

**REPORT OF THE COMMITTEE**

**FOR**

**REVITALISATION OF EDUCATIONAL SYSTEM**

**OF**

**GOA, DAMAN AND DIU**

**REPORT OF**  
**the Committee for Revitalisation of the**  
**whole educational system in the Union**  
**Territory of Goa, Daman and Diu (1980-81).**

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**Institute of Educational  
Planning and Administration**

**17-B, SriAurbindo Marg, New Delhi-110005**

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## PREFACE

*The Committee is thankful to the Government of Goa, Daman and Diu for giving it the opportunity for studying the educational system in the territory and suggesting action to be taken for its revitalisation. The Committee is thankful to the Director of Education, his officers and staff for according all facilities for conducting the study and preparing the report. The Committee is thankful to the Development Commissioner, the Labour Commissioner, the Director of Industries and the Chairman, Board of Secondary and Higher Secondary Education for sparing time for discussion with the Committee. It records its thanks to all members of the public and other educationists who met the Committee or gave their views in writing for consideration.*

*The Committee is specially thankful to the Education Minister for sparing time to meet the Committee at the beginning. It is grateful to Chief Minister for sparing time to meet the Committee to receive its Report.*

Panaji,

16th April, 1981.

Members of the Committee

## Introduction

### 1.1 Appointment of the Committee:

The Government of Goa, Daman and Diu in their Order No. WET/ /1/Res. 83/79 dated 8th September, 1980 constituted a Committee to prepare a plan for revitalisation of the educational system in the territory consisting of the following members:

1. Dr. R. C. Das — Chairman.  
Professor and Head of  
Department of Teacher Education,  
N. C. E. R. T., New Delhi.
2. Dr. A. N. Bose, — Member.  
Professor, Department of  
Education in Science and  
Mathematics, N. C. E. R. T.,  
New Delhi.
3. Dr. P. N. Dave, — Member.  
Professor and Head,  
Comprehensive Access to  
Primary Education Group,  
N. C. E. R. T., New Delhi.
4. Shri R. S. Kenkre, — Member.  
Alankar,  
Lady Jamshetji Road.  
Mahim-Bombay.
5. The Director of Education — Member-Secretary.  
Panaji.

1.2 The terms of reference as laid down in the said Order are as follows: —

- i. To go into the present educational system prevailing in the Union Territory of Goa, Daman and Diu and recommend the necessary changes, if any, in order to suit the development requirements.

- ii. To prepare a plan for revitalisation of the whole educational system in this Union Territory of Goa, Daman and Diu, keeping in view the requirements of the employment market.

1.3.1 The Committee met in three sessions as follows:

- 1st session : From 26th November to 29th November, 1980.
- 2nd session : From 27th January to 31st January, 1981.
- 3rd session : From 13th to 15th April, 1981.

1.3.2 All the sessions were held at Panaji, Goa, mainly in the office of the Director of Education although some meetings were also held at other places in Panaji. In the beginning, the Committee met the Education Minister and the Development Commissioner-cum-Chief Secretary to find out their views regarding the terms of reference of this Committee and also as to what they considered as the weaknesses of the present educational system of the territory and as to how it could be revitalised. At these meetings the Committee was informed that they could consider the whole educational system of the territory from pre-primary to the University stage and recommend the steps that could be taken to make the educational system more effective and relevant to the territory. In particular the Committee was informed that the Government would like the educational system to be strengthened in its vocational aspects so that the students after passing the High/Higher secondary school would have adequate preparation for entering into suitable vocational areas. The Committee was also informed that in the territory most of the high/higher secondary schools as well as Colleges were under private management and the Committee might give its attention to see how they could be adequately strengthened to take up the new educational programme recommended by the Committee. It was also pointed out that till recently the educational system of the territory was same as that of Maharashtra and a separate Board of Secondary Education for the territory had now been formed. University education is still under the University of Bombay, and there is a Centre of Post-Graduate Instruction and Research at Panaji.

1.4 The Committee met Heads of Departments of Government and Semi-Government Organisations as stated below and ascertained their views regarding revitalisation of the educational system of the territory:

1. Shri Suresh G. Amonkar,  
Chairman, Goa, Daman and Diu  
Board of Secondary and Higher Secondary Education.
2. Mr. V. Sinha, Labour Commissioner.
3. Prof G. V. Kamath Helekar,  
Director, Centre of Post-Graduate Instruction and Research,  
Panaji.

4. Shri D. R. Karnure,  
Principal, Government Polytechnic, Panaji.
5. Prof. G. V. Nadkarni,  
Principal, Dhempe College, Panaji.

1.5 The Committee visited the following educational institutions and observed their teaching programmes and facilities and had discussions with the Heads of the institutions and their teaching staff:

1. Nirmala Institute of Education, Panaji.
2. Rosary High School, Caranzalem.
3. Sacred Heart High School, Parra.
4. Government Primary School, Mapusa.
5. St. Xavier's College, Mapusa.
6. New Goa High School, Mapusa.
7. Government Primary School, Tivim.
8. Shanta Durga High School, Bicholim.
9. Government Primary School, Azossim.
10. Government Middle School, Azossim.
11. Azmane High School, Azossim.

1.6 The Committee also gave a notification in the local Newspapers stating the Government Order for constitution of this Committee and inviting members of the public to meet the Committee and give their views, if any, regarding revitalisation of the educational system. Accordingly, the following persons had met the Committee and stated their views:

1. Prof. Shantaram A. Hede,  
Retired Zonal Educational Officer.
2. Shri Madhav Pandit,  
Teacher, Mahila and Nutan Vidyalaya, Margao.
3. Prof. Devidas J. Malkarnekar,  
Retired Principal, Srimati P. Chowgule College, Margao.
4. Shri Ravindra Raiturkar,  
President, All Goa Secondary Teachers' Association.
5. Prof. G. G. Bakhole,  
St. Xaviers' College, Mapusa.
6. Shri Shankar Sardesai,  
Retired Education Officer, Panaji.
7. Fr. Benedicto Furtado,  
Principal, Don Bosco High School, Panaji.



8. Shri R. N. Phene,  
Principal, M. & N. English School, Margao.
9. Shri Ashraf Aga,  
President, South India Urdu Academy, Goa-Branch, Goa.
10. Shri Ibadulla Khan,  
Member, Executive Committee, South India Urdu Academy,  
Goa-Branch, Goa.

1.7 The Committee received representations from the following members of the public which were duly considered by the Committee:

1. Shri A. Baptista,  
1/250 Gaurovaddo, Calangute, Bardez, Goa.
2. Shri Shridhar G. Verenker,  
Old Bazar, Ponda-Goa.
3. Shri M. D. Ionkar,  
Executive Chairman, Gomantak Grathalaya Sangha, Panaji.
4. Shri M. R. N. Gaunekar,  
Headmaster, Smt. Hirabai High School, Sancordem, Goa.

1.8 The Committee also met the following officers of the Directorate of Education, Goa.

1. Shri S. V. Kurade,  
Dy. Director, Academic.
2. Shri F. A. Figueiredo,  
Dy. Director, Administration.
3. Shri R. Y. Lawande,  
Asstt. Director, Planning.
4. Shri V. M. Desai,  
Asstt. Director, Academic — I.
5. Shri P. V. Salelkar,  
Asstt. Director, Adult Education.
6. Shri V. D. Naik,  
Asstt. Director, Academic — II.
7. Shri J. A. Varela,  
Asstt. Director, Administration.
8. Shri N. R. Dhavlikar,  
Zonal Officer, North Zone.
9. Shri R. V. Bhatt,  
Zonal Officer, South Zone.
10. Shri J. J. Ram Anand,  
Dy. Education Officer, Daman.

