

# **NATIONAL COUNCIL OF EDUCATIONAL RESEARCH AND TRAINING**

## **ANNUAL REPORT 1971-72**



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## **1971-72**



**National Council of Educational Research and Training**  
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# CONTENTS

	Page
<b>THE COUNCIL AND ITS ACTIVITIES</b>	3
<b>HIGHLIGHTS OF 1971-72</b>	11
<b>ACKNOWLEDGEMENTS</b>	25
<i>APPENDICES</i>	
1 Membership of the Council and its Committees 1971-72	31
2 Summary of Minutes of the Meetings of the Council and its Committees held During 1971-72	40
3 Statement of Account of NCERT of the Year 1971-72	43
4 Development of Campuses	44
5. NIE Library	45
6 Curriculum Development	46
7 National Science Talent Search Scheme	54
8 National Integration Projects	56
9 Population Education	58
10 Rural Talent Search Scheme	59
11 Examination Reform	60
12 UNESCO Silver Jubilee Celebrations	62
13 Grants to Professional Educational Organisations	63
14 Research Studies, Investigations and Surveys	64
15 Grant-in-Aid for Approved Research Projects (GARP)	76
16 Training Programmes	79
17 Extension and Field Services	85
18 Collaboration with the States and Union Territories	95
19 Collaboration with the Ministry of Education and Social Welfare	101
20 International Collaboration	104
21 Publications 1971-72	110

# *The Council and its Activities*

## THE COUNCIL AND ITS ACTIVITIES

1. The National Council of Educational Research and Training, popularly known as the N.C.E.R.T., was established on 1st September, 1961 as an autonomous organisation under the Societies Registration Act, 1860. On its establishment, it took over the Central Institute of Education (1947), the Central Bureau of Textbooks Research (1954), the Central Bureau of Educational and Vocational Guidance (1954), the All-India Council for Secondary Education (1955), the Directorate of Extension Programmes for Secondary Education (1955, 1959), the National Institute of Basic Education (1956), the National Fundamental Education Centre (1956) and the National Institute of Audio-Visual Education (1959). All these organisations had been set up by the Government of India with a view to provide facilities for the improvement of school education. After taking over these organisations, the Council reorganised its work so that it could function in an effective manner.

2. The Council is financed entirely by the Government of India. It functions as the academic wing of the Ministry of Education and Social Welfare and assists the Ministry in the formulation and implementation of its policies and programmes in the field of school education. Broadly, the functions of the Council are :

- (a) To undertake studies, investigations and surveys relating to school education ;
- (b) To organise pre-service and in-service training, mainly at an advanced level ;
- (c) To organise extension services ;
- (d) To disseminate improved educational techniques and practices ; and
- (e) To act as a clearing-house for ideas and information on all matters relating to school education.

3. In order to carry out such functions effectively, the Council works in close cooperation with the Education Departments in the States and the Universities and generally with all institutions set up in the country for furthering the objectives of school education. In addition, the Council maintains close contact with similar international and national

organisations throughout the world. In order to make the results of its work known to the public, it undertakes the publication of books, journals and other literature.

4. The Council has set up several institutions for organising its training and extension programmes and for carrying out and promoting research activities. It maintains a close liaison with all the State Governments through its network of offices of Field Advisers.

The Council has its headquarters in Delhi.

5. At Delhi, the Council has its National Institute of Education. This institution is primarily concerned with research, short-duration training, etc. The National Institute of Education has several Departments like the Department of Pre-Primary and Primary Education, the Department of Textbooks, the Department of Teacher Education, the Department of Social Sciences and Humanities, the Department of Educational Psychology and Foundations of Education, the Department of Science Education, the Department of Teaching Aids, the Data Processing and Educational Survey Unit and the NIE Library, Documentation and Information Services. Each one of the Departments is concerned with projects assigned to it. In addition, a certain amount of fundamental work necessary for the fulfilment of the Council's objectives is also undertaken. But, by and large, most of the investigations undertaken are of an applied character and are expected to be of an immediate utility value

6. The Central Institute of Education at Delhi which offers B. Ed, M. Ed. and Ph. D. courses is run by the Council as a Constituent College of the University of Delhi. It is likely to be transferred to the University of Delhi shortly.

7. The Council runs four Regional Colleges of Education at Ajmer, Bhopal, Bhubaneswar and Mysore. These institutions are campus colleges with extensive laboratory, library and residential facilities. They run a content-cum-pedagogy course of four years' duration leading to the B. Sc., B. Ed. in science and the B. A., B. Ed. in languages. These courses have been fashioned taking into account the prevailing *views* in certain other countries of the world. It is generally believed in several countries that education should be treated as a professional subject like engineering, medicine, etc., and students must be trained in the subjects and in pedagogy simultaneously. The four-year courses run in the Regional Colleges are meant to implement this view. In addition, the Regional Colleges run one-year B. Ed. courses also. Of special significance among one-year B. Ed. courses are those pertaining to science, agriculture, commerce and languages. To the extent possible, the students undertaking training are afforded opportunities for acquiring work-experience, so that they could inject the same into school teaching when they become teachers at

schools. Three of the Regional Colleges at Ajmer, Bhopal and Bhubneswar are offering M Ed courses, while two of them (Ajmer and Bhubneswar) provide facilities for Ph. D. in education. The Regional Colleges also organise in-service education courses, particularly in work-experience for teacher educators and school teachers of their respective regions. The Regional Collèges are being developed to function as models or centres of excellence for the four regions of the country. They work in close collaboration with the universities and institutions and also the State Departments of Education in their respective regions. Each Regional College has a Management Committee with Vice-Chancellor of the University to which it is affiliated, as its Chairman. The Management Committee tenders advice to the Executive Committee of the Council on all matters of direct interest to the College concerned.

8 The Council has a Publication Unit which looks after the printing of educational literature produced by the various constituent units of the Council. The literature falls into the following major categories :

- (a) Textbooks and teachers' manuals
- (b) Supplementary reading material
- (c) Yearbooks
- (d) Research monographs
- (e) Instructional material
- (f) Brochures and pamphlets
- (g) Educational journals
- (h) Reprints of foreign books ; etc.

9. The General Body of the Council has the Minister incharge of the portfolio of Education in the Union Council of Ministers as its President. All Ministers of Education in the States of the Union and in Union Territories having legislatures, and the Chief Executive Councillor, Delhi are members of the Council. Other members of the Council are : Chairman of the University Grants Commission, Secretary to the Government of India in the Ministry of Education and Social Welfare, four Vice-Chancellors of Universities—one from each region, 12 nominees of the Government of India among whom four are teachers, and all members of the Executive Committee. With such a constitution, it becomes possible to take policy decisions at the highest level and in a mutually agreed manner. It is against this background that the Government of India has requested the NCERT to function as the National Board of School Education.

10. The administration of the Council is vested in an Executive Committee with Union Minister incharge of Education and Social Welfare as its President and Minister of State for Education and Social Welfare as its Vice-President. Among others, one of the Deputy Ministers of Education in the Union Ministry of Education and Social Welfare is its



member. Other members of the Executive Committee are : the Director and the Joint Director of the Council, the Chairman of the University Grants Commission, one representative each of the Union Ministry of Education and Social Welfare and the Union Ministry of Finance, two teachers, three members of the Faculty of the Council and two eminent educationists. This Executive Committee takes decisions on all matters concerning the affairs of the Council. In order to assist the Executive Committee in taking decisions on academic matters, the Council has a Programme Advisory Committee which scrutinises and initiates the academic programmes and which has representatives from university departments of education and State Institutes of Education in addition to the Faculty of the Council. A Finance Committee advises the Executive Committee on all matters having financial implications, while the Establishment Committee renders assistance on establishment matters.

11. In addition, the Executive Committee generally appoints standing committees to deal with a variety of specific issues with representatives of the Council and experts in the field from different parts of India. Thus, problems pertaining to study groups in science, problems pertaining to UNESCO/UNICEF—aided pilot project for the improvement of science education in the country, the national science talent search scheme, etc. which require handling, in the first instance, at the level of acknowledged experts are considered by the Science Advisory Committee. Similarly, problems relating to publications of the Council are first considered by its Publication Advisory Committee and problems concerning construction of buildings, etc by its Building and Works Committee.

12. The Ministry of Education and Social Welfare sets up several committees or boards. The Council is generally represented on these boards and, wherever necessary, it provides the required expert advice in addition to collaborating with the boards and committees in their day-to-day work. Thus, the Council works in close cooperation with the Central Advisory Board of Education, the National Board of School Textbooks, etc. The link between the Ministry of Education and Social Welfare and its committee, etc. on the one hand and the Council on the other is so continuous and so close that it becomes impossible to define in precise terms either this link or the manner in which the Council functions distinctly as a separate entity. Such a close tie-up conduces to the effective functioning of the Council and assists its work to a remarkable degree, particularly in the implementation of its programmes.

13. The Council has already made a significant impact on school education and teacher education throughout India. It has published a variety of model school textbooks which have attracted the attention not only of educationists in the country but outside also. It has assisted

several State Boards of Secondary Education in improving their examination systems. It has developed, with the assistance of the UNESCO-UNICEF, a considerable amount of science teaching material. So far, about 550 teacher training institutions have been provided with laboratory equipment and about 1,100 primary and middle schools with science kits. In addition, the science books published under the UNESCO-UNICEF pilot project have been translated into several regional languages.

14 The Council conducts an all-India competition to select talented students in the field of science under its scheme of National Science Talent Search. This scheme has become extremely popular and provides an opportunity to students coming from even poor families to pursue their studies uninterrupted and free from financial worry up to the highest level in education, viz , the Ph D. The examinations for this scheme are now being conducted in all the languages of the Union and the entire procedure is kept constantly under review to effect improvements.

15. The Council has evaluated and is continuously evaluating textbooks prepared by different organisations from a variety of standpoints. There are continued requests to the Council to evaluate books even at the manuscript stage from several State organisations. The Council has developed brochures on the preparation and evaluation of textbooks in different school subjects for the guidance of textbook writers and evaluators.

16. The Council's scheme of giving grant-in-aid for research projects has enabled many university departments of education, teacher training colleges, research institutions, etc. to embark on research of significant value. Some of the results of these researches have already had an impact on school education. The Council also provides financial assistance to individuals for the publication of outstanding researches in the field of education. In addition, it gives grants to professional educational organisations operating at national/regional levels for the improvement of school education. It also encourages school teachers to undertake experimental projects which would help them solve their classroom problems. In order to assist promising young research scholars, the Council offers junior and senior fellowships of the monthly value of Rs. 300/- and Rs. 500/- respectively and provides facilities for their professional growth.

17. The Council has embarked on a special project to clear the backlog of untrained teachers through its Regional Colleges of Education. In this scheme, intensive vacation-cum-correspondence instruction is provided to employed untrained teachers in order to assist them to qualify for the B. Ed.

18. A normal feature of the work of the Council is organisation of a variety of summer institutes to provide facilities and opportunities of growth to school teachers and teacher educators. Among them, summer science institutes are of great significance. Further, in order to make its work meaningful, the Council provides academic guidance to primary and secondary extension services centres spread throughout the country. The Council also organises seminars and workshops to train resource personnel and teachers and other experts drawn from all parts of India. There is a continuous and unending demand for the experts employed by the Council from most of the States and from several organisations interested in school education including the State Boards of Education, etc.

19. In order to infuse in the minds of children the concept of national integration and the basic unity of India ; the Council publishes literature of value and organises inter-State camps of students and teachers. Some of the textual material, community singing material, etc. developed by it has attracted special attention of the schools. Recently, the Council has started work in the area of population education.

20. The above description gives a broad picture of the way in which the work of the Council is organised and administered as also of the various activities in which the Council is engaged.

# *Highlights of 1971-72*

# HIGHLIGHTS OF 1971-72

## 1. Introduction

The National Council of Educational Research and Training, which was formed through the merger of several subordinate offices of the Ministry of Education into an autonomous organisation in 1961, completed a decade of its existence in 1971. During this decade, there was progress and there was also criticism about the work of the Council. A committee had been appointed to review its work and make recommendation for its future development. Another committee looked into the policies and procedures for recruitment. The findings of these committees constitute the basis for improving the work of the Council. In recent years, the expenditure of the Council was reported to be on the high side. This required a detailed examination.

This section is primarily concerned with how the Council has dealt with the problems described and with highlighting the important work done during 1971-72.

## 2. Expenditure

As against a request for about Rs 316 lakhs in 1969-70 and Rs. 344 lakhs in 1970-71, the Council asked for general grant for the running of the NCERT of about Rs 274 lakhs only during 1971-72. In recent years, this is perhaps the smallest grant asked for. Out of this grant, about Rs. 27 lakhs are accounted for as payment of scholarships to National Science Talent Search scholars, about Rs. 16 lakhs for Summer Institutes which were previously run by the University Grants Commission and about Rs. 10 lakhs for advance purchase of paper for printing during 1972-73. In addition, a sum of about Rs. 10 lakhs is outstanding as dues from governmental and other organisations for textbooks sold. Therefore, the total expenditure grant on both capital and revenue for the year 1971-72 comes to about Rs. 211 lakhs. Out of this, 9 lakhs were spent on the Central Institute of Education, Rs. 84 lakhs on the four Regional Colleges of Education at Ajmer, Bhubaneswar, Bhopal and Mysore and Rs. 56 lakhs on the National Institute of Education at Delhi. The non-recurring expenditure on buildings, particularly staff quarters for lower staff and equipment, was Rs. 16 lakhs. The balance of about Rs. 46 lakhs was spent on the NCERT headquarters and offices of field advisers which do liaison work with the States and which are located in the different parts of India. In government department, accounts are main-

tained by the Accountant General and they do not figure in the expenditure of the departments. Buildings are built and maintained by the Public Works Department and the expenditure does not figure in that of a government department. But, both these items figure in the expenditure of the NCERT headquarters. It has to be remembered that the NCERT has over 2,000 employees whose individual accounts, etc have to be maintained and it has a large number of buildings. For maintenance of such buildings, the PWD charges much more than what it would debit for a corresponding government department. Even for auditing, the Council has to pay fees. Since the Council is an autonomous organisation, it has to pay taxes at high rates to Municipal Corporation. Taking all these factors into account, the expenditure on the headquarters is also not high.

Significant reduction in expenditure in 1971-72 was made possible through a series of measures for cutting expenditure without affecting either the quality of work or the number of useful programmes. Stipends for summer school-cum-correspondence B. Ed. course students were abolished. For regular students in the Regional Colleges, the award of stipends was limited to about fifty per cent of the intake. Seminars, workshops, conferences and other programmes which did not justify getting organised on the basis of the actual preparation made on the objectives to be served were all cut. In this connection, it may be pointed out that the expenditure on seminars and workshops which stood at Rs. 6 15 lakhs during 1969-70 was brought down to Rs 3 34 lakhs during 1971-72. The payment of daily allowance to participants in different programmes was rationalised. The printing programmes of the Council were modified. The number of copies to be printed was reduced drastically wherever immediate distribution or sale was not expected. In several cases, reports of seminars, workshops, conferences, etc were only mimeographed to reduce expenditure and to provide adequate workload for the mimeographing facilities available.

The detailed statement showing Consolidated Receipts and Payments Account for the year 1971-72 is given in Appendix 3.

### **3. Staff**

In any institution, good work can always be done by getting the willing and active cooperation of all categories of staff. The general philosophy which pays good dividends is to enthuse workers to work on their own through a realisation of the social responsibilities of the individual. The staff had been continuously complaining and the Review Committee had also highlighted that an institution of the type of the Council should not indefinitely continue to function without regulations. Draft regulations were therefore made and got approved by the Government of India.

These have been promulgated and brought into force with effect from 12-5-71. These regulations provide the minimum norms of procedure necessary in recruitment, in the incurring of expenditure or the exercise of powers by the different authorities of the Council. The Council had hundreds of persons working on daily wages for years. Social justice demanded that this inequitable situation should be put to an end. This question was considered in considerable detail. As several of these daily wage employees were on projects whose duration was, at least for the present, very limited, it was decided to set up a Special Projects Establishment and absorb the daily wage employees serving in the Council in such an Establishment. These employees get many of the privileges of the regular staff like leave, house rent allowance, city compensatory allowance and pay at rates prevailing in the Government. This has removed a major source of discontent among the Council's employees.

In view of the fact that regular recruitment was practically stopped since 1967, several appointments were being made on an ad hoc basis. Further, the holders of such appointments often got their services terminated at the end of an academic year. This created a measure of instability. In teaching institutions, the quality of teaching suffered. Further, this procedure of recruiting and terminating the services of staff was not consistent with social justice. In addition, continuing ad hoc appointments for periods longer than a few months was definitely irregular. Therefore, the Council decided to advertise the posts which were absolutely necessary and fill them on a two-year contract basis. In taking this action, the Council was confident that within about two years the structural pattern of the NCERT and the procedures for recruitment would have been evolved on proper lines.

One of the irritants to all categories of staff is the lack of recruitment rules. Recruitment rules have been prepared and circulated to all staff associations and to all establishments of the Council. The views of every one concerned have been obtained. These together with a modified form of the original draft are before the Executive Committee for consideration. After getting the advice of the Government of India in the matter, these rules are expected to be finalised.

#### **4. Programmes**

The Council had a very large number of programmes. Some of them have been discontinued. In a few cases, even when the programme was not likely to yield results of immediate application value, it was continued because a large amount of funds had already been invested and the additional expenditure involved was small. But, generally, every attempt was made to recast programmes of the Council on the basis of the advice of the Programme Advisory Committee. A brief description of the major programmes of the Council is given in what follows.

### *(a) Curriculum Development*

In the field of school education, curriculum development is a major programme of interest to the parents, students, teachers and the Governments of State concerned. Any mechanical writing of a syllabus destroys the very purpose of education. A broad-based view of a programme of education at the elementary, middle and secondary school levels has to be taken and this has to be based on the National Policy. There is already the National Policy Resolution of the Government of India which recommends the 10+2+3 pattern of education, the last three years corresponding to university education. At all levels of school education, work experience should preferably be made compulsory. There can be variations in the efficiencies of scholars or in the general efficiency of a Department of Education looking after a network of schools. This has to be kept in mind and allowed for in any actual planning.

Based on the overall plan, a certain number of subjects have to be included in a school curriculum with a broad apportionment of time. In each subject, the curriculum development has to be based on the objectives which the curriculum is meant to serve. Thus, firstly, instruction has to be utilised to develop the reasoning capacity of students. Secondly, instruction has to be utilised to develop in the students a capacity to exercise judgement and take decisions. Lastly, instruction has to be utilised to equip the students with a certain amount of information and the procedure they have to adopt to add to their information at any time. In addition to these objectives, there are over-riding considerations. The first one is concerned with the development of proper values and attitudes. The second one is concerned with a proper appreciation of the Country, its resources and all it stands for. It may be stressed here that the development of proper values and attitudes cannot get reflected by a mere syllabus but through the proper writing of a textbook on the syllabus.

Mere curriculum or a textbook loses its value if the teachers who have to do their jobs are not properly trained to appreciate the objectives for which the curriculum has been developed and the values and attitudes they are required to build up in the younger generation. Therefore, instruction to the teacher is an important auxiliary to curriculum development. This has two facets. The first one could be an exhaustive teachers' guide or teachers' handbook. Such a manual would broadly indicate how the teacher should get about his job, where he should use laboratory facilities and where he should use charts, films, slides, etc. In addition, it is the primary job of the teacher to relate the teaching to the environment in which the children live and develop proper values and attitudes. This cannot be done by a teacher unless there is a proper in-service education programme for him. Therefore, teachers' manuals and in-service education programmes become necessary parts of curri-



culum development. Even a good curriculum, a good textbook, a good teachers' guide and a good programme for in-service education may have no impact if the procedures for evaluation and examinations are defective. In fact, the major bottleneck for progress in the field of school education is our present programmes of examinations which encourage cramming and destroy the primary objectives of education. Therefore, curriculum development has to involve the persons concerned in preparing a scheme for examination reform. If such a scheme visualises a two-hour paper with five questions, the five questions would correspond to five units. In each unit, there should be a large number of well thoughtout and well-designed questions. The preparation of such question banks becomes a pre-requisite for proper curriculum development. The question banks provide the base for the students to know how they are going to be evaluated and to appreciate the manner in which they have to study. So far as the teachers are concerned, they can easily pick up one question for each unit and prepare a question paper which would be well-designed and well-thought out. In addition, the question bank could be utilised for continuous evaluation throughout the year. Therefore, any attempt to evade the preparation of question banks may destroy the very basic objectives of curriculum development

Curriculum development requires persons who will do the hack-work of preparing the curriculum and follow it up by the writing of a textbook or the preparation of question banks. But, each one of these assignments requires scrutiny. This is best done by the best brains the country can provide in the area. Consequently, setting up of panels of experts for each area of knowledge, seeking their advice on draft curriculum, on draft textbooks and on question banks and continuously associating such high level persons with the work is a pre-requisite for proper progress. Examining the question on these broad lines, the Council proceeded to set up appropriate panels for different subjects. By the cooperative work of the Council's staff, special invitees including teachers and students and the advice of the panels, it is hoped that high-level material for use in schools could become available. A master plan on these lines is now under preparation and this may incidentally lead to the restructuring of some of the establishments of the Council.

The work done in the area of curriculum development during 1971-72 is described in Appendix 6.

*(b) School Science Project*

Under a Unesco/Unicef Assisted Project of the Government of India, the Council has developed and is developing simple and cheap laboratory equipment for all branches of science for being used in the primary, middle and secondary schools. This equipment is being develop-

ed on the basis of curriculum prepared and books written for the different stages of school education. Several States have already started a pilot project utilising all this material. They have translated and printed the textbooks and the teachers' guides. In the second phase, nearly 5% of all primary schools and nearly 30% of all middle schools may get covered by the supply of school science equipment.

In this project, a major deficiency came for notice. Unless the teachers who were to teach were properly trained, the equipment and the books would be of no value. Training a large number of teachers cannot be undertaken in just one or two institutions in a State. Further, universalization of such facilities would imply training of all teachers. For this purpose, centres are proposed to be set up in the Regional Colleges of Education to train primary teacher educators and secondary teacher educators from all the teacher training institutions in the States. The Government of India has already proposed to equip all primary teacher training institutions and colleges of education with the requisite equipment and a small library. Hence, if the teacher educators from these institutions are properly trained in the Regional Colleges of Education and if an expert from a Regional College of Education visits each of the institutions, the teacher educators could be properly initiated to prepare a programme of in-service education in science for primary or secondary teachers. Teachers from groups of schools could be called to such an institution, trained and sent back. If teachers are called in groups of 30 or 40 the corresponding institutions could be closed for the four weeks when training would be given. Thinking broadly on these lines, a project has already been prepared to train all the teacher educators in science in the four Regional Colleges of Education. When the project goes through, it will provide an all-India base for the in-service education in science for all the teachers. The Government of India and the Unicef have already agreed to finance the project.

### *(c) National Science Talent Search Scheme*

In 1963, the Council launched this scheme with a view to pick up promising young persons with an aptitude for science and encourage them for further studies in science. It was noticed at the outset that many who qualified for the scholarship came from the major cities of the country. It was felt that this defect could partly be rectified by conducting the examination for the selection of scholars in all the regional languages used for instruction in the country. Therefore, the National Science Talent Search tests are now being conducted in all the regional languages. This has resulted in a better spread of the award of scholarships. In the recent NSTS tests, the boy who stood second appears to come from a village. Thought is being given to lay stress more on intellectual capacity rather than on information in the conduct of examinations.

The number of awardees who availed themselves of the NSTS scholarships during the year 1971-72 is as follows :

<i>B Sc.</i>	
1st Year	219
2nd Year	226
3rd Year	242
<i>M.Sc.</i>	
1st Year	124
2nd Year	161
<i>Ph D.</i>	93
<hr/>	
Total	1065
<hr/>	

A study of such figures revealed that all the students who are awarded scholarships do not accept the same. One of the reasons was that some of them preferred to go for engineering or medicine and gave up pure science. This is a question of choice. The second reason was the fact that the quantum of scholarship was not adequate to fully support a student in a college. This has been rectified by permitting such brilliant students to accept other scholarships and other forms of finances which they can receive along with NSTS scholarship. Many students experienced hardships in the regular receipt of scholarships. This has been partially rectified by sending the scholarship amount in advance for a half year to the institution which the student joins. The question of requesting all institutions approved by the Council to admit such students without insisting on prior payment of fees is also under examination in order to avoid some of the initial hardships.

A large number of students give up the scholarship after qualifying for the B Sc. It was noticed that some of these preferred to go abroad. Similarly, several students who qualified for the M.Sc. did not proceed for the Ph.D. as they preferred to go abroad for specialised research. The present rules prevent approving institutions outside India from being recognised for the award of NSTS scholarships. Therefore, this rule has been modified but with the restriction that a scholar continuing his studies would be paid the scholarship in rupees only to the credit of his bankers in India subject to receipt of reports of progress from the approved institution.

Some of the students found it difficult to get admission to the Ph.D. courses. One of the reasons for this was found to be that CSIR or UGC's scholars bring with them a certain amount as contingent grant to the institution they join. This helps the institution to spend on consumables. The NSTS scholars were only paid scholarships and the insti-

tutions they joined did not get any contribution for contingent expenditure. This defect has now been rectified

A close look is being given to the procedures adopted for evaluation with a view to reduce further any uncertainties that any evaluation scheme is bound to give rise to. Summer schools are run for the benefit of NSTS scholars at different levels. A close look is being given to improving this programme. In 1974, the scheme would have been in existence for 10 years on an all-India basis. Therefore, an over-all evaluation of the entire project including the provision of facilities through staff for continued observation, advice and guidance is under examination

A report on the working of the scheme during 1971-72 is given in Appendix 7.

*(d) Professional Growth of Teachers*

Improvement of school education depends primarily on teachers. The NCERT has been most concerned with the problem of generating zest and enthusiasm among the teachers. This is being done through a variety of extension services. Some of them to which greater attention has been paid during the year under report and which are likely to get expanded, in spite of difficulties, are worth mentioning. The first one is the Seminar Readings Programme. In this programme, any teacher is permitted to write about anything novel he has done for making teaching more effective or for adopting better techniques of teaching. The paper the teacher writes is first read at an extension centre. Thereafter, the best papers from a State get selected. These are evaluated and prizes awarded for the best all-India papers in the Seminar Readings Programme. The best papers are printed and widely circulated. This has encouraged many good teachers to take greater interest in their work in spite of prevailing frustration.

Another scheme is the one on Experimental Projects. In this scheme, any teacher who has a novel idea either for improving the technique of teaching or for preparing a gadget can submit a project. If it is found good, a small grant is made to assist the teacher to do his work. Several teachers all over India have tried to take advantage of this scheme with good results.

Taking an over-all view of these two projects, it was felt that the tempo of work in the two projects should get stepped up. Therefore, these schemes are going to get decentralised. The Principals of the Regional Colleges of Education are going to be authorised to announce the schemes properly, get applications and process them for all teachers living in the region for which the College caters. The Regional Colleges

of Education have people well-versed in different languages of the States concerned, subject experts and education experts. With these facilities, it is felt that the Regional Colleges could step up the tempo of activity in these areas.

Whether a person belongs to the fighting forces or is in civil employment, it is very necessary that he gets periodical refreshing both of knowledge and experience in order to maintain a high level of efficiency. This applies with equal force to teachers. Therefore, a variety of in-service programmes for teachers have been launched both directly from the headquarters and through the Regional Colleges of Education. Some of these programmes which are novel, are attracting considerable attention. In one programme, batches of secondary teachers are being called to a Regional College of Education and given training in horticulture so that they could introduce horticulture as work experience in the secondary schools in which they teach. In another scheme, batches of physics teachers are being called and given instruction in the use of workshop tools and engineering materials. Thereafter, they are made to do a project for preparing something useful to them in their schools. The same teachers are called again in another summer along with four or five of their students. The teachers are made to give projects in the same manner to the students and get the work done. In this, the teachers are assisted and supervised by the staff of the Regional College. This scheme is progressing very satisfactorily and attempts are now being made to get project work introduced as an alternative to physics practical at the higher secondary stage.

The current thinking the world over is that we should integrate the subjects and pedagogy in any scheme of teacher education. The duration of teacher training would not be longer, but the teachers would learn simultaneously the subjects they have to teach and pedagogy. This approach is regarded as sounder for several reasons. Firstly, we do not get the best of brains for the teaching profession and a long period of indoctrination has to be preferred. Thus, teacher education is being regarded as professional education like engineering, medicine, etc. The second reason that actuates this thinking is the fact that teachers have to teach at least two subjects. One of them could be work experience. Initiation into subjects of work experience cannot be given successfully to elderly people. Further, this work is done effectively only when spread over a number of years. The curriculum in the universities is more made with a view to taking students for the master's degree and research; whereas the curriculum for a teacher has to be fashioned with special reference to the job he is going to do. At the secondary level, knowledge of the subject with specific reference to what is to be taught at the school level, is far more important than pedagogy. For these

reasons, integrated courses are very much in favour. The possibility of utilising facilities of an arts or a science college and the facilities of a college of education for giving this combined course and its effectiveness are being examined. It is now widely recognised that a one-year B.Ed. cannot serve the purpose of good secondary teacher education. If any integrated course is not practicable on an all-India basis, the only alternative would be extensive in-service education and curricula, plans and programmes for the purpose will have to be drawn and nationalised.

