

Mid-Term Assessment Survey

An Appraisal of Students' Achievement



जिला प्राथमिक शिक्षा कार्यक्रम
DISTRICT PRIMARY EDUCATION PROGRAMME

DPEP Core Resource Group
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Foreword

Universalisation of primary education and universalisation of quality education are the two faces of the same coin that have always posed a challenge not only to a vast country like India but also to several developing countries as well. Although most countries in the world have set for themselves the goal of achieving universal primary education and despite high investment in majority of cases, studies reveal low participation, high dropout rates and under education of pupils.

The Government of India has taken up the challenge to universalise elementary education. There have been a number of interventions in the form of state and central programmes during the last five decades resulting in a spectacular hike in the number of primary institutions from two hundred and twenty four thousand schools in 1951 to seven hundred and forty five thousand schools in 1995. The enrolment at the primary stage has also increased almost five fold from 19.2 million in 1951 to 98.1 million in 1995. Although this appears to be a very impressive record, the cherished goal of UEE in all its manifestations, viz. enrolment, retention and quality learning, is still elusive. Concerted efforts are therefore being made by the central and the state governments to provide basic education to all children of school going age.

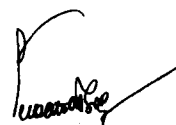
UEE has always been rated as a priority programme of the country and has been a key issue in all the policy documents including that of NPE-POA, 1992. During all these years it has been increasingly felt that the interventions need to encourage the local initiative based on contextuality and flexibility with improvement in quality of learning as the focus. It is in this context that a centrally sponsored scheme of the District Primary Education Programme (DPEP) was launched in 1993-94.

The essential ingredients of the DPEP are local planning and implementation with a great deal of flexibility based on contextuality and local requirements, with facilitation, coordination and support from the national level. It is a "home grown" programme of reform and renewal of processes based on observations, evaluation, development and dissemination. Following this spirit, 42 districts spread over seven states were identified for coverage under Phase I in the year 1994. The DPEP in a span of four years has covered 149 districts in as many as fourteen states.

Prior to launching the programme, Baseline Assessment Studies (BAS) were conducted in all the project districts to generate the bench mark data on access, retention and achievement. Based on the findings of the baseline studies, necessary interventions were designed and implemented in all the project districts. In order to assess the impact of interventions on students' achievement and to learn whether the programme was moving in the right direction, an indepth Mid-term Assessment Survey (MAS) was conducted during the middle of 1997 after a gap of three years. This exercise was undertaken to

provide answers to questions like whether there was any improvement in the average performance of students' achievement in language and mathematics, whether the differences in achievement had reduced in regard to gender and social groups, whether there was an incremental influence of parental qualifications on students' achievement, whether the difference between the language used at home and the medium of instruction at school had any impact on students' achievement and whether competency based teaching learning material and in service training had any effect on students' achievement. An attempt was also made through the present study to assess the hike in students achievement in language and mathematics on BAS tests used in 1994 as against the same tests readministered in the year 1997 under MAS.

The present study brought out by the National Council of Educational Research and Training (NCERT), New Delhi seeks to answer the aforesaid questions. I hope that the findings of the study will be of interest to the policy executives, managers, administrators, researchers and grassroots level functionaries engaged in implementing the interventions for the UEE. The Department of Education would like to place on record its appreciation of the contribution of the NCERT authorities especially Prof. Ved Prakash and his team in bringing out this document in its present form.



P.R. Dasgupta
Education Secretary
MHRD, Govt. of India

Preface

After independence, India as a democratic welfare state announced Universalisation of Elementary Education (UEE) and equal opportunities for all as its basic principles. In order to reflect the multiple realities of the country it was realised that the challenge of making primary education universal lay in making the curriculum contextual and relevant to local aspirations. It was felt that the planning process needed to be based on disaggregated targets and decentralised planning. To begin with, it was decided that the district might be considered as a unit for planning and management. This 'home grown' idea was actually the basis of the emergence of the District Primary Education Programme (DPEP).

The DPEP was launched in 42 districts spread over seven states under Phase I in the year 1994. DPEP was anchored in all the project districts by initiating the Baseline Assessment Study (BAS). Findings of the BAS were utilised for introducing interventions in the form of pedagogical renewal process, participatory planning process, teacher training drive, building of infrastructure and community mobilisation. The DPEP had grown out of its infancy by 1997. In order to assess the level of success in realising the DPEP objectives after a lapse of three years, a Mid-Term Assessment Survey (MAS) was mounted in the year 1997.

The present report is based on the findings of the MAS carried out in 42 districts of the seven DPEP Phase I states. The present document consists of seven chapters. Chapter I gives a detailed account of the context, an overview on BAS and MAS and the design of the survey. Chapter II analyses the level of students' achievement in language and mathematics of classes I, III and IV on the MAS tests in 1997. A comparative profile of students' achievement on BAS tests conducted in 1994 as against the same tests readministered in 1997 is outlined in Chapter III. Genderwise differences in achievement in MAS tests are illustrated in Chapter IV. Chapter V discusses areawise differences in students' achievement while chapter VI details out categorywise differences. Chapter VII portrays the influence of intervening variables on students' achievement. The document closes with Chapter VIII on intervention implications.

The present document took the combined efforts of many people. The unstinted support extended by Shri R.S. Pandey, Joint Secretary, DPEP Bureau, MHRD, New Delhi is gratefully acknowledged. But for his continued support and guidance this monumental task would not have been accomplished in the record time. The valuable suggestions offered by the members of the Advisory Committee have immensely benefited the production of this document for which the research team stands indebted to them.

The research team owes a lot to Professor A.K. Sharma, Director, NCERT and to Professor A.N. Maheshwari, Joint Director, NCERT for providing guidance and support at every

stage of the study. But for their constant endeavour and considered opinion, the study would not have taken its present shape.

The study draws heavily on the invaluable contributions of the State Project Directors, Directors, SCERTs in general and the Principal Investigators in particular who handled monumental data for preparing state reports. The contribution of Prof. A.B.L. Srivastava in support of statistical analysis is deeply acknowledged.

My deep sense of appreciation goes to my colleagues - the members of the research team, Dr. S.K.S. Gautam, Dr. I.K. Bansal and Mrs. M. Bhalla who kept the processing and flow of the material all along and were always there when there were deadlines to meet.