11. **Shri M. K. Apte,**  
Zonal Officer, Central Zone.
12. **Shri P. D. Kalambkar,**  
Dy. Education Officer, South Zone.
13. **Shri J. S. Nayak,**  
Principal, Government Teachers' Training College.
14. **Shri O. Dias,**  
Dy. Education Officer, Central Zone.
15. **Shri Ramchandra Jirage,**  
Dy. Education Officer, Physical Education.
16. **Shri P. C. Sancoalcar,**  
Accounts Officer.
17. **Shri G. K. Verlekar,**  
Statistical Officer.
18. **Shri M. R. Nimbalkar,**  
Asstt. Social Education Officer.

## II

# Existing System of Education in Goa, Daman and Diu

### 2.1 Pre-liberation Background:

The Union territory of Goa, Daman and Diu was under Portuguese domination till 1961. The Portuguese Government had made primary education free and compulsory through Portuguese language for the age group 7-14 years. Primary education was of 5 years duration. In the year 1961-62, at the time of liberation there were 176 Government and 300 private primary schools. The medium of instruction in most of the private schools was Marathi. No grant-in-aid was paid by the then Government to such schools except for maintenance of Portuguese medium classes. In addition, there were primary classes attached to 72 secondary schools.

2.2 There was one Government Lyceum imparting secondary education through Portuguese medium, the final examination of which was equivalent to Intermediate course of a College in India. In addition to this Government Lyceum, there were 13 private institutions more or less like coaching classes following the Lyceum pattern and preparing students for the Lyceum examination. Also there were private secondary schools through Marathi and English medium and some middle schools with Gujarati as medium preparing students for the S.S.C. examination of S.S.C.E. Board, Poona. The latter school did not get any aid from the then Government and had to face considerable difficulties. There were 78 such non Government secondary schools functioning without any aid in the year of liberation. As regards higher education it was limited to Medical and Pharmacy courses imparted by the "Escola Medica" at Panjim. Those who aspired for higher education above the level of Lyceum in other branches had to go to Portugal or any other college in India or elsewhere.

### 2.3 Education after Liberation:

After liberation the territory followed the educational system of Maharashtra which continues even to this date. Although recently the Government of Goa, Daman and Diu had established a separate Board of Secondary and Higher Secondary Education which has made some

changes in the syllabus of the Maharashtra Board, the books prescribed by the Maharashtra Board are still followed in the territory of Goa, Daman and Diu.

2.4 The educational pattern in the territory as it exists today consists of primary education of four years duration followed by middle school of three years duration and high school of further three years duration. This is followed by two years of higher secondary education.

**TABLE 1**  
**No. of Schools in 1979-80**

Type of Schools	No. of Schools		
	Government	Non Government	Total
Primary Schools ... ..	915	48	963
Primary and Middle ... ..	119	7	126
Middle ... ..	2	14	16
Middle and Secondary ... ..	18	100	118
Primary, Middle and Secondary ... ..	2	111	113
Secondary ... ..	3	5	8
Schools having Higher Secondary Classes ...	4	5	9

2.5 The number of different types of schools under Government and Non-Government Management is shown in Table 1. It is found that at the primary level more than 95% of the schools are under Government Management. The number of schools having middle school classes are almost equally divided between Government and non-Government Management. More than 95% of the schools having secondary classes are under non-Government management. Thus management at the lower level of education is with Government and changes at higher level to non-Government.

2.6 The medium of instruction in the Government primary schools is Marathi in 726 schools; it is Gujarati in 23 schools; English and Konkani in 38 schools; Marathi, English and Konkani in 29 schools; Marathi and English in 45 schools. There is also provision for teaching of Urdu and Kannada in a few other schools. In case of non-Government Primary schools, the medium of instruction is English in 35 out of 48 schools. The medium of instruction in non-Government middle and secondary schools is English. Thus, the students who come from regional language medium primary schools have to change to English medium when they study in the middle schools. In other words, most of the students of the territory have to study in English medium from Class V onwards. This

change of medium from regional language to English in class V, for the children who have not studied English earlier, causes difficulty for them in understanding the subjects during their middle school career. Also students coming from English medium primary schools and those coming from regional language primary schools are generally mixed up in the same class and have to study the same books in English medium which also introduces difficulty both for the teachers as well as for the students. From 1980-81, English has been introduced as a second language from Class III onwards in all non-English medium primary schools.

2.7 From the data provided regarding class-wise enrolment in the territory during 1979-80 it is found that the enrolment of boys in class IV is nearly 62% of the enrolment of boys in Class I. The same percentage of enrolment holds true of girls. A study conducted by the Directorate indicates, however, that of the children who were enrolled for class I during 1970-71 only 45% had reached class V in 1974-75. From the statistics available, it appears that on the whole the holding power of the primary school classes is satisfactory as compared with the national average.

2.8 From the statistics on teachers it was found that 16% of the teachers at the primary level and 11% of the teachers at the secondary level are untrained. The percentage of untrained teachers sex-wise works out as 22% for female primary teachers and 10% for male primary teachers. Thus the percentage of untrained teachers in schools is relatively small in the territory as compared with that in most other States. The pupil-teacher ratio based on actual enrolment during 1979-80 works out as 31 at the primary level, 37 at the middle level and 19 at the secondary level. This is also quite satisfactory compared with similar figures in other States

2.9 The committee visited some primary, middle and higher secondary schools. In general, it is found that the rural primary schools including single teacher schools have better buildings and furniture, than those found in other parts of the country. In some places, however, they lack adequate playground facilities. The buildings for rural, middle and secondary schools, which are generally private schools, are not so satisfactory as in many cases the size of class rooms is small for the enrolment. The laboratory facilities are found not very satisfactory.

2.10 The teaching of Work Experience at present in the primary and middle schools is far from satisfactory. At the secondary school level in some schools some Work Experience is being taught but even this is of a very limited nature and is not well organised. Needle work seems to be a common work experience given to girls and gardening to boys. At the higher secondary level vocational subjects were taught as additional subject during 1975-77. This was subsequently discontinued, for being an additional subject, it was resisted by students and parents. At present there is no teaching of vocational subjects at the higher secondary level.

2.11 It is understood that 200 secondary schools in the territory have introduced teaching of some Work Experience. The subjects which are taught under Work Experience are as follows:

**Standard VIII**

**One Subject from Each Cluster**

*Cluster A*

1. Maintenance and Repairs of Electrical Gadgets
2. Maintenance and Repairs of Stoves
3. Book Binding
4. Preservation of Fruits
5. Doll Making
6. Puppet Making
7. Wood Work
8. Fret Work
9. Tailoring
10. Maintenance and Repair of Cycle

*Cluster B*

1. Kitchen Gardening
2. Pot Culture
3. Simple Farm Operations

**Standard IX & X**

**One Subject from Each Cluster**

*Cluster A*

1. Use of Common Tools
2. Maintenance & Production of School Science Apparatus
3. Maintenance and Elementary Repairs of Radios
4. Preparation of Plastic Articles
5. Batik Art
6. Preparation of Suit Cases
7. Maintenance & Elementary Repairs of Time-pieces
8. Elementary Plumbing
9. Maintenance & Elementary Repairs of Water Pumps
10. Elementary Chemical Technology
11. Maintenance & Preparation of Teaching Learning aids
12. Needle-Work, Embroidery, Knitting and Crochet

*Cluster B*

1. Farm Operations
2. Poultry
3. Preparation of Bread and Biscuits
4. Pisciculture
5. Horticulture
6. Bee-keeping
7. Preparation of Nutritious Food
8. Animal Management
9. Marine Fisheries

2.12 Provision of teaching of these Work Experience activities in different schools is also given in Table 2.

TABLE 2

**Topic-wise, Number of Schools Teaching Work Experience**

Sr. No.	Name of the Work Experience Subject	No. of schools having taken the Subject. **
1.	Maintenance and Repairs of Electrical Gadgets ... ..	36
2.	Maintenance and Repairs of Stoves ... ..	16
3.	Book Binding ... ..	48
4.	Tailoring ... ..	44
5.	Maintenance and Repairs of Cycles ... ..	24
6.	Kitchen Gardening ... ..	75
7.	Pot Culture ... ..	68
8.	Use of Common Tools ... ..	39
9.	Maintenance and Production of School Science Apparatus ...	24
10.	Maintenance and Preparation of Teaching Learning Aids ...	15
11.	Needle Work, Embroidery, Knitting and Crochet ... ..	32
12.	Preparation of Bread & Biscuits ... ..	16

\*\* The number showing the schools having taken the subject is approximate.