Both at the NIE at Delhi and in the Regional Colleges of Education, the Council has recently been most concerned with the teacher educator or the professional man who mans the primary teacher training institutions and the colleges of education. A variety of programmes of in-service training of such teacher educators have been drawn up and are being continuously implemented. Some of them come up in the form of giving more of content. Some of them come up in the form of disseminating improved techniques. In a few of them attention is paid to the problem of injecting ideas, knowledge and application of instructional technology, an area of knowledge that is now fast growing the world over.

The activities of the Council in per-service training of secondary school teachers and in-service training of educational workers of various categories during 1971-72 are described in Appendix 16. A description of the work done in the area of educational extension during the year is given in Appendix 17.

#### *(e) Work Experience*

In order to fit a child successfully into the society of tomorrow, it is very necessary to make the child realise the value of working both with the hand and the brain. It is also necessary for the child to realise that something made has to conform to standards for being sold. This requires a certain degree of application with a view to realising quality and reproductibility. In addition, a knowledge of marketable products in a sophisticated technological society and the price at which it would sell, is important. It is only this way that a child can appreciate the value of its contribution in terms of money as it grows. Therefore, in most countries of the world, work experience constitutes a very essential part of the education of all children at all levels at school. In fact, work experience counts as much for credits, passing etc. as mathematics, science or languages. The Education Commission (1964-66) had recommended introduction of work experience at the school level. The Council has been most concerned with this problem and is applying its mind to this area with a special emphasis on work experience in agriculture as the large majority of our schools are in rural areas. Training in work experience in the field of agriculture was given to several

batches of primary teacher educators in one of the Regional Colleges of Education. Plans are afoot for rationalised introduction of work experience in all classes in the demonstration schools attached to the Regional Colleges of Education. When this scheme gets going on standard lines and this will not be long, any set of experts from any State could visit the demonstration schools of the Council to see how work experience has been injected and form their own opinion about the results achieved.

*(f) Current Problems in Education*

Problems of education at school level are many and finding solutions to them are intricate. In several cases, it is necessary to have an intimate knowledge of the background of practices in other countries of the world including the costs of such projects. Before solutions are evolved, it is necessary to educate all concerned in this area. Therefore, a new series of booklets on current problems in education are being published by the Council dealing with a variety of problems of current interest to the country.

Technology is being applied in an increasing manner in the field of education. Thus, it is felt that use of tape recorders, language laboratories and other audio-visual aids can make language teaching most effective and also reduce the time required for learning a language. The Council had appointed a Committee to go into the problem. Thereafter, Messrs. Bharat Electronics were entrusted with the responsibility of undertaking indigenous development of the equipment required. Messrs Bharat Electronics may get ready with the proto-types very soon. Simultaneously, thought has been given to the preparation of soft-ware. It is proposed to go ahead with this project as soon as Messrs. Bharat Electronics are ready to go into production.

What is most important in the education of teachers is micro-teaching. The teachers must see an actual classroom situation where a good teacher is teaching and observe the classroom responses. This is best done by recording classroom situation at video-tape and reproducing the same.

In some cases, it is necessary to allow a child to learn at his own speed or at his own rate repeating, listening to or understanding a specific problem including an answer to the same. For this purpose, programmed instruction is of immense value and attention to utilisation of the ideas behind programmed instruction for use in schools is under examination, particularly for primary schools.

There is no doubt that a limited use of extremely cheap computers called 'mini-computers' can assist the storage and reproduction of any

desired information. Hence, the manner in which such extremely cheap computers could be put to use for instructional purposes atleast in schools and colleges of education is also receiving attention.

## 5. Relation with States

During the past few years, several States are taking increasing advantage of the facilities developed by the Council. Thus States like Assam, Rajasthan, West Bengal, Mysore, Madhya Pradesh, Gujarat, Punjab and Haryana have sought the assistance of the Council for the training of their personnel in the setting of questions and generally in the improvement of their examination programmes.

The States of Bihar and Jammu & Kashmir sought the assistance of the Council for reviewing the manuscripts of textbooks prepared for them so that proper decisions could be taken before the publication of the books.

The States of Andhra Pradesh, Bihar, Haryana, Mysore, Rajasthan and Kerala sought the assistance of the Council in the preparation of books on social studies, languages, etc. Several States have adopted or adapted NCERT publications.

The most interesting developments for intimate contacts with the States came through the two major programmes of the Council. The first one is the Crash Programme for the evaluation of textbooks from the stand point of national integration. Almost all the States took up the project. In this project, a list of books recommended for use in the different classes (from classes 1 to 11) by the Director of Education or by the Secondary Examination Board is first prepared. Three copies of each book are purchased. One copy of the book and one copy of a special evaluation tool developed is sent to a school teacher teaching the subject. He prepares the evaluation report. The book together with the evaluation report goes to an expert who checks it. Thereafter, it goes to the expert committee. Thus, the expert committee gets three sets of such evaluation reports. One of these is through the State channels. Most of the States magnificently cooperated with the Council and assisted in this evaluation. As a result of such evaluations, the required assessment has already been completed for Andhra Pradesh, Gujarat, Kerala, Nagaland, Jammu & Kashmir, Haryana, Himachal Pradesh, Manipur, Mysore, Bihar, Delhi, Orissa, Madhya Pradesh, Punjab and West Bengal. The evaluation has shown that about 3% of the books were such that they had to be withdrawn from further use. About 20-30% of the books had material which either had to be deleted or portions of the book had to be re-written. When the reports of the expert committee were sent to the authorities concerned, most of the States acted promptly and did the needful.



The setting up of the offices of Field Advisers for different States and groups of States has assisted considerably in improving contacts with the States and in giving advice and assistance. On the initiative of some of the Council's Field Advisers, several States have embarked on modification of their programmes.

Further details about the collaboration activities between the NCERT and the State Governments/Union Territory Administrations during 1971-72 are given in Appendix 18.

## **6. Regional Colleges of Education**

The four Regional Colleges of Education have on their rolls about 4,000 students for the degree and post-graduate courses. In a modest way, the Ph.D. programme has also got started. In addition, the four Demonstration Schools attached to the four Regional Colleges of Education have about 2,000 students. Thus, the Council provides instructional facilities through these Colleges for 4,000 university students and about 2,000 school students. A special feature of these colleges is the experiments they are conducting in teacher education in a variety of ways. They are all campus colleges having adequate facilities in a variety of disciplines. The facilities are regarded as sufficient for instructional and experimental purposes in the field of school education. Thus, the Regional Colleges are basically multi-faculty institutions. Having regard to the variety of their programmes, some of the universities to which they are affiliated are thinking in terms of granting them an autonomous status. The results of these Regional Colleges both in the university examinations and in the school examinations are extraordinarily good and the wastage is negligible. Many of the products of the Regional Colleges who have gone for post-graduate courses have done very well in these courses. The standard maintained for admission is extremely high. Thus, for science courses, ordinarily only those who get 55 per cent and above marks in the higher secondary examination are admitted. The very high standards maintained by some of these Regional Colleges has also contributed to their affiliating universities contemplating giving them an autonomous status.

A very important area of activity of these Regional Colleges is in the field of in-service education of teachers and teacher educators. A beginning has been made to look into the interests of primary teacher educators and this being an important area, the present plans are to step up the tempo of this activity considerably.

A special feature of the courses in the Regional Colleges of Education is the attention they pay to work experience in teacher education. Ours is a poor country and teachers at school are required to teach at least two subjects. It is not practicable to employ separate teachers for

work experience. Therefore, if science or arts teachers are also qualified in the field of work experience, they can handle this work in addition to teaching one or two subjects at schools.

So far as Demonstration Schools attached to the Regional Colleges of Education are concerned, plans have been made and would be implemented next year to have formalised work experience instruction in all classes in the schools.

The work of each Regional College of Education is looked after by a Management Committee on which there are representatives of all the States in the region. The Vice-Chancellor of the university to which the college is affiliated is the chairman of the Management Committee. A large number of programmes pertaining to the college are invariably discussed by its Management Committee. In fact, the in-service programmes for teachers and teacher educators from the different States are organised on a request or a suggestion from the representatives of the State concerned.

## 7. Research

Research has to be a major activity of the Council. Incidental to the development of programmes of different varieties, a certain amount of research is done. In the field of curriculum development, textbook production and evaluation, a measure of research has always to accompany the programme if the programme is to be meaningful. To this extent, some research has always been done. This is true not only of the NIE but also of the Regional Colleges of Education. In addition, some attention is being paid to basic research where investigations are carried out for their own sake but the results of investigations could throw up problems only after the investigations are complete. Such investigations are long drawn out processes. In one such investigation, viz., Developmental Norms Project for children of the age-group  $2\frac{1}{2}$  to 5 years, the results of the study are now available. As a result of these investigations carried out in urban and rural areas around Ahmedabad, Allahabad, Bombay, Delhi, Calcutta, Hyderabad and Madras, it has now been found that rural children are less ready or less prepared for receiving primary education at 5+ than urban children. In fact, the facilities available in rural areas do not enable the children's mind to grow as well as in urban areas. The period  $2\frac{1}{2}$  to 5 years is a period when the mental growth is most rapid. Consequently, the investigations and the results obtained therefrom pose a fundamental problem. If some form of pre-school education is given to children before they enter primary schools, probably rural children may be better prepared to receive primary education and wastage and stagnation could be reduced. Further, with this kind of facility for pre-primary education, children coming from weaker sections of the

community may grow better intellectually during the period 2½ to 5 years. In such a case, they may take to education without difficulty. If this proves a reality, it may not be necessary to think in terms of reservation of seats or special scholarships in the later years of the child's life.

In another investigation, viz, Mother Tongue and Equality of Opportunity in Education, critical studies have been made, both from the scientific point of view and from the point of view of practicability on the basis of available data, on the medium of instruction to be adopted at schools and colleges. Exhaustive data pertaining to Indian conditions have also been made available. The conclusion from this investigation is that the mother tongue is the best medium of instruction. One could argue that this is a known fact. To some extent, this is true. However, the details and limiting conditions imposed on the problem in its wider perspective are very necessary in the practical implementation of policies and programmes. This long-felt need or gap in our knowledge has been filled by this investigation.

A brief description of research studies, investigations and educational surveys completed/undertaken during 1971-72 is furnished in Appendix 14.

In addition, the Council gives grant-in-aid for research work in the universities and other institutions of higher learning for the publication of research reports, etc. Many of the research projects take a number of years to get completed. The results of such research projects are published either as reports or as papers in professional journals. So far, 96 projects dealing with a variety of important aspects of education have been farmed out to various institutions in different parts of the country under the Council's scheme of grant-in-aid for approved research projects (GARP).

The names of institutions and the titles of projects for which grants amounting to Rs. 73,450 were released under the GARP scheme during 1971-72 are given in Appendix 15.

## **8. Publications**

The NCERT is probably one of the biggest publishers of school textbooks in the country selling as it does about 30 to 40 lakhs rupees worth of books. So far, very little criticism has been received about factual inaccuracies or deficiencies in the get-up and production of these books. In fact, several individuals have expressed appreciation of NCERT books. For costing, the practice has been to price publications on a no-profit-no-loss basis. A small margin above actual costs is maintained to allow for booksellers discount and other incidental Council's costs. Yet, the NCERT publications are the cheapest available.

in the market. They all get sold out and frequent complaints of lack of copies of NCERT publications are received. This is because advance orders are not placed by private school managements and children have to go about to get the books. Plans have already been made to print more copies and to make available copies of NCERT publications easily to the public. The setting up of a Sales Depot in Connaught Place area of New Delhi has already been approved. It is significant to point out that through the sale of textbooks, the excess of income over expenditure amounted to over 6 lakhs of rupees during 1971-72. If the publication programme is freed from some of the restrictions of governmental rules and norms, it may be possible to sell a much larger number of books and make the results of NCERT's work available to a larger student population. If, further, the NCERT is permitted to translate its publications into the different regional languages and print them, the sale of NCERT publications might reach extremely high figures. These wider questions are currently engaging the attention of the Council.

A classified list of NCERT publications released during 1971-72 is given in Appendix 21. An up-to-date list of Council's textbooks recommended or prescribed by various States/Union Territories, etc. may be seen in the Annexure to this Appendix.

Details in respect of the following subjects are furnished in the Appendix mentioned against each :

Membership of the Council and its Committees	Appendix 1
Summary of Minutes of the Meetings of the Council and its Committees held During 1971-72	Appendix 2
Development of Campus	Appendix 4
NIE Library	Appendix 5
National Integration Project	Appendix 8
Population Education	Appendix 9
Rural Talent Search Scheme	Appendix 10
Examination Reform	Appendix 11
UNESCO Silver Jubilee Celebrations	Appendix 12
Grants to Professional Educational Organisations	Appendix 13
Collaboration with the Ministry of Education and Social Welfare	Appendix 19
International Collaboration	Appendix 20

## ACKNOWLEDGEMENTS

The Council feels indebted to the Union Minister and the State Minister for Education and Social Welfare for evincing keen interest in its affairs. The Council also expresses its gratitude to all the staff of the Ministry of Education and Social Welfare for extending several facilities to it from time to time during the year under report. The Council is grateful to several individuals 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 especially the State Departments of Education for their unstinted cooperation with the Council in carrying out its activities. Last but not the least, the Council expresses its gratefulness to the UNESCO, the UNICEF, the UNDP, the British Council, the CEDO, the USAID, the US National Science Foundation and the Governments of the USSR, the United Kingdom and the German Democratic Republic for the assistance they rendered in one form or the other.

# *A p p e n d i c e s*

## APPENDIX I

### *Membership of the Council and its Committees 1971-72*

#### *A. The Council*

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| 1. Shri Siddhartha Shankar Ray<br>Union Minister for Education<br>and Social Welfare<br>Shastri Bhavan<br>New Delhi ( <i>President</i> )    | 8. Education Minister<br>Andhra Pradesh<br>Hyderabad         |
| 2. Dr. D.S. Kothari<br>Chairman<br>University Grants Commission<br>Bahadurshah Zafar Marg<br>New Delhi                                      | 9. Education Minister<br>Assam<br>Shillong                   |
| 3. Shri T.P. Singh<br>Secretary to the Government<br>of India<br>Ministry of Education and<br>Social Welfare<br>Shastri Bhavan<br>New Delhi | 10. Education Minister<br>Bihar<br>Patna                     |
| 4. Dr. K.L. Shrivastava<br>Vice-Chancellor<br>Banaras Hindu University<br>Varanasi  | 11. Education Minister<br>Gujarat<br>Ahmedabad               |
| 5. Prof. S.N. Sen<br>Vice-Chancellor<br>Calcutta University<br>Calcutta   | 12. Education Minister<br>Haryana<br>Chandigarh              |
| 6. Shri N.D. Sundaraviveku<br>Vice-Chancellor<br>Madras University<br>Madras  | 13. Education Minister<br>Himachal Pradesh<br>Simla          |
| 7. Smt Sharda Divan<br>Vice-Chancellor<br>S.N.D.T. Women's University<br>1, Nathubai Thackersey Road<br>Bombay-20 B.R.                      | 14. Deputy Education Minister<br>Jammu & Kashmir<br>Srinagar |
|   | 15. Education Minister<br>Kerala<br>Trivandrum               |
|   | 16. Education Minister<br>Madhya Pradesh<br>Bhopal           |
|   | 17. Education Minister<br>Maharashtra<br>Bombay              |
|   | 18. Education Minister<br>Mysore<br>Bangalore                |



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| 19. | Education Minister<br>Nagaland<br>Kohima  | 32  | Prof D P Yadav<br>Deputy Minister<br>Ministry of Education<br>and Social Welfare<br>Shastri Bhavan<br>New Delhi                        |
| 20. | Education Minister<br>Orissa<br>Bhubaneswar   |     |  |
| 21  | Education Minister<br>Punjab<br>Chandigarh  | 33. | Prof. S V.C Aiyá<br>Director<br>National Council of Educational<br>Research and Training<br>New Delhi                                  |
| 22. | Education Minister<br>Rajasthan<br>Jaipur   | 34  | Prof. M V Mathur<br>Director<br>Asian Institute of Educational<br>Planning and Administration<br>New Delhi                             |
| 23. | Education Minister<br>Tamil Nadu<br>Madras  |     |  |
| 24  | Education Minister<br>Uttar Pradesh<br>Lucknow  | 35  | Prof. Shantí Narayan<br>Dean of Colleges<br>University of Delhi<br>Delhi   |
| 25. | Education Minister<br>West Bengal<br>Calcutta   | 36  | Shri S Udapachar<br>Headmaster<br>Nrupatunga Multipurpose<br>Higher Secondary School<br>Hyderabad                                      |
| 26. | Chief Executive Councillor<br>Delhi Administration<br>Delhi   | 37. | Shri D.S. Bajpai<br>Principal<br>Kendriya Vidyalaya<br>Indian Institute of Technology<br>Kanpur  |
| 27. | Education Minister<br>Goa, Daman & Diu<br>Panaji (Goa)  |     |  |
| 28. | Education Minister<br>Government of Pondicherry<br>Pondicherry  | 38. | Joint Director<br>National Council of Educational<br>Research and Training<br>New Delhi  |
| 29. | Education Minister<br>Government of Tripura<br>Agartala   | 39. | Dr. R H. Dave<br>Head of the Department of<br>Textbooks<br>National Council of Educational<br>Research and Training<br>New Delhi       |
| 30. | Education Minister<br>Meghalaya<br>Shillong   |     |  |
| 31  | Prof S Nurul Hasan<br>Minister of State<br>Ministry of Education<br>and Social Welfare<br>Shastri Bhavan<br>New Delhi | 40  | Dr M.C Pant<br>Head of the Department of<br>Science Education<br>National Council of Educational<br>Research and Training<br>New Delhi |

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| <p>41. Shri P.D. Sharma<br/>Principal<br/>Regional College of Education<br/>Bhubaneswar</p> <p>42. Shri T.R. Jayaraman<br/>Joint Secretary<br/>Ministry of Education and<br/>Social Welfare<br/>New Delhi</p> <p>43. Shri O.P. Mohla<br/>Financial Adviser (NCERT)<br/>Ministry of Education and<br/>Social Welfare<br/>New Delhi</p> <p>44. Shri Bhakt Darshan<br/>15-Gurudwara Rakab Ganj Road<br/>New Delhi-1</p> <p>45. Shri H. Narasimhaiah<br/>Principal<br/>The National College<br/>Bangalore-4</p> <p>46. Shri I.J. Patel<br/>Chairman<br/>State Board of Teacher Education<br/>State Institute of Education<br/>Raikhad<br/>Ahmedabad</p> <p>47. Shri S.P. Verma<br/>Deputy Secretary to the Govt. of<br/>Madhya Pradesh<br/>Education Department<br/>Bhopal</p> <p>48. Prof. Rais Ahmed<br/>Head of the Department of Physics<br/>Aligarh Muslim University<br/>Aligarh</p> | <p>49. Shri D.B. Phatangare<br/>Thombre Building<br/>Kopergaon<br/>Distt. Ahmednagar (Maharashtra)</p> <p>50. Shri S.V. Chittibabu<br/>Director of School Education<br/>Tamil Nadu<br/>Madras-6</p> <p>51. Km. K. Pasricha<br/>Principal<br/>Kanya Mahavidyalaya<br/>Jullundur City</p> <p>52. Dr. D.N. Gokhale<br/>12 Fergusson College Campus<br/>Poona-4</p> <p>53. Dr. K. Kuruvila Jacob<br/>Principal<br/>The Cathedral &amp; John Connon School<br/>6 Outram Road<br/>Bombay-1</p> <p>54. Shri M. Abdul Ghanis Saheb<br/>429 P.R. Street<br/>Muslimpur<br/>Vaniyambadi<br/>Distt. North Arcot (Tamil Nadu)</p> <p>55. Shri K. Sukumaran<br/>Education Officer<br/>Kendriya Vidyalaya Sangathan<br/>Nehru House<br/>Bahadur Shah Zafar Marg<br/>New Delhi-1</p> <p>Secretary<br/>National Council of Educational<br/>Research and Training<br/>New Delhi (Secretary)</p> |
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### *B. Executive Committee*

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| <p>1. Shri Siddhartha Shankar Ray<br/>Union Minister for Education<br/>and Social Welfare<br/>Shastri Bhavan<br/>New Delhi (President)</p> | <p>2. Prof. S. Nurul Hasan<br/>Minister of State<br/>Ministry of Education<br/>and Social Welfare<br/>Shastri Bhavan<br/>New Delhi (Vice-President)</p> |
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| <p>3. Prof. D.P. Yadav<br/>Deputy Minister<br/>Ministry of Education<br/>and Social Welfare<br/>Shastry Bhavan<br/>New Delhi</p> | <p>10. Joint Director<br/>National Council of Educational<br/>Research and Training<br/>New Delhi</p>  |
| <p>4. Prof. S.V.C. Aiyar<br/>Director<br/>National Council of Educational<br/>Research and Training<br/>New Delhi</p>            | <p>11. Dr. R.H. Dave<br/>Head of the Department of Textbooks<br/>National Council of Educational<br/>Research and Training<br/>New Delhi</p>             |
| <p>5. Dr. D.S. Kothari<br/>Chairman<br/>University Grants Commission<br/>New Delhi</p>   | <p>12. Dr. M.C. Pant<br/>Head of the Department of Science<br/>Education<br/>National Council of Educational<br/>Research and Training<br/>New Delhi</p> |
| <p>6. Prof. M.V. Mathur<br/>Director<br/>Asian Institute of Educational<br/>Planning and Administration<br/>New Delhi</p>        | <p>13. Shri P.D. Sharma<br/>Principal<br/>Regional College of Education<br/>Bhubaneswar</p>  |
| <p>7. Prof. Shanti Narayan<br/>Dean of Colleges<br/>University of Delhi<br/>Delhi</p>  | <p>14. Shri T.R. Jayaraman<br/>Joint Secretary<br/>Ministry of Education and Social<br/>Welfare<br/>New Delhi</p>  |
| <p>8. Shri S. Udupachar<br/>Headmaster<br/>Nrupatunga Multipurpose Higher<br/>Secondary School<br/>Hyderabad</p>                 | <p>15. Shri O.P. Mohla<br/>Financial Adviser (NCERT)<br/>Ministry of Education and Social<br/>Welfare<br/>New Delhi</p>                                  |
| <p>9. Shri D.S. Bajpai<br/>Principal<br/>Kendriya Vidyalaya<br/>Indian Institute of Technology<br/>Kanpur</p>                    | <p>Secretary<br/>National Council of Educational<br/>Research and Training<br/>New Delhi (<i>Secretary</i>)</p>  |

### *C. Finance Committee*

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| <p>1. Shri T.R. Jayaraman<br/>Joint Secretary<br/>Ministry of Education and Social<br/>Welfare<br/>New Delhi (<i>Chairman</i>)</p> | <p>3. Prof. M.V. Mathur<br/>Director<br/>Asian Institute of Educational<br/>Planning and Administration<br/>New Delhi</p> |
| <p>2. Prof. S.V.C. Aiyar<br/>Director<br/>National Council of Educational<br/>Research and Training<br/>New Delhi</p>              | <p>4. Prof. Shanti Narayan<br/>Dean of Colleges<br/>University of Delhi<br/>Delhi</p>                                     |

5. Shri O.P. Mohla  
Financial Adviser (NCERT)  
Ministry of Education and Social  
Welfare  
New Delhi

Shri S A. Abidin  
Secretary  
National Council of Educational  
Research and Training  
New Delhi (*Secretary*)

### *D. Programme Advisory Committee*

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

2. Joint Director  
National Council of Educational  
Research and Training  
New Delhi (*Vice-Chairman*)

3. Prof. H B Majumdar  
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Visva Bharati University  
P. O. Shantiniketan

4. Dr. D M Desai  
Dean  
Faculty of Education and Psychology  
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5. Smt. M. A Thankamma  
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Trivandrum

6. Prof. V R Taneja  
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Chandigarh

7. Prof C S. Bennur  
Dean and Principal  
University College of Education  
Karnatak University  
Dharwar

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14. Staff Representative from  
Regional College of Education  
Ajmer (Vacant)

15. Km. A. Charu  
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16. Dr. R C Dass  
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Ajmer
17. Dr. R. H Dave  
Head  
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18. Staff Representative from  
Regional College of Education  
Bhopal (Vacant)
19. Dr. (Km.) S Dutt  
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Central Institute of Education  
Delhi
20. Shri C. V Govinda Rao  
Officiating Principal  
Regional College of Education  
Mysore
21. Dr. (Km.) E. Marr  
Reader  
Department of Teacher Education  
New Delhi
22. Dr. (Smt.) Perin H Mehta  
Offg. Head  
Department of Educational  
Psychology and Foundations  
of Education  
New Delhi
23. Shri T. S. Mehta  
Incharge  
Department of Social Sciences and  
Humanities, New Delhi
24. Dr R. G. Misra  
Incharge  
Data Processing and Educational  
Survey Unit  
New Delhi
25. Dr. M. C. Pant  
Head  
Department of Science Education  
New Delhi
26. Shri D. S. Rawat  
Incharge  
Department of Pre-Primary and  
Primary Education  
New Delhi
27. Prof P K Roy  
Principal  
Central Institute of Education  
Delhi
28. Shri N K Sanyal  
Field Adviser  
Department of Science Education  
New Delhi
29. Dr. A. N. Sharma  
Reader  
Department of Educational  
Psychology and Foundations  
of Education  
New Delhi
30. Shri P. D. Sharma  
Principal  
Regional College of Education  
Bhubaneswar
31. Shri Shankar Narayan  
Reader  
Department of Teaching Aids  
New Delhi
32. Dr G S. Shrikantia  
Prof and Head of the Department of  
Science Education  
Regional College of Education  
Bhubaneswar
33. Prof. J. K. Shukla  
Principal  
Regional College of Education  
Bhopal

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Jamia Millia Islamia  
New Delhi (*Chairman*)
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Ministry of Education and  
Social Welfare  
New Delhi
3. Km. A. Chari  
Commissioner  
Kendriya Vidyalaya Sangathan  
Nehru House  
Bahadur Shah Zafar Marg  
New Delhi-1
4. Shri U. S. Seolekar  
Director  
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Textbooks Production and  
Curriculum  
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Poona-16
5. Shri M. P. N. Sharma  
Managing Director  
Bihar State Textbooks  
Publishing Corporation Pvt Ltd.  
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Buddha Marg  
Patna-1
6. Shri N. Narayan Rao  
Director  
Andhra Pradesh Textbooks Press  
Mint Compound  
Hyderabad
7. Shri A. E. T. Barrow  
Secretary  
Council for the Indian Schools  
Certificate Examination  
B-27 Nizamuddin East  
New Delhi-13
8. Shri D. R. Mankekar  
39 Bharati Nagar  
New Delhi
9. Begum M. Qureshi  
Director  
State Institute of Education  
Srinagar
10. Prof. C. S. Bennur  
Dean and Principal  
University College of Education  
Karnatak University  
Dharwar-1
11. Shri T. S. Sadasivan  
Head of the Botany Department  
Madras University  
Madras
12. Shri T. V. Thimme Gowda  
Director of Textbooks  
30/30-A Kumar Park West  
Bengalore-20
13. Shri K. L. Bordia  
Chairman  
Board of Secondary Education  
Rajasthan  
Ajmer
14. Shri S. S. Sodhi  
Chairman  
Punjab School Education Board  
Chandigarh
15. Shri D. S. Bajpai  
Principal  
Kendriya Vidyalaya  
Indian Institute of Technology  
Kanpur
16. Shri N. Chakravarty  
Incharge  
Publication Unit  
National Council of Educational  
Research and Training  
(*Member-Secretary*)

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Chairman  
University Grants Commission  
New Delhi (*Chairman*)
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Professor and Head  
Department of Chemistry  
Rajasthan University  
Jaipur
3. Dr. A. M. Ghose  
Professor  
Bose Institute  
93/1 Acharya Prafulla Chandra Road  
Calcutta-9
4. Shri R. K. Rath  
Secretary to the Govt of Orissa  
Education Department  
Bhubaneswar
5. Prof. B. Venkataraman  
Tata Institute of Fundamental  
Research  
Home Bhaba Road  
Bombay
6. Dr. A. R. Vasudeva Murthy  
Professor Inorganic and  
Mineral Chemistry  
Indian Institute of Science  
Bangalore-12
7. Dr. Rais Ahmed  
Professor of Physics  
Department of Physics  
Aligarh Muslim University  
Aligarh
8. Dr. B. M. Johri  
Professor and Head  
Department of Botany  
University of Delhi  
Delhi
9. Shri S. Udapachar  
Headmaster  
Nrupatunga Multipurpose  
Higher Secondary School  
Hyderabad
10. Prof. V. R. Taneja  
Dean and Head  
Department of Education  
Punjab University  
Chandigarh
11. Shri M. Ghose  
Principal  
State Institute of Education  
Banipur  
P. O. Baigachi  
Distt. 24 Parganas
12. Dr. R. C. Das  
Principal  
Regional College of Education  
Ajmer
13. Dr. M. C. Pant  
Head  
Department of Science Education  
National Council of Educational  
Research and Training  
New Delhi (*Member-Secretary*)

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1. Prof. S. V. C. Aiyar  
Director  
National Council of Educational  
Research and Training  
New Delhi (*Chairman*)
2. Shri B. Rama Rao  
Superintending  
Surveyor of Works (I)  
Central Public Works Department  
Nirman Bhavan  
New Delhi

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| <p>3. Shri B. R. Gambhir<br/>Assistance Financial Adviser<br/>Ministry of Finance (Works)<br/>Nirman Bhavan<br/>New Delhi</p> <p>4. Shri J. M. Benjamin<br/>Senior Architect (I)<br/>CPWD (Consulting Architect of<br/>the Council)<br/>Nirman Bhavan<br/>New Delhi</p> <p>5. Shri O. P. Mohla<br/>Financial Adviser (NCERT)<br/>Ministry of Education and Social<br/>Welfare<br/>Shastri Bhavan<br/>New Delhi</p> <p>6. Shri T. R. Jayaraman<br/>Joint Secretary<br/>Ministry of Education<br/>and Social Welfare<br/>Shastri Bhavan<br/>New Delhi</p> | <p>7. Shri S. C. Varshney<br/>Deputy General Manager<br/>Delhi Electric Supply Undertaking<br/>Raj Ghat Power House<br/>New Delhi</p> <p>8. Shri S. M. Hasnain<br/>Executive Engineer (Bldg )<br/>Municipal Corporation of Delhi<br/>Town Hall<br/>Delhi</p> <p>9. Prof. Shanti Narayan<br/>Dean of Colleges<br/>University of Delhi<br/>Delhi</p> <p>10. Joint Director<br/>National Council of Educational<br/>Research and Training<br/>New Delhi</p> <p>11. Shri S. A. Abidin<br/>Secretary<br/>National Council of Educational<br/>Research and Training<br/>New Delhi (<i>Member-Secretary</i>)</p> |
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#### *H. Establishment Committee*

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| <p>1. Dr. D. S. Kothari<br/>Chairman<br/>University Grants Commission<br/>New Delhi (<i>Chairman</i>)</p> <p>2. Prof. S. V. C. Aiyar<br/>Director<br/>National Council of Educational<br/>Research and Training<br/>New Delhi</p> <p>3. Joint Director<br/>National Council of Educational<br/>Research and Training<br/>New Delhi</p> <p>4. Shri T. R. Jayaraman<br/>Joint Secretary<br/>Ministry of Education and<br/>Social Welfare<br/>New Delhi</p> <p>5. Shri O. P. Mohla<br/>Financial Adviser (NCERT)<br/>Ministry of Education and<br/>Social Welfare<br/>New Delhi</p> | <p>6. Prof. Shanti Narayan<br/>Dean of Colleges<br/>University of Delhi<br/>Delhi</p> <p>7. Prof. S. P. Luthra<br/>Indian Institute of Technology<br/>New Delhi</p> <p>8. Dr. B. N. Ganguli<br/>7-B Hauz Khas Enclave<br/>Ishwar Bhavan<br/>New Delhi-16</p> <p>9. Dr. B. R. Seshachar<br/>Head of the Department of Zoology<br/>University of Delhi<br/>Delhi</p> <p>10. Shri S. A. Abidin<br/>Secretary<br/>National Council of Educational<br/>Research and Training<br/>New Delhi (<i>Member-Secretary</i>)</p> |
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## APPENDIX 2

### *Summary of Minutes of the Meetings of the Council and its Committees held During 1971-72*

A Special meeting of the General Body of the Council was held at New Delhi on 24th January, 1972, to consider and approve the amendments to Rule 3 and Rule 23 of the Rules of the Council.