Thanks are due to the members of the administrative staff, Mr. N. Panicker, Mr. A.P. Kumra, Mr. Parash Ram, Mrs. Kalika Sundriyal and Mr. Keshwa Nand for the seemingly endless work of typing and retyping of the text. Their enthusiastic support and invaluable contribution in handling the text are deeply appreciated and gratefully acknowledged.

It is hoped that the present document will find favour with policy planners, managers, implementors, researchers and field functionaries. Any suggestions for its improvement will be more than welcome.



Ved Prakash
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DPEP Core Resource Group, NCERT

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Executive Summary

Primary education is essential to each individual as it provides skills to access opportunities in life which are crucial for viability in a society increasingly influenced by the information revolution. Universalisation of Elementary Education (UEE) has always been a matter of great concern for policy planners even in pre independence days and later on the post independence constitution very explicitly provided for the state's role in making available "free and compulsory elementary education upto fourteen years of age", within a definite time frame. In pursuance of redeeming this constitutional pledge, the country has traversed a long distance. Though the country has taken considerable strides in the direction of achieving the target of UEE through various schemes during the last five decades, the goal still remains elusive.

Education cannot be measured solely in years of enrollment. What matters is what students learn, retain and apply in life. This points towards the quality. The quality of learning achievement in schools appears to be far from satisfactory. Ensuring access to quality education for all children of the school going age is still a daunting task. The most significant reason for this has been total disregard of the element of contextuality and misplaced emphasis on a single uniform prescription for the whole country.

In an effort to engineer a closer link between education and the life of the people, the Programme of Action 1992 envisaged district specific projects, which, within the overall strategy framework are tailored to the specific needs and possibilities in a district. The District Primary Education Programme (DPEP) launched in 1994 in 42 districts across seven states under phase I seeks to operationalise this objective.

Prior to operationalising the DPEP in seven states under Phase I, studies focussing on students' achievement were conducted with a view to assessing the benchmark of the existing level of achievement in language and mathematics at the end of the initial and the penultimate stage of primary schooling. These studies, popularly known as Baseline Assessment Studies (BAS) were used as a base for planning area specific interventions with a view to accelerating the pace of universalisation of improved quality in the area of primary education.

As per the provisions of the DPEP guidelines, it is obligatory that the level of success of DPEP interventions may be assessed after a period of three years of their implementation. In order to fulfill this requirement, another study by the name of Mid-Term Assessment Survey (MAS) was launched in the year 1997 in all the forty two districts under phase I. This study aimed at measuring the average performance of students' achievement on the newly developed competency based achievement tests in language and mathematics at the end of class I and at the end of the penultimate class of primary school. Besides, the

study also made an attempt to make a comparative analysis of students' achievement on the BAS tests administered during the initial survey in the year 1994 with that of students' achievement on the same set of tests readministered to the students of five schools that were randomly selected from the sample of MAS 97. The study also attempted to compare the differences in students' achievement on the MAS tests in regard to gender and social groups. The MAS with its entire gamut of activities was conducted for not only assessing students' achievement on the newly composed set of tests but also attempted to identifying one, the inadequacies, if any, in the programme which would serve as pointers to planning mid course corrections, two, to eliminate activities which were counter productive and finally to discover new areas of operation which were, hitherto, unexplored.

The MAS was conducted in 1997 by employing a multistage stratified random sampling technique. It is pertinent to mention here that the tests employed under MAS 1997, developed by the Ed.CIL, were different from those used under BAS 1994. The NCERT in the capacity of the nodal agency developed the design, instruments, framework of data analyses and other complementary materials for administration during the survey. The responsibility of the training of the Master Trainers at the state level and the monitoring of the progress of the study was shouldered by the DPEP Core Resource Group of the NCERT. The MAS was conducted by the states with the academic support of the DPEP Core Resource Group.

The present study makes an effort to providing an overview of the findings gathered from the data of seven DPEP Phase I states. The MAS data covered 66831 students, 6221 teachers and 2068 schools spread over 42 districts across seven DPEP Phase I states. A cursory glance at the average performance of class I students reflected on MAS confirms the predominant influence of the element of contextuality that prevails over the primary school system in the country. This fact is obvious from the range of students' achievement that varies within and across the states.

In the state of Assam, the average performance of class I students on MAS tests has crossed 67% mark in language and 71% in mathematics with district Morigaon taking the lead. In Haryana, it has crossed 63% in language and 70% in mathematics with Sirsa and Kaithal capturing the top position in language and mathematics respectively. In Karnataka, it has crossed 61% both in language and mathematics with Belgaum claiming the ace position. In Kerala, it has crossed 69% in language and 66% in mathematics with Malappuram rendering superior performance. In the state of Madhya Pradesh the students' performance has crossed 44% in language and 36% in mathematics with Bilaspur capturing the top position in both the subjects. In Maharashtra, it has crossed 58% in language and 52% in mathematics with Osmanabad giving a headstart. In the state of Tamil Nadu, it has crossed 56% in language and 52% in mathematics with Villupuram establishing a record. Significantly, in all the states it has been observed that there is a streak of relationship between language and mathematics in their pattern of growth. As regards the distribution of achievement scores, the entire range has been utilised in both the

subjects in all the states except in language in Madhya Pradesh and the higher range has claimed maximum number of cases in most of the states. Besides, positive upward progression of frequencies has been observed against higher intervals which tends to producing negatively skewed distribution in a large number of cases.

The average performance of class III students on MAS tests reveals that in Assam it has crossed 57% mark in language and 55% in mathematics with Morigaon and Dhubri sharing the top position in language and mathematics respectively. In Karnataka, it has crossed 37% in language and 33% in mathematics with Belgaum taking the lead. In the state of Kerala, it has crossed 49% in language and 37% in mathematics with Malappuram and Kasargod sharing the top position in language and mathematics respectively. In Maharashtra, it has crossed 36% in language and 23% in mathematics with Aurangabad capturing the ace position in both the subjects. Sequential pattern of growth in both the subjects across the districts has been observed in the case of Karnataka and Maharashtra. As regards the distribution of achievement scores in language and mathematics, the entire range has been utilised by all the four states. In contrast to class I, higher range in class III has claimed least number of cases in three out of four states. Distribution of achievement scores has tended to producing a non skewed distribution in Assam in both the subjects, only in language in Kerala and Maharashtra and in the rest it has tended to producing positively skewed distribution.