2.13 At present (1980-81) higher secondary classes are available in nine schools, while higher secondary classes are also attached to eight Colleges. Out of the nine higher secondary schools, four are under Government management and five under private management. All the eight Colleges having higher secondary classes are under private management. No vocational courses have been provided so far at the higher secondary level.

2.14 There are five Colleges of Arts and Science and four Colleges of Commerce. One Commerce College also has provision for Arts. There is one Centre of Post-Graduate Instruction and Research at Panaji which provides Post Graduate Courses in Arts, Science and Commerce. The enrolment in Arts, Science and Commerce courses in the first year degree classes was 1685 during 1979-80. The total enrolment in the first year of the M. A., M. Sc., and M. Com. in the same year was 279. All the Colleges in Goa are affiliated to the University of Bombay and follow the syllabus prescribed by this University. One College in Daman is affiliated to the South Gujarat University and follows the syllabus prescribed by it. In addition to the general Colleges, there are following professional Colleges:

1. Goa Medical College, Panaji.
2. Goa College of Pharmacy, Panaji.

3. Goa College of Engineering, Pharmagudi, Ponda.
4. Goa College of Art, Panaji.
5. Kare College of Law, Margao.
6. M. S. College of Law, Panaji.
7. Nirmala Institute of Education (secondary level).

2.15 Besides, there are the following professional institutions not affiliated to the University:

Primary Teacher Training Institutions (1 Govt. 3 non Govt.)	...	...	...	...	...	4
Polytechnics (1 Govt. and 1 non Govt.)	...	...	...	...	...	2
Food Craft Institute	...	...	...	...	...	1
Industrial Training Institutes	...	...	...	...	...	7
Nursing School	...	...	...	...	...	1
Schools of Music	...	...	...	...	...	4

In the Polytechnic the following courses are being offered:

	Duration	Intake
Diploma in Civil Engineering	3 years	40
Diploma in Mech. Engineering	3 years	50
Diploma in Elec. Engineering	3 years	20
Diploma in Structural Fabrication	4 years	20
Diploma in Industrial Electronics	4 years	20
Diploma in Mining and Mine Surveying	3 years	20
Diploma in Post Harvesting and Food Technology	4 years	10
Diploma in Stenography and Secretarial Practice	2 years	20
Diploma in Production Engineering	4 years	20

It is also understood that there is a proposal to start one more Polytechnic under private management at Vasco. It will provide a four-year sandwich course in Marine Engineering.



### III

## Recommendations for Revitalisation

**3.1** While considering the steps to be taken for revitalisation of education in the territory, the Committee kept in view the main objectives of school education as stated in the documents "The Curriculum for Ten Year School" of the National Council of Educational Research and Training and the "Report of the Review Committee on the Curriculum for the Ten Year School". Some of the principles on the basis of which the Committee made its recommendations are as follows:—

**3.1.1** The curricula should be related to the life, needs and aspirations of the people. The Committee considers that the educational system in Goa, Daman and Diu should be relevant to the life, needs and aspirations of the people of Goa, Daman and Diu. While it may follow the national pattern of the curriculum and take steps for achieving national integration, it should be sufficiently flexible to cater to the needs of the local people.

**3.1.2** Teaching of Science and Mathematics should be modernised and strengthened so as to relate it to the developmental needs. It is necessary that the teaching of Science and Mathematics is upgraded and modernised so that it is in keeping with the national standard and also such that the students can apply the principles of Science and Mathematics for increasing productivity and for accelerating development.

**3.1.3** Socially Useful Productive Work should be a source of learning at all levels of school education. This is necessary to break the dichotomy between work and education. The child should learn using his hands for productive work. This will give him insight into the material phenomena and human relationships involved in productive work. It will create attitudes necessary for cooperative work and respect for persons working with the hands. The Socially Useful Productive Work activities should, however, be meaningfully related to the life and needs of the people and can provide basic preparation for a future vocation.

**3.1.4** Education should develop in the child artistic appreciation and expression. From early childhood, it is necessary to provide experience to the child in different forms of art so as to develop in him

a sense of appreciation for art. He should be gradually given opportunity for personal expression in aesthetic activity. Music, dance, drawing, painting, modelling and sculpture should be included in the pupils' experience in a gradual manner.

3.1.5 Health and Physical Education should be included in the educational programme at all levels. It is necessary that the child should learn and practice habits conducive to good health from the early childhood. Adequate facilities for games, health and physical education should be provided in schools.

3.1.6 The curriculum should be flexible within a framework of acceptable principles and values. The curriculum may allow flexibility and local variation particularly at the primary level. It may be desirable to have a decentralised curriculum developed at this level as is being done under the UNICEF supported project of Primary Curriculum Renewal. At the same time for children not going to formal schools, non-formal education may be provided at Centres of Non-formal Education and they should be allowed to enter the formal system of education at different stages after some years of non-formal education.

### 3.2 Pre-primary and Primary Education:-

At present the pupils are admitted to class I of the primary school on completion of age of five years. Normally in the national pattern the child is admitted to Class I on completion of 6 years of age. It has also been recommended by the Secondary Education Commission (1964-66) that the age of admission to Class I will ordinarily be not less than 6 +. It is understood that the children who are admitted one year earlier, are unable to cope with the syllabus prescribed at the primary level. This appears to adversely affect their performance at the higher levels of education also. So it is recommended that the child is admitted to Class I so that his age on 1st October in the year of admission is six. It may be desirable therefore, to have pre-primary classes added to the existing primary schools so that the children of age 5 may be admitted to the pre-primary class and promoted to grade I at age 6. The Department may also develop suitable guidelines for teachers for conducting pre-primary class activities.

3.3 It is understood that many Balwadis are not teaching through the mother tongue. Since learning at this level is facilitated if the mother tongue is used, the existing Balwadis should use the mother tongue as medium of instruction. They may also follow the guidelines developed by the Department of Education for organising learning activities at the pre-primary stage.

3.4 The medium of instruction in the primary classes should be the mother tongue i.e. it may be Konkani, Marathi, Gujarati, Hindi or Urdu as the case may be. Depending on the number of children belonging to each language group in primary school, separate teachers capable of

teaching in these languages, should be provided in the primary schools. In addition to the mother tongue, a second language is introduced at Class III. Since the medium of instruction in most of the middle and secondary schools is English, the Directorate has introduced English as a second language at Class III. For this purpose there should be at least one well-trained teacher in English at each primary school.

3.5 Instead of following the curriculum prescribed by the Maharashtra Government/Board of Secondary Education, the primary and secondary schools in the union territory may follow the national pattern of curriculum recommended by the NCERT and also use the books prescribed by it. The NCERT publishes books in English and Hindi media for all classes from I to XII primarily for the Central Schools and for the schools under the Central Board of Secondary Education. However, many State Governments also follow these books either in their original form or republish them with adaptation. The NCERT allows adaptation or adoption of its books by the State Governments. It would be of advantage if the Government of the Union territory examines the NCERT books and makes adaptation to suit to their local needs. The Government of Goa, Daman and Diu may then translate the NCERT books or their adapted version into their regional languages such as Konkani, Marathi and Gujarati and publish them.