The Executive Committee of the Council met four times during the year, i.e. on 23rd June, 1971, 28th January, 10th February, and 4th March, 1972. A summary of the important decisions taken in these meetings is given below

(i) The Executive Committee approved the proposal regarding the continuation of publication of textbooks by the NCERT and setting up of textbook panels in different subject areas

(ii) The Executive Committee approved the creation of a post of Welfare Officer in the Council.

(iii) The Executive Committee approved continuation of the Offices of the Field Advisers in the States till the end of February, 1973. It also resolved that necessary steps should be taken to set up Offices of Field Advisers in larger States as early as possible, so that liaison work with the States could be carried out effectively

(iv) The Executive Committee approved the merger of the Tribal Education Unit in the Department of Pre-Primary and Primary Education of the National Institute of Education. This unit was previously being financed by the Government of India, Department of Social Welfare.

(v) The Executive Committee accepted the proposal regarding publication of Urdu books by the NCERT in collaboration with the Taraqqi-e-Urdu Board.

(vi) The Executive Committee resolved that full whole-sale trade discount should be given to the members of the staff of the NCERT for purchasing one copy each of the Council's publications.

(vii) The Executive Committee resolved that every effort should be made to effect transfer of the Central Institute of Education to the University of Delhi from the academic session 1972-73.

(viii) The Executive Committee approved the proposal regarding absorption of the employees working on daily wages in various Departments of the NIE and in different Sections of the Council Secretariat under the Special Project Establishment (SPE). Except for seniority and promotions based on seniority, the staff of the SPE will get most of the benefits which regular employees of the Council are getting, viz. leave, weekly and other holidays and salary in the regular pay scales, etc.

(ix) The Executive Committee resolved that all Professors of outstanding merit, who had put in at least five years of continuous service should be eligible for the selection grade of Rs. 1600-1800. It was, however, stressed that the working out of

the procedure was extremely important as only the best men should get a chance of being appointed in the selection grade

(x) The Executive Committee accepted the report of the 4-year language course committee in toto and resolved that the Government be moved for initiating action on a long-term basis

(xi) While considering the demands of the Ministerial Staff Association, the Executive Committee resolved that steps should be taken for the creation of a Compassionate Fund in the Council.

(xii) The Executive Committee resolved that whenever a teacher in a teaching institution of the Council attains the age of superannuation during an academic term, the services of such a person should automatically be continued till the end of the academic term. The Committee suggested that a suitable draft regulation may be framed in this regard.

The Finance Committee of the Council met twice in the year, i.e. on 7th August and 5th November, 1971. In its first meeting, the Committee made recommendations to the Executive Committee on a number of problems like fixation of rates of remuneration for setting question papers, evaluation of answerbooks, etc. in connection with the diploma course in educational and vocational guidance; fixation of rates for the use of the Auditorium of the Department of Teaching Aids; permission to give 15% discount to the Central Schools on the purchase of Council's textbooks subject to certain conditions, revival of the scheme of financial assistance for organisation of science clubs and science fairs; and raising the rates of TA and DA for Research Fellows so as to make them at par with those admissible to Lecturers in the Council. In its second meeting, the Committee mainly devoted itself to the consideration of the Revised Estimates for 1971-72 and Budget Estimates for 1972-73 of the Council. In this meeting, the Committee also suggested guidelines for the preparation of the Council's budget in future.

The Programme Advisory Committee of the Council met only once during the year, i.e. on 17th and 18th September, 1971. The Committee considered and approved the revised programmes for 1971-72 and draft proposals for 1972-73 of different Departments of the NIE, Regional Colleges of Education and the Central Institute of Education. The Committee noted with satisfaction that the Executive Committee had approved the continuation of new 4-year courses in languages in the Regional Colleges of Education and suggested that a committee consisting of one Reader or Lecturer in English from each Regional College may be formed to develop a suitable curriculum for the new 4-year integrated course in English. The committee further suggested that a curriculum committee for the development of 4-year language courses should be formed to provide broad guidelines to the Regional Colleges. The Committee considered an evaluation report on the National Integration Project, as submitted by the Department of Social Sciences and Humanities, and authorised its Chairman to appoint a small expert committee for advising to NCERT on all matters relating to this project. The Committee noted that the Council had appointed an Evaluation Committee for going into the various aspects of the programme of summer science institutes with Shri M.V. Rajagopal as its Chairman. The Committee considered the evaluation report of the committee appointed earlier by the Council to assess the working of the scheme of "Experimental Projects." The Committee recommended that the responsibility for the implementation of the scheme of Experimental Projects in secondary schools and in primary schools and junior teacher training institutions costing up to Rs. 500 each may be transferred to the Regional Colleges of

**Education** All experimental projects to be undertaken by secondary schools and by primary schools and junior teacher training institutions and costing more than Rs. 500/- each may be referred by the Regional Colleges to the Department of Teacher Education and the Department of Pre-Primary and Primary Education respectively for scrutiny and approval. The Committee appointed a sub-committee to suggest the procedures for the purchase of films and filmstrips by the Department of Teaching Aids and also to review the membership of different panels for previewing of films. The Committee also considered and approved the recommendations made by its various sub-committees, i.e. GARP Sub-Committee, Research Sub-Committee on Seminars and Training Programmes. The Committee recommended that the present Research Sub-Committee and Sub-Committee on Seminars and Training Programmes may be redesignated respectively as Sub-Committee for Research and Development Projects and Programmes Sub-Committee. One of the significant recommendations made by the Programme Advisory Committee to the Executive Committee pertains to the organisation of science fairs. The Committee recommended that organisation of science fairs should be supported by the NCERT and the Council itself should organise all-India science fairs to promote science education in the country.

### APPENDIX 3

#### *Statement of Accounts of National Council of Educational Research and Training for the Year 1971-72*

##### Consolidated Receipts and Payments Account (In Rs.)

RECEIPTS		PAYMENTS	
Opening Balance	29,94,698.10	NON-PLAN EXPENDITURE	2,01,65,743 10
<i>Grants received from Government :</i>		(a) Pay & Allowances, Programmes, etc.	1,97,90,294.90
(a) General Grant for NCERT	2,74,18,350.00	(b) Loans and Advances	6,16,380 00
(b) Specific Grants	27,86,543 00	Less Recoveries	(—) 2,40,931.80
Contribution from other sources	8,000.00		<u>3,75,448.20</u>
Receipts : (a) Sale proceeds of publications etc.	28,32,961.58	PLAN EXPENDITURE	1,08,69,479.27
(b) Other receipts	17,00,869.01	Expenditure out of Specific Grants	23,01,516 29
Provident Fund	13,06,320.39	Provident Fund	6,54,071.25
Deposits, Advances, Suspense and Remittances	9,97,703.98	Deposits, Advances, Suspense and Remittances	19,23,494 75
		Closing Balance	41,31,141.40
<b>Total</b>	<u>4,00,45,446.06</u>	<b>Total</b>	<u>4,00,45,446 06</u>

## APPENDIX 4

### *Development of Campuses*

#### *(a) NIE Campus*

The construction of 32 each type II and type III quarters and the Director's quarter for which administrative and financial sanction had been accorded in 1970-71, was nearing completion. The construction of 32 type I, 16 type IV and 8 type V quarters which was approved in 1970-71, could not, however, be started during 1971-72.

The uneven vacant plots of land overgrown with shrubs at the NIE Campus were levelled during the year under report and are proposed to be dressed by the CPWD so as to give a good look to the surroundings.

The supply of drinking water by the Municipal Corporation of Delhi to the NIE Campus was started on 4th December, 1971. Tubewell water which was found to be unpotable and which was hitherto flowing into the bathrooms was disconnected to replace sweet water. The tubewell water is now being used for horticultural purposes.

During the year under report, the construction of 40,000 gallons capacity underground tank near the overhead reservoir for storing filtered water was completed at the NIE Campus. Besides, pumps were also installed near the underground tank for pumping filtered water from the underground tank to the overhead reservoir.

The construction of car park, cycle and scooter sheds was taken up towards the end of the financial year 1971-72. The work is likely to be completed in a couple of months.

#### *(b) Campuses in the Regional Colleges of Education*

As regards development of campuses in the Regional Colleges of Education, major works have already been completed. During the year under report, emphasis in the Colleges was laid on the construction of staff quarters to meet the demand for residential accommodation. It was decided that henceforth construction of new works and maintenance of existing buildings in the Regional Colleges would be entrusted to the Central Public Works Department in place of State P.W.D.

## APPENDIX 5

### *NIE Library*

The National Institute of Education (NIE) has a fairly big Library at New Delhi Campus of the Council. The library mainly caters to the needs of the research staff of various Departments/Units of the NIE. The clientele also includes persons working in other research and academic organisations. The library is also used by the teacher trainees and State level representatives attending seminars, workshops, etc. in the NIE Campus throughout the year. Besides, the library provides inter-library loan facilities to many local institutions.

The collection of the NIE Library has touched the mark of about one lakh books and about 40,000 bound journals. As many as 280 journals, both Indian and foreign, are being subscribed to annually and as many as 75 journals are received free.

To meet the growing demands of its clientele, the NIE Library adds every month about 150 new volumes, representing basic and seminal material on educational thinking and related subjects.

During the year under report, about 2,500 new books were added to the library. A list of these new arrivals were circulated to all Departments of the NIE.

During 1971-72, furniture and equipment costing a little over Rs 56,000/- was acquired for the library to overcome the problem of overcrowding in the library's stock hall and reference room, to increase the seating capacity of the reading room and to improve the services of the library.

The NIE Library Committee, known as the Kesavan Committee, which was appointed last year to go into the problems of accommodation, staff, furniture and equipment for the library, submitted its report in 1971-72. The Committee made important recommendations regarding the design of library block, optimum holdings of the library and also the requirements of the library staff and their grades.

## APPENDIX 6

### *Curriculum Development*

A brief account of the progress in the area of curriculum development during the year 1971-72 is given below.

#### 1. Science and Mathematics

##### 1.01 *Science at the Primary School Level*

Curriculum development in science at the primary school level aims at improving science teaching through active participation of children in the learning process. In this approach, emphasis is laid on the 'process' of Science rather than its 'products'. During the year under report a textbook "Science is Doing" for class V was written, edited and cyclostyled. The cyclostyled copies were mailed to the States of Andhra Pradesh, Mysore, Kerala, Tamil Nadu, Gujarat, Maharashtra, Punjab and Jammu and Kashmir for adoption/adaptation, translation into regional languages and printing by them. The manuscript of this textbook (English and Hindi versions) was also sent to the Press by the Department of Science Education during the year. The art pulls of the illustrations of the textbook were made available to the States for printing of the book in the regional languages. The manuscript of the accompanying teachers' guide was also prepared in English and translated into Hindi. Copies of another textbook "Evaluation Brochure" for classes III and IV were made available to the States for use by the supervisors during their visits to schools.

##### 1.02 *Secondary Science Teaching Project (UNESCO-assisted)*

This is an on-going project. During 1971-72, the first drafts of the textual materials for the first year of the secondary school stage were developed in different science subjects and also made press-worthy. Textual materials in all science subjects for the second year of the middle school stage were revised and published. Textbooks for the third year of the same stage were made press-worthy. The subject-wise details of the work done is as follows :

##### *Physics*

Physics part I for class IX was written, cyclostyled and distributed to the States for comments. On the basis of the comments received, it was revised and made press-worthy except for illustrations. Draft outlines of four chapters of physics part II for class X were prepared and the first chapter was also written. The textbook for class VII was revised and printed, while that for class VIII was revised and translated into Hindi and sent to the press. The teachers' guides for classes VI and VIII were thoroughly revised. The kit guides for classes VI and VII with write-up for a limited number of experiments were mimeographed and made available for distribution. The demonstration and pupil's kits for classes VII and VIII were finalised and the prototypes produced.

##### *Chemistry*

<sup>1</sup> The first drafts of six chapters of the textbook for class IX were prepared, out of

which three were finalised by the Editorial Committee. Chemistry textbook part I and part II for middle classes (both English and Hindi versions) was revised for the reprint edition. A new teachers' guide for chemistry part I was prepared, finalised and printed on the basis of the revised textbook. A kit guide for chemistry demonstration was prepared and mimeographed. Prototype for chemistry for the middle school stage was also designed and finalised.

### *Biology*

The work on the writing of the biology textbook for class IX was in progress. Biology part II and part III for the middle school stage were revised and sent for printing. The instructional manual for the biology kit was also finalised and mimeographed.

### *Mathematics*

Arithmetic-algebra and geometry textbooks for class VI and teachers' guide for arithmetic-algebra were revised on the basis of the comments received from different parts of the country. Revised drafts of arithmetic-algebra for class VIII and teachers' guide for arithmetic-algebra part II and part III were also prepared. The first draft of algebra and geometry for class IX were prepared and discussed with the experts. The audio-visual aids, demonstration kits and laboratory kits were under preparation. The first draft of 'Insight into Mathematics' part II for class II was also ready.

### *1.03 A Comprehensive Scheme for the Improvement of Science Education (Study Groups)*

1971-72 was a crucial year for the Study Groups. The Biology and Chemistry Study Groups mostly completed their assignments of producing textbooks and teachers' guides for the entire school stage. Except the Convener study group, all other study groups in these two subjects were wound up from 1st April, 1971. Physics Study Group at Jaipur was abolished from 1st April, 1972. The remaining four study groups in this subject at New Delhi, Calcutta, Nagpur and Dehra Dun decided to produce useful material through collaborative efforts. Except for mechanics, the textbook for the first two years of the high school stage was developed and the draft was being finalised. Physics part III for the middle school stage was sent for printing. The curriculum material for the middle school stage and the textbook and laboratory manual for the first year of the high school stage were printed in chemistry. The teachers' guide in chemistry for the first year of the high school stage was sent to the press and the laboratory manual in that subject for the second and the third years of the high school stage was made press-worthy. The work on developing teachers' guide in chemistry for the last two years of the high school stage was in progress and was expected to be completed shortly. With the appointment of Dr J N. Kapur as Vice-Chancellor of Meerut University, it was decided to start one study group in mathematics at Meerut to utilise his services. This new Mathematics Study Group developed materials during the year under report mostly for the first and second years of the high school stage. So far, middle school geometry books (3 in number) and algebra books (2 in number) have been printed. Printing of Book III is proposed to be taken up shortly. Besides, teachers' guide for geometry Book I and Book II were also printed and those for geometry and algebra Book II and Book III were sent to the press. Copies of the textual materials were sent to the State Institutes of Science Education and Teacher Training Colleges for comments. The comments would be processed after they are received.

### *1.04 Unesco-Unicef-assisted Pilot Project for Strengthening of Science Teaching at the School Stage*

Under an agreement executed by the Ministry of Education with UNESCO and UNICEF in April 1967, a project was launched from the beginning of the school year



1970 to expand and improve the teaching of science throughout the school stage in the country. By 1971-72, all States and three Union Territories had agreed to implement this project on a pilot basis in 50 of their selected primary schools and 30 middle schools. The Council worked during the year very closely with the officers of the UNICEF stationed in New Delhi and assisted them in implementing the pilot project in the participating States/Union Territories. The instructional materials (textbooks and teachers' guides together with syllabi) developed by the Council were made available to the States for adoption/adaptation and translation into regional languages for use in the experimental schools. Hindi versions of these materials were supplied directly by the Council to all the Hindi-speaking States. Sample kits of science equipment were also supplied by the Council for use in the experimental schools for the teaching of new science courses. The Council organised orientation courses for key personnel from the State Institutes of Science Education, who in turn were required to organise training courses for experimental school teachers in their respective States. Besides, the Council made arrangement for the distribution of UNICEF equipment to 100 teacher training colleges and 400 teacher training schools selected under the Project during 1971-72. The total value of the equipment supplied to 500 teacher training institutions was of the order of about Rs 95 lakhs. During the year under report, supplies of cover paper and text paper were also received from UNICEF at the ports of Bombay and Madras. The cover paper was distributed to the States in accordance with the orders of the Ministry of Education and Social Welfare. The balance of cover paper was stored with the Publication Unit of the NCERT at New Delhi pending further distribution. Similarly, in the case of text paper the balance from Bombay port was stored with Publication Unit at New Delhi and the paper from the Madras port was stored at the Regional Colleges of Education pending further distribution to the States concerned. The value of the cover paper received from UNICEF is Rs. 6.25 lakhs while that of text paper is Rs 56 lakhs approximately.

#### 1.05 *Production of Supplementary Reading Materials in Science*

During the year under report, work continued on the preparation of supplementary reading Materials in science. The progress of work is given below :

##### I. *Titles which were sent to the press*

- (1) The Bird Migration
- (2) ABC of Atom
- (3) Hindi version of 'Life and Work of Meghnad Saha'
- (4) Fight Against Diseases—Chemotherapy
- (5) Plants Viruses
- (6) Our Agriculture
- (7) The Spices
- (8) Man-Made Forests
- (9) Biological Clocks

##### II. *Titles which reached the page proof stage of publication*

- (1) The Story of Transport
- (2) Our Tree Neighbours
- (3) Marine Plants
- (4) Microbes
- (5) Medicinal Plants

##### III. *Manuscripts which reached the final stage of approval, etc.*

- (1) The Story of Glass

- (2) The Story of Oil
- (3) Animals without Backbone

#### IV. *Manuscripts which were rejected/dropped*

- (1) The Riddle of Life
- (2) Power from Water

Out of remaining 30 titles, about 10 reached the manuscript stage and were either sent to the reviewers or returned to the authors after a preliminary review for modifications, etc.

#### 1.06 *Production of Science Kits*

The Central Science Workshop of the Council continued to support the curriculum development programme of science by preparing prototypes of new science equipment and also by undertaking batch production of kits for use in the experimental schools selected under the UNESCO-UNICEF-assisted pilot project. Physics Demonstration Kit No III meant for the final year of the middle school stage was developed during the year under report. This completes the series of physics kits for that stage. Improvised apparatus was developed in the subject area of light, magnetism and electricity. A prototype was developed and tried in the laboratory. Based on this design, which will have 74 items including the kit box, the kit will be produced in a batch of 600 Nos. to be supplied to the experimental schools during 1972-73. The top of the kit box will be wide enough to be utilised as a small demonstration table in the village schools where separate tables may not be available. The kit will not create any storage problem as it can be kept in the corner of a room. Physics Pupils' Kit No III was also developed. The Pupils' kit contains a number of items which can be used by the students themselves. This kit is meant for use by 45 students at a time. Students can work in batches of two or more according to the requirements. To provide an adequate opportunity to the students to perform experiments in chemistry, a special kit (Supplementary to Chemistry Demonstration Kit for middle schools) was also developed. Two or more students can work on it at a time. The kit contains 37 items in a tiny aluminium box. The kit has been designed in such a way that it can be used in a village school which may not have any demonstration table. Under phase II of the UNESCO-UNICEF-assisted pilot project on science teaching, about 600 Nos. of each of the following kits were produced in the Central Science Workshop of the Council during 1971-72.

- (1) Physics Demonstration Kit No. II.
- (2) Chemistry Demonstration Kit for Middle Schools
- (3) Biology Demonstration Kit for Middle Schools.

In addition, 15 kits required by the Physics Study Group were also prepared in the workshop. These kits were despatched to States for use in the key institutions and experimental schools.

#### 1.07 *Instructional Material Centre for Science Education*

The Instructional Material Centre for Science Education continued to discharge its functions of collection and dissemination of knowledge pertaining to school science during the year under report. The activities undertaken by the centre were as follows :

- (1) Reorganisation of the materials displayed for a better and meaningful presentation,
- (2) Addition of teaching aids and science materials received from the German Democratic Republic,
- (3) Organisation of science exhibitions at Bhubaneswar, NIE Campus, Bal Bhavan and National Physical Laboratory, New Delhi. (The exhibitions at NIE Campus and National Physical Laboratory were organised in connection with the UNESCO Silver Jubilee celebrations), and
- (4) Preparation of pamphlets in connection with the science exhibition held at Bhubaneswar.

The Center is receiving science journals and other secondary science materials from 24 international organisations on exchange basis. During the year under report, the Centre was visited by a number of teacher educators, inspectors of schools, science supervisors, science councillors, key persons from the States and foreign educators.

Some headway was made in the establishment of a Primary Science Centre in the Department of Science Education of the NIE. Different stages in the development of primary science instructional materials together with demonstration of activities based on equipment from the kits and on improvised equipment are on display in this Centre.

#### 1.08 *Ancillary Curriculum Project*

The film "Science is Doing" was prepared in English under this Project to explain the new approach to the philosophy and teaching of primary science. The film was dubbed in Hindi for distribution to the States under the UNESCO-UNICEF-assisted pilot project for use in their teacher training schools. The profile for the second film in primary science on "Rocks, Soils and Minerals" was also prepared and discussed. The shooting script was almost ready for the third film on "Teaching of Elementary Physics Today". The purpose of this film is to highlight the effectiveness of the new educational technology at the middle school stage.

During the year under report, two sets of slides on primary science teaching and teaching of physics were duplicated and sent to about 100 teacher training institutions throughout the country. An intensive programme for the production of 20 slides and 2 filmstrips for each science subject and for each year of the middle schools stage was also planned. The shooting script for a set of 20 and 30 slides was prepared for middle school physics and biology respectively.

The filmstrip on pressure liquids in physics was nearing completion and the work on mathematics filmstrip symmetry was started. The shooting script was also written for the middle school physics filmstrip "Structure of Matter."

Cyclostyled copies of Textbook Evaluation Brochure for classes III and IV were made available to the States for use by the Supervisors during their visits to schools. Similar brochures were also prepared for class VI in physics and biology and for class VIII in physics and chemistry. Illustrated kit guides were prepared and mimeographed, copies of which were supplied to the experimental schools under the UNESCO-UNICEF-assisted pilot project on science teaching. The work on preparing a brochure on 'Copernicus' for Copernicus Centenary to be celebrated in February, 1973 was also initiated.

## 2. Social Sciences and Humanities

### 2.01 *Social Studies*

A comprehensive handbook in social studies for teacher educators was finalised. The manuscript was ready for being sent to the press. The work on the preparation of the textbook in social studies (Volume II) for higher secondary classes made steady progress. Draft syllabus in social studies for classes I to XI was revised. A set of workbooks in social studies for classes I to V, was prepared by the Council in collaboration with the experimental school at IIT, Kanpur

### 2.02 *History*

At present there is a noticeable trend to introduce world history as one of the papers to be studied at the higher secondary stage. Very often, there is no rationale behind the formulation of this course. For ensuring proper historical perspective and teaching of the paper, the Council undertook a project on world history during 1971-72. The project aimed at formulation of curriculum in world history for higher secondary classes. This involved working in detail the rational, scheme of studies and detailed specifications for different units pertaining to the content. The syllabus was prepared and finalised in an all-India workshop held at Lucknow. A format for a handbook for history teachers of middle grades was prepared by a working group. The working group also discussed and finalised a few chapters for the handbook. A textbook in History 'Modern India' for class VIII was prepared and published. As a follow-up of the all-India seminar on student-participation in the teaching of history at the secondary stage, the work on the preparation of a brochure was continued during the year. The manuscript of the brochure is likely to be sent to the press soon. Some of the chapters of the handbook for history teachers for secondary schools were translated from English into Hindi.

### 2.03 *Civics*

The syllabus in civics for higher secondary classes was developed in a workshop held in November, 1971. The draft outline of the syllabus was detailed out in the Department of Social Sciences and Humanities of the NIE and was placed before a review group for finalisation. The manuscript is expected to be sent to the press soon. The manuscript of 'Independent India' (Civics textbook for class VIII) was reviewed by a review group of experienced persons in the field of civics in its meeting held during June-July, 1971. On the basis of the report of the review group, the manuscript was finalised in the Department of Social Sciences and Humanities of the NIE. The manuscript was later sent for printing. With this book, the series of textbooks in civics for the middle school stage was completed.

### 2.04 *Geography*

The manuscripts of class VIII geography textbook 'Europe and India', both Hindi and English versions, were completed last year. The illustrations and the work connected with the printing of these books were completed during the year under report. The Hindi version of the book was released in August, 1971. The work on the English version was in its final stage and the book was expected to be published shortly.

### 2.05 *Economics*

The material for the teachers' handbook in economics for secondary schools was developed and finalised in a workshop organised in November, 1971

## 2.06 *Mother Tongue*

The final drafts of the 'Kavya Bharati' and 'Gadya Bharti', new textbooks of Hindi Poetry selection and Hindi Prose selection respectively for higher secondary classes, were prepared and were ready for being sent to the press. The new Hindi primer prepared by the Department of Social Sciences and Humanities was sent to the Department of Textbooks for comments. The comments were received and were being looked into

## 2.07 *Second Languages*

The press-copy of the first textbook in Bengali as a second language and its illustrations were prepared. The book was sent to the press for printing.

## 2.08 *Sanskrit*

Work was started on the first textbook in Sanskrit. The first and second textbooks in this series are expected to be ready during 1972-73.

## 2.09 *Production of Supplementary Reading Materials in Social Sciences*

During the year under report, the manuscripts of the following supplementary readers were finalised and sent to the Publication Unit of the Council for printing .

1. Giriraj Himalaya
2. Peeps Through the Millennium
3. Van Sampati

## 2.10. *Coordinated Curriculum Plan for School Education*

The coordinated curriculum for general education covering the entire school stage was prepared during the year under report. The plan includes the goals of school education at the elementary and secondary school stages, the scheme of studies, the allotment of instructional time to various subjects, and detailed courses of studies in Hindi as a first and second language, social studies, history, geography, civics, health and physical education and population education.

