

NATIONAL SEMINAR ON DPEP STUDIES

# RESEARCH BASED INTERVENTIONS IN PRIMARY EDUCATION

*Organised by*  
NATIONAL COUNCIL OF EDUCATIONAL RESEARCH AND TRAINING  
*23-25 August 1994*

NIEPA



G2727



राष्ट्रीय शैक्षिक अनुसंधान और प्रशिक्षण परिषद्  
NATIONAL COUNCIL OF EDUCATIONAL RESEARCH AND TRAINING



# Foreword



The baseline beneficiary studies form an important part of the project formulation process under the District Primary Education Programme (DPEP). Six such studies were undertaken by the national resource institutions. Four of these, including (i) Teacher Policy, Training Needs and Perceived Professional Status, (ii) Designing, Production and Distribution of Instructional Materials, (iii) Educational Problems of Tribal Children, and (iv) Gender Issues in Primary Education were conducted by the National Council of Educational Research and Training (NCERT) in all the eight DPEP states. The study on Learning Achievement of Primary School Children in Reading and Mathematics was conducted by the NCERT in Assam, Haryana, Madhya Pradesh, Maharashtra and Orissa. The National Institute of Educational Planning and Administration (NIEPA) conducted the study in Karnataka and Kerala, and the New Concept, a non-government organisation, conducted the study in Tamil Nadu, following the same design in all the eight states. The study on State Finances for Education was conducted by the NIEPA in the DPEP states. Administering the studies in the selected districts was thus a joint effort of the NCERT and NIEPA.

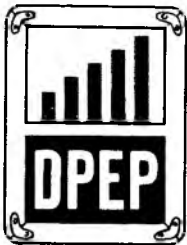
The studies were funded by the World Bank and the United Nations International Children's Education Fund.

The three-day National Seminar on DPEP Studies, organised by the NCERT at New Delhi from 23 to 25 August 1994, reviewed the studies to examine implications of their findings for designing research-based programme interventions for improving primary education in the country. This document is an outcome of the three-day intensive interactions by the experts on variety of issues related to primary education. It provides to the reader a glimpse of the current primary education scenario in the country, the DPEP preparatory activities undertaken as a part of the project formulation process including the baseline beneficiary studies, and implications of these studies for effective programme implementation to achieve the goal of the DPEP.

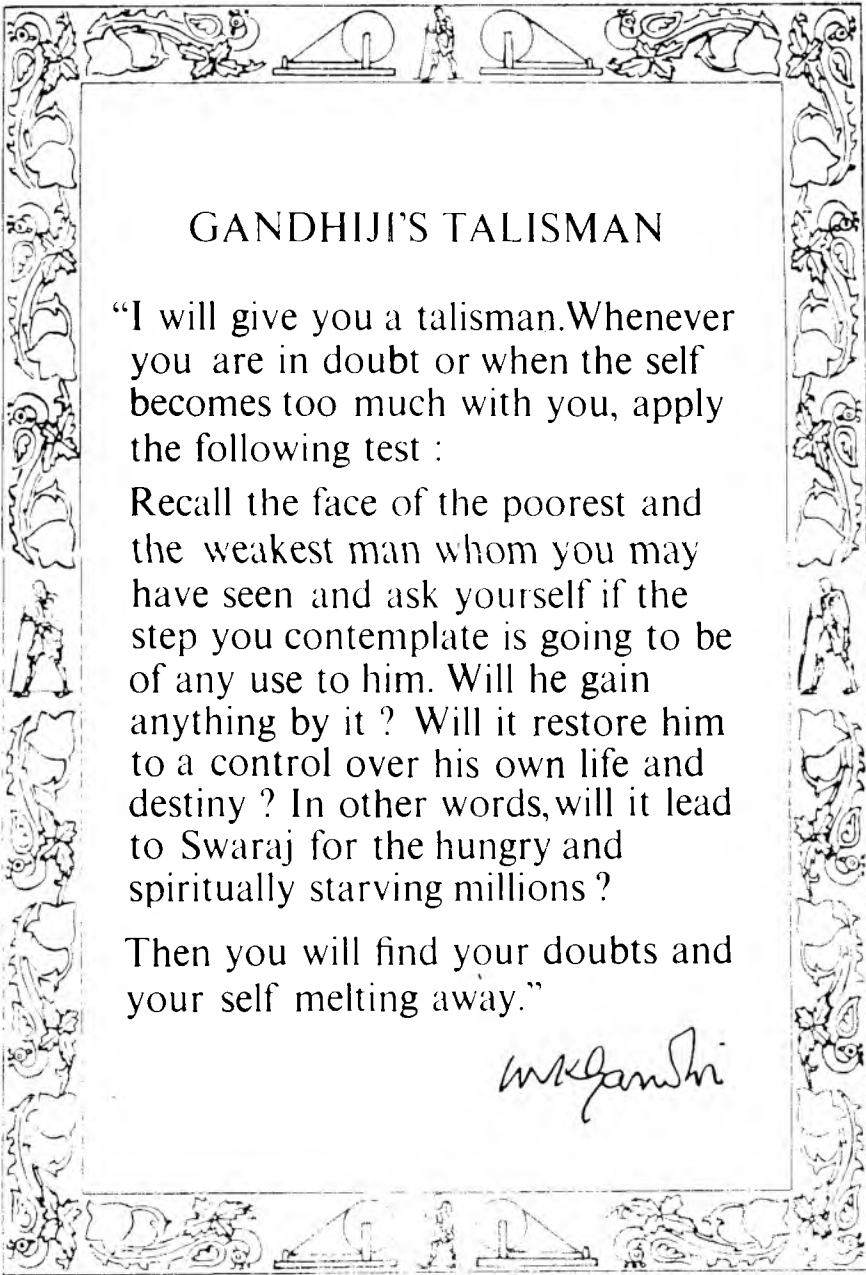
The NCERT is grateful to the NIEPA for its collaboration in the studies and all the participants for their contributions in making the seminar a learning experience.

A. K. SHARMA  
*Director*  
National Council of Educational  
Research and Training

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## GANDHIJI'S TALISMAN

“I will give you a talisman. Whenever you are in doubt or when the self becomes too much with you, apply the following test :

Recall the face of the poorest and the weakest man whom you may have seen and ask yourself if the step you contemplate is going to be of any use to him. Will he gain anything by it ? Will it restore him to a control over his own life and destiny ? In other words, will it lead to Swaraj for the hungry and spiritually starving millions ?

Then you will find your doubts and your self melting away.”

*M.K. Gandhi*

# Primary Education since 1950



## Introduction

Provision of free and compulsory education to all children until they complete the age of 14 years is a Directive Principle of the Indian Constitution. Since 1950 determined efforts have been made towards the achievement of this goal. Over the years there has been a phenomenal increase in the number and spread of institutions as well as enrolment. The number of primary schools has increased from 2.10 lakh in 1950-51 to 5.58 lakh in 1990-91. The number of upper primary schools has gone up to 1.46 lakh in 1990-91 as compared to 13,600 in 1950-51. The gross enrolment (GE) of 6-11 age-group has increased from 43.1 per cent in 1950-51 to 85.0 per cent in 1985-86. Likewise, the GE of 11-14 age-group has gone up from 12.9 per cent in 1950-51 to 48.9 per cent in 1985-86. The corresponding gross enrolment ratio (GER) for Classes I-V has touched 101.03 as in 1990-91, and for Classes VI-VIII, the GER has gone up to 60.11.

However, Universalisation of Elementary Education (UEE) in its totality is still an elusive goal and much ground is yet to be covered. The drop-out rate continues to be alarming. In 1985-86 the drop-out rate was 47.6 per cent in Classes I-V and 64.4 per cent in Classes I-VIII.

## The NPE and Other Measures

All-out efforts on the part of the government are being made to fulfil the constitutional commitment. The National Policy on Education (NPE) 1986, revised in 1992, and the corresponding Programme of Action (POA), reflect an unqualified priority to the UEE. Many innovations have been introduced. The emphasis has been shifted from enrolment *per se* to enrolment as well as retention. An array of micro-planning-based strategies are being formulated for application at the grass roots level to ensure children's retention at school. The enrolment drives are being replaced by participative planning in which the teachers and the villagers would formulate family-wise and child-wise design of action to ensure that every child regularly attended school or non-formal system of education and completed at least five years of schooling or its non-formal equivalent. The unattractive school environment, unsatisfactory condition of buildings and insufficiency of instructional materials, which act as demotivating factors for children and their parents are being attended to. The child-centred and activity-based process of learning at the primary stage are being adopted increasingly. The

restructuring of teacher education, pre-service as well as in-service, is also under way.

The above-mentioned measures have contributed towards improving the primary education to a limited extent. Much more needs to be done. It is now acknowledged that the UEE cannot be accepted as having been achieved unless children passing out of the school or non-formal system acquire a minimum level of learning (MLL). Achievement has come to be assigned equal importance along with access and retention. This is reflected in the revised policy formulation in para 5.5 (NPE 1986, updated in 1992) which specifies that the UEE has three aspects :

- i. universal access and enrolment;
- ii. universal retention of children up to 14 years of age; and
- iii. a substantial improvement in quality of education to enable all children to achieve essential levels of learning.

The experience with the pursuit of UEE has also established the following :

- i. *UEE is contextual.* The contextuality varies widely across the country. Even in states like Kerala, where participation is near-universal, much requires to be done in respect of quality and achievement. In such states the pursuit of UEE would be mainly in the area of quality, facilities and achievement. In other states participation and demand aspects need more attention.
- ii. *Contextuality entails local area-planning with disaggregated targets and decentralised planning and management.* Planning for UEE has hitherto been mainly at the national and state level. Barring some states and Union territories, these entities are too large and heterogeneous for effective planning; they cannot provide contextuality. Ideally the planning should be from below, right from the village upwards but given the objective conditions, a beginning has to be made with district as the unit of planning. The district plans are to be prepared through an intensive process of interaction with the local bodies, teachers and NGOs so that it is 'owned' by all who are to be associated in implementation and it reflects the ground-level realities.
- iii. *Resources are an important but not sufficient condition for achieving UEE.* A host of measures, both financial and non-financial, both on the supply side and on the demand

side, need to complement higher allocation of resources.

- iv. *The strategies for UEE* have hitherto emphasised mainly access in terms of construction of classrooms and appointment of teachers. This has been inadequate and needs to be augmented by
  - a. a holistic planning and management approach which goes beyond implementation of a disjointed set of individual schemes, perceives the task of UEE in its totality, integrates all the measures needed to achieving UEE in the specific context of the district;
  - b. this holistic planning should incorporate a gender perspective in all aspects of the planning and implementation process and be an integral part of all measures needed to achieve UEE;
  - c. addressing the more difficult aspects of access, particularly access to girls, disadvantaged groups and out-of-school children;
  - d. improving school effectiveness;
  - e. strengthening the alternatives to schooling, particularly the non-formal education system;
  - f. stressing the participative processes whereby the local community facilitates participation, achievement and school effectiveness;
  - g. toning up teacher competence, training and motivation;
  - h. stressing learning competence and achievement;
  - i. stressing need for improved teaching/learning materials;
  - j. overhaul of planning and management in respect of both routine and innovative areas; and
  - k. convergence between elementary education and related services like ECCE and school health.

### The DPEP

The District Primary Education Programme (DPEP), adopted by the Government in November 1993, is based on the above national experience and seeks to operationalise para 7.4.6 of the POA, 1992 which reads as follows :

Further efforts would be made to develop district-specific projects, with specific activities,

clearly defined responsibilities, definite time-schedule and specific targets. Each district project will be prepared within the major strategy frameworks and will be tailored to the specific needs and possibilities in the district. Apart from effective UEE, the goals of each project will include the reduction of existing disparities in educational access, the provision of alternative systems of comparable standards to the disadvantaged groups, a substantial improvement in the quality of schooling facilities, obtaining a genuine community involvement in the running of schools, and building up local level capacity to ensure effective decentralisation of educational planning. That is to say, the overall goal of the project would be reconstruction of primary education as a whole in selected districts instead of piecemeal implementation of schemes. An integrated approach is more likely to achieve synergies among different programme components.

The DPEP also builds upon the experience gained in

- i. the implementation of the Bihar Education Project (with UNICEF assistance) and the Lok Jumbish Project (with SIDA assistance);
- ii. the planning of basic education project in Uttar Pradesh (with IDA assistance);
- iii. the implementation of the Andhra Pradesh Primary Education Project (with ODA assistance), Shiksha Karmi Project (with SIDA assistance) and Mahila Samakhya (with Dutch assistance).

Where the DPEP goes beyond and Uttar Pradesh and Bihar projects, it is in

- i. the emphasis of local area planning with the district plans being formulated in their own right rather than being derived from a state plan project document;
- ii. greater rigour and infusion of professional inputs in planning and appraisal;
- iii. more focussed targetting in that the districts selected would be :
  - a. educationally backward districts with female literacy below the national average; and
  - b. districts where TLCs have been successful leading to enhanced demand for elementary education;

- iv. more focussed coverage in that the programme would focus on primary stage (Classes I-V and its NFE equivalent), with stress on education for girls, and for socially disadvantaged groups. In states where enrolment and retention is near-universal in the primary stage, support can be considered for the upper primary stage.

To begin with, the DPEP has been taken up in 43 districts in the states of Assam, Haryana, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Orissa and Tamil Nadu. The objective is to gradually extend the coverage to all the districts which satisfy one of the twin criteria referred to above. The pace of expansion would depend upon the availability of resources, and in states where the programme is now being started, on the pace and quality of implementation in the districts now chosen. The attempt would be to start the programme in at least 110 districts in the Eighth Five Year Plan with an estimated outlay of Rs 1950 crore, of which Rs 1720 crore are proposed to be drawn from external sources under Social Safety Net related funding.

#### The DPEP District Plans

The process of formulation of district plans, as visualised under the DPEP, commenced in early 1993 with the basic orientation of the states and the national resource institutions in the philosophy of the DPEP and the planning process to be followed. The four-stage planning strategy of the World Bank has been strictly adhered to. The identification stage, followed by the preparatory, the pre-appraisal and the appraisal stages, have been successfully gone through.

#### Baseline Beneficiary Studies

As a part of the project formulation process, selected preparatory baseline beneficiary studies have also been completed to provide research base to the district plans. To provide hands-on experience to the district level planning groups in utilising outcomes of the studies in making the district plans research-based, district level studies sharing three-day workshops were organised in May-July 1994, one each in Assam (Darrang), Maharashtra (Aurangabad), Karnataka (Mandya), Kerala (Malappuram) and Tamil Nadu (Thiruvannamalai Samburvaryar).

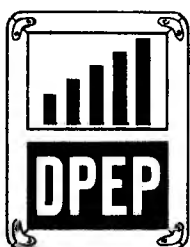


### **The National Seminar**

To share the findings of the studies among the states participating in the DPEP and to have an exchange of views on the DPEP experience so far, the three-day National Seminar on DPEP studies was organised by the National Council of Educational Research and Training at New Delhi, from 23 to 25 August 1994. Participants drawn from the states and districts involved in the planning of district plans, the experts from the Indian Institutes

of Management and other professional institutions engaged in educational management, research, training and development, who were associated with the formulation process of the district plans, and the experts in the universities and research organisations in the country as well as the experts representing the World Bank, European Union, UNICEF, and UNESCO, attended the seminar. The three-day intensive deliberations in the seminar on a variety of issues related to the DPEP are reflected in this report.

# The National Seminar



## Objectives

The seminar was designed to provide a forum to the planners of district plans, the researchers who conducted the baseline beneficiary studies, the State Project Directors and the representatives of the international agencies associated with the DPEP, to have an exchange of views, to learn from such an exchange of experience and, based on the seminar experience, to chalk out further course of action, and the research agenda in particular, for achieving the goal of the DPEP. About 24 working hours were invested by over 130 experts to understand the outcomes of six national level studies especially undertaken to provide a research base to the projects planned to achieve the UEE.

## Seminar Logistics

To achieve the objectives of the seminar six sessions were planned; each session of about three and a half hours. In the first session the inaugural remarks were made by the Education Secretary to the Government of India, the National Project Director, DPEP and the Director, NCERT. The Director, NCERT being the host welcomed the participants and presented a resume of events that had taken place since the commencement of the DPEP to date. The National Project Director of the DPEP reflected on the characteristic aspects of the DPEP which differentiated it from earlier initiatives taken by the Government of India to achieve the UEE. The Education Secretary highlighted the achievements so far in the inaugural address.

The first session also included an illustrated presentation on the baseline study on Learning Achievement of Primary School Children in Reading and Mathematics in the six DPEP states. The session was presided over by Shri S.V. Giri, Education Secretary, GOI.

In the second session another study on Teacher Policy, Training Needs and Perceived Professional Status was presented and discussed under the chairmanship of Prof. Kuldeep Mathur, Director, NIEPA.

The third session covered presentations on Designing, Production and Distribution of Instructional Materials and Educational Problems of Tribal Children. The session was presided over by Prof. R. Muralidharan, former Head, Department of Pre-School and Elementary Education, NCERT.

The studies on Gender Issues in Primary Education and State Finances for Education were taken up in the fourth session. This session was conducted by Prof. Eswara Reddy of the Osmania University.

The fifth session was split into two parallel sessions : one devoted to specific implications of all the baseline studies for the states of Assam and Kerala, and the other deliberated on the Methodological Issues Emerging out of the Studies presented and the proposed follow-up, presided over by Dr R.V. Vaidyanatha Ayyar, National Project Director, DPEP and Prof. Muralidharan, respectively.

The concluding session was chaired by Dr (Smt.) Chitra Naik, Member (Education), Planning

Commission, GOI. In the wrap-up the deliberations of the seminar were briefly presented. In her concluding address, Dr Naik stressed the need for bringing together the institutions, organisations and educational personnel working at various levels for achieving the goals of the DPEP in viable and effective manner, and to change the climate of tension and rivalry among the organisations and personnel and to appreciate each other's contributions.

The sequence of presentation was as follows.

## PROGRAMME

**23 August 1994**

10.00 a.m. SESSION I

*Chairperson :* Shri S.V. Giri  
Education Secretary  
Department of Education  
Ministry of Human  
Resource Development

Welcome and Opening Remarks Director, NCERT

*Presentations on Baseline Beneficiary Studies*

1. Learning Achievement of Primary School Children in Reading and Mathematics  
— N.K. JANGIRA

*Discussion on*

Learning Achievement Study : Emerging Issues and Implications for Programme Interventions

2.30 p.m. SESSION II

*Chairperson :* Prof. Kuldeep Mathur  
Director, NIEPA

*Presentation on*

2. Teacher Policy, Training Needs and Perceived Professional Status  
— N.K. JANGIRA

*Discussion on*

Emerging Issues and Implications for Programme Interventions

**24 August 1994**

9.30 a.m. SESSION III

*Chairperson :* Prof. R. Muralidharan  
Formerly Head  
Department of Pre-School  
and Elementary Education  
NCERT

*Presentation on*

3. Designing, Production and Distribution of Instructional Materials  
— C. N. RAO

*Discussion on*

Emerging Issues and Implications for Programme Interventions

*Presentation on*

4. Educational Problems of Tribal Children  
— C. J. DASWANI

*Discussion on*

Emerging Issues and Implications  
for Programme Interventions

2.30 p.m. SESSION IV                      *Chairperson :* Prof. Eswara Reddy  
Dean, Education  
Osmania University

*Presentation on*

5. Gender Issues in Primary Education  
— USHA NAYAR

*Discussion on*

Emerging Issues and Implications  
for Programme Interventions

*Presentation on*

6. State Finances for Education  
— J. B. G. TILAK

*Discussion on*

Emerging Issues and Implications  
for Programme Interventions

**25 August 1994**

9.30. a.m. SESSION V (a)                      *Chairperson :* Dr R. V. Vaidyanatha Ayyar  
National Project Director  
DPEP

*Presentation on*

7. Implications of Baseline Studies for  
DPEP Interventions in Assam  
— N. K. JANGIRA  
Implications of Baseline Studies for  
DPEP Interventions in Kerala  
— N. V. VARGHESE

SESSION V (b)                      *Chairperson :* Prof. R. Muralidharan

*Round Table Discussion on*

8. Methodological Issues and Follow-up  
Activities for the DPEP

2.30 p.m. SESSION VI                      *Chairperson :* Dr Chitra Naik  
Member  
Planning Commission

*9. Resume of Discussions held*

- Director, NCERT  
— National Project Director

*10. Valedictory Address*

- Chairperson

*Vote of Thanks*

- Director, NCERT

A brief account of the studies presented, the discussions held, and the recommendations made by the distinguished participants are reflected in the following section.

## THE STUDIES

*The studies presented and discussed in the seminar included (i) Learning Achievement of Primary School Children in Reading and Mathematics, (ii) Teacher Policy, Training Needs and Perceived Professional Status, (iii) Designing, Production and Distribution of Instructional Materials, (iv) Educational Problems of Tribal Children, (v) Gender Issues in Primary Education, and (vi) State Finances for Education. A synthesis report of each of these studies is appended at the end. The objective, the methodology followed, the findings and implications, and the discussion held after each presentation are summarised in this section.*

# Learning Achievement of Primary School Children in Reading and Mathematics



## Objectives

The study was undertaken to assess the learning achievement of students approaching the end of the primary school cycle, i.e. Class IV or V in reading and mathematics, based on Class III or IV curriculum. The reading assessment was confined to word meaning and comprehension and did not include mechanics of reading. Variables related to students, school and home environment were also examined to explain differences in learning achievement. Class II students were assessed for simple literacy and numeracy skills to study the level of learning in the beginning of the primary school cycle. Drop-outs were assessed for simple literacy and numeracy skills to study the level of retention of these skills. Micro-analysis to diagnose areas of difficulty was the concomitant outcome of the study.

A sample of primary school teachers was interviewed to assess teacher characteristics and teaching activities.

## Methodology

A multi-stage sampling procedure was used. At the first stage, about 20 per cent rural blocks and urban areas identified in the 1991 Census were selected randomly from the DPEP target districts. Wherever tribal block did not appear in random selection, one tribal block was added to the sample.

At the second stage, 35-45 primary schools were selected randomly. Rural and urban population proportion was the basis for allocating schools to rural and urban strata. The total number of schools in sampled rural blocks and urban locations was the basis for deciding the number of schools to be selected from each site.

At the third stage, students and teachers were selected. Up to 30, all Class IV or V students were included. Where the number in a class exceeded, 30 students were selected with random start. In the case of Class II, up to 20, all students were included. Where the number exceeded 20, students were selected with random start. Up to five identified drop-out students, all were included. Where the number exceeded, five were selected randomly. Up to five teachers, including the head teachers, all were included. Where the number exceeded, five were selected randomly.

A total of 24,504 students of Class IV or V, 23,056 students of Class II, 3,117 drop-outs, and 5,114 teachers were covered in the study. They were drawn from 1,817 schools located in 106 blocks

and 91 urban areas, spread over eight states including Assam, Haryana, Madhya Pradesh, Maharashtra, Karnataka, Kerala, Orissa and Tamil Nadu.

Standardised tests were used to assess learning achievement of Class V in mathematics and reading in the states of Haryana, Madhya Pradesh, Orissa and Tamil Nadu, and Class IV in the states of Assam, Karnataka, Kerala and Maharashtra (as the primary stage is from Classes I to IV in these states). For Class II, simple literacy and numeracy tests, developed by the NCERT for the Primary Education Curriculum Renewal Project, were used. For drop-outs, simple literacy and numeracy tests were adapted from the tests used in the World Bank research projects in other countries.

The interview schedule for teachers and head teachers included information on teacher characteristics, qualifications, training and experience, availability of teaching material and aids, teaching activities and supervision.

Descriptive statistics was used for preliminary analysis. Simple regression analysis was carried out on the data of one state to explore the line of final multivariate analysis. Ultimately multilevel modelling will be used.

### Findings

Results of the learning assessment study are quite revealing. Letter and word reading are basic skills which require 100 per cent mastery for developing further reading skills but, surprisingly, none of the districts achieved even an average score of 80 per cent in either of the tests. Students in Sehore and Panna districts in Madhya Pradesh, for instance, could not even read five words correctly, while in the case of letter reading, the situation has been described as 'alarming'. The highest average score was 8.73 for Waynad district in Kerala while the average for Haryana, Tamil Nadu and Maharashtra was five only.

A micro-analysis showed that 47.6 per cent of the students in Class II in Panna district of Madhya Pradesh and one-third of the pupils in Sirsa in Haryana, Nanded in Maharashtra and Karbi-Anglong in Assam could not read even a single letter correctly.

Similarly, in the case of recognition and simple addition and subtraction, considered basic numeracy skills, the averages are exceedingly low. In fact no district achieved an average score of 80 per cent in the recognition of single digits. Two-thirds of the students in Dhubri in Assam, a

quarter in Phulbani in Orissa and 16.7 per cent in Parbhani in Maharashtra could not do a single addition or subtraction correctly. In Tamil Nadu and Kerala only about one-third could achieve mastery level.

Teachers have attributed this low achievement to lack of parental support and the policy of not detaining students which, according to them, has promoted non-learning.

The condition of teachers is no better. Although the minimum qualification for primary teachers is 10 years of schooling, there are districts in the states, except Kerala, Haryana and Tamil Nadu, which have underqualified teachers.

The percentage of untrained teachers was found to be high in Assam, Madhya Pradesh and Orissa. More than half of the teachers have not received any in-service training during the last five years in all the four districts of Assam, the Rajnandgaon district in Madhya Pradesh and the Rayagada district of Orissa.

Like the students, the teachers also find mathematics a difficult subject to handle. A reading and mathematics test conducted on 42 teachers showed that most of them could not even correctly do a question on LCM, while 64 per cent could not even give a correct title to a paragraph in the language comprehension test.

With the exception of Tamil Nadu and Kerala, 10-15 per cent students in other states reported that teachers did not take classes regularly. Most pupils reported that they were given home-work but one-third said it was not corrected regularly.

Teacher absenteeism was reported to be higher in Madhya Pradesh, Assam and Orissa.

The study showed supervision to be the weakest link in the primary school system. Only about one-third of the teachers reported help from their head teachers and more than two-thirds said there was no supervision by block level education officers.

In Assam, Madhya Pradesh and Orissa there were schools which had not been visited by the Block Education Officers for 5-10 years and in Assam one school was not inspected for the last 17 years. Several officers did not even know the location of the primary schools in these three states. In the case of Orissa, Assam and Madhya Pradesh, it was attributed to non-availability of TA and DA or delay in payment for years.

While drop-out rates could not be computed for lack of reliable school records, an indication was





<i>Item</i>	<i>Haryana</i>	<i>Madhya Pradesh</i>	<i>Orissa</i>	<i>Tamil Nadu</i>	<i>Assam</i>	<i>Karnataka</i>	<i>Kerala</i>	<i>Maharashtra</i>
Getting community involved in school management	#	×	×	×	×	#	#	#
Link with school cluster head and BEO	×	×	×	×	×	×	×	×
Demonstration of good teaching	×	×	×	×	×	×	×	×
Making teacher guides and school textbooks available	×	×	×	×	×	×	×	×
<i>School Facilities</i>								
Micro-planning for extension or construction of new buildings, toilets, drinking water, etc.	×	×	×	×	×	×	×	×
Survey of School buildings for maintenance and repairs	×	×	×	×	×	×	×	×
Teaching aids	×	×	×	×	×	×	×	×
Library books for additional reading	×	×	×	×	×	×	×	×
<i>Teacher Representation in Services</i>								
Increasing the representation of female teachers	×		×		×		×	×
Increasing the representation of SC teachers		×			×		×	
Increasing the representation of ST teachers			×	×			×	
<i>School Management</i>								
Teacher attendance	#	×	×		×	#		#
Management of multigrade teaching	×	×	×	×	×	×		×
Local need-based procurement of materials	×	×	×	×	×	×	×	×
Rational deployment of resources	×	×	×	×	×	×	×	×
Increasing instructional time	×	×	×	×	×	×	×	×
Improving student attendance	×	×	×		×	#		#
Maintaining school records	×	×	×	×	×	×	#	×
Internal supervision	*	*	*	*	*	*	*	*
Monitoring learning achievement	*	*	*	*	*	*	*	*
Mobilisation of community support	*	*	*	*	*	*	*	*

The major areas of intervention from the study on the assessment of learning achievement indicate that school-based in-service training is to be seen not as a periodic activity, but a continuous teacher development activity, supported by collaboration among teachers within the school and across schools. Greater dependence on internal supervision, and supervision capacity within the school cluster, will have to be developed. Curriculum and textbooks following MLL approach, with teacher guide, need to be encouraged. The major investment should be made in learning material for students, teacher training, internal supervision and improvement of threshold school facilities.

### Highlights of Discussion, Observations and Suggestions

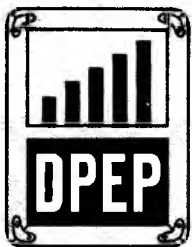
The comprehensive coverage and rigorous design of the study were appreciated. The NCERT and MIIRD initiative to conduct this study was perceived as an encouraging signal for educational research addressed to the quality of primary education. The issues considered during the discussion are summarised in this section.

1. In response to a question it was clarified that the achievement tests were administered on students of Classes II and IV/V of the schools in DPEP districts. The tests given to students of Class II were based on the syllabus covered up

- to Class I, and the tests given to students of Classes IV/ V were based on the syllabus covered up to Class III/ IV.
2. The delegates expressed concern about the causes of low achievement of children and stressed to arrive at a clear understanding of variables, factors, and causes resulting in such poor levels of attainment for designing interventions.
  3. It was pointed out that achievement of children depended upon several factors like comprehensibility of language used in the textbooks and teachers, availability of textbooks with the students, average class size, teacher-pupil ratio, availability of teachers, pre-school education, attendance, socio-economic status of students, particularly of the disadvantaged group of children. Some observations made in this context are :
    - 3.1 It appeared that in certain cases children of the age below the prescribed age of admission are admitted by inflating their age in the school records. In consonance with the mental maturity of such children, their achievement level is likely to be low.
    - 3.2 Teacher-pupil ratio may not be an appropriate criterion. Teacher-class ratio may also be kept in view. Attendance of students may also be taken into account. (In Maharashtra, fixation of posts of teachers are linked to student attendance rather than pupil-teacher ratio.)
    - 3.3 We should bring down the difficulty level of textbooks or plan appropriate teaching-learning strategies for enhancing achievement level of students.
  4. In order to enhance learning achievement of students belonging to educationally disadvantaged groups, additional inputs in terms of appropriate teaching-learning strategies need to be planned and implemented, and training of teachers needs to be organised accordingly.
  5. The studies on the following aspects may be conducted :
    - 5.1 Analysis of textbooks, specially from the standpoint of academic aspects for taking follow-up action. The matter regarding development of need-based alternate or supplemental instructional materials may also be considered.
    - 5.2 Effect of pre-school education on achievement of children at the primary school stage may be probed.
    - 5.3 Process and pace of learning, especially for the diagnostic purpose, may be examined.
    - 5.4 Effect of school environment on achievement need investigation, especially in the rural areas.
    - 5.5 Relationship of attendance and achievement and the effect of ill health on learning achievement may be analysed.
  6. Methodological and other related issues :
    - 6.1 Data on achievement of primary school children in reading and mathematics need to be rearranged. The findings and suggested interventions may be mentioned subject-wise. The graphic presentation of data may be simplified in the report.
    - 6.2 If suitable sophisticated statistical techniques are applied, the data on the learning achievement study could provide several more significant findings, the implications of which may be studied for appropriate interventions. In the context of the requirements of the minimum levels of learning (MLIs), efforts may also be made to measure achievement pertaining to basic life skills.
    - 6.3 Cross-sectional and longitudinal studies may be planned and conducted, particularly to see cohort-age effect and time-age effect.
    - 6.4 Adoption of 'systems framework' vis-a-vis socio-economic, geographical and cultural aspects of each district may be useful for drawing appropriate and more holistic picture of pupil problems related to achievement levels.
    - 6.5 In-depth sub-sample studies may be conducted to understand the problems of textbooks, minimum levels of learning, etc. Additional studies on many aspects in the context of DPEP are needed. Some studies applying the technique of interview and participant observation may be conducted and their results may be compared with the learning achievement study already conducted.
    - 6.6 Content and process variables need further examination.
    - 6.7 Input-process/content-output relationship vis-a-vis achievement levels should be studied. In other words, stress may be on production-function approach where inputs in education may be linked with outputs in terms of learning outcomes. Sequential research could be one way of negating time effects.

- 6.8 For more meaningful analysis, 'variance' rather than 'range' could be used in the technical report.
- 6.9 Transfer of teachers may affect learning achievement of children. This aspect also needs to be studied.
- 6.10 The information included in Table 10, mentioning 'Areas of Difficulty in Class V and IV Mathematics' in the Learning Achievement Study is significant for planning suitable interventions. Percentages may also be added in order to make the information more useful. Such table may also be prepared for language comprehension as it would be useful for diagnostic purpose.
- 6.11 Certain manipulatory variables like 'facilities available in schools' and 'time devoted by teachers' (special classes for language, tribals, etc.) may also be added in the report of the study as these are important for planning interventions.
- 6.12 Implications of multigrade teaching and non-detention policy on learners' achievement also need to be studied.
- 6.13 The reliability and validity of test items and the test, if available, may be included in the report.
- 6.14 A framework for measuring progress with the help of the baseline studies need to be prepared.
- 6.15 Detailed gender-caste location-wise presentation and analysis of data may be done for enabling group-specific planning and the intervention.
- 6.16 The scope for further empirical studies may be mentioned precisely.
- 6.17 Implications for in-service education of the teachers need to be worked out in the context of language of textbooks and the language used by the teachers in the teaching-learning process.
- 6.18 Studies need to be conducted to tackle the educational needs of the children of mobile population and the children working in small establishments.
- 6.19 While drawing implications of the studies, policy issues and non-policy issues may be mentioned separately. What critical changes are needed for the practitioners may be clearly spelt out. The action points may be prioritised for taking follow-up action.
7. The MILs identified in India for the primary level are lower vis-a-vis MILs in certain other countries. Efforts may, therefore, be made that MILs are achieved at mastery level. In this context, feasibility of providing local-specific instructional materials may be examined and strategies may be planned and implemented for individualising instruction. The matter regarding achievability of MIL (of India) may, however, be debated while planning appropriate teaching-learning strategies. The factors responsible for non-achievement of MILs may be identified for taking appropriate follow-up action.
8. Teaching-learning environment in many schools is not conducive for appropriate learning achievement. This aspect needs to be looked into on priority basis.
9. It may be ensured that teachers regularly attend the school and observe school timings.
10. The findings of the study and implications of findings may be suitably shared with concerned state/district education authorities for planning appropriate implementation strategies. The districts may be given appropriate powers and freedom in planning and implementation of interventions. The DIETs will have to assume greater responsibilities for the success of the DPEP.
11. The dynamic pace of learning was stressed for underachievers.
12. For raising the achievement level of students, provision of graded instructional materials and individualisation of instruction as effective teaching-learning strategy may be considered.
13. Among others, the NGOs, local community, Village Education Committees (VECs) may be involved in monitoring of achievement of students in primary schools.
14. Child-centred approach may be adopted for raising achievement level of students.

# Teacher Policy, Training Needs and Perceived Professional Status



## Objectives

The study examined the teacher policy in the states and its implementation at the school level, teacher perceptions about the policy and the teacher training needs. At the policy level, the study covered initial education and training of teachers; teacher recruitment, placement and transfer, remuneration and service conditions; and in-service education and training. At the field level, the study covered training needs, assessment; perceptions about policy implementation; perceptions about social, economic and professional status; and problems faced in carrying out professional activities in the school. The field study covered 19 of the 46 DPEP districts.

## Methodology

The study was conducted at two levels. The design and procedure matched these levels. At the first level, covering teacher policy, analysis of government orders and procedural guidelines issued from time to time was carried out. Interview with senior administrators in the Directorates of Education and State Councils of Educational Research and Training supplemented the analysis of the secondary data (government orders, etc.). Field study was addressed to policy implementation, institutional capacity for initial and in-service training, and teacher quality available in the sampled cluster of primary schools, and was conducted on a limited scale to get a feel of the policy implementation and perceptions of teachers.

Some teachers were interviewed. Two project districts in each of the states were selected using purposive sampling procedure (except in Madhya Pradesh where five districts were selected); the criteria for selection were the existence of a DIET in the district and whether it was a tribal district. The sampled districts were Karbi-Anglong and Darrang (Assam), Jind and Hissar (Haryana), Raichur and Belgaum (Karnataka), Wayanad and Malappuram (Kerala), Aurangabad and Nanded (Maharashtra), South Arcot and Dharmapuri (Tamil Nadu), Gajapati and Rayagada (Orissa), and Betul, Bilaspur, Ratlam, Sehore and Tikamgarh (Madhya Pradesh). One block in each district and one school complex within each block were selected randomly. One urban area (the district headquarter) was also selected. In the states which did not have the system of school complex, primary schools in the catchment area of a secondary school were treated

as a school complex. In each district, the sample size was restricted to 100 teachers, distributed across rural and urban areas, using the proportion of rural and urban population. Where the number of teachers was fewer than 100, teachers from the adjacent school complex were included in the sample. In all, 1,907 teachers were interviewed in the 19 districts of eight DPEP states.

Two teacher training institutions, including one DIET, if available, in each selected project district, were examined. Some districts had only one teacher training institution. The principal was interviewed to supplement information collected through the questionnaire. Block Education Officers of the sampled blocks were also interviewed. The number of Elementary Teacher Training Institutes covered, including DIETs, was 20. Besides principals, meetings were held with the faculty of each of the institutions. The District and Block Education Officers interviewed were 15 and 23, respectively. Triangulation makes the findings reliable as such information on basic issues was sought from more than one source—the teacher, the teacher educator, and the Block and District Education Officers. Information from different sources has been used for inferencing in relevant sections.

Qualitative analysis of the documents on state policy on teachers was used. Descriptive statistics (percentages) were used for analysing data with regard to teacher profile, their pre-service training, perceptions regarding social, economic and professional status, problems, etc.

Teacher perception of professional status was taken as the criterion variable. Stepwise regression analysis was carried out. The explanatory variables included sex, age, marital status, socio-cultural groups of teachers, education and training, reasons for choosing the teaching career, year of completing teacher training, satisfaction about pre-service training received, teaching experience, desire for in-service training, length or duration of in-service training, use of in-service training in classroom practice, perceptions of social status, satisfaction about social status, perception about economic status, time for commuting from home to school, head teacher accepting suggestions, promotional prospects, promotions received, help from other teachers, staff meetings to discuss improvement in teaching-learning process, meetings of VEC/AEC to achieve the goal of UPE, transfer, multigrade teaching, lack of

teaching aids, lack of physical facilities, high rate of student absenteeism, apathy of parents and lack of academic guidance from seniors. The criterion variable of teacher perception about professional status was based on the assumption that the teachers perceiving the professional status as high are those who are motivated because they have a sense of career satisfaction.

### Findings

1. Minimum academic qualification for a primary school teacher is 12 years of schooling with two years' diploma or certificate in elementary education in the states of Haryana, Karnataka, Madhya Pradesh, Maharashtra and Tamil Nadu. In the states of Kerala and Orissa, it is still 10-year schooling with two years of diploma or certificate in elementary education. In Assam, the minimum qualification is 10-year schooling without initial training.
2. The representation of female teachers is low in the states of Assam (23.1 per cent), Madhya Pradesh (24 per cent), Maharashtra (25.6 per cent) and Orissa (25 per cent). In other states, it ranges from 38 to 60 per cent. It is the highest in the state of Kerala (60 per cent).
3. There is imbalance in teacher supply and demand in the states of Kerala, Maharashtra, Karnataka and Tamil Nadu. The turn-over of teachers in these states is twice the number recruited in the last couple of years. The teacher supply and demand is balanced only in the states of Haryana and Madhya Pradesh.
4. None of the states has the policy for initial posting of teachers either in the rural or urban area. Transfer policy is conspicuously absent in the states of Assam, Kerala, Madhya Pradesh and Tamil Nadu. In other states, teachers are transferred after 3 to 6 years. In Maharashtra, there is policy to post teachers atleast 25 kms away from their home town.
5. There is no provision for rural/remote area allowance in the states except in Madhya Pradesh and Haryana.
6. More than 40 per cent teachers in Assam and about one-third in Madhya Pradesh are untrained. In rest of the states the percentage of untrained teachers ranges from 0.5 to 13 per cent.
7. Utilisation of library facilities by students and teachers in teacher training institutions is abysmally poor in the states of Haryana, Maharashtra, Darrang district of Assam and Tikamgarh

district in Madhya Pradesh. The utilisation of facilities in other districts is also not very encouraging.

8. Teachers with less than 10-year schooling is the highest in Karbi-Anglong in Assam (31 per cent). Such teachers are also working in Malappuram district of Kerala, South Arcot district in Tamil Nadu and Gajapati district in Orissa.
9. Facilities for in-service training are inadequate in almost all the states as none of the states could provide training to all the primary school teachers once in five years. The infrastructure at sub-district levels is practically absent.
10. Consultation with teachers to assess their training needs, competent resource persons, involvement of trainees in the training process and support for teachers to implement new ideas emerged as important factors facilitating teachers' participation in in-service training programmes.
11. Nearly half of the teachers in Assam, Haryana, Ratlam and Sehore districts of Madhya Pradesh

perceived a decline in the social status during the last 10 years.

12. More than 90 per cent teachers in Assam and more than 50 per cent teachers in Haryana, Kerala and Tamil Nadu reported that their chances of promotion were bleak.
13. The factors explaining perceived professional status of teachers were economic status, help from head teacher, promotional avenues, desire for in-service training, etc.

### Implications of Findings

Within the time constraint, the study has provided useful information which has implications for the review of teacher and teacher education policy to make these responsive to the needs of DPEP. It indicates in-service training needs of teachers in the states and other parameters for designing the programme of continuous school-based in-service training. The policy implications, arising out of the study, are summarised in the following Table. Against each implication, 'x' indicates relevance to the state and '\*' indicates suggestions of experts.

TABLE  
Policy Implications

<i>Implications</i>	<i>Assam</i>	<i>Haryana</i>	<i>Karnataka</i>	<i>Kerala</i>	<i>Maharashtra</i>	<i>Tamil Nadu</i>	<i>Madhya Pradesh</i>	<i>Orissa</i>
<b>1. Demand and Supply</b>								
1.1 Review of demand and supply	x	x	x	x	x	x	x	x
1.2 Alternative use of surplus pre-service training capacity		x	x	x		x		
1.3 Augmentation of pre-service training facilities	x							
<b>2. Recruitment, Placement and Transfer</b>								
2.1 Upgradation of teacher qualification to plus-two level	x			x				x
2.2 Pre-service training before entry into teaching	x							
2.3 Decentralised recruitment at district level	x	x		x		x		x
2.4 Involvement of local administration in recruitment	x	x	x	x	x	x	x	x
2.5 Placement policy for schools in difficult contexts to ensure teacher availability	x	x	x	x	x	x	x	x
2.6 Rationalised transfer policy instead of bureaucratically fixed period of transfer		x	x		x			x
2.7 Rationalised transfer policy instead of forced posting at a distance from home					x			



Implications	Assam	Haryana	Karnataka	Kerala	Maharashtra	Tamil Nadu	Madhya Pradesh	Orissa
8. Problems								
8.1 Timely payment of salary	×	×						×
8.2 Steps for improving instructional supervision by BEOs	*	*	*	*	*	*	*	*
8.3 Housing facilities for female teachers	×	×	×	×	×	×	×	×
8.4 Provision of separate toilet for female teachers	×	×	×	×	×	×	×	×
8.5 Augmenting physical facilities	×	×	×	×	×	×	×	×

## Highlights of Discussion, Observations and Suggestions

### 1. Teacher Motivation

- 1.1 Motivation has been used in a limited sense. It is assumed that it is the outcome perceived status and service conditions.
- 1.2 Case studies of successful teachers or 'success stories' may be conducted and disseminated. Inputs that contribute to these 'success stories' need to be identified for taking appropriate action in other schools, particularly to improve learning achievement of pupils.
- 1.3 Forums may be provided to exchange experiences and ideas of educational personnel, and especially for teachers.

### 2. Training of Teachers

- 2.1 Pre-service training programmes in the country were planned and implemented keeping in view the felt need of supply of trained teachers. The goal like the Universalisation of Elementary Education (UEE) was not considered. Now, our training programmes should *inter alia* be geared to meet the needs of UEE. Gaps in the perceived perception of teachers and their expected roles in this regard need to be identified for designing intervention in pre-service and in-service training programmes. Perception of the community about the roles of teachers also need to be studied.
- 2.2 The teachers' training programmes should be reviewed, particularly for incorporating adequate emphasis on their training in both scholastic and non-scholastic fields.
- 2.3 Both pre-service and in-service training programmes of teachers should *inter alia* provide the teachers adequate training in development of curricula and instructional materials.

### 2.4 The teachers' training programmes should *inter alia* be geared to

- i. Multigrade teaching and remedial teaching
  - ii. Individualisation of instruction, particularly in the context of automatic promotion of students under the 'non-detention policy'
  - iii. Development of graded instructional materials, particularly in the context of multigrade teaching
  - iv. Inter-disciplinary approach to teaching-learning
  - v. Participatory training, particularly to enhance the self-concept.
- 2.5 In-service training of teachers should be relevant, need-based and recurring.
  - 2.6 The matter regarding empowerment of and autonomy to teachers needs to be given adequate attention. Among other things, the teachers may be empowered to purchase teaching aids, etc. and they may be encouraged to use them in teaching-learning situations.
  - 2.7 Strategies need to be developed and implemented to improve teaching competence of untrained and under-qualified teachers working in different states.
  - 2.8 The modus operandi for in-service training of teachers needs to be reviewed thoroughly. The proposal that teachers may be provided training at school level needs serious consideration. The period of in-service training of teachers may generally be increased.
  - 2.9 Studies may be conducted to find out the efficacy of teachers' training through correspondence courses.
  - 2.10 Lack of relevant in-service training is one of the findings of the study. It was suggested that the planners and organisers of



the in-service training programme must take into consideration the message given by the teachers during planning and organising in-service training in future.

### 3. *Planning and Implementation*

- 3.1 There is a need to develop a perspective plan for pre-service and in-service training of teachers, taking into account the training needs of teachers. Suitably adapted managerial techniques may also be applied in the field of education.
  - 3.2 Identification of training needs of teachers should not be a one-time affair. Such exercise should be done periodically.
  - 3.3 There is a need for adequate micro-planning in the context of the UEE rather than centralisation in planning and management of educational programmes.
  - 3.4 Interventions are planned and implemented from time to time for pre-service and in-service teachers' training programmes. There is a need to conduct, periodically, impact studies and feedback should be used for taking appropriate corrective measures.
  - 3.5 Since the existing infrastructural facilities for in-service education of teachers are inadequate, there is a need for capacity building in this regard at district/ sub-district levels.
  - 3.6 The teacher study has revealed that content upgradation is an important area for pre-service training. It was suggested that studies might be conducted to identify areas of difficulties experienced by teachers of different subjects.
- ### 4. *General*
- 4.1 The teacher educators concerned with primary school teachers' training programme

should be given adequate exposure of teaching-learning strategies relevant for teaching primary classes. Orientation programmes for educational planners, administrators and supervisors may also be organised in this regard.

- 4.2 Studies may be undertaken to ascertain attitude of teachers towards teaching-learning. Excessive involvement of teachers in trade union type activities is likely to distract their attention from their profession. Politicisation of teachers should be minimised for the cause of education.
- 4.3 There is a need to review, periodically, the policy of transfer of teachers. If a teacher is found motivated to discharge his role satisfactorily in a school, his periodic transfers may not be in his own interest and in the interest of the school.
- 4.4 There is a need to create appropriate mechanism for redressal of grievances of teachers.
- 4.5 The role of educational technology in the context of motivation and training of teachers needs to be recognised for taking appropriate action.
- 4.6 In the context of certain observations/findings of the study about centralised recruitment of teachers, it was clarified by the representative from Assam that recruitment and appointments were now being made at the district level. As regards the 'demand and supply' of teachers, he clarified that the state has stopped the pre-service training programme in the wake of unemployment of teachers and efforts were being made to provide on-the-job training to untrained teachers working in the schools.

# Designing, Production and Distribution of Instructional Materials



## Objectives

The specific objectives of the study were:

1. To assess the present status of designing, production and distribution of instructional and NFE materials in the states covered by the DPEP.
2. To suggest improvements/modifications, wherever necessary for each area.
3. To suggest professional and technical training of the personnel, in view of technological advances.

## Methodology

The required data was collected from each state through a main questionnaire, which was filled in by the respective Nodal Officer in consultation with the respective member of the Sub-core Team. Thereafter, two sub-questionnaires were filled in by the respective Surveyor, on the basis of the surveys conducted to ascertain : (i) the availability of books, and (ii) paper and infrastructure for printing, etc. in the state. The information thus collected was analysed by the Study Team and discussed with the respective Nodal Officer. Printed books were collected from each state and were examined by a team of experts to assess the physical qualities of the books for different classes/stages under five categories, namely, typography, illustrations, printing, binding and paper as well as the overall rating.