3.6 The subjects of study in the primary classes and their time distribution may be as follows as recommended by the Committee headed by Shri Ishwarbhai Patel for the Review of the Ten Year School Curriculum:

Subjects	Time
Mother Tongue/Regional Language	20 percent + 10%
Mathematics	20 percent
Environmental Studies (Social Studies, Nature Study and Health Education)	20 percent
Socially Useful Productive Work	20 percent—5%
Games and Creative Activities (Music, Dancing, Drawing and Painting)	20 percent—5%

Note: Since a second language is introduced at Class III each language may be given 15 percent time by reducing 5% of time from S. U. P. W. and Games and Creative Activities each.

3.7 It is recommended that the total engagement time for children in the primary school should be four and a half hours including the time for Socially Useful Productive Work, Physical Education and Games and recess.

3.8 From the early childhood the child should be given some experience in Socially Useful Productive Work. At the primary stage this

should begin with simple creative self-expressional activities. It is desirable to avoid any activity with an element of monotony in it. The primary aim should be to enable the child to work with his hands in trying to make something useful. Simple material such as clay, paper and cardboard, straw and other locally available materials may be used for making toys and other simple articles.

3.9 There should also be provision for art, music and other aesthetic activities in the primary school. The child should be given some experience in drawing and painting so as to develop a sense of self-expression. Listening to music as well as singing in chorus should be encouraged. A cassette recorder with a few cassettes will enable a teacher to make available to the pupils recorded good music.

3.10 No less important is health education, games and recreational activities. While health education can be integrated with the teaching of environmental studies, adequate provision should be made for physical education and games. At least one teacher in the primary school should be trained in this respect and the school should have adequate play areas in the vicinity of the school. An open area of about 400 to 800 sq. ft. may be provided near each primary school for this purpose.

3.11 There are 164 single teacher primary schools in the union territory. It is also recommended that wherever possible two neighbouring single teacher schools may be combined into one provided the distance between these schools is less than 2 kilometres. It is very difficult for a single teacher to manage pupils of different classes in a primary school. The teacher has to be given special training in multiple class teaching. A one-month's training programme may be organised for teachers of single teacher schools for this purpose. The National Council for Teacher Education has developed a course of inservice training for teachers of single teacher primary schools; a copy of which can be obtained from the NCERT and the inservice training may be organised.

3.12 It is desirable that there should be some leave reserve posts of teachers for the primary schools to teach in the leave vacancies. This is particularly important in case of single teacher and two-teacher schools as the school will be left without teacher when one of them goes on leave for long periods. It is proposed that for every 20 teachers in service, one leave reserve post may be created and attached to the Centre of a school complex which may be a middle or high school. He may be given a conveyance allowance so that he can go around the primary schools for helping the teachers as well as for working in leave vacancy.

3.13 There is no detention of students at class I although there is an annual examination conducted by the teacher at the end of this class. This practice should be continued and individual records of achievement of students in different subjects should be maintained. The weaker students should be given special help to come up to the minimum standard for

the class. The practice of non-detention may also be extended to class II. In other words, all students may be promoted from class II to class-III without detention although at the end of class II an annual examination may be held for all pupils and their marks recorded in their individual records. Progressively this practice should continue upto class IV but adequate care must be taken to see that the standard of instruction is maintained and the weaker pupils are given special help by the teachers. This experiment may be tried out in some experimental schools under the supervision of the State Institute of Education/State Council of Educational Research and Training. For the examination at the end of class IV model questions may be developed by the State Institute of Education and sent to all primary schools so that they may use these questions for the annual examination. A pupil may, however, not be promoted to class IV unless he has adequate standard at this annual examination.

3.14 About 15 percent of the primary schools are located in private buildings. These buildings are generally not quite suitable for the purpose of the school as the rooms are generally small. They do not have adequate facilities required for instructional purposes. Yet the Government is paying heavy rent for these buildings. It is therefore recommended that Government develop a plan for constructing its own school buildings in a phased manner for location of these schools.

3.15 About 15 percent of the primary teachers in service are not trained. In order to get these untrained teachers trained at the earliest, the union territory may organise through the State Institute of Education a crash training programme consisting of two summer courses of eight weeks each. Even for the trained teachers it is necessary that regular refresher courses be provided so that it is possible for a teacher to attend one such refresher course every five to seven years. This would enable him to update his knowledge and be acquainted with the modern trends and techniques of teaching.

3.16 The pre-service teacher training course for training primary teachers may be revised as per the recommendation of the National Council for Teacher Education. The content course in this training programme should also be upgraded. At present there is a two-year teacher training programme for candidates after passing class X. In many States the minimum qualification for primary teachers has been raised to higher secondary or class XII. It may be desirable to admit students who have passed class XII examination to the second year of the Primary Teacher Training course so that they may undergo only one year teacher training to be a primary teacher; whereas for those who have passed class X the duration of teacher training may be two years. This would require suitable adjustment of the course such that most of the content courses are provided in the first year and most of the pedagogical courses are provided in the second year. However, care should be taken to integrate teaching of content with methodology. In due course, when adequate number of candidates with higher secondary qualification are available for teacher

training, the minimum qualification for admission for teacher training will be raised to class XII.

3.17 Non-formal education has been accepted as a strategy to supplement the efforts of formal education in order to achieve universalisation of elementary education. The territory is implementing the UNICEF assisted Project entitled 'Comprehensive Access to Primary Education' wherein instructional materials to be used in non-formal education are being developed in the process of teacher training at the elementary teacher training institutions. The territory is also in the process of setting-up Non-formal education centres for children for the age group 9 to 14. It is therefore recommended that this should be given due importance and properly supervised so that it supplements the efforts of formal education in achieving universalisation. Provision should also be made for admission, into formal system in different classes, of children who have received education at the Non-formal education centres for a few years. Necessary administrative instructions have to be given to the Inspecting Officers and Heads of Primary and Middle Schools in this regard. There should be an officer at the Directorate of Education at least of the rank of Assistant Director of Education to supervise Non-formal education in the territory.

### 3.18 Middle and Secondary Level:

As has already been pointed out most of the middle and secondary schools in the territory teach through English medium. The children who come from regional language medium primary schools find difficulty in following the teaching during their middle school classes. To overcome this difficulty, it is recommended that English which has been introduced in class III at the primary school, may be continued. It is further recommended that in classes V & VI the children coming from regional language medium primary schools may be given a special course in English so that they would be able to follow the subjects taught through English medium. It is necessary, therefore that a special course in English may be designed for such children to be taught to them in classes V & VI. It would be desirable that children coming from regional language medium and children coming from English medium primary schools are put in separate section in classes V & VI, wherever possible.

3.19 Some schools in the territory operate in two shifts, as a result of which each shift works for about 5 hours a day. This is a little insufficient for instruction in all school subjects together with instruction for Socially Useful Productive Work, Aesthetic activities and Health & Physical Education activities. It is, therefore, recommended that the working hours for the middle and secondary schools be 5½ hours a day for 6 days a week. In order to operate the two shifts, it will be necessary to start the schools at least one hour earlier (i.e., from 7 a.m. to 12.45 p.m. and 12.45 p.m. to 6.30 p.m.) so as to have 5½ hours of instructional time excluding 15 minutes of recess). On Saturday, the instructional time may be one hour less to allow for staff meetings.