## 2.11 *Preparation of Instructional Materials*

Twenty-four teaching units in history and geography were finalised during 1971-72. Five brochures containing teaching units in these two subjects were prepared and sent for printing during the year

## 2.12 *Transfer of the Project on 'Development of Methods and Materials for the Improvement of Teaching Languages' from the NCERT to the Central Institute of Indian Languages, Mysore*

In pursuance of the decision of the Union Ministry of Education and Social Welfare communicated vide its letter No. F. 8-17/71-L 2 dated 28th May, 1971 the Project on 'Development of Methods and Materials for the Improvement of Teaching Languages' was transferred from the NCERT to the Central Institute of Indian Languages (CIIL), Mysore. As the funds for implementation of the scheme during 1971-72 had been provided in the Council's budget, it was decided that the director, CIIL would assume administrative control for the implementation of the projects which had been assigned by the NCERT to the Central Institute of English, Hyderabad, Centre for Advanced Study in Linguistics in Annamalai University and the Deccan College, Poona with immediate effect. The NCERT would release funds to these bodies for the implementation of the project during 1971-72 on the recommendations

of the Director, CIIL, Mysore. The Council also agreed to provide necessary personnel to help the Director, CIIL in supervising the projects. From 1972-73, necessary provision for implementation of the project would be made in the budget of the CIIL, Mysore.

### 3. Development of National Curriculum Standards for the Primary Stage

Development of minimum curriculum standards for the primary stage education is a new project in the field of curriculum planning. The idea is to arrive at a national consensus about the minimum targets of achievements in various aspects of education which are considered to be necessary for every school going child. During the year under report, learning outcomes at the primary stage were worked out in an all-India workshop which was attended by representatives of the State Departments of Education, State Institutes of Education and non-official specialists in the field. Learning outcomes thus developed are proposed to be processed further for developing a curriculum.

### 4. Curriculum in Work-Experience

The curriculum in work-experience developed by the Council was tried out during 1971-72 in 30 selected schools of Hyderabad city and district. The teachers of these schools were given orientation to the curriculum in work-experience and were also provided with the equipment for implementing the programme.

### 5. Teaching Aids

The Council has been working on a programme of promoting the use of teaching aids in education at the entire school stage during the last several years. This includes inexpensive techniques such as flannelgraph kits, graphic kits, etc. which are very useful at the school stage. In addition, a considerable amount of filmstrips, charts, diagrams and other relevant materials are produced in various school subjects. During the year under report, the following materials are produced:

*Films*. A film on 'Science is Doing' was produced. 100 prints of the film were got duplicated. The film was also dubbed in Hindi.

Treatment script for another film 'Teaching of Elementary Physics Today' was prepared and revised.

Four prints of children's film 'Suno Katha Shri Ram Ki' were got prepared and supplied to the Ministry of External Affairs.

#### *Filmstrips*

The following filmstrips were completed:

- i) Jammu and Kashmir
- ii) Road Safety
- iii) 3-D Teaching Aids in Plaster of Paris
- iv) Department of Teaching Aids

#### *Posters on National Emergency*

During national emergency, the following posters were designed, printed and distributed among the educational institutions of Delhi:

- i) Donate Blood
- ii) Naya Desh Bangla Desh
- iii) Rashtriya Ekta
- iv) 'Ghus Khori' is a Social Crime
- v) 'Socho'

#### *Study Kit on 'Our India'*

A revised version of the study kit on 'Our India' was prepared.

#### *History Packages on Ancient India*

The work regarding the completion of history packages on ancient India made progress during the year under report.

## APPENDIX 7

### *National Science Talent Search Scheme*

In the science talent search examination held in 1971, about 1,000 candidates qualified for interview. On the basis of interview, 359 candidates were finally selected for awards. A state-wise distribution of candidates selected for awards during 1968-71 is given in the Annexure.

The science talent search examination of 1972 was held at 350 centres throughout the country, where about 7,200 candidates took the test. The awards for this examination will be made in June, 1972 after the interviews.

Nineteen summer schools of four weeks' duration each were planned for undergraduate awardees, out of which eighteen could be organised during May-June, 1971 at different university centres. The postgraduate awardees were placed for their summer programmes at about twenty five national laboratories and institutes of advanced studies in different parts of the country.

A team of 15 talented students in science from the U.K. and U.S.A. visited India in September, 1971. A special function was organised for the visiting team to meet the NSTS awardees of Delhi.

**ANNEXURE**

**State-wise Distribution of Candidates Selected for Awards (1968-1971)  
under the NSTS Scheme**

Sl No	Name of State/ Union Territory	Number of Scholarships Awarded			
		1968	1969	1970	1971
1.	Andhra Pradesh	4	11	3	11
2.	Assam	4	5	—	3
3.	Bihar	7	14	6	8
4.	Gujarat	4	7	3	6
5.	Haryana	—	1	—	—
6.	Jammu & Kashmir	—	—	1	—
7.	Kerala	32	11	13	10
8.	Madhya Pradesh	9	10	8	15
9.	Maharashtra	30	35	36	54
10.	Mysore	30	5	12	15
11.	Nagaland	—	—	—	—
12.	Orissa	3	2	2	10
13.	Punjab	3	2	6	2
14.	Rajasthan	9	8	20	4
15.	Tamil Nadu	16	21	28	32
16.	Uttar Pradesh	46	25	15	24
17.	West Bengal	55	77	54	72
18.	Andaman & Nicobar Islands	—	—	—	—
19.	Chandigarh	1	—	2	—
20.	Delhi	100	124	149	93
21.	Goa	—	—	—	—
22.	Himachal Pradesh	1	1	1	—
23.	Laccadive, Minicoy & Amindivi Islands	—	—	—	—
24.	Manipur	1	—	—	—
25.	N.E.F A	—	—	—	—
26.	Pondicherry	—	—	—	—
27.	Tripura	—	—	—	—
<b>Total</b>		<b>355</b>	<b>359</b>	<b>359</b>	<b>359</b>
		<b>(5)</b>	<b>(10)</b>	<b>(11)</b>	<b>(11)</b>

*Note :* Figures in parentheses represent the number of candidates awarded scholarship for a study of Mathematics.



## APPENDIX 8

### *National Integration Projects*

The Ministry of Education and Social Welfare has entrusted to the Council the task of fostering national integration among school children through various educational programmes. The major programmes undertaken by the Council under the National Integration Project are as follows :

- (a) Organisation of inter-State camps for students and teachers and separate camps for teachers and school principals,
- (b) Initiation of 'Our India Project' in selected schools, and
- (c) Preparation and production of suitable instructional materials relevant to the subject for students and teachers

A brief account of activities conducted during the year under report under each of these programmes is given below :

#### *(a) Organisation of Inter-State Camps*

During May-June, 1971 seven inter-State student-teacher camps were organised at Srinagar, Poona, Trivandrum, Darjeeling, Chhamba, Netarhat and Mt Abu. Ten camps were planned for being organised during November-December, 1971 and January, 1972, but due to national emergency only two camps could be held at Bhatinda and Kanpur. In each of these camps, students and teachers were invited from five States.

By now all States have been covered and over a dozen schools have participated from each State in the inter-State student-teacher camps.

Prior to the organisation of each series of camps, a two-day orientation meet for the Camp Directors and Organisers was arranged at the NIE Campus.

The activities in student-teacher camps included learning languages of the fellow-campers, talks, discussions and debates, exhibitions, field trips and excursions, activities for the promotion of physical health and safety; cultural and recreational activities, etc.

Two inter-State camps exclusively for teachers were organised in May-June 1971 at Baroda and Coimbatore. The duration of each camp was ten days. Teachers from almost all the States participated in these camps. The activities in the teachers' camps included the project "Know our State"; preparation of instructional materials relevant to the theme; and talks by experts on topics like teacher's role in fostering national integration among children, national integration through social studies, national integration through geography and creative dramatics in the service of national integration.

One camp exclusively meant for principals of schools was organised at Lucknow in November, 1971. Seventy one principals from all States except Assam and Jammu and Kashmir participated in the camp. Eminent guest speakers were invited to talk to the campers. The campers were divided into six groups, each group dealing with one of the following subjects

- (1) Curriculum
- (2) Curricular activities
- (3) Knowing through exchanges
- (4) School and community
- (5) Our India exhibition
- (6) Coordination

The material prepared by these groups was compiled in the form of a handbook which could be used as guidelines for organising activities in schools for promoting national integration. The material is being processed and the handbook is proposed to be published. The participants in the principals' camp had brought with them some material which depicted special features of their States. The material was put up in the form of an exhibition in the camp.

**(b) 'Our India Project'**

'Our India Project' forms an integral part of the overall programme of fostering national integration among school children through educational activities. The main objective of this project is to make the children understand the unity in diversity which is a special characteristic of our country. The specific objectives of the project are .

- (1) To reinforce the achievements and experiences gained at the inter-State camps,
- (2) To follow up the work of inter-State student-teacher camps in individual schools, and
- (3) To widen the area of impact of inter-State student-teacher camps by involving all participating schools in the project for the development of a national perspective among the students.

Under this project, grants were sanctioned by the Ministry of Education and Social Welfare to 100 selected schools at the rate of Rs. 1,000/-per school.

The activities undertaken by the schools under the project included essay, recitation, elocution and debate competitions; publication of hand-written magazines to which articles were contributed by the students; preparation of charts, models, maps, graphs, etc. depicting historical, geographical, cultural and economic aspects of the States undertaken for study.

**(c) Preparation and Production of Instructional Materials for Students and Teachers**

Under this aspect of the project, it is proposed to bring out useful instructional materials both for students and teachers. A handbook entitled "Geography and National Integration" was under preparation during the year under report for teachers teaching geography at the higher secondary stage. A number of songs on national integration from various languages of India were also collected and compiled in the form of a book. The book "Our National Songs" was to be placed before the Screening Committee of the National Integration Project. A supplementary reader "Bharat Ko Prakrite Ke Uphar" was under preparation for the benefit of students in the age-group 12-14 years. A study kit on national integration was also being developed which is a general teaching-learning device consisting of correlated assemblage of various types of audio-visual materials and allied literature pertaining to the theme.

## APPENDIX 9

### *Population Education*

Population explosion is causing great concern in the developing countries like ours. The fruits of development are eroded by the phenomenal increase in population. Population education which is a nascent field is, therefore, being considered necessary all the world over.

In view of the significance of population education at the school stage, the Union Ministry of Education and Social Welfare entrusted a new project in population education to the NCERT during 1969-70. The Council set up in 1970-71 a Special Unit in the Department of Social Sciences and Humanities (NIE) to formulate and implement appropriate programmes in this area.

During the year under report, the unit developed the drafts syllabus in population education for the entire school stage and initiated work on the preparation of instructional material and implementation of the programme in the States. It also organised an all-India conference of Directors of Public Instruction/Directors of Education and Directors of State Institutes of Education of different States in order to acquaint them with the syllabus and other materials produced by the unit. The conference made useful recommendations for the implementation of population education for school children, teacher trainees and out-of-school youth. Meetings of two review groups for reviewing instructional materials produced by the unit, viz story books and handbook on nutrition, were held during the year. A workshop for developing syllabus on population education for pre-service and in-service training of teachers was also organised. Another workshop on population education was organised by the Council in collaboration with the Haryana Government. The officers of the Population Education Unit participated in programmes related to population education and other allied subjects organised by outside agencies like Family Planning Association of India, the Colombo Plan Bureau, Colombo, Union Ministry of Health and Family Planning, New Delhi, Indian Medical Association, New Delhi, State Institutes of Education, Udaipur, Patna and Gurgaon, etc. Besides, the unit produced literature during the year under report, which includes . (i) Report of the National Seminar on Population Education, (ii) Population Education in School Curricula, (iii) Readings in Population Education, (iv) Population Education—A Draft Syllabus, (v) Indian Population Situation, (vi) A Bibliography on Population Education, (vii) Plug Points for Population Education in School Curricula, and (viii) Population Education under the Current Problems in Education Series.

The manuscripts of two publications . (i) Report of the National Conference held in October, 1971 at Vigyan Bhavan, New Delhi, and (ii) Readings in Population Education (Second Volume) were sent to the press for printing.

## APPENDIX 10

### *Rural Talent Search Scheme*

The Ministry of Education and Social Welfare has started a national scholarship scheme at the secondary stage for talented children from rural areas. While the administrative responsibility of the scheme lies with the Ministry of Education, the NCERT has been asked to undertake the responsibility of providing academic guidance to the States in identifying talented children from rural areas for the award of national scholarships. The Council has been further asked to coordinate academic aspect of this scheme and conduct research for identifying talented children and bringing curricula of different States as close as possible from the standpoint of their comparability. A special unit is proposed to be set up in the Council to discharge academic responsibilities under this scheme. The Executive Committee of the Council in its meeting held on 10th February, 1972 observed that the scope and functions of such a unit should be enlarged so as to bring into the functions of the unit the question of discovering talent from amongst the weaker sections of the community. The Executive Committee appointed a sub-committee to go into the question of establishing the proposed special unit in the Council and also to define its functions, etc. Pending establishment of such a unit, the Council made ad-hoc arrangements during 1971-72 for providing guidance to the States for the implementation of the scheme on the basis of its experience gained through the implementation of the examination reform programme. 15 States and Union Territories took advantage of such guidance. More systematic and scientific work in respect of the procedures for identifying talented children from rural areas will be undertaken after the proposed unit is set up in the Council.

## APPENDIX 11

### *Examination Reform*

For many years, the Council has been engaged in improving the examination system in the country. The examination reform programme of the Council has two major goals :

- (i) to make examinations valid and reliable instruments of measuring pupil growth ; and
- (ii) to make them powerful instruments for improving the entire teaching-learning process

The comprehensive programme of examination reform developed by the Council incorporates the improvement of questions, question papers, scoring procedures and other similar aspects in regard to written examination , considerations of both the process and product of evaluation in practical examinations and the inclusion of verbal expression as well as organisation of content in oral examinations. The programme also advocates the extension of evaluation techniques to observation, interviews, rating scales, etc. It also aims at improving the mechanics of conducting examinations and the use of test scores not only for grading, classification and certification, but also for the purposes of diagnosis, remedial instruction, academic prediction, etc. Consequential changes in the area of curriculum, textbooks, instructional methods and materials and in the training of teachers are also not lost sight of in the programme. Certain far-reaching outcomes of the programme of examination reform of the Council, which have been observed, are as follows :

- (i) interest shown by the neighbouring countries, such as Nepal, in the programme ;
- (ii) voluntary efforts by several State level educational agencies to pursue the programme as developed by the NCERT ;
- (iii) percolation of reforms introduced in examinations of the various Boards at the school stage ,
- (iv) use of materials and techniques developed by the NCERT by some universities and State Boards of Technical Education , and
- (v) production of literature in educational evaluation by various individuals trained under the programme.

In the reorganised set up of the National Institute of Education, a suitable machinery for pursuing the programme of examination reform is yet to be developed. During the year under report, the Department of Textbooks where most of the officers earlier working on examination reform have been posted, took up some work in this field. The activities carried out during the year included completion of the analysis of results of 1969-70 of secondary examinations conducted by various Boards of Secondary Education ; initiation of work on the analysis of the results of 1970-71 ;

evaluation of internal assessment project in Rajasthan with a view to further improving and strengthening it ; continuation of analysis of the B. Ed. syllabi of various universities in regard to the content of educational evaluation with a view to developing a revised version of compulsory and specialisation course on the subject circulated earlier to the universities , organisation of eight evaluationwork shops for the State Boards of Secondary Education of Madhya Pradesh, Mysore and Rajasthan, for the Council of Indian School Certificate Examination and for the Department of Education, Goa, Daman and Diu ; and holding of a seminar for the officers in charge of evaluation programmes in different States

## APPENDIX 12

### *Unesco Silver Jubilee Celebrations*

At the instance of the Indian National Commission for Cooperation with UNESCO, Ministry of Education and Social Welfare, the NCERT celebrated the 25th anniversary of UNESCO during the year under report. The main function included an address by Dr. Malcolm S. Adiseshiah, former Deputy Director-General of UNESCO and presently Director, Madras Institute of Development Studies, Madras on "UNESCO in Twenty-Five Year—A Retrospect and A Prospect". Printed copies of the address were circulated to the distinguished audience which included officers of UNESCO, UNICEF, UNDP, WHO, FAO, etc. stationed in Delhi, Officers of the USAID, the British Council and the Union Ministry of Education and Social Welfare and the NCERT. The other features of the main function were . publication of a brochure entitled "A Children's Science Injection Programme" authored by Prof S.V.C. Aiyar, Director, NCERT, planting of a sapling of a tree by Dr. Adiseshiah at the NIE Campus and organisation of a science exhibition at the NIE Campus for the benefit of school teachers and students. Apart from other invitees to the exhibition, the local Science Talent Search awardees were also invited. The celebrations held at the Regional Colleges of Education and the Central Institute of Education included organisation of symposia, lectures by guest speakers, cultural programmes, debates, essays and declamation contests, educational films on UNESCO's contribution, etc.

## APPENDIX 13

### *Grants to Professional Educational Organisations (1971-72)*

There are a number of professional educational organisations in the country which undertake work that is of value either directly or indirectly to school education. The NCERT has been operating a scheme of financial assistance to such organisations in the past few years on the lines of the scheme of assistance to voluntary educational organisations started by the Union Ministry of Education during the First Five Year Plan.

The details in respect of financial assistance provided by the Council to various professional educational organisations during 1971-72 are given hereunder

<i>Sl. No.</i>	<i>Name of Professional Educational Organisation</i>	<i>Amount Sanctioned (in Rs)</i>
1	Indian Association of Teacher Educators, DELHI	10,000 00
2.	All-India Science Teachers' Association, Lodhi Estate, NEW DELHI	8,500.00
3	All-India Federation of Educational Associations, NEW DELHI	3,000.00
4.	Indian Association for Pre-School Education, NEW DELHI	4,500.00
5	Association of Mathematics Teachers of India, MADRAS	5,700.00
6.	Association for the Promotion of Science Education, MADRAS	3,500 00
7.	National Parent-Teacher Association of India, NEW DELHI	2,500 00
8.	Bangiya Vijnan Parishad CALCUTTA	3,500 00
9	Institute of Children's Films, Rabindra Sarobar, CALCUTTA	5,000 00
10.	Association of Geography Teachers of India, MADRAS	4,000 00
	<b>Total</b>	<u>50,200 00</u>



## APPENDIX 14

### *Research Studies Investigations and Surveys (1971-72)*

During the year under report, further progress was made on the on-going projects and a few new studies, investigations and surveys were also undertaken. A brief description of research studies, investigations and educational surveys completed/undertaken during the year is given below :

#### A. STUDIES

##### 1. Test Development

###### 1.01 *Cooperative Test Development Project*

The project aims at developing two psychological tools—a test of intelligence and an interest inventory. During 1971-72, sequential tests of intelligence for the ages 7-16 in parallel forms were printed in Bengali, Malayalam and Tamil for normative data collection. Junior form for school boys and senior form for college boys of interest inventory were printed in Hindi, Marathi and Kannada for administration on students and ten selected occupational groups. Development of norms and other statistical analysis in respect of both the instruments was in progress during the year.

###### 1.02 *Differential Aptitude Tests Battery*

Tryout test booklets administered in two States in the previous year were scored and two sets of item analysis were carried out in 1971-72. Items were selected on the basis of item-analysis data. The tests were then edited and instructions were modified according to requirements with a view to preparing final forms for norms study. The test booklets were printed. Three answer sheets were designed and printed. A sample of about 240 schools spread over Hindi-speaking States was selected. The concerned State authorities were contacted for organising testing programme in the States.

###### 1.03 *Developing a Diagnostic Test on 'Indices and Surds'*

The NIE-HEW Project entitled 'All-India Achievement in Mathematics Survey' had shown that the topic of Indices and Surds was comparatively difficult. It was, therefore, felt that a diagnostic test may be developed to locate weaknesses of students in this topic. Once the weaknesses are identified through such a test, it will not be difficult to develop material for more effective instruction in this topic. During the year under report, the writing of test items was taken in hand after completing preliminary studies in the field. The test items are proposed to be tried out for preparing the final test. The final test will be released for general use by school teachers.

###### 1.04 *Standardisation of Achievement Test Battery for Classes I-VII*

Work was initiated on standardisation of achievement test battery for classes I to VII at the Regional College of Education, Mysore during 1971-72.

###### 1.05 *Construction and Standardisation of Achievement Tests in Book-keeping and Elements of Commerce*

The Regional College of Education, Bhubaneswar undertook construction and standardisation of achievement tests in book-keeping and in elements of commerce. The drafts of tests were prepared and administered to a sample of higher secondary schools in the eastern region.

#### 1.06 *Second Mental Measurement Handbook for India*

The first Mental Measurement Handbook for India was published in 1966. Realising the need for bringing it up to date, a project for its revision was undertaken during the year under report.

### 2. Guidance and Counselling

#### *Teaching of Occupations*

The aim of this project is to study and evaluate different methods of teaching occupations in classes VIII and X. During 1971-72, the experimental work was carried on in science and commerce streams of class X. Three sections from each stream were taken up for study.

### 3. Child Development

#### 3.01 *Development Norms Project for Children in the Age-Group 2½ to 5 Years*

This project aims at evolving norms of development of Indian children in the age-group 2½ to 5 years. During 1971-72, the following reports were prepared:

- (i) Motor Development of pre-school children; and
- (ii) A comparison of norms as obtained by cross-sectional and longitudinal methods.

#### 3.02 *Developmental Norms Project for Children in the Age-Group 5½ to 11 Years*

The broad objective of the project is to understand the development of Indian children in the age-range 5½—11 years with a view to improving the process of their education. The focus of the studying is on exploring the relationships between environmental process variables in the home and the school and studying the effect of these on school achievement and cognitive and social development of children. Besides, norms for various aspects of development are also to be worked out from the available data. This project has been undertaken in collaboration with five centres at the Universities of Bombay, Kerala, Osmania, Bangalore and Ranchi and at one centre at the Gandhian Institute of Studies, Varanasi. A core study has also been planned for the Delhi Centre. During the year under report, the tools required for the study were developed. Also the pilot studies at various centres were completed or were nearing completion.

#### 3.03 *A Study of Concept Formation in Pre-School Groups Taught by Two Methods*

The study aims at finding out the comparative effectiveness in concept formation and personal-social adjustment of sense training in isolation through structured experiences and sense training in the context of other experiences which form part of the pre-school education programme. During 1971-72, the data were processed and the first draft of the report was also prepared.

### 4. Adolescence

#### 4.01 *Development of a Personality Inventory for Adolescents*

The final form of personality inventory for adolescents having 250 items in 10 sub-scales was completed during 1971-72 for further studies i.e. norms and validity.

Its manual of instructions was also prepared.

#### 4.02 *Development of a Scale to Measure Adolescents' Attitude Towards Authority*

During the year under report, the item selection was continued. It is expected that the final form of attitude scale will be ready by May, 1972 for further validation and norms studies.

#### 4.03 *Cooperative Research on Adolescence*

A list of dissertations on Adolescence from two universities—Jamia Millia Islamia and the University of Delhi were prepared and put in bibliographical form by the Delhi Centre. Further work on the project was suspended pending a decision to be taken by the Council regarding the pattern of working of Cooperative Research Projects.

### 5. Social Psychology

#### *Application of Social Reinforcement Technique to Improve Study Behaviour of Students*

The aim of this project is to apply social reinforcement technique to improve study habits of students. During 1971-72, the study was completed and the draft report prepared. Findings of the study suggest that the teachers can motivate their students to achieve higher level of performance with the help of this technique.

### 6. Programmed Learning

#### *A Study of Relative Effectiveness of Individual Vs Group Pacing in the Context of Programmed Learning*

The project aims at developing programmed units in statistics for higher secondary stage and polynomials for class VII. The materials so developed are proposed to be used in different situations for learning, like individual learning, group learning when the group is controlled by the teacher, group learning when the groups are small in size and based on homogeneous and heterogeneous abilities and are free to work out their own strategies of going through the programmed materials. The material in statistics consists of three units—(i) Introduction to certain terms and classification of data, (ii) Measures of Central Tendency, and (iii) Measures of Dispersion. Of these, two units were prepared during the year under report for use and the third unit was being duplicated. Unit on polynomials in algebra was also duplicated. It is proposed to test these materials in certain schools of Delhi in the situations mentioned above and to analyse the results to find out their relative effectiveness.

### 7. Talent

#### *7.01 Identification of Talent in Elementary and Secondary Schools*

A research project on 'Identification of Talent in Elementary and Secondary Schools' was started in 1964, as one of the NIE-HEW Projects. During the first phase which terminated in March, 1967, a number of tests on identification of talent in elementary and secondary schools were developed. The second phase which involved revision of tests of identification of talent already developed and the study of inter-relationships between measures of talent and age, sex, social status, personality and rural-urban variables was started from April, 1967 upto March, 1971, revision of most of the tests had been completed. Besides, four new tests on creativity were also developed. During 1971-72, the revision of all tests in the battery was completed and the

inter-relationships between the measures of talent, age, sex, personality and rural and urban variables were analysed on the basis of data obtained from schools in Uttar Pradesh, Rajasthan and Delhi

#### 7.02 *A Comparative Study of the Characteristics of Awardees and Non-awardees of the National Science Talent Search Scheme*

The aim of this study is to identify the characteristics of awardees and non-awardees of National Science Talent Search Scheme. A large battery of tests, measuring both cognitive and non-cognitive aspects of personality, was administered to awardees and non-awardees in B.Sc. and M.Sc. classes of all the colleges of Delhi University. It was also administered to non-awardees of Uttar Pradesh (studying in colleges at Lucknow and Allahabad), Maharashtra (studying in colleges at Bombay and Poona), Madhya Pradesh (studying in colleges at Jabalpur), Tamil Nadu (studying in colleges at Madras and Madurai) and Mysore (studying in colleges at Bangalore)

### 8. History of Education

#### 8.01 *Mother Tongue and Equality of Opportunity in Education*

A Research Project 'Mother Tongue and Equality of Opportunity in Education' was undertaken in April, 1971. It was completed in December, 1971. On completion, the report of the study was sent to the press for printing. In this study, the relationship between the provision of a foreign medium of instruction and the practice of equality of opportunity of education has been examined in historical perspective. The main finding of the study is that English as the medium of instruction especially at the University level has done much harm to the practice of educational equality in India. The study therefore, recommends that mother tongue should be made the medium of instruction at all levels.

#### 8.02 *Teaching of Social Sciences in Indian Schools and its Development Since Independence*

A study to assess the impact of changing socio-political conditions on the syllabi of different branches of social sciences, to evaluate the textbooks followed in these subjects, to examine whether the teachers teaching them were being kept properly equipped through re-orientation programmes, etc. and to enquire whether the educational administrators were aware of the recent demand about bringing about changes in this branch of study, was continued during the year under report. The data collected during 1970-71 from the Delhi schools was analysed. It is proposed to cover in the study all States of India in due course. The questionnaire was mailed to the States for collecting data.

### 9. Comparative Education

#### 9.01 *Pressures on Access to Secondary Education and Choice of School Subjects—A Comparative Study*

The main objectives of the study are:

- i) To analyse the nature of pressures exerted on the access to secondary education and on the choice of school subjects in different countries; and
- ii) To find out the degree of individual success and the freedom of choice.

During the year under report, the papers prepared on the basis of work undertaken at 12 centres in the country were edited. Additional data were also incorporated in these papers. The report of the study was sent to the Publication Unit for printing. Besides, work on the collection of data from Nepal, Ceylon and the Phillipines was in progress.

## 9.02 *A Study of Factors Influencing Languages Policies in Selected Countries—A Comparative Approach*

The aims and objectives of the study are as under .

- i) To identify and analyse some of the important factors which play a decisive role in the formulation, adoption and implementation of the language policy in multilingual countries , and
- ii) To make a comparative study on the basis of the same set of variables of different educational systems with particular reference to their language policies.

During 1971-72, reference material already collected for the study was analysed with a view to indentifying factors affecting language policies in multilingual countries. The first draft of the introductory chapter was also prepared

## 10. Curriculum and Evaluation

### 10.01 *Linguistic Analysis and Description of Phonological Variations in Standard Hindi*

Last year, the data in the form of speech samples from 19 dialect regions of all the Hindi speaking States and Union Territories were collected from such informants who speak one of the dialects of Hindi as their mother tongue in their families and standard Hindi as their general first language in outside society. An after phonetic transcription and analysis of the data, the phonological variations, as available in different dialect regions of Hindi, were identified and studied. But to discover the norms of standard spoken Hindi, it was decided in a working group meeting of the experts that such informants should also be recorded who do not speak any one of the dialects of Hindi and use standard Hindi, Hindustani or Urdu as their mother tongue. During 1971-72, tools for data collection were, therefore, developed and the necessary data from the native speakers of standard Hindi, Hindustani and Urdu from Allahabad, Agra and Lucknow respectively were recorded, transcribed and analysed. The reports of these studies were also drafted.

Since the stress was not marked in the previously colleted data from 19 dialect regions of Hindi, 57,000 word items previously recorded, were again studied and stress in all the items was found to be distinctly marked.

### 10.02 *Fundamental Research on Language*

The Second National Seminar on Fundamental Research on Language was held at the Sanskrit University, Varanasi in March, 1972. About 25 scholars representing various branches of Indian thought relating to philosophy, grammer, poetics, etc. participated in the seminar. The papers presented at the seminar are being edited which will be published in the form of a book.