## Findings

- i. Generally, more than one agency is involved in the overall publishing of the textbooks. This has often resulted in lack of coordination and the different agencies have tended to follow different mechanisms.
- ii. Resources and finances are major problems for almost all agencies. Borrowing money from banks at high interest rates seriously affects the financial standing of the agencies.
- iii. Some agencies depend only on government presses for the printing of the books while other agencies confine the printing jobs to printers within their state only. In the former case, printing has been delayed and in the latter case, the printing rates have been quite high.
- iv. **Except for a couple of agencies, the distribution of the printed books has been seriously delayed, leading to criticism and dissatisfaction.**

- v. Distribution of free books is a major problem as often such free books do not reach the target group or reach very late. Further, the reimbursement on account of such free books is generally delayed with the result that the agencies face a financial crunch.
- vi. Almost all the agencies suffer from the lack of professionally trained personnel in all the areas of book publishing.
- vii. In-house facilities for lasersetting, artwork preparation, designing, etc. are non-existent.
- viii. The physical qualities of the books need considerable improvement in almost all cases.
- ix. The agencies are not functionally autonomous, with the result that they have to await decisions and approval from elsewhere.
- x. The agencies and their various outlets do not have modern communication facilities and, hence, monitoring becomes difficult and cumbersome.
- xi. The rates of payments to authors, illustrators, editors, proof readers, etc. are poor.
- xii. The agencies have no control over the frequent changes made in the textbooks and, therefore, the quantities printed are sometimes less than the required number.
- vi. Urgent steps should be taken to train the existing staff in modern techniques of publishing and, wherever feasible, fresh, professionally trained staff should be recruited.
- vii. The agencies should instal in-house facilities for lasersetting, illustrations, designing, etc.
- viii. The physical qualities of the books should be improved by engaging freelance artists, designers, typographers, editors, production personnel, etc.
- ix. The agencies should be made functionally autonomous, with sufficient checks and balances.
- x. Modern communication facilities should be provided.
- xi. The rates of payments to authors, illustrators, editors, proof readers, etc. should be periodically revised.
- xii. The textbooks once prescribed should continue for a minimum period of three years, unless there are compelling reasons to revise/replace them. This will enable the agencies to plan their printing programme more satisfactorily.

### Recommendations

- i. Multiplicity of authorities for decision-making should be avoided.
- ii. The agencies should be provided with sufficient working capital or a rolling fund so that they do not have to borrow money at commercial rates. One-time interest-free loan, to be paid back in a specified time, could be another alternative.
- iii. Printing rates should be obtained from a wider cross-section of printers so that there is an element of competition, which would result in lower rates and help the agencies in further lowering the sale prices.
- iv. Inventory control and distribution have to be modernised and made more efficient. The book trade should be associated with such distribution so that the pressure on the storage space will be eased and the books will be more easily available throughout the state.
- v. The agencies should not be burdened with the cost of free books. The concerned state government should pay the money to the agencies *in advance* and evolve a mechanism so that such free books do not remain in the offices/ godowns of the government offices.

### Highlights of Discussion, Observations and Suggestions

1. Textbook publishing on a mass scale has not been recognised even today, barring a few exceptions, as a specialised technical process requiring employment of trained professionals, technologists and specialists in the field of designing, production, storage and distribution, resulting thereby in poorly illustrated and indifferently produced textbooks.
2. Two significant points about state production of textbooks are : (i) the nationalised textbooks are, generally, produced on no-profit no-loss basis. In certain cases the government subsidised the cost of production, and (ii) the contents of such textbooks are relevant to Indian ethos.
3. The print order of textbooks for children of the minorities is generally, very low, in comparison to the nationalised textbooks for the majority population of the state. Consequently, the cost of production of textbooks for children of the minorities are, generally, very high. Some solution to this problem needs to be thought of.
4. Certain textbooks in some of the states are common. For example, some of the textbooks of the NCERT have been adopted by certain states. If such books are produced through one

window, the benefits of the economy of the scales would be available to all concerned.

5. There is a need to bring about improvements in the physical aspects of the textbooks also.
6. Earlier, the Government of India had been allocating paper for production of textbooks to the nationalised textbook agencies on subsidised rates. However, this scheme was withdrawn a few years ago. This has resulted in escalation of costs of nationalised textbooks.
7. Instances of piracy of textbooks of the nationalised textbook agencies have come to notice. This problem of piracy should be tackled with the help of the copyright laws, which are stringent.
8. Ideally, under the District Primary Education Programme (DPEP), the textbooks should be prepared and produced at the district level. However, it was felt that adequate facilities may not be available in the districts and the cost of production of textbooks would go up as the benefits of the economy of the scales that are available in case of the centralised production of textbooks, would not be available. Selective decentralisation should, however, be attempted, as has been done by the NCERT.
9. A suggestion was made that the problem of distribution of textbooks could be solved if the textbook agencies make arrangements for supply of textbooks to the students through the schools. However, it was pointed out that generally the school authorities were reluctant to undertake such responsibility due to various reasons, particularly financial and administrative.
10. The recently introduced modus operandi of production/distribution of NCERT textbooks through Regional Production-cum-Distribution Centres and through private wholesale agents was cited. It was also informed that the system was working quite well. In this context, an observation was made by a representative from Karnataka that they could not find the modus operandi of production and distribution of textbooks through private sector viable. Among other things, the distributors demanded a high rate of commission.
11. An observation was made that if the problem of storage and supply of textbooks could be tackled efficiently, there would be no question of piracy of textbooks.
12. Another observation was that further analysis, specially from financial angle, was not done in

respect of several recommendations included in the study. The DPEP states have different sets of problems of textbooks and a uniform solution cannot be applied.

13. Although the elementary education is free in the states, the parents have to incur private expenditure on education on several items such as textbooks, stationery, etc. Keeping in view the criterion of equity, efforts should be made to reduce the cost of production of textbooks even if the government may have to provide subsidy for this purpose.
14. With regard to the suggestion that the textbooks should not be changed at least for three years, it was felt that in the fast-changing world the situations sometimes warrant frequent change of curriculum and instructional materials. This aspect needs to be kept in view while taking decisions in the matter.
15. Although it was pointed out in the presentation that the study dealt with only the physical aspects of textbooks, yet the delegates gave certain suggestions that pertained to academic aspects of the textbooks.

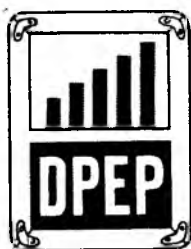
These suggestions were as follows :

- 15.1 In the context of the emphasis of Minimum Levels of Learning (MLLs), efforts should be made to develop competency-based textbooks.
- 15.2 Keeping in view the recommendations given in the Yashpal Committee Report titled *Learning Without Burden*, efforts should be made to reduce the number of textbooks. At the early primary stage, no textbook may be prescribed for the students of Class I. Instead, teachers' guides may be prepared and disseminated. A suggestion was given that at the early primary stage (Classes II and III), a combined textbook might be produced covering all the subjects. In this context, it was pointed out that a single textbook comprising about 300 pages might pose problems of binding, durability, etc.
- 15.3 In case the socio-economic, cultural and geographical situations are by and large similar, it would not be worthwhile to decentralise the development and production of textbooks. Moreover, a significant decision with regard to preparation of textbooks will have to be taken, i.e.

whether or not there should be separate textbooks in the DPEP districts and non-DPEP districts.

- 15.4 While preparing the textbooks, the requirement of rational and empirical evaluation of textbooks must be kept in view. The feedback received should be utilised in finalisation/revision of the manuscripts of the textbooks.
- 15.5 It has been observed that there is a proliferation of 'keys' and 'guide books' in the market. There is a need to probe into this business.
16. The matter regarding preparation of teachers' guides as separate books vis-a-vis bringing out teachers' editions of textbooks needs serious consideration.
17. The teachers may be given freedom to choose the instructional materials for use in their schools.
18. In the process of development of textbooks, there should be adequate representation and participation of teachers. Their inclusion in the textbook teams should not be simply ornamental.
19. It was pointed out that the structural approach (introduced in the sixties) was still being followed in the textbooks in English. This point may be looked into by the textbook agencies.

# Educational Problems of Tribal Children



## Objectives

The focus of the study was to map the present provisions for primary education in the tribal areas as well as their utilisation by the recipient population. The specific objectives were:

- To carry out a sample survey of the educational infrastructure and facilities available in the tribal areas (with a view to identify gaps, if any, in the available infrastructure and facilities).
- Status of teachers in tribal areas including their availability, background, qualifications, training, punctuality and problems.
- Status of curriculum in operation and the teaching-learning materials being used with special reference to the use of the tribal language in the writing of teaching-learning materials as well as in the classroom transaction.
- Status of monitoring and evaluation of primary education including administrative structures.
- Status of school enrolment and school drop-out with special reference to factors affective in enrolment and drop-out of tribal girls.
- Status of convergence of various departments providing services and facilities in tribal areas.
- Status of community participation in the educational programmes and management of schools.

## Methodology

The study was carried out in two districts in each of the five states (i.e. Assam, Karnataka, Kerala, Orissa and Tamil Nadu) except in Madhya Pradesh where four districts were selected and in Maharashtra only one district was selected for the study. The study was conducted in one block in each of the selected 15 districts on the basis of the highest tribal population. Ten tribal villages were surveyed in each of the selected blocks. Haryana was excluded from the study in the absence of any significant tribal population.

The sample of respondents for the study in each village consisted of 20 children drawn from various groups, all the teachers of the selected primary schools with a maximum of five per school, one instructor from NFE centre, five pairs of parents and five community members out of which two were males and three females.

A set of eight instruments, prepared for collecting quantitative and qualitative data, was used to collect data from the field. A training manual was prepared in the regional languages to train field instructors from various states.

Two reports were prepared for each state, one

on the status of education of tribal children and the other a survey report based on the actual field data collected through the eight instruments.

For the analysis of data, a common plan was developed. On the basis of the seven survey reports generated at the state level a national synthesis report was prepared.

## Findings

The key findings of the study are as follows.

### 1. Educational Facilities

- Out of the five DPEP states, in Maharashtra and Tamil Nadu all the villages surveyed had a primary school. In Assam, Karnataka and Kerala 75 to 90 per cent villages had primary schools. Madhya Pradesh and Orissa had primary schools in 84.62 and 75 per cent villages, respectively.
- Out of the five DPEP states, Maharashtra had the largest number of ashram schools, followed by Tamil Nadu, Kerala and Karnataka. Villages covered in Assam did not have any ashram/residential school. Less than 20 per cent of the villages covered in Madhya Pradesh and Orissa had ashram schools.
- Assam, Orissa and Tamil Nadu show fair presence of NGOs at the village level.
- In response to a question whether tribal development programme was successful or not, the community leaders in Karnataka, Madhya Pradesh and Maharashtra felt that these programmes were unsuccessful.

### 2. Teachers of Tribal Children

- Educational qualifications of teachers in the seven states range from below matric to post-graduate.
- In all the states the sampled teachers have either pre-service training or in-service training. No teacher is untrained.
- Most teachers and community leaders ascribe poor attendance of tribal children in school to economic reasons, including household duties and working on the farm. Low parent motivation is also listed as a significant reason for children not attending school. There is a similarity of responses given by children, community leaders and teachers.
- Most of the teachers, when interviewed, said that they faced a number of problems while teaching tribal children which include language

of the learners, irregular attendance, lack of infrastructural facilities, lack of teaching-learning materials and multigrade teaching.

- The specific learning problems of tribal children, according to teachers, relate to low learner motivation, poor parent participation in the education of children, illiterate family background, irregular attendance and uninteresting curriculum. The language problem was mentioned by teachers in three DPEP states, viz. Karnataka, Kerala, Maharashtra in addition to Madhya Pradesh and Orissa.
  - The most prominent problem listed by a large number of teachers related to the inability of girls in attending school regularly on account of household chores and duties. Lack of interest on the part of parents in sending girls to school was another problem listed by many teachers.
  - Not all the facilities provided under the Operation Blackboard were available in the schools covered in the states. Special facilities available for tribal children varied from state to state.
  - In the states where non-formal education programme is in existence, teachers encourage non-school-going children to attend NFE centres.
- ### 3. Teachers and School Programme
- Most teachers, except those in Maharashtra, feel that the textbooks are relevant to tribal boys and girls. In Maharashtra, over 60 per cent teachers feel that the textbooks are not suitable for tribal children. Parents of children covered under the study shared this opinion with teachers. In Maharashtra the major cause for unsuitability of textbooks for tribal children was the language of the textbooks.
  - In Tamil Nadu, a large number of teachers feel that the textbooks are not comprehensible by children. Likewise, nearly one-third of the teachers of Karnataka find textbooks too difficult.
  - Regarding comprehensibility of textbooks, teachers in Madhya Pradesh and Orissa feel that the children find textbooks difficult. Most teachers feel that a special teaching-learning methodology needs to be adopted for teaching tribal children.

#### 4. Tribal Parents

- A large number of tribal parents have no formal education themselves.
- There seems to be high correlation between attendance in Anganwadi and attendance in schools.
- Most parents in all the seven states are satisfied with the school system as it operates today.
- Parents' attitude towards change in the educational system reveals that between 50 and 70 per cent do not want any change in the educational system, except in the case of Maharashtra, where more than 50 per cent of the parents are looking for a different educational system.
- Most parents in all the states felt that girls should be given health education and education in vocations like tailoring.
- Teachers, parents of tribal children and community leaders were asked to give their opinion on various aspects of community participation in educational programmes meant for tribal children. Responses from Madhya Pradesh and DPEP states like Maharashtra and Assam show strong opinion in favour of community's control over the village school.
- In Maharashtra, all the villages covered had a Village Education Committee (VEC). In other four DPEP states the percentage of villages having VEC ranged from 4 to 16.25 per cent. In Madhya Pradesh and Orissa, the percentage of villages having VEC was high, i.e. 65 and 72.50 per cent, respectively.

#### 5. Tribal Children

- In Assam, Karnataka, Kerala, Madhya Pradesh and Maharashtra, between 43 and 55 per cent of male siblings of school-going children continue to be in school while the percentage of female siblings is marginally or significantly lower.
- Helping parents with their work/occupation, looking after younger siblings and minding the house are three most important household chores done by school-going children.
- In almost all the states high percentage of children had textbooks available to them but in case of some of the states like Orissa only 47.37 per cent children had textbooks.
- Most non-school-going children have to work at home. Helping parents is at the top of the

list, followed by looking after the house, minding younger siblings, collecting firewood and looking after household animals. In some cases the children have to cook at home.

#### 6. Tribal Language

- The multiplicity of home language is repeated in the multiplicity of school languages as declared by parents of school-going children.
- Most teachers prefer to use, or actually use, the regional language in classroom interaction, except in Madhya Pradesh, where the responses given in favour of tribal dialect and regional language is equal.
- The results show that even those teachers, who presumably speak the same language as the learners, prefer to use the regional dominant language for classroom interaction.
- A large number of teachers believe that the textbooks should be in the standard regional language.
- Parental preference for the medium of instruction swings heavily in favour of the regional language.

#### Implications of Findings for Designing Interventions

The synthesis report has described in detail implications of various findings for designing interventions. These interventions have been classified under educational facilities, teachers of tribal children, teachers of school programme, tribal parents, tribal community leaders, school education and tribal children. All these interventions cover various important aspects of education of tribal children, including provision of primary/ashram schools in all the villages, role of NGOs, various aspects of teachers including their training, attitudes, teaching problems, curriculum, instructional material and textbooks, medium of instruction and language problems, teaching aids, participation of tribal parents and community members in educational programmes and reasons for children not attending the schools, children and wage work and attitude of children towards the system as a whole.

Investigators' diaries and focussed group discussions held in each village with the community members have been analysed state-wise. These analyses bring out certain common elements in case of all these states. Some state-specific problems have also emerged from these discussions.



### Highlights of Observations, Discussion and Suggestions

1. The study showed parental preference for regional language as the medium of instruction. Some tribal parents preferred to send their wards to schools in adjoining non-tribal villages in spite of availability of schooling facilities in their villages. It was suggested that findings of the study in this regard should be interpreted carefully. Studies need to be conducted about reasons for such preferences. Strategies regarding the medium of instruction should be guided more by pedagogic considerations vis-a-vis opinion of parents. A suggestion was given that it would be expedient if dialect of tribal children was used in the teaching-learning process for first two years and, thereafter, may switch over to the regional language.
2. The matter regarding acceptance of the education system is very important. It has been observed that, in spite of schooling facilities, several tribal communities are not much enthusiastic to send their children to schools.
3. An observation was made that ethnicity played a crucial role with regard to teacher effectiveness in tribal areas. There is a need to identify carefully the kinds of inputs required to be provided to non-tribal teachers teaching in schools in tribal areas.
4. One of the reasons for low attendance of tribal children in schools was attributed to their ill health. The reasons for low attendance need to be probed further. There was a general observation that, in several cases, incentives for education of tribal children did not reach them in time.
5. It was observed that generalisations about community participation in school affairs were not possible on the basis of available data.
6. Viable and effective modes of supervision of schools in tribal areas may be thought of and operationalised.
7. The performance of tribal children in ashram schools of Orissa was found better than that of the tribal children studying in other schools. It was felt that a significant reason for this could be the special inputs for tribal children in ashram schools. In some villages tribal community members preferred to send their children to English medium schools.
8. In response to a query it was informed that mobile tribal population was not included in the baseline study on Educational Problems of Tribal Children. A suggestion was given that the DPEP must take into account the educational needs of migrant tribes and certain other educationally disadvantaged groups.
9. The educational needs of tribal children cannot be seen in isolation. Area intensive approach to education of tribal children may be planned and operationalised, keeping in view the context and issues. Among others, the integrated tribal development agencies need to be actively involved in the endeavours for tribal education.
10. The study, *inter alia*, revealed that in Maharashtra 57.14 per cent teachers thought that textbooks used by the children were not understood easily by them, whereas 75.21 per cent students thought that they could understand their textbooks. Such variation in opinion was viewed with surprise.

# Gender Issues in Primary Education



## Objectives

The gender study was taken up with the following objectives:

1. Mapping out gender disparities in access, enrolment and retention.
2. Identifying causes for non-enrolment and drop-out of girls and proposing effective local-specific strategies for improved enrolment and retention of girls.
3. Assessing situation of women in each district with regard to some social and demographic indicators on women's equality and empowerment.
4. Collecting information on gender bias in
  - i. textbooks
  - ii. teacher training
  - iii. teacher's attitude
  - iv. curriculum transaction and
  - v. administrator's attitude
5. Identifying supportive community structures for developing strategies for UPE of girls.
6. Identifying ways of convergence of services of different departments for UPE of girls (ECCE, health and support services).
7. Studying the availability of educational and other incentives.
8. Assessing participation of women in teaching, administration and other decision-making bodies.
9. Developing state/district level monitoring and framework for removal of gender disparities.

## Methodology

The study is qualitative in nature. It was participatory in the sense that discussions were held with girls, parents, community leaders, teachers and administrators for identifying problems of girls' education and women's equality and empowerment. Individual household interviews, group discussion and field observation formed the mainstay of the study.

Information on district and village variables was collected from the secondary data.

One block was selected in each DPEP district. Eight villages and two urban slums were selected to represent villages having (a) no school, (b) only primary school, (c) only middle school, and (d) a secondary or a higher secondary school. A uniform pattern could not be followed because of variations. In 21 districts of Assam, Karnataka, Kerala, Maharashtra, Haryana and Tamil Nadu, a total of

202 villages/urban slums were visited. In all, 6777 households were visited; 1253 drop-out girls, 1351 never-enrolled girls, 311 primary schools'/sections' head teachers, 740 primary teachers, 470 community leaders and 245 educational administrators were interviewed and 186 focussed group discussions were held.

### Findings

#### *Factors for Girls' Continuance in Schooling*

- Better economic status of the parents
- Literacy of the parents
- Parental motivation
- Positive attitude of the teachers
- Incentives like scholarships, textbooks, uniforms and mid-day meals
- Flexible school timings
- Availability of support services

#### *Factors for Girls' Discontinuance from Schooling*

- Poverty
- Illiteracy of parents
- Lack of parental motivation
- Negative attitude of teachers
- Burden of domestic chores
- Girls help parents in their occupations
- Non-availability of support services
- Dowry, early marriage, female infanticide
- Difficult natural conditions—forests, hilly terrains, floods, calamity, difficult access to school

#### *Achievement of the Study*

- An attempt has been made to make the states aware of the need to collect gender disaggregated data and to undertake special programmes for UPE of girls.
- The state departments, SCERTs/DIETs have

been prepared for taking up studies and action at the grass roots level for promoting girls' education and women's equality and empowerment.

- The study has been able to provide the gender perspective in DPEP plan formulation.
- It has been able to build state level capabilities.
- Orientation programme and focussed group discussions sensitised not only the project staff in gender issues and problems of girls' education but also the educational functionaries, village community, schools, teachers and parents.

### Highlights of Observations, Discussion and Suggestions

1. In response to a query, it was informed that some of the districts chosen for the study were those with low female literacy and the Total Literacy Campaign (TLC) districts.
2. The media may *inter alia* be used for awareness-generation programmes.
3. The school mapping programmes should take care of the educational needs of girls. Coeducation should be the guiding principle at the primary level and the single sex schools to be avoided as far as possible. Having women teachers makes the parents more comfortable and also would provide the necessary role model to the village girl.
4. Although gender-based division of labour is still prevalent in households, education may *inter alia* be used as an instrument to break certain undesirable traditions so that gender roles may be restructured. The boys may also be asked to perform roles like child rearing and cleaning the school premises. Such role-sharing activities may be started in the Balwadis. An example of 'Kishore Bharati' was also cited.

# State Finances for Education



## Objectives

The study on state finances was conducted in six states (Assam, Haryana, Karnataka, Kerala, Maharashtra and Tamil Nadu), to provide a statistical, descriptive and analytical profile of the pattern of financing for education (particularly elementary education: primary and upper primary), and projections on the financial requirements of elementary education in each state, if elementary education were to be universalised by the turn of the century.

The specific objectives of the study are:

1. To present a brief profile on the pattern of financing for education, particularly elementary education—primary and upper primary education—in each state during the post-independence period, concentrating on the 1980s to the present (1980-81 to 1992-93).
2. To present a brief idea of the extent of financial resources required for education (for universalisation of elementary education by 2000), and of the gap between the requirements and likely availability of resources.

The main aspects identified for the study were:

(a) trends in financing education, including allocation of resources, priority given to education in the five year plans (outlay/expenditure on education as per cent of the total plan outlay/expenditure), plan expenditure/outlay on education during the seventh and the eighth five year plans, growth in non-plan expenditure on education, expenditure on centrally sponsored schemes, intra-sectoral allocation of resources, inter-functional allocation of resources (expenditure by objects); and (b) requirement of resources for universalisation of elementary education up to the turn of the century, based on unit costs of education (expenditure on education per student) and projected enrolments with the target of universalising elementary education by the turn of the century.

## Findings

A few important findings are as follows:

1. Except Maharashtra, the budgetary conditions in the recent years in all the other five states are characterised by almost continuously increasing deficits (in revenue account). One expects these adverse general budgetary conditions to have serious effects on education budgets. But no proper correspondence could be found between general budgetary conditions and education budgets.

2. Except in case of Kerala and Tamil Nadu, the priority accorded to education in the five year plans has increased significantly between the seventh and the eighth five year plans. (But the increase might be smaller than the increase between the sixth and the seventh plans; the latter is attributable to the National Policy on Education 1986). In Kerala the share of education in the eighth five year plan expenditure/outlay was almost the same as in the seventh five year plan (3.7 per cent), and in case of Tamil Nadu it has declined from 7.2 per cent in the seventh plan to 3.6 per cent in the eighth plan, though in absolute terms, the allocations have increased.
3. Intra-sectorally, the relative priority accorded to elementary education also increased significantly in all cases, except in Tamil Nadu, between the seventh and the eighth five year plans, which is in response to the resolve made in the National Policy on Education 1986, to increase allocations for elementary education. In Karnataka, the share of elementary education in the total plan expenditure/outlay for education increased from 38 per cent in the seventh plan to more than two-thirds in the eighth plan. In Tamil Nadu, the change is in negative direction, but the quantum of change is marginal.
4. In the allocation of non-plan expenditure on education also, elementary education receives a high priority, receiving nearly half of the total in case of almost all the six states. However, between 1990-91 and 1991-92, the two latest years for which data are available, there is a marginal decline in the corresponding proportions, and the decline is steep in case of Assam (from 59.3 per cent in 1990-91 to 54 per cent in 1991-92); and in Karnataka there is a marginal increase. In the other states, the proportion remained relatively unchanged.
5. The recent trends in the grants to the states for centrally sponsored schemes for elementary education have not been systematic. During the last seven or eight years, such grants have increased in Assam, but declined in case of Haryana, and there were zigzag trends in case of other states. Grants for centrally sponsored schemes in adult education have declined in Assam, Haryana, Kerala and Tamil Nadu, and the trends are not smooth in Karnataka.
6. Understandably, the growth in plan expenditure on elementary education in Kerala, during the 1980s, has been negative not only in constant

prices, but also in current prices, due to declining age-group population and correspondingly declining enrolments.

7. Even the modest estimates of resource requirements, based on projected enrolments and unit cost of education in the early 1990s, seem to be huge in most states. It is only in Kerala that the required rate of growth in enrolments is negative for universalisation of elementary education by 2000. Therefore, the resource requirements of Kerala are found to be not huge; but for improvement in quality of education, it is felt that additional resources will be required in Kerala too. In real terms (i.e. at constant prices), the annual rate of growth required in resources is more than 7 per cent in most states (7.7 per cent in Karnataka, 12.8 per cent in Tamil Nadu and nearly 20 per cent in Assam) during the remainder of the 1990s.

#### Highlights of Observations, Discussion and Suggestions

1. Utilisation of resources should have been a major concern that has been left out in the study. There is a lot of scope for better utilisation of existing resources. It is felt that saving of the order of 20 per cent is possible if resources are utilised efficiently. The principal investigator of the study, however, felt that in the present circumstances, additional external funding would be needed. If resources are not taken from external agencies, the government may have to resort to more taxes.
2. The sustainability aspect of the DPEP should also have been studied. In this context an observation was given that since the DPEP proposed to prepone a programme of about 20 years to seven years only, the question of sustainability was, perhaps, not relevant. The principal investigator informed that the study gave some idea about flow of funds and how the funds will be used. However, the sustainability aspect could be studied only after the final district plans are formulated.
3. It was pointed out that rationalisation of 'norms' was difficult as provision of resources depended upon exigencies and as a residual factor.
4. The modus operandi of the district level planning in school education is, by and large, non-existent. It needs to be encouraged. However, in order to facilitate action, norms for micro-plan-

ning may be prepared. Lack of norms result in misallocation or ad hoc allocation of resources.

5. Certain significant facts related to primary education of children have emerged as a result of the DPEP studies. This is a significant contribution of programme planning exercise.
6. Observing that the DPEP budget vis-a-vis the entire central sector budget for education was meagre, a question was raised whether there was a need for seeking external funding. In this context, example of the 'Amul' project of Anand (Gujarat) was given which had not only become self-sustaining but also was able to export milk products to several other countries.

It was also suggested that certain central sector schemes like Operation Blackboard (OB), Non-Formal Education (NFE), and District Institutes of Education and Training (DIETs) in the field of primary education also need to be

reviewed and restructured. Some seemingly outdated non-plan schemes may also be reviewed and decisions about their continuance or discontinuance may be taken.

7. It was observed that the required rate of growth on expenditure on elementary education to achieve Universalisation of Education (UEE) by 2000 was seemingly high. The method of arriving at the rate of growth needs to be elaborated.
8. Quite a substantial budget allocation is spent on access to primary education. An exercise in balancing of budget allocation for primary education needs to be undertaken.
9. Unit cost of education per school and kinds of resources needed may be studied.
10. Education needs to be recognised as potential input for raising productivity as also for economic growth.

# Methodological Issues Emerging Out of the Studies



The studies reported in the earlier section have served a useful purpose. They have provided an empirical base for realistic formulation of district plans. Based on the findings of the studies, the plans prepared by the districts covered under the DPEP could be suitably updated. Indications to this effect emerged during the presentations as well as the discussions that followed each presentation.

However, the time constraints and other factors highlighted by the study coordinators limited the scope of the studies. Only the simple survey methodology could be applied. No cause-and-effect analysis of the variables examined in the studies could be attempted. To deliberate on the methodological issues arising out of the limitations under which the reported studies had to be conducted, a small group of research-oriented participants of the seminar was constituted. This group included experts (Appendix III) from research institutions engaged in basic as well as applied behavioural research, well-versed in qualitative and quantitative methods. A parallel session was held by this group on 25 August 1994 from 9.30 a.m. to 1.15 p.m. After deliberating on various research issues the group made the following recommendations, which were also shared with other participants of the seminar in the plenary session.

1. The baseline studies reported in the seminar have served a useful purpose of providing empirical data for initial project formulations. A descriptive survey methodology with attempted quantification of certain behaviours has been followed so far. The only exception has been the study on Learning Achievement of Primary School Children in Reading and Mathematics. In this study, the quantitative survey design has been attempted, making it possible to generalise, to a limited extent, the obtained results on the population out of which the samples were drawn, to examine the effects of various variables. More sophisticated studies should now be undertaken for better understanding of school-related variables.
2. Systematic data-base on school statistics should be created at the district level for effective decentralised educational planning and management of primary schooling.
3. Documentation of available studies on primary education in the country should be the first priority.
4. In-depth studies may be undertaken, following a master-design, involving local and regional

research institutions for effective analysis of complex school-related students and teacher behaviours.

5. Special attention should be devoted to establish the authenticity of the collected data. This may require careful selection of measures for initial data collection, with acceptable standards of reliability and validity.
6. Suitable distribution of responsibilities for undertaking variety of studies be worked out among the resource institutions at the national, state, district and sub-district levels.
7. Institutionalised studies should be encouraged.
8. Effective review mechanism should be evolved, and systematically followed, in the formulation, implementation and dissemination of studies.
9. Facilities should be created to strengthen capabilities of institutions networked with the DPEP for undertaking research and studies.
10. Strategies for effective dissemination of research findings of studies among the DPEP functionaries should be worked out and implemented.
11. In the context of the Learning Achievement Study the following was observed. The study was completed within the constraints of time and manpower. Several issues relating to design, methodology and analysis arise from this study. Some of these issues are endemic to social science research while some are inherited from the time constraint. It will be worthwhile to consider some of the issues for the improvement of this type of studies and those emerging from the present one. These issues are considered in the context of the design, methodology and analysis.

The study so far used survey design which yield descriptive profile and correlates even in multivariate analysis. The determinants are based on association. The cause-and-effect analysis relationships are not established. Quasi-experimental studies are required to support correlational and prediction studies. Should these experimental studies be done on independent samples or on the sub-samples of this study? Experimental studies are costly and time-consuming. These cannot be conducted on large scale as the one conducted in eight states. What should be the size and scope of these studies? Should these be independently designed studies or multisite replication studies within a standard design? These designs

should be considered in the context of informing policy decisions through complementing correlational and prediction studies. The issue is the mix of programmatic and individual aptitude-oriented research.

Learning achievement study is to be replicated in the third and the sixth year of the programme. Will the subsequent assessment be in the same school and on the same Class II students or will it be on a new sample? Both approaches have advantages and disadvantages. For example, the advantage of assessment of the same Class II students is the previous knowledge base. The disadvantage is the high mortality rate. The advantages and disadvantages need to be weighed.

The generalisability of studies does have implications for these districts. But generalisation for the whole state poses problems. How will these policy decisions be formulated for the state component? Will these be valid for other districts which will be influenced by the decisions regarding the state component? How will the components for implementation in other districts be picked up? Will it require further studies to apply to other states? Can such research be built in the study design or simultaneous studies be mounted through sponsored research for further validation of the findings? It would result in increased relevance and cost effectiveness.

The study concentrated on cross-sectional research methodology. The process variables were inferred from the perceived experience with learning and supervision activities. Direct evidence on the process were not studied. Should the study not include a small process study on sub-sample? For example, how textbooks are used; how teaching aids are used; teacher-student, and student-student interactions; and teacher-head teacher interactions need observational study. Qualitative information and process study could provide useful information for designing more relevant interventions.

The unit of sampling in studies on achievement has shifted from individual student alone to student within the school and home environment. The interactive effects of the three sets of variables are relevant for student learning achievement. It has implications for the design and analysis of multilevel studies of school effectiveness. The disaggregated individual and



group explanatory variables need to be conceptualised and used in this type of research. With advanced statistical techniques and computer technology, it is possible to use hierarchical multilevel modelling. The skills to conduct such studies need to be developed through DPEP research capacity building provision.

Estimation of drop-out poses a problem, due to the absence of authenticated enrolment and drop-out records. Will crude estimates continue to suffice or should we study discrepancy between these estimates and household survey? Should we work out some adjustment mechanism? A way is to be found out till MIS starts providing reliable information.

Standardised achievement tests have been used in the study. The curriculum based on MLL is being developed. Revised curriculum will be implemented by the time the second learning assessment is undertaken. Should new tests be developed and standardised or the same tests continue to be used? The present study did not include the assessment of achievement in environmental studies. The time constraints and non-availability of standardised tests precluded its inclusion. Should these be included now? If so, what type of tests should be developed for the assessment of achievement in environmental studies? Another important dimension of primary education is non-scholastic area of the curriculum. Should this also be assessed? If so, what kind of tools should be used?

12. Several areas of research emerge from the study on Teacher Policy, Training Needs and Perceived Professional Status. The disequilibrium between demand and supply in some states raises the question of wastage of resources in pre-service teacher education, including the induction training cost and quality of training, particularly of private unaided institutions. A comprehensive study on labour market on primary school teacher is desirable.

In this study, the issues of teacher motivation and teacher quality could not be linked to student achievement due to time constraint. A study linking incentives and teacher quality to student achievement will be quite useful.

Efficiency of teacher training institutions preparing primary school teachers, particularly DIETs/ETITs (government, private aided and unaided), is needed from the point of view of costs involved and quality assurance.

Large investments will be made for in-service training of teachers and teacher educators. Studies on the impact on classroom practice, including teacher behaviour and student achievement are desirable for the improvement of in-service training design.

The regression analysis has yielded within school and school complex variables and internal supervision (help from head teacher, peers, academic guidance). Experimental study to establish causal relationship between internal supervision and student achievement will be of interest.

13. The study on Educational Problems of Tribal Children has generated some interesting data in each of the seven states. It is well-known that the tribal communities in different states have characteristics that are unique to each community. The situation in Assam is vastly different from the situation of tribal communities in Orissa. From an understanding of the ground realities in each of the states, the specific survey reports may have to be studied. However, the study throws up some very interesting indicators which would seem to be common to all tribal communities. This may be probed.

The first of these indicators of course is the issue of language. All the tribes seem to be torn between the tribal mother tongue and the regional state language. While there is a deep-seated desire on the part of the tribal communities to identify with the tribal language, most communities are aware of the obvious socio-economic significance of the regional standard language.

The other important indicator common to all state survey reports is that of an awareness about the relevance of school education for tribal children. The overwhelming opinion is that relevant schooling for the tribal children, and specially for the tribal girl child, is needed. The search for a viable alternative, which is in consonance with the aspirations of the parents and the children, seems to have been initiated in various states. In this context, most tribal communities investigated have asked for a curriculum which is linked to the economic activities in the local context.

It appears that some of the basic infrastructural facilities such as school buildings, teaching-learning materials, equipment

under the Operation Blackboard as well as the incentives provided by some of the states for tribal children do not reach the user population as efficiently as they should.

There is widespread understanding about the role of the school teacher in providing relevant education for the tribal children. Most of the communities prefer the appointment of local teachers who can communicate with the children in the local language. There is also a demand for adequate number of teachers for the schools.

Awareness of the relevance of non-formal education is another indicator. Even in states where there is no widespread non-formal education programme, the tribal parents are aware of the advantages of such an alternative.

The survey reports from the various states can, at best, be seen as sample studies since the data has been collected from a very limited number of villages in the tribal areas. However, one can generalise from the findings and plan at the district level. At the same time, there is need for carrying out quick surveys and research studies in order to validate some of the findings as well as to acquire a better understanding of the educational needs of these tribal communities. On the basis of the comparison carried out in this document, the following studies may be undertaken in different states:

- A study to determine the efficacy of the ashram school
- A study of successful on-going school programmes in tribal areas to help planners in providing relevant inputs
- A study on factors promoting or inhibiting learner attendance

14. Learning efficiency is enhanced if instructional materials are neither too hard nor too easy for

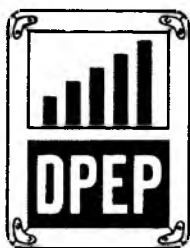
the students using them. Recent research conducted in India has led to speculation that the effectiveness of available primary textbooks is restricted because of a lack of parity between the skill level required by the textbooks and the actual skill level of Indian students. Currently, little is known about the appropriateness of the content and sequencing of materials in Indian textbooks at the primary level. In addition, textbooks are often written by scholars in literary standard languages, which are by and large incomprehensible to students and often differ greatly from the home language of children.

It is, therefore, suggested that an analysis of the reading level of primary level textbooks may be undertaken to evaluate the reading level of primary level textbooks, provide information for in-service teacher training on the use of existing textbooks, and guide the preparation of new textbooks so that they are more readable.

15. Many state and national education interventions have been aimed at improving the quality of the learning environment for students from scheduled tribe and scheduled caste backgrounds. DPEP baseline studies in eight states have collected extensive information about school-level inputs to learning achievement; these studies also include information about the characteristics of children enrolled in each school. An analysis of these data would answer questions regarding the quality of school inputs available to ST children.

It is, therefore, suggested that a study be undertaken to answer the following questions: What is the relationship between concentration of ST children in a school and the extent of inputs available in the school? Do schools with a high concentration of ST children have fewer resources than schools with a lower concentration?

# Research Based Programme Interventions: Illustrative Presentations on Assam and Kerala



Findings of the baseline studies for a particular district were shared with the District Planning Group of that district in a three-day workshop held at the district headquarter in May-July 1994. Five such workshops were organised, one in each of the five states; in Assam at Mangaldai for Darrang district, at Mandya in Karnataka, Malappuram in Kerala, Aurangabad in Maharashtra and Thiruvannamalai Samburvaryar in Tamil Nadu. The purpose of these workshops was to apprise the District Planning Group and other officials as well as NGOs and community members, who were earlier involved in the participatory planning process of project formulation, of the research findings and their implications for updating various components of the district plan, to make it need-based and related to ground realities.

To apprise the State Project Directors and Coordinators of District Planning Groups of all the DPEP states of the methodology for incorporating findings of the studies in the district plans, two illustrative presentations were organised in the National Seminar: one for Assam and another for Kerala. Implications of district level studies conducted in the state for developing relevant programme interventions were highlighted.

Comments and observations made by the participants on the presentations were responded to by the presenters. The following are the highlights of the discussion, observations and suggestions in this context.

## ASSAM

### 1. Access

- 1.1 Keeping in view the difficult terrains position in Assam, 'school mapping' exercise is essential. The problem of primary education may also be considered area/school-wise.
- 1.2 Factors pertaining to access, retention and drop-outs need to be probed thoroughly,
- 1.3 Efforts may be made to seek cooperation of parents, community, Village Education Committees (VECs) and NGOs with regard to schooling and retention of children. Steps may be taken for convergence of services like school education, health and nutrition, social welfare for the benefit of school-going children.
- 1.4 Steps may be taken to identify those weaker sections of the society whose children

do not attend schools. The needs and problems of such children and groups may be studied and suitable strategies for their education may be prepared.

## 2. Curriculum and Quality

- 2.1 The school curriculum may be made more relevant and need-based.
- 2.2 MLL-based instructional materials and guidelines, etc. may be developed and made available to all concerned early.
- 2.3 A high level policy decision needs to be taken about medium of instruction in primary schools.
- 2.4 Keeping in view the location of schools in difficult terrain situations, development of distance education/self-learning packages may prove useful both for teachers and students.

## 3. Teacher Training and Teaching-learning Process

- 3.1 Keeping in view the large number of untrained teachers, a well-thought policy of pre-service and in-service training of teachers may be prepared and implemented.
- 3.2 The DIEP has so far been established in only one DPEP district. Efforts may be made to hasten the establishment of DIETs in the DPEP districts. In the meanwhile, some alternative arrangements for in-service training of teachers may be made.
- 3.3 For providing education in difficult contexts in hilly terrains, the concept of 'mobile teachers' may be operationalised. These teachers may organise classes in community with variable number of children as per situations.
- 3.4 The new untrained teachers should be provided 'induction training' at the earliest.
- 3.5 At present, in-service training to teachers is provided after about 8 to 10 years. The in-service training should be periodic and frequent, say, after a period of 2-3 years. Keeping in view the difficult terrain situation, the matter regarding 'school-based in-service training' needs serious consideration.
- 3.6 Appropriate strategy for training of non-tribal teachers in tribal areas may be prepared and implemented.
- 3.7 In several schools of Assam, large size classrooms have been constructed in which students of more than one grade sit in

groups. The plus points and minus points of this system may be studied.

## 4. Monitoring and Supervision

- 4.1 Keeping in view the difficult terrain situation, internal supervision at school-cluster level may be a viable proposition for school effectiveness. Since the schools are very much scattered in several regions, the number of schools in school complexes may not be kept uniform.

## 5. School Effectiveness and School Management

- 5.1 A 'framework' for school effectiveness may be prepared.
- 5.2 In the context of 'school-cluster-based management' the matter regarding organisation of short-period 'children's camps' for the children of both formal and non-formal streams may be considered. This strategy will, hopefully, be instructional for increasing achievement of children in both scholastic and non-scholastic areas.

## 6. Framework for Action

- 6.1 According to a suggestion, the problems and issues may be classified in the following areas :
  - i. *Human Resource Development*  
This may include capacity building, community mobilisation, etc. The DIETs may *inter alia* be made functional and effective for this task.
  - ii. *Education in Difficult Contexts*  
In some areas, it may not be viable to set up schools. Innovative strategies for education of children living in such areas need to be evolved and implemented. A suggestion was given to appoint 'para teachers' in such areas.
  - iii. Convergence of child development services.
- 6.2 Another suggestion relates to preparation of 'matrix' of packages of communications. The matrix may include the following three major aspects :
  - i. *Policy Issues*  
There are certain 'high policy issues' in the context of school education in Assam which *inter alia* include (a) medium of instruction and (b) appointment and

training of teachers. The state education secretary may move a 'cabinet note' in this regard for consideration by the government.

ii. *Programme Issues*

The issues of following types may be considered at state/district/sub-district levels.

- a. Development of single set of textbooks versus multiple sets of textbooks.
- b. Development of region-specific other teaching-learning materials (work-books, teachers' guides, etc).
- c. Supplemental teaching-learning strategies like 'radio mode' of teaching languages.
- d. Core package for the state as a whole.
- e. Non-detention policy and Comprehensive Continuous Evaluation (CCE).

iii. *Administrative Issues*

These include matters related to administrative deficiencies like delay in supply of Operation Blackboard (OB) material to schools. In this context, certain administrative and procedural bottlenecks need to be removed.

The above-mentioned 'matrix' prepared by educational planners and administrators may list :

- Problems
- Levels of problems
- What is to be done and how?

Suitable communications regarding the issues listed in the matrix may be sent to all concerned right from the top to the bottom by the state level education authorities.

- 6.3 Matter related to DPEP 'system' or 'framework' should be considered and decided speedily.
- 6.4 In order to provide responses to certain challenges of education, some small-scale projects or studies may be undertaken and their feedback should be fed to the system as early as possible for taking policy decisions and follow-up action.

## KERALA

### 1. *Planning and Monitoring*

1.1 The observation and suggestions given in

the 'sharing workshops' are significant and due note may be taken. Some findings of the study need to be verified further.

- 1.2 Certain significant issues about teachers, textbooks and languages need *action at the state level*. This action may precede the DPEP or these steps may be undertaken simultaneously.
- 1.3 Certain implications mentioned in the tribal studies seem to be over simplifications. The educational problem of tribals could be studied thoroughly through house-to-house survey and interaction. Some demographic changes in the tribal concentration district of Wayanad have occurred due to inward non-tribal migration from other places. This fact may also be kept in view while planning educational programmes.
- 1.4 Keeping in view that most of the budget allocation is consumed on the salary of teachers, the State Education Department generally gets meagre budget allocation for academic programmes. Appropriate steps may be taken to enhance budget allocation for academic programmes.
- 1.5 Primary education is, by and large, not related to life skills and quality of life. Steps may be taken to do the needful.
- 1.6 Policy decisions at the state level may have to be taken for implementation of certain academic suggestions.
- 1.7 The overcrowding of classrooms is an administrative question which needs to be tackled with ingenuity.
- 1.8 NGOs may also be involved in the DPEP affairs.
- 1.9 The Director, NCERT informed that the NCERT would play catalytic role vis-a-vis other institutions in the DPEP network.
- 1.10 Research studies under the DPEP may be identified and conducted/farmed out.
- 1.11 Innovative ways of monitoring of educational programmes of schools need to be evolved and implemented. One of the seminar's suggestions was that the administrative duty of the headmaster of the school should be reduced and he/she may assume more responsibilities related to school effectiveness.
- 1.12 The parent-teacher associations need to be strengthened. Keeping in view the fact

that, in quite a large number of cases fathers of school-going children are doing jobs elsewhere, mother-teacher associations may prove more effective.

## 2. Development of Materials

- 2.1 Several textbooks and teachers' guides based on the MLLs have been prepared and tried out. The Mahatma Gandhi University has started B.Ed. course for preparation of primary school stage teachers. The MLLs are also given due place in teacher training programmes also.
- 2.2 A separate organisation has been suggested for preparation and production of textbooks. In this context, it was clarified that the status of the SIE was being raised to SCERT. The State Council would be in a position to manage efficiently the textbook development programme.

## 3. Teachers' Training

- 3.1 A perspective plan of in-service training of teachers may be prepared. The SCERT may assume major responsibility of planning and implementation of in-service teachers' training programmes.
- 3.2 The teaching-learning strategies may be child-centred at the primary school stage.
- 3.3 The teachers' training curriculum needs to be reviewed.
- 3.4 One of the reasons of low attainment at primary school stage could be that the

teachers might not be properly exposed to the OB materials. Appropriate steps for training of teachers may be initiated.

## 4. Teaching-learning Strategies

- 4.1 In the wake of the non-detention policy in Kerala, the teaching-learning strategies at primary stage need to be planned and implemented with ingenuity. Since the children learn at different paces, there is a need to tackle teaching-learning strategies effectively.
- 4.2 In the context of the teaching assignments to school teachers, the issue of one teacher teaching all subjects in a class may *inter alia* be considered from psycho-pedagogic considerations.
- 4.3 The study observed that there was no problem of medium of instruction as people in all areas speak Malayalam. It was, however, pointed out that there were different dialects in certain areas in Kerala. As such, the issue of medium of instruction or teaching-learning strategies needs to be considered from this aspect also.
- 4.4 The state is taking steps to harmonise the 'madarsa education' and the 'formal education'. The response from the madarsa authorities in this regard is encouraging. The madarsas receiving assistance from the government now generally teach formal school subjects also.

## The Wrap-up



The wrap-up session was presided over by Dr (Smt.) Chitra Naik, Member, Planning Commission, Government of India. Extending a warm welcome to her on behalf of the participants and on his own behalf, Prof. A. K. Sharma, Director, NCERT, briefly apprised Dr Naik of the outcomes of the seminar. Prof. Sharma informed that the discussion on baseline studies proved helpful for awareness generation at various levels. The studies have brought before us several areas of concerns that need urgent attention particularly in the context of achieving the goal of Universalisation of Elementary Education (UEE). The findings of the studies were earlier shared in the concerned District Primary Education Programme (DPEP) states and, in the present seminar, before a wide range of professionals. As a result of such interaction, certain issues that need suitable interventions have been identified. The DPEP work is being shared by various institutions/organisations at the national, state, district and grass roots levels. It is encouraging that several institutions/organisations at various levels have come forward to share the DPEP responsibilities.

Prof. Sharma informed that as a result of the DPEP studies, some basic policy issues like medium of instruction and centralisation versus decentralisation in the context of preparation and production of instructional materials have surfaced. Such issues are required to be tackled with great ingenuity. There is a need to bridge the gap between practice and research. A very significant contribution of the DPEP is that it has provided a forum for educational planners, administrators, teacher educators, teachers, parents and community to meet and exchange ideas and information conducive for UEE.

Dr R. V. Vaidyanatha Ayyar suggested that there should be appropriate fusion of practice and research at various levels under the DPEP. In the interest of the programme certain vital policy decisions would have to be taken at the national, state and district levels through dialectical dialogues. Dr. Ayyar underlined the need of preparation Plans of Action at various levels for transplanting the ideas into action points. For this purpose, the state DPEP personnel may remain in constant touch with the national level resource institutions/organisations.