The average performance of class IV students on MAS tests reveals that in Haryana, it has crossed 37% mark in language and 39% in mathematics with Sirsa bagging the top position. In Madhya Pradesh, it has crossed 30% mark in language and 20% in mathematics with Bilaspur coming through as a winner in both the subjects. In Tamil Nadu, it has crossed 43% mark in language and 30% mark in mathematics with Cuddalore and Villupuram sharing the ace position in language and mathematics respectively. Sequential growth pattern in both the subjects across the districts has been observed only in the case of Haryana. The distribution of scores reveals that the entire range has been utilised in both the subjects in Tamil Nadu and only in mathematics in Haryana. Further, achievement scores have tended to produce non skewed distribution in both the subjects in Tamil Nadu & Madhya Pradesh and in mathematics in Haryana. Distribution of scores in language in Haryana has tended to produce a positively skewed distribution.

A comparison of students' performance in language in class I on BAS tests administered during the initial survey in 1994 and readministered under Mid-Term Survey in 1997 have revealed positive trends in 28 out of 42 districts. Of these 28 districts, 19 districts have demonstrated significant hike in achievement in language. Of all the districts, 6 districts have recorded a hike in achievement that ranged from 25% to 36%, 10 districts from 10% to 25%, 12 districts upto 10%. However, in the case of 14 districts, achievement has suffered a decline that ranged from 0% to 18%. In case of mathematics, 33 out of 42 districts have displayed positive trends, of them, 30 showed significant improvement in students' performance. Of all the districts, in 9 districts the hike in achievement has

ranged from 25% to 44%, in 18 districts from 10% to 25% and in six district upto 10%. Of the remaining districts, one district in Kerala and six in Madhya Pradesh have shown a significant decline in performance.

A comparative analyses of students' achievement in language in class III on BAS tests administered during the initial survey in 1994 and readministered during mid-term survey in 1997 reveal that 13 out of 15 districts in four states have demonstrated positive trends and negative trends in the remaining two. Of the districts showing a positive trend, the hike in students' achievement has been significant in 12 districts. The range of hike has been from 25-38% in two districts, 10-25% in seven districts and upto 10% in the remaining four districts.. Even the two districts which have shown a decline in performance, the decline has not been found significant. A comparative assessment of students' achievement in mathematics in class III indicates that 11 out of 15 districts have exhibited positive trends and the remaining four negative trends. Of the eleven districts with positive trends, nine have displayed a significant improvement in students' achievement. Of all the districts, six districts have recorded a hike in achievement ranging from 10% to 29% and five districts upto 10%. Out of the four districts with negative trends, three have shown significant decline in students' achievement in mathematics.

Comparative assessment of class IV students' achievement in language reveals that 18 out of 27 districts have demonstrated positive trends, of them 15 displayed significant improvement. In seven districts, the hike in achievement ranged from 10 - 21% and in 11 districts upto 10%. Two districts in Haryana and six in Madhya Pradesh have, however, displayed a significant decline. In mathematics, 18 out of 27 districts have portrayed positive trends, of them, 14 districts exhibited significant improvement in students performance. The hike in achievement has varied from 10 - 24% in four districts and upto ten percent in fourteen districts. One district in Haryana and six in Madhya Pradesh have exhibited a significant decline.

On comparison of performance of class I students (1997 vs 1994) both in language and mathematics, it is evident that 28 out of 42 districts in language and 33 out of 42 in mathematics have registered a positive incline in achievement. The decline in performance in other districts may be partly attributed to the non compatibility between the test contents based on the 1994 existing syllabi with the instructional material based on the 1997 revised syllabi. It may be pertinent to mention here that the BAS tests used in 1994 and in 1997 were developed in the year 1993-94, obviously, on the then prevailing syllabi. By 1997, several states have undergone a change in their curriculum and instructional material under the aegis of the DPEP. Those districts and states that could enable their students to acquire the basic competencies through the DPEP interventions, thus striking a balance between the test contents and the changed course contents seem to have performed better than others.

The analysis of the comparative performance of class III students on 1997 vs 1994 achievement tests reveal positive trends in 13 out of 15 districts in language and in 11 out of 15 districts in mathematics in four states. In class IV positive trends have been observed in 18 out of 27 districts in language and equal number of districts in mathematics in three states. The reason for "no hike" situation prevailing in other districts may be due to the variations between the test contents developed in the year 1990 based on the then existing syllabi and the revised course contents transacted in the year 1997. The districts where the DPEP interventions were able to develop the basic competencies amongst the students to such a level where they became competent to handle any kind of test items related to curriculum relevant competencies seem to have made an edge over others in their performance.

Analysis of results reveal that the performance of students in class I on MAS tests both in language and mathematics has been better than the performance of students in classes III and IV. It signifies that the pedagogical renewal processes have not shown as good results in the penultimate classes as they have shown in class I across the states. This calls for focussed attention on the implementation of research based interventions in classes III and IV.

The DPEP goal of reducing the differences in achievement between boys and girls in class I has been accomplished in 40 out of 42 districts in language and in 31 out of 42 districts in mathematics across seven states. Genderwise differences in achievement in class III signify that the DPEP goal of reducing the achievement gaps has been overcome in 14 out of 15 districts in language and in all the 15 districts in mathematics across four states. Differences in achievement between gender in language in class IV have been reduced in 24 out of 27 districts and in mathematics in 25 out of 27 districts of the states of Haryana, Tamil Nadu and Madhya Pradesh.

The DPEP goal of reducing the achievement differences between urban and rural students in class I has been realised in 20 out of 42 districts in language and in 16 out of 42 districts in mathematics across seven states. In class III, the differences in achievement between urban and rural students have been reduced to less than five percent limit of the DPEP in 4 out of 15 districts in language and in 5 out of 15 districts in mathematics across four states. The goal of the DPEP of reducing the areawise differences in achievement has been attained in 22 out of 27 districts in language and in 18 out of 27 districts in mathematics in class IV.