### 10.03 *Graphemic Analysis of Devnagri Script as Used for Writing Hindi*

The project was undertaken to study the writing system of Hindi, which uses the Devnagri script. The Hindi writing system was analysed at paragraph, sentence, clause, phrase, word, and grapheme levels and phono-graphological correspondence was also studied. Besides, the Hindi graphemes i.e. letters were analysed into graphs and allographs and their distribution was stated. Along with spacing, structuring and clustering of Hindi graphemes, the number of order and the strokes which make a grapheme, were also studied on the basis of the data collected from the native Hindi Speaker's hand-writing. The report of the study is being finalised.

**10.04 *A Study of Existing Levels of Obtain of Children in Mother Tongue (Hindi) at Primary and Middle School Stages***

Some preliminary work was done on this project during 1971-72. It was also decided that it may be undertaken as an inter-departmental project involving the Departments of Social Sciences and Humanities and Educational Psychology and Foundations of Education.

**10 05 *Developing an Educational Vocabulary in Hindi for School Children***

This project was jointly undertaken by the Department of Social Sciences and Humanities and the Department of Pre-primary and Primary Education. The data for spoken vocabulary from primary school children were collected. The analysis of data was also started.

**10 06 *A Study of the Status of the World History in the School Syllabi of Different States***

The work on studying the status of world history in the school syllabi of different States was undertaken during 1971-72. The analysis of the syllabi included highlighting the scheme of subject followed in the syllabus, periods allotted per week, suggestions for practical work, methods of teaching and evaluation. A brochure on the position of world history based on the analysis of the syllabi is proposed to be published soon.

**10.07 *A Study of the Status of Civics in the School Syllabi of Different States***

A study of the status of civics in syllabi of 14 States was made during the year under report. The study formed the basis for developing a new syllabus in civics for the higher secondary stage.

10 08 A comparative study of bilingual teaching and the structural approach to the teaching of English to Indian children was undertaken in the Regional College of Education, Bhubaneswar during the year. The study could not make much head-way because of the shortage of staff. It is proposed to pursue the study in 1972-73.

**10.09 *A Study to Find Out the Efficacy of Language Laboratory Techniques in Teaching Hindi to Non-Hindi Speakers***

An experimental study was conducted in the language laboratory of the Council in 1971-72 to find out the efficacy of language laboratory techniques in teaching Hindi to non-Hindi speakers. The study was conducted in collaboration with University of Delhi.

**10.10 *An Analytical Study of Some Major Objectives of Teaching Social Studies and Ways of Attaining Them***

The study was completed at the Regional College of Education, Mysore and the report brought out during the year.

**10.11 *Analysis of Results of the High School/Higher Secondary Examinations Conducted by the State Boards of Secondary Education***

During the year under report, the analysis of results of high school/higher secondary examination conducted by the State Boards of Secondary Education in 1969-70 was completed and the work was started on the analysis of results of examinations held in 1970-71.

## 10.12 *A Study to Evaluate Internal Assessment Programme*

A study to evaluate the internal assessment programme in Rajasthan was continued during the year with a view to further improving and strengthening it.

## 10.13 *A Study of B.Ed Syllabi with Regard to Their Content in Educational Evaluation*

The work was continued during 1971-72 on the analysis of B Ed. Syllabi of various universities with regard to their content in educational evaluation with a view to developing a revised version of compulsory and specialization course on the subject circulated to different universities earlier

## 11. Pre-Primary Education

### *A Study of Behavioural Outcomes vis-a-vis Activities for Children at the Pre-Primary School*

Pre-school education is largely controlled by private enterprise and, therefore, different institutions pursue their own practices in arranging institutional programmes activities. To have a knowledge of such activities and also to disseminate the good ones to other institutions in the country, this project was undertaken by the Council. During the year under report, tools of investigation were prepared and finalized. Responses from about 60 teachers were also received

## 12. Primary Education

### 12 01 *A Pilot Project on Ungraded School System to Reduce Wastage and Stagnation at the Primary Stage*

The Council has undertaken a pilot project on 'ungraded school system' in Loni Block (Meerut District) of Uttar Pradesh with a view to studying its impact on reducing wastage and stagnation at the primary stage. The project covers 20 primary schools out of which 10 are in the experimental group and another 10 in the control group. During the year under report, the work regarding collection of data for working out incidence of wastage and stagnation in the last 10 years was continued and the data from 6 schools were collected. After giving orientation to the headmasters and assistant teachers of the participating schools to the basic ideas underlying the ungraded schools system, the project was launched on 1st September 1971. The then existing class I in 10 schools of the experimental group was placed under ungraded pattern with possibilities of new-comers joining the group.

### 12.02 *A Study of the Impact of Reading on the Achievement of Pupils in Different School Subjects in Primary Schools*

The first phase of the study involves preparation of a scientifically developed list of vocabulary for children of classes I to V. During 1971-72, background material and tools for the collection of vocabulary were prepared through an inter-departmental approach involving the Department of Pre-Primary and Primary Education, Department of Textbooks, Department of Social Sciences and Humanities and Department of Educational Psychology and Foundations of Education. The State Institutes of Education were entrusted with the responsibility of collecting vocabulary. The vocabulary thus collected was processed in the Department of Pre-Primary and Primary Education.

### 12 03 *Multiple Class Teaching in Primary Schools*

During 1971-72, a pilot project was started in selected primary schools of Gurgaon (Haryana State) for developing multiple class teaching techniques and literature.

The design of the project was finalised with the help of the State Institute of Education, Haryana and the selected teachers. The teachers were given orientation in the concept of multiple class teaching and the preparation of teaching units. Teaching units in different school subjects at the primary stage were also developed. The work is proposed to be continued in the coming years.

### **13. Tribal Education**

#### **13.01 *A Study of Wastage and Stagnation Among Tribal Students in Primary and Middle Schools***

The study was undertaken with the objective of finding out ways and means of reducing wastage and stagnation among tribal students in primary and middle schools. In this connection, work on the preparation of a draft of an action programme was taken in hand.

#### **13.02 *A Study of the Aspirations and Motives of Tribal Youth***

The study aims at identifying the problems of tribal youth due to education and modernization in the background of their aspirations and motives. This is a project which is being jointly undertaken by the Tribal Education Unit of the Department of Pre-Primary and Primary Education and the Department of Educational Psychology and Foundations of Education. The research design of the study prepared last year was revised during 1971-72.

#### **13.03 *A Study of the Impact of Education on Tribal Students***

The study aims at finding out the impact of education on tribal students with reference to their reading ability, performance, comprehension and sense of integration. A design of the study was formulated during the year.

#### **13.04 *A Study of Education and Socio-Economic Mobility in Tribal Areas***

The study aims at examining the contribution of education to the shift in occupational structure, detribalization, cultural change and economic, social and geographical mobility in tribal areas. The design of the study was prepared during the year.

#### **13.05 *A Study of the Impact of Tribal Dialects on the Education of Tribal Students***

The study aims at finding out whether the textbooks in tribal dialects with regional script will be helpful in reducing wastage and stagnation among tribal students, create interest in them for learning and make them responsive to studies. Since the textbooks prepared in tribal dialects were to be introduced in different States, the concurrence of the State Governments concerned was sought. The concurrence from Bihar and West Bengal was received during the year and it was awaited from the Government of Orissa. The textbooks are proposed to be introduced in these three States on pilot basis.

### **14. Teacher Education**

#### **14.01 *Promotion of Research in Colleges of Education***

The fourth seminar on planning research projects for teacher educators of the eastern region was held at the Regional College of Education, Bhubaneswar from 7th to 16th October, 1971. The seminar was attended by teacher educators from the States of West Bengal, Bihar, Orissa and Assam. Each participant was helped



to plan a research project. Research designs were prepared by the participants in the areas of development of education, measurement and problems of school education and teacher education

#### 14.02 *Development of an Instrument for Grading Training Colleges*

During the year under report, draft information blank for the collection of items and formulation of criteria pertaining to essential aspects under the following areas was prepared .

- (i) Physical resources,
- (ii) Manpower resources,
- (iii) Instructional programme, and
- (iv) Enrichment programme.

#### 14.03 *Improvement in Evaluation Practices in Teacher Training Institutions*

Question papers, syllabi and other relevant literature regarding B. Ed. courses and elementary teacher training courses were collected from all over India. Out of all the universities and examining bodies for secondary teacher training institutions, 16 were selected as a sample. Their syllabi were analysed with respect to their objectives. The draft report entitled 'The Objectives of the Syllabi' was also prepared.

#### 14.04 *A Study of Admission Procedures in the Regional College of Education, Bhubaneswar*

A follow-up study of previous batches of students was conducted in the Regional College of Education, Bhubaneswar to improve procedures of admission to the college. As the stipends have now been restricted to 50 per cent of the enrolled students, developing proper procedures for selection has come up as a special need and it is expected that the study would help in this direction.

#### 14.05 *A Follow-up Study of Graduates of Four-year and One-year B.Ed. Courses*

A follow-up study of graduates who passed out of four-year and one-year B.Ed. courses from the Regional College of Education, Mysore was undertaken during the year.

### 15. Educational Technology

About 300 books, reports, papers, articles and other important documents on educational technology were annotated during 1971-72 for the benefit of teachers and teacher education.

### 16. Textbook Preparation and Evaluation

#### 16.01 *A Study of the Position of Nationalised Textbooks*

The work on this study was initiated last year. The study was completed during the year under report.

#### 16.02 *A Study of the Position of Textbooks in the Minority Language Groups in Different States*

This study was undertaken last year in pursuance of a recommendation made at the second meeting of the National Board of School Textbooks. The study was completed in some of the states during 1971-72.

### 16 03 *A Study of, Selection and Presentation of Content in History*

The work on this study which was initiated last year continued during 1971-72 also.

### 16 04 *Principles and Procedures of Preparation and Evaluation of Textbooks in Different School Subjects*

This is a research-cum-development project. The work involves evolving principles and procedures for the preparation of textbooks in a particular subject field. The findings of such a study are placed before a representative group of subject experts, pedagogy specialists, teachers, etc. After validation of the findings by such a group, they are circulated for wider comments. Simultaneously, work is also started on developing brochures and tools for evaluation of textbooks for various purposes such as improvement, selection, short reviews, etc. This is followed by the preparation of a brochure containing all these materials. The brochure is discussed by a team of specialists, reviewed, finalised and published. Before its actual printing, an experimental edition is also prepared. Under this project, it is proposed to cover all school subjects in a phased manner. During 1969-70 and 1970-71, the work was completed in respect of eight subjects. During 1971-72, final editions of four of these brochures in history, geography, biology and mathematics were sent to the press. Three more subjects—second language, general science and civics, were also covered during the year under report and similar work was initiated in the subjects of economics and chemistry.

### 17. Other Studies

#### 17.01 *A Study of the Social Status of Teachers*

A study of the social status of teachers was completed during 1971-72 at the Regional College of Education, Bhubaneswar by one of the staff members of the college under the UGC scheme of assistance for research projects

#### 17.02 *An Empirical Validation of Taxonomy of Educational Objectives using Mcquilly's Hierarchical Syndrome Analysis*

The study was completed at the Regional College of Education, Mysore and the report brought out during the year

#### 17.03 *Load of Language Learning, Intelligence and Academic Achievement*

The study was completed at the Regional College of Education, Mysore and the report brought out during the year.

#### 17.04 *A Study of Socio-Economic Environment as Related to Non-Verbal Intelligence of Students*

The study was completed at the Regional College of Education, Mysore and the report brought out during the year.

## B. EDUCATIONAL SURVEYS

### 1. Sample Survey of Secondary School Teachers in India

The report of this survey covering the following aspects was completed and mimeographed during 1971-72 :

- (i) Secondary schools in India (general information about the schools included in the sample)
- (ii) Teachers in secondary schools

- (iii) Teachers' attitude towards teaching profession
- (iv) Teachers' professional problems
- (v) Teachers and national integration
- (vi) Headmasters' perception of teachers

Work on school interaction, a sociometric study, of about 1500 teachers emerging out of the above survey was also nearing completion.

## **2. Sample Survey of Facilities Available in High/Higher Secondary Schools/Intermediate Colleges for Academic Growth of Pupils**

The survey aims at collecting information on such aspects as facilities for library and reading room, laboratories, workshops, audio-visual aids, subject clubs and associations, guidance services, mid-day meals, school health services, etc. A sample survey covering 3 per cent high/higher secondary schools and intermediate colleges in the country was conducted during 1970-71. During the year under report, the survey was extended to another 3 per cent sample school all over the country. The collection of data from additional 3 per cent sample schools was completed and the analysis of data collected during 1970-71 was progressing during the year

## **3. A Study of Malpractices in Public Examinations at the Secondary Stage**

The study covers various types of malpractices in vogue at different levels, machinery to tackle the problem, various academic as well as administrative steps taken to solve the problem, nature of punishment awarded for different types of malpractices and the opinions of the authorities in solving the problem. Various types of malpractices detected and reported during the years 1969, 1970 and 1971 examinations (both regular and supplementary) conducted by all the Boards of Secondary Education were studied. The report of the study is expected to be ready by the middle of 1972.

## **4. Third All-India Educational Survey**

Preliminary work was started in 1971-72 on the Third All-India Educational Survey.

## **5. A Survey of Facilities for Educational and Vocational Guidance in India**

A study of the facilities available for educational and vocational guidance in different States and Union Territories was conducted covering the following aspects :

- (i) Number of institutions having whole-time counsellors, teacher counsellors, visiting counsellors and career masters.
- (ii) Educational and vocational guidance programmes run in these institutions.
- (iii) Number of trained counsellors available in different States/Union Territories
- (iv) The type of personnel available in the main agency in each State, viz State Bureau of Educational and Vocational Guidance, and
- (v) Financial outlay provided for educational and vocational guidance in the 4th plan of each State and Union Territory.

## **6. A Survey of Parent-Teacher Associations**

A survey of parent-teacher associations was conducted in Delhi in 1971-72. The report of the survey which deals with the growth of parent-teacher associations, the composition of the executive committees of such associations, fees charged from members, programmes taken up by the associations, etc. was prepared. A number of useful suggestions have been given in the report about the projects which can be undertaken by the PTAs. A model constitution of a PTA has also been suggested in one of the appendices to the report.

## **7. Third National Survey of Secondary Teacher Education**

The questionnaire for the survey was printed and mailed to all the colleges of education in the country. Thirty five per cent of the total number of colleges of education returned the filled-in questionnaire. The non-responding institutions were reminded to expedite the supply of information.

## **8. National Survey of Elementary Teacher Education**

The questionnaire for the survey was printed and despatched to all the elementary teacher training institutions in the country through the State Institutes of Education in the States and through the Directors of Public Instruction/Directors of Education in the Union Territories. The data were collected by the State Institutes of Education and would be analysed by the staff of the Institutes to prepare State-wise reports. The data to be received from elementary teacher training institutions through the Union Territories would be analysed in the Council.

## **9. A Survey of the Need, Availability and Use of Audio-Visual Equipment and Material in Secondary Teacher Training Colleges**

A survey of the need, availability and use of audio-visual equipment and material in secondary teacher training colleges in different States/Union Territories was undertaken during 1971-72. The printed questionnaire for the survey was mailed to all the secondary teacher training colleges in the country. Replies are being received.

## **10. A Survey of the Status of Development of Audio-Visual Education at the State Level**

A survey of the status of development of audio-visual education at the State level was conducted during 1971-72. The requisite data were collected from different States. The analysis of the data was under way.

## **11. A Survey of Pre-Schools in India**

In connection with this project, the questionnaire which had been developed earlier was tried out in a few schools and finalised in the light of the try-out in 1971-72. The survey is being conducted jointly by the Department of Pre-Primary and Primary Education and the Data Processing and Educational Survey Unit.

## **12. A Survey of the Status of Commerce Education in Bihar State**

A questionnaire for the survey was mailed to all the secondary schools in Bihar States. Replies were received from some schools which were being processed.

## **C. EXPERIMENTAL PROJECTS**

During the year under report, out of 359 project proposals received from secondary schools, 255 were approved and grants to the tune of Rs. 86,000 sanctioned. Besides, the scope of this scheme was expanded to include primary schools and Junior teacher training institutions. Out of 200 project proposal received during the year from primary schools and Junior teacher training institutions located in different States, 100 involving grants amounting to Rs. 10,000 were approved. Orientation programmes for resource persons for guiding experimental projects in secondary schools and in primary schools and Junior teacher training institutions were also organised during 1971-72. The Committee set up in 1969-70 to evaluate the work of the scheme of experimental projects in secondary schools submitted its report to the Programme Advisory Committee of the Council.

## APPENDIX 15

### *Grant-in-Aid for Approved Research Projects (GARP) (1971-72)*

Under this scheme, financial assistance was provided for 3 new and 11 on-going projects during 1971-72. The names of institutions and the titles of the projects for which grants were released are furnished in the Annexure.

**Annexure**

**Statement Showing Grants Released During the Year 1971-72 Under the Scheme of Grants-in-Aid  
for Approved Research Projects in Education**

Sl. No.	Name of Institution	Title of Research Project	Amount of Grant Released (in Rs )
1	2	3	4
1.	Department of Philosophy, University of Rajasthan, Jaipur	An Investigation into Some Correlates of Job Orientation of University Students	11,700.00
2.	St. Ann's Training College, Mangalore	An Investigation into the Understanding of Certain Concepts in Science of Students of IX Standard	1,000.00
3.	University Training College, Nagpur University, Nagpur	Survey of Educationally Backward Children Between the Age-Group 8 plus to 12 plus in Nagpur Schools	550 48
4.	Basic Teachers' Training College, Gandhi Vidya Mandir, Sardarshahar	Experimentation in Teaching Methods in Training Colleges	5,000.00
5	Department of Education, Aligarh Muslim University, Aligarh	Language Development During Early Childhood	2,430.00

*(Contd)*

(Contd.)

1	2	3	4
6.	Institute of English, Calcutta	Teaching Bengali as Second Language in Schools in West Bengal	14,870 00
7	University Teaching Department of Psychology, Ravishankar University, Raipur	Construction and Standardisation of Diagnostic Test of Basic Skills in Regional/Federal Hindi	7,000 00
8.	Govt. Training College, Trichur	Impact of Certain Sociological Factors on the Teaching Ability in Classroom	2,000.00
9.	State Educational Research Bureau, Bangalore	History of Education in Mysore State	1,000.00
10.	G. H. G. Khalsa College of Education, Gurusar Sadhar, Ludhiana	Follow up of the Alumni of the Training Colleges : Post College Employment and Adjustment	2,500 00
11	Vidya Bhawan G. S Teachers' College, Udaipur	Developing a Realistic Programme of Teacher Education on the Basis of an Analysis of Their Professional Jobs	10,000 00
12.	Women's Training College, Dayalbagh, Agra	Current Supervisory Practices—Their Evaluation and Improvement	5,000 00
13.	G. K Institute of Rural Education, Gargoti, Distt. Kolhapur	An Ungraded Unit for Grades I to IV in Primary Schools	500 00
14	Faculty of Education, Banaras Hindu University, Varanasi	Development of Teacher Attitude Inventory and a Study of the Change in Professional Attitudes of Student-Teachers	9,900 00
<b>Total</b>			<u>73,450 48</u>

## APPENDIX 16

### *Training Programmes (1971-72)*

As in the previous years, the Council gave its best attention in 1971-72 to the pre-service education of teachers and in-service education of teachers and teacher educators through its various training programmes as mentioned below

#### 1. Pre-service Education

##### 1.01 *Central Institute of Education*

During the year under report, the Central Institute of Education at Delhi continued to offer regular courses leading to the B Ed. and M. Ed. degrees of the University of Delhi. The Institute also continued with its two-year part-time evening course leading to the M. Ed. degree and a research course in education leading to the Ph D. degree of the same university. Two scholars, Shri Jagdish Mitter Mahajan and Km. A. Vasantha were declared eligible for the award of the Ph. D degree during the year. B. Ed correspondence course was discontinued from 1971-72. The total enrolment in the Institute during the year under report was 210 which was composed of 171 B Ed. regular course, 20 M. Ed. regular course and 19 M Ed. part-time evening course

##### 1 02 *Regional Colleges of Education*

The Council has four Regional Colleges of Education at Ajmer, Bhopal, Bhubaneswar and Mysore as its constituent units. The main purpose of establishing these colleges was to prepare teachers through 4-year integrated courses after higher secondary combining teaching in different subject areas and pedagogical training. The 4-year courses in technology and commerce in the Regional Colleges were abolished from 1968-69 and 1970-71 respectively. However, education in 4-year commerce courses at the Regional Colleges, Bhopal and Mysore and 4-year course in technology at the Regional College, Ajmer continued to be imparted to the students who were already on the rolls. During the year under report, 4-year integrated courses in science and English were continued. Besides, revised courses in these subjects were also introduced. The Regional Colleges continued with their one-year B Ed course for graduate teachers in agriculture, commerce, science and languages. A limited amount of facility also continued to be afforded for the M Ed course at the Regional Colleges of Education, Bhopal and Bhubaneswar. Besides, M. Ed course in science education was started at the Regional College of Education, Ajmer from July, 1971. The total enrolment in the four-year integrated courses and one-year B. Ed. courses in all the Regional Colleges during the academic session 1971-72 was 1997. The number of students admitted to the M. Ed course at the Regional College of Education, Bhopal was 6 and at the Regional Colleges of Education, Ajmer and Bhubaneswar was 10 each.

With a view to clearing the backlog of untrained teachers in high/higher secondary schools in the country, the Council has been organising summer school-cum-correspondence courses leading to the B. Ed degree at its four Regional Colleges of Education. This course includes full-time intensive training during the two summer



vacations (four months) and instruction through correspondence during the ten months' period between the two summer vacations. The total enrolment in this course at the four Colleges during 1971-72 was 1,781.

## 2. In-service Education

A brief description of the work done by the Council during the year under report in offering short-term and long-term in-service courses to teachers and other educational workers connected with school education is given below .

### 2.01 *Summer Institute in Science*

(a) To keep the secondary school/PUC/intermediate college/training college teachers of Science and Mathematics abreast of the latest developments in their subject areas, the NCERT in collaboration with the University Grants Commission and National Council for Science Education has been organising summer institutes during the last few years. The duration of a summer institute is generally 5-6 weeks and it is held under the chairmanship of a university professor with the help of resource personnel from the universities/colleges. During the year under report, 64 summer institutes in science and mathematics were organised at different centres all over the country. The Council set up a committee during the year under the chairmanship of Shri M.V. Rajagopal to review the working of the programme of summer science institutes. The committee has submitted its report and made significant recommendations to improve the effectiveness and utility of these institutes. From 1972 and onwards, the NCERT which will be solely responsible for running the summer science institutes will be guided by the recommendations of the Rajagopal Committee. 84 such institutes have been planned for the summer of 1972.

(b) A summer institute in science and mathematics was organised by the Council in collaboration with the State Board of Teacher Education, Gujarat for elementary teacher educators from 31st May to 12th June, 1971. The purpose of the institute was to give orientation to the participants to the revised curriculum which had then been introduced in elementary teacher training institutions in the State 49 teacher educators attended the institute.

### 2.02 *Summer Institutes in Social Sciences and Humanities*

(a) A summer institute in social studies and language was organised by the Council in collaboration with the State Board of Teacher Education, Gujarat for elementary teacher educators from 6th to 11th June, 1971. 40 teacher educators of social studies and about 50 teacher educators of language from elementary teacher training institutions of Gujarat State attended the institute. In social studies, the emphasis was laid on teaching the subject as an integrated whole for the development of international understanding and world peace. In language, the importance was given to oral work and correct pronunciation in mother tongue.

(b) A summer institute in applied linguistics and language teaching was organised from 27th May to 30th June, 1971 at Dehra Dun. The institute was organised at two levels: one, general level and the other advanced level. General level course was open to new participants, while advanced level course was specially designed for the benefit of those who had participated in such courses conducted by the Council earlier or have had the benefit of similar training elsewhere. 34 participants in general level course and 16 participants in advanced level course attended the institute from various university departments of education, teacher training colleges and secondary schools. All the participants were either teachers of Hindi language and literature or were doing research in this area.

### 2.03 *Summer Institute in Project Technology*

The Regional College of Education, Bhubaneswar organised a summer institute in project technology (work experience) from 1.6.1971 to 5.7.1971 to train physics teachers of the eastern region. 17 teachers participated in the institute. The participants prepared scientific projects including design, construction and experimentation. In all, 175 projects were prepared.

### 2.04 *Summer Institute on Contemporary Problems of Indian Education*

This institute was organised at Udaipur from 20th May to 19th June, 1971. It covered a wide range of problems of Indian education such as quality versus quantity in education, education and economic development, modernisation and education, neighbourhood schools and vocationalisation of education, etc. The institute was open to teacher educators from training colleges.

### 2.05 *Summer Institute in Learning, Motivation and Group Processes*

This institute was organised at the university of Mysore for lecturers of training colleges and departments of education and psychology of universities and their affiliated colleges. The purpose of the institute was to improve the knowledge of teacher educators in the areas of learning, motivation and group processes who in turn were expected to improve the pre-service training of teachers.

### 2.06 *Winter Institute on Research Methodology in Guidance*

This institute was offered to persons who were either teaching guidance in teacher training institutions or conducting or guiding research in the area of guidance. The purpose of the institute was to improve the knowledge of the participants in research methodology relevant to guidance. The institute was organised at the State Institute of Education, Poona. In all, 25 participants attended the institute from different parts of the country. The institute was planned to be run for 35 days, but had to be closed after 18 days, due to national emergency. During these 18 days, almost 50 per cent of the syllabus was covered. It was decided to complete the training of these participants by inviting them to the institute to be organised on this subject during the summer of 1972.

### 2.07 *Diploma Course in Educational and Vocational Guidance*

The 11th full-time post-graduate diploma course in educational and vocational guidance was held from 15th July 1971 to 14th April, 1972. The course is designed to train counsellors for State Guidance Bureaus and schools and also to train teacher educators who teach guidance in training colleges. As against the intake capacity of 5, 22 candidates joined the course and 20 completed it. Out of these 20, 10 had been deputed by the State Governments.

### 2.08 *Other Short-Term Training Programmes*

A number of other short-term training programmes were also conducted in different fields. A brief report on these programmes is given below.

(i) A three week programme was organised to train teachers as career masters for the higher secondary schools of Delhi. 52 teachers attended the programme.

(ii) A training programme on the use of various audio-visual equipment in secondary schools was organised for the teachers of Delhi.

(iii) A training programme on the effective utilisation of school libraries was organised for the librarians working in secondary schools of Delhi. The programme was attended by 41 school librarians.

(iv) Two one-week training programmes were conducted at the request of the Delhi Municipal Corporation, Delhi to train the sponsors of science clubs in various activities. 77 teachers attended the programmes.

(v) A training programme on the teaching of geography at the higher secondary stage was organised for geography teachers of Delhi schools.

(vi) A training programme on developing experimental project designs was organised for the teachers of Delhi.

(vii) A six-week training course in audio-visual education was organised from 12th May to 22nd June, 1971 in which 22 teacher educators representing teacher training colleges and State Institutes of Education participated.

(viii) A one-month technical training course for the operation, maintenance and repair of audio-visual equipment was organised during October-November, 1971. 12 participants from different parts of the country attended the course.

(ix) A one-month regional training course in audio-visual education was organised in August, 1971 at the Regional College of Education, Bhubaneswar. 16 teacher educators representing teacher training colleges of the eastern region participated in the course. The emphasis was laid on inexpensive audio-visual aids in the course.

(x) An orientation programme for teacher educators of elementary teacher training institutions and personnel of the State Institutes of Education was held at Hyderabad to acquaint the participants with the pre-service training programme in social studies developed by the Council and to orient them to implement the programme in the States.

(xi) Two training programmes in Hindi for Class I Officers of the Government of India were organised in the language laboratory of the Council in collaboration with the Central Hindi Institute.

(xii) A one-month training course was organised in January, 1972 in the teaching of English as a second language at the primary level for teacher educators from NEFA. The course combined the content and methodology of teaching English as a foreign language.

(xiii) A training course was conducted in the language laboratory of the Council in October, 1971 for lecturers of training colleges and teachers of higher secondary schools in the use of tape recorders and language laboratory in teaching a second or a third language.

(xiv) An orientation course for teachers teaching in primary classes was organised in the language laboratory of the Council in May, 1971.

(xv) Two training programmes were conducted—one at Ranchi during October—November, 1971 and the other at Delhi during December, 1971—January, 1972 for primary school teachers. The objectives of the programmes were as follows:

- (a) To impart knowledge of tribal culture and values to the participants,
- (b) To acquaint them with special problems of tribal education,
- (c) To improve classroom conditions suiting the tribal children, and
- (d) To develop achievement motivation among tribal children.

(xvi) An orientation programme was organised for primary teacher educators for conducting experimental projects.

(xvii) At the request of the Education Department of the Municipal Corporation of Delhi, a three-day training course was conducted for teachers and supervisors of selected primary schools for developing action programmes to reduce wastage and stagnation in primary schools

(xviii) A two-week training course in child development was organised for teacher educators from pre-primary and primary teacher training institutions of northern region. 23 participants attended the course.