In her address, Dr Naik appreciated the District Primary Education Programme and felt that it would prove to be a significant milestone for edu-

cational development in particular and the national development in general. She appreciated that the Ministry of Human Resource Development (MHRD) has now acknowledged that there was a need of diversity of action for achieving the goals of UEE. The school learning system transplanted in the community should be seen in the context of the phenomenon that every organism grows in relation to its environment (physical, cultural, geographical and social). Therefore, there is a need to study the 'ecology of education' seriously. While agreeing that the issue of language/medium of instruction was very crucial in the education system, Dr Chitra Naik suggested the need for appropriate decentralised academic and pedagogic efforts in a country like India where there are a large number of languages and ethnic groups. Citing an example that the same word is pronounced differently in the same region/state, she pointed out that the complexity of teaching languages could be easily visualised. Realising that there is no single methodology of teaching languages, the problem of language teaching needs serious research studies and policy discussions. Dr Chitra Naik also emphasised the need to look into the issue of educational vocabulary with a view to evolving appropriate vocabulary relevant to our needs. She wondered

whether there was any equivalent word of 'curriculum transaction' in use in India. Would 'mutual communication' be a better substitute for the word 'transaction'?

For the success of massive District Primary Education Programme (DPEP), cooperation and collaboration of different sectors in the field of education is needed. Dr Chitra Naik felt that a significant challenge before us was how we could harmoniously bring together the educational institutions/organisations and educational personnel working at various levels for achieving the goals in viable and effective manner. We have to change the climate of tension or rivalries among the organisations/personnel and should strive to appreciate each other's contribution. Generally, we find it difficult to bring about changes in the existing structures of the organisations easily. However, we could endeavour to change or adjust the roles of personnel for the benefit of the cause by soliciting their cooperation. In this process, gradually the structures could also be suitably changed or adjusted for mutual benefits. In the context of the DPEP, we may consider whether certain changes in roles of the functionaries are needed for developing viable and effective multi-channel, multi-faceted and diversified system.



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## APPENDIX V

## RAPPORTEURS

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V. P. Garg	Anupam Ahuja
S. K. Yadav	S. Nagpal
K. M. Gupta	M. P. Rastogi
N. Sabharwal	K. K. Vashishta
R. S. Saxena	I. K. Bansal
Neerja Shukla	V. P. Gupta

## APPENDIX VI

## SUPPORT STAFF

Dinesh Thapliyal	Rattan Singh
R. L. Lingwal	Harjinder Singh
Sushma Thukral	P. Purushotham
Sneh Kumari	Nek Ram
K. Ratna Sarasan	Bishan Nath
P. S. Parcha	Sunil Kumar
Man Mohan Singh	

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# Learning Achievement of Primary School Children in Reading and Mathematics

N. K. JANGIRA



## Introduction

Schools are places where children come to learn and achieve. Primary schools assume special significance, since these lay foundation for subsequent learning. Study of achievement and its determinants has, therefore, interested educational researchers all the world over. In India, 227 studies were reported in the Fourth Survey of Research in Education, 1983-88 (Büch, 1991). Few studies addressed the primary stage. Most of these (83 per cent) were doctoral studies. Almost all were small-scale studies covering limited geographical areas. Only elementary statistics guided the analysis. The generalisability of the findings is low. Preliminary indications are that situation has not changed much in the Fifth Survey of Educational Research which has identified 136 studies (Dave and Murthy, 1993).

The two national surveys of achievement of primary school children conducted by the National Council of Educational Research and Training (NCERT) stand out. The first survey of achievement of primary school children in mathematics was conducted in 1965-66 (Kulkarni, 1970). The second national study on attainment of primary school children in language and mathematics was conducted in 1990 (Shukla, *et al.*, in press). Both surveys indicated low levels of learning achievement.

In the post-National Policy on Education (NPE) and Jomtien EFA conference period investments in primary education picked up considerably through national commitment complemented by international community support to realise the goal of quality primary education for all children (MHRD, 1994). It requires rational investment decisions, research-based interventions and continuous monitoring of progress. The use of feedback by management at all levels and practitioners at grass roots level to carry out mid-course correction is indispensable. It will ensure better returns in terms of student achievement from investments.

The Baseline Assessment Study (BAS) was conducted in 46 districts in eight states and is in progress in another eight districts of Uttar Pradesh. Table 1 indicates the districts and states covered by different organisations. It is also being planned for the seven Bihar Education Project districts with technical assistance from the NCERT.

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- \* The author is thankful to Dr N.V. Varghese and Dr Y.P. Aggarwal of NIEPA, and Ms. Sajita Bashir (formerly with the World Bank) for co-designing the study; principal and associate coordinators for making the draft report available for the preparation of the synthesis paper; and the New Concept Consultancy for sharing the material prepared for the baseline assessment study in Uttar Pradesh and training master trainers.
- \*\* The study in the states of Assam, Haryana, Karnataka, Kerala, Maharashtra and Tamil Nadu was funded by the World Bank; and in the states of Madhya Pradesh and Orissa by UNICEF.

TABLE 1  
Agencies Conducting BAS in DPEP States

State	Agency	No. of Districts
Assam	NCERT	4
Haryana	NCERT	4
Madhya Pradesh	NCERT	19
Maharashtra	NCERT	3+2*
Orissa	NCERT	4
Sub-Total	NCERT	36
Kerala	NIEPA	3
Karnataka	NIEPA	4
Sub-Total	NIEPA	7
Tamil Nadu	New Concept Consultancy	3
Total		46

\* BAS in two earthquake hit districts of Latur and Osmanabad is in progress

### Objectives

The major objective of BAS was to assess learning achievement of students approaching the end of the primary school cycle Class IV or V in reading and mathematics based on Class III or IV curriculum. Reading assessment was confined to word meaning and comprehension and did not include mechanics of reading. The study also assessed a number of variables relating to students, school and home to explain differences in learning achievement. Class II students were assessed for simple literacy and numeracy skills to study the level of learning in the beginning of the primary school cycle. Drop-outs were assessed for simple literacy and numeracy skills to study the level of retention of these skills. Micro-analysis to diagnose areas of difficulty was the concomitant outcome. The data would also be used to identify factors contributing to school effectiveness.

### The Conceptual Frame

The conceptual frame has been visualised in Fig. 1 on page 61.

The community environment and the policy inform school learning. The policy is formulated at the national level, cultured with state-specific adaptations (wherever necessary), and implemented at the district and the school levels. Policy remaining the same, perceptions and implementation vary at the district and school levels. Learning in school is the outcome of interactive effects of child, school and home. Guided by filtered policy formulations, the schooling process results in learning achievement in cognitive and non-cognitive areas.

This paper covers profile of learning achievement of primary school students in reading and mathematics

at the end of the primary schooling cycle. It is Class V in the states of Haryana, Madhya Pradesh, Orissa and Tamil Nadu; and Class IV in Assam, Kerala, Karnataka and Maharashtra. Learning achievement in literacy and numeracy in the beginning of the primary cycle is considered as a school variable to assess achievement at the end of the primary schooling cycle. The student characteristics and learning activities in the school and home support constitute individual explanatory variables. The school variables affecting the class as a whole (school size, class size, classroom teaching activities, etc.) were treated as group explanatory variables. The policy is viewed as manifested in the implementation at the school level.

The potential explanatory variables for learning achievement study are summarised in the following box.

**INDIVIDUAL :** Age, sex, socio-cultural groups (SC, ST, OBC), pre-school experience, family size, parents' educational and vocational status, help to do home-work, educational and occupational aspirations, opportunity to read aloud, correction of home-work, feedback on tests, access to reading material other than the textbook, grade repetition, attendance, medium of instruction and language spoken at home, difficulty in understanding teachers' language and special help from the teacher.

**GROUP :** Age of the school, school structure (primary only or primary section in upper primary or secondary school), school size, class size, pupil-teacher ratio, incentive scheme, coverage by OB scheme, teacher sex, socio-cultural group of teachers, education and training of teachers, in-service training, availability of teaching aids, teacher expectations, giving home-work, giving tests, supervision, help from head teacher, help from block and district education officer, staff meetings, teacher coming to the class.

### Design and Procedure

The design of BAS evolved out of the four studies conducted during the 1990s by Shukla, Garg, Jain, Arora and Rajput (in press); Govinda and Varghese (1994); Sajitha (1992); and Sajitha and Ramakrishnan (1993). Multipurpose survey design was used. The procedure for sampling, design and selection of tools, data collection and management, and statistical analysis are described in this section.

### Sampling

Multistage sampling procedure was used in BAS. At the first stage about 20 per cent rural blocks and urban areas identified in 1991 Census were selected randomly from the DPEP target districts. Wherever tribal block did not appear in random selection one tribal block was added to the sample. At the second stage, 35-45 primary

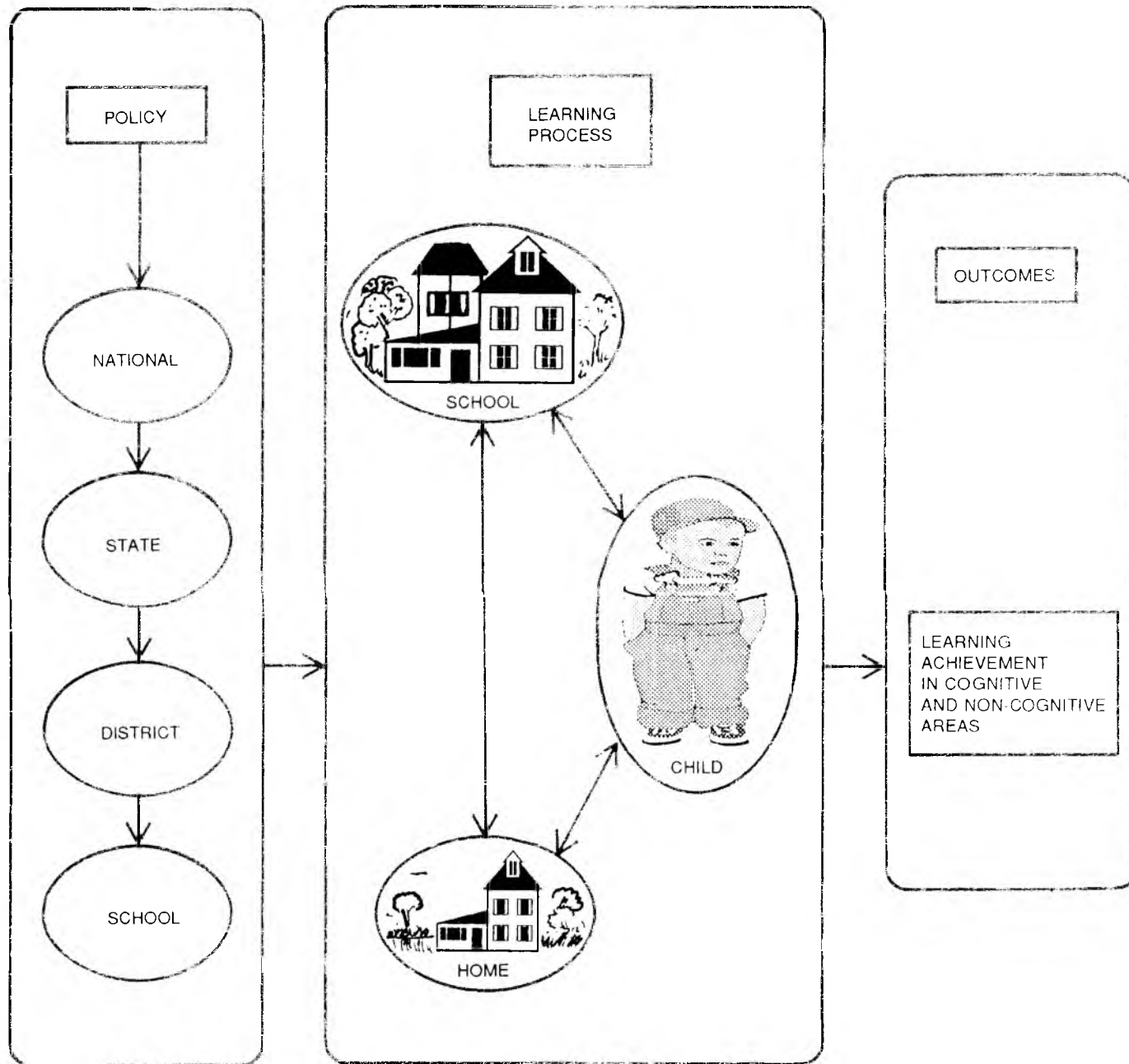


Fig. 1 Conceptual Framework for Learning in School

schools were selected randomly. Rural and urban population proportion was the basis for allocating schools to rural and urban strata. The total number of schools in sampled rural block and urban location was the basis for deciding the number of schools to be selected from each site.

At the third stage students and teachers were selected. Up to 30 all Class IV or V students were selected and where the number exceeded, 30 students were selected with random start. Similarly, up to 20 all Class

II students were selected and where the number exceeded, 20 students were selected with random start. Up to 5 identified drop-out students, all were selected and if the number exceeded, 5 students were selected randomly. Up to 5 teachers including the head teacher all were selected and if the number exceeded, 5 were selected randomly.

In all, 106 blocks, 91 urban areas, 1817 schools, 24,504 Class IV or V students, 23,056 Class II students, 3117 drop-outs, and 5114 teachers were selected for BAS.

TABLE 2  
Sample of Schools, Students and Teachers Covered in BAS

State	Schools	Class V/IV	Class II	Drop-outs	Teachers
Haryana	145	2516 (57%)	2462 (84%)	329 (45.38)	548 (75.58)
Madhya Pradesh	802	8771 (36%)	8331 (52%)	1671 (41.67)	1874 (46.73)
Orissa	165	1366 (27%)	1704 (51%)	346 (41.94)	528 (64.00)
Tamil Nadu	120	2345 (65%)	1856 (78%)	132 (22.00)	357 (59.5)
Assam	161	1710 (35%)	1981 (61%)	97 (12.04)	452 (56.15)
Karnataka	176	2561 (59%)	2469 (70%)	389 (43.95)	438 (49.49)
Kerala	113	3089 (91%)	2231 (98%)	Nil (00.00)	508 (89.91)
Maharashtra	135	2146 (52%)	2022 (74%)	153 (22.67)	409 (60.59)
Total	1817	24504	23056	3117	5114

The state-wise sample of students and teachers is given in Table 2. The percentage of students in the sample was much less than expected in all the states except Kerala. The enrolment and attendance in primary schools particularly in rural areas, was lower than expected. In the states of Assam, Madhya Pradesh and Orissa, the sample of Class IV or V students was less than 50 per cent of the expected. It was the lowest in Orissa (27 per cent) and the highest in Kerala (91 per cent); followed by Tamil Nadu (65 per cent), Karnataka (59 per cent), Haryana (57 per cent) and Maharashtra (52 per cent). In Class II the situation was a little better.

#### *Instruments for Assessment of Learning*

Standardised tests were used to assess learning achievement in mathematics and reading in Class V in the states of Haryana, Madhya Pradesh, Orissa and Tamil Nadu; and Class IV in the states of Assam, Karnataka, Kerala and Maharashtra. Class V tests, developed by NCERT for the countrywide survey of attainment of primary school children in 1991, are based on the common curriculum of Class IV prevalent in different states. Class IV tests based on Class III curriculum in mathematics (Jangira, 1993a) and reading (Jangira, 1993 b) were developed by NCERT for BAS in 1993. Table 3 indicates composition of the tests of different levels.

For Class II simple literacy and numeracy tests de-

veloped by NCERT for the Primary Education Curriculum Renewal (PECR) project were used. For drop-outs simple literacy and numeracy tests were adapted from the tests used in the World Bank research projects in other countries.

#### *Instruments for Context and Process*

*Student Present Schedule (SPS)*: Class V students who were administered mathematics and reading tests, were interviewed using this schedule. It comprised items for collecting information on the background variables like pre-schooling, attendance, perceptions about teachers and teaching, availability of learning materials, school-related activities at home, nutrition, etc.

*Drop-out Student Schedule (DS)*: Beside background variables, it covered reasons for leaving the school and the work in which they were engaged at the time of the study.

*Teacher Schedule (TS)*: This schedule was used for interviewing teachers and head teachers. Information regarding teacher characteristics, qualifications, training and experience, availability of teaching material and aids, teaching activities and supervision were included in this study.

*School Record Schedule (SR)*: This schedule covered items of information relating to physical facilities, teaching materials, enrolment, attendance, drop-out, multi-grade teaching and school management.

TABLE 3  
Composition of the Tests for Learning Achievement

<i>Class</i>	<i>Subject</i>	<i>Content Areas</i>	<i>No. of Items</i>
V	Mathematics	Fundamental operations, unitary method, multiples fraction, decimal, time; weights and measures and geometry	40
	Reading	Word Meaning Comprehension	40 44
IV	Mathematics	Number reading/recognition, place value, addition and subtraction, multiplication, division, weights and measures, time and period, fraction, geometry/shapes	40
	Reading	Word Meaning Comprehension	20 24
II	Numeracy	Number Recognition Addition and Subtraction	6 8
	Literacy	Letter Reading Word Reading	10
Drop-outs	Numeracy	For fundamental operations	8
	Literacy	Factual questions based on 5 statements	5

The tests and interview schedules were translated, printed and supplied to all PIs by NCERT. The New Concept translated and printed the tests in Tamil from the English version provided by NCERT.

#### *Field Notes*

For each school a separate set of field notes was completed by the team of investigators. It contained the method of selecting Class V or IV, and Class II students, drop-outs and teachers. Field notes also documented investigator's observations on unique aspects and provided quality information.

#### *Data Collection and Management*

Data were collected by four teams of two investigators each, and one supervisor constituted for each of the districts. These teams received 10-day intensive training in respective states. They were provided training by master trainers trained at NCERT. The training covered the purpose, design and methodology of BAS; use of each of the instruments; the procedure of drawing samples of students and teachers in schools; field experience using instruments and interview; and deployment plans. The training was conducted in participatory mode with individual and small group work, discussion in large groups, practice in the use of techniques through role play and in simulated situations, and practice in the field followed by discussion. The field training was organised in the same way as the teams were to collect data for the study.

Great care was taken for providing training in test administration. During the training, sufficient common

examples were created to provide experience to children in taking the test. The procedure was explained with examples. It was followed by children doing examples on the blackboard ensuring demonstrated learning of the correct procedure. The teachers continued in the class with the investigators up to the experiences being provided to the children. After that the teachers left the class. Thus testing was not influenced by the teachers.

The data were collected from each school over a period of three days. At the end of the day the data were scrutinised in the school. The tests and schedules were scrutinised at the district level. It was scrutinised at the state or the central level before statistical analysis.

Descriptive statistics was used for preliminary analysis. Simple regression analysis was carried out on the data of one state to explore the line of final multivariate analysis. Analysis using multilevel modelling has been planned to further refine the results.

#### *Results*

The results of descriptive analysis in respect of learning achievement are presented in this section. Results of multivariate analysis using multilevel modelling are presented in a separate paper. Both should be considered for intervention design in DPEP.

A note of caution is not out of place here. The BAS was confined to DPEP districts which have been selected on the criteria of low levels of female literacy except in Kerala. These are educationally backward districts. Obviously, sample of districts is purposive. Within dis-

districts random sampling procedures have been adopted. There is a limitation of generalising results to states and the country. The findings, therefore, are indicative of the trends. The readers should view findings against this background.

#### *Class V or IV Student Characteristics*

Student characteristics in this section cover gender and socio-cultural groups represented in the sample, parents' education and occupational level, pre-school experience, medium of instruction and mother tongue, educational and occupational aspirations, access to reading material, participation in teaching activities, etc.

*Gender Composition:* The gender composition in the sample of Class V or IV students was almost equal in Kerala and proportionate to girls' participation in Tamil Nadu, Maharashtra and Orissa. In other states, it varied from district to district. Some districts had more girls than boys. For example, the percentage of girls in the sample in Morigaon in Assam was more than 50. Same was the situation in Sirsa in Haryana and Betul in Madhya Pradesh. These states have some schools exclusively for girls and some such schools formed a part of the randomly selected sample. Sampling correction was not applied because preliminary analysis did not indicate difference in the achievement of boys and girls in most of the districts.

*Socio-cultural Groups:* The socio-cultural groups covered in BAS were scheduled castes (SC), scheduled tribes (ST) and other backward classes (OBC). Table 4 gives minimum and maximum percentage of students in each of these groups in the sample.

The variations reflect demographic pattern in the states and districts. For example, Karbi-Anglong district in Assam is predominantly tribal while some districts in Orissa and Madhya Pradesh have one-third tribal population. Some districts had nearly one-third SC population. The variations are also partly influenced by the participation rates and attendance of students on the

days of the data collection. The districts with minimum percentage were below population proportion and maximum more than population proportion in respective districts. For example, percentage of SC students was higher (31.9) in Sirsa district in Haryana. Is it due to the migratory agriculture labour or inflation to avail SC benefits? The question needs further probing. Similar situation prevailed in some districts in Madhya Pradesh. Reference data were not available for comparing OBC with Census population.

*Education of Parents :* The districts were selected on the basis of low female literacy rates in DPEP except in Kerala where it was much higher than the national average. Figs. 2 and 3 indicate minimum and maximum level of percentage of illiteracy and the level of primary education in different states.

A few trends are quite conspicuous. The variations among the states and within states among the districts and between males and females are high in the education levels of the parents of sampled Class V or IV students. The district with the highest illiteracy level of fathers (50.5 per cent) was Kaithal in Haryana, followed by Gajapati district in Orissa (40.5 per cent) and Thiruvannamalai in Tamil Nadu (39.9 per cent). About one-third of the fathers in other districts except in Kerala were illiterate. The situation in respect of mothers was alarming. The district with the highest illiterate mothers was Kaithal in Haryana (84.5 per cent), closely followed by Sidhi in Madhya Pradesh (79.9 per cent). Over half of the mothers in Karbi-Anglong in Assam, Nanded in Maharashtra, Dharmapuri in Tamil Nadu and Kalahandi in Orissa were illiterate. These figures are higher than the official literacy rates in these districts. Discounting educated parents placing the children in fee-charging private schools (even in rural areas in Haryana and Tamil Nadu, the illiteracy level among parents, especially mothers, was very high. Similar trend was discernible in respect of primary education.

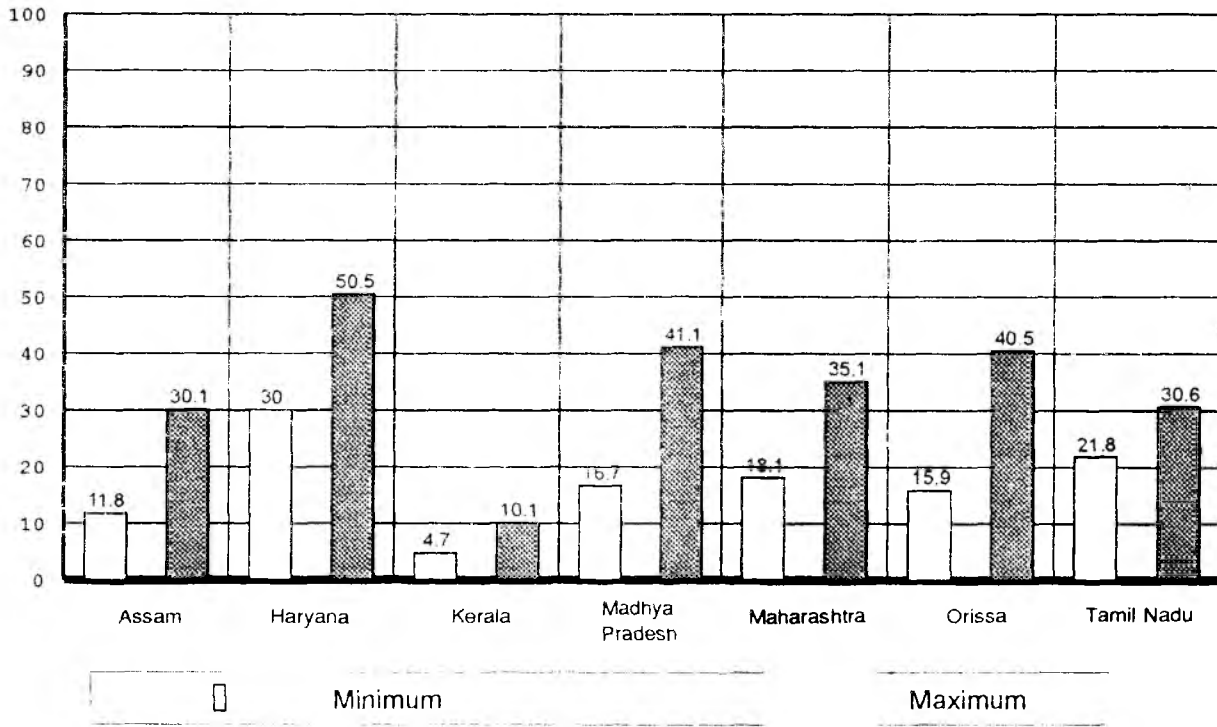
*Pre-school Experience :* The pre-school experience covered

TABLE 4  
Socio-cultural Groups of Class V or IV Students

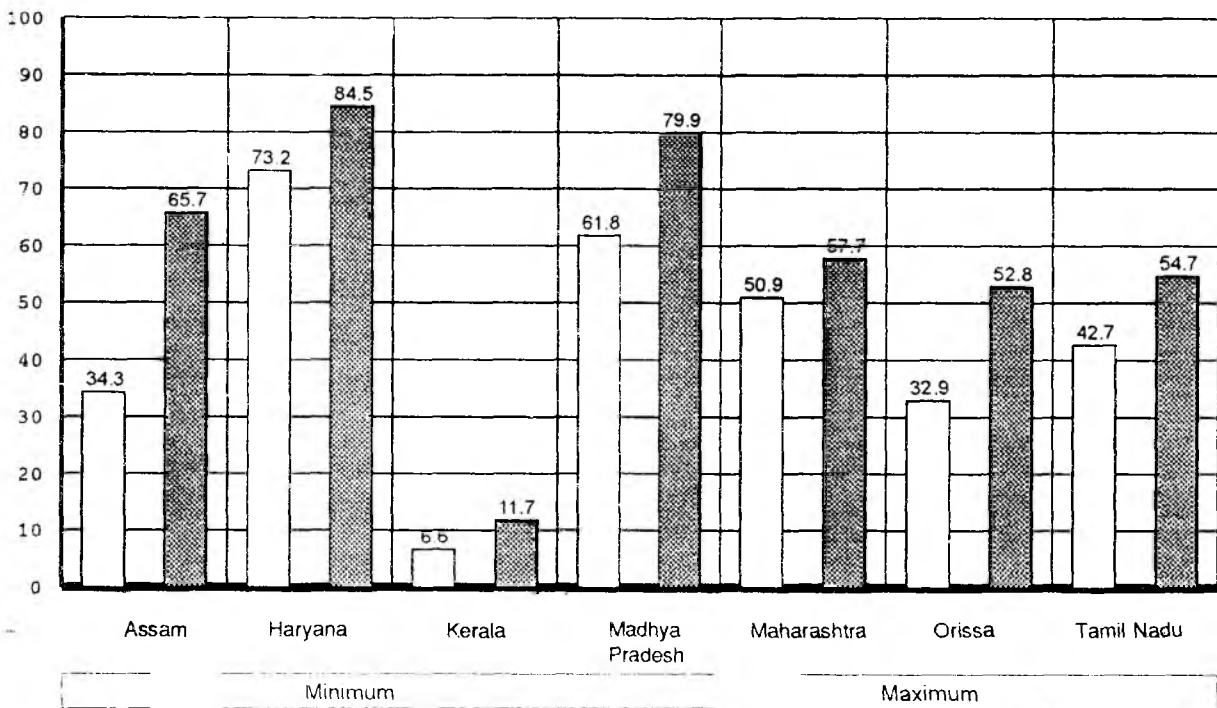
State	SC		ST		OBC	
	Min.	Max.	Min.	Max.	Min.	Max.
Haryana	14.8	31.9	1.7	3.2	16	24.9
Madhya Pradesh	6.5	34.1	1.5	35.5	32.8	73.4
Orissa	5.8	27.1	10.1	35.6	18.4	29.5
Tamil Nadu	12	26.8	2.7	8.1	68.9	84.2
Assam	3.2	7.8	4.1	52.9	2.3	29.7
Karnataka	NA	NA	NA	NA	NA	NA
Kerala	3.5	7.2	0.4	17.3	49.2	87.6
Maharashtra	12.7	22.9	2.8	8.5	8.4	15.7



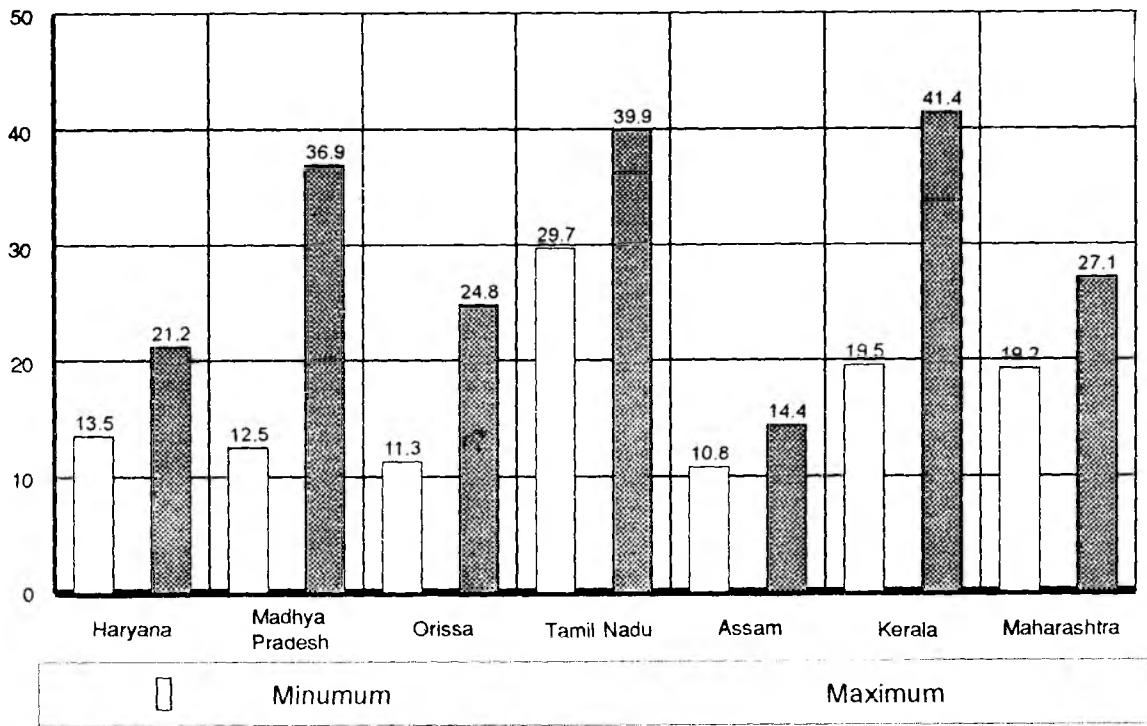
**Illiterate Parent (Father)**



**Illiterate Parent (Mother)**



**Parent with Primary Education(Father)**



**Parent with Primary Education(Mother)**

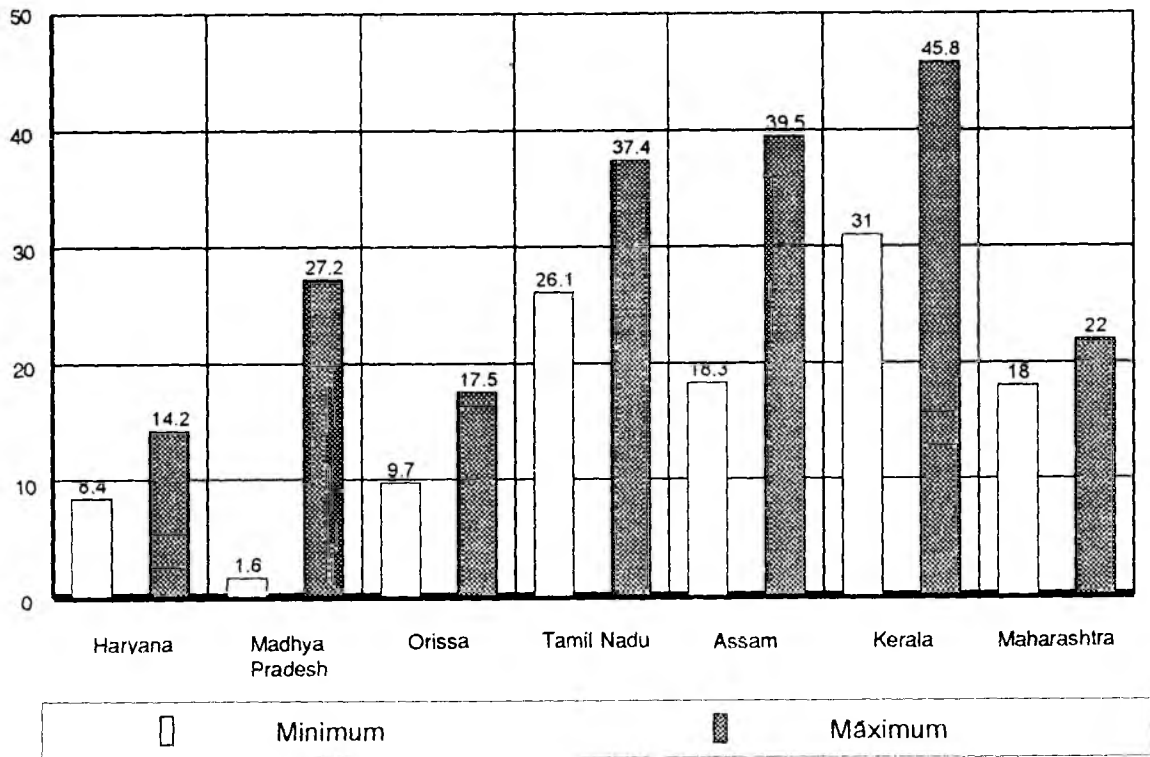


Fig. 3

formal pre-schools (nursery or kindergarten) or *anganwadis* under Integrated Child Development Scheme (ICDS) and *balwadis* under the Central Social Welfare Board. The variation across and within the states was very high. The coverage was reported to be over 80 per-cent in Kerala by either one or the other provision. In Tamil Nadu the coverage ranged from nearly one-third in Dharmapuri to half in Thiruvannamalai. In Maharashtra about one-third students were covered. It was very low in Darrang in Assam (1.4 per cent), Kaithal in Haryana (0.4 per cent), Rayagada in Orissa (0.3 per cent), and no coverage in Tikamgarh district in Madhya Pradesh. Even the maximum coverage was low in Raigarh district in Madhya Pradesh, Sirsa district in Haryana and Gajapati district in Orissa.

**Nutrition and Health :** In most of the states students reported availability of two meals a day. About a quarter of students did not take the third meal. In Assam in Dhubri district a quarter of students reported not taking meal (breakfast) regularly before coming to school. Some states had school health check-up provision. For example, in Haryana more than four-fifths of the schools were covered by school health scheme or annual medical check-up. The percentage of schools availing immunisation facilities varies from a low of 15 to about 70 in the sampled districts. The range was between 40 in Parbani to 86 per cent in Aurangabad in Maharashtra.

**Parental Help :** Parental help for home-work available to students ranged from 30-60 per cent. Literate parents provided more support. In Haryana, Madhya Pradesh, Orissa and Assam, more than half of the students reported help from brothers and sisters. It is natural because of the high illiteracy of parents in these states. It may turn out to be a significant explanatory variable.

**Repetition :** Despite the policy of non-detention of students in primary classes, particularly in the first two classes, students reported repetition. Table 5 gives dis-

tricts with maximum and minimum repetition along with the class with the highest repetition. Nearly one-third of the students repeated class atleast once. The repetitions reported by Class V or IV students was the highest in Rewa district of Madhya Pradesh (60.3 per cent), closely followed by Karbi-Anglong in Assam (59.8 per cent) and Kalahandi district in Orissa (51.3 per cent). The highest repetition was reported in Class III in the states except in Tamil Nadu, where it was 11 per cent in Class IV. Students repeated classes more than once too. About 10-33 per cent students in different states failed more than once. It reflects on the quality of primary education adversely.

**Availability of Textbooks and Other Reading Material :** The textbooks were available to over 95 per cent of the students in most of the states. The textbooks were verified also at the time of visit to schools for data collection. The timely availability of the textbooks was, however, raised in many places in Assam, Madhya Pradesh and Orissa. Though textbooks were supplied free of cost in Assam, students reported teachers charging some amount (Rs 2 per student) for contingency expenses. The contingency expenses from the department reached late. What happens to this contingency? Is the amount returned to the students? Availability of reading material other than the textbooks was very low in Madhya Pradesh and Orissa. About 40 per cent students in Kerala, and over one-third students in Haryana and Assam reported access to reading material other than textbook. In Haryana TV-watching at home was also much higher than radio-listening.

**Educational Aspirations:** The educational aspirations of students were found to be high in most of the states. In Maharashtra about 90 per cent of the students desired to study up to matriculation. In Assam, Haryana, Orissa and Tamil Nadu more than two-third students desired to study up to this level. The educational aspirations were low in Madhya Pradesh where only one-third students desired to study up to matriculation

TABLE 5  
Class V or IV Students Repeating Classes

State	Total		Class with maximum repetition		Failed more than once
	Min.	Max.	Class	Percentage	
Haryana	32.5	43.8	III	14.7	15.1
Assam	35.3	59.8	III	17.3	9.8
Orissa	28.4	51.3	III	16.5	18.43
Tamil Nadu	NA	NA	IV	11	NA
Karnataka	NA	NA	NA	NA	NA
Kerala	1.2	7.9	III	7.9	NA
Madhya Pradesh	13.3	60.3	III	24.2	33
Maharashtra	28.7	31.3	III	14.6	28.98

in the district of Chhatterpur, the highest being in Guna (38.47 per cent). Only 2-5 per cent students aspired for graduation and beyond. The educational aspiration of girls in several districts were lower than that of boys indicating low status accorded to the education of girls.

*Teacher Quality* : Teacher characteristics include gender, age composition, education and training and teaching context. More than half of the sampled teachers were females in Kerala, Jind and Kaithal districts in Haryana, and Aurangabad district in Maharashtra. In other districts the percentage of female teachers was about a quarter of the total teachers. Female representation was the lowest in Assam (23 per cent), followed by Madhya Pradesh (24.1 per cent). Inter-district variations were marked. The trend was also confirmed in the teacher study (Jangira, Singh and Yadav, 1994). Similarly, representation of SC and ST teachers was lower than their population proportion. Only in Karbi-Anglong in Assam tribal teachers were more than the population proportion in the district. The implication is to prepare more female, SC and ST teachers to improve availability for recruitment.

*Education and Training* : Minimum of ten years of schooling is the requirement in most of the states. Some states like Haryana and Tamil Nadu have raised it to 12 years. But still some districts had teachers with less than 10 years of schooling. The highest number was in Karbi-Anglong in Assam (67.9 per cent), followed by Gajapati in Orissa (21.95 per cent) and Betul in Madhya Pradesh (21.8 per cent). Districts in all the states except Haryana, Kerala and Tamil Nadu have some teachers in this category.

Over 95 per cent teachers were trained in Haryana and Tamil Nadu. Maximum number of teachers were untrained in Karbi-Anglong in Assam (67.1 per cent), closely followed by Dhar in Madhya Pradesh (58.5 per cent), and Phulbani in Orissa (41.8 per cent). Districts in Kerala had about 5-10 per cent untrained teachers. The percentage of untrained teachers was high in Assam, Madhya Pradesh and Orissa. In the districts covered by BAS it was higher than the state average of the untrained teachers.

More than half of the teachers except in Kerala did not receive in-service training during the last five years in all the four districts of Assam, Rajnandgaon district in Madhya Pradesh and Rayagada district in Orissa. More than two-third teachers desired in-service training in all the states. In Satna district in Madhya Pradesh the desire for training was very low (17.7 per cent). Teaching methodology, presenting and communicating subject-matter, multigrade teaching (except in Kerala), and National Policy on Education were the areas preferred for in-service training. Teachers in Kerala and Haryana also wanted training in the content of school subjects.

Teachers do face difficulty in mathematics particularly. In a recent study Class V tests in reading and

mathematics were administered to 42 teachers in one of the states during the data collection for BAS. The mean score in mathematics was 30.55 out of the maximum score of 40 and 75.74 in reading out of the maximum score of 86. Most of the teachers (83.3 per cent) could not do correctly questions on LCM and place value (55 per cent). In language comprehension 64 per cent of the teachers could not give correct title to a paragraph (Gupta, MS). Majority of teachers except in Maharashtra desired training in the school or the school complex. Both have implication for in-service training design. The areas and schools in which teachers need subject-matter competencies along with pedagogical competencies will have to be identified. The process of training needs assessment (TNA) should be established in districts. School-based and teacher-based training programmes will have to be designed.

*Availability of Teaching Material*: Most of the teachers in all the districts had blackboards, but in some districts chalks were not available to a quarter of the teachers. It implies that blackboards in these schools remained unused. In fact, in schools with multigrade teaching more than two blackboards are required to leave assignment in one class when the teacher goes to another to teach. Almost all teachers used textbooks. Charts, maps and globes were available in the blocks covered by the Operation Blackboard (OB) scheme. Teacher guides were available to more than half of the teachers in Tamil Nadu and Kerala and about one-third teachers in Haryana and Maharashtra. The availability was very low in Assam, Orissa and Madhya Pradesh. Dictionary was available to only one-fifth of the teachers. Teachers in Assam and Orissa did not report its availability. The use of teaching aids was reported by one-third or less teachers. The availability of teaching aids to teachers was lower than the availability in schools. Non-availability of aids was due to reluctance of the head teachers to issue for the fear of breakage or loss. Lack of training in the use of teaching aids was also reported. Some funds and flexibility to purchase or prepare aids should be available to school. The training in the use of this material should be available to teachers.

*Supervision and Classroom Visits* : Supervision seemed to be the weakest link in the primary school system. The head teachers and teachers gave contradictory responses to supervision. Over 80 per cent head teachers reported class visit. Only about one-third teachers reported help from the head teachers. Nearly one-fifth teachers reported no help from peers. In some districts where more than half of the teachers reported visit to the classroom by teachers, very peculiar situation emerged on further probing. Many a time the head teacher visited classes in the absence of the teacher through mutual agreement (leave or absence). When asked what was the help in improvement of teaching that was received, the visit turned out to be a discussion about things other than

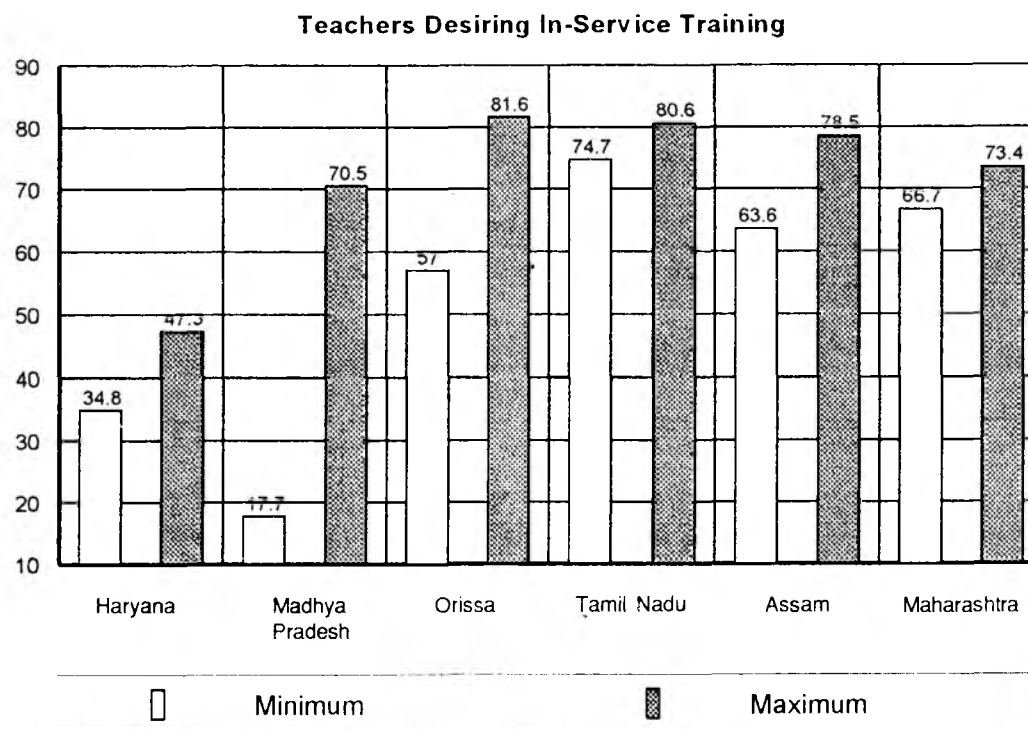
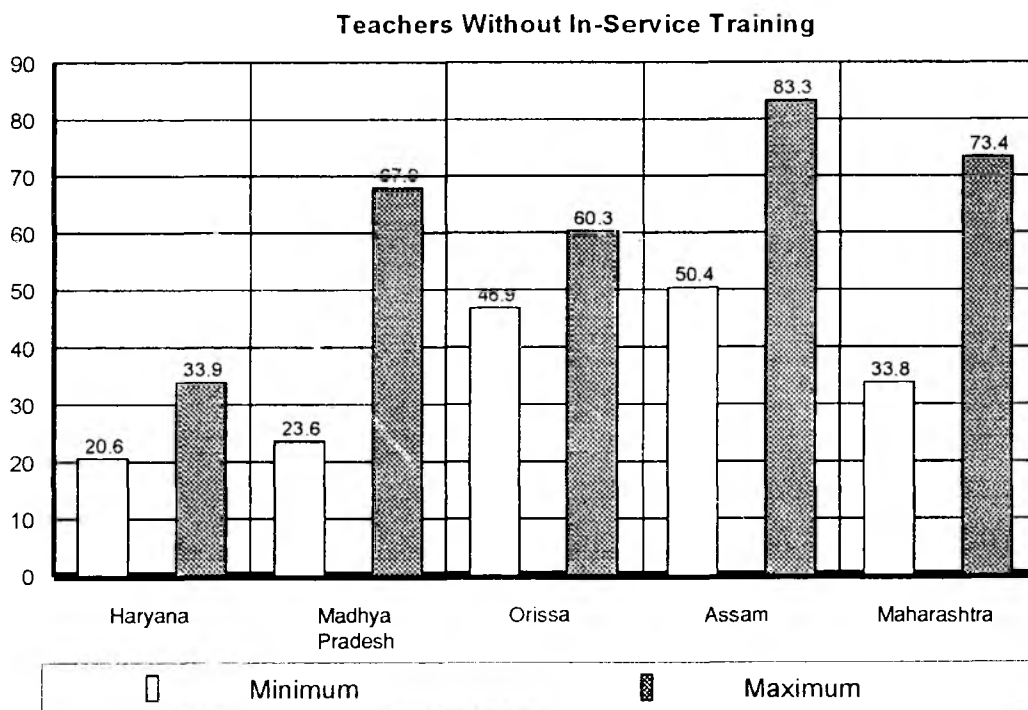


Fig. 4

classroom teaching (going to the school complex/BEO office to get salary, bringing textbooks for children, non-teaching tasks to be done for other departments). Few teachers (5-10 per cent) reported discussion about teaching. In Kerala head teachers, particularly in private aided schools, played active managerial role.

Overwhelmingly, more than two-third teachers reported no supervision and help from the Block Education Officers. In Kerala and Tamil Nadu a little more than one-third teachers reported visit of the education officers to school. In Assam, Madhya Pradesh and Orissa there were schools which were not visited by the Block Education Officer or equivalent for 5-10 years. In Assam one school was not visited for the last 17 years. Surprisingly, several education officers did not know even the location of primary schools in these three states. The probing revealed that most of these visits were routine. School visits did not mean visit to classroom, observation of teaching and discussing improvement. Facilities were the subject of discussion mostly.

School visits in the states of Assam, Madhya Pradesh and Orissa were rare because of non-availability of TA and DA funds or delay in payment for years. Heavy administrative workload was also pointed out as a reason during sharing workshops at the district level. Moreover education officers came from the background of teaching in secondary schools except in Maharashtra where some officers had experience of teaching at the primary level. Absence of training and faulty promotion policy accounts for, atleast in part, the reluctance of education officers to give demonstration of teaching at the school complex or the school level during visit.

The implication of inadequate travel funds, heavy administrative workload, and long and difficult distances, particularly in Assam, Orissa and Madhya Pradesh, is to develop an effective supervision at the school and school complex or cluster level. Peer teacher support within and across schools in the cluster and inter-school collaborative school improvement programmes could be designed to improve learning environment in schools leading to improved learning achievement. Intensive training programmes along with action research at the school and cluster level should form a part of the internal supervision. For details refer to teacher study (Jangira, Singh and Yadav, 1994) and multisite action research project for inclusive schooling carried out at NCERT (MHRD, 1993).

*Teaching-learning Process* : The states have mostly regional language as the medium of instruction (Table 6).