The DPEP goal of reducing the achievement differences between SC and others and between ST and others in class I in language has been reached in 21 out of 42 districts in seven states and in 17 out of 31 districts in four states respectively. In class I in mathematics, the goal has been realised in 22 out of 42 districts in seven states between SC and others and in 15 out of 31 districts in four states between ST and others. The

DPEP goal of reducing differences among social groups in class III in language has been realised in 13 out of 15 districts between SC and others and in 9 out of 15 districts between ST and others in four states. In class III mathematics, it has been achieved in 13 out of 15 districts between SC and others and in 11 out of 15 districts between ST and others in four states. In class IV in language, the DPEP goal of reducing differences in achievement among social groups has been overcome in 23 out of 27 districts between SC and others and in 14 out of 27 districts between ST and others. In class IV in mathematics, the goal has been reached in 19 out of 27 districts between SC and others and in 11 out of 27 districts between ST and others.

In all those districts where the DPEP goal of reducing the differences in achievement both in language and mathematics among gender and social groups has not yet been achieved, concerted efforts need to be made with a view to achieving the target.

As regards the influence of parental qualifications on the achievement of students of penultimate classes in both the subjects, an incremental influence in achievement has been observed in all the districts of Kerala, in four districts of Maharashtra and in one district each of Assam and Karnataka. The states of Haryana and Tamil Nadu have, however, demonstrated mixed results with more number of positive cases.

The difference between the language used at home and the medium of instruction at school has not created any adverse impact on students' achievement in all the three districts of Kerala, in three out of four districts of Karnataka, in all the five districts in Maharashtra, in seven out of eight cases in Haryana and in seven out of eight cases in Tamil Nadu. Apparently, in most cases the difference between the language spoken at home and the medium of instruction at school has failed to cast any negative influence on students' achievement in both the subjects.

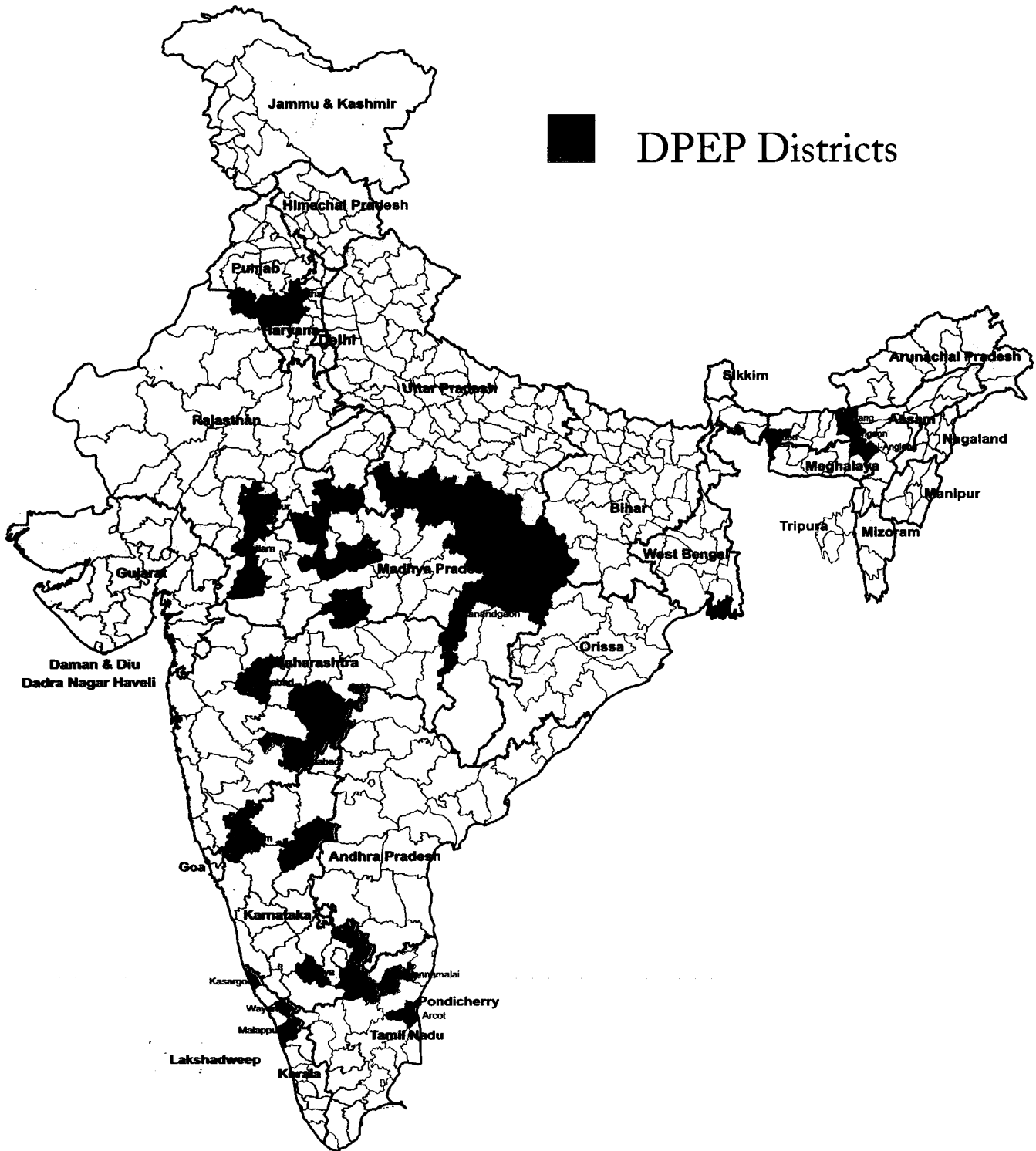
On the issue of the influence of the availability of competency based teaching learning material on students' achievement, it has been observed that districts having maximum number of schools holding the complete range of competency based materials perform better than their counterpart. It goes to prove that the students' achievement stands positively related to the availability of competency based teaching learning materials. The account of in service training of sampled teachers during the last three years reveals that all urban teachers hailing from all the three districts of Kerala, two each of Assam and Tamil Nadu, one of Haryana and three of Madhya Pradesh have received in service training during the past three years. Of the remaining districts, some of them have reported substantial number of untrained teachers. In the rural sector, in 24 out of 42 districts, ninety percent of teachers are reported to have received in service training. Kerala has the singular distinction of setting a record in providing in service training to most of its teachers both in urban and rural sectors. The analysis of results indicates moderate influence of in service training on students' achievement. It calls for need based district specific recurrent training for all teachers.