3.20 The territory is now following the syllabus prescribed by the Maharashtra Board although a separate Board of Secondary and Higher Secondary Education has recently been established in the territory. The Board is taking steps to gradually revise the syllabus and prepare new textbooks for the territory. It is recommended that the Board adopts the national pattern of school syllabus as recommended by the NCERT and reviewed by the Committee headed by Shri Ishwarbhai Patel. According to this Committee the subjects to be taught and the time allocation in classes V to VII would be as follows:

Subjects	Time allocation per week
1. Languages	7 hours
2. Mathematics	4 hours
3. History, Civics and Geography	4 hours
4. Science	4 hours
5. Arts (Music, Dance and Painting)	3 hours
6. Socially Useful Productive Work	6 hours
7. Games, Physical Education and Supervised Study	4 hours
	<hr/> <b>32 hours</b> <hr/>

For classes VIII to X, the subjects to be taught and the time allocation is recommended as follows:

	Time allocation
1. Languages	8 hours
2. Mathematics	4 hours
3. Science	5 hours
4. History, Civics and Geography	3 hours
5. One of the following: Arts (Music, Dance and Painting) Agriculture, Commerce, Economics, Social reconstruction, Classical Languages	2 hours
6. Socially Useful Productive Work and Community Service	6 hours
7. Games, Physical Education and Supervised Study	4 hours
<b>Total</b>	<hr/> <b>32 hours</b> <hr/>

3.21 As regards languages it is recommended that the child may study two languages upto Class VI. A third language may be introduced from class VII onwards but dropped after completion of class IX. The child carried the first two languages upto class X for the final Board examination. Every child should study his mother tongue/regional language and English/Hindi as the first two languages. As regards the third language, it should be Hindi for those who have not studied Hindi as first or second language. It can be any foreign or Indian language for those who have studied Hindi as first or second language. Considering the conditions in Goa where the medium of instruction in secondary level is English and English is taught from class III onwards, English will be studied either as first or second language.

3.22 In order to improve the standard of instruction in different subjects, it is recommended that the territory may adopt or adapt and use the text books developed by the NCERT. The NCERT publishes books in English and Hindi and permits State Governments to translate these books into their own regional languages and publish them. It also allows adoption of its books to suit to the requirements of the State Governments. While the text-books in Science and Mathematics and English and Hindi may be used as such, the text-books in Social Studies may be adapted to suit to the needs of the territory. Since the territory is using English as the medium of instruction, it can use the NCERT books as such published in English language by intimating the NCERT the number of copies that would be required for the territory well in advance. The territory may, however, publish those books which it desires to translate into regional languages. It may also republish the Social Studies book, if it desires to modify the same. If the territory decides to use the NCERT books, the Board of Secondary Education of territory should revise the syllabus accordingly.

3.23 It is necessary that the standard of teaching Science and Mathematics at the secondary level be improved. While the use of NCERT books will improve the standard of the curriculum, the teachers should be qualified and trained to teach the same. It is recommended that one trained graduate Science teacher be provided for the middle school classes and two trained graduate science teachers (one in physical science and one in biological science) be provided for the secondary school classes. Further, in service training courses may be organised by the State Institute of Education to orient the teachers in teaching the improved Science and Mathematics syllabus.

3.24 Each secondary school having minimum of 60 pupils in classes VIII to X may be provided a laboratory assistant to assist the teacher in the science practical work. Where a school has more than six divisions in classes VIII to X, a second laboratory assistant may be provided. It is also recommended that a science supervisor in the grade of post-graduate teacher be provided for each Zone to supervise the teaching of science in the middle and high schools. The Board of



Secondary Education may also prepare a minimum list of apparatus and chemicals that may be kept for experimental work in science in each high school and the Government may give suitable grants for purchase of this minimum list of apparatus and chemicals. For this, the lists prepared by the Kendriya Vidyalaya Sangathan and the Central Board of Secondary Education may be consulted.

3.25 The teaching of Socially Useful Productive Work should be introduced in all middle and secondary schools. A school should provide instruction in at least three to four areas of Socially Useful Productive Work, out of a list of suggested activities to be prescribed by the Directorate/Board of Secondary and Higher Secondary Education. The activities to be taught in a school under Socially Useful Productive Work should be related to the employment/self-employment potentialities in the area and the human and material resources available. While trained artisans may be employed on part-time basis for teaching some skills to the pupils in Socially Useful Productive Work, by and large Socially Useful Productive Work should be taught by the regular teachers of the school. An extensive programme of training teachers in Socially Useful Productive Work should be drawn up and implemented by the State Institute of Education. While one or two teachers may take up the responsibility of coordinating Socially Useful Productive Work, it would be desirable to associate as many teachers as possible in planning, teaching and supervising this subject.

3.26 In classes V to VII, the pupil may be taught basic skills common to a number of crafts and he may be given exploratory experiences in trying his hand in a number of areas. In classes VIII to X depending on his interest, he may specialise and work in one area of Socially Useful Productive Work so as to gain a degree of skill which may be further improved if he desires to take up a vocation in that area. It would therefore be desirable to develop a sequential course of Socially Useful Productive Work for classes VIII, IX and X.

3.27 In order that adequate facilities may be provided in the school for the teaching of Socially Useful Productive Work, grant-in-aid rules of the school should be suitably modified so as to provide hundred percent grant for equipment necessary for the teaching of this subject. It should also provide hundred per cent grant for recurring expenditure. For this purpose it is recommended that grant-in-aid for contingent expenses may be increased from Rs. 15/- to Rs. 20/- per pupil so as to provide for a minimum contingent expense of Rs. 3/- per pupil per year for Socially Useful Productive Work and Rs. 2/- per pupil per year for laboratory expenses, and the remaining Re. 1/- may be used on other items. If Socially Useful Productive Work is well organised, the cost of materials can also be recovered to some extent from the sale of the products. Some of the areas suggested for Socially Useful Productive Work for V to VII and for classes VIII to X are given in Appendix 'A' and Appendix 'B' respectively.

### **3.28 Physical Education:**

Physical Education is taught at present as a compulsory subject in all classes from I to X. Basic Aasans of Yoga are also included in the syllabus for Physical Education. Coaches have been provided to train pupils in almost all games at 3 coaching centres as well as in camps. Thus the provision for Physical Education in the curricula appears to be satisfactory. However, there is shortage of play grounds in a number of schools. Efforts should be made to acquire land near the schools which do not have play-grounds and develop them for the purpose of play-ground. In urban areas common play-grounds may be provided for a cluster of schools.

3.29 From the data provided it is found that about 11% of the teachers at the secondary level are untrained. It is necessary that these untrained teachers be got trained at the earliest say within three years either through the regular course or by arranging a special two-summer session course. It is necessary that the existing B. Ed. course be suitably revised as per the recommendations of the National Council for Teacher Education so as to improve it in quality. The teacher training course should provide adequate training in content-cum-methodology as well as Socially Useful Productive Work. It should also train the teachers in all the practical aspects of teaching in secondary schools.

### **3.30 Higher Secondary Level:**

As already pointed out most of the higher secondary classes are at present attached to Colleges. It would be desirable, however, to have higher secondary classes alongwith the secondary schools, since the pupils at this stage are young and need the same kind of close supervision and teaching as in case of secondary schools. It is recommended that all future higher secondary classes may be started by upgrading the secondary schools.

3.31 At present the courses of study followed at the higher secondary classes are as recommended by the Maharashtra Board of Higher Secondary Education. According to this syllabus a student may take either two languages and four academic optional subjects or one language, three academic optional subjects and one vocational subject. In other words, the student may, at his option, take a vocational subject to get a little vocational bias without in any way decreasing his academic preparation for studying at the degree level. At present no vocational courses are taught at the higher secondary level in the territory.

3.32 In order to prevent educated unemployment as well as to release the congestion at the degree and post graduate levels, it has been recommended by the Secondary Education Commission that about 50 percent of the students at the higher secondary level be diverted to vocational courses. A vocational course to be meaningful should give adequate practical training to the pupil in the vocational and related

subjects. The publication of the NCERT entitled 'Higher Secondary Education and its Vocationalisation' as well as the Report of the Committee headed by Dr. Malcolm S. Adiseshiah entitled 'Learning To Do' have recommended that there should be two kinds of courses at the higher secondary level— one, General Education Course and two, Vocational Course. The subjects to be taught and the time distribution for these two courses are recommended as follows:

*A. General Education Course:*

Subjects	Time distribution
Languages	15 percent
Socially Useful Productive Work	15 percent
Electives	70 percent

*B. Vocational Course:*

Languages	15 percent
General Foundation Courses	15 percent
Vocational Elective Subjects	70 percent

A student who takes the vocational course would be prepared for entry into a group of related vocations. These courses have to be selected on the basis of survey of employment/self-employment potential available in the area.