In Class IV in Karbi-Anglong district in Assam there were only 4.1 per cent children whose mother tongue was Assamese while Assamese was the medium of instruction. In Rayagada district of Orissa 28.8 per cent students and in Dharmapuri district of Tamil Nadu 21.9 per cent students were in this category. In other districts also 4.20 per cent students did not have the language of the state which is the medium of instruc-

tion as mother tongue. Most of these children were tribal, while others were minority language students in the bordering districts, or those belonging to migratory labour. It results in difficulty in understanding the textbooks as well as teacher communication.

TABLE 6

Students with Different Mother Tongue than State Language and Difficulty in Understanding Teachers' Language in the Classroom

State	Mother Tongue as Medium of Instruction		Difficulty in Understanding Teachers' Language	
	Min.	Max.	Min.	Max.
	Haryana	55.3	98.2	6.1
Madhya Pradesh	85.4	*100.00	1.3	27
Orissa	71.2	95.5	13.1	25.2
Tamil Nadu	78.1	94.8	NA	NA
Assam	11.1	97.5	0.2	23
Karnataka	NA	NA	NA	NA
Kerala	NA	NA	NA	NA
Maharashtra	80.3	85.2	22.6	81.6

\*Panna, Satna, Rajnandgaon, Dhar districts in Madhya Pradesh

About a quarter of the Class V or IV students covered in the study except in Maharashtra reported difficulty in understanding the language of the teacher. In Parbhani district of Maharashtra it was exceptionally high at 81.2 per cent and in Sirsa district of Haryana it was 31.2 per cent. It might be due to several reasons. Firstly, tribal students who speak a different language at home than the school might have difficulty in understanding non-tribal teachers' language. Secondly, some children in border districts speak different mother tongue at home. Thirdly, teachers from different mother tongue background might be using mixed language in the classroom. Lastly, the communication skills of the teachers leave much to be desired. The net result is uneven understanding of teacher communication in the classroom affecting the teaching-learning process adversely. It has implications for the design of the in-service training programme for the teachers. The teachers also indicated communication and presentation as important areas to be covered in in-service training. Research in communication in the classroom will provide specific nature of difficulties.

The process of teaching-learning was not studied through classroom observation. Students and teachers were asked about classroom activities. The range of Class V or IV students having the opportunity to read aloud in the classroom was quite wide (Table 7). It was the highest in Madhya Pradesh with as low as 12.3 per cent in Rajnandgaon district and 68.3 per cent in Betul. In some districts more than two-thirds of the students did not get this opportunity (Dhubri in Assam, Betul in

TABLE 7  
Class V or IV Students Reporting Regular Activities in the Class

State	Reading Aloud		Dictation		Feedback on Tests	
	Min.	Max.	Min.	Max.	Min.	Max.
Haryana	52.6	55.6	55.5	64.7	58	83.9
Madhya Pradesh	12.3	68.3	8	45.9	16.1	56.0
Orissa	88	96.7	91.5	98.7	19.6	36.2
Tamil Nadu	44	61.3	13.2	40.8	34.2	55.1
Assam	21.2	40.8	3.5	50	0.8	8.5
Karnataka	NA	NA	NA	NA	NA	NA
Kerala	22.5	61.0	9.0	10.2	NA	NA
Maharashtra	37	44.3	20.7	34.9	20.3	35.8

Madhya Pradesh, and Aurangabad in Maharashtra). More than half of the students reported no dictation except in Haryana and Assam.

Nearly all students reported regular tests. But interviews revealed that students perceive term examinations as regular tests. Continuous evaluation to use improvement of learning was not reported by the students during the interview. Even in these limited tests feedback was reported by less than half of the students except in Haryana, Betul district in Madhya Pradesh and South Arcot district in Tamil Nadu. It was the lowest in Assam. There were districts where less than one-fifth students reported feedback. Even where feedback was provided, it was merely giving of marked papers. Selective probing by the visiting teams revealed that practically no feedback was provided for using test results for improving learning.

Home-work was reported by most of the students, but about one-third of the students and, in some districts even more, reported that home-work was not corrected regularly. Teachers' help to remove difficulty of students was also reported by only a quarter of students.

In Tamil Nadu and Kerala, all students reported teachers coming to the class regularly. In other states 10-15 per cent students reported that teachers did not come to the class regularly. The teacher absenteeism is higher in Madhya Pradesh, Assam and Orissa. The student absenteeism in these states, therefore, is not unnatural. When the teacher did not come to the classroom, most of the students reported waiting or playing. In multigrade teaching, most of the teachers reported students to work on their own or under the charge of a peer, when they moved to other class to teach new material after this.

*School Facilities and Participation* : The availability of schools in different districts in the states of Kerala and Tamil Nadu is not a problem. Most of the schools were

available within below 2 km. But in other states the availability of schools was still a problem. In districts in Madhya Pradesh, Assam, Orissa, Haryana and Maharashtra, the distance between primary schools more than 2 km was high. The percentage of such schools was 40 per cent in Shahdol in Madhya Pradesh, 42 per cent in Aurangabad (most of these schools in Soegaon block). In other districts in different states nearly a quarter to one-third schools were at a distance of more than two kilometres except in Kerala and Tamil Nadu. Discounting the crude distance perceptions, it implies that there is a need for more schools or non-formal education centres in small habitations. Micro-planning should be undertaken in these districts for assessment of the requirement of additional schools.

School buildings were available in nearly 80-90 per cent of the schools. Another 5-10 per cent of the schools were located in rented buildings. In Ratlam district in Madhya Pradesh 19 per cent schools were being run in rented buildings. In Assam four-fifths of the school buildings have single rooms for all the classes. About one-third of the buildings in all the districts of Maharashtra were single-room buildings. In other districts in different states except in Kerala the percentage of such schools was 10-20 per cent. Number of school buildings with five classrooms in Dhar and Tikamgarh in Madhya Pradesh and in Karbi-Anglong in Assam was zero. In the remaining districts except in Kerala and Tamil Nadu the percentage was 2-12. It implies seating of more than one class in the same room. It also implies the need for extension of school buildings to meet the requirement of increased enrolment and improved retention in the DPEP districts.

In addition to the additional rooms required, the quality of buildings need to be redressed. Large number of school buildings in Assam were fragile and needed major repairs. In the absence of regular maintenance most of the primary school buildings in all the

districts require maintenance and repairs. Immediate surveys could be carried out to allocate rational funds for carrying out these repairs and maintenance work. Less than 5 per cent of the schools had separate toilet facilities for girls. More than half of the schools did not have drinking water facilities. Both these facilities are required for healthy atmosphere in schools. Survey of building construction and repairs and maintenance is required.

**Class Size and Drop-out:** The school records were either not maintained or poorly maintained in primary schools in all the districts. The names of the students continue in attendance registers even after they leave the school. It was difficult to estimate the drop-out rate. The drop-out can be estimated from two sources, the decreasing class sizes and the ratio of Class V students to Class I enrolment. Fig. 5 gives average size of Classes V or IV and Class I. The range of Class I size was the highest in Maharashtra, 51.4 in Aurangabad to 68.5 in Nanded. It declined to about 38 in Class IV. Similarly, in Haryana it declined from 47.80 to 32.80. There was a decline of about 20 per cent in the districts with minimum class size. In Madhya Pradesh Class I size ranged from 20.90 in Sarguja to 39.47 in Betul. The minimum Class IV size was 10.8 in Raigarh and maximum

of 34.04 per cent in Betul. Similar situation prevailed in Orissa. The attendance in rural areas was much lower than the class size.

The drop-outs could not be computed because of lack of reliable school records. Household survey was the alternative.

**Teacher-Pupil Ratio :** There is a wide variation in teacher-pupil ratio. The discrepancy between the apparent and effective teacher-pupil ratio was due to unfilled teacher posts except in Assam where the number of teachers in position was more than the sanctioned strength in Morigaon.

#### Achievement

##### Class V or IV Student Achievement in Reading

Reading test comprised two sections. The test on word meaning consisted of 40 items and reading comprehension of 44 items. Class IV test consisted of 20 word meaning items and 24 reading comprehension items. The states have been grouped according to the end of the primary cycle Class V or IV. Table 8 gives minimum and maximum scores on the reading test in the states. The range of average score is the highest in Madhya Pradesh because the number of districts is large (19).

Average Class Size

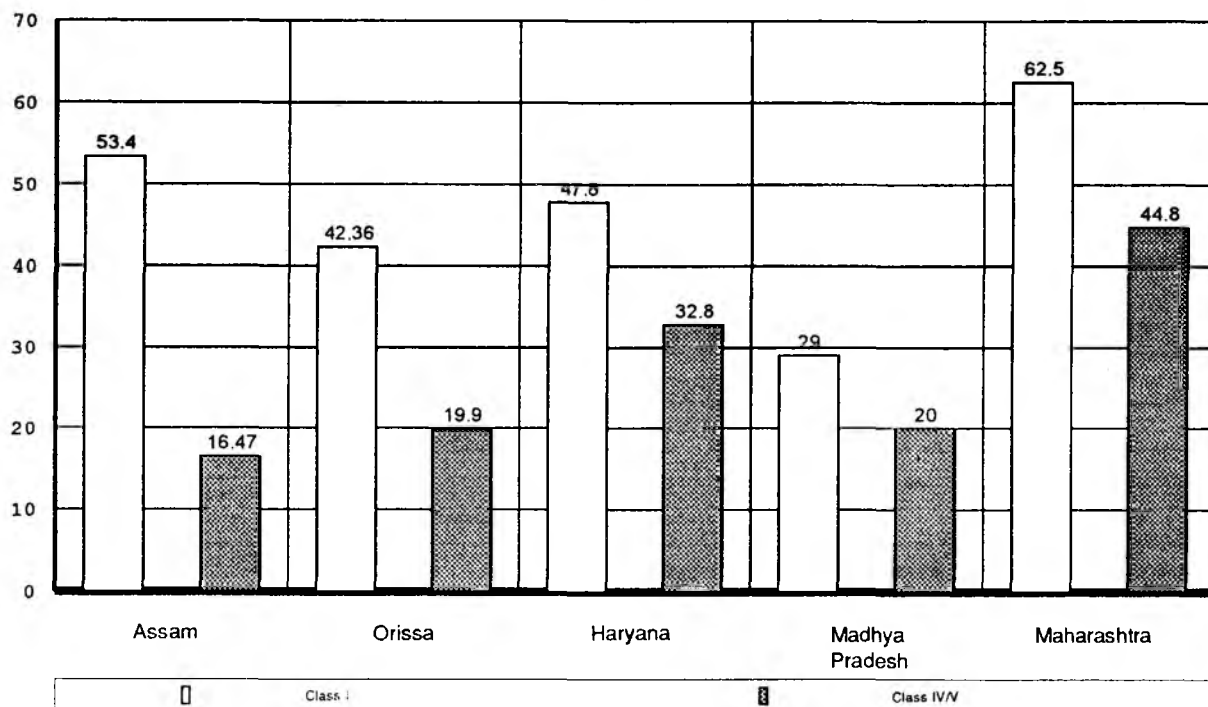


Fig. 5



TABLE 8  
Class V/IV Student Achievement in Reading

State	Word Meaning		Reading Comprehension	
	Min.	Max.	Min.	Max.
<i>Class V</i>	<i>Out of 40</i>		<i>Out of 44</i>	
Madhya Pradesh	10.06	20.28	7.62	16.7
Orissa	17.93	20.47	13.91	17.06
Tamil Nadu	17.27	19.57	11.36	12.77
<i>Class IV</i>	<i>Out of 20</i>		<i>Out of 44</i>	
Assam	9.9	12.6	8.3	10.3
Karnataka	5.77	10.44	6.37	10.68
Kerala	8.5	11.62	7	13.5
Maharashtra	8.09	9.08	7.99	8.11

The performance of students was higher in word meaning test than in reading comprehension test. In all districts the maximum average score was nearly 50 per cent. In districts with minimum average score, it was the lowest in Mandya district in Karnataka (28.85 per cent). In other districts it was between 40 and 49.5 per cent. The districts with maximum score ranged from 45 per cent in Parbani in Maharashtra to 63 per cent in Assam. It was nearly 50 per cent in the states of Haryana, Madhya Pradesh, Orissa and Tamil Nadu.

In reading comprehension no district in Madhya Pradesh and Tamil Nadu achieved an average score of 40 per cent. The lowest average score was in Kasargode district of Kerala (35 per cent). The variations in achievement across states and districts are obvious.

The issue of low achievement in reading becomes alarming when viewed in terms of mastery level. Fig. 6 gives districts with minimum and maximum percentage of students receiving the score of below 40 per cent and 80 per cent and above. The range of students not achieving the score of 40 per cent in word meaning in different states was quite high. The district with the highest percentage of students not achieving a score of 40 was Satna in Madhya Pradesh (67.4 per cent), followed by Nanded district of Maharashtra (55.1 per cent). About a quarter to one-third students in other states could not achieve the minimum average score of 40 per cent in word meaning test. In other districts it ranges from half to two-third students. Students achieving mastery level (80 per cent and above) was about 5 per cent or a little more in most of the districts. Madhya Pradesh had three districts with no student reaching the mastery level.

In reading comprehension the students scoring below 40 per cent was alarmingly high in Satna district in Madhya Pradesh (91.1 per cent). In other states also several districts had more than two-third students scoring below 40 per cent. Almost half of the students in all other districts were in this category.

The students scoring 80 per cent and above were very low (10 per cent). In Tikamgarh district in Madhya Pradesh no child could achieve 80 per cent and above. In Sirsa district in Haryana, Gajapati district in Orissa and Karbi-Anglong district in Assam only one per cent students achieved mastery.

#### Achievement in Mathematics

Achievement in mathematics was still lower. The maximum average score was the lowest in Thiruvannamalai in Tamil Nadu (29 per cent), followed by Parbani in Maharashtra (31 per cent). The district with minimum average score was Satna in Madhya Pradesh (17.5 per cent), followed by about 18 per cent in Dhubri. In Tamil Nadu, Assam, Maharashtra and Haryana no district had an average score of 40 per cent.

TABLE 9  
Class V or IV Student Achievement in Mathematics  
(out of 40)

State	Min.	Max.
Haryana	13.85	15.82
Madhya Pradesh	7.01	17.48
Orissa	13.3	16.6
Tamil Nadu	11.08	11.61
Assam	7.23	8.31
Karnataka	11.66	19.04
Kerala	13.6	19.09
Maharashtra	10.88	12.29

For mathematics a comparison can be made with the scores of the All India Survey of Mathematics conducted by NCERT in 1965-66 (Kulkarni 1970). Though the scores are for the states but it provides an indication about the direction of Class IV student achievement in mathematics. The average score was 41 per cent

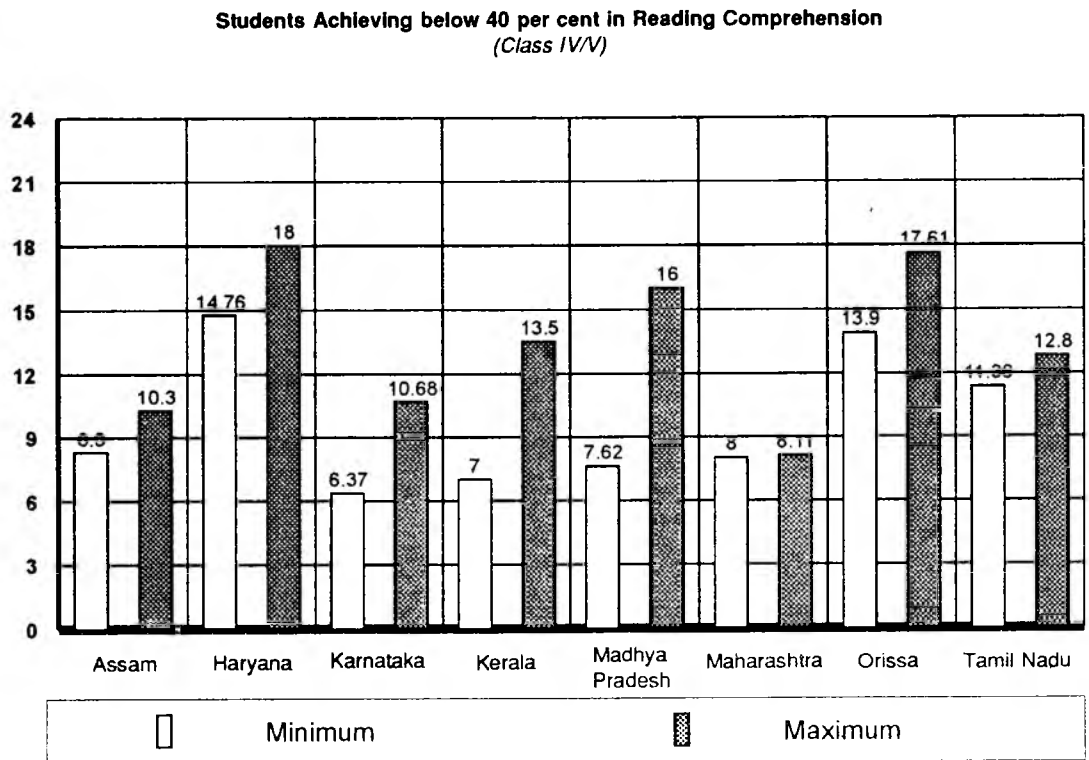
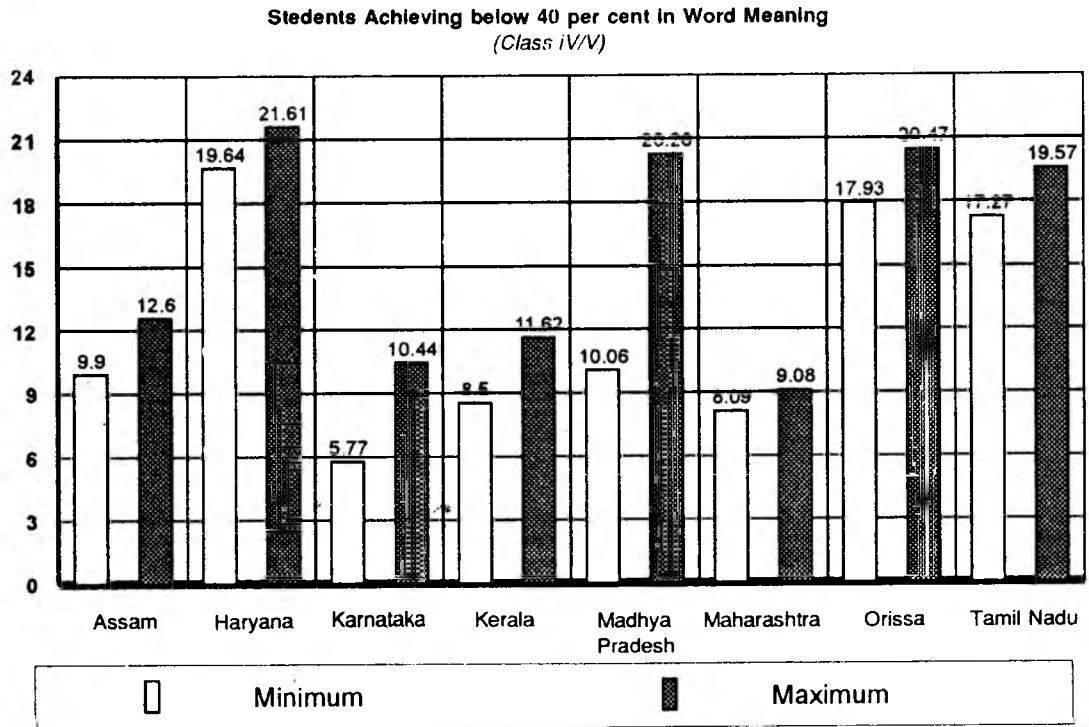


Fig. 6

in Assam which is now between 17 and 18 per cent. It is a steep decline. In Haryana it was 37 per cent in 1966 which is now 37.40 per cent. In Kerala the average score in 1966 was 43 per cent which was lower in Malappuram (34 per cent) but was higher in Wayanad (47.5 per cent). In Madhya Pradesh there was a steep decline in some districts from an average of 36 per cent to about 17 per cent in Satna but it has improved to 45 per cent in Rajnandgaon. In Maharashtra it has declined from 41 per cent to 27-31 per cent. Orissa had an average score of 44 per cent which is now 33-41 per cent. It indicates decline in all the states except Haryana and Kerala.

More than four-fifth students of the five states could not achieve a minimum score of 40 per cent (Fig. 7) in Satna district of Madhya Pradesh, Sirsa in Haryana, Kalahandi in Orissa, Aurangabad in Maharashtra and Karbi-Anglong in Assam. Only in Dhubri the percentage of such students was below 50. The students achieving 80 per cent and above was zero in the three districts of Haryana and 11 out of 19 districts in Madhya Pradesh and Aurangabad district in Maharashtra. In these districts also it was less than one per cent and about 2-10 per cent in few districts. It confirms the low level of learning in Class V or IV students in mathematics.

#### Areas of Difficulty

The areas of difficulty were identified through micro-analysis of the data. The areas of difficulty covered items which even 40 per cent students could not do correctly. Table 10 summarises areas of difficulty in mathematics.

In reading comprehension students experienced difficulty in searching information not available directly in the paragraph and in questions requiring inferencing.

The most difficult was to give central idea or title to a paragraph. It implies that reading comprehension needs to be stressed in teaching.

#### School Variations

The variation among schools was marked in achievement in reading and mathematics. Fig. 8 gives percentage of schools achieving an average score of below 40 per cent in the states. As high as 73.9 per cent schools in Madhya Pradesh, 56.3 per cent in Maharashtra, 53 per cent in Orissa, 35.5 per cent in Haryana and 18.6 per cent schools in Assam could not achieve this level in reading. There were schools with zero score in Madhya Pradesh, Orissa and Maharashtra. At the same time there were schools in districts in Madhya Pradesh achieving the average score of 83.1 per cent. In other states no district could reach an average score of more than 80 per cent.

The situation was equally alarming in mathematics. The highest number of schools not achieving an average score of 40 per cent was in Madhya Pradesh (92.6 per cent), followed by Maharashtra (87.4 per cent), Orissa (75.8 per cent), Haryana (69.6 per cent) and Assam (31.6 per cent).

There were schools in Madhya Pradesh, Orissa and Maharashtra with a score of zero. There were also schools with an average score at the mastery level (80 per cent and above) in the states of Assam, Orissa and Madhya Pradesh. The case study of schools with average score at the mastery level will be of relevance.

The learning achievement levels are low in reading and still lower in mathematics. The variation among students; inter-school and inter-district variations are large. This reflects on the quality of teaching in primary schools. It requires indepth studies.

TABLE 10  
Areas of Difficulty in Class V and IV Mathematics

Items	Haryana	Madhya Pradesh	Orissa	Tamil Nadu	Assam	Karnataka	Kerala	Maharashtra
Addition and subtraction in same item in statement form	x	x		x	x	NA	NA	x
Multiplication involving zero as one number	x	x	x	x	x	NA	NA	x
Conversion of measures and weights, including volume	x	x	x	x	x	NA	NA	x
Factors and multiples	x	x	x	x	x	NA	NA	x
Addition of standard hours	x		x			NA	NA	
Fractions	x	x	x			NA	NA	x
Items involving application of mathematical concepts to problems	x		x			NA	NA	x
Decimal	x	x	x			NA	NA	x
Division (Estimation)		x	x	x	x	NA	NA	x
Geometrical shapes		x	x			NA	NA	x
Number reading/recognition				x	x	NA	NA	

Students Achieving below 40 per cent in Mathematics  
(Class IV/V)

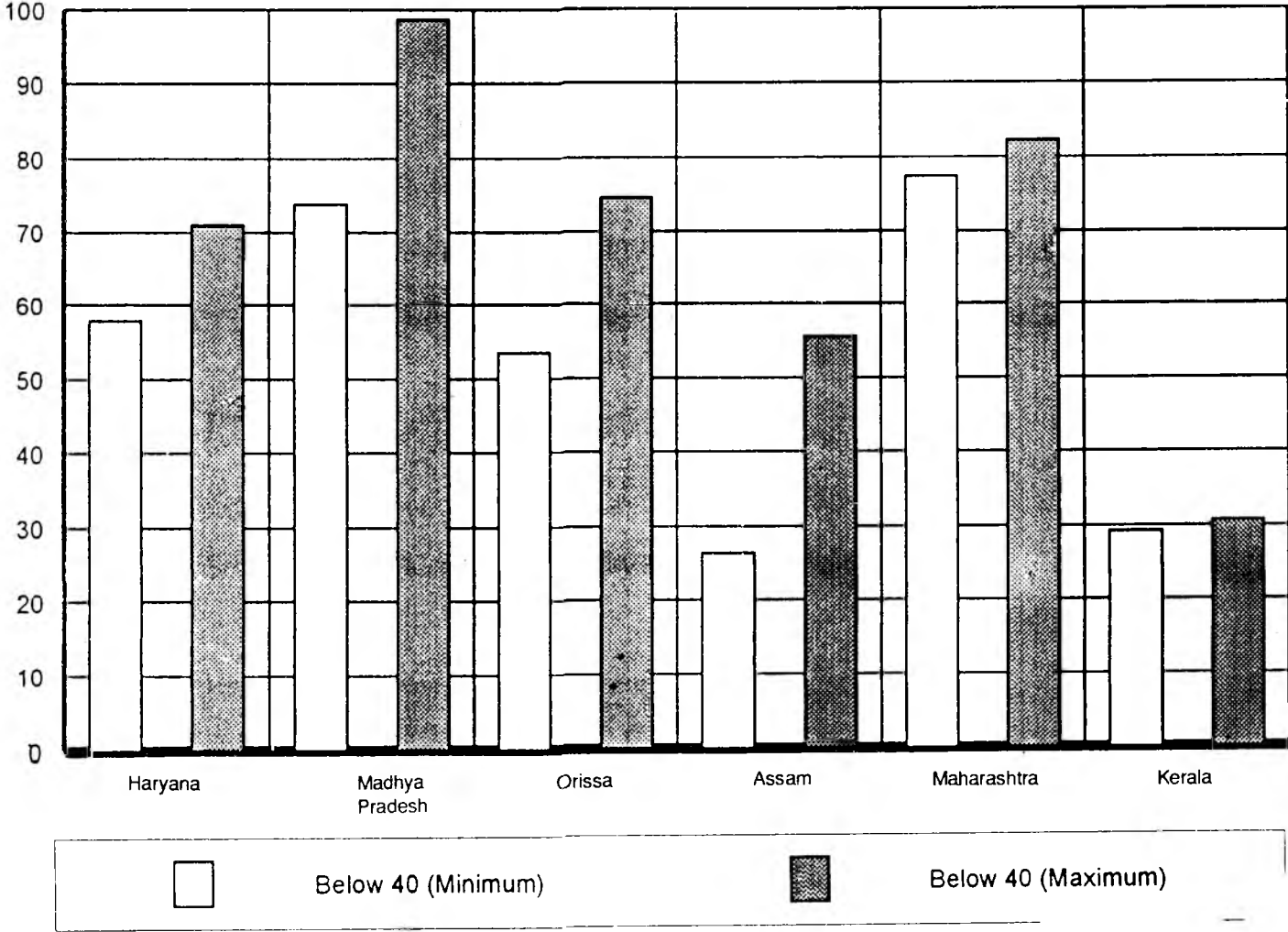


Fig. 7

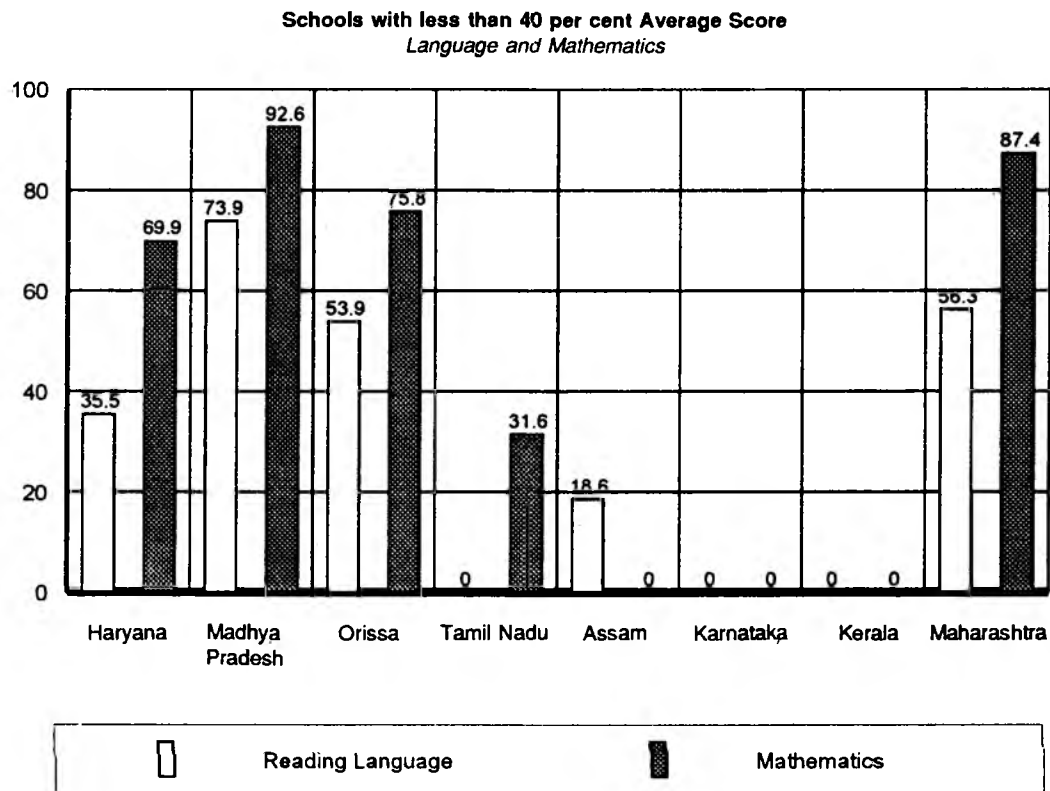


Fig. 8

### What Predicts Class V or IV Achievement?

Preliminary analysis to predict Class V student achievement in mathematics and reading on the data of Haryana state was carried out. There were two types of explanatory variables; individual explanatory variables relate to individual students. Group explanatory variables pertain to class or school as a whole (for example: class size, school size, teacher characteristics, etc.). Interesting results have come out of this analysis.

#### Individual Variables

Language of instruction and difficulty in understanding teachers' language in the classroom; availability of the language textbooks, opportunity to read material other than textbooks and TV-watching; educational and occupational aspirations; teachers coming to the class regularly; receiving dictation and feedback on tests were significant predictors of reading achievement. These factors explained 8.9 per cent variation in achievement. It seems to be low because previous knowledge which usually explains 10-15 per cent variation was not covered in the study.

In group explanatory variables of asking children to

read from the textbook on their own and reading from the textbook and explaining, explained 9.0 per cent variation in reading achievement.

For the prediction of student achievement in mathematics only seven individual variables namely, father's education, reading other material, correcting home-work regularly, understanding teachers' language, educational and occupational aspirations emerged as significant predictors explaining only 2.6 per cent variation. In a structured subject like mathematics involving sequential learning, previous knowledge may be a more potential explanatory variable which was not covered in the study. In group variables class size and teacher expectations explained 6.27 per cent variance. Further analysis using multilevel modelling with more variables will throw more light on explanatory variables.

It is evident that what goes on in the classroom is more important for improving student achievement. Besides teaching activities, if teachers have positive expectations of the students to succeed, the achievement is higher. The in-service training should develop this attitude in teachers. They should also learn how to raise educational and occupational aspirations of children besides organising substantive teaching-learning activities.

### Class II Student Achievement

Class II students were administered literacy and numeracy tests based on competencies achieved at the end of Class I orally. The literacy test required students to read 10 letters and 10 words. The numeracy test consisted of recognition of six single-digit small and large numbers and eight addition and subtraction questions.

**Letter and Word Reading :** Letter and word reading are basic skills which require 100 per cent mastery for developing subsequent reading skills. Surprisingly, none of the districts achieved even an average score of 80 per cent in either of the tests. Students in Sehore and Panna districts in Madhya Pradesh, could not read even five words correctly. In the case of letter reading, the situation was alarming. The highest average score of 8.73 was for Wayanad district in Kerala. Students in Haryana, Tamil Nadu and Maharashtra on an average could not read even five words correctly. In Tikamgarh in Madhya Pradesh, Karnataka, Tamil Nadu the average minimum and in Kovar and Thiruvannamalai districts the score was less than two (Table 11).

Micro-analysis revealed that 47.6 per cent of students in Class II in Panna district of Madhya Pradesh could not read even a single letter correctly (Fig. 9). Nearly one-third students in Sirsa district of Haryana, Karbi-Anglong district of Assam and Nanded district of Maharashtra failed to read even a single letter correctly. Similar percentage of students could not read atleast four letters correctly. Between 15 and 23 per cent students could read atleast eight letters correctly.

TABLE 11  
Class II Achievement in Language

State	Letter Reading		Word Reading	
	Min.	Max.	Min.	Max.
Haryana	6.14	6.43	3.84	4.63
Madhya Pradesh	3.91	7.46	1.92	5.5
Orissa	6.25	7.04	5.56	6.41
Tamil Nadu	4.67	5.71	1.82	2.36
Assam	5.1	7.2	3.8	6.2
Karnataka	5.89	6.62	1.78	3.51
Kerala	6.35	7.21	6.37	8.73
Maharashtra	4.84	6.79	2.68	4.71

The situation was more alarming in the word-reading test. In Panna district of Madhya Pradesh (75.1 per cent), in Nanded in Maharashtra (54.1 per cent) and in Karbi-Anglong district in Assam (38.4 per cent), students could not read even a single letter. Nearly a quarter to half could achieve mastery level in some districts.

**Number Recognition and Addition and Subtraction :** The

number recognition and simple addition and subtraction are basic numeracy skills to be mastered by all students for subsequent levels. The low average (see Table 12) indicates that these skills were not mastered by many students. In addition and subtraction, the learning was still lower. The average score was the lowest in Tamil Nadu where it was less than 40 per cent. All states except Assam had districts with less than 40 per cent average score (for example, Sirsa in Haryana, Panna in Madhya Pradesh, Thiruvannamalai in Tamil Nadu, Nanded in Maharashtra).

Fig. 10 reveals that 36 per cent students in Satna district in Madhya Pradesh could not recognise even a single number correctly. About 5-10 per cent in other states fall in this category. About one-fourth students could reach the mastery level. In number recognition two-third students in Rajnandgaon district in Madhya Pradesh, one-third in Dhubri district in Assam and 16.7 per cent in Parbani district in Maharashtra, and one-fourth students in Phulbani district of Orissa could not do even a single addition and subtraction sum correctly. In Tamil Nadu and Kerala, about one-third of the students could reach mastery level.

TABLE 12  
Class II Achievement in Mathematics

State	Number Recognition (out of 6)		Addition and Subtraction (out of 8)	
	Min.	Max.	Min.	Max.
Haryana	1.91	3.99	1.7	4.27
Madhya Pradesh	1.37	3.91	1.46	4.02
Orissa	3.38	3.96	3.32	4.48
Tamil Nadu	2.79	3.2	1.47	2.15
Assam	4.2	4.7	4.5	6.3
Karnataka	5.97	8.93	NA	NA
Kerala	4.2	4.8	3.4	4.5
Maharashtra	3.08	3.57	2.84	3.48

The teachers considered admission throughout the year, non-detention policy and lack of parental support as causes of low achievement. The first does not seem to be relevant because Class I tests were given in Class II. By that time numeracy and literacy skills should have been developed. The implementation of the non-detention policy is faulty and does not realise the objective for which it is used. It is for smooth transition from home to school and adjusting pace of learning. It has become mostly a policy for promoting non-learning situation. Another phenomenon causes concern. Children are enrolled at the age of 4-5 years in Class I to get additional teachers. The under-age (10-20 per cent) are indicative of this trend in all states. It also affects learning achievement in beginning grades.

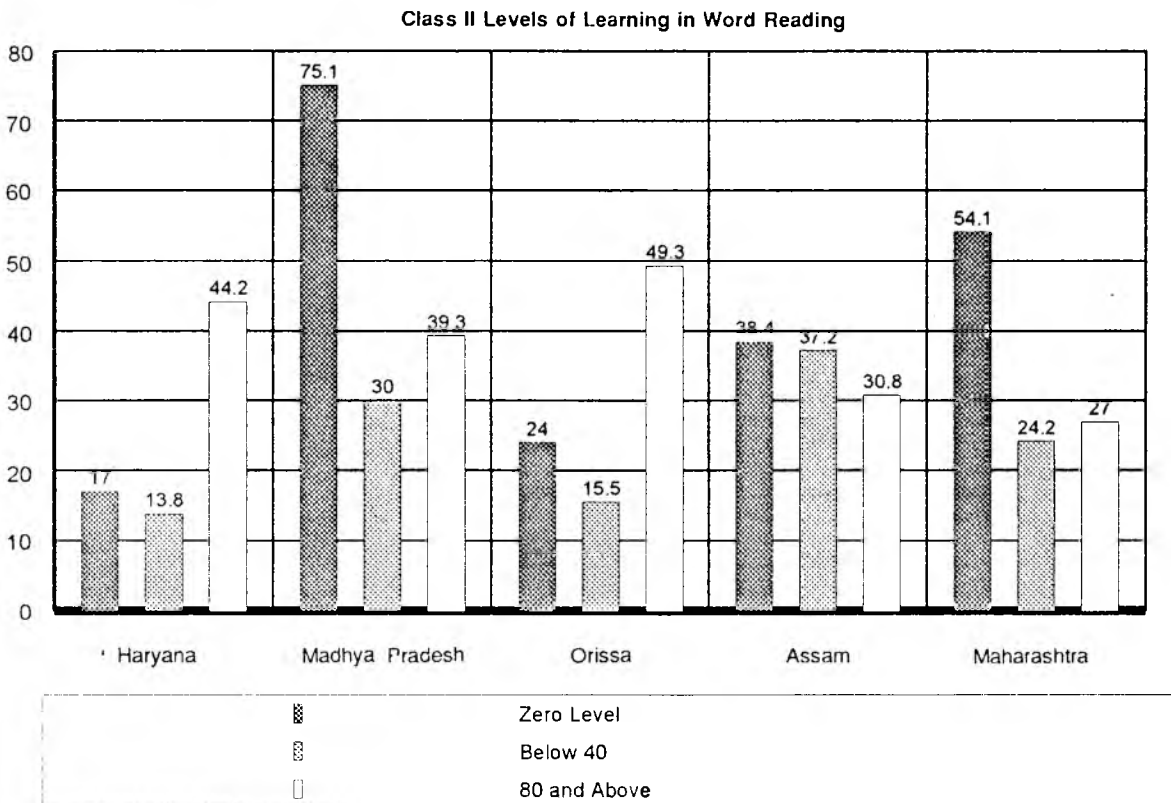
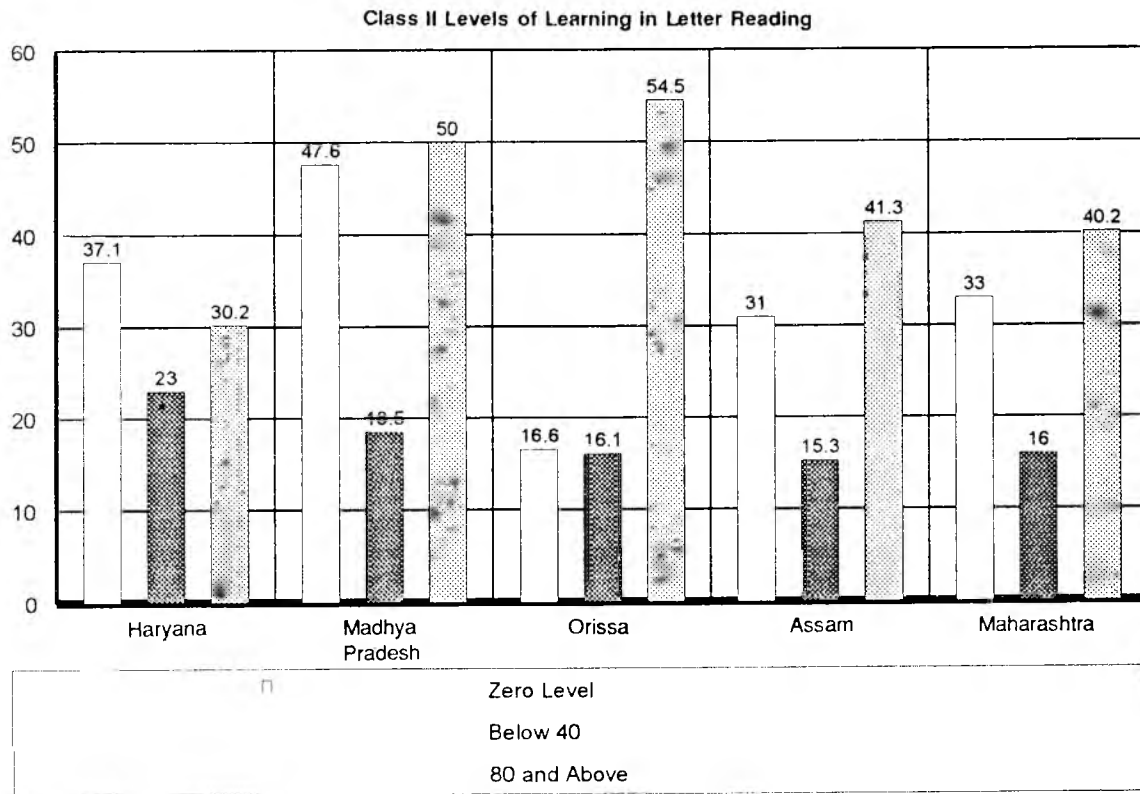
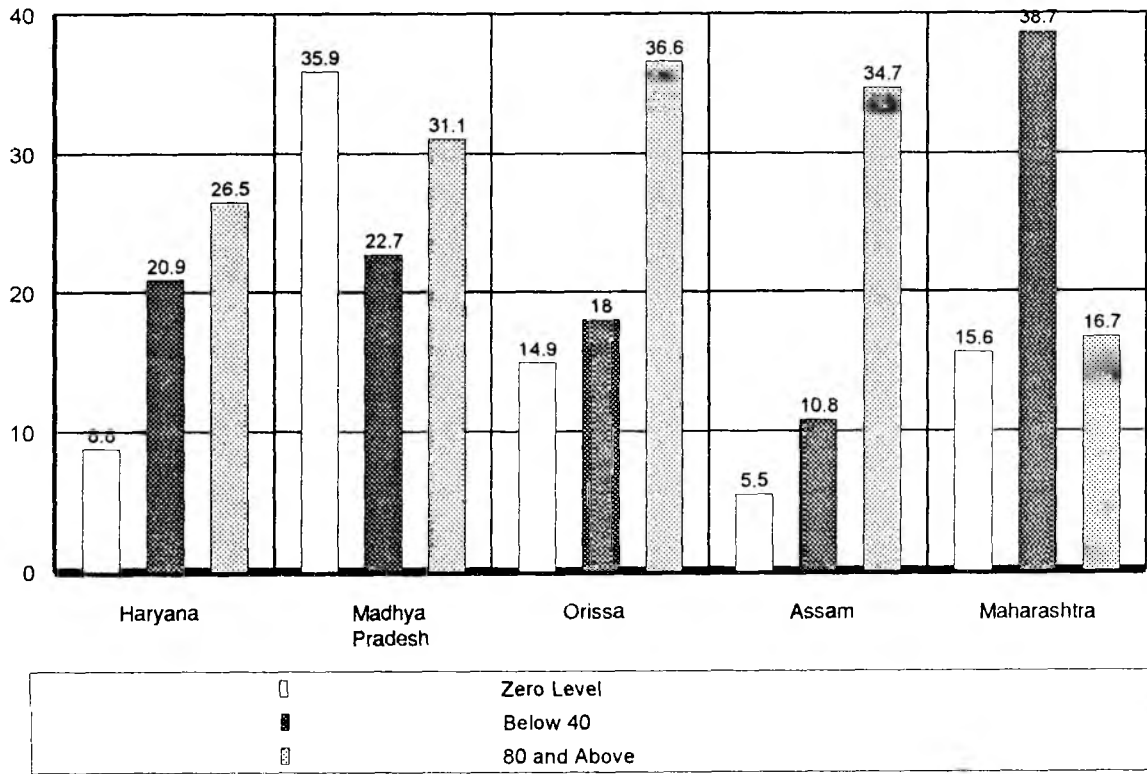


Fig. 9

**Class II Levels of Learning in Mathematics**  
*Number Recognition*



**Class II Levels of Learning in Mathematics**  
*Addition and Subtraction*

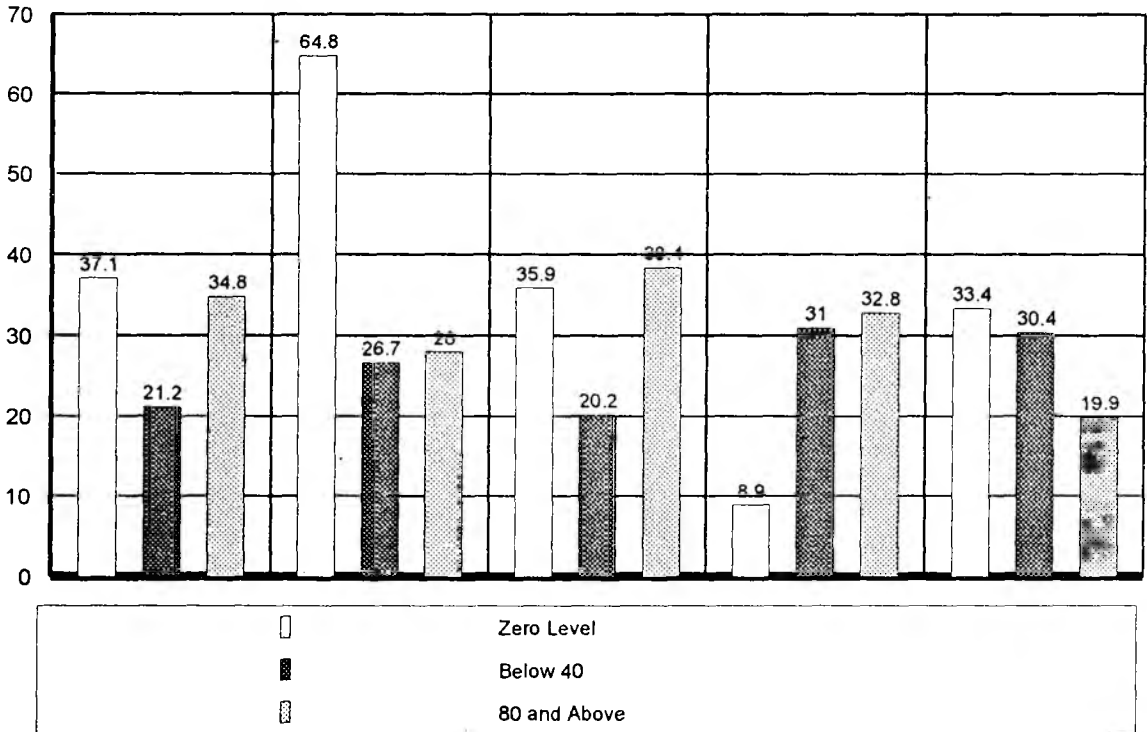


Fig. 10



Poor performance of Class II students on literacy and numeracy tests is the forerunner of poor performance in Class V or IV. Regular teachers and relatively better infrastructure in Tamil Nadu and Kerala did not result in better performance. It implies poor quality of instruction. In other states the schools are featured by both poorer infrastructure, poor management and poor quality of instruction.

#### Drop-outs

The low achievement of students is not prevalent only in school children. The drop-outs also achieved low.

The literacy skills of drop-outs were very low in all states. In no district, except in Haryana and Assam, did drop-out students achieve an average score of 40 per cent either in literacy or numeracy skills. One trend is marked here. Unlike in school students, drop-outs performed better on numeracy than literacy skills. The reason may be the more functional use of numeracy skills in transactions during work. Reading seems to be much less in use. So relapse might have been higher in this area.

TABLE 13

Minimum and Maximum Scores of Drop-outs

State	Literacy (out of 8)		Numeracy (out of 8)	
	Min.	Max.	Min.	Max.
Haryana	2.77	3.04	3.36	4.22
Madhya Pradesh	0.35	2.1	0.33	1.82
Orissa	0.77	1.53	0.79	1.04
Tamil Nadu	0.82	1.23	1.7	3.23
Assam	2.5	3.2	2.9	4.8
Karnataka	1.68	2.91	1.99	2.98
Kerala	No drop-outs			
Maharashtra	1.77	2.85	1.75	2.07

#### Reasons for Discontinuance of Study

The pattern varies from state to state and district to district within states. In Haryana about one-third students in Sirsa district found 'studies too difficult' and 'parents do not want' as the reasons. In other states also 10-20 per cent students reported 'studies too difficult'. More than one-third students reported 'parents do not want' as the reason for discontinuance. Household assistance as reason for discontinuance of studies was predominant in Darrang district in Assam (16.7 per cent), Sargoja district (21.1 per cent) in Madhya Pradesh. In Tamil Nadu, particularly girls (36.8 per cent) in Thiruvannamalai, indicated 'parents do not want' and 'household work' more than boys in almost all districts. It is the manifestation of bias towards education of the girls.