Teachers' perceptions on in service training programmes reveal that these programmes have shown an incremental influence on teaching of language and mathematics in all the districts of Karnataka, Maharashtra, Tamil Nadu, three districts of Haryana, one district each of Kerala and Assam and eleven districts of Madhya Pradesh.

Sustained efforts are required to maintain the tempo of progress in high achieving districts and spirited intervention efforts in low achieving districts. Poor performance of students at the penultimate stage invites focussed attention on the implementation of research based interventions in classes III and IV. Greater emphasis may be laid on intensive coaching and cooperative learning with a view to enabling students to deal any kind of test items related to competencies laid down in their curriculum. Besides, extra drills, supervised study programmes, proliferation of local specific instructional material, purposeful reinforcement and motivation may be made an integral part of teaching learning process.

The data from all the low performing districts need to be thoroughly reanalysed with a view to identifying the weak links and to applying corrective measures in each area of operation.

Districts covered under DPEP Phase I



Introduction

The Context

The National Policy on Education, 1986 and its subsequent Programme of Action, 1992 advocate for the adoption of disaggregated target setting and decentralised planning for the purposes of achieving Universalisation of Elementary Education (UEE). It was with this spirit that the District Primary Education Programme (DPEP) was conceived as a centrally sponsored programme with the approval of the Central Advisory Board of Education (CABE). The programme aims at accelerating the pace of UEE by transforming and toning the primary education system. The DPEP lays emphasis on contextuality and capacity building through the participatory mode.

The whole idea behind the DPEP is to develop a replicable, sustainable and cost effective programme with the objectives given as under (DPEP Guidelines, Jan. 1997):

- to reduce differences in enrolment, dropout and learning achievement among gender and social groups to less than five percent,
- to reduce overall primary dropout rate for all students to less than ten percent,
- to raise average achievement levels by at least 25 percent over measured baseline levels and ensuring achievement of basic literacy and numeracy competencies and a minimum of 40 percent achievement levels in other competencies by all primary school children,
- to provide, according to national norms, access for all children to primary education classes (I-V), i.e. primary schooling wherever possible, or its equivalent non formal education.

DPEP is a 'home grown' idea that focuses on contextuality which takes care of the diversities that exist in a vast country like ours. In an effort to engineer a closer link between education and the life of the people, DPEP envisages district specific

projects, which, within the overall strategy framework are tailored to the specific needs and possibilities in a district through participative planning and management approach. These project districts will have the necessary intensity to address issues pertaining to access, participation and achievement.

DPEP being a district specific programme for more focussed targeting the districts selected would be

- a. educationally backward districts with female literacy below the national average; and
- b. districts where Total Literacy Campaigns (TLCs) have been successful leading to enhanced demand for the universalisation of elementary education.

On the basis of the above mentioned criteria, 42 districts were identified from amongst seven states under Phase I of the programme. The names of the states and the districts covered under the programme are indicated in the map given on the facing page.

Baseline Assessment Studies– A Benchmark of Learning Achievement

A large number of studies were conducted during 1994 to establish the benchmark for planning research based interventions in all the project districts. Of these studies, the Baseline Assessment Study (BAS) was singularly devoted to assessing students' achievement in the two fundamental subjects - language and mathematics. The target population of this study was the student group which had passed the initial stage (class I) and the penultimate stage (class III/IV) of primary schooling.

Baseline Assessment Studies (BAS) were conducted in all the 42 districts spanning seven states. This mega study covered over 50,000 students, 5000

teachers and 1800 schools. The BAS was by itself a unique proposition after the earlier national studies on attainments of primary school children carried out in 1965-66 in mathematics (Kulkarni, 1970) and in 1990 in language and mathematics by the NCERT (Shukla et. al. 1994).

Enormous amount of data were generated out of the BAS which was analysed and interpreted for the purposes of identifying the area specific interventions to realise the goals of the DPEP.

Mid-Term Assessment Survey—the midway checkpoint

The programme implementation has been in operation for the past three years. As per the stipulation of the World Bank Report No. 13072 - in, page 42 para 3.23 (1), November, 1994, the assessment studies are to be carried out in all project districts during the third and the sixth year of the project.

This exercise of conducting the Mid-term Assessment Survey (MAS) would provide an opportunity to the policy planners to relook at the strategies to ensure that they were moving in the right direction for realising the goals of the DPEP. It would also make possible to assess the quantum of activities being carried out in different operational areas, highlighting areas which require additional inputs and identifying pockets, hitherto, unknown and unexplored which require special treatment. Moreover, the MAS would also assist in applying mid-course corrections to prevailing interventions.

The Mid-term Assessment Survey (MAS) was mounted with the focus on the following objectives:

OBJECTIVES

1. To measure the average performance of students' achievement on the newly generated competency based achievement tests in language and mathematics at the end of class I

and at the end of penultimate class of primary schooling.

2. To compare the average performance of students' achievement on the BAS tests administered during the initial survey in 1994 with that of students' performance on the same tests readministered during MAS in 1997.
3. To compare the achievement differences in regard to gender and social groups on MAS tests.
4. To study the effect of variables like home, school and teacher.

The scope of the present study report encompasses the first three general objectives in totality and the fourth one partially.

Design of the Survey

Normative correlational survey design was employed for conducting the Mid-Term Assessment Survey.

Population: The mid-term assessment survey was targeted to cover the 42 districts of the DPEP Phase I states. The states are Assam, Haryana, Karnataka, Kerala, Madhya Pradesh, Maharashtra and Tamil Nadu.

Time: As per the decision of the Advisory Committee, the MAS was conducted in the aforesaid states at the commencement of the academic session except in the state of Assam where the MAS was conducted four weeks prior to the closing of the academic session.

The data collection for MAS was undertaken in the months of July-August, 1997 in the states of Maharashtra, Tamil Nadu, Kerala, Karnataka and Haryana; in the months of August-September, 1997 in the state of Madhya Pradesh and in the months of November-December, 1997 in the state of Assam.