(xix) A sequential course (level II) on behaviour modification was organised at Delhi from 9th to 22nd March, 1972. 35 participants from different parts of the country attended the course. The objectives of the course were as follows .

- (a) To acquaint the participants with the recent advances in the field of behaviour modification,
- (b) To acquaint the participants with various techniques of behaviour modification useful in classroom situations, and
- (c) To explore new areas of application with special reference to Indian school setting.

(xx) An in-service training course in teaching English grammar was organised at the Regional College of Education, Bhubaneswar in April, 1971. 23 teachers of English from Orissa schools participated in the course. The main objective of the course was to orient them in modern linguistic approaches to the teaching of grammar

(xxi) At the request of the State Department of Education, Government of Orissa, the Regional College of Education, Bhubaneswar organised a course for the training of supervisors for the functional literacy programme in June, 1971. Participants from Intensive Agricultural Development Districts of Orissa attended the course

(xxii) A special in-service training course for teachers of biology from secondary schools of Orissa was arranged at the Regional College of Education, Bhubaneswar for six days in January, 1972. The objective of the course was to acquaint the participants with some of the important developments in the content and methodology of teaching biology with particular reference to secondary school stage

(xxiii) A meeting of a selected group of lecturers from teacher training colleges in the eastern region was convened to discuss the B Ed. programme in psychology with a view to formulating the objectives of teaching psychology. The implications of the syllabus and the method of teaching to achieve those objectives were also discussed. 10 teacher educators participated in the discussions which continued for five days.

(xxiv) A training programme for teachers of English from Orissa schools was organised during the year under report. The main theme of discussion and orientation was "Spoken English." Principles of phonetics were emphasised with due stress on pronunciation. 19 teachers participated in the programme, which lasted for six days in March, 1972.

(xxv) A training course for Honorary Directors and Coordinators of primary and secondary extension services centres from the States of Punjab, Haryana, Himachal Pradesh, Jammu and Kashmir, Uttar Pradesh, Orissa, West Bengal and the Union Territories of Delhi and Chandigarh was organised at Delhi from 13th to 22nd March, 1972. The main objectives of the course were .

To acquaint the participants with the developing concept, methods and techniques, scope and strategy of in-service education with various kinds of programmes, researches and studies conducted in different departments of the NIE and the Regional Colleges of Education, and with the special aspects of extension work presently being implemented in different centres

(xxvi) An orientation programme for heads and teachers of cooperating schools for the four-year B. Sc.Ed and B. A. Ed. internship-in-teaching programme was held at the Regional College of Education, Mysore from 6-7-1971 to 9-7-1971 40 heads of schools and teachers participated in the programme The participants were oriented to the objective-based approach to teaching and evaluation.

(xxvii) An orientation programme for the heads and teachers of cooperating schools for the one-year B. Ed. internship-in-teaching programme was held at the Regional College of Education, Mysore from 10-11-1971 to 12-11-1971. 73 heads and teachers participated in the programme Objective-based approach to lesson planning, teaching and evaluation was discussed by the participants.

(xxviii) A one-week orientation programme was organised for teacher educators in science and mathematics from the States of Punjab, Haryana and Himachal Pradesh to plan their B. Ed. syllabi to be adopted by the universities of these States. The programme was organised jointly by the Departments of Science Education and Teacher Education.

(xxix) An orientation programme of 10 days' duration was organised for Directors of State Institutes of Science Education and other key personnel from the States to acquaint them with the new approach and content of curricular materials developed for teaching science at the primary and middle school stages. They were also familiarised with the kits and equipment for teaching science at these two stages. This training programme formed a part of the UNESCO-UNICEF-assisted Pilot Project for the Improvement of Science Teaching at the School Stage

(xxx) The sixth sequential course on programmed learning was held at the Regional College of Education, Bhopal in June, 1971.

## APPENDIX 17

### *Extension and Field Services*

The progress of work in providing extension and field services during 1971-72 is given in the following paragraphs .

#### 1. Extension Services Centres

The administrative and financial control of 95 secondary and 45 primary extension services centres located in selected teacher training institutions in the country was transferred to the respective State Governments with effect from 1-4-1971. Academic guidance was, however, continued to be provided to these centres on a limited scale by the Field Advisers of the NCERT in the States and also by the officers of various Departments of the National Institute of Education and Regional Colleges of Education. A brief description of the guidance provided by the Field Advisers is given below:

The annual conference of extension services centres in Rajasthan was held in March, 1972. The conference reviewed the experiences of the past year and formulated programmes for 1972-73. The representatives of four extension services centres newly started by the Government of Rajasthan also attended the conference. The Field Adviser, Jaipur helped the participants in finalising the programmes of extension services centres for 1972-73. It was decided to continue some of the activities in 1972-73 that had proved useful in the past such as, experimental projects, seminar readings, intensive development of a few schools, library project, institutional planning, demonstration lessons, diffusion of tested practices, school complexes, headmasters' forums and teachers' study circles, evaluation programme and Balwadi project. At the suggestion of the Field Adviser, the participants agreed to launch and develop new programmes in the following areas :

- (a) Speeding up learning by children.
- (b) Helping teachers to realise the contribution of education to national development and social and economic equality.
- (c) Formulating public opinion about defects in the educational system so as to induce the society and the Government to eradicate them by implementing decisions like those contained in the National Education Policy Document, 1968.
- (d) National integration through educational activities

The Field Adviser (Shillong) made all efforts to persuade the Government of Assam to take over the extension services centres in the State. He organised a conference of Honorary Directors and Coordinators of extension services centres of Manipur and Tripura at Imphal in March, 1972 in collaboration with the Government of Manipur. He presented two papers in the conference—one on "Techniques of Planning Extension Programmes" and the other on "History and Organisations of the NCERT and the Present Programmes of NIE Departments". The lecturer of the Field Office, Shillong also presented a paper on "The Role of Extension Centres in Educational Development". Honorary Directors and Coordinators of seven primary extension centres of Manipur and the Coordinators of primary extension centre of Agartala, participated in the conference.

At the State level conference, the Field Adviser (Trivandrum) gave orientation to heads of secondary schools, supervisors of schools and district education officers of Kerala in modern trends in education and the role of the NCERT in the promotion of research on problems emerging in classroom situations

The Field Adviser (Delhi and Uttar Pradesh) pursued with the Government of Uttar Pradesh the question of continuing the extension services centres in the State on a permanent basis. He participated in the Senior Education Officers' Conference held at Lucknow in August, 1971. The conference, among other things, passed a resolution urging the State Government not only to maintain the existing extension services centres but also to start new ones. The Field Adviser (Delhi and Uttar Pradesh) guided the deliberations of the two regional conferences of Honorary Directors and Coordinators from secondary extension services centres held at Lucknow and Muzaffarnagar. Several administrative and academic problems of the centres were discussed in these conferences.

The Field Adviser (Punjab, Haryana, Jammu and Kashmir, Himachal Pradesh and Chandigarh) provided academic guidance to the State level conferences for the States of Punjab, Haryana, Himachal Pradesh, Jammu and Kashmir and the Union Territory of Chandigarh. These conferences were attended by Education Ministers, Education Secretaries, Directors of Public Instruction/Directors of Education, Joint Directors of Public Instruction/Joint Directors of Education, Principals of teacher training colleges, Directors of State Institutes of Education, Directors of States Institutes of Science Education, principals of teacher training schools and heads of State Evaluation and Guidance Bureaus. These State level conferences provided a forum for the participants to discuss extension work in the field of education from the total State point of view. The relationship between the NCERT and the State Departments of Education were also discussed in the conferences. The Field Adviser organised a conference of Honorary Directors and Coordinators of extension services centres in the States of Punjab, Haryana, Himachal Pradesh, Jammu and Kashmir and the Union Territory of Chandigarh. 20 Honorary Directors and Coordinators participated in the conference. The main objectives of the conference were :

- (a) To review the work done during the last two years ,
- (b) To prepare a plan of work for the next year with a view to making extension work functional and oriented to the classroom needs,
- (c) To study the kind of coordination between various extension agencies in the States,
- (d) To study some of the administrative and financial problems faced by the centres,
- (e) To discuss the trends of education in different States, and
- (f) To ascertain the expectations of different extension services centres from the NCERT.

The Field Adviser (Punjab, Haryana, Jammu & Kashmir, Himachal Pradesh and Chandigarh) in collaboration with the Field Adviser (Delhi and Uttar Pradesh) organised a training course for Honorary Directors and Coordinators of primary and secondary extension services centres at Delhi from 13th to 22nd March, 1972. Honorary Directors and Coordinators from the States of Punjab, Haryana, Himachal Pradesh, Jammu and Kashmir, Uttar Pradesh, Orissa and West Bengal and from the Union Territories of Delhi and Chandigarh attended the course. The main objective of the training course was to acquaint the participants with the developing concept, methods and techniques and scope and strategy of in-service education. The partici-

pants were also provided information about the various kinds of programmes, researches and studies conducted in the constituent units of the NCERT and the special aspects of extension work that were going on in different extension centres

The Field Adviser (Punjab, Haryana, Jammu and Kashmir, Himachal Pradesh and Chandigarh) organised a workshop on ungraded system at Delhi. The participants held discussions on using the ungraded system for reducing wastage and stagnation and as a new technique to provide students an opportunity to learn at their own pace. The participants developed a procedure for achieving these objectives. They clarified the concept of ungraded school and examined its implications in curriculum; organisation and administration of classroom situations, examination and evaluation procedures, methods of teaching, preparation of sequential assignments, administrative implications for students, teachers and inspectors, and preparation of self-study material. The participants also developed model units in language, mathematics and science. It is proposed to revise these units and use them for further development. During the deliberations, a third dimension of the ungraded system also attracted attention of the participants. This pertains to its effectiveness in helping to achieve the objective of universalisation of education at the primary stage.

The Field Adviser, Bhubaneswar organised two programmes for the improvement of classroom instruction in the schools of A. & N Islands. He guided the deliberations of the two conferences held at Patna and Calcutta from 13th to 15th July, 1971 and on 27th July '71 respectively in which the Hon'ble Directors and Coordinators of extension services centres (both primary and secondary) from the States of Bihar and West Bengal participated. The Field Adviser assisted the participants in drawing up the programmes of their centres for 1972-73.

The Field Adviser, Bhopal helped the State Governments of Maharashtra, Gujarat and Madhya Pradesh in the smooth take-over of extension services centres. He persuaded the Government of Maharashtra to start extension centres in each district of the State. He also assisted the committee set up by the Government which went into the question of re-organisation of extension centres in the State.

## 2. Seminar Readings

During 1971-72, 154 papers were received from 17 States and 3 Union Territories for the Ninth National Competition of Seminar Readings Programme. Out of these, 65 were selected for final screening on the basis of a preliminary evaluation in which each paper was judged independently by two evaluators from the NIE Departments and Regional Colleges of Education. These 65 papers were again screened finally by two evaluators. Strictly on the basis of merit, 30 papers were selected at the national level. Due to national emergency, the annual national meet of awardees could not be held and certificates and cash award of Rs 500/- each were sent to them by post. The subject-wise distribution of 30 papers selected for awards was as follows:

(i) Improvement of teaching of school subjects like science, modern mathematics, English and Hindi	14
(ii) Experimentation in classroom situations relating to a variety of problems	9
(iii) Sociological factors in education	2
(iv) Educational administration	1
(v) Tests and examinations	2
(vi) Extra-curricular activities	1
(vii) Analysis of textbooks	1
Total .	<u>30</u>



### 3.Seminars, Workshops, Meetings, Conferences, etc

A number of seminars, workshops, meetings, conferences, etc. were organised in different areas during 1971-72, a brief account of which is given below

(i) The third seminar-cum-training programme for the personnel of the State Institutes of Education was organised at Delhi from 13th to 25th September, 1971. The main purpose of the programme was to discuss new ideas and innovations in the fields of curriculum, instructional materials and methods, evaluation, teaching aids, etc. A talk by Shri Ramesh Chandra, incharge T V. (Satellite), All-India Radio on "Satellite Communication and its Implications for Education at the Primary and Secondary Stages" formed a part of the programme. 24 participants representing almost all the SIEs attended the programme. They also discussed the important programmes of their institutes.

(ii) A seminar was organised by the Council in collaboration with the States Board of Teacher Education, Gujarat, at Gujarat Vidyapeeth, Ahmedabad from 31-5-1971 to 5-6-1971 for the principals and lecturers of Graduate Basic Training Centres of Gujarat State 26 participants representing 6 Graduate Basic Training Centres attended the seminar. The revised curriculum developed for these centres and the details of its implementation were discussed by the participants.

(iii) Under the joint auspices of the NCERT and the State Board of Teacher Education, Gujarat, a conference was organised for the principals of B Ed. colleges of education in Gujarat at Gujarat Vidyapeeth, Ahmedabad from 1st to 4th June, 1971 Revision of syllabus, improvement of evaluation procedures and other aspects of teacher training programme were discussed in the conference

(iv) A workshop was organised at the Department of Education, Gauhati University from 2nd to 8th July, 1971, to finalise the B.Ed. curriculum. 20 teacher educators from Gauhati and Dibrugarh Universities participated in the workshop. Major portion of the B.Ed curriculum was finalised for adoption and implementation in these two universities from the academic session commencing from January, 1972.

(v) A seminar-cum-workshop for the orientation of teacher educators in science was organised at Government College of Education, Chandigarh from 4th to 16th October, 1971. Eleven lecturers of science from the Colleges of education of Haryana, Punjab, Himachal Pradesh and Chandigarh attended the workshop. The curriculum of "Teaching of General Science" was divided into 9 units and a teachers' guide for each unit was prepared.

(vi) A seminar-cum-workshop on teaching of English was organised in collaboration with the Regional Institute of English, Chandigarh from 27th September to 9th October, 1971 The seminar was attended by 27 lecturers of English working in the B Ed colleges of education of the universities of Punjab, Guru Nanak, Kurukshetra and Himachal Pradesh. The main objective of the seminar was to give orientation to the teacher educators in teaching the new syllabus with improved methods and techniques The participants recommended that modern techniques of evaluation in the teaching of English should be introduced in the B Ed. programme.

(vii) A seminar-cum-workshop on teaching of mathematics was organised jointly by the Department of Teacher Education and the Department of Science Education of the NIE at Delhi from 13th to 25th March, 1972. 15 teacher educators of mathematics from Punjab, Haryana and Himachal Pradesh attended the workshop.

The following topics with reference to new mathematics were discussed in the seminar :

- (a) Number system
- (b) Relation and functions
- (c) Sets
- (d) Base system
- (e) Symbolic logic
- (f) Nature of proof
- (g) Euclidean and noneuclidean geometry
- (h) Algebraic system
- (i) Computer mathematics
- (j) Curriculum in mathematics
- (k) Evaluation in mathematics.

(viii) A workshop for training resource personnel for guiding experimental projects in secondary schools was held at the Regional College of Education, Bhubaneswar from 15th to 20th September, 1971. 18 participants from different States attended the workshop.

(ix) To create awareness and arouse consciousness among the school teachers about the preparation and use of improvised teaching aids, a scheme for organising a competition was started in 1970-71. During the year under report, the scheme was advertised in daily English newspapers and entries were invited for the competition. About 300 descriptive outlines were received. Seven aids were finally recommended for the national prize of the value of Rs 250/-each by a Committee of experts appointed by the N C.E.R.T.

(x) Another scheme for giving away national awards with a view to encouraging the private producers to produce standard audio-visual aids required by the schools in the country was also formulated last year. During 1971-72, this scheme was advertised in 10 daily English newspapers. The Committee of experts appointed by the Council recommended two aids for the award of first prize of Rs. 500/-each and seven aids for the award of second prize of Rs. 250/-each.

(xi) During the year under report, 134 films were added to the Central Film Library of the Council, bringing the total number of films available with the library to 7,098. The Library issued 10,843 films and 141 filmstrips to its member institutions during the year.

(xii) The Central Customs Department offered to the Council a number of confiscated films free of cost. The Council selected 31 films out of the lot for acquisition. These films have since been got censored and put into circulation through the Central Film Library

(xiii) The NCERT in collaboration with the Indian Standard Institution finalised the standard for production of filmstrips-cum-slide projector. The standard was given wide circulation, so that the manufacturers could take up its production from indigenous material.

(xiv) The second national seminar on Fundamental Research on Language was held at Sanskrit University at Varanasi in March, 1972. About 25 scholars representing various branches of Indian thought relating to philosophy, grammar and poetics

participated in the seminar. The papers read by the participants are being edited and will be published in the form of a book.

(xv) An All-Indian conference on Population Education was organised at Delhi in October, 1971. The Directors of Public Instruction/Directors of Education and Directors of State Institutes of Education of different States/Union Territories participated in the conference. The purpose of the conference was to acquaint the participants with the syllabus and other materials on population education produced by the Council. The conference made useful recommendations for the teaching of population education in the schools and teacher training institutions. The conference also recommended that a programme may be developed for imparting instruction in population education to out-of-school youth. The report of the conference has since been printed.

(xvi) A workshop was organised for developing syllabi for pre-service and in-service training of teachers in population education during the year.

(xvii) An all-India workshop was convened for developing the concept and objectives of a rural Balwadi and for suggesting some of the major activities/programmes which should be undertaken by it. As an outcome of the workshop "A Handbook for Balwadi Teachers" was written. Draft of the handbook was finalised by a working group and sent for printing.

(xviii) An all-India workshop for developing minimum curriculum standards for the primary stage of education was organised which was attended by the representatives of the State Departments of Education, State Institutes of Education and non-official specialists in primary education, etc. The workshop continued its deliberations for 10 days and produced learning outcomes at the primary stage. These learning outcomes are proposed to be processed further for developing a curriculum.

(xix) An all-India workshop for developing suitable criteria for evaluating primary school children was convened during the year. In the workshop, the general criteria were developed and their implications for different curricular areas were worked out. A draft manual for the use of the criteria was also prepared.

(xx) In connection with the pilot project on ungraded school system in the Loni Block (Meerut District), the following workshops/seminars were organised during 1971-72:

- (a) Workshop for preparing teaching units in general science, art and crafts,
- (b) Seminar on ungraded school system,
- (c) Workshop for preparing teaching units in mathematics,
- (d) Workshop for preparing teaching units in Hindi.

The teaching units in different subjects in these workshops were prepared keeping in view the syllabus of Uttar Pradesh for classes III to V.

(xxi) A seminar on primary, secondary and vocational education of tribal people was organised during the year.

(xxii) A workshop for developing tools for the collection of vocabulary for primary school children was organised. In the workshop, the tools for collection of four types of vocabulary viz. listening, speaking, reading and writing were developed. The tools for the spoken and written vocabulary were modified in the light of try out in some schools.

(xxiii) An all-India workshop on action programmes to reduce wastage and stagnation at the primary level was held during 1971-72. The workshop was attended by representatives of the State Departments of Education, the Union Ministry of Education and Social Welfare, the NCERT, District Education Committees, Municipal Corporations and Committees, etc.

(xxiv) Ten State level seminars were organised in different States to improve the qualitative and quantitative aspects of girls' education. The recommendations of these seminars are being implemented by the States concerned

(xxv) In pursuance of the recommendations of the 10th National Seminar on Elementary Education, 12 State level seminars were held in different States in 1971-72. The recommendations of these seminar are to be discussed in the 11th National Seminar on Elementary Education scheduled to be held in April, 1972. During the year under report, working papers, background materials and consolidated report of progress of work in the States/Union Territories were finalised for use in the 11th National Seminar.

(xxvi) A workshop on vocational work-experience for farm youth was held at the Regional College of Education, Bhubaneswar for the agriculture teachers of West Bengal and Bihar from 22.10.1971 to 27 10 1971.

(xxvii) A workshop on audio-visual education was held for social studies teachers of Central Schools located in the eastern region. Eight participants attended the workshop for 7 days and prepared different aids for making teaching of social studies effective. Special kits on Mahatma Gandhi, etc. prepared by the Council for fostering national integration among children were also used in the workshop.

(xxviii) A workshop on institutional planning was organised for the headmasters of schools and officers of the Education Directorates in the eastern region. About 15 participants attended the workshop for five days and evolved suitable institutional plans with focus on qualitative improvement.

(xxix) A workshop on work-experience was arranged for the headmasters and teachers of Orissa schools for four days to explore the possibility of introducing work-experience in secondary schools. The concept of work-experience and different ways in which it could be implemented in schools were discussed in the workshop.

(xxx) The NCERT in collaboration with the Ministry of Education and Social Welfare organised a conference of District Education Officers/Inspectors of Schools and Directors of State Institutes of Education of the eastern region from 29th October to 1st November, 1971 at the Regional College of Education, Bhubaneswar. 38 participants from Bihar, West Bengal, Orissa and Nagaland attended the conference. Representatives of the Union Ministry of Education and Social Welfare, the NCERT, Asian Institute of Educational Planning and Administration, Kendriya Vidyalaya Sangathan and Indian National Science Academy also participated in the conference. The purpose of the conference was to give orientation to the participants in the new ideas and innovations in the field of school education.

(xxxi) A conference of principals/headmasters and subject teachers of cooperating schools was arranged at the Regional College of Education, Bhubaneswar for two days in November, 1971. 30 principals/headmasters and subject teachers of schools in the eastern region attended the conference. The purpose of the conference was to orient the participants to supervision and evaluation of internship of student-teachers

(xxxii) Conferences for the supervisors of the summer courses were organised by the Regional College of Education, Bhopal at Nagpur, Poona, Baroda, Gwalior and Indore.

(xxxiii) A conference for the principals and teachers of cooperating schools was convened from 24th to 26th October, 1971 by the Regional College of Education, Bhopal.

(xxxiv) A conference of the Deans, Faculties of Education and Science and the science method masters of the western region was held at the Regional College of Education, Bhopal, from 4th to 6th November, 1971.

(xxxv) The following conferences/meetings were organised at the State Institute of Education, Poona from 13th to 15th March, 1972 by the Regional College of Education, Bhopal in collaboration with the Field Adviser (Bhopal) of the Council

- (a) Regional Conference of the Chairmen of Textbook Corporations,
- (b) Regional Conference of the Directors of State Institutes of Education,
- (c) Regional Conference on Audio-visual Education,
- (d) Regional meeting of the Secretaries of State Boards of Teacher Education, and
- (e) Regional meeting of the Directors of Public Instruction/Directors of Education.

(xxxvi) Under its programme of development and dissemination of materials on textbook production and evaluation, the Council produced brochures on principles and procedures of preparation and evaluation of textbooks in general science, civics and second language, during the year under report. In addition, SRET (Supplementary Reading Evaluation Tool) was also printed with its manual both in English and Hindi. The following other materials were also cyclostyled and circulated to relevant agencies in the country :

- (a) Three papers on management techniques in book production,
- (b) Eight papers on reading material on textbooks, and
- (c) A few teaching units by way of textual materials.

(xxxvii) Steps were taken to collect information from textbook agencies about textbook authors and reviewers in various school subjects. A directory is being compiled on the basis of the material so procured. From time to time, the State agencies as well as the Union Ministry of Education and Social Welfare were helped by supplying relevant information from this collection.

(xxxviii) The National Centre of Textual Materials set up by the Council continued to procure textbooks and textual materials from various parts of the country and also from abroad during the year under report. The textbooks and the materials received were catalogued and added to the stock of the centre. The centre was put to various kinds of uses, e.g. arranging book exhibitions, consultation by authors and supply of books for review purposes.

(xxxix) A workshop on sociometry in the classroom for teacher educators and counsellors of northern region was organised at Srinagar in October, 1971. 22 participants belonging to the States of Jammu & Kashmir, Haryana, Punjab, Rajasthan and Himachal Pradesh attended the workshop.

(xi) In pursuance of a recommendation made by the Heads of State Bureaus of Guidance, a five-day workshop to develop the prototype of a guidance kit was organised in 1971-72. It was attended by representatives from 12 States and 7 guidance workers from Delhi. A report of the workshop is being prepared which will provide a detailed description of the content of the guidance kit.

(xli) An all-India conference on vocational guidance and aptitude testing was organised at Delhi on 2nd and 3rd June, 1971 in collaboration with the Directorate General of Employment and Training, New Delhi. The subjects discussed in the conference were. (i) collaboration among various agencies concerned with providing vocational guidance, and (ii) collaboration among various agencies for developing aptitude tests, mainly the adaptation to Indian conditions of the general aptitude test battery of the U.S Employment Service. Representatives from the Directorates of Public Instruction/Directorates of Education from various States/ Union Territories, State Directors of Employment, Heads of State Bureaus of Educational and Vocational Guidance, Officers of the D.G E. & T., Planning Commission, Union Ministry of Education and Social Welfare and the NCERT participated in the conference

(xlii) The Guidance Laboratory of the Council provided occupational and educational information to a large number of persons through correspondence

(xliii) A two-day seminar on 'New Approaches to Teaching Science' was conducted on 20th and 21st August, 1971. 22 science teachers from high schools of Mysore city participated in the seminar. Demonstration lessons were given by experts which were followed by discussion by the participants. Use of improvised apparatus in science teaching was another feature of the programme

(xliv) A workshop, was held at Government Teacher Training Institute, Mysore to orient primary teacher educators of Mysore city in lesson planning. 72 teacher educators participated in the workshop. Objectives and specifications in terms of behavioural outcomes were spelt out in lesson plans which were prepared by the participants in English, Kannada, Social Studies, General Science and Mathematics

(xlv) A seminar on biology by investigation for the teachers of Coimbatore was held from 26th to 28th October, 1971 at the request of some of the heads of high schools of Coimbatore. 18 teachers attended the seminar.

(xlvi) A three-day seminar on teaching of biology for teachers of Tumkur was held from 4th to 6th November, 1971, at the request of the school authorities of Tumkur. 15 teachers participated in the seminar.

(xlvii) A seminar on teaching of biology for the teachers of Salem was held from 9th to 11th December, 1971 at the request of the school authorities of Salem. 43 teachers attended the seminar.

(xlviii) A five-day seminar on modern methods of teaching English with special emphasis on the structural approach and the teaching of grammar was organised for the teachers of secondary schools of Mysore city. 18 teachers participated in the seminar

(xlix) A two-day conference of the Directors of State Institutes of Science Education/Liaison Officers was held on 20th and 21st July, 1971 to discuss the progress made in the implementation of the UNESCO-UNICEF-assisted Pilot Project on Science Teaching in various States and to develop the future programme.

## APPENDIX 18

### *Collaboration with the States and Union Territories (1971-72)*

A brief account of the programmes indicating collaboration between the State Governments and the Council during 1971-72 is furnished below

#### 1. Improving Teaching of Science

1.01 Collaboration in this area was extended in the form of supply of syllabus and instructional materials for the primary and middle school stages in all the science subjects, supply of primary science and middle school kits and deputation of resource persons to help the States—Union Territories conduct their training programmes for the teachers of experimental schools under the UNESCO-UNICEF-assisted Pilot Project on Science Teaching. All the non-Hindi speaking States were supplied with illustrations for science textbooks for their use in the language versions prepared by them. The Hindi speaking States of Uttar Pradesh, Madhya Pradesh, Rajasthan, Bihar, Haryana, Himachal Pradesh and the Union Territory of Delhi were supplied with Hindi version of the textbooks. The total number of textbooks supplied during the year was 96,5500 primary 16,950 and middle 79,550) Besides teachers' guides in English were also supplied to the States at their request. The States/Union Territories were also supplied with 3,435 primary science and middle school stage kits. Supplies of cover paper and text paper received from UNICEF were also distributed to the participating States/Union Territories. Laboratory equipment was given to the State Institutes of Science Education, State Institutes of Education, teacher training colleges and teacher training schools. State-wise distribution of instructional materials, paper, laboratory equipment, etc is shown in the Annexure

#### 2. Improving Teaching of Social Sciences and Humanities

2.01 Three workshops were organised—one each in Haryana, Himachal Pradesh and Kerala—to train resource persons in the State educational systems in curriculum development and improvement of syllabi in social sciences and humanities. 150 persons attended the workshops. In Haryana, the resource persons were trained in the revision and improvement of syllabi in history, geography, civics and Hindi for the middle school stage, in Himachal Pradesh, the training related to the improvement of syllabi in social studies and Hindi for the primary school stage, and in Kerala, training was imparted for the improvement of syllabi in Hindi, Sanskrit, Malayalam, history, geography, civics and economics for the high school stage

2.02 The Council assisted the Kendriya Vidyalaya Sangathan in conducting its summer institutes in social studies for the teachers of middle school stage. The teachers were oriented to the effective use of textbooks in social studies, history, geography and civics produced by the Council.