#### Implications for DPEP Interventions

The prediction results are preliminary but promising and meaningful. Implications for intervention in DPEP districts can be worked out taking into consideration both descriptive scenario and prediction results. These are summarised in Table 14.

The major areas of intervention from the baseline study on the assessment of learning achievement indicates that school-based and teacher-based in-service training is to be looked not as a periodic activity but as a continuous teacher development activity supported by collaboration among teachers within the school and across schools. Greater dependence on internal supervision and supervision capacity within the school cluster will have to be developed. Curriculum and textbooks following MLL approach with teacher guide need to be encouraged. The major investment should be made in learning material for students, teacher training, internal supervision and improvement of threshold school facilities.

TABLE 14

Implications for DPEP

Items	Haryana	Madhya Pradesh	Orissa	Tamil Nadu	Assam	Karnataka	Kerala	Maharashtra
<i>Learning in the Classroom</i>								
Active involvement of children in learning	x	x	x	x	x	x	x	x
Reading aloud	x	x	x	x	x	x	x	x
Dictation	x	x	x	x	x	x	x	x
Continuous evaluation and feedback	x	x	x	x	x	x	x	x
Timely textbook availability		x	x	#	x		#	
Other reading material	x	x	x	x	x	x	#	x

x stands for data-based; # stands for partly; \* stands for expert's suggestion



Items	Haryana	Madhya Pradesh	Orissa	Tamil Nadu	Assam	Karnataka	Kerala	Maharashtra
Teaching aids	x	x	x	x	x	x	x	x
Library books for additional reading	x	x	x	x	x	x	x	x
<i>Teacher Representation in Services</i>								
Representation of socio-cultural groups of teachers			x	x			x	
Increasing the representation of female teachers	x		x		x		x	x
Increasing the representation of SC teachers		x			x		x	
Increasing representation of ST teachers			x	x			x	
<i>School Management</i>								
Teacher attendance	#	x	x		x	#		#
Management of multigrade teaching	x	x	x	x	x	x		x
Local need-based procurement of materials	x	x	x	x	x	x	x	x
Rational development of resources	x	x	x	x	x	x	x	x
Increasing instructional time	x	x	x	x	x	x	x	x
Improving student attendance	x	x	x		x	#		#
Maintaining school records	x	x	x	x	x	x	#	x
Internal supervision	*	*	*	*	*	*	*	*
Monitoring learning achievement	*	*	*	*	*	*	*	*
Mobilisation of community support	*	*	*	*	*	*	*	*

### Methodological Issues

The BAS was completed within the constraints of time and manpower. Several issues relating to design, methodology and analysis arise from this study. Some of these issues are endemic to social science research while some are inherited from the time constraint. It will be worthwhile to consider some of the issues for the improvement of this type of studies and those emerging from the present one. These issues are considered in the context of the design, methodology and analysis.

The study so far used survey design which yield descriptive profile and correlates even in multivariate analysis. The determinants are based on association. The cause-and-effect analysis relationships are not established. Quasi-experimental studies are required to support and prediction studies. Should these experimental studies be done on independent samples or on the subsamples of this study? Experimental studies are costly and time-consuming. These cannot be on large scale as this. What should be the size and scope of these stud-

ies? Should these be independently designed studies or multisite replication studies within a standard design? These designs should be considered in the context of informing policy decisions through complementing correlational and prediction studies. The issue is the mix of programmatic and individual aptitude-oriented research.

Learning achievement study is to be replicated in the third and the sixth year of the programme. Will subsequent assessment be in the same school and on the same Class II students or will it be on a new sample? Both approaches have advantages and disadvantages. For example, the advantage of assessment of the same Class II students in the same school will provide highly potential explanatory variable of learning aptitude (previous knowledge base). The disadvantage is the high mortality rate. The advantages and disadvantages need to be weighed.

The generalisability of studies does have implications for these districts. But generalisation for the whole state poses problem. How will these policy decisions be

formulated for the state component? Will these be valid for other districts which will be influenced by the decisions regarding the state component? How will the components for implementation in other districts be picked up? Will it require further studies to apply to other states? Can such research be built in the study design or simultaneous studies be mounted through sponsored research for further validation of the findings? It would result in increased relevance. Study of learning achievement in randomly selected districts is called for.

The baseline study concentrated on cross-sectional research methodology. The process variables were inferred from the perceived experience with learning and supervision activities. Direct evidence on the process were not studied. Should BAS not include a small process study on the sub-sample? For example, how textbooks are used; how teaching aids are used; teacher-student, and student-student interactions; and teacher-head teacher interactions need observational study. Qualitative information and process study could provide useful information for designing more relevant interventions.

The unit of sampling in studies on achievement has shifted from individual student alone to student within the school and home environment. The interactive effects of the three sets of variables are relevant for student learning achievement. It has implications for the design and analysis of multilevel studies of school effectiveness. The disaggregated individual and group explanatory variables need to be conceptualised and used in this type of research. With advanced statistical tech-

niques and computer technology, it is possible to use multilevel modelling. The skills to conduct such studies need to be developed through DPEP research capacity building provision. It also requires capacity building for advance analysis of the data generated through the present study and improved design of future studies.

Estimation of drop-out poses problems because of the absence of authenticated enrolment and drop-out records. Will crude estimates continue to suffice or should we study discrepancy between these estimates and household survey? Should we work out some adjustment mechanism? A way is to be found out till MIS starts providing reliable information.

We have used standardised achievement tests in BAS. The curriculum based on MLL is being developed. Revised curriculum will be implemented by the time the second learning assessment is undertaken. Should new tests be developed and standardised or the same tests continue to be used? The present BAS did not include the assessment of achievement in environmental studies. The time constraints and non-availability of standardised tests precluded its inclusion. Should these be included now? If so, what type of tests should be developed for the assessment of achievement in environmental studies? Another important dimension of primary education is non-scholastic area of the curriculum. Should this also be assessed? If so, what aspects with what kind of tools should be used?

These issues are by no means exhaustive. These are only for the stimulation of discussion. Many more issues will flow from the discussion.

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# Teacher Policy, Training Needs and Perceived Professional Status

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Schools do make a difference in student achievement (Lockheed and Longford, 1991; Bashir, 1992; and Bondi, 1991). The level and quality of student achievement depend on what goes on in schools and classrooms. This brings the teacher to the centre stage of school effectiveness. Teacher quality is critical to achieve school goals. It is the outcome of dynamic interaction of teacher competence and motivation of teachers to transform competence into performance. Education and training build teacher competence, while service conditions, school climate and community environment guide commitment of teachers. The process of training and support also contributes to teacher commitment to some extent (Jangira and Ahuja, 1991).

Teacher commitment to perform is significant. In the affective domain it starts from willingness to respond to a situation and through a series of steps, it becomes a professional value (Jangira, 1985). What is the dynamics of this becoming? What guides teachers to acquire this value? What can be done to facilitate the process? Do states have policy to attract competent and committed teachers? How are teachers recruited? Are service conditions conducive to retain good teachers? Do these sustain commitment throughout the career? Research on school effectiveness, teacher effectiveness and career satisfaction explore these questions. This research has yielded several variables of consequence which have policy implications for investment in teacher quality.

A recent CERl study on teacher quality provides an appropriate conceptual framework for linking teacher policy contribution (initial education and training, inservice education and training, teacher appraisal, alternate paths to teaching, alternate teaching careers, incentives to enter the teaching profession and incentives to remain in the teaching profession); context of schooling (education system policies, local policies and strategies, organisation and culture of schools and links with classroom management); and dimension of teacher quality (content knowledge, pedagogical skill, reflection, empathy and managerial competence) (OECD, 1994). The line of research on incentives is also quite relevant in this context. Khamerer framework includes such variables as : (a) remuneration; (b) instructional support (availability of instructional materials in the classroom); (c) instructional supervision at the classroom level; (d) training provided to teachers; and (e) career opportunity available to teachers (Khamerer, 1990). Chapman, Snyder and Burchfield added career satisfaction and community support, recognition and approval to this framework. Four of the six separate regression analyses yielded instructional supervision, community support and amount of training as variables directly related to career satisfaction. In-service training turned

\* The study was financed by the UNICEF. The authors appreciate the assistance provided by several individuals, particularly Professional Assistants Anil Kumar K., Rakesh Kumar Sharma and Ramesh Sultania.

out to be more important than initial training (Chapman, *et al.*, 1993).

### The Present Study

Teacher quality formed a component in baseline assessment studies of the three districts in Uttar Pradesh and 46 districts of Assam, Haryana, Kerala, Karnataka, Madhya Pradesh, Maharashtra, Orissa and Tamil Nadu. Designing of teacher quality component of DPEP requires an assessment of teacher policy in the states, its implementation at school level, teacher perceptions about policy, and training needs. The study explored these areas at two levels. At the policy level it covered initial education and training of teachers; teacher recruitment, teacher placement and transfer; remuneration and service conditions; and in-service education and training. At the second level, field study covered training needs assessment (TNA); perceptions about policy implementation; perceptions about social, economic and professional status; and problems faced in carrying out professional activities in the school. The field study covered 19 of the 46 DPEP districts.

### Design and Methodology

The study was conducted at two levels. The design and procedure matched these levels. At the first level covering teacher policy, documentation comprised analysis of government orders and procedural guidelines issued from time to time. Interview with senior administrators in the Directorates of Education and State Councils of Educational Research and Training (SCERTs) supplemented analysis of documents. The field study addressed policy implementation, institutional capacity for initial and in-service training, and teacher quality available in sampled cluster of primary schools and was conducted on a limited scale to get a feel of the policy implementation and perceptions of teachers.

### Sample

For the interview with teachers, two project districts in each of the states were selected purposively (except in Madhya Pradesh where five districts were selected); the criteria for selection were the existence of a DIET in the district and whether it was a tribal district. The sampled districts of Karbi-Anglong and Darrang (Assam); Jind and Hissar (Haryana); Raichur and Belgaum (Karnataka); Wayanad and Malappuram (Kerala); Aurangabad and Nanded (Maharashtra); South Arcot and Dharmapuri (Tamil Nadu); Gajapati and Rayagada (Orissa); and Betul, Bilaspur, Ratlam, Sehore and Tikamgarh (Madhya Pradesh). One block in each district and one school complex within each block were selected randomly. One urban area (the district headquarters) was also studied. In states which do not have the system of school complex, primary schools in the catchment area of a secondary school were treated as a

cluster of schools. In each district, the sample size was restricted to 100 teachers, distributed across rural and urban areas using the proportion of rural and urban population. Where the number of teachers was fewer than 100, teachers from the adjacent school complex were included in the sample. In all, 1,907 teachers were interviewed in 19 districts of the eight DPEP states.

Two institutions including one DIET, wherever available from each project district, were selected purposively. Some districts had only one teacher training institution. The Principal was interviewed to supplement information collected through the questionnaire. Block Education Officers of the sampled block were also selected for interview. The number of ETIs including DIETs covered was 20. Beside principals, meetings were held with the faculty of each of the institutions. The District and Block Education Officers interviewed were 15 and 23, respectively. Triangulation makes the findings reliable as such information on basic issues was sought from more than one source, the teacher, the teacher educator and the Block and District Education Officers. Information from different sources has been used for inferencing provided in relevant sections.

### Instruments

State Teacher Policy Questionnaire (STPQ) was developed to collect basic information. For assessing institutional capacity SCERT Information Schedule (SIS) and Training Institute Information Schedule (TIS) were developed. For the field study interview schedule for teachers (TS) and interview schedule for the district and block level administrators (AIS) were developed. The TS, AIS and TIS were pre-tested on a small sample at Gurgaon in Haryana. The research team also developed a simple training-cum-field manual which was used by field investigators after training for two days under a senior consultant. The consultants collected data on state policy and interviewed the administrators.

### Statistical Analysis

Qualitative analysis of the documents on state policy on teachers was used. Descriptive statistics (percentages) were used for analysing data with regard to teacher profile, their pre-service training, perceptions regarding social, economic and professional status, problems of teachers, etc.

Teachers' perception of professional status was taken as the criterion variable. Stepwise regression analysis was carried out. The explanatory variables were: sex, age, marital status, socio-cultural groups of teachers, education and training, reasons for choosing the teaching career, year of completing teacher training, satisfaction about pre-service training received, teaching experience, desire for in-service training, amount of in-service training, use of in-service training in class-

room practice, perceptions of social status, satisfaction about social status, perception about economic status, time for commuting from home to school, head teacher accepting suggestions, promotional prospects, promotions received, help from teachers, staff meetings to discuss improvement in teaching-learning process, meetings of VEC/AEC to achieve the goal of UPE, transfer, multi-grade teaching, lack of teaching aids, lack of physical facilities, high rate of student absenteeism, apathy of parents, lack of academic guidance from seniors. The criterion variable of teacher perception about professional status was based on the assumption that the teachers perceiving the professional status as high are those who are motivated because they have a sense of career satisfaction.

### Teacher Policy

This section deals with teacher policy covering teacher recruitment, placement, representation of female teachers in the teaching work force and demand and supply of teachers. The state policy on teacher training, transfer and service conditions are also highlighted.

### Teacher Recruitment

The states have laid down minimum academic accomplishments for primary school teachers. The states of Haryana, Karnataka, Madhya Pradesh, Maharashtra and Tamil Nadu require primary school teachers with 12 years of schooling and two years of diploma in elementary education. The states of Kerala and Orissa require 10 years of schooling with two years of diploma in elementary education. In Assam entry qualification for primary school teachers is 10-year schooling without initial training. In the autonomous Hill district of Karbi-Anglong of Assam, teachers below 10 years of schooling continue to be appointed.

Ten-year schooling or below was prescribed for qualifying as primary school teachers when high/higher secondary school graduates were in limited supply and unprecedented expansion of primary schooling in the 1950s and 1960s required a large number of teachers. The situation has now changed. Not only higher secondary and university graduates are available, a large number of them also remain unemployed. The question of raising qualifications needs a review by the states taking into consideration implications for remuneration. It may improve teacher's knowledge of content to meet the demands of the upgraded primary school curriculum. It may have financial implications, but in practice, it has started happening. Recently the Uttar Pradesh Government upgraded entry to elementary teacher training institutes to graduation. It has, however, been withdrawn for reasons other than availability of graduates. In DIETs in Haryana, a number of university graduates and post-graduates seek and get admission and this may be true in other states too. So upgrading of qualification of primary school teachers needs con-

sideration. Simultaneously, encouraging existing teachers to improve qualification through open learning system also needs consideration, particularly in the states where teachers are underqualified. Incentive system for upgradation of academic qualification needs to be worked out.

### Recruitment Procedure and Placement

Recruitment procedure is practically centralised in most of the states. In Assam, Haryana, Kerala and Tamil Nadu recruitment is done at the state level, while in Karnataka, Maharashtra and Madhya Pradesh it is done at the district level. In Orissa, primary school teachers are recruited at the regional level.

Centralisation of recruitment of primary school teachers poses several problems. Firstly, the head teacher and the local administration have little say in the selection of teachers for their school. Local specific needs of their schools are, therefore, not reflected. In the absence of specific guidelines regarding initial posting of primary school teachers either in rural or urban area, teachers are placed in schools wherever the vacancies are available. Most of the vacancies are in rural and remote areas. Centrally selected teachers either do not join or put pressure for initial posting in towns and cities. Influential ones do succeed. As a result, vacancies in rural, remote and hilly areas remain unfilled for a considerable period of time affecting pupils' learning adversely in these areas. Thirdly, substitute teachers are not generally appointed when teachers proceed on long leave on account of ill health, maternity, etc. So decentralised recruitment with the involvement of the local administration needs consideration, particularly in the context of Panchayat Raj and local body acts.

### Female Teachers

The reservation for teacher recruitment is according to government policy in each of the states. However, representation of female teachers causes concern, particularly from the point of view of enrolling and retaining girls in primary schools. At present, in most of the states female teachers are under-represented except in the states of Kerala, Haryana and Tamil Nadu as indicated in Table 1.

TABLE 1

Percentage of Male and Female Primary School Teachers

State	Male	Female
Assam	76.9	23.1
Haryana	52.0	48.0
Karnataka	62.0	38.0
Kerala	40.0	60.0
Madhya Pradesh	76.0	24.0
Maharashtra	74.4	25.6
Orissa	75.0	25.0
Tamil Nadu	50.9	49.1



In other states, except Karnataka, only a quarter of primary school teachers are female. The GOI guidelines suggest improvement in recruitment of female teachers. In fact, in Operation Blackboard scheme guidelines suggest that at least 50 per cent of teachers to be appointed should be females (MHRD, 1987). States are making conscious efforts to increase female teachers in primary schools.

#### *Demand and Supply of Teachers*

There is no conscious effort to link supply of primary school teachers to demand. None of the states could provide a perspective plan for teacher preparation. In some states it seems that production of teachers has gone out of control despite the fact that teacher training institutions are recognised by the government. For example, in Kerala, Maharashtra, Karnataka and Tamil Nadu the turnover of teachers is twice the number recruited in the last couple of years. In Assam the capacity for providing initial teacher training at present is zero, because existing facilities are not sufficient for even clearing the backlog of untrained teachers. The demand and supply is balanced only in the states of Haryana and Madhya Pradesh.

In the absence of a perspective plan for elementary teacher education, growth of private unaided elementary teacher training institutions causes concern. In Maharashtra and Karnataka nearly half of the teacher training institutions are private unaided. The field study indicates that most of the private unaided institutions have only two classrooms with no library and laboratory facilities. The staff is also inadequate. The percentage of failure in these institutions in Maharashtra about 60 (SCERT, 1993) is an indication of the low quality of teacher training. In Tamil Nadu the court intervened recently for admission to ETTEs other than DIETs. The states may like to review and balance the demand and supply of primary teachers through careful study of the labour market. The states must have a policy on elementary teacher training according to the standards provided by the National Council for Teacher Education (NCTE). Training quality assurance is the key to the supply of competent teachers.

#### *Teacher Training*

The administrative control of primary teacher training also seems to be an expedient decision rather than a rational one. For example, the administrative control of elementary teacher training institutions in Haryana is with the Directorate of Secondary Education and not with the Directorate of Primary Education. The justification given by the administrators during the interview is that diploma in elementary education is a post-secondary course. Secondly, Classes VI-VIII are also with the Directorate of Secondary Education in the state. Similarly, the examinations are mostly conducted by the boards of secondary education which do not have the

expertise for conducting practice teaching examinations. Curriculum is with the State Councils of Educational Research and Training/State Institutes of Education. A coherent policy on the administrative and academic control of primary teacher training institutions needs to be developed.

No state could provide policy on in-service training. The districts with DIETs also did not have a plan to cover all teachers. The pressure to provide in-service training to teachers for crossing efficiency bar or to get selection grade guided some in-service training programmes. Major in-service programmes were those sponsored by MIIRD (PMOST, SOPT, from DIET funds) or other projects (MLL, NCERT projects, Teacher Empowerment, etc.). States like Kerala, Maharashtra, Haryana do provide funds but without a comprehensive plan. Only Madhya Pradesh established subdistrict centres (teacher centres) on an experimental basis but an overall policy was lacking there too.

There is no policy regarding staffing of elementary teacher training institutions. The teacher-student ratio varies from 1:12 to 1:40. Even in DIETs the guidelines have provided for a ratio of 1:15 (*a staff of seven for 100 student teachers have been provided*). Further the qualifications and experience of the master trainers do not make primary teaching experience a condition. Most of them are drawn from secondary schools. In recent years the states have raised the entry level of prospective teachers to the plus-two level and revised the curriculum. The master trainers in teacher training institutions except in DIETs remain university graduates with a degree in education. The subject competence of the master trainers to transact the upgraded curriculum is doubtful. Further study is required to assess actual transaction of the elementary teacher education curriculum. Even then there is a case for review of the qualifications of master trainers as in the case of DIETs. The states should formulate policy for the preparation of master trainers with primary teaching experience. The qualifications for experienced primary teachers for providing practice teaching should also be considered. The policy of providing in-service training to the staff of ETTEs needs to be worked out. Institutes of Advanced Studies in Education (IASEs) which have been assigned the role should be geared to the task. The states should have definite plans for the functionalisation of DIETs and improvement of the quality of other elementary teacher training institutions.

#### *Transfer Policy*

In the states of Maharashtra, Haryana, Karnataka and Orissa the policy is to transfer teachers after 3-6 years. In the states of Assam, Tamil Nadu, Madhya Pradesh and Kerala teachers are transferred on request and administrative grounds only. The policy of periodic transfer seems to be the legacy of the civil service where incumbents are transferred after three years so that they do not develop vested interest. In a school, if teachers

are effective, one does not find any justification for transfer after three to five years. It is usually exploited for the displacement of teachers to adjust some for purposes other than school performance. Nearly 30 per cent of teachers were transferred up to three times during the last five years in one state. Transfers followed every election. It is confirmed by teacher perceptions in the baseline study which indicates that 40 per cent teachers consider their transfer as a punishment (Jangira and Ahuja, 1994). The result may be low job satisfaction, low motivation and low performance.

In Maharashtra, the policy is to keep teachers at least 25 kilometres away from their home town. The premise is that teachers will stay at the school location. To what extent the purpose is served needs to be studied. The teachers who are transferred under this policy perceive transfer as a punishment. The outcome in terms of performance may not be positive. Secondly, in many villages residential accommodation for teachers, particularly female teachers, is not available. They stay in larger villages or nearer towns and commute dis-

tances as found in the field study. In both cases teacher performance is likely to be affected adversely. There seems to be a discrepancy between policy and field reality. Similar policy which proved counter-productive in Haryana stands withdrawn. A study on effectiveness is needed. The transfer policy needs review and rationalisation in some states.

#### Service Conditions

The service conditions include salary, allowances, housing facilities, study loans, pension and gratuity, benefits, etc. Table 2 summarises availability of the compensation and different facilities available to primary school teachers.

The scales are almost similar. In Assam, ad hoc teachers are appointed for Rs 900 per month till they are regularised. The states of Haryana, Karnataka, Kerala and Tamil Nadu provide additional allowance for working in rural or hilly areas. The states do not provide housing facilities for teachers, but pay house rent in urban locations. The problem is not addressed to in

TABLE 2  
Compensation and Service Conditions

Compensation and Service Conditions		Assam	Haryana	Karnataka	Kerala	Maharashtra	Madhya Pradesh	Tamil Nadu	Orissa
Appointment	Regular	Y	Y	Y	Y	Y	Y	Y	Y
	Ad hoc	Y	N	N	N	N	N	N	N
Salary* (in Rupees/month)	Initial	1185	1200	1130	1125	1200	1200	1200	1080
	Final	2395	2040	2100	1720	2040	2400	2040	1800
Housing facilities		N	N	N	N	N	Y**	N	N
Medical Allowance/reimbursement		Fixed	Y	Y	Y	Y	Fixed	Y	Y
Allowance	Rural/Remote Area	N	Y	N	N	N	Y	N	N
	Hill Area	N	N.A.	Y	Y	N	N.A.	Y	N.A.
Advances	House Building	Y	Y	Y	Y	N	Y	N	Y
	Scooter	Y	Y	Y	Y	Y	Y	Y	Y
Transfer Policy	Initial Posting	N	N	N	N	N	N	N	N
	In-service	N	3yrs.	N	N	5yrs	N	N	6yrs.
Study Leave		N	Y***	N	N	N	N	N	Y
Age of Retirement		58	58	58	55	58	60	58	58
Retirement Benefits	Pension	Y	Y	Y	Y	Y	Y	Y	Y
	Gratuity	Y	Y	Y	Y	Y	Y	Y	Y
	Leave Encashment	N	Y	Y	Y	N	Y	Y	Y
	Group Insurance	Y	Y	Y	Y	Y	Y	Y	Y
Grievance Removal Machinery		Y	Y	Y	Y	Y	Y	Y	Y

Y=yes, N-No

\* Scale of pay is only for regular teachers. In Assam, ad hoc teachers are paid a consolidated salary of rupees nine hundred per month.

\*\*Only for lady teachers of rural areas.

\*\*\*Only for B.Ed degree

rural and remote areas. All states provide pension, gratuity, group insurance and medical facilities. Leave encashment is also allowed in all states except in Assam and Maharashtra. There is no provision of study leave except in Orissa and for B.Ed. in Haryana. All states have grievance removal machinery and a provision for advance for the purchase of a vehicle. Salary scales and selection grades after fixed years of completion of service are available in all the states.

The opportunity for career advancement is very low as indicated by the field study. Only limited percentage (6 to 32) of the teachers received promotion. The highest percentage of teachers who received promotion was in Dharmapuri district (32 per cent) in Tamil Nadu and the lowest in Malappuram district (60 per cent) in Kerala. Good primary school teachers have to leave primary education for career advancement. The qualifications and years in service and not good performance in primary schools is the criteria for promotion. It affects job satisfaction adversely and retention of teachers in primary schools. The states need to review the promotion policy and make a channel of career advancement in primary education where a primary school teacher can become a head teacher, Block Education Officer, join DIET faculty, and become master trainer in in-service training programmes, etc. The criteria of promotion should include teacher performance. In fact, channel to SCERT and Directorate of Education for primary school teachers should be available. The policy regarding caderisation of personnel in primary education and career opportunity for primary school teachers assumes significance in view of the stress on teacher quality.

#### FIELD STUDY

##### **Institutional Capacity : State Council for Educational Research and Training**

The SCERTs/SIEs are involved in curriculum development and training of staff of the DIETs and ETTIs. At

present SCERTs cater to the needs of the entire school stage. The focus in DPEP is on the improvement of the quality of primary education through ensuring teacher quality. There is no group in the SCERTs which addresses this task. One or two staff members who are associated with this work do not have the experience in teaching at the primary stage.

The SCERTs are not equipped for training teacher educators in DIETs and ETTIs. The recent focus on continuous in-service training to supplement improved initial training requires a group, totally devoted to this task. The SCERTs did not report a system of training need assessment (TNA). It is also important for the effectiveness of training and transfer of its effects to classroom practice. Teacher consultation emerged as a factor contributing to their willingness to participate in in-service training programme in the field study. The states should establish a group on primary education in SCERTs with the responsibility for curriculum development, training teachers and training of teacher educators. Through national technical assistance programme the capacity of this group to design and execute curriculum and teacher development programmes in DIETs and sub-district level institutions should be developed.

##### **Institutional Capacity : District Institute of Education and Training and Elementary Teacher Training Institutes**

Each of the teacher training institution turns out 40 to 100 teachers every year. The position regarding curriculum revision is not encouraging. Most of the states revised curriculum after the National Policy on Education (1986) between 1987 and 1993. It was reported that minimum levels of learning (MLLs) and multigrade teaching have been introduced in the syllabi. The theory content is very high in Kerala (60 per cent) followed by Maharashtra (55 per cent in the first year and 60 per cent in the second year). It is 40 per cent in other states. It includes both practice teaching as well as other practicals. It reflects curriculum provision and not actual transaction.

The practice teaching is not in terms of time or

TABLE 3

Teachers Trained By DIETs during 1992-93

<i>State</i>	<i>District</i>	<i>Total No. of Teachers in the District</i>	<i>Total No. of Teachers/Head Teachers Trained</i>	<i>Percentage of Trained Teachers</i>
Haryana	Jind	1736	Nil	Nil
Kerala	Wayanad	2152	726	33.7
	Malappuram	18268	757	04.01
Tamil Nadu	Krishnagiri	6340	743	11.70
Madhya Pradesh	Betul	4621	308	6.7
	Bilaspur	12914	148	01.20
	Ratlam	3336	239	07.20
	Sehore	3716	222	06.00
	Tikamgarh	3345	271	08.10

blocks. Almost all the states are making provision for a particular number of lessons ranging from 20 lessons in Maharashtra to about 35 in Kerala. The lessons observed during practice teaching also vary from 4 in Haryana to 25 in Kerala. There is no system for internship in any of the states. The teachers do not receive full charge of the classroom or the school. However, both SCERTs and the DIETs suggest internship period of 3 to 6 months. In practice teaching experience in multigrade teaching is not provided. In Haryana practice teaching is not provided in intact classes but in part classes comprising about 20 children. It does not seem to be a healthy practice. Curriculum transaction requires review and improvement to ensure teacher quality.

DIETs are not fully operational in states except at Dharmapuri in Tamil Nadu. It was surprising that the DIET in Jind district had just two academic staff, but 12 supporting staff. In Madhya Pradesh staff ranges from 5 to 8. In Kerala, only a faculty of 11 was in position. DIET staffing is inadequate to meet the heavy demand of in-service training and providing guidance to the teacher centres or school clusters that are fast coming up under the DPEP strategy of recurrent school-based in-service training.

The coverage of in-service training programme was miserably low (1.2 to 6.7 per cent) in the DIETs of sampled districts in Madhya Pradesh.

It is about 10 per cent or lower in other districts

except in Wayanad in Kerala where the coverage was about one-third of the teachers. With this rate all teachers cannot be covered even in five years. The states will have to plan sub-district infrastructure at the block and school cluster levels for continuous school-based in-service training. The DIETs should develop plans for recurrent in-service training for all teachers.

#### *Library and Its Utilisation*

There are some teacher training institutions which do not have even a single library book. The number of books in other institutions range from 2,000 to 15,000. The utilisation of the books, however, is low. Table 4 shows the number of books, books issued to faculty and books issued to students.

In the Jind district of Haryana and Tikamgarh district of Madhya Pradesh no books were issued to either faculty members or students during the 1992-93 session. If issue of books is any indication, in other districts also the utilisation level was very low except in Bilaspur in Madhya Pradesh.

In Assam and Maharashtra DIETs are not available in the project districts. In other states these are not fully operational and is a cause for concern. The states which have not established DIETs in DPEP districts will have to take expeditious steps for establishing and making them functional. It will take a couple of years for these states to make DIETs operational. As an interim

TABLE 4

Library Facilities and Utilisation

<i>State</i>	<i>District</i>	<i>ETTI/DIET</i>	<i>No. of Books</i>	<i>Issued to Faculty</i>	<i>Issued to Trainees</i>
Assam	Karbi-Anglong	BTC	1000	50	300
	Darrang	BTC	2000	Nil	Nil
Haryana	Jind	DIET	Nil	Nil	Nil
	Hissar	DIET	60	Nil	Nil
Kerala	Wayanad	DIET	706	115	405
	Malappuram	DIET	329	40	75
Maharashtra	Aurangabad	GJCE	7500	100	100
	Nanded	GJCE	14000	Nil	Nil
Tamil Nadu	Krishnagiri	DIET	1100	870	650
Madhya Pradesh	Betul	DIET	4500	125	728
	Bilaspur	DIET	8016	645	1000
	Ratlam	DIET	15000	200	150
	Sehore	DIET	6636	1100	352
	Tikamgarh	DIET	Nil	Nil	Nil
Orissa	Gajapati	GSTS	5200	90	230
	Rayagada	GSTS	9500	90	300

measure these states should identify ETIs and establish teacher training teams for undertaking the tasks envisaged in the district plans. The states in which DIETs are not fully operational should take steps to raise them to the optimum level with technical assistance from SCERT and national technical assistance group. These institutions should be provided the necessary equipment for in-service training and capacity building at the district level.

### *Teacher Quality*

Teacher quality includes initial education and training and in-service training of teachers, desire for in-service training, preferred type of in-service training, instructional supervision, perceptions about socio-economic and professional status, and perceived career prospects and career satisfaction. The study covered 1907 teachers from 13 districts.

### *Sample Characteristics*

The majority of the teacher population is aging because a large number of teachers were recruited during the 1950s and 1960s to meet the demands of expansion of primary education. The additional recruitment is mostly for attrition and a comparatively much lower rate of expansion. In Tamil Nadu about 90 per cent of the males and 60 per cent of the females in South Arcot district are above 45 years of age. In Aurangabad in Maharashtra, Haryana, Madhya Pradesh and Karnataka the percentage of teachers above 45 years of age is 50 and above. The percentage of teachers in the age range of 25 and below is quite low except in Aurangabad and Nanded, where probably, more recruitment in recent years has been made. Motivational strategies directed towards the more experienced and aged teachers will, therefore, have to be addressed to. It is a difficult task because the teaching practice and attitudes get fixed as the teachers get older and experienced, particularly where staff development avenues are limited.

When teachers are considered according to their socio-cultural status (those belonging to SC/ST and OBC), there is a lot of variation not only among the states but also among the districts within the states. For example, in Jind and Hissar districts in Haryana only about 3 per cent of the teachers belong to SC while the population percentage is around 20 according to the 1991 Census. The same is the case in the districts of Sehore and Ratlam in Madhya Pradesh and South Arcot in Tamil Nadu. In other districts also, their percentage is lower, but not to this extent. Only in Belgaum district the percentage of SC teachers is higher than the population percentage in the district.

Representation of ST teachers is very low in relation to their population percentage in all the districts of Madhya Pradesh, Wayanad and Raichur. It may be due to low utilisation of educational opportunities by tribal children in these districts and absorption of the

limited number of school graduates in other professions or vocations according to their preference. In the districts of Karbi-Anglong, Aurangabad and Nanded it is higher than their population proportion. The states may like to study the reasons for under-representation of SC and STs to plan intervention strategies to improve the situation. There is no reference for comparison of the representation of OBC teachers but the percentage is the highest in Tamil Nadu followed by Betul and Sehore districts of Madhya Pradesh and in both the districts of Kerala.

### *Education and Training*

The prescribed qualification of primary school teachers is plus-two in the states of Haryana, Maharashtra, Madhya Pradesh, Karnataka and Tamil Nadu and matriculation in the states of Kerala, Assam and Orissa. Some of the districts in the states still have teachers who have not completed 10 years of schooling. It is the highest in Karbi-Anglong (50 per cent) followed by Gajapati district (23 per cent). The district with percentage of teachers having 12 years of schooling or above is the highest in Kerala followed by Karnataka, Madhya Pradesh and Haryana. The percentage of such teachers goes up to 40-50. About five per cent of the teachers have post-graduate qualification in these states.

### *Satisfaction with Initial Training*

The teachers were asked about their satisfaction with the initial training they had. The highest percentage of teachers who felt dissatisfied with initial training was in Wayanad (48) followed by Jind and Malappuram (30) and Hissar (28.81) districts. In other districts the percentage of teachers dissatisfied with initial training was below 20. The teachers were further asked about the aspects of initial training which they considered unsatisfactory. The major areas of dissatisfaction were : practical work, practice teaching, library and inadequate audio-visual material. In Haryana the teachers were also dissatisfied with the teaching of the theory course. They found textbooks of low quality and even non-availability of textbooks in the regional language. They also reported poor teaching in institutions and indifferent teacher educators. Study of teacher training institutions confirms the prevalence of poor initial training practices even now. The SCERTs suggest curriculum revision to include MLLs, multigrade teaching, use of teaching aids, demonstration lessons by experienced teachers and internship of 3-6 months to improve initial training. The states need to address the quality of initial training.

### *In-service Training*

There is a wide range of coverage in in-service training programmes during the last five years. It is as low as 12 per cent in Karbi-Anglong in Assam and as high as 84 per cent in Raichur district in Karnataka. The coverage is also in the higher range in Wayanad (82 per cent) and

Dharmapuri (78 per cent). Half of the districts covered less than 50 per cent teachers in in-service training programmes. The lower coverage of teachers in in-service training programmes is also supported by the baseline assessment studies.

The lower coverage in in-service training programmes in the districts is due to inadequate infrastructural facilities, inadequate allotment of funds and the absence of a conscious policy at the district level to cover all teachers. In fact, ETIs do not have the obligation to provide in-service training which is an important function of DIETs. Even when DIETs function fully, it is not possible to cover all teachers in the district. Study of institutions reveals that most of the DIETs provide in-service training to less than 10 per cent of the primary school teachers during the last two years. There is practically no infrastructure at the sub-district level. In Madhya Pradesh teacher centres are being established on an experimental basis. The data on the location of training programmes indicated few teachers receiving in-service training at the school or school complex level. The districts will have to develop adequate infrastructure at the sub-district level (blocks, school cluster, etc.)

The duration of most of the in-service training programmes has been one to two weeks. But these programmes are mostly a single shot affair with little follow-up. The impact of such training on classroom practice is doubtful. Recurrent in-service training with school-based staff development support has been found to contribute to school effectiveness and improved learning achievement as demonstrated by Jangira (1994) and Joyce and Showers (1988).

Another aspect of the quality of in-service teacher training is its relevance to teachers in the context of their schools. Interviews with SCERT faculty and DIET and ETI and teacher training staff indicated top-down decision regarding training content and is not based on actual training needs assessment. Most of the teachers received training in content and methods of teaching. Very few received training in multigrade teaching, preparation and use of teaching aids and child-centred education. None of the teachers received training in the role of teachers in improving enrolment, retention and attainment of children. The issue of relevance is related to its use in the classroom.

#### *Reasons for not Using In-service Training in Schools*

Nearly one-third teachers in Darrang and Hissar districts, and a quarter of teachers in Wayanad did not make use of in-service training in classroom practice. In other districts too about 10-15 per cent teachers fall in this category. The reasons for not using knowledge and skills acquired during in-service training given by teachers are: non-availability of the required material, heavy syllabus, lack of support from the head teacher and irrelevance of training. A promising experiment on teacher empowerment in Dhar district in Madhya

Pradesh was reported by SCERT (UNICEF, 1993). The teachers are provided Rs 500 to purchase material and make teaching aids. They are also provided training in making teaching enjoyable through activities. Initial indications are encouraging. Its impact on learning achievement is yet to be evaluated. The effect of action-research-based staff development through NCERT-sponsored Multisite Action Research Project (Jangira and Ahuja, 1993) in Wayanad DIET in Kerala reported improvement of classroom practice of teachers. It has implications for staff development in primary schools.

#### *Perceived Training Needs*

In most of the districts 80 to 90 per cent of the teachers desire to undergo in-service training irrespective of their sex or location in rural and urban areas. It is also borne out by the baseline assessment studies. This brings us to the perceived teacher needs for designing in-service training.

#### *What Should be the Content of Training?*

The teachers were asked to suggest the content areas for in-service training. Most of them preferred methods of teaching, play-way techniques of teaching, preparation and use of teaching aids and multigrade teaching. In Assam and Kerala content of school subject was given higher priority, while in Madhya Pradesh methods of teaching, play-way techniques and child-centred education were accorded high priority. Surprisingly, the role of teachers in enrolment, retention and achievement of children did not receive high preference. Probably teachers believed that with the other suggested areas of training, these parameters will also improve. Methodology of responsive teaching (Jangira, 1994) and active learning and child-centred teaching need to be stressed (Jangira, 1994).

#### *Where Should the Training be Organised?*

The teachers were required to give preference for the location of training. Teachers in more than half of the districts preferred training in their own school and school complex. In Karbi-Anglong, Nanded, Gajapati, Rayagada, Ratlam, South Arcot, Raichur and Belgaum more than 50 per cent of the teachers desired training in teacher training institutions. For continuous staff development initiative infrastructure at the cluster level and peer support in schools are to be developed.

#### *Duration and Periodicity*

Teachers in most of the districts desired one to two-week training. They are not in favour of more than two-week training except in Maharashtra. Three-week training in Maharashtra may be due to the condition for crossing the efficiency bar or getting selection grade. The preferred periodicity is that of once a year. The duration and periodicity of the training are linked to

training design. These perceptions are based on the conventional programmes with fixed periodicity. Continuous school-based in-service training is likely to change the perceptions as it happened in the Multisite Action Research Project (Jangira and Ahuja, 1993).

#### *What Increases Teachers' Participation in Training?*

Teachers were required to rank the factors which improve their willingness to participate in in-service training programmes. The factors receiving high preference are: consultation with teachers to assess training needs, competent resource persons, involvement of trainees in the training process and support for teachers to implement new ideas and innovations acquired in in-service training programmes. These factors need to be taken into consideration in designing in-service training programmes.

#### *Teacher Perceptions about Status*

The teachers were interviewed to assess their perceptions regarding social, economic and professional status. They were also interviewed to explore perceived satisfaction with professional status. These perceptions were assessed on the premise that positive perceptions about status are related to career satisfaction. The career satisfaction leads to motivation and commitment to perform in schools and classrooms (Chapman, *et al.*, 1993). For example, the teachers who desire more in-service training and join teaching because of interest in teaching young children may perceive their professional status as high. For reliability check negative indicators like long vacations, limited hours of duty and last choice for the job were also taken into account. Teacher perceptions regarding the factors that contribute towards improvement of social, economic and professional status were also studied.

#### *Reasons for Joining the Teaching Profession*

The teachers were required to give reasons for joining the teaching profession. All teachers in Karnataka and Maharashtra indicated interest in teaching young children as the reason. It was about 80 per cent in Assam, Kerala, South Arcot district in Tamil Nadu, Orissa and Madhya Pradesh. In Haryana, Wayanad district in Kerala, and Dharmapuri district in Tamil Nadu, this reason was not rated high.

At least one-third of the teachers joined teaching not because of interest in teaching young children, but due to some other reasons. Limited hours of duty and joining teaching because no other avenues were available also find a place in reasons for joining teaching in Jind district of Haryana, both the districts of Karnataka, Malappuram district in Kerala and Dharmapuri district in Tamil Nadu. Higher percentage of teachers expressing interest in teaching young children as a reason is contradictory in Karnataka, Malappuram district in

Kerala, Maharashtra, Orissa and Madhya Pradesh. About one-third of teachers in these districts also gave other reasons which were for cross-checking responses. Overall, nearly half of the teachers joined teaching because of interest in teaching young children.

#### *Perceived Social Status*

Teachers in different states perceived different factors contributing to their social status. It implies that the perceptions are culture-based. For example, teachers in Assam, Madhya Pradesh, Haryana, Maharashtra and Orissa considered good performance of students in studies and sports as the major factor, while teachers in Kerala and Tamil Nadu considered commitment to the welfare of students and moral status of teachers as the major factors contributing to high social status. Teachers in Karnataka consider high qualifications as the most important factor contributing to high social status of primary school teachers.

Teachers were asked to indicate whether their social status declined or improved or remained the same during the last ten years. Nearly half of the teachers in Assam, Haryana and Ratlam; and Sehore district of Madhya Pradesh perceived a decline in their social status during the last ten years. In rural areas of Hissar district in Haryana; both districts in Karnataka; Malappuram district in Kerala; both districts in Maharashtra, Tamil Nadu, Orissa and all districts in Madhya Pradesh except in Ratlam, felt that their social status improved. Overall it seems that one-third to half of the teachers, particularly in urban areas, felt that their social status declined. It has implications for motivations of teachers. Such teachers are likely to have low motivation affecting their performance.

#### *Perceived Economic Status*

Teachers were asked to indicate the extent to which they could meet needs of their family with salary. The percentage of teachers in both the categories 'to a great extent', and 'not at all' was low except in a few districts. In Haryana; Maharashtra; Dharmapuri district in Tamil Nadu; Orissa; and Ratlam and Tikamgarh districts of Madhya Pradesh, about 10 per cent teachers are able to meet family needs with their salary. In Kerala, Tamil Nadu, and Gajapati districts in Orissa about 10 per cent teachers expressed that salary was not at all sufficient to meet their family needs. Although the concept of meeting family needs is subjective and varies from culture to culture and place to place, the data suggests that some teachers are not in a position to meet their needs from the salary. This segment of teachers may have problem of motivation.

Teachers were also asked to give their perception with regard to their economic status. Economic status of teachers was perceived as the lowest in Assam followed by Haryana and Kerala. Majority considered it moderate. Teachers' economic status was perceived as high in Tamil Nadu.

TABLE 5

## Perceived Promotional Prospects of Teachers

State	District	Very Bright	Bright	Bleak
Assam	Karbi-Anglong		08.00	92.00
	Darrang	01.00	02.90	96.10
Haryana	Jind	18.00	26.00	56.00
	Hissar	13.50	24.00	62.50
Karnataka	Raichur	13.00	33.00	54.00
	Belgaum	05.00	32.00	63.00
Kerala	Wayanad	04.00	31.00	65.00
	Malappuram	—	20.00	80.00
Maharashtra	Aurangabad	10.00	52.00	38.00
	Nanded	08.00	64.00	28.00
Tamil Nadu	South Arcot	03.00	28.00	69.00
	Dharmapuri	10.00	21.80	68.20
	Betul	11.00	22.00	67.00
	Bilaspur	04.00	37.00	59.00
	Ratlam	04.00	18.00	78.00
Madhya	Sehore	09.00	25.00	66.00
Pradesh	Tikamgarh	20.00	22.00	58.00
	Gajapati	16.00	64.00	20.00
Orissa	Rayagada	11.00	52.00	37.00

*Perceived Professional Status*

To assess professional status, primary school teachers were asked to rank factors that they consider contributing to the professional status. The perceptions varied from state to state. In Karnataka, Kerala and Orissa academic qualifications received rank one. In Haryana and Madhya Pradesh teaching experience received rank one. It seems to be in agreement with the aging population of teachers in these two states where most of the teachers fell in the 45 years and above age range. In Assam, performance of students was ranked first while in Maharashtra and Tamil Nadu commitment to the welfare of students was ranked first. Academic qualifications, teaching experience, performance of students, commitment to the welfare of students and membership of expert committees emerged as the factors which contribute to the professional status of teachers. Although teachers perceived membership of expert committees as a factor in professional status, the representation of the sampled teachers on committees was rare.

*Improvement in Qualifications*

The teachers improving academic and professional qualifications ranged from 10 to 62 per cent except in Karbi-Anglong district of Assam where it was only 2 per cent. Percentage of teachers acquiring a university degree was over 40 in Assam, Haryana, Wayanad in Kerala, Maharashtra, Tamil Nadu and the districts of Betul and Ratlam in Madhya Pradesh. Number of teachers who

acquired a post-graduate degree was more than 20 per cent in the two districts of Haryana, Dharmapuri district in Tamil Nadu and Tikamgarh district in Madhya Pradesh. Similarly, teachers were also acquiring degrees in education. It might be due to the availability of opportunities in the open learning system. It seems to be a healthy trend but one has to be cautious. Unless special steps are taken, these teachers cannot be retained in primary schools. Secondly, these teachers may get demotivated because they may continue to work in primary schools without increased compensation commensurate with qualification. This is likely to affect their performance adversely.

*Promotional Prospects*

The teachers were asked about their promotional prospects. More than 90 per cent of the teachers in Assam and more than 50 per cent in Haryana, Kerala, Tamil Nadu and Madhya Pradesh reported that their chances for promotion were bleak. In the states of Maharashtra and Orissa the percentage of teachers was between 20 and 38. About one-third of the teachers in Karnataka, Wayanad in Kerala, Bilaspur in Madhya Pradesh and more than 50 per cent in Maharashtra and Orissa considered their promotional prospects as bright. The percentage seems to be on the higher side. The teachers might perceive selection grade also as a promotional prospect. This percentage comes close to the percentage of teachers in the age-group 45 and above. The actual percentage of teachers who received promotion was low. It ranged from 6 to 32 per cent. It was the



highest (32) in the Dharmapuri district of Tamil Nadu and the lowest (6) in Malappuram district of Kerala. In most of the districts less than 20 per cent teachers could get promotion in their career. When teachers feel stranded in a dead end position with limited opportunities for growth or expectancy of reward, it is difficult to sustain their motivation for improved performance.

#### *Perceptions about Professional Status*

More than one-third of the teachers considered their professional status high in the states of Karnataka, Kerala, Maharashtra, Tamil Nadu and Orissa. Most of the teachers rated their professional status as moderate or low. Taking all the factors together these perceptions of over one-third teachers are bound to affect the motivation level adversely.

Considering the perceived social, economic and professional status of teachers one feels that most of the primary school teachers have low motivation. It is, therefore, not surprising that the learning achievement in reading and mathematics as reported in baseline assessment studies is low. The teachers either are not qualified or have low professional competence or the environment in the school and education departments does not allow them to transfer teaching competence to performance.

#### **Problems**

##### *Timely Payment of Salary*

Forty-three per cent teachers in Darrang district in Assam reported non-payment of salary on a fixed date.

This percentage was highest in Rayagada (73 per cent) followed by Gajapati (21 per cent) and Hissar (14 per cent). In other districts the percentage of such teachers ranged from 2 to 8. The irregularity in payment of salary is a cause for concern.

##### *Academic Support from Different Functionaries*

The percentage of teachers not getting any help from District Education Officers (DEOs) was the highest in Tikamgarh (68 per cent), followed by Malappuram (63 per cent), Hissar (56 per cent), Bilaspur (54 per cent) and Nanded (46 per cent). Even in other districts teachers did not get any help from these functionaries. About one-third of teachers in Madhya Pradesh reported no help from Block Education Officers and about one-fifth of teachers in Karbi-Anglong, Hissar, Rayagada, Betul reported no academic assistance from Block Education Officers. Nearly 10 per cent teachers did not receive any academic support from teachers of their own school and more than one-third of teachers in Wayanad, Dharmapuri and all districts of Orissa and Madhya Pradesh did not get any help from the school complex. This indicates the absence of supervision and help which leads to teacher isolation and discourage teachers to improve performance in the school.