Tools: Following tools were employed for conducting the mid-term survey:

1. Achievement tests both in literacy and numeracy for class I students
2. Achievement tests both in language and mathematics for Classes III/IV students.
3. School Record Schedule
4. Teachers' Schedule
5. Student Present Schedule
6. Student Dropout Schedule including Achievement Test
7. Field Notes
8. Training Manual
9. Field Handbook

It is worth mentioning that the achievement tests based on the competencies of classes I and IV were administered at the beginning of the session to the students of classes II and V respectively in the states of Haryana, Madhya Pradesh and Tamil Nadu. Similarly, the tests based on the competencies of classes I and III were administered at the beginning of the session to the students of classes II and IV respectively in the states of Maharashtra, Kerala and Karnataka. However, in the state of Assam the tests based on the competencies of classes I & III were administered to the students of classes I & III respectively at the end of the academic session. Instead of providing monumental data on item parameters and reliability of all the conjugations of tests for all the seven states, an exemplar information districtwise in respect of the states of Haryana and Maharashtra are given in Annexure-B& C respectively. It may also be pertinent to mention here that the data pertaining to dropouts are dealt with in individual state reports.

Sampling Design

Multistage stratified random sampling technique was employed for the selection of various constituents of the MAS.

Target Population: The target population used in the MAS is given as under:

Schools: All Govt. and Govt. Aided Primary Schools including primary sections (I-IV/V) attached to upper primary/secondary/senior secondary schools.

Teachers: All teachers including the Head teacher.

Students: i. All students at the end of the initial stage of primary schooling

ii) All students at the end of the penultimate stage of primary schooling (III/IV)

Various steps involved in the selection of total number of schools, selection of number of urban and rural schools, selection of blocks, selection of urban areas, selection of schools from rural and urban areas, selection of students and teachers are given as under:

Step I

Total number of schools selected for the survey

10% of the total number of government and government aided primary schools including primary sections attached to upper primary/secondary/senior secondary schools having classes I to IV/V were selected in each project district, subject to a maximum of 50 schools.

Step II

Number of Schools selected from the Urban and Rural Sectors

The schools decided for the survey under step I were divided proportionately on the basis of the total number of urban and rural schools in the district, subject to a minimum of 10 schools from the urban area.

Step III

Selection of Blocks

While selecting the blocks, the urban areas if any, were excluded from the blocks. All blocks were selected, if the total number of blocks was upto 4.

If the total number of blocks was more than four, two separate lists of tribal and non tribal blocks (arranged alphabetically) were prepared. Subsequently, from these two lists, four blocks were selected proportionately and randomly with a minimum of one block from the tribal list.

Selection of Urban Areas

Prior to selecting the urban areas, all the urban areas were arranged alphabetically. All the urban areas were selected if the total number of urban areas was upto 3. If the number of urban areas was more than 3 then only 3 areas were randomly selected.

Step IV

Selection of Schools

Rural Schools

Schools were proportionately selected from each sampled block using the table of random numbers after preparing a list of government and government aided schools.

Urban Schools

Schools were proportionately selected from each sampled urban area using the table of random numbers after preparing a list of government and government aided schools.

Besides, a replacement list of 10 schools in the proportion of rural and urban number of sampled schools was also prepared for meeting out any exigencies.

Step V

Selection of Students

Class I

One section was randomly selected wherever the number of sections was more than one. All the students of this section were selected if the number of students was 20 or less than 20. If the number of students was more than 20, the boys and girls were alternately arranged using the class register and then 20 students were finally selected using random start.

Classes III/IV

One section was randomly selected wherever the number of section was more than one. All the students of this section were selected if the number of students was 30 or less than 30. In those cases where the number of students was more than 30, the boys and girls were alternately arranged using the class register and then 30 students were finally selected using random start.

Step VI

Selection of Teachers

Five teachers including the Head Master/Head Teacher were selected for the study. Of them, one was the head teacher. The second teacher was the one who taught the sampled students of class I. Third teacher was the one who taught the sampled students of Classes III/IV. If there were separate teachers teaching language and mathematics to the students then both were included in the sample and the fifth teacher was randomly selected from amongst the remaining teachers, preference was given to the lady teacher. In those schools where the language and the mathematics teacher happens to be the same person both the fourth and the fifth teachers were randomly selected from amongst the remaining teachers.

Overview of the Tests Used in BAS & MAS

It may be pertinent to mention here that the tests employed under MAS 1997 were different from those used under BAS 1994 and that these new tests employed under MAS were developed by the Ed.CIL. A broad classwise outline of the tests used under both the BAS and the MAS is given as under and their analyses are provided in Annexure A.

Class I Language Tests BAS & MAS

The test in language used under BAS comprised a set of twenty items. Of them, the first set of ten items were devoted to the recognition of alphabet and the second set of ten items to recognition of

words. Out of these ten words only one word involved the recognition of more than one 'Matra'. The test required the reading of the alphabet and the words.

The MAS test in language also contained twenty items, but all these items were devoted only to the recognition of words. Out of these twenty words, there were as many as ten words having more than one 'Matra'. The test warranted the recognition of the picture and reading of a set of four given words and recognising the word that would associate with the picture.

Class I Mathematics Tests BAS & MAS

The mathematics test under BAS consisted of fourteen items based on four competencies. The mode of its conduct was individual administration where the examinee indicated the answer.

The MAS test in mathematics contained twenty items which measured as many as ten competencies inclusive of the four competencies that were covered under BAS test. The mode of its conduct was also individual administration both oral and written.

Class III Language Tests BAS & MAS

The language test under BAS had forty four items divided into part one and part two. Under part one there were twenty items of word knowledge while in part two, there were twenty four items on reading comprehension. It was a group test.

The test under MAS covered sixty five items in language divided into two parts namely part one and part two. Part one had thirty items under word knowledge and part two had thirty five items under reading comprehension.

It may be mentioned here that the words and the passages used under BAS & MAS tests were different.

Class III Mathematics Tests BAS & MAS

The BAS test in mathematics consisted of forty items measuring thirty four competencies while the MAS test with equal number of items measured only thirty competencies. In the MAS test, of thirty competencies, there were thirteen competencies that were common with the BAS test and the rest were different. The MAS test had items based on four digit numbers.

Class IV Language Tests BAS & MAS

The language test under BAS comprised eighty four items broken down into part one and part two. Part one had forty items on word knowledge while part two had forty four items on reading comprehension.