The Delhi Municipal Corporation was rendered necessary help in the orientation

of its headmasters and supervisory staff in the effective use of social studies textbooks of the Council

2 03 Assistance was rendered to the State Departments of Education in an orientation programme for teacher educators of elementary teacher training institutions and personnel of the State Institutes of Education. The orientation programme was held at the State Council of Educational Research and Training, Hyderabad. The purpose of the programme was to acquaint the participants with the pre-service training programme in social studies developed by the Council so as to improve the quality of teacher education in the States with reference to the teaching of social studies

2 04 Teacher educators from the Union Territory of N E F A were imparted training in the teaching of English as a second language at the primary stage. The one-month training course combined the content and methodology of teaching English as a foreign language

### **3 Introduction of Population Education in School Syllabi**

Many States have communicated their willingness to accept population education as a part of their school curricula. During the year under report, the Council helped the State Departments of Education, Haryana, Maharashtra, Kerala, Bihar and Rajasthan in incorporating population education ideas in their existing school syllabi

### **4 The Examination Reform**

The Boards of Secondary Education, Madhya Pradesh and Rajasthan were provided assistance by the Council in the organisation of workshops for preparing resource persons in evaluation in different school subjects. The Board of Secondary Education, Rajasthan, was also helped in its programme of internal assessment. The Council assisted the Mysore Board of Secondary Education in organising a workshop for its paper-setters. At the request of the Government of Goa, Daman and Diu, an evaluation workshop was conducted at Panaji in October, 1971 for education officers of the Union Territory Administration. The Council organised a seminar for the officers incharge of evaluation programmes in different States in April, 1971 which was attended by 16 officers

### **5 Evaluation of Textbooks Received from the States**

The Council reviewed the manuscripts of textbook received from the State textbook agencies and State Departments of Education. Review reports were sent to the agencies concerned

### **6 Dissemination of Materials on Textbook Production**

Literature relating to basic principles and procedures for the preparation and evaluation of textbooks in general science, civics and second language produced by the Council during the year under report was distributed to the State textbook agencies. In addition, SRET (Supplementary Reading Evaluation Tool) was printed along with its manual, both in English and Hindi and distributed to the textbook agencies in various States. The following materials were also cyclostyled and circulated to relevant agencies in the country

- (i) Three papers regarding modern management techniques in book production,



- (ii) Reading material on textbooks—8 papers,
- (iii) A few teaching units by way of textual material.

#### **7 Training, Extension and Consultative Services on Textbook Production and Evaluation**

The Council rendered help to the Directorate of Textbooks, Government of Mysore in organising and orientation programme for textbook authors and evaluators in geography, history and civics. Besides, a number of agencies undertaking studies and research in the field of textbook evaluation were also helped through ideas and materials.

#### **8. Orientation of Teachers in Organizing Science Clubs**

At the request of the Delhi Municipal Corporation, Delhi, two one-week training programmes were organised to give orientation to the teachers of Municipal primary schools in organising science clubs. 77 teachers attended the programmes.

#### **9. A Survey of Facilities Available in Secondary Schools of Assam for Academic Growth of Pupils**

Two officers of the Directorate of Public Instruction, Assam, were provided help and guidance in conducting a survey of facilities available in secondary schools of Assam for the academic growth of pupils.

#### **10. Improvement of Girls' Education**

In order to improve qualitative as well as quantitative aspects of girls' education, the Council helped the State Governments and Union Territory Administrations in organising 10 State level seminars during the year under report. The recommendations of these seminars are being implemented by the concerned States/Union Territories.

#### **11. Workshop to Develop Action Programmes to Reduce Wastage and Stagnation in Primary Schools**

At the request of the Education Department of the Municipal Corporation of Delhi, a three-day workshop was conducted to give orientation to the primary school teachers in the techniques and methods of developing suitable action programmes to reduce wastage and stagnation in primary schools run by the Corporation.

#### **12. Pre-service and In-service Training of Pre-School Teachers**

The Boards of Teacher Education, Maharashtra and Gujarat were rendered assistance to make use of the curricula for pre-service and in-service training of pre-school teachers developed by the Council

#### **13 Developing a Programme of Work-Experience**

During 1971-72, the Council collaborated with the Kendriya Vidyalaya Sangathan in developing and implementing the programme of work-experience in Central Schools.

#### **14. Developing a Programme of Ungraded Teaching**

Guidance and consultative services were provided to the selected teachers and supervisors of the Municipal Corporation of Ahmedabad in developing a programme of ungraded teaching in 50 selected primary schools.

#### **15. Orientation of Career Masters**

The Council provided assistance to the Delhi Administration, Delhi in organising an orientation course for career masters

#### **16. Training of Supervisors in Functional Literacy Programme**

At the request of the State Department of Education, Orissa, the Council organised a training course for supervisors in the functional literacy programme in June, 1971. Participants from Intensive Agricultural Development Districts of Orissa and a representative from Bihar attended the training programme

#### **17 Establishment of a State Council of Educational Research and Training in Uttar Pradesh**

At the request of the Director of Education, Uttar Pradesh, a detailed proposal regarding the establishment of a State Council of Educational Research and Training was formulated and submitted to the State Government

#### **18. In-service Training Courses in Horticulture for Graduate Teachers of High Schools in Mysore State**

At the suggestion of the Department of Public Instruction, Government of Mysore, three courses in Horticulture for a period of 2 months each for the graduate teachers of high schools of Mysore State were organised. In all, 79 teachers attended the courses. Practical training in kitchen gardening, ornamental gardening and pot-culture was imparted in these courses.

#### **19 In-service Training Course for Drawing Teachers of Primary Teacher Training Institutions of Mysore State**

At the request of the State Department of Public Instruction, Mysore Government, a two-week in-service training course for drawing teachers of primary teacher training institutions of Mysore was conducted from 21-10-1971 to 3-11-1971. Twenty-four teacher educators participated in the course. In addition to drawing and painting, training in different media like clay, plaster of paris, wax, etc. was also given.

#### **20 In-service Training Course in Work-Experience for Primary Teacher Educators of Mysore State**

At the request of the State Department of Public Instruction, Mysore, two short-term training courses in work-experience were organised for primary teachers of Mysore from 25-11-1971 to 4-12-1971 and 8-12-1971 to 17-12-1971. Forty-six and thirty-four teacher educators participated in the first and second courses respectively. Training was imparted to the participants in kitchen gardening, ornamental gardening, pot-culture under horticulture craft, and wood work and sheet metal work under technical crafts

#### **21 Drafting of Secondary School Syllabus in Physics**

The State Institute of Science Education, Poona was rendered assistance in organising a 10-day programme for teacher educators of Maharashtra State for drafting the secondary school syllabus in Physics

#### **22 Liaison with States through Field Contacts**

The Field Advisers of the Council in the States visited as many Extension Services

Centres under their jurisdiction as they could and provided the required assistance to solve their administrative and academic problems. The Field Advisers also brought to the notice of the State authorities the programmes undertaken by different Departments of the NIE and the Regional Colleges of Education. In particular, they helped the State Governments in the implementation of the UNESCO-UNICEF-assisted Pilot Project on Science Teaching.

The main problem during the year under report was the take-over of the Extension Services Centres by the respective State Governments and Union Territory Administrations. The Field Advisers of the Council through personal contacts with the concerned officers of the Departments of Education of their respective States made all efforts to solve this problem.

One of the main activities of liaison was holding of State level conferences by the Field Advisers of the NCERT. The Field Adviser (Punjab, Haryana, Himachal Pradesh, Jammu & Kashmir and Chandigarh) organised such conferences. These conferences were attended by Education Ministers, Education Secretaries, Directors of Public Instruction/Directors of Education, Joint Directors of Public Instruction/Joint Directors of Education, Principals of Training Colleges, Directors of State Institutes of Education, Directors of State Institutes of Science Education, Principals of Teacher Training Schools and Heads of State Evaluation Units, Guidance Bureaus, etc. The conferences proved extremely useful and enable the State education officials to have a new look on extension work from the total State point of view and to have a working relationship with the NCERT. The Field Adviser, Trivandrum provided orientation to heads of secondary schools, supervisors of schools and district educational officers of Kerala at the State level conferences in modern trends in education and the role of NCERT in promoting research on problems emerging from classroom situations. Besides, annual conferences of Honorary Directors and Coordinators of Extension Services Centres were also convened by the Field Advisers in their respective States.

## ANNEXURE

### State-Wise Distribution of Primary Science and Middle School Science Kits, Books, Paper and Laboratory Equipment Under UNESCO-UNICEF-assisted Pilot Project on Science Teaching (1971-72)

Sl. No	State	No of schools		Number of Kits supplied							Books supplied		Paper supplied (reams)	Laboratory equipment supplied to Trg Insts				
		Pry	Middle	Pry	Phy.	Phy.	Bio.	Bio.	Chem.	Total	Pry	Middle		S I	Sc	S I. E. T	T. C. T.	T. S.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
1	Andhra Pradesh	50	30	51	35	31	33	31	31	212	—	—	—	1	1	7	91	
2.	Assam	50	30	—	—	1	—	1	1	3	—	—	—	—	1	6	21	
3.	Bihar	50	30	51	35	31	35	31	31	214	—	6,000	—	1	1	6	27	
4.	Gujarat	50	30	50	31	31	30	31	31	204	—	—	6,748	1	1	24	63	
5	Haryana	50	30	51	31	31	31	31	31	206	1500	4,200	—	1	1	5	8	
6	Himachal Pradesh	25	10	26	11	12	11	12	12	84	1500	850	—	—	—	2	2	
7.	Jammu & Kashmir	40	30	40	40	1	40	1	1	123	—	—	—	1	1	1	6	
8	Kerala	50	30	51	30	31	31	31	31	205	—	—	25,510	1	1	10	26	
9.	Madhya Pradesh	50	30	51	31	31	31	31	31	206	3000	28,300	17,496	1	1	5	8	
10.	Maharashtra	45	30	46	47	45	46	45	45	274	—	—	13,898	1	1	7	19	
11.	Manipur	—	—	—	1	—	—	—	—	1	—	—	—	—	—	1	1	
12.	Meghalaya	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
13.	Mysore	50	30	50	30	31	31	31	31	204	—	—	—	1	1	3	11	
14.	Nagaland	30	30	31	31	31*	31	31*	31*	186	1650*	10,200*	—	—	—	—	3	

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
15.	Orissa	50	30	51	31	1	31	1	1	116			17,204		1	4	21
16.	Punjab	50	30	52	32	31	32	31	31	209			2,200	1	1	11	8
17.	Rajasthan	50	30	51	33	31	31	31	31	208	4,500	17,500		1	1	3	9
18.	Tamil Nadu	50	30	51	31	32	31	32	32	210			3,720	1	1	10	39
19.	Tripura	20	10	20	10	1	10	1	1	43			606			1	1
20.	Uttar Pradesh	50	30	51	32	31	31	31	31	207	2800	12,500	14,000	1	1	9	54
21.	West Bengal			51	31	1	31	1	1	116				1	1	1	1
22.	A & N Island	20	10	1	1		1			3							
23.	NEFA	13	13	13	13		13			39							1
24.	Dadra & Nagar Haveli																
25.	Delhi	50	all	50						50	17080		4,600	1	1	3	1
26.	Goa, Daman & Diu																1
27.	Laccadives			1			1			2							1
28.	Mizoram																
29.	Pondicherry	50	30	50	30	30				110	300						1

\*includes numbers under delivery.

Legend · Pry. = Primary      Bio = Biology  
 Phy. = Physics      Chem. = Chemistry

S I. Sc. Edn. = State Institute of Science Education  
 S I.E. = State Institute of Education  
 T.T C = Teacher Training College  
 T.T S. = Teacher Training School.

## APPENDIX 19

### *Collaboration with the Ministry of Education and Social Welfare (1971-72)*

The Council actively associated itself with the work of the Ministry of Education and Social Welfare during the year under report. A brief report of the Council's participation in all such work is given below :

#### 1. National Board of School Textbooks

The National Board of School Textbooks was established by the Government of India in December, 1968 to coordinate and guide the activities of the national and state level organisations for production and improvement of textbooks. The Department of Textbooks which was created in June, 1969 continued to serve as the Academic Secretariat of the National Board of School Textbooks during the year under report. Follow-up action on recommendations of the first and second meetings of the Board held respectively in April 1969 and May 1970 was taken during 1971-72. No meeting of the Board could, however, be held during the year.

#### 2. Evaluation of Textbooks Received from the Ministry of Education and Social Welfare

A number of textbooks received from the Ministry of Education and Social Welfare were screened by the officers of the Council for controversial subject-matter. Evaluation reports in respect of these books were sent to the Ministry.

#### 3. Intensive Educational District Development Project (IEDDP)

The Council extended technical assistance to the Ministry of Education and Social Welfare in working out details of pilot projects, in developing design of surveys and studies and in the preparation of district project reports and training of district project staff.

#### 4. Crash Programme of Textbook Evaluation

In 1970-71, the Ministry of Education and Social Welfare had entrusted to the Council the responsibility of implementing a crash programme of evaluating school textbooks with a view to identifying the material prejudicial to national integration. During the year under report, textbooks prescribed in schools of the following six States and one Union Territory were evaluated -

Andhra Pradesh  
Bihar  
Madhya Pradesh  
Orissa  
Punjab  
West Bengal  
Delhi

The recommendations of the Expert Committee were sent to these States/Union Territory for consideration.

## **5. Orientation Conference of District Education Officers, etc**

The Council in collaboration with the Ministry of Education and Social Welfare organised an orientation conference of District Education Officers/Inspectors of Schools and Directors of State Institutes of Education of the Eastern Region from 29th October to 1st November, 1971 at the Regional College of Education, Bhubaneswar. Thirty-eight officers from the States of Bihar, Orissa, Nagaland and West Bengal participated in the conference. The conference was also attended by the representatives of the Ministry of Education and Social Welfare, NCERT, Asian Institute of Educational Planning and Administration, Kendriya Vidyalaya Sangathan and Indian National Science Academy. The purpose of the conference was to exchange ideas about the innovative practices tried out by different States and to suggest concrete programmes for adoption/adaptation of these practices in the concerned States.

## **6 National Prize Competition for Children's Literature**

The National Prize Competition for Children's Literature which was earlier conducted by the Ministry of Education and Social Welfare was entrusted to the Council for implementation from the year 1970-71. Steps were taken by the Council in 1971-72 to organise the 16th National Prize Competition. In all 225 entries were received in different regional languages for the competition, out of which 13 were selected for awarding prizes of the award winning entries, two were in Hindi, and one each in Kannada, Bengali, Assamese, Urdu, Marathi, Gujarati, Tamil, Sindhi, Oriya, Telugu and Malayalam. Action was also taken for holding the 17th competition during the year by way of inviting entries through advertisements in all the leading newspapers of the country. Besides, a study was undertaken to evaluate the impact of the scheme on the quality and quantity of the production of children's literature. A report of the study was finalised. On the basis of the findings of this study, it is proposed to modify the scheme to make it more effective.

## **7. Rural Talent Search Programme**

The Council cooperated with the Ministry of Education and Social Welfare in implementing the scheme of national scholarships at the secondary stage for talented children from rural areas. Under this scheme, two children from class VII or VIII selected from each community development block on the basis of a competitive examination specially conducted for the purpose are to be awarded scholarships. The value of each scholarship is Rs. 500/- per annum for day scholars and Rs 1,000/- per annum for those staying in recognised hostels or selected families. Subject to satisfactory progress of the scholars, the scholarships will continue for two to four years covering the secondary stage. The administrative responsibility of the scheme lies with the Ministry of Education and Social Welfare. The Ministry will run the scheme in collaboration with the State Governments. The Council has been entrusted with the responsibility of providing academic guidance to the States. It is proposed to set up a special unit in the Council for undertaking this responsibility. Till such time the proposed unit is set up, the Council during the year under report offered guidance to the States through some adhoc arrangements. The adhoc arrangements had been worked out on the basis of experiences gained through the implementation of the Council's examination reform programme.

## **8. National Integration Project**

In 1970-71, the Ministry of Education and Social Welfare entrusted to the Council the task of promoting national integration among school children through various educational programmes which consisted of organisation of inter-state camps for students

and teachers and exclusive camps for teachers and principals of schools, initiating of 'Our India Project' in selected schools, and preparation and production of instructional materials relevant to the theme for students and teachers. The report of the work done under this project during 1971-72 has already been given in Appendix VII.

#### **9. Population Education**

At the instance of Ministry of Education and Social Welfare, a special unit was set up in the Department of Social Sciences and Humanities of the National Institute of Education in 1970-71. The unit was entrusted with the responsibility of formulating and implementing appropriate programmes on population education at the school stage. The work done by the unit during 1971-72 has already been reported in the text of the report

#### **10. Celebration of Silver Jubilee of UNESCO**

In November, 1971, the Council collaborated with the Indian National Commission for Cooperation with UNESCO in organising functions to commemorate the Silver Jubilee of UNESCO. The programmes carried out on this occasion included holding of exhibitions; lectures by eminent scholars on the contribution of UNESCO, and organisation of film shows, essay and declamation contests, debates, symposia, etc.



## **A P P E N D I X 20**

### *International Collaboration (1971-72)*

During the year under report, the Council continued to receive assistance from the international agencies, like the, UNESCO, the UNICEF and the UNDP. Assistance was also received from the British Council, the USAID, the U S. National Science Foundation, the Governments of the USSR, the United Kingdom and the German Democratic Republic. Many officers of the Council went abroad either to attend international conference/seminars or on special assignments or for advanced level training under various fellowship programmes. Several experts from overseas visited the Council and its institutions. Some of them worked with the Council as Consultants, while others underwent training. A detailed account of activities undertaken in this sphere during 1971-72 is given in the following paragraphs

#### **1. Equipment and Expertise Received from Overseas**

1.01 Under the UNESCO-assisted Secondary Science Teaching Project, 7 UNESCO experts continued to assist the Council in 1971-72 in developing instructional materials, equipment and audio-visual aids in science and mathematics.

1.02 Under the UNICEF-assisted Pilot Project for the Improvement of Science Teaching at the School Stage, one UNESCO expert continued to assist the Council in the development of curriculum materials in science for the primary stage practically for the whole year.

1.03 10 science films were received as a gift from the U K. under the Colombo Aid funds. These films have since been got censored and put into circulation through the Central Film Library of the Department of Teaching Aids of the National Institute of Education

#### **2. Council's Collaboration in International Research Projects**

The Council continued to collaborate during 1971-72 in the research project of the International Association for the Evaluation of Educational Achievement. 20 countries including India are participating in this project. The main purpose of the project is to relate input variables like organisation and structure of school and its material facilities, qualifications, experience, motivation and attitudes of teachers and socio-economic background of students with achievement in some school subjects. During the first half of the year under report, the data for the project were collected, got punched and sent to the International Centre. During the second half of the year, the computer output received from the International Centre was gone through and occasional queries received from Stockholm were also replied

#### **3. Council's Training Programmes for Foreign Educators**

3.01 A four-month training programme in audio-visual education which was organised for the three Afghan nationals deputed under the USAID Third Country

Programme was completed on 30th June, 1971. The main areas covered in the programme were photography, audio-visual equipment and graphics.

3.02 A teacher-educator from Afghanistan under the USAID Programme was imparted training in techniques involved in the production of educational filmstrips and slides for a period of one month in June-July 1971.

3.03 A one-week training programme in teaching aids was arranged for an Indonesian national during July 1971 under the WHO Fellowship Programme. The training involved preparation of inexpensive teaching aids such as silk screen printing, charts, posters, etc.

3.04 Two Afghan nationals S/Shri M I Shaffiq and Syed Mohd Zahir Khushbin, who visited India during the year under report under the UNESCO Fellowship Programme, received training in the various Departments of the National Institute of Education and the Regional Colleges of Education at Bhubaneswar and Ajmer.

#### 4. Assistance Provided to UNICEF for Finalising Play Equipment for Family and Child Welfare Projects

Assistance was provided to the UNICEF in finalising play equipment for the family and child welfare projects. These projects are run by the Government of India with the assistance from the UNICEF.

#### 5. Supply of Material to UNESCO/UNICEF

5.01 Bibliographies and abstracts of the publications on vocational guidance in India were prepared and sent to the International Bureau of Education, UNESCO.

5.02 The UNICEF is currently engaged in exploring the contribution it can make towards improving the condition of pre-school children in India in the context of the present programmes of governmental and non-governmental agencies. In this connection, two officers of the Council at the request of the UNICEF, prepared position papers—one on "Voluntary Organisations which Serve Pre-school Children in India" and the other on "A Critical Review of Existing Facilities in Pre-school Teacher Training in India."

#### 6. Deputation of Council's Officers Abroad for Participation in International Conferences/Seminars and Advanced Training under Fellowship Programmes

6.01 Dr. (Smt) Perin H Mehta, officiating Head, Deptt. of Educational Psychology and Foundations of Education was deputed to attend the meeting of the Association for Evaluation of Educational Achievements held in Budapest (Hungary) from 25th to 29th October, 1971.

6.02 Shri S L. Ahluwalia, Head, Department of Teaching Aids was deputed to participate in Educational Workshop on Audio-visual Instruction in Asia organised by the National Institute for Educational Research, Japan from 14th May to 11th June, 1971.

6.03 Shri T. S. Mehta, Incharge, Department of Social Sciences and Humanities attended from 21st to 30th June, 1972 the National Seminar on Population Education organised by the Government of Ceylon under the Colombo Plan Bureau, Colombo.

6.04 Dr. C. H. K. Misra, Reader in the Department of Educational Psychology and Foundations of Education (now on foreign service with Central Institute of Indian Languages, Mysore) was deputed to participate in the meeting of the Steering Commi-

tee of the Experimental Project on Programmed Instruction in Asia held in Bangkok from 4th to 8th October, 1971.

6 05 Prof P. K. Roy, Principal, Central Institute of Education, Delhi attended the meeting of the International Working Group convened by the UNESCO—sponsored Asian Institute for Teacher Educators, Manila (the Philippines) from 11-1-1972 to 20-1-1972.

6 06 The following officers of the Council were deputed to participate in the International Seminar for Advanced Training in Curriculum Development and Innovation, convened by the I.E.A. in Granna (Sweden) from 4th July to 14th August, 1971 .

1. Dr. R. C. Das, Principal, Regional College of Education, Ajmer.
2. Shri N K Sanyal, Field Adviser, Department of Science Education
3. Smt. A. Khanna, Reader, Deptt of Textbooks
4. Shri Anil Vidyalkar, Reader, Deptt. of Social Sciences and Humanities
5. Dr. G. N. Kaul, Field Adviser, NCERT
- 6 Shri H. S. Srivastava, Reader, Department of Textbooks.  
Dr. R. H. Dave, Head, Department of Textbooks and Dr M C Pant, Head, Department of Science Education, acted as faculty members in the seminar

6 07 The following officers of the Council went for advanced studies under the Commonwealth Teacher Training Bursaries, U K. :

- 1 Shri R N. Karnawat, Lecturer in Science, Regional College of Education, Ajmer—20-10-1971 to 19-9-1972 (granted leave as due)
- 2 Shri R S. Kothari, Lecturer in Mathematics, Regional College of Education Ajmer— 16-9-1971 to 15-8-1972 (granted leave as due).
3. Shri C L. Anand, Lecturer in Education, Regional College of Education, Mysore, 17-9-1971 till October, 1972 (granted special leave).

6 08 Under UNESCO-assisted Secondary Science Teaching Project S/Shri Chhoten Singh and P. K Bhattacharya of the Department of Science Education were deputed for advanced training abroad.

6 09 Dr (Smt ) V. S. Anand, Lecturer in the Department of Textbooks, who went for advanced studies under the Commonwealth Teacher Training Bursaries, U. K on 1-10-1970 completed her studies on 4-7-1971

#### 7. Council's Officers who went Abroad on Special Assignments

7.01 Dr. A. Raof, Field Adviser in the Council continued to be on foreign service to UNESCO as a Specialist in Principles of Teaching at the Kabul Academy for Teacher Education, Kabul.

7.02 Shri S. S. Sharma, Lecturer in the Central Institute of Education, Delhi continued to be on foreign service to UNESCO as a Specialist in Teacher Training in Afghanistan under the Special Fund Component of the UN Development programme.

7 03 Dr. (Smt ) B Raju, Reader in the Central Institute of Education, Delhi, continued on deputation to UNESCO as Senior Lecturer in Educational Planning and Administration at University College, Nairobi (Kenya).

7.04 Shri N. K. Jangira, Sr Research Assistant in the Department of Pre-Primary and Primary Education continued on deputation as Principal, Teacher Training Institute, Pelling (Gyalshing), Government of Sikkim

7.05 Shri C. G. Nagarj, Teacher, Demonstration Multipurpose Higher Secondary School attached to the Regional College of Education, Mysore was granted leave as due from 5-8-1971 for a period of one year to take up a teaching assignment in East Orange High School, East Orange, New Jersey (USA) under Teacher Exchange Programme.

#### 8. Foreign Dignitaries and Experts who Visited the Council

A number of foreign dignitaries and experts visited the NCERT during 1971-72. A brief account of visits by outstanding personalities is given below .

8.01 A team of seven leading educationists from Indonesia accompanied by two members of staff of the Ford Foundation visited the Department of Teacher Education of the National Institute of Education in April, 1971. The subjects discussed with the visitors included multipurpose schools, demonstration schools and programmes of teacher training, etc.

8.02 A UNESCO delegation led by Shri John E. Fobes, Deputy Director General, UNESCO, visited the Council on 17-8-1971. The members of the delegation went round the Department of Science Education and Central Science Workshop. They evinced keen interest in the science study kits and instructional materials being produced by the Council. They also held discussions with the Director, NCERT, Heads of Departments of the NIE and UNESCO experts working with the Council on UNESCO—assisted Science Teaching Project and on relationships between the Council and the Union Ministry of Education and Social Welfare on the one hand and between the State Governments and the Council on the other.

8.03 Shri Oduro-Kwarten, Chairman of the Board of Directors of the Ghana News Agency, Shri W. Lightfoot, UNESCO-UNICEF expert at New York and Shri Philip R. Thomforde, UNICEF Liaison Officer, F.A.O., Rome visited the Department of Science Education in June 1971 and were shown the materials developed under the UNICEF-assisted Pilot Project on Science Teaching at the School Stage.

8.04 Shri Mohammed Ayyub, Principal, Higher Teachers' College, Kabul, visited the Council in June, 1971 and had discussions with the officers of the Departments of Science Education and Teacher Education.

8.05 Shri Gul Rahman Hakim, Director of Admissions, Kabul visited the Council in June, 1971 to acquaint himself with the organisation of testing programme in schools undertaken by the Council.

8.06 Dr J. L. Handerson, Senior Lecturer in History and International Affairs of the University of London, visited the Central Institute of Education, Delhi on 29th July, 1971 and delivered a talk on 'Student and Society.'

8.07 Dr. Homend M. Filts, WHO Consultant in Health Education, NC Central University, Durham, visited the Department of Science Education on 2-8-1971 and was shown round the Central Science Workshop. He was mainly interested to see what components of health education had been included in the science programmes of the Council.

8.08 Shri Y. K. Lule, Assistant Secretary-General incharge of Education of the Common-wealth Secretariat, London, visited the Council on 19th August, 1971.

He was shown round the Central Science Workshop. He held discussions with the Director, NCERT and Heads of Departments of the NIE

8.09 Two members of the Swedish Parliament, Shri Stigalemyr and Smt. Cecilia Mettlebrand visited the Council on 8th September, 1971. They were shown round the Central Science Workshop and Department of Science Education. They held discussions with the Director, NCERT and Heads of Departments of the NIE.

8.10 Prof. Harry F. Meiners, Professor of Physics, Rensselaer Polytechnic Institute, New York visited the Department of Science Education on 13-9-1971 and held discussion with the officers of the Department on the development of new demonstration equipment in physics

8.11 Dr. Garth Howell, Head, Science Education Section of the British Council, U K. and Dr. R. M. Drimmelen, Associate UNESCO Expert in Educational Research, UNESCO Regional Office for Education in Asia, Bangkok, visited the Department of Science Education and Central Science Workshop in November, 1971 and held discussions with the officers of the department and workshop on science education programmes of the Council.

8.12 Shri Ach, UNESCO expert on science equipment visited the Department of Science Education and Central Science Workshop and examined in detail various drawings of science equipment and kits with the actual specimens for the purpose of making bulk purchase of science equipment from the manufactures

8.13 Dr. Odolen Smekal, Head of the Department of Indology, Charles University, Prauge (Czechoslovakia) visited the Department of Textbooks on 11-1-1972. Dr. Smekal had prepared some Hindi books for adults residing in Czechoslovakia. He was interested in the textbooks prepared by the NCERT. He had discussions with the Head and the language team of the Department of Textbooks about the books prepared by the Council. He found most of the Council's books useful and took a number of them with him as sample material

8.14 Shri Robert Morris, Deputy Director General, Centre for Educational Development Overseas, London, accompanied by Shri Stanley Hodgson, representative for India in the British Council, visited the NCERT on 14th February, 1972. Shri Morris addressed the faculty members. In his address, he gave an account of the experiences in curriculum development in different countries of the world where the CEDO had on-going programmes. He also described the experiences and the practice followed in this field in the United Kingdom.

8.15 The following members of UNESCO-NIER Evaluation Mission visited the NCERT on 1st March, 1972:

1. Dr. Gordon Arvidson of UNESCO Regional Office for Education in Asia, Bangkok
2. Dr. Kihei Koizumi, representative of the NIER, Japan
3. Dr. Iraj Ayman of the National Institute of Psychology, Iran

The member of the mission visited the Department of Science Education and Central Science Workshop and held discussions with the Heads of Departments of the NIE about the research projects that the UNESCO South East Asia Centre, which was proposed to be established at Bangkok, could take up in the near future.