TABLE 6

Teachers Not Getting Salary on a Fixed Date

<i>State</i>	<i>District</i>	<i>Percentage of Teachers</i>
Assam	Karbi-Anglong	1.0
	Darrang	43.1
Haryana	Jind	8.0
	Hissar	14.4
	Raichur	10.0
Karnataka	Belgaum	-
Kerala	Wayanad	3.0
	Malappuram	-
Maharashtra	Aurangabad	6.0
	Nanded	5.0
Tamil Nadu	South Arcot	2.0
	Dharmapuri	2.0
Madhya Pradesh	Betul	6.0
	Bilaspur	-
	Ratlam	-
	Sehore	3.0
	Tikamgarh	5.0
Orissa	Gajapati	31.0
	Rayagada	73.0

##### *Multigrade Teaching*

The teachers perceive multigrade teaching as a problem mostly in the rural areas of Assam, Haryana, Karnataka, Maharashtra; Dharmapuri district of Tamil Nadu; Orissa and Madhya Pradesh. The percentage of teachers reporting the problem ranged from 42 in Maharashtra to 87 in Karbi-Anglong. Very little pedagogical and administrative support is reported by teachers.

High student absenteeism was perceived by more than 50 per cent of teachers in the states of Madhya Pradesh, Orissa, Haryana and Wayanad district in Kerala. Non-availability of in-service training was reported by more than two-thirds of teachers in Assam, Karnataka, Kerala and Orissa. In other states also, the problem was faced by one-third to half of the teachers.

More than 50 per cent of teachers in the states of Madhya Pradesh, Orissa, Kerala, Karnataka and Haryana considered syllabus as heavy for students. This is also compounded by the non-availability of textbooks in time in the states of Assam, Karnataka, Kerala, South Arcot district in Tamil Nadu and Orissa. The percentage ranged from a quarter to hundred per cent. Similarly, high percentage of teachers in almost all the states expressed lack of teaching aids in schools as the problem.

##### *Problems of Female Teachers*

More than half of the female teachers reported problems in schools. Lack of cooperation from male teachers was the highest in Sehore (50 per cent), Tikamgarh (42.9 per cent); Nanded (26.7 per cent) and Hissar (25.6 per cent) districts. It was about 10 per cent in the other

states except in Assam, Kerala and Rayagada district in Orissa. In Assam, particularly in Karbi-Anglong district, females enjoy equal status with men culturally. In Kerala females are equally educated. Lack of separate toilets and availability of residential accommodation in schools was reported by most of the female teachers in all the districts. About 10 per cent of the female teachers in Darrang district of Assam; Bilaspur and Tikamgarh districts in Madhya Pradesh; and about 5 per cent in Haryana, Kerala, South Arcot district of Tamil Nadu, Gajapati district of Orissa reported harassment by the head of the institution.

The policy of the government is to improve representation of female teachers not only for ensuring equal professional status but also in improving girls' enrolment and retention in schools. Unless these problems are addressed to in the project districts, this objective cannot be fulfilled.

#### Prediction of Perceived Professional Status

The positive perception of professional status was con-

sidered as an indicator of career satisfaction and consequent motivation. The teachers were required to rate their professional status on five points ranging from 'very high' to 'very low'. Based on the descriptive analysis data, 38 explanatory variables were selected for regression analysis (Tables 7 and 8).

The 14 significant explanatory variables are: economic status, help from the head teacher, lack of academic guidance, long vacations, 'could not find any job', marital status, year of completion of teacher training, desiring in-service training, number of days of in-service training, promotional avenues, interest in teaching young children, social status, staff meeting, limited hours of duty. Product moment correlations are not significant for the explanatory variables of marital status, interest in teaching young children, social status, staff meeting and limited hours of duty. The beta coefficient for these variables are, however, significant.

The 14 variables explain 14.2 per cent variation in the level of perceived professional status of teachers. The first explanatory variable picked up in the step-down

TABLE 7  
Explanatory Variables, Beta Coefficient, *r* and Standard Error

<i>Explanatory Variable</i>	<i>Beta</i>	<i>Standard Error</i>	<i>t Value</i>	
Economic status (VH=1, H=2 MOD = 3, L&VL=4)	.187	.240	0.778	8.43
Help from head teacher (VH=1, SH=2, NH=3)	.110	.215	0.764	4.74
Lack of academic guidance (Yes=1, No=2)	.103	.197	0.759	4.52
Long vacations (Yes=1, Else=2)	.138	.111	0.756	5.66
Could not find any job (Yes=1, Else=2)	-.112	-.087	0.753	4.78
Marital status (Unmarried=1, Else=2)	.084	0.044	0.751	3.87
Year of completion of teacher training	.074	.112	0.749	3.42
Desiring in-service training (Yes=1, Else=2)	.065	.73	0.747	3.02
No. of days of in-service training	-.055	-.071	0.746	2.59
Promotional avenues (Yes=1, Else=2)	.052	.050	0.745	2.41
Interest in teaching young children (Yes=1, Else=2)	-.056	-0.004	0.744	2.44
Social status (Remained same=1, Improved=2, Else=2)	-.051	-0.147	0.743	2.24
Staff meetings (Term and Year=1, Week and Month=2, Else=0)	-.048	0.089	0.742	2.20
Limited hours of duty (Yes=1, Else=2)	-.051	0.004	0.742	2.14

TABLE 8  
Explanatory Variable, Multiple R, Square R and Variation Explained (VE)

<i>Explanatory Variable</i>	<i>Multiple R</i>	<i>Square R</i>	<i>% VE</i>
Economic status (VH=1, H=2, MOD = 3, L and VL = 4)	0.24	0.057	5.7
Help from head teacher (VII = 1, SH = 2, NH = 3)	0.301	0.09	3.3
Lack of academic guidance (Yes = 1, No = 2)	0.322	0.104	1.4
Long vacations (Yes = 1, Else = 2)	0.332	0.111	0.7
Could not find any job (Yes = 1, Else = 2)	0.334	0.119	0.8
Marital status (Unmarried = 1, Else = 2)	0.352	0.124	0.5
Year of completion of teacher training	0.360	0.13	0.6
Desiring in-service training (Yes = 1, Else = 2)	0.366	0.133	0.4
No. of days of in-service training	0.37	0.137	0.3
Promotional avenues (Yes = 1, Else = 2)	0.374	0.14	0.3
Interest in teaching young children (Yes = 1, Else = 2)	0.377	0.142	0.2
Social status (Remained same = 1, Improved = 2, Else = 3)	0.38	0.145	0.3
Staff meetings (Term and Year = 1, Week and Month = 2, Else = 0)	0.383	0.147	0.2
Limited hours of duty (Yes = 1, Else = 2)	0.386	0.149	0.2

Multiple R = .386 Square R = .149 Adjusted R = .142

regression analysis was economic status. It explains 5.7 per cent of the variation. It is followed by 'help from the head teacher' which explains 3.3 per cent variation in the perceived professional status of teachers. Two more variables, 'lack of academic guidance' and 'staff meetings' to discuss learning-teaching problems' are also linked to this variable. The teachers who perceived their professional status high are sensitive to the lack of academic guidance. These three variables together explain 4.9 per cent of the variation. The variables are indicators of internal supervision which also emerged as significant explanatory variable of student achievement.

The explanatory variables of 'desire for in-service training' predict the perceived level of professional status of primary school teachers. The amount of in-service training was indicated by the number of days of cumulative in-service training during the last five years. The teachers with more days of in-service training perceive their professional status high.

The choice of the teaching profession was concep-

tualised as a composite component of the positive sub-component of interest in 'teaching young children' and three sub-components of 'long vacations', 'limited hours of duty' and 'could not find any other job' as opposite to 'interest in teaching young children'. The descriptive analysis indicated contradictory choice decisions. The same trend appeared in the regression analysis indicated by contradictory directionality. This variable needs further conceptualisation and study.

Expectation of promotion has emerged as a significant explanatory variable of the level of perceived professional status. The teachers who considered promotion chances 'very bright' and 'bright' perceived their professional status high. Although chances for promotion of primary teachers do not go beyond head teacher, larger number of teachers considered their promotion channels as 'very bright'. It may be due to the number of teachers who had already acquired or were in the process of acquiring higher qualifications, as indicated in descriptive analysis, may be expecting promotion outside primary schools.

Social status emerged as a predictor of perceived professional status. The variation explained is small, but it does matter. This aspect needs to be addressed as the descriptive analysis indicated that about one-third of the teachers perceive a decline in social status.

A large part of the variation in the perceived professional status remains unexplained as only 14.2 per cent has been explained by the 14 variables. Further efforts to conceptualise professional status and explanatory variables are needed. But it does indicate that within school processes (help from head teacher, academic help and discussion on problems relating to classroom), amount of in-service training, economic status and promotional prospects do affect teacher perceptions about professional status. These findings from regression analysis are preliminary, since the sec-

ond level of analysis to assess variations between states is yet to be carried out and findings, therefore, should be considered as indicative only.

#### Policy Implications

Within the time constraint the study has provided useful information having implications for the review of teacher and teacher education policy to make these responsive to the needs of DPEP. It indicates in-service training needs of teachers in the states and other parameters for the design of the programme of continuous school-based in-service training. The policy implications arising out of the study are summarised in Table 9. Against each implication 'x' indicates relevance to states and '\*' indicates suggestions by the experts.

TABLE 9  
Policy Implications

Implications	Assam	Haryana	Karnataka	Kerala	Maharashtra	Madhya Pradesh	Tamil Nadu	Orissa
<i>1. Demand and Supply</i>								
1.1 Review of demand and supply	x	x	x	x	x	x	x	x
1.2 Alternative use of surplus pre-service training capacity		x	x	x	x			
1.3 Augmentation of pre-service training facilities	x							
1.4 Development of perspective plan on Teacher Education	x							
<i>2. Recruitment, Placement and Transfer</i>								
2.1 Upgradation of teacher qualification to +2 level	x		x					x
2.2 Pre-service training before entry into teaching	x							
2.3 Decentralised recruitment at district level	x	x		x		x		x
2.4 Involvement of local administration in recruitment	x	x	x	x	x	x	x	x
2.5 Placement policy for schools in difficult context to ensure teacher availability	x	x	x	x	x	x	x	x
2.6 Rationalised transfer policy instead of bureaucratically fixed period of transfer		x	x		x			x
2.7 Rationalised transfer policy instead of forced posting at a distance from home					x			
<i>3. Representation of Socio-cultural Groups of Teachers</i>								
3.1 Increasing representation of female teachers	x		x		x		x	x
3.2 Increasing representation of SC teachers			x	x			x	
<i>4. Service Conditions</i>								
4.1 Compensation for posting in remote and difficult contexts	x		x	x	x		x	x
4.2 Study leave for improving further education and training	x		x	x	x	x	x	x



### Further Research

Several areas of research emerge from the present study. The disequilibrium between demand and supply in some states raises the question of wastage of resources in pre-service teacher education including the induction training cost and quality of training, particularly of private unaided institutions. A comprehensive study on labour market on primary school teachers is desirable.

In this study, the issues of teacher motivation and teacher quality could not be linked to student achievement due to time constraint. A study linking incentives and teacher quality to student achievement will be quite useful.

Efficiency of teacher training institutions preparing primary school teachers, particularly DIETs/ETTIs (government, private aided and unaided), is needed from the point of view of costs involved and quality assurance.

Large investments will be made for in-service training of teachers and teacher educators. Studies on the impact of in-service training on classroom practice including teacher behaviour and student achievement are desirable for the improvement of in-service training design.

Relative effectiveness of trained and untrained teachers particularly in the states of Assam, Madhya Pradesh and Orissa needs to be studied. The effectiveness of transfer policy in the state of Maharashtra, that is, posting of teachers at least 25 km away from their home town needs to be studied.

The regression analysis has yielded within school and school complex, variables of internal supervision (help from head teacher, peers, academic guidance). Experimental study to establish causal relationship between internal supervision and student achievement will be of interest.

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# Designing, Production and Distribution of Instructional Materials

C. N. RAO



## Introduction

Printed textbooks and other instructional materials have been and, in spite of the advent of the electronic media, will continue to occupy an extremely important place in the teaching-learning process in the schools in India. The much-publicised paperless (and bookless) society has not, mercifully, emerged as a practical alternative in the educational scenario in the schools. On the other hand, the number of titles, the number of copies of these titles and the number of pages have registered significant increase in recent years, not to mention the greater use of colours. These have strained the resources of the agencies responsible for publishing these textbooks, calling for managerial skills, generally associated with mass production of consumer and other goods, which, unfortunately, were either not available in the book industry or, if available, were not taken advantage of. Furthermore, textbook publishing on a mass scale has not been recognised even today, barring a few exceptions, as a specialised, technical process, requiring the employment of trained, professional technologists and specialists in the fields of editing, designing, production, storage and distribution. State after state and agency after agency have requisitioned the services of existing administrative personnel, who have stumbled through the maze of typesetters, processors, printers, binders and book retailers. Some of them acquired a little insight, while the remaining majority refused to learn the intricacies of book production. All this resulted in poorly illustrated, ill-designed and indifferently produced textbooks.

However, the two strong points of such textbooks were the reasonable prices (since most of the agencies operated on a 'no-profit-no-loss' basis or the government subsidised the costs of production) and the contents, which were more relevant to Indian ethos, as compared to the earlier textbooks.

## Objectives of the Study

The Publication Department (PD) of the National Council of Educational Research and Training (NCERT) was entrusted with the task of undertaking a study on Designing, Production and Distribution of Instructional Materials in select states under the District Primary Education Programme (DPEP). These states were : Assam, Haryana, Karnataka, Kerala, Maharashtra, Madhya Pradesh, Orissa and Tamil Nadu. The studies in six states have been completed and preliminary reports have been approved by the concerned states. However, the progress in the case of Madhya Pradesh and Orissa has been slow and the reports are yet to be drafted.

The objectives of the study were :

1. To assess the present status of designing, production and distribution of instructional and NFE materials in the states covered by the SSN and DPE projects.

- 2 To suggest improvements/modifications, wherever necessary for each area.
3. To suggest professional and technical training of the personnel, in view of technological advances.

### Terms of Reference

The Terms of Reference of the study are given at Annexure I.

### The Study Team

While Shri C. N. Rao, Head, Publication Department, NCERT was the Head of the Team, senior officers of the Publication Department were nominated as the members of the Sub-Core Team, who were assisted by the Nodal Officers and Surveyors from each state. The state-wise details are given at Annexure II.

### Methodology

The required data was collected from each state through a main questionnaire, which was filled in by the respective Nodal Officers in consultation with the respective member of the Sub-Core Team. Thereafter two sub-questionnaires were filled in by the respective Surveyors, on the basis of the surveys conducted to ascertain : (i) the availability of books, and (ii) paper and infrastructure for printing, etc. in the state. The information thus collected was analysed by the Study Team and discussed with the respective Nodal Officers. Printed books were collected from each state and were examined by a team of experts, to assess the physical qualities of the books for different classes/stages under five categories namely, typography, illustrations, printing, binding and paper, as well as the overall rating. The proforma of the three questionnaires and the rating card are given at Annexures III, IV, V and VI.

### Findings of the Study and Recommendations

#### Findings

1. Generally, more than one agency is involved in the overall publishing of the textbooks. This has often resulted in lack of coordination and the different agencies have tended to follow different mechanisms.
- 2 Resources and finances are major problems for almost all agencies. Borrowing money from banks at high interest rates seriously affects the financial standing of the agencies.
3. Some agencies depend only on government presses for the printing of the books while other agencies confine the printing jobs to printers within their state only. In the former case, printing has been delayed and in the latter case, the printing rates have been quite high.
4. Except for a couple of agencies, the distribution of

the printed books has been seriously delayed, leading to criticism and dissatisfaction.

5. Distribution of free books is a major problem as often such free books do not reach the target group or reach very late. Further, the reimbursement on account of such free books is generally delayed with the result that the agencies face financial crunch.
6. Almost all the agencies suffer from the lack of professionally trained personnel in all the areas of book publishing.
7. In-house facilities for lasersetting, artwork preparation, designing, etc. are non-existent.
8. The physical qualities of the books need considerable improvement in almost all cases
9. The agencies are not functionally autonomous with the result that they have to await decisions and approval from elsewhere.
10. The agencies and their various outlets do not have modern communication facilities and hence monitoring becomes difficult and cumbersome.
11. The rates of payments to authors, illustrators, editors, proof readers, etc. are poor.
12. The agencies have no control over the frequent changes made in the textbooks and, therefore, the quantities printed are sometimes less than the required number.

#### Recommendations

1. Multiplicity of authorities for decision-making should be avoided.
2. The agencies should be provided with sufficient working capital or a rolling fund so that they do not have to borrow money at commercial rates. One-time interest-free loan, to be paid back in a specified time, could be another alternative.
3. Printing rates should be obtained from a wider cross-section of printers so that there is an element of competition, which would result in lower rates and help the agencies in further lowering the sale prices.
4. Inventory control and distribution have to be modernised and made more efficient. The book trade should be associated with such distribution so that the pressure on the storage space will be eased and the books will be more easily available throughout the states.
5. The agencies should not be burdened with the cost of free books. The concerned state government should pay the money to the agencies, in advance, and evolve a mechanism so that such free books do not remain in the offices/godowns of the government offices.
6. Urgent steps should be taken to train the existing staff in modern techniques of publishing and, wherever feasible, fresh professionally trained staff should be recruited.



7. The agencies should instal in-house facilities for lasersetting, illustrations, designing, etc.
8. The physical qualities of the books should be improved by engaging freelance artists, designers, typographers, editors, production personnel, etc.
9. The agencies should be made functionally autonomous but with sufficient checks and balances.
10. Modern communication facilities should be provided.
11. The rates of payments to authors, illustrators, editors, proof readers, etc. should be periodically revised.
12. The textbooks once prescribed should continue for a minimum period of three years, unless there are compelling reasons to revise/replace them. This will enable the agencies to plan their printing programme more satisfactorily.

## TERMS OF REFERENCE

1. Objectives
  1. To assess the present status of designing, production and distribution of instructional and NFE materials in the states covered by the SSN and DPE projects.
  2. To suggest improvements/modifications, wherever necessary, for each area.
  3. To suggest professional and technical training of the personnel, in view of technological advances.
- II. Methodology
  1. To identify, with the help of the MHRD and the state, the nodal officers in each state.
  2. To develop a questionnaire for collecting data and information, which will be sent to these nodal officers.
  3. Visits by the Head of the Functional Area of the National Core Team and the members of the Sub-Core Team for extensive discussions with the nodal officers and on-the-spot assessment.
  4. To appoint/identify technical staff in each state for collecting on-the-spot data, wherever necessary.
  5. To analyse the data and information, for preparing an interim report by the end of September 1993 and the final report by the end of November 1993.
- III. Prescription/Approval and Development of Material
 

To ascertain the present procedures for

  - prescription/approval
  - development
  - authorship
  - royalty payment to authors
  - evaluation
  - revision and updating
- IV. Designing
  1. To assess the
    - sizes of printed material presently being used for different age-groups/classes/subjects;
    - type faces and sizes presently being used for different age-groups/classes/subjects;
    - number of colours presently being specified for different age-groups/classes/subjects;
    - nature and quality of illustrations in the printed material, currently in use;
    - availability of (in-house and external) :
      - book designers
      - illustrators
      - typesetters, in different languages
      - copy editors
      - proof readers
      - quality and GSM of paper (for text and cover), presently being used.
  2. To suggest improvements/changes, if necessary, in the above areas.
  3. To project revised modus operandi, in view of anticipated technological changes and to
    - formulate training programme for personnel;
    - estimate budgetary provisions;
    - increase in-house technological facilities.
- V. Processing, Printing and Binding
  1. To ascertain the process of printing presently being utilised (letterpress/offset).
  2. To ascertain the process of typesetting presently being utilised (manual/mechanical, hot metal setting/photo composing/lasersetting/calligraphy).
  3. To ascertain the method of processing, presently being utilised (blocks/camera processing/scanning).
  4. To ascertain the process of binding, presently being utilised (manual/mechanical, saddle stitching/side stitching/section sewing/perfect).
  5. (a) To ascertain the machinery and facilities available for
    - typesetting
    - processing
    - printing
    - binding
 (b) To ascertain if adequate facilities are available within the state or if out-of-state resources have to be used.
  6. To suggest improvements/changes in the above areas.
  7. To assess the annual expenditure for the production of these materials, for the last five years and the rates paid for each item of production.
  8. To project revised modus operandi, in view of anticipated technological changes and to
    - formulate training programmes for personnel
    - estimate budgetary provisions.
- VI. Pricing
  1. To ascertain the present pricing formula and to find out if
    - there is any subsidy, if so, the extent thereof;
    - the state earns a profit, if so the extent thereof;
    - the state incurs a loss, if so the extent thereof;
    - there is neither any loss nor any profit.
  2. To suggest a revised pricing formula, if necessary.
- VII. Distribution
  1. To ascertain the present mode of distribution (directly, through own sales outlets/through retailers, through wholesalers/a combination of one or more of the above.
  2. If books are distributed free, to ascertain the percentage thereof.
  3. To ascertain the present status of availability of books in
    - urban areas
    - rural areas
    - remote areas
 (with particular reference to disadvantaged groups and minority language groups).
  4. To ascertain the modes of transportation of books (post/train/truck/others).

## VIII. Paper

## 1. To ascertain

- the quality and specifications of paper (for both text and cover), presently being used;
- the annual expenditure on purchase of paper (for both text and cover), for the last five years;
- availability and sources within the state;
- the rate at which paper was procured last year;

- if gift/free paper has been made available, if so, the details thereof;
- the present procedure for stocking and issue;
- the warehousing facilities (for both paper and books).

## 2. To suggest improvements/changes in the

- specifications of paper
- mode of procurement
- warehousing, inventory control

## ANNEXURE II

## THE STUDY TEAM

## Head of the Team

C. N. Rao

*Head, Publication Department, NCERT*

<i>State</i>	<i>Members, Sub-Core Team</i>	<i>Nodal Officers</i>	<i>Surveyors</i>
Assam	U. N. Jha Chief Business Manager Publication Department	P.K. Gogoi Managing Director ATP & PC Ltd.	M.C. Kakati and D.K. Dutta
Haryana	R. S. Saxena Editor Publication Department	D.C. Grover Subject Specialist SCERT, Haryana and H.G. Arora Senior Specialist SCERT, Haryana	A.R. Huria and A.K. Bharadwaj
Karnataka	T. T. Srinivasan Assistant Production Officer Publication Department	Y.R. Achyuta Rao DPI, DSERT Karnataka and D.J. Rao Deputy Director DSERT, Karnataka	H.V. Mallappa Md. A. Sharieff and A. Ananthacharya
Kerala	Prabhakar Dwivedi Chief Editor Publication Department	T.A. Francis Project Officer Office of DPI Kerala	M.K. Thirumeni and N. Chitharanjanan
Maharashtra	V. R. Devikar Assistant Production Officer Publication Department	S.S. Salgaonkar Director MSCERT, Pune and (Ms) S.S. Inamdar JD, MSCERT, Pune	A.R. Deshpande
Tamil Nadu	T. T. Srinivasan Assistant Production Officer Publication Department	(Ms) S. Nappoly Secretary, TTC and N. Ramanathan NSS Coordinator	Janardhan and U. Rajagopalan



## II. DEVELOPMENT OF TEXTBOOKS

9. Procedures for the development of textbooks\*/NFE materials
  - (a) Internally by the faculty of the Board/Agency.
  - (b) Through Writing Teams appointed by the Board/Agency
  - (c) By commissioning authors
  - (d) By assigning to private publishers
  - (e) Others (Please specify)
10. Details of royalty paid to authors, if any, and norms/rates of payment
11. Whether the manuscript is subject-edited within the organisation or by outside experts?
12. Is Word Processing/Desk-top Publishing used in the editing process?
13. Rates of payment to outside editors

## III. PRESCRIPTION/APPROVAL OF TEXTBOOKS\*/NFE MATERIALS

14. Which is the authority, which prescribes textbooks\*/approves NFE materials?
15. Guidelines specified for prescribing/approving textbooks\*/NFE materials
16. Mechanism for evaluating manuscripts/printed books submitted for prescription/approval
17. Mechanism for evaluating published textbooks\*/NFE materials
18. Mechanism and procedure for revision/updating of textbooks\*/NFE materials, and frequency of revision/updating
19. Details of mechanism, if any, for testing/trialling of textbooks\*, before they are introduced in the school system

## IV. DESIGNING

20. Is there an in-house Art Studio for designing?
21. If Yes, give details of Visualisers, Artists, etc.
22. If No, what is the mechanism for designing and illustrating?
23. Details of prescribed rates for illustrating, designing, etc. for freelance designers, illustrators, photographers, etc.
24. Average number of illustrations

A. Textbooks*	No.	Nature (Line, Line and Tone, Wash, B/W Photographs, TPs, Colour Prints)	Colours	How are Illustrations processed for printing (Blocks, Camera, Scanning)
		For Classes I-V		
		For Classes VI-VIII		
		For Classes IX-X		
		For Classes XI-XII		
B. NFE Materials				

---

\*Textbooks should include Workbooks also.

25. Size of the publications and typography
- |                     |                      |                             |
|---------------------|----------------------|-----------------------------|
| A. Textbooks        | <i>Size of Books</i> | <i>Point Sizes of Types</i> |
| For Classes I-V     |                      |                             |
| For Classes VI-VIII |                      |                             |
| For Classes IX-X    |                      |                             |
| For Classes XI-XII  |                      |                             |
- B. NFE Materials

26. Average number of pages
- A. Textbooks
- For Classes I-V
- For Classes VI-VIII
- For Classes IX-X
- For Classes XI-XII
- B. NFE Materials

#### V. PRINTING OF TEXTBOOKS\*/NFE MATERIALS

27. Whether the books are printed through Government Press/own Press?  
By which process? (Letterpress/Offset)
28. If the printing is assigned to private presses, then give details of procedure adopted for identifying the private presses. Also specify the process of printing.
29. How are the printing rates finalised? (Attach a copy of the prevalent rates offered to printers.)
30. Pricing Formula of textbooks\* (First editions)
31. Pricing Formula of textbooks\* (Reprints)  
(Send the latest price list)
32. Whether text and cover paper is provided by the government, free or on concessional rates?
33. If not, what is the procedure adopted for procuring paper?
34. Quality, size(s) and GSM of paper used.
35. Style of binding, generally used
- A. Textbooks
- For Classes I-V
- For Classes VI-VIII
- For Classes IX-X
- For Classes XI-XII
- B. NFE Materials

#### VI. DISTRIBUTION OF TEXTBOOKS\*/NFE MATERIALS

36. The procedure adopted for distribution of books
- (a) Through own depots
- (b) Through Retail Agents
- (c) Through Wholesale Agents
- (d) Other (Please specify)

---

\*Textbooks should include Workbooks also.

37. The procedure of appointing Wholesale/Retail Agents for distribution of books
38. Trade discount allowed to Wholesale Agents
39. Trade discount allowed to Retail Agents
40. Trade discount allowed on direct supply to schools/institutions
41. Are printed books generally available throughout the state at the beginning of the new academic session?
42. Mechanism, if any, for monitoring the availability
43. Availability of books:
  - (a) In remote areas
  - (b) For minority language groups
  - (c) For disadvantaged groups
44. Mode of transporting books
45. Who decides the print orders of the textbooks\*/NFE materials?
46. What is the basis of deciding print orders of textbooks\*/NFE materials?
47. Total number of copies of textbooks\*/NFE materials printed annually
48. Break-up of the above :
  - A. Textbooks
    - For Classes I-V
    - For Classes VI-VIII
    - For Classes IX-X
    - For Classes XI-XII
  - B. NFE Materials
49. Arrangements for stocking books and paper

#### VII. FINANCING

50. What are the sources of funding?
  - (a) Government grant
  - (b) Sale of books
  - (c) Both the above (If so, indicate the percentage of each)
  - (d) Other sources (Please specify)
51. Does the organisation earn profit from the sale of textbooks\*? Yes/No
52. Are textbooks\* given free of charge to students? If so, please give details.

#### VIII. MISCELLANEOUS

53. Details of the Book Bank scheme, if any, in the schools/NFE Centres
54. What is the percentage of second-hand books in use?
55. Any other information, that may be relevant to the study

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\*Textbooks should include Workbooks also.

## SUB-CORE TEAM

Name \_\_\_\_\_

Designation \_\_\_\_\_

Signature \_\_\_\_\_

Date \_\_\_\_\_

Place \_\_\_\_\_

## RESPONDENT

Name \_\_\_\_\_

Designation \_\_\_\_\_

Signature \_\_\_\_\_

Date \_\_\_\_\_

Place \_\_\_\_\_

C. N. RAO  
*Head of the Functional Area*  
(Designing, Production and Distribution of Instructional Materials)  
of the National Core Team  
and  
*Head, Publication Department, NCERT*



AVAILABILITY OF BOOKS

1. Name of the State
2. Total No. of titles published annually
3. Total No. of copies printed annually
4. Total No. of target points for distribution *Percentage*  
 Percentage break-up of the above :      Depots  
    Wholesale Agents  
    Retail Agents  
    Schools/Institutions  
    Others, if any
5. Target date for completion of supply
6. Average transit time *Percentage*
7. Mode of transportation :      Post  
    Road transport  
    (Trucks, Tempos, etc.)  
    Rail  
    Others, if any
8. Date of commencement of despatch
9. Date of completion of despatch
10. Brief details of complaints, if any, about non-availability of books
11. Comments of Teachers, Students, Parents, Booksellers and Media, regarding availability of books

A. For Classes I-V

	Total No. contacted	Location-wise Break-up	Total No. of titles	Comments		
				Not Available (% of titles)	Delayed (% of titles)	Satisfactory (% of titles)
(a) Teachers						
(b) Students						
(c) Parents						
(d) Booksellers						
(e) Media						

B. For Classes VI-VIII

- (a) Teachers
- (b) Students
- (c) Parents
- (d) Booksellers
- (e) Media

C. For Classes IX-X

- (a) Teachers
- (b) Students
- (c) Parents
- (d) Booksellers
- (e) Media

D. For Classes XI-XII

- (a) Teachers
- (b) Students
- (c) Parents
- (d) Booksellers
- (e) Media

E. For NFE Materials

- (a) Teachers
- (b) Students
- (c) Parents
- (d) Booksellers
- (e) Media

(\* Give brief description of location, specifying if it is in a

- remote area
- tribal area
- backward area
- area with low female population
- area with high female population)

Name of the Surveyor\_\_\_\_\_

Signature\_\_\_\_\_

Address\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Place\_\_\_\_\_

Date\_\_\_\_\_

PAPER AND INFRASTRUCTURE FOR PRINTING, ETC.

1. Name of the State
- A. Paper
  2. Approximate annual requirement (in MTs) of
    - Text Paper
    - Paper for Cover
  3. Present source(s) of procurement
    - Within the State
    - Outside the State
    - Others (Please specify)
  4. Quality
    - Satisfactory
    - Unsatisfactory (Please clarify)
  5. Rates
    - Reasonable
    - Costly
    - Exorbitant
  6. Availability of stocks
    - Timely
    - Within a reasonable period
    - Badly delayed
- B. Infrastructure for Printing, etc.
  7. No. of Typesetting firms
    - Hand composing only
    - Hot metal mechanical composing
    - Phototypesetting
    - Lasersetting (DTP)
  8. No. of Printers
    - Letterpress only
    - Offset
    - Gravure
  9. No. of Scanning firms
    - Scanners only
    - Scanning systems
  10. No. of Binding firms
    - Manual binding only
    - Semi-mechanised binding
    - Fully mechanised binding
  11. No. of Booksellers dealing in *school books*
  12. District-wise break-up of above
  13. No. of truck transporting firms
  14. No. of tempo transporting firms

Name of the Surveyor\_\_\_\_\_

Signature\_\_\_\_\_

Address\_\_\_\_\_

\_\_\_\_\_

Place\_\_\_\_\_

Date\_\_\_\_\_

## RATING CARD

*(for Components of Design and Production)*

NAME OF THE STATE

<i>Classes</i>	<i>Typography</i>	<i>Illustrations and layout</i>	<i>Printing</i>	<i>Binding</i>	<i>Paper</i>	<i>Total Marks</i>	<i>Overall Grade</i>
----------------	-------------------	-------------------------------------	-----------------	----------------	--------------	------------------------	--------------------------

If the overall grading is Poor or Average, what according to you, are the primary reasons?

*Rating Scale  
1-10, for each item*

<i>For individual items</i>	<i>For total marks</i>
2 : Poor	10 : Poor
3-5 : Average	15-25 : Average
6-8 : Good	30-40 : Good
9-10 : Very Good	45-50 : Very Good

Total Marks : 50

Signature of the Expert \_\_\_\_\_

Name of the Expert \_\_\_\_\_

Designation of the Expert \_\_\_\_\_

Date \_\_\_\_\_

# Educational Problems of Tribal Children

C. J. DASWANI  
NEERJA SHUKLA  
K. RAMA VANI



## Introduction

The present paper attempts to summarise some of the significant findings of the tribal study which was conducted under the District Primary Education Programme (DPEP). The study was commissioned since it was required by International Donor Agency (IDA). Reportedly, the IDA was concerned about the impact of all proposed interventions under the DPEP on tribal population in the concerned districts. It was, therefore, required that a sample survey of tribal population in the DPEP districts be carried out in order to ascertain the viewpoints of tribal parents, tribal community leaders and tribal children and teachers regarding both the availability of primary educational facilities and subjective evaluation of such facilities. It was also required that an overview of community participation in primary education in the tribal areas in these districts be provided.

The terms of reference for the study were provided by the funding agencies. All concerned agencies such as UNICEF and the World Bank, together with the Department of Education, MIIRD were consulted periodically throughout the course of the study and they were kept abreast of the progress of the study.

## Objectives and Research Design

### *Focus of the Study*

The focus of the study was to map the present provisions for primary education in the tribal areas as well as their utilisation by the recipient population. At the same time the study attempted to discover the attitudes of tribal parents, opinion leaders, teachers of tribal children, administrators of tribal educational institutions as well as other community members towards both the availability of educational opportunities as well as expectations from the educational system as a whole. It was envisaged that such a focus will enable the planners at the district level to make more meaningful and direct interventions for ensuring quality education in tribal areas.

### *Objectives*

The objectives of this study were:

- To carry out a sample survey of the educational infrastructure and facilities available in the tribal areas with a view to identify gaps, if any, in the available infrastructure and facilities.
- Status of teachers in tribal areas including their availability, background, qualifications, training, punctuality and problems.
- Status of curriculum in operation and the teaching-learning materials being used with special reference to use of the tribal language in the writing of teaching-learning materials as well as in the classroom transaction.

\* The study was carried out under a grant from the UNICEF.

- Status of monitoring and evaluation of primary education including administrative structures.
  - Status of school enrolment and school drop-out with special reference to factors affecting enrolment and drop-out of tribal girls.
  - Status on convergence of various departments providing services and facilities in tribal areas.
  - Status of community participation in the educational programme and management of schools.
- Both qualitative and quantitative data were collected with reference to the above terms of reference.

#### *Selection of Areas for Study*

The study was conducted in the tribal districts in seven States, viz. Assam, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Orissa and Tamil Nadu. The study was carried out in two districts in each of the states. In the case of Maharashtra it was decided by the State Government to confine this study to only one district. In the case of Madhya Pradesh, four districts were selected for the present study. The study was conducted in one block in each of the selected fifteen districts on the basis of highest tribal population.

It may be noted that Madhya Pradesh and Orissa

lage was 23 girls and three boys from the primary school; three girls and three boys from the NFE centre; six non-enrolled children (three girls and three boys) and two school drop-outs (one girl and one boy). In locations without an NFE centre the six children to be selected from NFE centres were selected from the school instead, making the total number of children from the primary school, 12. In villages without a primary school, 12 children were selected from the NFE centre.

All the teachers of the selected primary schools, with a maximum of five per school, and one instructor from the NFE centre were selected for the study. A sample of five pairs of parents (making the total number of parents 10) was also selected. Two male and three female members of the concerned community were also selected for collecting the data. In this manner, the maximum number of persons covered per village was 41.

#### *Methodology*

A set of eight instruments was prepared for collecting the bench-mark data from the field. Each instrument, except the eighth instrument, was divided into two parts. The eighth instrument has three parts. Part I was

List of Sample Blocks

<i>States</i>	<i>Districts</i>	<i>Name of the Blocks</i>	<i>Percentage of Tribal Population</i>
Assam	1. Darrang	Udaigiri	20.16
	2. Marigaon	Bhurbandha	30.14
Karnataka	1. Kolar	Gowribidanvir Bangarpet	15.19
	2. Raichur	Devadurga	20.16
Kerala	1. Kasargod	Kasargod	4.30
	2. Wayanad	Mananthavady	19.83
Madhya Pradesh	1. Betul	Bhimpura	83.79
	2. Ratlam	Bajana	91.02
	3. Raigarh	Kansaval	82.50
	4. Shahdol	Pushprajgarh	78.31
Maharashtra	1. Nanded	Kenwat	31.92
Orissa	1. Kalahandi	Thuamul	55.65
	2. Rayagada	Kolnara	68.75
Tamil Nadu	1. Dharmapuri	Pippireddipatti	18.24
	2. Thiruvannamalai	Jawadhu	61.89

were clubbed with the other five states although these two states do not form a part of the six DPEP states being considered under the World Bank provisions. Of the six World Bank DPEP states, five (Assam, Karnataka, Kerala, Maharashtra and Tamil Nadu) have been covered by the study. The sixth state, i.e. Haryana was excluded from the study in the absence of any significant tribal population.

#### *Sample*

The sample for the study was collected from ten villages in each of the selected blocks.

The total number of children covered in each vil-

lages was further divided into two sections, viz. Section A consisting of items for collecting quantitative data and Section B consisting of items meant for collecting qualitative data. Part I, as a whole, consisted of items which had to be answered by the respondents directly. Part II of the questionnaire was designed to be filled in by the investigator with the help of documents/information available in that location.

Table 1 (see Annexure) provides diagrammatic details of the various tools developed for the study.

In each village a focussed group discussion was also organised by the field investigator where issues related to the objectives were discussed with the members of the community.

*Training Manual*

A training manual was used by master trainers to train field investigators who collected the data from the sample villages. The training of master trainers was organised by the Department of Non-Formal Education and Education of SC/ST in the NCERT at the national level. A team of three members from each of the seven states, i.e. State Coordinator, Professional Assistant-cum-Supervisor and a Computer Assistant were trained. The state level team, in turn, trained the field investigators in the respective states with the help of one person from DNFEESC/ST

*Status Report*

In addition to the survey conducted with the help of the eight instruments, each state was asked to write a status report on the education of the tribal children in the state. The status reports cover the following aspects :

- Introduction to the tribal population in the state
- Information about various tribes in the state
- Developmental problems of tribal population
- Educational problems of tribals
- Schemes for promotion of education of tribals carried out by the state
- Status and availability of teaching-learning materials in tribal languages of the state
- Summary of important studies related to tribal population in the state, giving major findings
- State plans for education of tribals in Eighth Five Year Plan

The status report in each state was necessarily based on secondary data. All status reports from the seven states have been completed.

*Survey Report*

Based on the actual field data collected through the field work, seven state survey reports have been written by state coordinators who were in charge of the tribal study in the concerned states. Each survey report includes the following:

- Objectives of the tribal study
- Processes of the tribal study in the respective state
- Geographic and demographic description of the selected districts and blocks
- Instrument-wise data analysis
- Analysis of the investigators' diaries
- Analysis of focussed group discussion
- Results and conclusions

*Analysis Plan*

- A set of eight instruments were prepared for collecting the data.
- A training manual was prepared to assist the field investigators who were appointed to collect the data.
- All the eight instruments and the training manuals were translated into seven languages (Assamese, Hindi, Kannada, Malayalam, Marathi, Oriya).

- Workshops were held in all the states to train the field investigators. In each state a representative from Delhi was present to participate in the workshop. Special attention was given to focussed group discussions in which issues related to the objectives were discussed with the members of the community
- A data entry programme for all the eight instruments was developed in the NCERT. This software was sent on floppies to all the seven states.
- Data was collected from all the blocks under the study by the field investigators and was entered on the floppy.
- The floppies with the data were sent to NCERT from all the states.
- State reports were prepared.
- Data of the entire sample was processed in the DNFEESC/ST, NCERT
- Instrument-wise computer analyses were carried out.
- Finally with the aid of these computer reports a final synthesis report was prepared.

*Synthesis of State Reports*

On the basis of the seven survey reports generated at the state level a national synthesis report was prepared by the research team in the DNFEESC/ST. The national synthesis report attempts to capture significant findings as revealed in the state survey reports. Given the fact that tribal populations in the seven states not only vary significantly from each other but have different profiles within the state educational networks, the synthesis report, naturally, highlights only those areas where broad comparative statements can be made. The synthesis report also highlights the more significant interventions that are called for under the DPEP.

*Tribal Study and DPEP*

In order to plan systematic interventions for primary education for tribal children in all the DPEP districts, it would be necessary to collate at the state level, both the status reports as well as the survey reports. In-depth reading of these two documents at the state level is, therefore, essential for any realistic planning of primary education for tribal children.

*Key Findings**Educational Facilities*

- Out of the five DPEP states, in both Maharashtra and Tamil Nadu all the villages surveyed had a primary school. In Assam, Karnataka and Kerala 75 to 90 per cent villages had primary schools. Madhya Pradesh and Orissa had primary schools in 84.62 and 75 per cent villages, respectively, covered under this study.
- Out of the five DPEP states, Maharashtra had the largest number of Ashram schools followed by Tamil Nadu, Kerala and Karnataka. Villages covered in Assam did not have any Ashram/residential school.

Less than 20 per cent of the villages covered in Madhya Pradesh and Orissa had Ashram schools.

- Assam, Orissa and Tamil Nadu show fair presence of NGOs at the village level.
- The analysis of responses to a question whether tribal development programme was successful or not, the community leaders in Karnataka, Madhya Pradesh and Maharashtra felt that these programmes were unsuccessful.

#### *Teachers of Tribal Children*

- Educational qualifications of teachers in the seven states range from below matric to post-graduate.
- In all the states the sampled teachers have either pre-service training or in-service training. No teacher is untrained.
- Most teachers and community leaders ascribe poor attendance of tribal children in school to economic reasons, including household duties and working on the farm; low parent motivation is also listed as a significant reason for children not attending school. There is a similarity of responses given by children, community leaders and teachers (for details refer to Table 2 and Table 2a).
- Most of the teachers said that they faced a number of problems when teaching tribal children which include language of the learners, irregular attendance, lack of infrastructural facilities, lack of teaching-learning materials and multigrade teaching.
- The specific learning problems of tribal children according to teachers, relate to low learner motivation, poor parent participation in the education of children, illiterate family background, irregular attendance and uninteresting curriculum. The language problem was mentioned by teachers in three DPEP states, viz. Karnataka, Kerala, Maharashtra in addition to Madhya Pradesh and Orissa.
- The most prominent problem listed by a large number of teachers related to the inability of girls in attending school regularly on account of household chores and duties. Lack of interest on part of the parents in sending girls to school was another problem listed by many teachers.
- Not all the facilities provided under the Operation Blackboard were available in the schools covered.
- Special facilities available for tribal children varied from state to state.
- In states where non-formal education programme is in existence teachers encourage non-school-going children to attend NFE centres.

#### *Teachers and School Programme*

- Most teachers, except those in Maharashtra, feel that the textbooks are relevant to tribal boys and girls. In Maharashtra over 60 per cent teachers feel that the textbooks are not suitable for tribal children. Parents of children covered under the study shared this

opinion with teachers. In Maharashtra the major cause for unsuitability of textbooks for tribal children was the language of the textbooks. In Tamil Nadu a large number of teachers feel that the textbooks are not comprehensible for children. Likewise nearly one-third of the teachers of Karnataka find textbooks too difficult (for details refer to Table 3 and also Figs. 1 and 2).

- Regarding comprehensibility of textbooks, teachers in Madhya Pradesh and Orissa feel that the children find textbooks difficult. Most teachers feel that a special teaching-learning methodology needs to be adopted for teaching tribal children.

#### *Tribal Parents*

- A large number of tribal parents have no formal education themselves.
- There seems to be high correlation between attendance in Anganwadis and attendance in schools.
- Most parents in all the seven states are satisfied with the school system as it operates today.
- Parents' attitude towards change in the educational system reveals that between 50 to 70 per cent do not want any change in the educational system except in case of Maharashtra where more than 50 per cent of the parents are looking for a different educational system.
- Most parents in all the states felt that girls should be given health education and education in vocations like tailoring.
- Teachers, parents of tribal children and community leaders were asked to give their opinion on various aspects of participation in educational programmes meant for tribal children. Their opinions are presented in Table 4.
- Responses from Madhya Pradesh and DPEP states like Maharashtra and Assam show strong opinion in favour of community's control over the village school.
- In Maharashtra all the villages covered had a Village Education Committee (VEC). In other four DPEP states the percentage of villages having VECs ranged from 4.00 to 16.25 per cent. In the states of Madhya Pradesh and Orissa the percentage of villages having VECs was high, i.e. 65 and 72.5 per cent, respectively.

#### *Tribal Children*

- In Assam, Karnataka, Kerala, Madhya Pradesh and Maharashtra between 43 and 55 per cent of male siblings of school-going children interviewed continue to be in school while the percentage of female siblings continuing school is marginally or significantly lower.
- Helping parents with their work/occupation, looking after younger siblings and minding the house are three most important household chores done by school-going children.



- In almost all the states high percentage of children had textbooks available to them but in case of some of the states like Orissa only 47.37 per cent children had textbooks.
- Most non-school-going children have to work at home. Helping parents is at the top of the list followed by looking after the house, minding younger siblings, collecting firewood and looking after household animals. In some cases the children have to cook at home.

#### *Tribal Language*

- The multiplicity of home languages is reflected in the multiplicity of school languages as declared by parents of school-going children (see Fig. 3).
- Most teachers prefer to use or actually use the regional language in classroom interaction except in Madhya Pradesh where the responses given in favour of tribal dialect and regional language is the same. Fig. 4 given in the Annexure highlights responses of teachers in various states.
- The results show that even those teachers, who presumably speak the same language as the learners, prefer to use the regional dominant language for classroom interaction.
- A large number of teachers believe that the textbooks should be in the standard regional language.
- Parental preference for the medium of instruction swings heavily in favour of the regional language.

#### **Implications of Findings for Designing Interventions**

##### *Educational Facilities*

##### — Primary Schools

In Assam, Karnataka, Kerala, Madhya Pradesh and Orissa there is need for providing schools in all the tribal villages so far uncovered by primary schools. It may be necessary to carry out indepth studies of children who attend school in nearby villages in order to understand the motivation of such children and their parents.

##### — Ashram Schools

It would be desirable to study the ashram/residential schools in Maharashtra to understand how these work. They may provide model for replication. It would seem desirable, however, to provide an ashram/residential school in all tribal villages in these states.

##### — Children in Ashram Schools

There is need for undertaking indepth studies on the utilisation and relevance of ashram schools in all the states.

##### — Non-Government Organisations

It is clear that more non-governmental participation is necessary for education of tribal children. All

States, particularly Maharashtra, need to take concrete steps in this direction.

##### — Development Programmes

The DPEP projects in these districts should look at all the available developmental programmes for linkage with education and for effective coordination amongst various agencies.

#### *Teachers of Tribal Children*

##### — Teacher Age and Sex

In view of the emphasis on recruitment of female teachers under the DPEP, it would be necessary to correct the imbalance between male and female teachers in these states. Special recruitment policies coupled with adequate training programmes would be necessary.

##### — Teacher Qualifications

It is possible that some of the states may continue to have a policy of relaxation of minimum qualifications for primary school teachers. If so, additional training inputs would need to be provided under DPEP.

##### — Teacher Training

It is clear that states like Assam and Madhya Pradesh need to strengthen their pre-service training programmes. At the same time in-service training programmes need to be streamlined in all states specially in Kerala, Madhya Pradesh, Maharashtra and Orissa.

##### — Learner Attendance

Much more data is needed on why children do not attend school regularly. Indepth studies in the DPEP districts would be of significance.

##### — Teacher Attitudes : Job Satisfaction

An analysis of the teacher attitudes would show that in some of the States the teachers are quite innovative. These practices need to be studied and documented for replication.

##### — Teacher Perceptions : Teaching Problems

While some of the perceptions can be related to physical facilities and infrastructure, others are related to learner capacities. Further study of these problems specially in states like Assam, Karnataka, Madhya Pradesh and Tamil Nadu may provide insights for training programmes for teachers in tribal areas.

##### — Teacher Perceptions : Learner Problems

There is need for carrying out a number of indepth studies on learning achievement and learning problems of tribal children in these states.

##### — Teacher Perceptions : Problems of Tribal Girls

It is obvious that the issue of girls' education,

specially among the tribal populations, is of utmost importance. (Findings of the gender studies in these states may indicate remedial action).

— Operation Blackboard

The scheme of Operation Blackboard needs to be reviewed in the tribal villages in these districts.

— Facilities for Tribal Children

State schemes on incentives need to be made available universally to all tribal children.

— Delay in Supply of Facilities

It would be necessary to identify all bottlenecks in the delivery of incentives and other facilities to tribal children in the DPEP districts for better coordination at the state and district levels.

— Non-Formal Education

Non-formal education as an alternative delivery system would need to be dovetailed with primary education in all villages in tribal areas.