3.33 It would be necessary to have an Advisory Board for Vocational Education in the territory which would be responsible for identifying, planning and recommending vocational courses at the higher secondary level. This Board should have as its members: Chairman of the Board of Secondary and Higher Secondary Education, Directors of: Education, Agriculture, Industry, Medical Services, Mining, Forestry, and Fishery as well as representatives of large employees, such as Banks, LIC, Chamber of Commerce, etc. The existing State Council for Technical Education may be suitably enlarged so as to serve as Advisory Board for vocational Education also.

3.34 A guidance and employment service should also be developed to help the persons who have passed the vocational course in obtaining suitable employment.

3.35 It would be desirable to provide further vocational courses at higher level leading to degree/diploma courses for further promotion in the same vocation. The change from vocational to academic course at the degree stage should not, generally, be encouraged but may be allowed, if so desired by the pupils, subject to the condition that he takes additional required courses for admission to the academic degree level course.

3.36 While it is desirable that vocational courses should be offered in the existing higher secondary school classes, it is also desirable that this should not be done in haste and should be done after careful survey and planning. While planning vocational courses, duplication of courses already existing in polytechnics and other professional institutions, should be avoided as far as possible. A study of the employment potential for the 6th plan period (1979-84) in the territory of Goa, Daman and Diu has been made by the Institute of Applied Manpower Research. Some relevant extracts of the same are given in Appendix 'C' & 'D'. A list of suggested vocational courses for classes XI & XIII is given in Appendix 'E'. It is recommended, however, that the courses would be selected after due considerations of potential employment.

3.37 In order to encourage the provision of vocational subjects in the higher secondary schools, it would be necessary to suitably amend the grant-in-aid pattern for higher secondary schools. 100% grants should be provided for both equipment and recurring expenses for the vocational courses. If private higher secondary schools are not coming forward for organising vocational courses, Government should take action to start vocational courses in some selected government higher secondary schools.

### 3.38 School Library:

Every school should have a minimum library service. In primary schools, there should be at least two books per pupil in the library. In middle and secondary schools, at least three books per pupil and for higher secondary classes at least four books per pupil may be provided in the library. Provision should be made for supervised study periods in the school time-table, during which the pupils may be issued books from the library for study. One of the teachers of the School who will be in charge of library should be trained through a short training course of 2 to 3 months duration in library science. In schools having more than 1000 pupils, there should be a full-time trained librarian having a Certificate in library science.

### 3.39 Evaluation:

The main purpose of evaluation is to see how far the objectives set-forth in the curricula at different levels have been achieved. Evaluation should have the following characteristics:

- i. It should be reliable and valid i.e. give concrete reliable evidence.
- ii. It should cover all the stated objectives and the entire course of studies.
- iii. It should be done using a variety of tools and techniques.
- iv. It should be done at several points of time.

Evaluation should also be linked with the teaching-learning process and the results of evaluation should be used by the teacher to improve the learning of the pupils. Thus a good method of evaluation is one by the teacher himself. However, in our country, because of the importance given to the final certificate attained after an external examination, the evaluation by the teacher has not been very successful. Therefore, the Committee recommends that the State Institute of Education/State Council of Educational Research and Training should train teachers in evaluation, i. e., in preparing valid and reliable test items and using the results of evaluation for improvement of learning by pupils. It should also develop test items banks in different subjects for different classes which can be made available for use in the schools. The teacher should be asked to give at least three tests/assignments and obtain three evaluations each year in each subject and maintain records thereof. The average of these three evaluations may be taken as the final evaluation of the pupil for the year. The class tests should be given as much weightage as the annual examination at the end of each year and the results be decided on the basis of both class tests and the annual examination. There should be periodic tests/annual examination in all subjects including Socially Useful Productive Work and Games and Physical Education. In case of class X and class XII, the final examination will be conducted by the Board of Secondary and Higher Secondary Education based on the course of studies for the final year in all subjects including Socially Useful Productive Work and Health, Physical Education and Games. However, the internal assessment marks based on three class tests should be sent to the Board for entering in the mark-sheet. The internal assessment marks and the marks obtained by the candidate at the Board examination should be exhibited separately and not added together. The division, if awarded, should be shown separately in internal and external examinations.

### **3.40 Higher and Professional Education:**

The Colleges in the territory are affiliated to the Bombay University except one in Daman which is affiliated to such Gujarat University. There are nine Colleges of Arts, Science and Commerce, one College of Engineering, one Medical College, one College of Pharmacy, one College of Art, two Colleges of Law and one College of Education. From 1980-81, one Dental College has been started. Besides, there is a Centre of Post-Graduate Instruction and Research. At this Centre, there is provision for teaching post-graduate courses in 25 subjects. The Centre also offers correspondence courses for the degree course. In some of the post-graduate departments, however, the number of students enrolled is very small. The number enrolled in 1980-81 in the first year of the post graduate course is more than 10 in History, Economics, Sociology, Physics and Chemistry. It is between five and ten in English, Politics and Microbiology. It is less than five in the other subjects. Since a Post-Graduate Centre with reasonably good facilities is already functioning in the territory, it is recommended that this Centre may be converted into a teaching-cum-affiliating university. The University may seriously consider dis-conti-

...ing these subjects in the Post-Graduate classes where the enrolment is less than five in the first year of the course. The university may consider providing teaching and research facilities in the areas of Oceanography, Marine Biology, Mining, Agriculture and Forestry. Post-Graduate courses in Professional subjects such as Education, Medicine, Law, etc. may be allowed in the professional colleges. So far, applied subjects have not been offered at the under-graduate level although the same are provided as optionals in the courses of study. It is recommended that the Colleges may be encouraged to provide teaching facilities in applied subjects. For this purpose the grant-in-aid rules for colleges have to be suitably amended. It is recommended that hundred percent grant may be available to colleges for purchase of equipment and books for applied courses as well as hundred percent of deficit of income over expenditure may be given as grant to the colleges.

3.41 The Committee considers that the courses at present available in the Government Polytechnic as well as those proposed to be started in the new private Polytechnics at Verna and Vasco appear to be adequate to meet the needs of the territory so far as technical education is concerned.

It is observed that the intake in the existing I. T. I's. in Goa has been doubled this year and three more Industrial Training Institutes have been established. The Committee feels that this will sufficiently meet the requirements of training of skilled personnel of the territory. However, any increase in the facilities for technical training should be made only after a careful assessment of manpower needs.

3.42 The Committee examined the suggestion of augmenting I. T. I type of training at the secondary schools and discussed this with the Labour Commissioner. This suggestion is not considered feasible as it would be necessary to equip the secondary schools with more expensive equipment for this purpose which will be under-utilised. Further it would be difficult to adjust the pupils trained from the secondary schools in the second year of the I. T. Is. As such, it is recommended that the courses of Socially Useful Productive Work and the Vocational Courses at the Plus Two level would supplement the vocational training in I. T. Is. and not duplicate the same.

### 3.43 Education for the Minorities:

In providing education the Government has a special role to see that the minority communities and language groups get adequate facilities for education in their own language and do not suffer from any discrimination. It is necessary, therefore, that adequate provision be made for teaching in the mother-tongue of minority communities particularly at the primary level. One such language which needs special mention is Urdu. Provision may have to be made for teachers knowing Urdu language in schools for teaching Urdu to children. The Government should consider suitable books in Urdu language available in the

country and prescribe them as text-books. Urdu qualifications which have been recognised by Government of India as equivalent to high school certificate, Bachelor's degree and Master's degree should also be recognised by the territory for employment as teachers. Provision should also be made for teaching in Urdu at the Elementary teacher training institutions.