8.16 Dr. Nelson Max, Director of Topology Films Project at E.D.C. visited the

Department of Science Education and discussed with the officers of the Department the possibility of the use of computer animation in the field of science. He also showed films on mathematics where computer animation was used.

8.17 Shri A.A. Smirnov, Deputy Foreign Minister of the USSR and Smt Smirnov who had come to Delhi in connection with the Indo-Soviet Cultural Agreement visited the NCERT on 8th March, 1972. They were shown round the Department of Science Education and Central Science Workshop. They held discussions with the Director, NCERT and Heads of Departments of the NIE on the programmes of the NCERT with particular reference to UNESCO-assisted Secondary Science Teaching Project where UNESCO experts from the USSR were working.

8.18 Shri S. Murday, Permanent Secretary, Ministry of Education and Cultural Affairs, Mauritius visited the Central Science Workshop in March, 1972 and showed keen interest in the curricular materials in science, particularly the science kits. He also explored the possibility of collaboration with the NCERT in developing suitable programmes in science education in his own country.

## 9 Foreign Experts on Deputation to the Council

9.01 As stated earlier, seven experts continued to assist the Council in 1971-72 under the UNESCO-assisted Secondary Science Teaching Project. Three experts, Dr. V.M. Galushin, Dr. B.I. Baulin and Dr. A.W. Torric left during the year on completion of their assignments.

9.02 Dr. Dietrich Blandow, an expert in work-experience from the German Democratic Republic worked with the Department of Pre-Primary and Primary Education and visited the Regional Colleges of Education, Ajmer, Bhubaneswar and Mysore and discussed with the staff of the Colleges the possibilities of training of teachers in work-experience.

## 10 Assistance to Foreign Countries

A team of officers from the NCERT was deputed to help the Government of Bhutan to develop curriculum and instructional material for its school. A training programme was organised for this purpose at Teacher Training Institute, Samchi (Bhutan) from 14th to 27th February, 1972, in which about 60 secondary school teachers of Bhutan participated.

## 11. International Book Year, 1972

1972 has been declared as the International Book Year by UNESCO. During 1971-72, planning was done by the Department of Textbooks (NIE) and the publication Unit of the Council to undertake a number of programmes to commemorate 1972 as the International Book Year.

## APPENDIX 21

### *Publications 1971-72*

#### TEXTBOOKS

1. A Textbook of Chemistry for Higher Senondary Schools Part-II
2. Geometry for Middle Schools Part I (Reprint)
3. Rashtra Bharati Part I (Reprint)
4. English Reader Book IV (Special Series)
5. Ekanki Sankalan (Reprint)
6. Bhautiki Part I (Reprint)
7. Jeev Vigyan Part I (Reprint)
8. Chalo Pathshala Chalen (Reprint)
9. Kavya Ke Ang (Reprint)
10. Swatantra Bharat — Civics Textbook for Class VIII
11. Rasayan Vigyan — Part I (Reprint)
12. Science is Doing for Class IV
13. Bharat Aur Sansar (Reprint)
14. Physics Part III (Reprint)
15. Samajik Adhyan Part I (Reprint)
16. Biology Part I (Reprint)
17. Physics Part I (Reprint)
18. Samajik Adhyan Part II (Reprint)
19. Sthaniya Shasan (Reprint)
20. English Reader Book II (Special Series)
21. English Reader Book V (Special Series)
22. Australia Aur America — A Geography Textbook for Class VII (Reprint)
23. Science is Doing for Class III (Reprint)
24. Rani Madan Amar (Reprint)
25. Aao Hum Padhen (Reprint)
26. Kahani Sankalan (Reprint)
27. Chemistry Part II (Reprint)
28. Geometry Part III (Reprint)
29. English Reader for Class VI (Special Series)
30. Arithmetic — Algebra Part II (English) (Reprint)
31. Aao Padhen Aur Khojen (Reprint)
32. Biology Part III (Reprint)
33. Aao Hum Padhen (Reprint)
34. Science is Doing for Class IV (Reprint)
35. Arithmetic — Algebra Part III (Reprint)
36. Modern India — A Textbook for Secondary Schools
37. Jeev Vigyan Part II (Reprint)
38. Sanskritodaya (Reprint)
39. Bhautiki Part III (Reprint)
40. Europe Aur Bharat — Geography Textbook for Class VIII (Hindi)
41. Chemistry Part I (Revised Edition)
42. Aadhunik Bharat — A Textbook of History for Class VIII
43. Ank Ganit Beej Ganit — Part II (Reprint)
44. Jeev Vigyan Section IV-V (Hindi)

45. Social Studies for Higher Secondary Schools — Volume I (Reprint)
46. Chemistry for Secondary Schools Part I (Reprint)
47. Africa Aur Asia (Reprint)
48. Our Constitution and the Government
49. Rasayan Vigyan Part I (Revised Edition)
50. Ancient India (Reprint)
51. Medieval India (Reprint)
52. Biology Section VI-VII (Reprint)
53. Rashtra Bharatı Part I (Reprint)
54. Hindi Vıyakaran Aur Rachana
55. English Reader Book V (General Series)
56. Hindi Reader Book II (Reprint)
57. Hindi Reader Book III (Reprint)
58. Hindi Reader Book V (Reprint)
59. Chemistry Part II (Reprint)
60. Arithmetic Algebra Part I (Reprint)
61. Aao Padhen Aur Seekhen (Reprint)
62. Practical Geography (Reprint)
63. Geometry Part II (Reprint)
64. Biology for Secondary Schools Section I (Reprint)
65. Biology for Secondary Schools —Section III (Reprint)
66. Prachin Bharat (Reprint)
67. Bhautiki Part II (Reprint)

#### **TEACHERS' GUIDES AND WORKBOOKS**

68. Teachers' Guide for Geometry Textbook II for Class VI (Study Group)
69. Teachers' Guide for Insight into Mathematics Book I
70. Teachers' Manual for Physics Part II
71. Workbook to Hindi Primer (Reprint)
72. Workbook to Hindi Reader I (Reprint)
73. Workbook to English Reader for Class VI
74. Science is Doing — Teachers' Guide for Class IV (Hindi)
75. Teachers' Guide for English Reader for Class IX (Special Series) (Reprint)
76. Workbook for English Reader Book II (Special Series)
77. Teachers' Guide for Science is Doing for Class IV
78. Samanya Vigyan Part II — A Teachers' Handbook of Activities
79. Teachers' Guide for Our Country India Part I
80. Teachers' Guide for Our Country India Part II
81. Teachers' Guide for Our Country India Part II (Hindi)
82. Workbook for Let's Learn English Book I (Special-Series) (Reprint)
83. Workbook to Hindi Reader II for Class II

#### **SUPPLEMENTARY READERS**

84. Sant Tukaram (Hindi)
85. Swami Dayanand Saraswati
86. Banking Ki Manoharita
87. Bharat Ki Kathayen (Reprint)
88. Bahuroopi Gandhi (Hindi)
89. The Romance of Transport
90. The Constitution of India for the Young Reader
91. Our Agriculture
92. Mahakavi Kalidas (Hindi)
93. Sri Aurobindo (Hindi)
94. Lucknow Residency Ka Ghera



- 95 Ishwara Chandra Vidyasagar (English)
- 96 Lal Bahadur Shastri (Hindi)
- 97 Gautam Buddha (Hindi)
- 98 Antariksh Mein Hamari Prithvi

## OTHER PUBLICATIONS

- 99. Westage and Stagnation at the Primary Level —A Handbook for Supervisors
- 100. Supplementary Readers Evaluation Tool
- 101. Supplementary Readers Evaluation Tool (Hindi)
- 102. Manual of Instructions for Supplementary Readers Evaluation Tool
- 103. Manual of Instructions for Supplementary Readers Evaluation Tool (Hindi)
- 104. Rules of the NCERT (Hindi)
- 105. Report of the Education Commission — Volume IV
- 106. Report of the Committee to Evolve Model Syllabi for Elementary Teacher Education
- 107. The Teacher Speaks — Volume VII
- 108. Catalogue of Films Index — Volume I
- 109. An Experiment in Continuation Education for School Leavers After the Compulsory Education Age Limit of Eleven
- 110. School Situational Behaviours and Rating Scales for Assessing Personality Traits of Primary School Pupils
- 111. Syllabus for English Readers (Special Series) (Reprint)
- 112. Syllabus for English Reader (General Series) (Reprint)
- 113. Identification of Educational Problems of Saora of Orissa
- 114. Developmental Needs of the Tribal People
- 115. Current Problems in Education — Youth Service
- 116. Current Problems in Education — A School Science Project of India
- 117. Current Problems in Education —Population Education
- 118. Population Education — A Draft Syllabus
- 119. An Integrated and Comparative Study of a Selected Tribal
- 120. Community Living in Contiguous Areas
- 121. Plug Points for Population Education in School Curriculum
- 122. UNESCO in Twenty-Five Years
- 123. Catalogue of NCERT Textbooks
- 124. A Children's Science Injection Programme
- 125. Magnitude of Illiteracy
- 126. Symbols of Unity and Freedom
- 127. Students' Home at Kamptee
- 128. Why India Lives?
- 129. Retirement Benefits for the Employees of the NCERT
- 130. Survey of School Textbooks in India
- 131. Educational Evaluation and Assessment
- 132. Education and Economic Condition and Employment Position of Eighteen Tribes
- 133. Teaching Units for Middle Schools in Geography -- Volume III
- 134. Measurement of Educational Wastage
- 135. Rules of the NCERT (Hindi)
- 136. A School Science Project of India (Hindi)
- 137. Teaching Units in Civics for Middle Stage Volume I
- 138. Teaching Units in Civics for Middle Stage Volume II
- 139. Folder on Seminar Readings
- 140. Technology for Education (Hindi)
- 141. Folder for Experimental Projects

142. Rules and Regulations of the NCERT
143. Report of the Education Commission—Omnibus Volume
144. Audio-Visual Training Materials—A Source Guide
145. Report of the Committee on Examinations
146. Memorandum of Association of NCERT (Reprint)
147. A Bibliography on Population Education
148. Harmara Jism (Urdu)
149. NCERT Research Grant Schemes
150. Current Problems in Education Series—Youth Services (Reprint)
151. NCERT in the Service of Nation's Children
152. The Crisis of 1971
153. Current Problems in Education Series—Pre-School Education
154. Current Problems in Education Series—A School Science Project of India (Reprint)
155. Current Problems in Education Series—Technology for Education (Reprint)
156. NCERT Publicity Folders
157. National Emergency and School Programmes
158. Wastage and Stagnation in Primary and Middle Schools (Reprint)
159. Loktantra Aur Swadhinta Ki Raksha
160. Desh Bhakt Tere Roop Anek

#### **JOURNALS**

1. NIE Journal—January, March, May-July 1971
2. School Science—December 1970, March 1971
3. NIE Newsletter—March, June 1971
4. Indian Educational Review—July 1971.

## Annexure

### STATES/UNION TERRITORIES, ETC, WHICH HAVE RECOMMENDED OR PRESCRIBED NCERT TEXTBOOKS

Sl No.	Title	State/Union Territory which have recommended	State/Union Territory/ Organisation/ University which have prescribed
1	2	3	4

#### TEXTBOOKS (ENGLISH VERSION)

##### GENERAL SCIENCE

- |    |  |  |                              |
|----|--|--|------------------------------|
| 1. | General Science for You Volume I: A Textbook for Secondary Schools | The book has been sent to States/ Union Territories for Comments/ approval |                              |
| 2. | Science is Doing—A Textbook (for Class III)                        |  | Kendriya Vidyalaya Sangathan |
| 3. | Science is Doing—A Textbook (for Class IV)                         |  | -do-                         |

##### BIOLOGY

- |    |   |                               |   |
|----|---|-------------------------------|---|
| 4. | Biology: Science for Middle Schools Part I (for Class VI)     | } Andhra Pradesh, Gujarat     | Kendriya Vidyalaya Sangathan, Manipur (Translating into Manipuri), Jammu & Kashmir (Translated into Urdu) Part I only |
| 5. | Biology: Science for Middle Schools Part II (for Class VII)   |                               |   |
| 6. | Biology: Science for Middle Schools Part III (for Class VIII) |                               | Kendriya Vidyalaya Sangathan, Manipur (Translating into Manipuri)   |
| 7. | Biology: A Textbook for Higher Secondary Schools Section I    | Andhra Pradesh, Uttar Pradesh | Madhya Pradesh, Tamil Nadu, Nagaland, Punjab, A&N Islands, Central Board of Secondary Education, Goa, Daman & Diu     |

1	2	3	4
8	Biology. A Textbook for Higher Secondary Schools Section II		Himachal Pradesh, Manipur, Haryana, Kendriya Vidyalaya Sangathan
9.	Biology. A Textbook for Higher Secondary Schools Sections III		Madhya Pradesh, Tamil Nadu, Punjab, Nagaland, A&N Islands, Central Board of Secondary Education, Goa, Daman & Diu, Himachal Pradesh, Manipur, Haryana, Kendriya Vidyalaya Sangathan
10	Biology A Textbook for Higher Secondary Schools Sections IV and V	Andhra Pradesh, Uttar Pradesh	Madhya Pradesh, Tamil Nadu, Punjab, Nagaland, A&N Islands, Central Board of Secondary Education, Goa, Daman & Diu, Manipur, Haryana, Himachal Pradesh, Kendriya Vidyalaya Sangathan
11	Biology A Textbook for Higher Secondary Schools Section VI and VII		
<b>CHEMISTRY</b>			
12	Chemistry Science for Middle Schools Part I (for Class VII)	Andhra Pradesh (Adapted and translated into Telugu), Gujarat	Manipur (Translating into Manipuri), Kendriya Vidyalaya Sangathan
13.	Chemistry. Science for Middle Schools Part II (for Class VIII)		
14.	Chemistry A Textbook for Secondary Schools Part I	The book has been sent to States/ Union Territories for comments/ approval	
<b>PHYSICS</b>			
15.	Physics. Science for Middle Schools Part I (for Class VI)	Andhra Pradesh, Gujarat	Kendriya Vidyalaya Sangathan, Manipur (Translating into Manipuri), Jammu & Kashmir (Translated into Urdu)

1	2	3	4
16	Physics Science for Middle Class Schools Part II (for Class VII)	Andhra Pradesh, Gujarat	Manipur (Translating into Manipuri), Kendriya Vidyalaya Sangathan
17.	Physics Science for Middle Schools Part III (for Class VIII)		-do-
18.	Physics A Textbook for Higher Secondary Schools Part I	Mysore, Laccadives, Kerala, Andhra Pradesh, Haryana, Punjab, Rajasthan, Himachal Pradesh, Chandigarh	

#### MATHEMATICS

19	Arithmetic-Algebra Mathematics for Middle Schools Part I (for Class VI)	Andhra Pradesh	Kendriya Vidyalaya Sangathan
20.	Arithmetic-Algebra Mathematics for Middle Schools Part I (for Class VII)		-do-
21.	Arithmetic-Algebra Mathematics for Middle Schools Part III (for Class VIII)		-do-
22.	Geometry Mathematics for Middle Schools Part I (for Class VI)	Andhra Pradesh	-do-
23	Geometry Mathematics for Middle Schools Part II (for Class VII)		-do-
24.	Geometry Mathematics for Middle Schools Part III (for Class VIII)		-do-

1	2	3	4
25.	Algebra: A Textbook for Secondary Schools Part I	Kerala, Andhra Pradesh, Mysore, Maharashtra, Goa, Daman & Diu, Tamil Nadu, Rajasthan	Nagaland, A&N Islands, Central Board of Secondary Education, Manipur, Kendriya Vidyalaya Sangathan
26	Algebra: A Textbook for Secondary Schools Part II		
27.	Elements of Probability—A Textbook for Secondary Schools	Kerala, Mysore, Goa, Daman & Diu, Rajasthan, Pondicherry	
28	Insight into Mathematics Book I (for Class I)		Bihar (Translated), Jammu & Kashmir (Translating into Urdu), Kendriya Vidyalaya Sangathan
29.	Insight into Mathematics Book II (for Class II)		Kendriya Vidyalaya Sangathan
<b>TECHNOLOGY</b>			
30.	Engineering Drawing A Textbook for Technical Schools	Tamil Nadu, Kerala (Translating into Malayalam), Mysore, Pondicherry, Uttar Pradesh	Central Board of Secondary Education, Punjab, Himachal Pradesh, Manipur
31.	Elements of Electrical Engineering A Textbook for Technical Schools	Gujarat, Andhra Pradesh, Dadra & Nagar Haveli, Mysore, Tamil Nadu, Kerala (Translating into Malayalam)	Punjab, Haryana, Himachal Pradesh
32.	Elements of Mechanical Engineering A Textbook for Technical Schools	Andhra Pradesh, Mysore, Kerala, Tamil Nadu	
33.	Workshop Practice. A Textbook for Technical Schools Part I	Andhra Pradesh, Mysore, Gujarat, Kerala, Tamil Nadu	

1	2	3	4
34.	Workshop Practice: A Textbook for Technical Schools Part II	Goa, Daman & Diu, Pondicherry, Chandigarh, Dadra & Nagar Haveli, Punjab	
35	Reading Blue-Prints and Sketching A Textbook for Technical and Vocational Schools	The book has been sent to States/ Union Territories for their comments/approval.	
<b>SOCIAL STUDIES</b>			
36.	Our Country India Book I (for Class III)	Jammu & Kashmir, Madhya Pradesh, Kerala, Tripura, Maharashtra, Mysore, Andhra Pradesh	Manipur (Translating into Manipuri), Kendriya Vidyalaya Sangathan
37	Our Country India Book II (for Class IV)	Maharashtra, Goa, Daman and Diu, Tripura, Mysore, Kerala,	-do-
38.	India and the World Book III (for Class V)	Jammu & Kashmir, Madhya Pradesh, Andhra Pradesh	-do-
39.	Local Government. A Textbook of Civics for Middle Schools (for Class VI)		
40	Our Constitution and the Government (for Class VII)	The book is being sent to States/ Union Territories for comments/ approval.	
41.	Social Studies: A Textbook for Higher Secondary Schools Volume I		Kendriya Vidyalaya Sangathan

**GEOGRAPHY**

42. Practical Geography A Textbook for Secondary Schools  
Mysore, Andhra Pradesh, Tamil Nadu, Kerala, Rajasthan, Pondicherry, Gujarat, Dadra & Nagar Haveli  
Central Board of Secondary Education, Manipur, Punjab, Haryana, Madras University (for PUC), Kerala (Translating into Malayalam), Himachal Pradesh, Kendriya Vidyalaya Sangathan
43. Economic Geography A Textbook for Secondary Schools  
Mysore Andhra Pradesh Tamil Nadu, Kerala, Pondicherry, Rajasthan, Laccadives  
Himachal Pradesh, Kendriya Vidyalaya Sangathan, Central Board of Secondary Education, A&N Islands, Manipur, Punjab, Haryana, Kerala (Translated into Malayalam)
44. Physical Geography A Textbook for Secondary Schools  
Tamil Nadu, Goa, Daman & Diu, Kerala  
Mysore University (Translated into Kannada), Kerala (Translating into Malayalam), Kendriya Vidyalaya Sangathan
45. Africa and Asia A Geography Textbook for Middle Schools Part I (for Class VI)  
Andhra Pradesh
46. Australia and Americas—Textbook for Class VII  
The book has been sent to States/ Union Territories for comments/ approval.

**HISTORY**

47. Ancient India A Textbook of History for Middle Schools (for Class VI)  
Mysore, Andhra Pradesh, Maharashtra, Tamil Nadu  
Manipur (Translating into Manipuri), Laccadives
48. Medieval India A Textbook of History for Middle Schools (for Class VII)  
Andhra Pradesh, Jammu & Kashmir, Tamil Nadu, Kerala  
Manipur (Translating into Manipuri)



1	2	3	4
<b>COMMERCE</b>			
49	Elements of Book-keeping and Accountancy A Textbook for Classes IX-XI		Central Board of Secondary Education, Kendriya Vidyalaya Sangathan
50.	Commercial and Economic Geography. A Text- book for Secondary Schools	Andhra Pradesh, Kerala	
<b>ENGLISH (ASPECIAL SERIES)</b>			
51.	Let's Learn English Book I (for Class III)		Arunachal Pradesh, Kendriya Vidyalaya Sangathan
52	Let's Learn English Book II (for Class IV)		Kendriya Vidyalaya Sangathan
53.	English Reader Book I for Class VI		-do-
54.	English Reader Book II for Class VII		-do-
55.	English Reader Book IV for Class IX		-do-
56	English Reader Book V for Class X		-do-
<b>ENGLISH (GENERAL SERIES)</b>			
57.	English Reader Book I for Class VI		Bihar, Arunachal Pradesh, Maharashtra Board
58	English Reader Book IV for Class IX		Maharashtra Board, Punjab Board, Arunachal Pradesh
59	English Reader Book V for Class X		Guru Nanak University (for PUC)

1	2	3	4
<b>TEXTBOOKS (HINDI VERSION)</b>			
<b>BIOLOGY</b>			
60	Biology: Science for Middle Schools Part I (for Class VI)	Andhra Pradesh, Gujarat	Delhi Administration
61	Biology: Science for Middle Schools Part II (for Class VII)		-do-
62.	Biology. Science for Middle Schools Part III (for Class VIII)		-do-
63.	Biology: A Textbook for Higher Secondary Schools Section I	Andhra Pradesh, Uttar Pradesh	Central Board of Secondary Education, Haryana, Punjab, Goa, Daman & Diu, Himachal Pradesh, Madhya Pradesh
64	Biology A Textbook for Higher Secondary Schools Section II	-do-	Central Board of Secondary Education, Haryana, Punjab, Himachal Pradesh
65.	Biology. A Textbook for Higher Secondary Schools Section III		Central Board of Secondary Education
66.	Biology. A Textbook for Higher Secondary Schools Sections IV and V	The book is being sent to States/ Union Territories for comments/ approval	-do-
<b>CHEMISTRY</b>			
67.	Chemistry: Science for Middle Schools Part I (for Class VII)	Gujarat, Andhra Pradesh (Adapted and Translated into Telugu)	Delhi Administration
68.	Chemistry. Science for Middle Schools Part II (for Class VIII)		Delhi Administration

**PHYSICS**

- |     |   |                         |                      |
|-----|---|-------------------------|----------------------|
| 69. | Physics : Science for Middle Schools Part I (for Class VI)    | Andhra Pradesh          | Delhi Administration |
| 70. | Physics : Science for Middle Schools Part II (for Class VII)  | Andhra Pradesh, Gujarat | Delhi Administration |
| 71. | Physics : Science for Middle Schools Part II (for Class VIII) |                         | Delhi Administration |

**MATHEMATICS**

- |     |   |                |                      |
|-----|---|----------------|----------------------|
| 72. | Arithmetic-Algebra : Mathematics for Middle Schools Part I (for Class VI)   | Andhra Pradesh | Delhi Administration |
| 73. | Arithmetic-Algebra : Mathematics for Middle Schools Part II (for Class VII) |                | Delhi Administration |
| 74. | Arithmetic-Algebra Mathematics for Middle Schools Part III (for Class VIII) |                | Delhi Administration |
| 75. | Geometry : Mathematics for Middle Schools Part I (for Class VI)             | Andhra Pradesh | Delhi Administration |
| 76. | Geometry : Mathematics for Middle Schools Part II (for Class VII)           |                | Delhi Administration |
| 77. | Geometry : Mathematics for Middle Schools Part III (for Class VIII)         |                | Delhi Administration |

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<b>SOCIAL STUDIES</b>			
78.	Hamari Dilli (for Class III)	Jammu & Kashmir, Madhya Pradesh	Delhi Administration, Bihar (Adopted and renamed as "Hamara Bihar"), A&N Islands
79.	Hamara Desh Bharat (for Class IV)	-do-	Delhi Administration, Bihar, Haryana, A&N Islands
80.	Bharat Aur Sansar (for Class V)		Kendriya Vidyalaya Sangathan, Delhi Administration, Bihar, A&N Islands
81.	Samajik Adhyan Part I (for Class V)		Kendriya Vidyalaya Sangathan
82.	Samajik Adhyan Part II (for Class IV)		-do-
83.	Sthaniya Shasan : A Textbook of Civics for Middle Schools (for Class VI)		Bihar, Delhi Administration, Kendriya Vidyalaya Sangathan
84.	Shasan Aur Samvidhan—A Textbook of Civics for Middle Schools (for Class VII)	The book has been sent to States/ Union Territories for comments/ approval.	Delhi Administration, Kendriya Vidyalaya Sangathan
85.	Swatantra Bharat—A Textbook of civics for Middle Schools (for Class VIII)		-do-
<b>GEOGRAPHY</b>			
86.	Africa Aur Asia A Textbook for Middle Schools (for Class VI)		-do-
87.	Australia Uttar Va Dakshin America : A Textbook for Middle Schools (for Class VII)		-do-
88.	Europe Aur Bharat		-do-

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<b>HISTORY</b>			
89	Prachin Bharat A Textbook for Middle Schools (for Class VI)	Mysore, Andhra Pradesh, Maharashtra, Tamil Nadu	Delhi Administration, Bihar, Kendriya Vidyalaya Sangathan
90.	Madhyakalin Bharat A Textbook for Middle Schools (for Class VII)		-do-
91.	Aadhunik Bharat : A Textbook for Middle Schools (for Class VIII)		Delhi Administration, Bihar, Kendriya Vidyalaya Sangathan
<b>HINDI</b>			
92.	Rani Madan Amar . Hindi Primer for Beginners	Mysore	Bihar, Delhi Administration, A&N Islands, Laccadives, Kendriya Vidyalaya Sangathan, Arunachal Pradesh (for Class III)
93.	Chalo Pathshala Chalen Hindi Reader (for Class I)	Mysore	Delhi Administration, A&N Islands, Arunachal Pradesh (for Class IV), Bihar
94.	Aao Hum Padhen Hindi Reader (for Class II)	Andhra Pradesh, Mysore	Delhi Administration, A&N Islands, Bihar, Kendriya Vidyalaya Sangathan, Arunachal Pradesh (for Class V)
95.	Aao Padhen Aur Samjhen : Hindi Reader (for Class III)	Andhra Pradesh, Mysore, Goa, Daman & Diu	Delhi Administration, Bihar, A&N Islands, Arunachal Pradesh (for Class VI)
96	Aao Padhen Aur Seekhen : Hindi Reader (for Class IV)	Mysore, Jammu & Kashmir	Delhi Administration, Bihar, A&N Islands, Arunachal Pradesh (for Class VII), Kendriya Vidyalaya Sangathan

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97.	Aao Padhen Aur Khojen Hindi Reader (for Class V)	Kerala, Mysore	Delhi Administration, Bihar, Kendriya Vidyalaya Sangathan, A&N Islands, Arunachal Pradesh (for Class VIII)
98	Rashtra Bharati Part I Hindi Reader (for Class VI)	Andhra Pradesh, Mysore, Maharashtra, Dadra & Nagar Haveli, Gujarat	Delhi Administration, Kendriya Vidyalaya Sangathan, A&N Islands, Manipur, Bihar
99.	Rashtra Bharati Part II : Hindi Reader (for Class VII)	Mysore, Goa, Daman & Diu	Delhi Administration, A&N Islands, Bihar, Kendriya Vidyalaya Sangathan
100	Rashtra Bharati Part III : Hindi Reader (for Class VIII)	Mysore	Delhi Administration, A&N Islands, Bihar, Kendriya Vidyalaya Sangathan
101.	Kavya Sankalan . A Textbook for Secondary Schools	Punjab	Haryana, Himachal Pradesh, Central Board of Secondary Education, Andhra Pradesh, West Bengal, Kendriya Vidyalaya Sangathan, Bihar
102	Gadya Sankalan . A Textbook for Secondary Schools	Punjab	Andhra Pradesh, Haryana, Himachal Pradesh, Central Board of Secondary Education, West Bengal, Punjab University (Included four essays in the book published by them), Kendriya Vidyalaya Sangathan, Bihar
103.	Ekanki Sankalan A Textbook for Secondary Schools	Punjab	Central Board of Secondary Education, Kendriya Vidyalaya Sangathan, Madhya Pradesh, Haryana, Himachal Pradesh

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104.	Kavya Ke Ang . A Textbook for Secondary Schools		Madhya Pradesh, Central Board of Secondary Education, Kendriya Vidyalaya Sangathan
105.	Jeevani Sankalan A Textbook for Secondary Schools		Haryana, Himachal Pradesh
106.	Hindi Sahitya Ka Itihas : A Textbook for Secondary Schools		Punjab Board.
107.	Kahani Sankalan A Textbook for Secondary Schools		Haryana, Himachal Pradesh, Central Board of Secondary Education, Kendriya Vidyalaya Sangathan
108.	Kavya Sankalan   Gadya Sankalan   Combined Edition		M.S. University of Baroda
109.	Hindi Vyakaran Aur Rachana	The book is being sent to States/ Union Territories for comments/ approval	
<b>SANSKRIT</b>			
110	Sanskritodayah A Textbook for Secondary Schools	Kerala, Tamil Nadu, Maharashtra, Goa, Daman & Diu	Central Board of Secondary Education, Mamrupur, A&N Islands, Jammu & Kashmir University (for PUC), Kendriya Vidyalaya Sangathan