*Teacher and School Programme*

— Textbooks

The question of textbooks for tribal children must be dealt with in a comprehensive way taking into account the home language of the learner and the requirement of the school curriculum.

— Textbook Comprehensibility

Individual indepth studies on most successful teaching-learning methodologies need to be carried out in all the DPEP districts. These could be linked with the tribal language and the learning strategies already acquired by children in their social settings.

— Teaching Aids

State-wise assessment on availability, access to and use of teaching aids needs to be carried out.

*Tribal Parents*

— Parents' Education

Literacy and formal education among the tribal adults all over the country needs to be examined carefully. Success of programmes for universal primary education is often correlatable with parents' education.

— Schooling of Children in Age-group 6-14

There seems to be high correlation between attendance in Anganwadis and attendance in schools. Linkage between ECE and primary education, therefore, is of prime importance.

— Parents' Attitude towards School

Parent satisfaction with the school system is high, yet parents' awareness of and participation in school functions is very low, except in the case of Maharashtra. Vigorous steps will have to be taken

to secure greater participation of parents of tribal children in school education.

— Parents' Attitude towards Infrastructure

There is need to educate the tribal parents about the different incentive schemes for tribal children.

— Parents' Attitude to Change

Demand for a more relevant system of education can only emerge from greater parents' awareness and parent participation.

*Tribal Community Leaders and School Education*

— School and NFE

Community perceptions need to be discussed at the district level workshops to be organised in DPEP districts.

— Community Control

It would be necessary to collect extensive data on actual community participation in the primary school system in the DPEP districts.

— Village Education Committee

The formation of village education committee is an essential ingredient for UPE. This aspect needs to be looked at very carefully in all states. The existing situation in Maharashtra needs to be studied for replicability in other states.

*Tribal Children*

— School-going Children and Siblings

A more rigorous indepth study on acceptance of primary school education by tribal families and its generalisation may be undertaken in all the states.

— Continuance of Sibling Education

More indepth studies in this area need to be carried out.

— School-going Children and House Work

There is need for studying the work demands made on children, specially in terms of hours per day and timings during the day. Such information should enable education planners to provide school facilities when children are free.

— School-going Children and Wage Work

More information on wage-earning school-going children needs to be collected from tribal areas.

— School Children and Textbooks

Actual availability of textbooks must be recorded in all the DPEP districts. Discrepancies between sectoral responses must be understood.

— Relevance of Textbooks

The question of textbook comprehensibility needs to be critically examined.

— Attitudes towards School

There is need to make school/NFE centre attractive for the tribal learner.

— Reasons for not Attending School/NFE Centre

This entire area of attendance and irregularity is poorly understood and needs to be studied specially in the context of tribal children.

**Investigators' Diaries and Focussed Group Discussions**

Each of the seven states, where the tribal study was conducted, was required to submit a status report and a survey report. Status reports and survey reports have been completed in all the seven states.

In each of the survey reports the state team was required to summarise the observations of the investigators' daily diaries. These diaries were maintained by each investigator in which his/her observations regarding the actual socio-economic and educational situation in the various villages were to be recorded. It was felt that such observations would provide significant and rich data. Investigators' diaries, which are in the regional languages, were then analysed by the State Coordinators and an account of the major observations has been included in each survey report.

In each of the villages surveyed the investigators were also required to hold a focussed group discussion with the community leaders, parents and teachers. A record of these discussions was also maintained by each investigator. These records are also in the regional languages. A summary of the discussions in the focussed groups has been provided in each survey report.

Here an attempt has been made to list the salient features of the investigators' diaries and the focussed group discussions given in the individual survey documents. No attempt has been made to draw comparative conclusions on the basis of these salient features, since every state has unique situations and problems.

## ASSAM

### *Investigators' Diaries*

Analysis of the field investigators' diaries from Assam brings out the following points:

- The areas selected for the study are dominated by the scheduled tribe populations. Among all the tribal populations, Bodo is the most dominant tribe. The members of this tribe speak Boro. Since 1963 this language has been used as the medium of instruction in all the Bodo schools.
- The main occupation in this area is agriculture and the main source of income is from agricultural products. Besides this, a number of members of this community work on daily wages as rikshaw-pullers, labourers, etc.
- Though a number of development schemes were

meant for rural areas, they have not been fully implemented. Basic facilities like electricity, irrigation, water supply, public health provisions are not available to all the villages.

- People belonging to this community were very warm and extended full cooperation to the investigators. The Bodo community as a whole has a very positive attitude towards education. But it was observed by the investigators that parent unawareness about education is an important reason for poor enrolment of ST children in primary schools.
- In almost all the villages, the village Pradhan or the headman of the community extended full cooperation and support to the study.
- Most of the schools covered by this study were in good condition but some school buildings needed repairs. Almost all the schools have been covered under the Operation Blackboard scheme, but the materials provided under the OB are yet to be properly used. In some of the villages of Darrang district there are some NFE centres and Anganwadis. NFE centres in this area have to be activated so that the community can derive maximum benefit.

### *Focussed Group Discussions*

Due to politically disturbed situation in the state, focussed group discussion could not be held in all the 20 villages. Individuals from all the sections of the community, viz. parents, teachers, community leaders, Anganwadi workers, political workers and political activists participated in the meetings. All these participants expressed their desire for getting education for their children. While doing so they showed their disappointment over the functioning of NFE and Anganwadi centres and complained about the non-availability of textbooks and other incentives to their children in time. All the villagers were very keen to have basic knowledge about health, sanitation, hygiene and child-care and wanted Anganwadi centres to impart it to them. Many parents and Heads of the villages and other members of the community did not have any knowledge about various incentives provided by the government for their children. Some of the points emphasised by them for development of primary education in their villages were as follows:

- Need for improvement of school buildings
- Need for increasing the number of teachers in the school
- Timely supply of textbooks
- Training for teachers
- Timely monitoring of schools by educational administrators
- Provision of mid-day meal, free uniform and supply of sports items for children
- Need for making the school curriculum suitable for the needs of their children
- Extension of Operation Blackboard scheme to all the villages.

## KARNATAKA

*Investigators' Diaries*

Analysis of investigators' diaries brought out the following points:

- Devadurga block has sufficient number of primary schools.
- More school buildings along with more teachers and sufficient teaching materials are needed in the area.
- Schemes aimed at tribal development have not reached the needy people. The block faces acute shortage of drinking water facilities. Therefore, girl students have to fetch water from long distances which results in their being absent from the school very frequently.
- Community leaders complained about irregularity of teacher attendance and also talked about their habit of coming late to the school.
- Teachers give corporal punishment to tribal children for not coming in clean clothes but it was not mentioned openly by the community leaders.
- In general the members of the tribal community did not have any knowledge about developmental schemes and facilities provided for tribal children.
- Tribal community members were not interested in educating their children. The reason for this in their opinion was that children get less opportunities of work after receiving education.
- Some parents wanted separate educational system for their girls. They felt that a lady teacher will be the most ideal teacher for their daughters and their girls should get training in house-keeping. The benefits of incentive schemes do not reach the recipients in proper time. Most of the students were found without proper clothing and books.
- Distribution of milk among tribal children under an incentive scheme of the Government of Karnataka is being misused.
- Anganwadi centres in the states have not attracted tribal parents to send their children to them.
- The size of the family in the tribal communities of Karnataka was big, i.e. about 5-8 children per family.
- Members of the community felt the need of NFE system and wanted to send their children to NFE centres. They thought that the timings of NFE centre will be more suitable than the timings of schools.
- Linkages between Balwadis and primary schools need to be established.
- Need for health facilities for tribal people was strongly felt.
- Community leaders said that incentives should reach the clientele in time. The teaching in the school should be made more attractive and more job-oriented courses should be included.
- Financial assistance should also be provided to tribal children for their upliftment.
- Basic facilities like electricity, roads, drainage, etc.

were not available to the tribal community of this area.

*Focussed Group Discussions*

Some salient observations made during the focussed group discussions are as follows :

- Mid-day meals given to Anganwadi children are a great attraction for children.
- To make primary education attractive, it could be clubbed with Anganwadi centres.
- A need for more ashram schools was expressed. It was also demanded that NFE centres with proper facilities may be opened in the state. Since there was a shortage of teaching-learning materials, the community felt that the government could give some grant to the Panchayat to provide teaching-learning materials.
- Educational activities could be transferred to the Panchayat. There was a strong resistance against transfer of teachers from urban areas to rural and tribal areas because they do not understand the culture of rural and tribal areas.
- Villagers also expressed their need for health centres, agricultural facilities and digging of wells for irrigation.

On the analysis of investigators' diaries and group discussions and close observation of the areas the following are recommended for tribal education in Karnataka :

- Proper awareness campaigns should be organised to make the tribal community aware of the importance of education.
- To bring the tribal children to the mainstream the curriculum should be modified according to their culture, dialect and local environment.
- Preference should be given to the local teacher at the time of selection.
- School environment should be made more attractive.
- Some of the problems of tribal education which need to be addressed are : poor economic condition of the tribals, poor management system of education, language problem and lack of interest on the part of tribal community in education.

## KERALA

*Investigators' Diaries*

Analysis of investigators' diaries brought out the following points :

- Most of the tribal people are illiterate.
- Most of them live in the forest areas and hence earn their livelihood from the forests. Deforestation has had an adverse impact on their economic condition.
- Addition of liquor is one of the major causes for their bad health. They are often struck by epidemic diseases.
- Being illiterate the parents are not aware of the importance of education and hence are not interested

in sending their children to school. This attitude may be due to poverty.

- Children are scared of corporal punishment.
- For higher education, children have to travel long distances.
- In some schools both the headmaster and the teachers were found to be irregular. They came at their own will.
- Lack of learning facilities and insufficient number of teachers.
- Though students are irregular the teachers mark their attendance so that the children do not lose their stipend.

#### *Focussed Group Discussions*

Some of the opinions expressed during the focussed group discussions are as follows:

- Community members and village heads are very interested in the education of the tribal children while most of the parents are not interested in the education of their children.
- Community leaders and members demanded more tribal girls' hostels.
- A need for a joint effort of the people for compelling the parents to send their children to school.
- Grants should be increased in order to provide books, clothes, etc.
- No special education system is required for the girls.
- In Wayanad district some community leaders felt the need for Tribal Officers who will work for the development of the tribal people by understanding their problems and finding proper solution to them.
- Instructors may be appointed for conducting tuition classes and for enquiring into the reasons for irregular attendance by children. The findings, they felt, should be reported to the Tribal Officer.
- Most of the tribal schools are not functioning well.
- Hostel facilities, free boarding and lodging should be provided to the tribal children.
- Representatives of the scheduled tribes should be invited to form a part of the P.T.A. Committee.
- P.T.A. Committee meetings must be held at least once a month.
- Teachers are irregular in attending the school.
- Primary health centre is essential.

On the analysis of investigators' diaries and group discussions the following steps may be taken for the development for tribal population in Kerala :

1. To Organise special schemes for their development.
2. Parents should be given permanent jobs.
3. To attract the illiterate parents to the literary centres.
4. To assign sufficient quantity of cultivable land to them.
5. To conduct awareness classes for them.
6. Create volunteer organisations for them.

7. Schools may be started very near to tribal habitations. Local teachers may be appointed there.
8. Parents must be asked to come to the school once in a month.
9. Education officers must visit the school once in every three months and give advice for the upliftment of the school.
10. The Tribal Officers should be instructed to get all the school-aged children enrolled in the nearby school.
11. To simplify the textbooks.
12. To create affectionate atmosphere in school and change the teaching-learning process into joyful activities.

#### MADHYA PRADESH

##### *Investigators' Diaries*

After the analysis of the investigators' diaries the following points emerged :

##### *Atmosphere and Economic Status of the Village*

- The majority of children belonging to the age-group 6-14 is engaged in agriculture work as labourers. The tribal people are very poor therefore they are unable to send their children to the school.
- Drinking alcohol is a common evil in tribal areas. Discriminating between a girl child and a male child is prevalent in this area. In general parents are not interested in getting their daughters educated.

##### *Community and Culture*

- Most of the children believe in evil spirits and have faith in magic, like their parents.
- The tribals influenced by Christian missionaries are more developed than other tribal communities.

##### *Dialect of the Survey Area*

Most of the tribal parents and children speak their own dialect such as Kanaku, Kanwar, Gondi, Baiga, Korku and Bhil. Therefore, most of the children do not understand the Hindi language at all. Even literate tribals speak their own dialect in their houses. About 90 per cent Korku tribals speak the Korku dialect.

##### *Educational Situation*

- School buildings are in very poor condition. Even basic facilities are not available in these schools.
- Behaviour of the teachers with tribal children in the school is not friendly and sympathetic at all.
- The number of teachers in various schools needs augmentation.
- The village Panchayat does not have effective control over the educational atmosphere of the village.
- The supervision in the school is not satisfactory. The negligence of the supervisory staff in the area of primary education has made the situation even worse.

##### *Views of the Community Leaders*

- Due to famine and drought in the state, tribal people

- migrate from one place to another as a result of which education of their children suffers.
- Many heads of the villages expressed that children have to walk long distances to come to the school. Therefore, in such situations more schools should be opened.
- There is a lack of drinking water facility in most of the schools.
- Panchayat is headed by illiterate and inefficient people which affects the functioning of Village Education Committee (VEC). In such situations VEC does not have any control over educational and developmental activities of the area.

#### *Focussed Group Discussions*

During the focussed group discussions organised by the project staff, the following points emerged :

- In the areas selected for the study, Anganwadi activities were more effective than primary school activities. The meals given to children at Anganwadi centres are great attraction for children.
- NFE centres should be made more effective and equipped with more facilities.
- Most of the schools feel shortage of teaching-learning materials at all times. It has been suggested that the government should provide some grant to Panchayat to purchase this material.
- Educational activities should be transferred to the Panchayat. Local people should be oriented as teachers. Teachers coming from urban areas should not be posted in schools in tribal areas because they do not behave well with the tribal people.
- Villagers demanded a health centre and agricultural facilities in the village.

On the basis of the above points, a few recommendations have been made in Madhya Pradesh which are as follows :

- Since tribal people do not give any importance to education, proper awareness campaigns should be organised for them.
- To make schools more attractive for tribal children their social and cultural values should be given proper place in their curriculum.
- Preference should be given to local persons at the time of appointment of teachers.
- School environment should be made more attractive.
- Suitable inspection and supervision system should be developed.
- Educational activities should be transferred to Panchayats.

#### MAHARASHTRA

##### *Investigators' Diaries*

The analysis of field investigators' diaries bring out some very interesting observations which are as follows :

- Most of the tribals in this area are very poor and ignorant. The relationship within the family is not very sound.

- There is no hospital in any of these villages. Only a health worker resides in the village.
- Basic facilities like drinking water and electricity are not available to local communities.
- The condition of the school buildings is very poor.
- Both Anganwadi centres and primary schools are functional in most of the villages.
- Most of the tribal people are engaged in work as daily wagers and collect forest produce. The average number of children in a tribal family is 4 to 5.
- Most of the primary schools have two teachers.

##### *Focussed Group Discussions*

The conclusions drawn after analysing the focussed group discussions are as follows :

- Most of the children in the age-group 6-14 attend school.
- The drop-out rate is very low.
- Both teachers and students have to struggle with the issue of tribal dialect versus state language.
- Children have to work as household workers to earn their wages.
- Neither uniforms nor other materials are provided to children in the age-group 6-14.
- There is shortage of teaching-learning materials in the schools.
- Girls have to do household work and look after their siblings at home.
- Village Education Committees are functional.

#### ORISSA

##### *Investigators' Diaries*

The analysis of the field investigators' diaries brings out the following :

- Poor financial condition of tribal people is the main reason for children not attending school.
- The community felt a need for free food, clothing, and supply of educational materials from the government.
- Most of the children help their parents in agricultural work and other household activities.
- Most of the schools have poor infrastructure and unhealthy atmosphere.
- Tribal children are unable to understand the regional language, i.e. Oriya. Teachers' bookish language is not easily understood by tribal children.
- Most of the tribal people speak their own dialects.
- Members of the community demanded NFE centres and Anganwadis.
- Due to the expenditure involved parents usually do not take any interest in sending their children to the school.
- In general, enrolment of girl students is very low in the selected villages.
- Children have many health problems resulting from polluted water, unhealthy atmosphere and dirty habits. During the study no health worker was ever found to be in the village.

- Most of the tribal people are addicted to alcohol and drugs.
- Most of the people of these villages have negative attitude towards an educated person. They very strongly felt that a number of studies were conducted in their villages by various agencies but nothing concrete was done for them.
- People were aware of their exploitation by local contractors.
- Primary school teachers and NFE instructors are irregular in attending schools and NFE centres. They also remain absent for a very long time.
- Non-tribal teachers and other people discourage tribal parents from sending their children to school. They also look down upon the tribal customs, culture, dress and language. This creates a feeling of inferiority among the tribals. Parents complained against teachers, saying that the teachers were addicted to liquor and play cards during their working hours.
- Supervision system in the selected blocks is very weak.
- Some parents are interested in getting their children educated through the English medium.
- Most of the girls in the age-group 6-14 are engaged in looking after animals like goats, pigs, etc. and take care of their younger brothers and sisters. They also help in household work. The health of girls in the age-group 6-14 was very poor.

#### *Focussed Group Discussions*

Some observations made during the focussed group discussions were as follows :

- Due to lack of awareness about the importance of education and prevailing poverty, enrolment of tribal children in schools is very low.
- In some of the villages the school buildings are not in good condition and the classrooms have very unhygienic conditions.
- Teacher absenteeism and ineffective supervision of schools hampers smooth functioning of schools.
- There is a lack of teaching-learning materials and teaching aids and other materials. The timings of the school do not suit children and their parents.
- In some cases teachers discourage tribal children from coming to the school.
- The language of the teacher is not intelligible to tribal children. Also, teachers coming from outside do not have any knowledge of the local tribal language. Both parents and teachers in general maintained a distance from each other.

Some suggestions given by tribal parents and community leaders for improvement in education are as follows :

- Education officers, supervisors and inspectors should make regular visits to the school.
- Teachers interested in educating tribal children and

also having knowledge about local tribal language should be posted in tribal areas.

- More incentive schemes should be introduced for tribal children. These schemes may include free meals, free uniforms, learning materials, etc.
- Educated tribal youth should be recruited as teachers and posted in tribal areas.
- Timings should be revised to suit the girl students.
- More ashram schools may be opened in the villages having high tribal population.
- More women teachers should be recruited which will facilitate education of tribal girls.

#### TAMIL NADU

##### *Investigators' Diaries*

The following facts have emerged from the analysis of investigators' diaries and focussed group discussions :

- The total literacy rate of tribal population in this area is 50 per cent with female literacy as 42 per cent and male 58 per cent
- Socio-economic status of tribals of this area is low.
- Nearly 30 per cent of the children in the age-group 6-14 are employed as domestic workers and daily wagers.
- Due to financial constraints tribal people are unable to send their children to schools.
- Tribal people prefer more residential schools to regular primary schools. This may ensure effective monitoring of development of their children by the teachers.

##### Questions that Require Further Probing

As was stated above (in the Introduction), the tribal study has generated some very interesting data in each of the seven states. It is well-known that the tribal communities in the different states have characteristics that are unique to each community. The situation in Assam is vastly different from the situation of tribal communities in Orissa. For an understanding of the ground realities in each of the states presented here, the specific survey reports will have to be studied. However, the synthesis presented in this document throws up some very interesting indicators which would seem to be common to all tribal communities.

The first of these indicators of course is the issue of language. All the tribes seem to be torn between the tribal mother tongue and the regional state language. While there is a deep-seated desire on the part of the tribal communities to identify with the tribal language, most communities are aware of the obvious socio-economic significance of the regional standard language.

The other important indicator common to all state survey reports is that of a awareness about the relevance of school education for tribal children. The overwhelming opinion is that relevant schooling for the tribal children and specially for the tribal girl child is needed. The search for a viable alternative, which is in

consonance with the aspirations of the parents and the children seems to have been initiated in the various states. In this context most tribal communities investigated have asked for a curriculum which is linked to the economic activities in the local context.

It is clear that some of the basic infrastructural facilities such as school buildings, teaching-learning materials, equipment under the Operation Blackboard as well as the incentives provided by some of the states for tribal children do not reach the user population as efficiently as they should.

There is widespread understanding about the role of the school teacher in providing relevant education for the tribal children. Most of the communities prefer the appointment of local teachers who can communicate with the children in the local language. There is also a demand for adequate number of teachers for the schools.

Awareness of the relevance of non-formal education is another indicator. Even in states where there is no widespread non-formal education programme the tribal

parents are aware of the advantages of such an alternative.

The survey reports from the various states can at best be seen as sample studies since the data has been collected from a very limited number of villages in the tribal areas. However, one can generalise from the findings and plan at the district level. At the same time, there is need for carrying out quick surveys and research studies in order to validate some of the findings, as well as to acquire a better understanding of the educational needs of these tribal communities. On the basis of the comparison carried out in this document the following studies may be undertaken in different states :

1. A study to determine the efficacy of the ashram school
2. A study of successful on-going school programmes in tribal areas to help planners in providing relevant inputs
3. A study on factors promoting or inhibiting learner attendance.

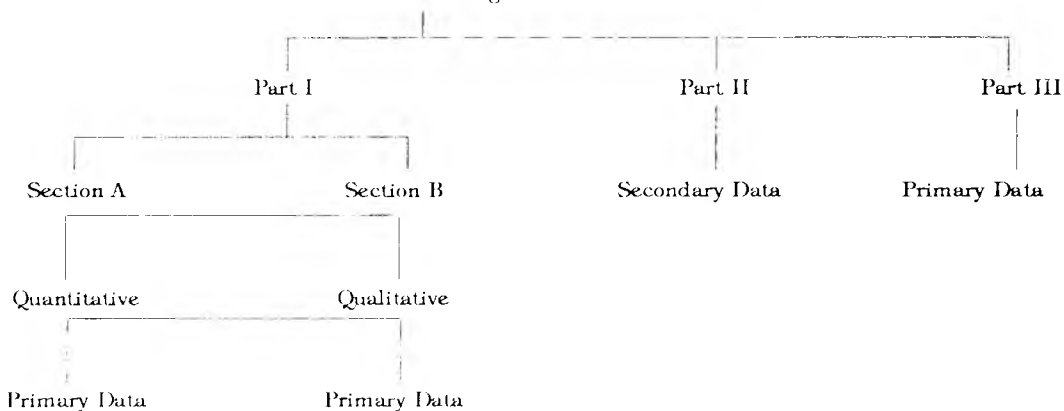


## ANNEXURE

## Tribal Population in DPEP Districts

<i>States</i>	<i>Districts</i>	<i>Name of the Blocks</i>	<i>Percentage of Tribal Population</i>
Assam	1. Darrang	Udalgiri	20.16
	2. Dhubri	Chapar	41.73
	3. Marigaon	Bhurbandha	30.14
	4. Karbe Along	Howraghat	39.94
Karnataka	1. Belgaum	Gokak	6.89
	2. Kolar	Bangarpet	15.19
	3. Raichur	Devadurga	20.16
Kerala	1. Kasargode	Kasargode	4.30
	2. Wayanad	Mannan Thavady	19.83
Madhya Pradesh	1. Betul	Bhimpura	83.79
	2. Rajnandgaon	Nanpur	74.85
	3. Satna	Ram Nagar	24.79
	4. Rewa	Hanumana	19.65
	5. Panna	Shahnagar	28.68
	6. Chattarpur	Bijawar	13.51
	7. Tikamgarh	Jatara	9.57
	8. Ratlam	Bajana	91.02
	9. Mandsaur	Jawad	15.02
	10. Dhar	Bagh	88.36
	11. Guna	Bamori	27.65
	12. Sihor	Narrulagani	29.97
	13. Raisen	Silwane	33.64
	14. Rajgarh	Pachor	7.70
	15. Bilaspur	Pondiupraura	73.10
	16. Raigarh	Kansaval	82.50
	17. Shahdol	Pushprajgarh	78.31
	18. Sidhi	Kusmi	64.71
	19. Surguja	Batauli	77.68
Maharashtra	1. Nanded	Kenwat	31.92
Orissa	1. Kalahandi	Thuamul	55.65
	2. Phulbani	Udayagiri	63.99
	3. Gajapati	Rayagada	77.89
	4. Rayagada	Kolnara	68.75
Tamil Nadu	1. Dharmapuri	Pippireddipatti	18.24
	2. South Arcot	Olakkun	13.68
	3. Thiruvannamalai	Jawadhu	61.89

**TABLE 1**  
**Tools Description**  
**Instruments (Eight)**



- 1. Instrument I-III
- 2. Instrument IV
- 3. Instrument V
- 4. Instrument VI
- 5. Instrument VII
- 6. Instrument VIII

- Teachers
- Headmaster/Teacher
- Village Head/Pradhan
- Parents
- Community Leaders
- School-going children
- Non-school-going children and drop-outs

TABLE 2

Reasons for Children not Going to School Regularly  
as Given by the Community Leaders and Teachers

Opinion	Assam (%)	Karnataka (%)	Kerala (%)	Madhya Pradesh (%)	Maharashtra (%)	Orissa (%)	Tamil Nadu (%)
1. Financial							
a. Teachers	96.97	93.02	80.90	90.00	81.82	68.33	82.35
b. Community leaders	100.00	98.55	78.57	92.86	100.00	100.00	87.00
2. Household Work							
a. Teachers	72.73	88.37	50.83	60.00	100.00	93.33	88.24
b. Community leaders	68.83	23.19	30.00	25.00	16.67	14.29	34.15
3. Health Problem							
a. Teachers	51.52	23.26	76.65	20.00	27.27	10.00	41.18
b. Community leaders	68.83	23.19	82.86	25.00	16.67	14.29	34.15
4. Agricultural Work							
a. Teachers	60.61	83.72	65.17	50.00	100.00	46.67	64.71
b. Community leaders	53.25	94.20	5.71	71.43	100.00	84.13	75.61
5. School Atmosphere							
a. Teachers	57.58	9.30	22.47	10.00	27.27	16.67	5.88
b. Community leaders	15.95	30.43	20.00	14.59		8.45	
6. Teachers' Behaviour							
a. Teachers							
b. Community leaders	19.48	76.62	18.57	20.29	17.86	4.76	29.27
7. Children's failure in examination							
a. Teachers	18.18		30.34				
b. Community leaders	33.77	21.74	65.71	17.86		1.59	31.71
8. Unwillingness of the parents							
a. Teachers	57.58	27.91	70.79	5.00	27.27	6.67	5.88
b. Community leaders	3.90	4.35	25.71				

Note :It may be noted that the total number of responses (Yes + No) does not conform to 100. In such cases, it may be understood that certain number of people have not responded

TABLE 2A

## Reasons for not Going to School/NFE Centre Regularly

<i>Reasons</i>	<i>Assam</i>	<i>Karnataka</i>	<i>Kerala</i>	<i>Madhya Pradesh</i>	<i>Maharashtra</i>	<i>Orissa</i>	<i>Tamil Nadu</i>
1. Do you go to school/ NFE Centre regularly?							
1. Yes	53.77	59.83	69.51	70.77	91.74	74.56	93.23
2. No	24.34	40.17	34.17	29.03	7.44	23.44	4.72
3. No response	1.89		1.25		0.32		
If no, reasons for irregularity							
a. You feel sick	25.53	90.43	20.73	39.12			6.25
b. you had to help your parents in their work	51.06	88.04	68.29	9.48	66.67	62.07	12.50
c. You had to go out of the village frequently	5.31	33.69	23.17	13.86	11.11	17.24	12.50
d. You had to look after your brothers/sisters	3.53	28.29	9.76	17.51	11.11	24.14	6.25
e. Your classmates were not friendly	10.00	3.26		9.48	11.11	6.90	
f. You did not like the school	15.95	30.43		14.59		3.45	
g. Teacher scolded you and did not help you in study	20.21	3.26		2.02	11.11	20.69	
h. Non-availability of textbooks/ exercise books	52.12	29.34	9.76	10.94	33.33	17.24	
i. Homework was not done	9.57	36.95	3.66	5.83	11.11		
j. Parents shifted to other place due to drought or excess rainfall	7.44	2.17	12.20				6.25
k. Teacher teaches faster than you understand	17.02	1.08	2.44			3.45	6.23
l. Teacher was not regular	15.95	11.95	1.22			17.24	
l. Fear of punish- ment from the teacher	11.52	7.60	1.22				6.25

TABLE 3

Opinion on the Textbooks Used by the Tribal Children

Opinion	Assam		Karnataka		Kerala		Madhya Pradesh		Maharashtra		Orissa		Tamil Nadu	
	Yes (%)	No (%)	Yes (%)	No (%)	Yes (%)	No (%)	Yes (%)	No (%)	Yes (%)	No (%)	Yes (%)	No (%)	Yes (%)	No (%)
1. Are the text-books of your children good?														
a. Mother	42.29	2.99	43.00	6.00	47.50	1.50	34.11	11.92	50.00	1.00	33.84	14.65	46.00	2.50
b. Father	49.75	4.48	46.50	4.00	49.00	1.00	38.08	13.08	47.00	1.00	42.92	4.55	51.50	
2. Do you like your textbooks? Children	90.09	9.43	86.03	13.97	97.08	0.83	95.13	4.24	85.95	13.22	88.60	9.65	97.46	2.10
3. Do the children enjoy reading the textbooks?														
a. Mother	44.78	0.50	38.50	10.50	38.50	10.50	32.94	13.08	50.00	1.00	15.66	33.26	44.00	4.50
b. Father	53.73	0.50	42.00	8.50	41.00	9.50	35.96	15.19	46.00	2.00	21.21	26.26	48.50	3.00
4. Do you think that textbooks used by the children are understood by them easily?														
a. Teacher	83.72	16.28	70.83	29.17	50.00	49.17	60.53	39.47	42.86	57.14	36.36	63.64	79.00	21.00
5. Do you understand your textbooks? Children	79.72	18.87	75.11	20.52	85.83	7.93	89.83	9.11	75.21	23.97	30.70	64.04	83.61	15.97
6. Do the textbooks suit the needs of tribal children? Teacher	81.40	18.60	93.75	6.25	75.00	25.00	76.32	23.68	39.29	60.71	90.91	9.09	92.00	8.00
Details of unsuitability														
a. Language problem	25.00		66.67				66.67		64.71					
b. Not easily understood			33.33		12.50								75.00	
c. Mistakes in textbooks	25.00				0.83									
d. Books not designed to capture children's interest	12.50													
7. Do you think that a special methodology for teaching tribal children is needed? Teacher	83.72	16.28	37.50	62.50	55.83	42.50	71.05	28.95	67.86	32.14	60.61	39.39	73.00	27.00

TABLE 4  
Questions Relating to Community Participation

Opinion	Assam		Karnataka		Kerala		Madhya Pradesh		Maharashtra		Orissa		Tamil Nadu		
	Yes (%)	No (%)	Yes (%)	No (%)	Yes (%)	No (%)	Yes (%)	No (%)	Yes (%)	No (%)	Yes (%)	No (%)	Yes (%)	No (%)	
1. Is the teacher concerned about the problems of the village?															
a. Mother	21.89	17.91	27.50	21.50	22.00	27.00	23.36	22.66	51.00	1.00	23.74	25.76	11.00	37.50	
b. Father	27.86	17.41	31.50	19.00	24.50	25.50	30.14	21.03	48.00		11.62	87.37	18.00	36.50	
2. Do you participate in any school function?															
a. Mother	20.40	24.88	5.00	44.00	23.50	25.50	9.58	36.45	45.00	7.00					
b. Father	31.84	22.39	24.50	26.00	28.50	21.50	27.34	23.83	48.00		17.17	32.32	11.50	37.00	
											13.13	35.86	11.50	40.00	
3. Do you participate in the school meetings?															
a. Mother	13.43	31.84	3.00	46.00	4	22.50	27.50	8.41	37.62	40.00	12.00	7.07	42.42	3.50	45.00
b. Father	26.87	27.36	9.00	41.50	6	26.00	24.00	25.23	25.93	47.00	1.00	12.63	35.86	4.50	47.00
4. Are you familiar with the activities of the school?															
a. Mother	7.96	7.31	12.50	36.50	20.50	28.50	12.15	33.88	42.00	10.00	6.06	43.43	0.50	48.00	
b. Father	18.91	35.32	20.00	30.50	24.00	26.00	26.17	24.77	47.00	1.00	8.08	40.40	2.50	49.00	
5. Do you involve community members in evaluating school/NFE centre? Teachers	48.84	48.84	0.00	100.00	4.17	90.83	34.21	65.79	39.29	60.71	15.15	75.76	30.00	70.00	
6. Should the community have any control over the school in your village?															
a. Community leader	94.74	5.26	63.75	36.25	60.00	40.00	90.00	10.00	100.00		53.16	46.84	21.00	79.00	
Type of control that you percieve-															
a. Supervisory	94.44		78.43		46.67		61.11		66.67		42.86		80.95		
b. Advisory	68.89		88.24		93.33		97.67		96.67		47.62		52.38		
c. Participatory	70.00		62.75		88.33		41.67		83.33		100.00		52.38		

Note : It may be noted that the total number of responses (Yes + No) does not conform to 100. In such cases, it may be understood that certain number of people have not responded.

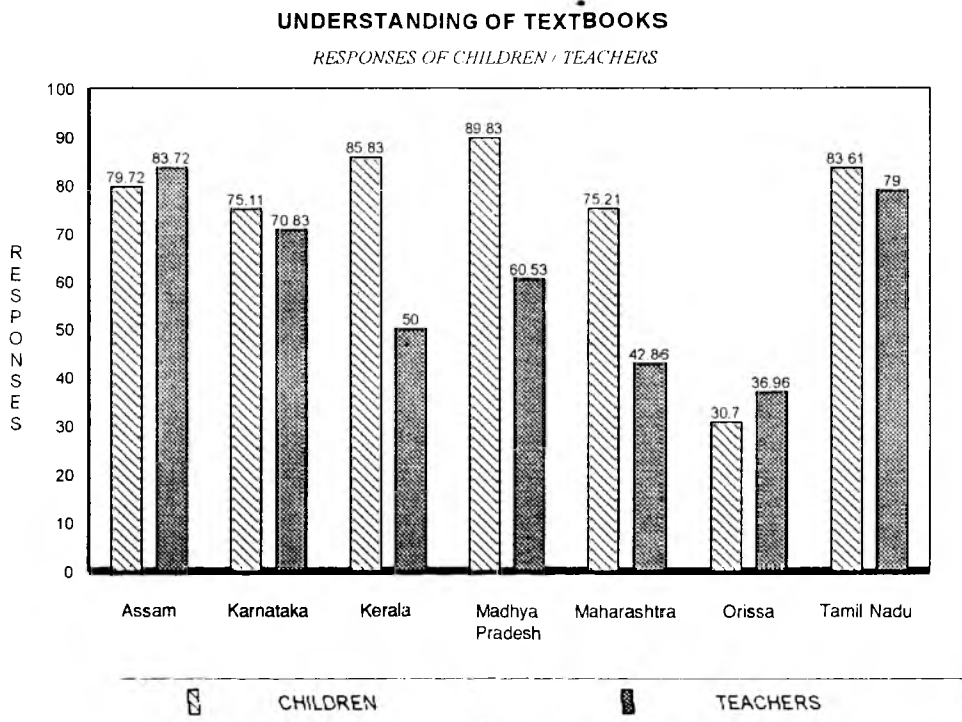


Fig. 1

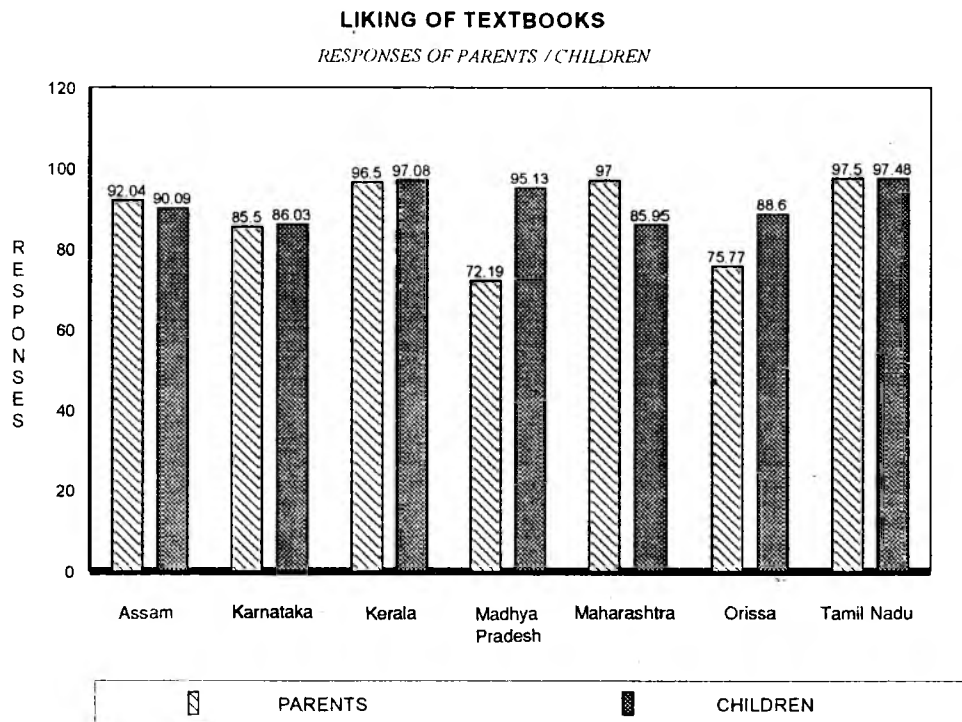


Fig. 2

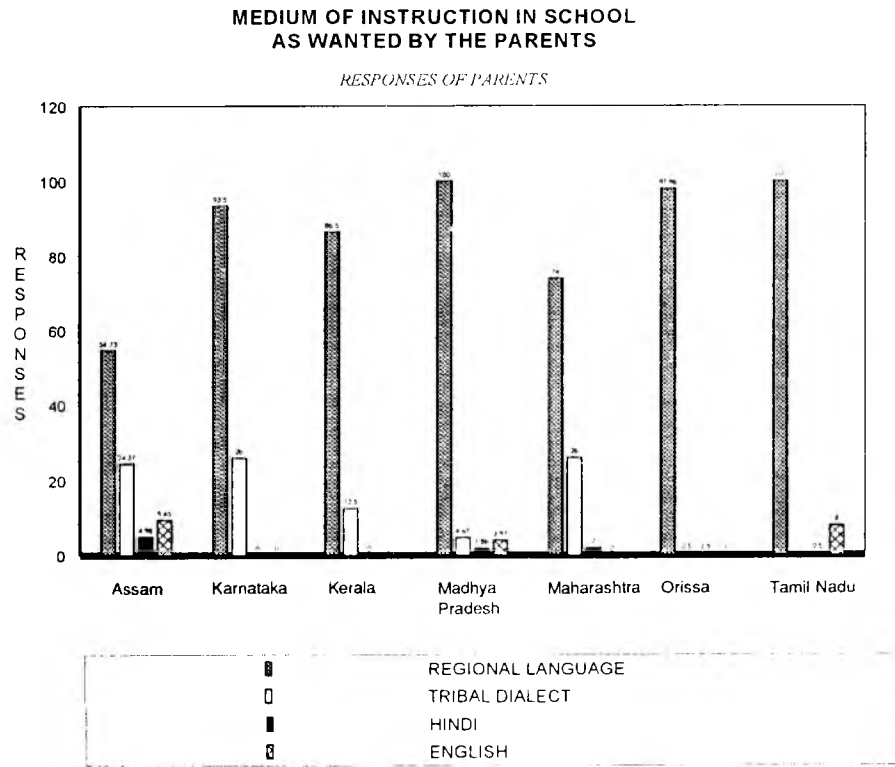


Fig. 3

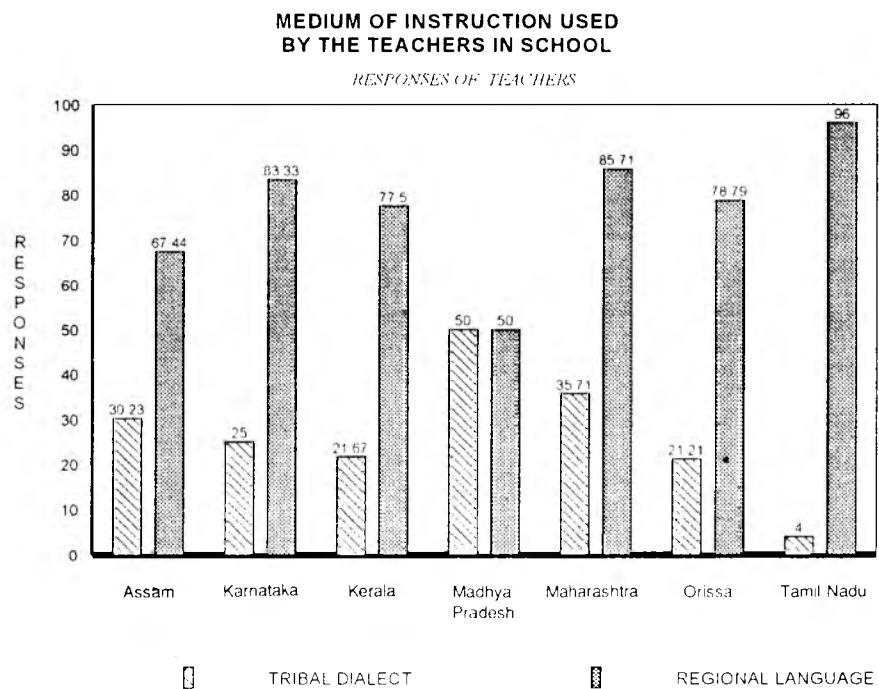


Fig. 4



# Gender Issues in Primary Education

USHA NAYAR



## Gender Perspective in National Policy on Education

The National Policy on Education 1986 is a major landmark in the evolution of the status of women in India. The NPE goes substantially beyond the equal educational opportunity and social justice (equity) approach and expects education to become an instrument of women's equality and empowerment. Paras 4.2 and 4.3 of the NPE put the issue of women's equality on centre stage :

Education will be used as an agent of basic change in the status of women. In order to neutralise the accumulated distortions of the past, there will be well-conceived edge in favour of women. The national education system will play a positive, interventionist role in the empowerment of women. It will foster the development of new values through redesigned curricula, textbooks, the training and orientation of teachers, decision-makers and administrators, and the active involvement of educational institutions. This will be an act of faith and social engineering. The women's studies will be promoted as a part of various courses and educational institutions encouraged to take up active programmes to further women's development.

The removal of women's illiteracy and obstacles inhibiting their access to, and retention in, elementary education will receive overriding priority, through provision of special support services, setting of time targets, and effective monitoring. Major emphasis will be laid on women's participation in vocational, technical and professional education at different levels. The policy of non-discrimination will be pursued vigorously to eliminate sex stereotyping in vocational and professional courses and to promote women's participation in non-traditional occupations, as well as in existing and emergent technologies.

The Programme of Action (POA) as revised in 1992 clearly spells out the need for the entire educational system to be alive to gender and regional disparities. Gender sensitivity is to be reflected in the implementation of educational programmes across the board. The POA makes it incumbent on all agencies and institutions in the field of education to be gender-sensitive and ensure that women have their rightful share in all educational programmes and activities. To this effect all educational institutions have to plan and act. All educational personnel, therefore, need to be sensitised on gender issues.

## Sex and Gender

There is gradual realisation that men and women play an overlapping variety of roles which complement one another. A change for one inevitable brings a change for the other. A balanced gender-aware approach would be the best way to implement development programmes. Whereas sex is biologically determined, gender imputes values to biological differences. One is born female or

male but it is one's culture which makes one masculine or feminine. Gender is thus the cultural definition of behaviour defined as appropriate to the sexes in a given society at a given time. Gender roles are hard to change but as they are socially/culturally created, they are changeable. Gender roles are a learned behaviour. These roles in their social, economic and political dimensions vary across cultures and are internalised very early in life. There is non-conscious internalisation of the gender role ideology during early childhood and education does little to modify or change this. In fact, education further strengthens the familiar gender-based division of labour and resources through inequitable distribution of school resources and a gender discriminatory transaction of the curricula. The main actors of gendering in school are the teachers, the educational planners and administrators, the curriculum developers and the textbook writers. And, they all emerge from the same society and have internalised (unequal) gender roles. It is only after unlearning some of the prejudices and stereotypes that an administrator, or a textbook writer can become a source of women's empowerment or gender equality. The POA recommends that :

- i. All teachers and instructors will be trained as agents of women's empowerment. Training programmes will be developed by NCERT, NIEPA, DAE, SRCs, DIETs, SCERTs and the university system. Innovative training programme will be designed with the assistance of concerned organisations and women's groups.
- ii. The common core curriculum is a potentially powerful instrument to promote a positive image of women. The Department of Women's Studies, NCERT will intensify activities already initiated in the area of developing gender-sensitive curriculum, remove sex-bias in textbooks and training of trainers/teachers. SCERT and concerned state level boards and institutions will initiate similar work.

In the area of girls' education and women's empowerment, significant research and development work was done for operationalising NPE commitment to education for women's equality after 1986. Considerable data-based analysis pointed to the educational and social lag of women and girls especially those belonging to rural areas. The most significant contribution of these field-based empirical studies was to highlight the regional and gender disparities and help in identifying districts which were backward in female literacy and schooling. This formed the basis for girls/women focussed EFA strategies and so the Eighth Five Year Plan (1990-95) focusses on issues of rural girls and women from disadvantaged groups.

The 1980s were a significant period when issues of sex-bias in curriculum and its transaction were raised and tools were developed to analyse textbooks and other

learning materials from the point of view of gender equality and later from the angle of women's empowerment. This was also a time when teacher education curriculum was reviewed from gender perspective.

Several EFA initiatives have been taken in the 1990s to include Bihar Education Project, Andhra Pradesh Primary Education Project, Uttar Pradesh Basic Education Project, Lok Jumbish in Rajasthan and Total Literacy Campaign (TLC) in more than 200 districts, with focus on girls' education and women's empowerment. The experience gained in these on-going projects has been utilised in formulating one of the largest primary education programme, namely, the District Primary Education Programme (DPEP).

Against the backdrop of policy commitment and the educational and social lag of women and girls, gender studies were taken up in 40 districts of the States of Assam, Haryana, Karnataka, Kerala, Madhya Pradesh, Maharashtra and Tamil Nadu. These were primarily low literacy districts or districts where TLCs have been taken up.

### Goals of Gender Studies

#### Immediate Goals

- Gender-sensitive project planning and implementation
- Increasing number of schools/places for girls' formal/non-formal education.
- Improving infrastructure and support services for girls and increasing number of women teachers and women administrators.
- Making the content and process of education gender-bias-free, highlighting elements to build a positive self-image and self-confidence among girls.
- Gender sensitisation of all educational personnel, parents and community.
- Monitoring progress towards gender equality.
- Social mobilisation, awareness generation, consciousness raising, advocacy, campaigns for survival, protection and development of the girl child education as a key input.
- Energising existing women's groups.
- Organising new groups.
- Supporting action by women and community to promote girls' education and to raise status of women.
- Reconstruction and deconstruction of gender roles according to present and future requirements.

#### Long-term Goal

- When being a man or a woman works neither to the advantage nor to the disadvantage of a person.

#### Objectives

1. Mapping out gender disparities in access, enrolment and retention.
2. Identifying causes for non-enrolment and drop-out of girls and propose effective districts/local-specific

strategies for improved enrolment, retention and achievement among girls.

3. Assessing the situation of women in each district with regard to some social and demographic indicators and women equality and empowerment.
4. Collecting information on gender-bias in (a) textbooks, (b) teacher training, (c) teacher attitude, (d) transaction, and (e) administrators' attitudes.
5. Identifying supportive community structures such as women groups, VECs, Panchayats, PTAs, teacher organisations, youth clubs for developing effective strategies of UPE among girls.
6. Identifying ways of facilitating convergence of services of different departments for UPE among girls (ECCE health and support services).
7. Studying the availability of educational (books, stationery, uniforms) and other incentives (noon meals, attendance prizes, etc).
8. Assessing participation of women in teaching, administration and other decision-making bodies.
9. Developing state/district level monitoring and framework for removal of gender disparities.

#### Earlier Studies

The girls suffer from abnormally high incidence of drop-out. In fact a large majority of them consist of pull-outs who are pulled out of the educational system by sheer force of socio-economic and cultural compulsions. Then, there are educational factors, like irrelevance of curriculum, discriminatory attitudes of teachers, parents and community regarding the value of education particularly to girls who are forced to quit without completing the primary state of education.

The situation among rural girls was found to be much worse in 1976. According to a national study conducted in 13 major states, the drop-out rate for girls in rural areas was 65.6 per cent compared to 22.3 per cent in urban areas. The high rate of drop-out of rural girls was 52 per cent compared to 44 per cent for urban girls (NCERT, 1976). This study reflected that there were more repeaters than premature withdrawals contributing to the overall drop-out in a particular batch. Further, the high rate of drop-out was more in earlier classes, i.e. between Class I and II and the enrolments stabilised in later classes. It was also found that states in which the primary stage constituted Classes I-IV the drop-out of girls was very high, and was higher among the rural girls.