#### 3.44 Opening of new schools and Colleges:

As seen from Appendix 'D' there is likely to be surplus of Matric/Higher Secondary passed candidates as well as of graduates during 1979-84 over and above the manpower requirements. Any further increase in enrolment at these levels will only increase educated unemployment. As such it is recommended that additional secondary/higher secondary schools and colleges should be opened only after a very careful assessment of the need for the same. In case of Colleges, it is recommended that the opening of a new collage as well as increasing enrolment in existing colleges should have prior approval of Government before consideration by the University.

## Organisation and Administration

4.1 For effective implementation of any improvement programme in school education, it is necessary that the administrative machinery should be adequately strengthened and the powers and functions well defined. The three main agencies for organisation and administration of education at the school level are the Directorate of Education, State Institute of Education and the Board of Secondary and Higher Secondary Education. While the academic work for improvement of the school education programme should be the concern of the State Institute of Education and the Board of Secondary and Higher Secondary Education, the administration and supervision of education programmes at all levels — from pre-school to higher secondary level including the teacher training — should be the concern of the Directorate of Education. Accordingly, the Committee would like to suggest a few steps for strengthening these three agencies.

### 4.2 State Institute of Education:

It is necessary that the State Institute of Education be adequately strengthened and headed by a person of the rank of at least a Joint Director of Education. It would be desirable if the functions of the State Institute of Education are enlarged and the Institute is reorganised as State Council of Educational Research and Training (SCERT) on the lines of the National Council of Educational Research and Training (NCERT), as this will provide better coordination of all activities. It may have the following Departments:

- i) Department of Curriculum, Instructional Materials and Evaluation with units in:
  - (a) Sciences and Mathematics.
  - (b) Social Sciences and Languages.
  - (c) Physical Health Education and Games.
  - (d) Arts (Music, Dance, Drawing, Painting etc.).
- ii) Department of Educational Technology (including Audio-Visual Education).



- iii) Department of Teacher Education (Pre-service and In-service).
- iv) Department of Vocational Education & Socially Useful Productive Work.
- v) Publication Department.

Each of these Departments may be headed by a person of a rank of a Deputy Director, with adequate academic staff of rank of Assistant Director. The State Institute of Education or State Council of Educational Research and Training may have the following functions:

- i) To prepare curricula and text-books for pre-primary, primary and middle school classes, i. e., from pre-primary upto class VII and for non-formal education.
- ii) To organise in-service training for teachers, head-masters and supervisors of education.
- iii) To prepare suitable teaching aids and offer training to teachers in the preparation of audio-visual aids.
- iv) To develop evaluation techniques to be used at different levels of education and to train teachers in evaluation.
- v) To develop curriculum and text-books for elementary teacher training institutions.
- vi) To implement various innovative programmes in education such as UNICEF-assisted projects.
- vii) To organise training courses in educational and vocational guidance and develop materials for the same.
- viii) To undertake research studies for improving school education

#### 4.3 Board of Secondary and Higher Secondary Education:

The Board of Secondary and Higher Secondary Education needs to be adequately strengthened so that it can effectively take up the following functions:

- i) To prepare the syllabus and develop/recommend text-books for secondary schools and higher secondary school examinations.
- ii) To conduct secondary school and higher secondary school examinations and publish the results.
- iii) To undertake research studies to improve secondary and higher secondary education and also their evaluation.
- iv) To organise programmes for the professional growth of teachers in the secondary and higher secondary schools

- v) To undertake publication of text-books for the secondary and higher secondary schools and arrange their sale through authorised dealers.
- vi) To develop Supplementary Readers and Teachers' Guides for the benefit of pupils and teachers.

4.4 For this purpose, the Board may be organised into different sections to undertake the functions listed above. Each section may be headed by a person of the rank of Assistant Secretary. There should be a Deputy Secretary for overall incharge of the examinations. There should also be an Academic Officer of the rank of Deputy Secretary for looking after the academic programmes such as research, development and organisation or training programmes. While the SCERT may develop books upto class VII, the Board of Secondary and Higher Secondary Education may develop books for classes VIII and above.

4.5 The Board will receive revenue from the examination fees of students appearing at the high school and higher secondary school certificate examinations. If it publishes its own text-books, it will also receive some profit from the sale of books. Although efforts should be made to balance income and expenditure of the Board, it is recommended that the Government meet the deficit of income and expenditure of the Board to enable the Board to take up supporting research and developmental activities.

#### 4.6 The Directorate of Education:

The Directorate of Education was re-organised in 1973 and three Deputy Directors were provided to assist the Director of Education. However, in 1975 one of Deputy Directors was posted as Director, State Institute of Education. Consequently, the Directorate was left with only two positions of Deputy Directors. Of these two posts, one post of Deputy Director is filled from Goa Civil Service Cadre and given the charge of administration. The other Deputy Director is in charge of all academic sections.

4.7 There has been a considerable expansion of education in the territory and new areas of socially useful productive work, vocational courses at higher secondary level are being proposed to be introduced. Higher secondary school classes are also now under the supervision of the Directorate. It is necessary that the Directorate should exercise some supervision over the Colleges so far as their fulfillment of conditions of grant and providing necessary facilities for teaching are concerned. The territory has also taken up innovative projects assisted by the UNICEF and it will be organising non-formal educational centres which need supervision. In order that the Directorate may effectively discharge the functions of administration and supervision of all levels of education in the territory, it is recommended that the Director of Education be assisted by one officer of the rank of Joint Director of Education and three officers of the rank of the Deputy Director of

**Education.** These officers will be at the Directorate exclusive of the officers recommended for the State Council for Educational Research and Training. The Joint Director will be assisting the Director in all functions and will be in charge of the Directorate whenever he is out of headquarters or on leave. He may also exercise some of the powers of the Director which may be delegated to him. The Joint Director of Education may also be in charge of planning, higher education and adult and social education in addition to assisting the Director of Education in all other functions.

4.8 Of the three Deputy Directors of Education, one may continue to be filled from the Goa Civil Service Cadre and be in charge of establishment. Appointment of academic posts, above primary teachers should be made by the Director of Education on the recommendations of a committee headed by him. The Zonal Officers be included in this Committee. Primary teachers will be appointed by the Zonal Officer for the particular Zone on the recommendations of committee headed by him. For all non-academic posts in C and D category, the Deputy Director (Administration) will be the appointing authority. Deputy Director (Administration) will however maintain all service records of the employees excluding primary teachers and gazetted officers and grant all kinds of leave. Transfers of teachers of all schools within the Zone may be delegated to the Zonal Officer and transfers from one Zone to another on the recommendations of the Zonal Officer may be decided by the Director of Education.

4.9 The Deputy Director of Education in charge of Academic I will be in charge of opening and recognition of all schools and inspections of secondary schools. The Deputy Director of Education in charge of Academic II will be in charge of national awards, committees, socially useful productive work, vocational education, science and mathematics, education, non formal education and physical education. Examination which is presently under Academic II may be transferred to SCERT. Construction of buildings which is now under Academic II may be transferred to Deputy Director of Education (Administration). The Joint Director and the Deputy Directors will be assisted by five Assistant Directors as at present.

#### 4.10 Inspection of Schools:

At the Directorate of Education, there are five Assistant Directors who undertake sample inspection of secondary schools. At the Zonal level, the secondary schools are inspected by the Zonal Officer and the Deputy Educational Officer. Each Zone has two or more Assistant District Educational Inspectors who inspect primary and middle schools and assist the Zonal Officer and Deputy Educational Officer in supervision of secondary schools. The number of inspecting officers should be proportionate to the number of schools to be inspected and one inspecting officer may be provided for about thirty schools. It is necessary that each school is inspected at least once in a year and the Inspector spends a full day at each school during inspection.

4.11 It is understood that the grants to private institutions are disbursed directly by the Directorate without the involvement of the Zonal Officer. It is recommended that the grants are released under information to the Zonal Officer and the report of the Zonal Officer be consulted before release of final instalment of the annual grant to the school.