The MAS test had seventy items split into part one and part two. Part one had thirty five items under word knowledge and part two had thirty five items under reading comprehension. The MAS test had a different set of words and comprehension passages from that of the BAS tests.

Class IV Mathematics Tests BAS & MAS

The mathematics test under BAS had forty items measuring twenty six competencies. The MAS test also had forty items but measuring twenty five competencies. In the newly constructed MAS test, eighteen competencies were common with that of the BAS test and the rest were different.

Strategy for the conduct of MAS

The conduct of the MAS was a shared responsibility between the NCERT and the state. The NCERT in its role of the nodal agency developed the design, instruments, framework of data analysis and other complementary material. Besides, the NCERT took upon itself the responsibility of conducting the training of Master Trainers in all the forty two districts across the seven states. Master Trainers were identified from amongst the faculty of the DIETs and the SCERTs. By and large these Master

Trainers were selected from the project districts and they were entrusted with the entire responsibility of conducting the training of the Field Investigators besides the collection and scrutiny & batching of the data under the overall supervision of the Principal Investigator. All these steps were meticulously planned and executed with a view to ensuring both the authenticity and the quality of the data. The NCERT also extended academic assistance to the states on demand. All the documents employed in the conduct of the MAS except the achievement tests were developed by the NCERT and presented for clearance before the National Advisory Committee on Surveys constituted by the Department of Education, Govt. of India.

Test Administration

As mentioned earlier a set of newly generated competency based achievement tests was employed for assessing students' performance under the MAS. Since these tests were different from the earlier tests used in the initial survey (BAS), they were used only for assessing the average performance of students and also for finding achievement gaps between gender and social groups in the present context in all schools sampled under MAS. However, in order to ascertaining the hike in students' performance after a period of three year

of DPEP interventions, the same set of tests that were used during the initial survey in the year 1994 were readministered subsequent to the MAS tests to the students of five randomly selected schools out of the total number of sampled schools in each project district. The initial tests were administered to the same set of students of the five selected schools who had already attempted new tests under MAS.

Data Collection

The data under MAS were collected by the Field Investigators under the direct monitoring of the Master Trainers and overall guidance of the Principal Investigator in each state.

The batching and the scrutiny of the data were carried out at two levels, one, at the district level and two, at the state level before it were subjected to statistical analysis.

The MAS data covered 66831 students, 6221 teachers, and 2068 schools spread over 42 districts across seven Phase I states. Statewise details are given in Table 1.1 as under:

Data Analysis

The data were analysed with a view to assessing the current status of students' achievement on

Table 1.1: Statewise Distribution of Total Sample

S. No.	State	No. of Districts	No. of Schools	No. of Students		No. of Dropouts	No. of Teachers
				Class I/ II	Class III/IV		
1.	Assam	3	150	2429	2164	114	418
2.	Haryana	4	190	3435	3975	263	623
3.	Karnataka	4	200	3008	3323	236	638
4.	Kerala	3	128	2447	3403	21	601
5.	M.P.	19	950	11700	11798	735	2390
6.	Maharashtra	5	250	4165	5356	457	888
7.	Tamil Nadu	4	200	3461	4010	331	663
	Total	42	2068	30645	34029	2157	6221

newly generated competency based achievement tests in language and mathematics administered at two levels namely; at the end of the initial stage and the penultimate stage of primary schooling. The achievement scores obtained on these tests were also used for preparing the ogives.

The data were also subjected to making a comparison of BAS 1994 results with that of the results obtained on the same tests readministered in the year 1997. Besides, the data were also analysed to finding out the achievement gaps on MAS tests in respect of gender and social groups.

Over and above, the data were also analysed to studying the influence of DPEP interventions in implementation since 1994.

Keeping in view the analysis plan and in order to ensure the uniformity and compatibility across the states a “ Framework of Analysis of the Data of Assessment Surveys” was developed by the DPEP Core Resource Group of the NCERT and distributed amongst the states. The Framework provided for not only the detailed analysis of the study reports but also guidelines for the chapterisation of the report.

Students' Achievement on MAS

This chapter deals with the students' achievement of classes I, and III/IV on the newly generated competency based achievement tests both in language and mathematics administered under the Mid-Term Assessment Survey. It discusses in detail the students' performance in terms of mean percentage and standard deviations besides distribution of

frequencies and cumulative frequencies against set of intervals ranging from 0 to 100.

2.1 Mean Percent of Achievement of Class I Students

Table 2.1 displays the performance of class I students demonstrated during MAS 1997.

Table 2.1: Mean percent of achievement of class I students in language and mathematics on MAS

State	District	N	Language		Mathematics	
			M%	SD	M%	SD
Assam	Darrang	723	75.45	25.70	74.45	25.90
	Dhubri	908	67.30	28.55	71.55	26.00
	Morigaon	798	78.10	22.60	77.75	21.85
Haryana	Hissar	857	69.73	29.02	74.13	28.73
	Jind	919	63.28	29.79	70.90	25.93
	Kaithal	726	71.47	26.09	81.03	20.97
	Sirsa	933	73.75	26.03	80.58	23.09
Karnataka	Belgaum	593	85.50	20.00	87.25	18.65
	Kolar	488	61.15	26.90	62.45	25.91
	Mandya	596	64.50	29.65	64.30	27.55
	Raichur	708	67.85	28.35	71.55	25.95
Kerala	Kasargod	907	75.30	22.85	73.60	25.20
	Malappuram	985	81.45	19.65	76.10	23.65
	Wayanad	555	69.30	19.65	66.10	24.45
Madhya Pradesh	Chattarpur	747	56.96	5.40	56.20	7.90
	Panna	512	51.50	12.00	55.68	12.90
	Rewa	701	44.52	27.25	48.25	32.00
	Satna	756	50.95	6.00	38.85	15.95
	Sidhi	624	58.40	23.70	52.93	20.74
	Tikamgarh	467	57.25	24.50	66.00	28.55
	Bilaspur	813	69.90	14.20	71.85	11.35
	Rajnandgaon	491	69.65	8.50	67.90	6.45
	Raigarh	620	61.25	12.85	64.10	9.55
	Surguja	537	49.35	28.20	51.02	29.05
Shahdol	508	50.85	24.11	45.55	27.89	