#### Reasons for High Drop-out of Girls

Reasons for high drop-out among girls given by the parents, the community, the girls themselves and the educational practitioners are poverty, early marriage, helping parents with house work and agricultural work, unattractive school environment, parents' illiteracy and indifference, lack of a positive educational climate, neglect of studies leading to repeated failure and finally

withdrawal from schools. Girls join very late and are withdrawn at the onset of puberty. Parents do not see any benefits of girls continuing in school and are in a hurry to marry them off so that their liability is shed.

Findings of a national study (NCERT, 1993) show a striking difference in the self-perception of girls who stay at home and the drop-outs, the former had a relatively higher self-image and a supportive family environment by and large. There were, however, cases where girls showed great determination and were doing well in spite of several odds. By and large, drop-outs were from relatively poorer households who may initially register the girls in school but later withdraw them on account of economic compulsions of work at home and many times on account of lack of clothes and extra tuition costs. Girls, when they do not fare well repeatedly, are withdrawn whereas boys are made to continue. Girls get much less time for studying at home, and leisure and play are remote events in their lives. Boys have the liberty to play and even while away their time as it is considered natural that they are playful.

It may be pertinent to point out that though enrolment ratios of girls in primary and upper primary are very high in the North Eastern states and tribal regions, the drop-out rates of girls are equally high and field studies and field observations show that though gender discrimination is not prominent in other aspects like food, health, personal freedom, girls are held back for working on the fields and looking after animals and little use is seen by the parents to give formal education to them.

#### Reasons for Low Enrolment of Rural Girls

The reasons assigned for non-enrolment of rural girls are a combination of educational and extra-educational factors, where low and inadequate provision (supply) compound the socio-economic disadvantage of rural girls :

- i. Low access and provision of educational facilities.
- ii. Lack of adequate support services of child care, medical and health care.
- iii. Lack of access to convenient sources of water, fodder and fuel.
- iv. Low female literacy and associated low status of women.
- v. Low parental education and apathy to education of daughters.
- vi. Low valuation of female life itself and discriminatory attitudes towards female child in access to food, health care, education and leisure.
- vii. Early marriage of girls hinders their educational chances.
- viii. Keeping poverty as constant, in poorer households the burden of male unemployment is passed on to women and children, particularly girls. Daughters attend to domestic chores and sibling care. Hence, they either do not join school or drop out. This trend will continue unless employment is assured for one adult.

- ix. Girls and women's work is considered interchangeable not boys' work and hence the perceived opportunity costs for girls are higher than those for boys (Chamie, 1982:32). Another study shows that a 10 per cent rise in female wages reduced school attendance of girls by 5 per cent.
- x. Girls in poorer families labour pool significantly improve the amount of schooling which male children receive.
- xi. The large size of poverty households is a deterrent to female education, as girls from such households are required at home for sibling care and for domestic work, in addition to helping the parents on family farms and household industry/labour.
- xii. However, the number of female children enrolled in schools, rise within the levels of household income (Shrestha, 1983; Nayar, 1988; Khan, 1989), parental education, especially father's education (Shah, 1989), and the size of land holdings.
- xiii. A recent study has found a positive relationship between the per capita household expenditure (PCHH) and performance of children at school. With the increase in PCHH, the enrolment of girls catches up fast. The enrolment rate for girls and boys equalises when the average per capita household expenditure is of Rs 225 per month.

### Methodology

The study is primarily qualitative and was carried out in participatory research mode. The concerned communities, parents, officials and researchers met together in face-to-face interaction and discussed the major issues of continuance, discontinuance and non-enrolment of girls in primary education. Structured individual interviews and group discussions were carried out in addition to secondary data obtained from the state, districts, block and sample villages. Field observation was employed to support/strengthen data obtained from secondary sources and through individual/group discussions.

In rural and urban slum settings, there is hardly any concept of household privacy. Household interviews in villages and urban slums were a family/community affair. Each interview turned into a mini discussion group with the male household head as chief respondent but household women, mother, wife, daughter, all participating. The responses registered are to be seen as parental responses as both male/female parents or occasionally a grandfather or a grandmother had their pieces to say, neighbours did not stay away either. When the investigators moved to the next identified household, the previous household head would usually accompany. In a little while it would seem that the research team was heading a small procession.

It would be pertinent to state that the group discussions were consciously conducted responses were elicited from all present, women had their full say. This compensated for male dominance of household interviews, where men felt as heads of households, it was their prerogative to give information.

### Secondary Data

The secondary data was collected on the following variables :

1. Social and demographic indicators, population distribution by sex, rural-urban areas, sex ratio, age-specific population, especially for age-group 0-6 and 6-11 years, population density, age-specific mortality rates, infant mortality rate, child mortality rate, age at marriage by sex, child labour, work participation rate by sex, by main and marginal workers and by rural/urban areas, wherever possible.
2. Literacy by sex, rural-urban, SC/ST 1981, 1991.
3. Availability of primary schools/NFE Centres, ECCE Centres within walking distance of 1 to 1.6 km for girls.
4. Availability of educational and other incentives like books, stationery, remedial teaching, uniforms, noon meals and attendance scholarships.
5. Enrolment by sex, rural-urban, SC/ST.
6. Drop-out by sex, rural-urban, SC/ST.
7. Total number of teachers by sex, rural-urban, SC/ST.
8. Women teachers as percentage of total teachers.
9. Women's participation in terms of percentage in educational administration and other decision-making bodies like Panchayats and VECs.
10. Supportive structures such as ECCE (Anganwadi, Balwadi, pre-schools), women's groups (Mahila Mandals, Mahila Samakhya, NGOs, etc.); VECs, PTAs, Panchayat Education Sub-Committees, teachers' organisations, Nehru Yuvak Kendras (youth clubs).
11. Schemes and programmes of education departments and other departments (GOI and state governments) for girls' education and women's development.

### Primary Data

The primary data was collected through group discussions, field observation and interviews with parents, teachers, administrators, community leaders and drop-out and never-enrolled girls themselves. The purpose was to identify :

- Reasons for continuance of girls in schooling.
- Reasons for discontinuance of girls from schooling.
- Reasons for non-enrolment of girls.
- Perceived utility of girls' education.

- Perception of gender equality and gender discrimination.
- Proposed strategies for UPE of girls' and women's empowerment.
- Role of parents, community leaders, administrators and teachers in UPE for girls.

### *The Sample Design*

The districts selected under the SSN project are low female literacy districts. Originally, it was proposed to conduct gender studies in two blocks—one with relatively high female literacy and the other with low female literacy rate. Later, on the advice of the national core group, it was decided to select one of the baseline survey block for gender studies keeping the number of sample villages the same. In each block eight villages were to be selected for collection of primary data to represent: (a) villages having no school, (b) villages having a primary school only, (c) villages having middle school, (d) villages having secondary or higher secondary school.

In addition to the above, one/two urban slum communities were also selected for collection of primary data. This was not followed uniformly. For instance, Karnataka used different criteria for selecting these villages in each of the four districts. Assam stuck to the original plan of selecting four villages from two blocks.

### *Major Departures*

The study is innovative in several dimensions such as:

- Household was used as the entry point instead of the schools.
- The phenomena of drop-out and non-enrolment of girls were studied separately.
- Since the education of girls is inextricably linked with the immediate socio-economic and cultural context, the study adopted the anthropological method of taking village as a unit of study. As it is well established now primary education really belongs to people, and should be their concern, each villager needing to develop a stake in its implementation. These village studies have followed the holistic intersectoral and multi-disciplinary framework.
- They provide location-specific analysis and intervention strategies, taking into account the interactive social structures and the development infrastructure, as it impinges on education.
- Instead of a team of educational researchers only, the study was an interactive process among (a) persons from various disciplines like sociology, social anthropology, women studies, education, zoology, political science, home science, economics, psychology and statistics; (b) practitioners like Education Commissioner, SCERT faculty, Director, Primary Education, DIET personnel, District Primary Education Officer, Block Education Officers, head teachers and teachers; (c) users, e.g. community leaders, parents, women and girls and deprived groups.

The study was process-oriented, change-oriented and people-oriented. The net result has been the achievement of common perceptions and commonality of action. It now provides a framework for action by policy planners, administrators, teachers, teacher educators and the community.

### *The Process of Capacity Building*

One of the objectives of DPEP is *capacity building* and creating a culture of field research. The National Core Group Gender (NCGG) met in a workshop to discuss the proposal for gender studies from 1-3 June 1993. The proposal was sent to MHRD on 4 June 1993.

The NCGG strengthened itself. Each NCGG member who had the responsibility of looking after a state fully participated in selection and training of project personnel. He/she was accompanied by two/three members of the NCGG team. Project Director participated in all the training programmes and introduced the concept and method of DPEP, gender equality and gender studies. She also met senior state/district officials for seeking their support and participated in the field work in several districts. One consultant and six professional assistants were appointed to assist NCGG. The professional assistants were oriented on the concept and modalities of DPEP at NCERT during the last week of September 1993. They were trained in the methodology of collecting data from secondary sources. Each one of them was assigned one state for detailed study on educational and other indicators. They were exposed to the seven interview schedules, individual and group interviews, techniques and methods of field observation for collection of primary data. Along with all the NCGG members, state coordinators (gender studies) participated in the review of schedules and development of coding and tabulation plan.

The Department of Women's Studies had earlier conducted a national study on factors responsible for continuance and discontinuance of girls in the schooling with focus on rural, SC/ST, and urban slum populations. The schedules used in that study were modified after field-testing in some locations. The revised project proposal was sent to MHRD on 29 June.

An orientation programme for coordinators of the project from the DPEP states was held on 8 and 9 July. The participants modified the schedules. State coordinators were also requested to identify their teams of researchers and prepare a status paper.

A national workshop on 'Elimination of gender bias from textbooks and providing inputs into primary teacher education curriculum' was held from 25 to 27 August 1993. Coordinators and curriculum experts from DPEP states participated in the workshop. Textbooks were reviewed and primary teacher education curriculum was scanned through.

After feedback from the field work in four villages of Kaithal, Haryana and four villages from Tikamgarh, Madhya Pradesh during the third and fourth week of

September, the Project Director in consultation with other members of NCGG revised all schedules from 1 to 4 October 1993

Initial training of professional assistants lasted three days of intense interaction among NCGG members, state coordinators and professional assistants on conceptual issues and field work methodology. *The duration was highly insufficient.*

Major components of this training consisted of :

- i. Gender sensitisation and discussion on status of women on the basis of state status paper.
- ii. DPEP framework and gender studies.
- iii. Exposure to interview schedules and forming of a battery of supplementary questions.
- iv. Mock interviews — individuals and group.
- v. Formation of teams following the mode of dyad technique : all individual and group interviews were to be conducted by a team of two, sometimes with one person keeping the discussion going and the second taking notes (on schedules/diaries). The role of the discussant and the reporter was to be interchangeable.
- vi. Methodology of field observation : Maintenance of daily diary.
- vii. Planning of field work, logistics and time schedule.
- viii. Actual exposure to field situation in a nearby locality.

It was found impractical to train professional assistants and other state personnel in the highly specialised clinical psychology/psychiatric technique of focussed group discussions. Also the feedback from Kaithal and Tikamgarh field work indicated that assembling of homogeneous discussion groups in the villages or in the slums is not feasible. The moment you enter a community, people just flock in and it becomes difficult to separate them into homogeneous groupings. You have to respond to their curiosity and enthusiasm by making them a part of the discussions. It was, therefore, decided that the NCGG members, and state/district coordinators would themselves undertake group discussions initially so that the professional assistant acquires the working level competency.

This multi-tier field-based training resulted in formation of highly motivated competent field teams. This is a point for enormous satisfaction considering that DPEP is a process directed at generating and developing national/state/district level capacities for gender studies and gender training. These groups have developed a potential for carrying out further work in the area. The state coordinators are fully equipped to plan and conduct gender intervention in DPEP management, content and process of primary education and gender sensitisation of all educational personnel, parents and community.

#### Limitations

— Field work slated to start in August had to be de-

layed till October as funds were released to the states only by September end, after which they appointed the professional assistants. Their training had to be rushed. Field work was completed during October-December 1993 in six states. Field work in Madhya Pradesh continued till March 1994. Orissa responded only in April and has finished field work.

- Field-based research was a new concept and the first experience for several NCGG members and the state coordinators. Despite several national and state level meetings and similar interaction by the NCGG, each state coordinator made some local variations and adjustments.
- As the reports had to be rushed to Delhi by the end of January for a national meeting, there was little time to supervise report writing, data analysis and data display. Despite such pressures, the state coordinators did an excellent job in preparing draft reports based on preliminary analysis of data. As they were handling such data for the first time, analysis was kept simple. The data display and analysis can be further improved as also the report format and content before printing.

#### The Interaction Field

- i. *State level* : Education Secretaries, DPIs/SCERTs Directors, State Coordinator Gender Studies State Project team (multi-disciplinary and often drawn from same district/language group).
- ii. *District level* : District Collectors, District Primary Education Authorities, District Primary Committee comprising officials of other concerned departments, eminent educationists and representatives of NGD.
- iii. *Block level* : Block Development Officers.
- iv. *Village level* : Panchayats, community leaders, teachers, parents, drop-out links, never-enrolled links and group discussions.
- v. In 21 districts under reference in six states, in all, 202 villages/slums were visited.

#### Summative Methodological Issues

No attempt is made to aggregate data at the national level as that would be self-defeating. District studies were carried out as district-specific situational analysis of girls' education and women's empowerment (or lack of it!). Each district is a unique social system and within that specific communities have their own sub-systems. Some kind of aggregation can be done at best at the state level, where the responsibility lies for common denominators like :

- i. Policy measures and programmes for primary/girls' education and women's development and other broad strategies.
- ii. Curriculum development; textbook preparation.
- iii. Preparation of teachers for curriculum transaction (pre-service, in-service).
- iv. Inter-departmental coordination.

Therefore, gender studies reports are presented district-wise and state-wise only. The studies are fairly detailed, have identified district-specific issues and strategies as perceived to by the users (parents, community, girls) and the members of the delivery system (educational and other development administrators and teachers).

Even though the issues of access, enrolment and retention might look common, the degree or magnitude of requirements, has not only to be district-specific but block-specific and village-specific. As a first step, we have moved to the district as a sub-unit for plan project formulation. In the wake of Panchayat Raj, we have to move towards block level, Gram Panchayat, and institutional level planning. How many, how much is required of the same or the different is to be known.

The study was carried out in the spirit of NPE/DPEP to effect decentralised, participatory planning and implementation of primary education and building state and local level capacities. Although the study design was formulated and finalised with the participation of state coordinators at the national level and constant link was maintained with them and their project teams (professional assistants), effectively, they are the ones who carried out the field work, analysis and report writing within six months. The NCGG provided support at every stage—project staff selection, establishing rapport with state and district officials, orientation of project staff on field work techniques, data analysis and report writing.

The district reports have to be seen in the light of the fact that it was at times the first brush of concerned state coordinator or with social research and that too field-based and empirical. All six state coordinators, extremely capable and dynamic, were *urban middle class women*, who (as they admitted) sat and talked with the parents in villages and slums, listened to their side of the story with *empathy*, internalised and understood the problems and issues concerning girls' education and women's equality and made suitable interventions in district level workshops. They can utilise district findings for formulating state level interventions. They have even gone ahead to *phasing* and *costing* of these interventions.

#### Data Analysis

The presentation of data and its analysis was kept simple so that the state teams could handle the same with ease. This study is not *quantitative* in any real sense. *Interviews* and *discussions* have been the chief mode in addition to *observation* of the field by the investigators. Analysis of secondary data at the state and the district levels provided the backdrop on girls' education and the status of women (state status paper and district profiles were prepared).

Only simple descriptive statistics like frequencies, percentage, ranking have been employed for a limited

*quantification of qualitative data* in the form of simple tables. The full scope of even *bivariate* analysis has not been exhausted due to extreme shortage of time. The field diaries and field notes can be further analysed.

Data for all nine locations (eight villages and one urban slum) has been clubbed and presented together. The data is available for each location separately. In the second stage, data analysis would be disaggregated column-wise for (i) unserved villages, (ii) villages with primary schools, (iii) villages with middle schools, (iv) villages with high/higher secondary schools, and (v) urban slums. The data can be aggregated row-wise for all DPEP districts in a state to indicate a broader set of findings.

For academic purposes, data on certain variables may be aggregated for all 44 districts — 21 in six states, 19 in Madhya Pradesh and four in Orissa — exercising a lot of care as to what all we are adding, of the same and the different.

The district reports may look quite the same, as they have a more or less common format, but each one read carefully gives more a glimpse of the situation of girls' education and women's status. The reports are drafted keeping in view their users, i.e. district and state level educational administrators and teacher educators. The reports give a brief but clear analysis of the following :

1. Situation of primary education of girls and female literacy (block-wise in some states) and highlight issues of access, low enrolment and low retention and reasons for continuance, discontinuance, non-enrolment as perceived by parents, girls, community, teachers, administrators.
2. Both primary and secondary data on other social and demographic variables provide insights on the actual situation of women and girls in the district and in specific rural and urban communities that were studied. One gets an idea as to how gender roles are perceived by chief actors *around the girl child*—the parents, the teachers, the administrators, the community leaders—and how the girl herself perceives her total situation if she has dropped out or has never gone to school. What all she does for the family, her hopes, her fears, how equal she feels or is treated by her family, her parents. What does a drop-out remember of her school and her wish/possibility of getting back to education, formal or non-formal? Did the school turn her away or the family factors pulled her out?

Gender studies are based on the assumption that *gender discrimination exists* within the educational supply factors, availability of school places/access and within the family situation which determines the *demand* for girls' education and full *utilisation* of available educational opportunities. What look like *causes* for low enrolment, higher drop-out, lower achievement (baseline study) are in fact the consequences of gender discrimination faced by girls on account of traditional gender

role perceptions to which most adults (parents, teachers, curriculum developers, book writers, administrators, community leaders) hang on. If education is to equip girls to become empowered women — self-confident, self-reliant, capable of participating in decision-making processes, good communicators and informed leaders — provision would have to be made (a) to provide educational facilities, and (b) to make the content and process of education not only gender-bias-free but a consciously designed vehicle of gender equality.

It is *relatively* easier to provide the school places. It is difficult to change the *mind set* of the teacher, the textbook writers and administrators about the traditional perceptions about gender-based division of labour, equal abilities and equal opportunities. Being educated they at least subscribe to the utility of educating girls and gender equality in several areas. The toughest task is to change the extra-school factors where interplay of poverty and gender discrimination becomes a lethal combination and leads to withdrawal from or non-enrolment of girls in schools consigning them to domestic roles and closing any possibility of their participating in extra-domestic spheres except as unpaid family workers or poorly paid wage workers as they grow up.

The studies mark a beginning of the process of gender sensitisation and awareness generation from state to district, to block to village slum communities. In six states and 21 districts nearly 40,000 persons interacted on issues of girls' education and women's equality.

## Major Findings and Recommendations

### Access

- i. The problem of access obtains in small sized villages and scattered habitations. Availability of educational and other development infrastructure of health, ICDS, water, electricity, roads, women's development groups/programmes is almost nil in villages with population less than 100 and increases with the population size of the villages. Villages with thousand or more population are better endowed and have higher levels of literacy and schooling facilities at least up to middle and even high school level.
- ii. Very large villages have a problem when even two primary schools do not suffice and some valuable sections are left out (girls among them).
- iii. Rains are a time when attendance drops, as *kuccha* roads become slushy and almost non-negotiable and at several places little rivulets and nullahs swell up and become dangerous for small children. In one of the Madhya Pradesh districts there were as many as 200 nullahs and villages. Villages with 21 or 25 households, even 40 households had no school within miles. About 16 per cent of villages of Madhya Pradesh have population habitations below 100; 15 per cent in Karnataka, 8 per cent in Assam, 12 per cent in Maharashtra, 22 per cent in Orissa and 7

- per cent in Tamil Nadu, 15 per cent for India as a whole and only 0.39 per cent in Kerala. Parents of unserved villages do not want to send their children especially girls for schooling outside the village.
- iv. Urban slums are worst off and rarely have a school if it comprises recent migrants from villages.
- v. There is evidence of a growing demand for girls' education. Interviews with parents and group discussions showed that they all wanted with one voice a school where none exists; a middle school in the village with a primary school, a high school in villages with a middle school.
- vi. The ratio of middle school to primary schools ranges between 1:3 to 1:6 in different states/districts. Girls are not sent outside the village. Primary education would become a dead end for girls unless commensurate facilities are created at the middle level. Middle schools were located at 3 to 8 km distance from smaller villages.
- vii. Secondary data shows an alarming trend that needs to be reckoned with. Compared to every 100 rural girls in Class II, only 0.23 are found in Class XII in Assam, 0.29 in Haryana, 1.60 in Karnataka and Kerala, 0.04 in Orissa and 2.53 in Tamil Nadu; 1.44 in India as a whole. And, 12 years of general education is a basic requirement for entry into primary teacher training and into other diploma and degree level general and professional courses.

### Enrolment and Retention

- i. Enrolment ratios for girls at the primary level vary from 80 per cent in some districts to 116 per cent.
- ii. With the exception of Kerala, drop-out rates for girls are very high and invariably higher than those for boys.
- iii. The phenomenon of non-enrolment of elementary age-groups is very high in Madhya Pradesh but is also considerable elsewhere except in Kerala.
- iv. Drop-out takes place largely after a girl is about 10+ or after primary for lack of a middle school.
- v. The average-underage phenomenon is to the tune of 25 per cent for girls in primary classes.
- vi. *Major Reasons for Continuance of Girls*
  - Better economic condition of the household.
  - Parental education and motivation.
  - Parental ability to pay extra tuition costs, provide books, stationery, clothes, create space and time for studies at home.
  - Self-motivation of the girl child.
- vii. *Main Reasons for Discontinuance of Girls*
  - Domestic work.
  - Inability of parents to provide books, stationery, clothes, extra tuition costs.
  - Parental illiteracy, and lack of motivation.
  - Helping parents in remunerative work.
  - Care of siblings.
  - Early marriage (as early as she is 'big enough' as measured by a *thali* in Madhya Pradesh,



Haryana, even among certain communities in Kerala, not so much elsewhere).

viii. *Main Reasons for Non-enrolment of Girls*

- Domestic work.
- Inability of parents to pay extra tuition costs, provide books, stationery, clothes, shoes, etc.
- Parental illiteracy and lack of motivation.
- Helping parents in occupation.
- Care of siblings.
- Early marriage.

ix. *Drop-out Girls*

- Drop-out girls give similar reasons for discontinuing school. Fetching water and collecting fuel take up a greater part of their time and domestic work includes cooking, clearing and washing.
- Most of them left school on account of domestic compulsions of work and poverty.
- Most of them belong to impoverished households.
- Most mothers are illiterate while fathers are relatively less illiterate.
- Drop-out girls belong to large-sized households.
- Drop-out girls are among the first, second or third born at the most.
- Drop-out girls (nearly all) liked their school and teachers and found them helpful.
- Drop-out girls miss school and majority would like to go back to school, if given a chance.
- Language was their favourite subject and subjects that they disliked most were mathematics and science (EVS).
- Few could read or write but could count up to 10 or 20.
- They get little time to play between myriad tasks and express that parents did discriminate against them and treated their brothers better. The boys were given more food and more time to play. The girls were left behind even when parents went for attending weddings or festivals. Only boys were taken to *melas*. If they fell ill, no proper medical care was arranged whereas the boys were taken to a doctor.
- The study exonerates the school from 'pushing out' girls and it becomes evident that it is the extra-school factors, both economic and cultural (gender discrimination), that 'pull out' girls. Because even within the same households, money is found for bearing the extra-tuition costs for boys' schooling at times. Even boys drop out on account of parental poverty. Ten-year-olds and plus start helping in income saving and income-generating tasks of parents.
- Ten years plus and above drop-out girls want to learn income-generating programmes in addition to literacy and education on health and nutrition. The parents also want this combination.

x. *Never-enrolled Girls*

The girls belong to the poorest of the households with both parents illiterate or a father with a mo-

dicum of literacy. In several villages in Sehore and Ratlam in Madhya Pradesh, practically all girls, babies to fourteen/sixteen years were married with *sindoor* adorning their central parting of hair and increasing *kohl* and little trinkets. In Haryana, they were eternally working, walking with a pitcher of water on her head, making cow-dung cakes and washing buffaloes — a new-found prosperity item in every rural household after the agricultural boom. The silver lining was that in unseen villages, parents were clamouring for a school and said they will send these girls to school, even though they may be married.

xi. *Household Conditions*

- Except for Kerala, the average household size ranged between 5 and 6.
- Drinking water has to be fetched by girls from nearby, or a distance of half to one kilometre and more. In several Madhya Pradesh villages, girls and women had to cover a distance of two to three kilometres at times to get potable water.
- Wood is the main source of fuel, cent per cent reliance on this in several villages. The wood is collected by girls and women, is time consuming and eco-destructive.
- Sanitation and drainage is extremely poor in Madhya Pradesh and Haryana for instance; 95 to 100 per cent households use open spaces for defecation and women have to wait until it is dark causing personal discomfort, often disease. Sexual harassment is another hazard of lack of private or decent public toilets. The situation is better in Kerala, and in Assam most of the households had private latrines, a little unusual but welcome.
- Majority of households were poor/low income households in Madhya Pradesh. There were a very small proportion who had annual income above Rs 12,000.

*Situation of Girls and Women*

Our basic assumption that gender discrimination accounts for lower participation and larger drop-out of girls in primary schooling is borne out by the study. Access of girls to education and their development is contingent on the status accorded to women in a particular group. Only a few salient features of group discussions and interviews with parents, teachers, girls themselves, community leaders and administrators are discussed.

- i. All of the 44 districts have low female literacy (including Malappuram, Kasargode and Wayanad compared to other districts in Kerala); male-female differentials are large and rural female literacy rate is half or less than half of urban female literacy rate. In Malappuram the sex ratio is 1054, and females form 51.32 of the population, but only 49 per cent of primary enrolments; in Kasargode, with sex ratio of 1026, females account for 51 of the total population but only 48 per cent of primary enrolment.

- ii. District data shows a positive relationship between female literacy and female age at marriage, female school enrolments and a negative relationship between population growth rate, infant and child mortality rate, family size among others.
- iii. The national trend of declining sex ratio (an average) is seen very vividly at district level. The sex ratio ranges from 865 to 1054. In Kerala, Wayanad has a sex ratio of 967 compared to 1026 in Kasargode and 1054 in Malappuram. Situation in Assam, Tamil Nadu and Karnataka and Orissa districts is not as grim but in Marathwada districts, Aurangabad, for instance, has sex ratio of 922. All four DPEP districts of Haryana and several districts of Madhya Pradesh have sex ratio as low as 865 to 882. In Jind, Kaithal, Hissar and Sirsa, there are village after village where only 500 girls were found per 1000 boys in the age-group 0-6 years. Group discussions and interviews with health authorities show that *female foeticide* has acquired menacing proportions with proliferation of private ultra-sound clinics, amniocentesis. These trends if allowed to continue can cause social aberrations and adverse repercussions, the effects of which would become evident much later as is being experienced in the post-one-child family in China. Common people's perception is that ultra-sound machines have *been installed by the Government* to help reduce the family size. Government hospitals/PHCS are aborting female fetuses as late as 6-7 months of pregnancy. *Dowry* was cited as the main culprit for this criminal behaviour pattern.
- The district and village level data, for example in Madhya Pradesh, showed that sex ratio was positive to women among the scheduled tribes and even among scheduled castes. Rajnandgaon (Madhya Pradesh) a district with substantial tribal population has sex ratio of over 1030. This, however, only indicates that girls are valued in tribal communities because women are the key actors in keeping subsistence households together and girls help mothers and also fetch a *bride price*.
- iv. The status of women varies in different socio-cultural groups, castes, communities within and among districts. Karnataka DPEP districts report evils of prostitution, *Devadasi* system. *Dowry* is eating into the vistas of Kerala and Tamil Nadu, where literacy/education indicators are high. In Rajgarh in Madhya Pradesh, for instance, villages after villages live off on the earnings of girls as prostitutes. In Sehore and Chattarpur and practically in all Madhya Pradesh districts nearly all girls were found married (not reported). Child brides and girls with younger siblings in arms was a common sight, so was *purdah*. Interviews with parents, teachers, educational administrators and community leaders and group discussions indicated that usefulness of educating girls is increasingly being felt. Their reactions were obtained on nine positive statements. Parental perceptions (mostly uneducated) were different somewhat from those teachers and administrators. Education of girls is seen as a means of increasing their economic contribution, for development of a positive self-image, ensuring education of future generations and for reducing family size. Parents are unable to appreciate the relationship between education of girls and family's health and nutrition and infant and child mortality, etc. There is lower importance attached to education, preparing girls for leadership and participation in decision-making processes and making them aware of their rights. Teachers and administrators and even community leaders have more favourable views.
- vi. Interviews with parents, girls, teachers, educational administrators and community leaders brought out their perceptions of gender equality/discrimination to the fore. Most agreed that girls need equal food (not all), health care and education but not *equal freedom* and not even *equal time to play*. All are not sure, whether girls are endowed with equal intelligence and similar abilities and can perform all tasks equally well and boys can have some occupations. There is complete agreement on equal wages but not equal sharing of work within the family. In as much as they oppose equal freedom, there is resistance to joint ownership of assets by wife and husband (Maharashtra has already passed this bill) anywhere and everywhere there was total opposition to female inheritance of property. Even middle class educated persons would give all they have by way of assets to sons; girls are given dowry. In all, it was evident that educational administrators were most egalitarian followed by community leaders and teachers and parents. Positive responses aggregated for these groups separately, for instance, in Haryana DPEP districts show egalitarian score (0-13) of 8 for parents, 10.6 for teachers, 11 for educational administrators and 10.05 for community leaders. The positive gender equality responses may also be taken with a likely pinch of salt, as people may 'agree' for forms sake but are not likely to practise equality. But the fact that there are variations among chief respondents, among districts, gives us along with utility of girls' education items an idea as to where to pitch gender sensitisation programmes.
- vii. We have already mentioned that drop-out and never-enrolled girls do perceive that they are discriminated against in matters of food, clothes, health care and above all play and entertainment, despite disclaimers from parents who, as the study brings out, have lower educational and occupational aspirations for daughters as compared to sons. Responses on parental expenditure (extra tuition costs) on education of children by sex are not very reliable but

do indicate relatively higher expenditure on sons as compared to daughters, as data in some districts show. Contrary to some western studies, girls (drop-outs) in our sample did not report any negative attitudes of teachers, and spoke very fondly about their teachers and their helpful attitude. Gender-based divisions of labour and resources is all too evident from the studies and indicate very clearly the disabilities and discrimination faced by girls and women and the need to work with parents, community, teachers and administrators to bring about a positive shift towards gender egalitarian social roles for boys and girls, for men and women.

- viii. As is obvious from demographic and educational data, you give females equality and they become more than equal. If, they are allowed to be born and survive age till 5 or 35, they live longer. If they remain within the educational system, their achievement level equals boys (Baseline Study, Dave's Study) and surpasses literacy, education and even employment do not automatically bestow equality on women. Kerala district reports show that women are conscious of their inferior status despite high literacy, carry the double work-day burden, and are bossed over by men in all situations and have very little say in decision-making. And all is seen to be well with Kerala women, for they have lesser number of children, of whom very few die. Generally, high literacy levels of males and females may have caused the demographic transition to lowest population growth rates in the country in this state, but for most of Kerala girls education ends at the high school, less than 2 per cent (1.58) girls making it to Class XII. And the high-literacy Maharashtra and Tamil Nadu are getting infamous for female foeticide, so are Haryana and Punjab, the two most affluent states in the country.

The complexity of issues of status of women's equality and the role of education have to be better understood. Not any education, but education which is gender-sensitive and gender-inclusive, with consciously designed curriculum and teacher education combined with social mobilisation can translate the NPE mandate of *Education for Women's Equality*. The girl child needs *Survival, Protection and Development*.

District gender studies can help work out districts/state agendas for education and empowerment of girls.

*Collection of information on gender bias in (a) textbooks, (b) teacher training, (c) teachers' attitude, (d) curriculum transaction, and (e) administrators' attitude*

- i. Review of Hindi and mathematics textbooks has been completed for Haryana, Karnataka, Tamil Nadu and Assam have done this exercise. Maharashtra has already revised its textbooks.
- ii. Gender role perceptions of teachers and administrators have been obtained and analysed.

*Identification of supportive community structures such as women groups, VECs, Panchayats, PTAs, Teacher Organisations, Youth Clubs, supporters of UPE amongst girls*

Women's groups under Mahila Samakhya are active in some districts of Karnataka. Mahila Mandals in Haryana exist but are totally ineffective. In Madhya Pradesh, these are almost non-existent. Due to paucity of time, only Sarpanchas and Panchayat members were contacted. It is heartening to report that majority of them were aware of most of the programmes for education of girls and women's development. They reported very feeble participation of women in Mahila Mandals and Panchayats. They welcomed opening of NFE Centres for girls and were willing to provide *space* and other support needed.

*Identification and facilitation of convergence of services of different departments for UPE among girls (focal areas: ECCE, Health and Support Services)*

At the moment there was near absence of any connection between the Department of Health, Department of Women and Child Development and the school system. There was no coordination between the Anganwadis and the school. The coverage is extremely low, for instance, in Madhya Pradesh, only big villages had one Anganwadi. In Haryana, large villages had up to 8-9 Anganwadis and small sized villages had none. Blockwise position shows coverage of 0-6 age-group from 20.48 per cent in Rania block to 39.15 per cent in Baragudha block in district Sirsa, for example.

It is proposed that the timings and proximity of Anganwadis to schools must be coordinated. *It is also suggested that non-formal education centre for girls be opened next to the Anganwadis with simultaneous timings.*

*Availability of educational (books, stationery, uniforms) and other incentives (noon meals, attendance prizes, etc.)*

Incentives like free textbooks, stationery, uniform attendance prizes are being given to scheduled caste and scheduled tribe girls. This has had a visible impact on enrolment of scheduled caste girls at the primary stage in Haryana, Tamil Nadu and Maharashtra.

In Madhya Pradesh, incentives are being provided to SC and ST children. Impact studies are needed especially where parents are *unable to provide* for extra tuition costs for girls. Maximum number of parents and respondents seek provision of free books, stationery, clothes, even noon meals to *all girls* for boosting their educational participation.

*Participation of women in teaching and administration*

- i. Proportion of women in primary teachers varies from 15 to 55 per cent in different districts. Participation of women in educational administration at the district and block level is nearly negligible in Madhya Pradesh and very low in other states.

- ii. It was found that there were very few women teachers in remote areas. All discussions pointed to the need for atleast one woman teacher in every primary school. Parents were reluctant to send their daughters to single (male) teacher schools as they felt that their daughters were not safe especially if the teacher was absent.

#### *Development of state/district level monitoring and evaluation framework*

(To be done under MIS) As soon as all data is analysed, indicators for monitoring girls education and women's empowerment shall be developed.

#### **Programme Interventions**

1. *School Mapping* keeping in view special requirements of girls.
2. *Multiple Delivery System*
  - (i) Opening of junior primary/part schools, NFE centres, voluntary schools for schoolless habitations and villages
  - (ii) Access of girls to post-primary and secondary education completing primary or middle schools through upgradation of primary schools (relaxation of 3 km norm)
  - (iii) Distance mode/open school
  - (iv) Residential schools for girls in each block head-quarter.
3. Bicycles to be provided to girls completing primary schooling for attending middle/high school. This scheme may cause a mini-revolution in making girls physically and mentally mobile and confident. This scheme is being implemented in Tribal Welfare Development blocks in Madhya Pradesh. In a Ratlam tribal village, there was a lone girl who had completed primary education. Her eyes lit up when asked, would she like to go to a middle school, if she had a bike. With or without bicycle, she wanted to study more.
4. Social mobilisation for girls' education.
  - Girl child campaigns
  - Increasing parental awareness and participation in educational management.
  - Mobilising women, Panchayats, youth, teacher organisation and NGO.
  - Media campaigns
5. TLS/adult education efforts to be intensified to remove parental illiteracy, a major hurdle to enrolment and retention of girls.
6. Inter-departmental coordination committee to be headed by the District Collector with DEO as member secretary to ensure :
  - i. Provision of drinking water within residence/habitation to save female energy and girls' time.
  - ii. Provision of non-conventional eco-friendly fuel, e.g. biogas to save forests and women and girls from walking with head-loads of firewood. Not only animal dung (which keeps girls and women busy, collecting and making cow-dung cakes for fuel) but even human excreta can be utilised for generating gas. A combination of Sulabh Shau-chalaya and biogas plants could serve community needs and save *the school time* of girls.
7. Out-of-school adolescent girls need to be reached out through NFE, condensed courses of Central Social Welfare Board, Open School and Balika Yojna (scheme for adolescent girls combining literacy, health and nutrition education and income-generating skill, Department of Women and Child Development, MHRD), to ensure that they complete primary and upper primary education.
8. Intensification of poverty removal and rural development programmes in low female literacy DPEP districts as a *complementary strategy* (coordination at the state level by Chief Secretaries and District Collectors at the district level). Poor economic condition of parents is a major hinderance to educational participation of girls. Special programmes to be directed at women through DWCRAs and setting up of women's cooperatives and women's banks. The reasons for low educational participation of girls are *systemic* and hence cannot be handled by education alone.
9. Studies may be mounted to assess the level of readiness of communities and states to enforce *compulsory education laws*. Tamil Nadu had taken an initiative and all children are getting a free noon meal and even free books and uniforms.
10. In Madhya Pradesh and elsewhere it was noticed that girls are withdrawn at the onset of puberty. Education on management of menarche and reproductive functions for girls (the latter for boys too) should be preceded by provision of *separate toilets* for girls in primary and middle schools.
11. Convergence of Services : UEE, ECCE/ICDS linkages to be forged and operationalised by increasing ECCE coverage and coordinating timings and proximity to the extent possible.
12. Special schemes to be formulated to prepare women teachers *for* rural areas *from* rural areas. Madhya Pradesh is considering launching of *Shiksha Karmi* programmes with focus on training and upgrading primary, middle pass local persons/girls for teaching in remote areas. Urban women who commute daily to rural areas neither feel themselves as a part of local people nor have the *time* to interact with *them*.
13. Incentives like free books, free stationery, uniforms, shoes, waiving off of all extra tuition levies, are demanded by the parents and village communities. A major review of the existing schemes should be carried out before offering such *package* on a large scale.
14. *Research and Development*
  - A. *Research*
    - i. Study of the impact of existing incentive schemes on enrolment and retention of girls.

- ii. Study of socialisation patterns and practices derogatory to status of women and to appropriate development of the girl child.
- iii. Study of innovative programmes of girls' education.
- iv. Study of role of teacher in development of a positive self image in the girl child.
- v. Study of gender role perceptions of teachers, teacher educators, educational administrators and community leaders.

#### *B. Development*

- i. Removal of gender bias from textbooks and other learning materials for primary (formal, non-formal) and TLC by (a) providing guidelines for gender equality to DPEP administrators, curriculum developers, textbook writers, teacher educators, NFE workers, literacy workers and ECCE work-

ers; (b) developing gender sensitisation materials for orientation of education personnel and the community — parents, women's groups, Mahila Mandals, VECs, Panchayats; and (c) developing of girl child campaign materials.

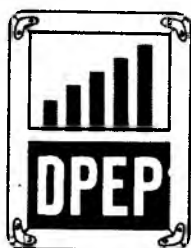
- ii. Preparation of gender inclusive exemplar materials for primary (formal, non formal) and TLC.
- iii. Preparation of handbooks for teachers
- iv. Development of tools for monitoring of girls' education and women's empowerment in DPEP.
- v. Preparation of inputs for pre-service and inservice training of teachers (Based on analysis of existing teacher education programmes).

#### *C. Training and Extension*

Training workshops of trainers at state level, multilevel, integrated (state, district, block, village and community).

# State Finances for Education

JANDHYALA B. G. TILAK



As a part of the District Primary Education Programme (DPEP), several baseline studies on various aspects relating to primary education have been conducted at district and state levels. These studies assume crucial importance in formulation, execution and evaluation of the projects. An important area of study refers to state finances for education. Studies on state finances would be very valuable and serve several purposes including the preparation of the district level plans, providing valuable inputs into the planning process and for *ex post* evaluation of the DPEP by facilitating analysis of the additive versus substituting nature of the funds of the project.

It was the intention of the national core team to build up state level capacities in preparing such studies, and accordingly the studies were conducted by the state government officers themselves, and the role of the members of the sub-group of the national core team\* was confined to providing guidance and expert advice in the preparation of the studies. A couple of workshops were organised at NIEPA in the context of these studies, one at the commencement of the studies, and the latter towards the end for the finalisation of the studies. In addition, a few visits were made to the states during the conducting of the studies.

Studies on state finances have been conducted in six states (Assam, Haryana, Karnataka, Kerala, Maharashtra and Tamil Nadu), that provide a statistical, descriptive and analytical profile of the pattern of financing of education (particularly elementary education : primary and upper primary), and projections on the financial requirements of elementary education in each state, if elementary education were to be universalised by the turn of the century.

## Objectives

The main objectives of the studies on state finances for education are :

1. To present a brief profile on the pattern of financing of education, particularly elementary education — primary and upper primary education — in each state during the post-independence period, concentrating on the 1980s to the present (1980-81 to 1992-93).
2. To present a brief idea of the extent of financial resources required for education (for universalisation of elementary education by 2000), and of the gap between the requirements and likely availability of resources.

The focus of the studies is on objective 1, and is on elementary education (primary and upper primary levels), though some important details on other and all levels of education as a whole were also to be given.

\* The members of the sub-group for the studies on State Finances for Education are : Jandhyala Tilak (NIEPA), Y. Josephine (NIEPA), and Sibani Swain (MHRD). A. Narender Reddy (NIEPA) provided able assistance in the preparation of the studies.

Originally a detailed structured outline of the studies was provided to the state governments as a suggestive framework for the studies. Finally, the state governments, on the advice of the Department of Education, Ministry of Human Resource Development, adopted the study prepared in the context of the Basic Education Project in Uttar Pradesh as a model format. It resulted in a somewhat uniform method of presentation of the studies by the several states, though there are a few differences in the presentation of details.

The main aspects identified for the studies were : (a) trends in financing education, including allocation of resources, priority given to education in the five year plans (outlay/expenditure on education as per cent of the total plan outlay/expenditure), plan expenditure/outlay on education during the seventh and the eighth five year plans, growth in non-plan expenditure on education, expenditure on centrally sponsored schemes, intra-sectoral allocation of resources, inter-functional allocation of resources (expenditure by objects), and (b) requirement of resources for universalisation of elementary education up to the turn of the century, based on unit costs of education (expenditure on education per student) and projected enrolments with the target of universalising elementary education by the turn of the century.

It is obvious that the costing and financing of the DPEP have not been a part of the studies on state finances for education. Accordingly, the studies could not refer to a couple of important issues such as sustainability (how far will the projects being launched now with the help of external assistance be sustainable after the end of the project), and additionality (how far will the project funds be additional to the domestic finances being made available for education). Originally it was intended that the studies would provide some idea on sustainability of the projects, and additionality of the external funds. But due to data and other constraints, these two issues could not be discussed in the studies.

### Findings

A few important findings reported in the studies are as follows :

1. Except Maharashtra, the budgetary conditions in the recent years, in all the other five states are characterised by almost continuously increasing deficits (in revenue account). One expects these adverse general budgetary conditions to have serious effects on education budgets. But no proper correspondence could be found between general budgetary conditions and education budgets, suggesting as if budgets for education are not affected by budget deficits.
2. Except in case of Kerala and Tamil Nadu, the priority accorded to education in the five year plans has increased significantly between the seventh and the eighth five year plans. (But the increase

might be smaller than the increase between the sixth and seventh plans; the latter is attributable to the National Policy on Education 1986.) The increase in Assam to 19 per cent in the eighth plan from 8 per cent in the seventh plan is not 'real', as plan outlay/expenditure in the eighth plan is meant for meeting non-plan expenditure as well.

In Kerala the share of education in the eighth five year plan expenditure/outlay was almost the same as in the seventh five year plan (3.7 per cent), and in the case of Tamil Nadu it has declined from 7.2 per cent in the seventh plan to 3.6 per cent in the eighth plan, though in absolute terms, the allocations have increased.

3. Intra-sectorally, the relative priority accorded to elementary education also increased significantly in all cases, except in Tamil Nadu, between the seventh and the eighth five year plans, which is in response to the resolve made in the National Policy on Education 1986 to increase allocations for elementary education. In Karnataka, the share of elementary education in the total plan expenditure/outlay for education increased from 38 per cent in the seventh plan to more than two-thirds in the eighth plan. In Tamil Nadu, the change is in negative direction, but the quantum of change is marginal.
4. In the allocation of non-plan expenditure on education also, elementary education receives a high priority, receiving nearly half of the total in case of almost all the six states. However, between 1990-91 and 1991-92, the two latest years for which data are available, there is a marginal decline in the corresponding proportions, and the decline is steep in case of Assam (from 59.03 per cent in 1990-91 to 54 per cent in 1991-92); and in Karnataka there is a marginal increase. In the other states, the proportion remained relatively unchanged.
5. The recent trends in the grants to the states for centrally sponsored schemes for elementary education have not been systematic. During the last seven or eight years, such grants have increased in Assam, but declined in case of Haryana, and there were zigzag trends in case of other states. Grants for centrally sponsored schemes in adult education have declined in Assam, Haryana, Kerala and Tamil Nadu, and the trends are not smooth in Karnataka.
6. Understandably, the growth in plan expenditure on elementary education in Kerala during the 1980s has been negative not only in constant prices, but also in current prices due to declining age-group population and correspondingly declining enrolments.
7. Even the modest estimates of resource requirements based on projected enrolments and unit

cost of education in the early 1990s, seem to be huge in most states. It is only in Kerala, the required rate of growth in enrolments is negative for universalisation of elementary education by 2000. Therefore, the resource requirements of Kerala are found to be not huge; but for improvement in quality of education it is felt that additional resources will be required in Kerala too. In real terms (i.e. at constant prices) the annual rate of growth required in resources is more than 7 per cent in most states (7.7 per cent in Karnataka, 12.8 per cent in Tamil Nadu, and nearly 20 per cent in Assam) during the remainder of the 1990s.

### Conclusion

To conclude, the several studies highlight the following :

- There exist wide variations in the levels of expenditure (total, per student, and percentage proportions) on education, particularly elementary education among several states. That there are no norms (either at the central or state level) regarding the proportion of state income (SDP : state domestic product), plan outlays or budgets that need to be allocated for education, and in education for elementary education might partly explain the inter-state variations.
- The trends in the growth in expenditure on education are not smooth.
- There is a significant increase in the central expenditure on elementary education in the recent past in several states.
- There are also wide variations in the grants for centrally sponsored schemes, and the growth in the same is not systematic.
- The salaries of the teachers and other staff consume the largest proportion of the budget, leaving little amounts for other items; in some states (e.g. Karnataka) expenditure on incentives is sizeable.
- The requirements of capital nature are important, and they seem to be high.
- Lastly, no such attempts were made earlier by the state governments to analyse the trends in state finances for education in the states. But the importance of these studies is well recognised both in the context of DPEP in particular, and in the context of educational planning in general.



TABLE 1

Share of Education in Total State Plan Expenditure/Outlay (per cent)

State	Seventh Five Year Plan	Eighth Five Year Plan
Assam	10.90	19.00
Haryana	5.30	7.10
Karnataka	4.25	8.80
Kerala	3.76	3.70
Maharashtra	2.50	3.90
Tamil Nadu	7.18	3.62

TABLE 2

Share of Elementary Education in Total Plan Expenditure/Outlay on Education (per cent)

State	Seventh Five Year Plan	Eighth Five Year Plan
Assam	49.30	59.30
Haryana	46.96	49.73
Karnataka	38.33	66.42
Kerala	18.00	21.00
Maharashtra	28.47	39.45
Tamil Nadu	51.38	50.49

TABLE 3

Share of Elementary Education in Total Non-Plan Expenditure on Education (per cent)

State	1990-91	1991-92
Assam	59.30	54.00
Haryana	46.11	45.34
Karnataka	50.41	51.71
Kerala	52.50	51.00
Maharashtra	45.52	45.50
Tamil Nadu	..	51.00

TABLE 4

Trends in Expenditure on Centrally Sponsored Schemes in Elementary and Adult Education (1985-86 to 1991-92)

State	Elementary	Adult
Assam	Increasing	Decreasing
Haryana	Decreasing	Decreasing
Karnataka	Zigzag	Zigzag
Kerala	Zigzag	Decreasing
Maharashtra	Zigzag	Zigzag
Tamil Nadu	Zigzag	Zigzag

TABLE 5

Required Real Rate of Growth in Expenditure on Elementary Education to Provide Universal Elementary Education by 2000 (per cent)

State	Annual Growth Rate
Assam	23.66
Haryana	8.00
Karnataka	7.70
Kerala	..
Maharashtra	9.00
Tamil Nadu	12.80

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