4.12 The Director of Education should also be the Controlling Officer for Colleges. Although the academic control of colleges lies with the university, the administrative control should lie with the Directorate. For this purpose the Director of Education should visit colleges to see that adequate standards are maintained and the conditions of grant-in-aid are fully met by the private colleges.

4.13 Since the Government is paying grant for the maintenance of private institutions, it is necessary that Government should have adequate control over the management and standards of these institutions. The Director or his nominee should be a member of the Selection Committee of all private schools and colleges. Similarly, the termination of services of a teacher in a private school/college should have the prior approval of the Director of Education. The Director of Education should ensure that teachers with adequate qualifications are appointed in the private schools and that the departmental rules and regulations regarding instruction and administration are followed and appropriate records maintained.

4.14 At present, the salaries of primary teachers are disbursed by the Zonal Office. A cashier attached to the Zonal Officer comes to the Taluka office with cash on pay day and disburses the salaries at the Taluka office. It is recommended the disbursement of salaries of primary teachers be decentralised and delegated to the Assistant Deputy Educational Inspector in charge of the Taluka Office. He may be provided an accounts clerk for this purpose.

## Steps for Implementation

5.0 After acceptance of the recommendations of the Committee by the Government, the following action may be taken to implement the same.

5.1 The Directorate of Education be adequately strengthened as recommended.

5.2 The State Institute of Education be converted into State Council for Educational Research and Training with adequate staff and given the functions as recommended.

5.3 The State Advisory Board of Vocational Education be constituted as recommended.

5.4 One Deputy Director of Education be given the charge of Socially Useful Productive Work and Vocational education. He should in consultation with Zonal Officers develop and implement a phased programme of introduction of Socially Useful Productive Work in classes I to X.

5.5 Occupational surveys be conducted by the State Advisory Board for Vocational Education district wise and Vocational Courses to be started in higher secondary schools be identified.

5.6 The S. C. E. R. T. should prepare revised syllabus for classes I to VII and develop text-books for the same on the lines of N. C. E. R. T. text-books.

5.7 The Board of Secondary and Higher Secondary Education should prepare revised syllabus for classes VIII to XII on the lines of Central Board syllabus and develop books on the lines of N. C. E. R. T. text books.

5.8 A phased programme of text-book preparation and introduction in schools be developed and implemented.

5.9 The Directorate should take action to amend the existing rules of grant-in-aid as recommended.

5.10 The other recommendations may be implemented by the Directorate, the S. C. E. R. T., and the Board of Secondary and Higher Secondary Education in respect of those in which they are concerned.

APPENDIX A

**Suggested list of Socially useful Productive Work Activities for classes V to VII.**

1. Cleaning and beautification of the surroundings.
2. Meal planning and preparation of food.
3. Storage of food material.
4. Preservation of food — dehydration of vegetables, making of pickles, jams, jellies, fruit juice, bari, paper, etc.
5. Decoration of the house on special occasions.
6. Knitting.
7. Laundry work.
8. Pottery.
9. Chalk making.
10. Vegetable growing in plots or pots.
11. Flower growing.
12. Embroidery.
13. Doll making.
14. Stationery making.
15. Card board work.

## APPENDIX I

### Possible Areas of Specialisation in Socially Useful Productive Work in classes VIII, IX and X

1. **Ceramics including Pottery, Chalk making, Plaster of Paris Work.**
2. **Agriculture and Allied:**
  - Vegetable Growing
  - Fruit Growing
  - Flower Growing
  - Dairy
  - Poultry
  - Bee-Keeping
  - Mushroom Culture
  - Soil Culture
3. **Food and Allied:**
  - Bakery
  - Confectionery
  - Cooking
  - Catering
4. **Dress and Allied:**
  - Spinning
  - Weaving
  - Mat and Carpet Making
  - Cutting and Tailoring
  - Embroidery
  - Doll Making
  - Knitting
5. **Stationery and Allied:**
  - Book Binding
  - Card-board Work
6. **Industrial:**
  - Wood Work
  - Metal Work
  - Electrical
  - Electronics
7. **Chemical:**
  - Soap Making
  - Detergent Making
  - Cleaning Powder Making
  - Ink Making
  - Candle Making
  - Prevention of Corrosion



**Appendix C**  
**Manpower Requirements for 1979-84**

Department	Employment		Increase in Employ- ment 1979-84	Basic Needs 1979-84	Total Additional Requirement 1979-84
	1979	1984			
<b>A. State Govt.:</b>					
1. Agriculture ... ..	679	914	235	68	303
2. Animal Husbandry ... ..	634	1,492	858	63	921
3. Fisheries ... ..	244	322	78	24	102
4. Health and Medical ... ..	3,339	4,313	974	334	1,308
5. Forestry ... ..	786	1,703	917	79	836
6. Electricity ... ..	1,619	2,200	581	162	743
7. P. W. D. ... ..	2,285	4,016	1,731	228	1,959
8. Industries and Mines ... ..	137	144	7	14	21
9. Information & Tourism	441	1,333	892	44	846
10. Education ... ..	615	629	14	62	76
11. Other State Govt. Depts.	8,385	11,966	3,581	898	4,419
<b>Total -- A ... ..</b>	<b>19,164</b>	<b>29,032</b>	<b>9,868</b>	<b>1,916</b>	<b>11,764</b>
<b>B. Semi-Govt.:</b>					
Organisations (Under State Govt.) ... ..	1,934	2,350	366	198	564
<b>C. Central Govt.:</b>					
	3,752	4,685	933	375	1,308
<b>D. Semi-Govt.:</b>					
Organisations (under Cen- tral Govt.) ... ..	5,177	6,726	1,549	518	2,067
<b>Grand Total ... ..</b>	<b>30,077</b>	<b>42,793</b>	<b>12,716</b>	<b>3,007</b>	<b>16,793</b>

APPENDIX D

**Imbalance between Manpower Supply and Manpower Requirements  
by Level of Education during 1979-84**

Sl. No.	Educational Level	Manpower Supply including Backlog	Manpower Requirements	Surplus or Shortage
1.	Illiterate/Below Matric ... ..	11562	21702	(10140)
2.	Matric/Higher Secondary ... ..	30243	7294**	22949
3.	Degree-General ... ..	8155	2405	5750
4.	Graduate and P. G. in Agriculture ...	—	196	(196)
5.	ITI/Jr. Tech. School/Crafts School Cert.	2707	7192	(4485)
6.	Diploma in Engineering ... ..	198	1051	(853)
7.	Degree in Engineering ... ..	194	917	(723)
8.	Degree/Diploma in Medicine ... ..	690*	330	360
9.	Degree/Diploma in Education ... ..	2620	497	2123†
10.	Degree/Diploma in Nursing ... ..	166	628	(462)
	<b>Total ... ..</b>	<b>56535</b>	<b>42212</b>	<b>31182 (16859)</b>

Note: — Figures within brackets represent shortages.

\*Includes Degree/Diploma in Pharmacy.

\*\*Includes 'Others'.

†This surplus capacity is required to train the backlog of untrained teachers which is of the order of 2864 persons in 1975-76.

(Source-IAMR Report No. 1/1978 p. 116).

APPENDIX E

Possible Vocational Courses for classes XI & XII

1. Ceramics.
2. Chemical Technology.
3. Food Processing and Preservation, Dairy, Poultry, Bee Keeping and allied Horticulture.
4. Agriculture Engineering, Irrigation, Agriculture Machinery maintenance.
5. Hotel Administration.
6. Salesmanship, Advertising, Journalism.
7. Handicraft — Production & Sales.
8. Electronics.
9. Plumbing.
10. Accountancy & Secretarial.

Sub. Director - I Systems Unit,  
National Institute of Educational  
Planning and Administration  
17-B, SriAurobindo Marg, New Delhi-110016  
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