Contd

State	District	N	Language		Mathematics	
			M%	SD	M%	SD
Madhya Pradesh	Betul	784	64.85	18.50	59.80	9.70
	Dhar	537	58.50	25.95	58.85	25.28
	Guna	581	63.67	16.08	36.51	21.50
	Mandsaur	719	55.25	23.76	55.20	26.38
	Rajgarh	680	53.65	17.85	54.00	26.85
	Raisen	351	69.45	25.80	66.24	27.15
	Ratlam	612	56.60	13.75	58.60	7.00
	Sehore	660	54.25	15.25	54.75	12.90
Maharashtra	Aurangabad	845	70.62	29.60	66.46	30.00
	Latur	864	64.69	35.70	66.02	33.20
	Nanded	762	59.11	31.80	52.19	33.60
	Osmanabad	830	79.02	26.30	75.10	30.20
	Parbhani	864	58.63	33.20	57.91	33.40
Tamil Nadu	Dharmapuri	874	58.81	30.00	53.11	33.88
	Cuddalore	840	66.49	25.40	62.50	30.36
	Thiruvannamalai	832	56.34	26.68	52.27	32.68
	Villupuram	915	79.40	19.98	77.60	24.92

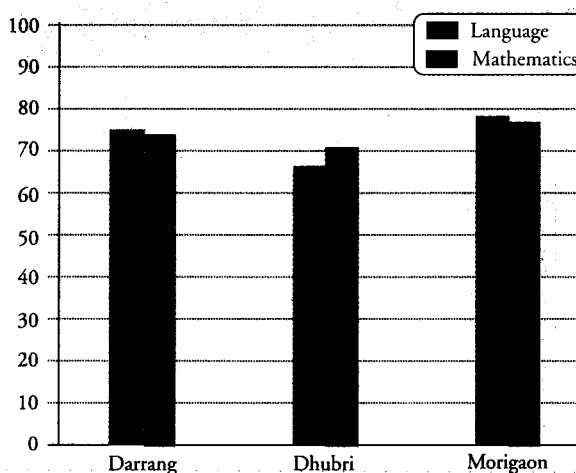
The performance demonstrated by class I students both in language and mathematics across the seven states is indicated statewise in the subsequent paragraphs.

2.1.1 Assam

In the three districts of Assam the achievement of class I students in language ranged from 67.30% in Dhubri to 78.10% in Morigaon. In mathematics the performance of students ranged from 71.55% in Dhubri to 77.75% in Morigaon. The results indicated identical pattern of growth and sequence in students' achievement in both the subjects across the districts.

- Students' achievement crosses 67% mark in language and 71% mark in mathematics
- Identical pattern of growth and sequence emerge in both the subjects across the districts.
- Morigaon takes the lead.

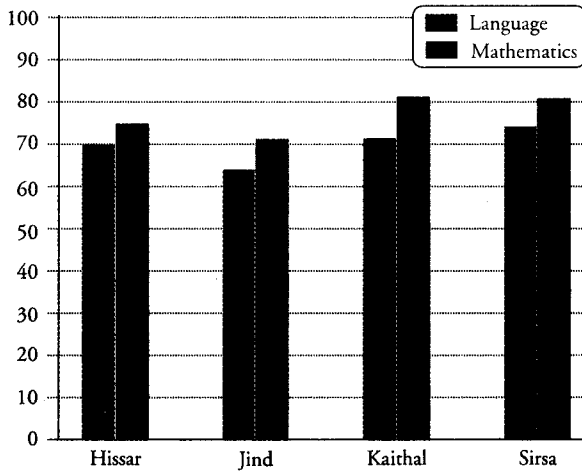
Class I Students' Achievement on MAS



2.1.2. Haryana

Students' achievement in language in class I in the four districts of Haryana varied from 63.28% in Jind to 73.75% in Sirsa. In mathematics it varied from 70.90% in Jind to 81.03% in Kaithal.

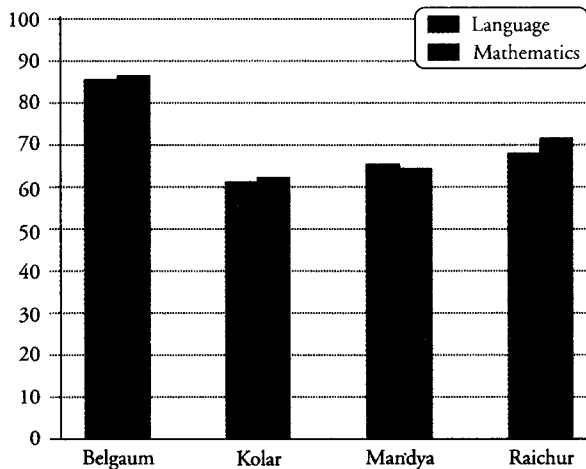
Class I Students' Achievement on MAS



- Students' achievement crosses 63% mark in language and 70% mark in mathematics.
- Sequential growth in performance exists in both subjects in Hissar and Jind.
- Sirsa and Kaithal outscored all other districts in language and mathematics respectively.

2.1.3. Karnataka

Class I Students' Achievement on MAS



The performance of students in language in the state of Karnataka varied from a low of 61.15% in Kolar to a high of 85.50% in Belgaum. Similar performance was exhibited in mathematics that varied from a low of 62.45% in Kolar to a high of 87.25% in Belgaum.

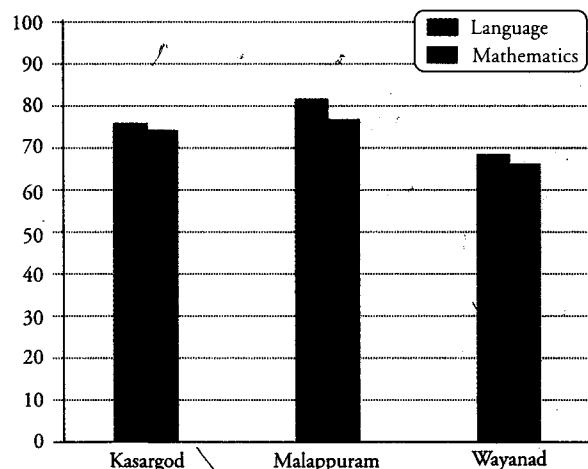
- Students' achievement crosses 61% mark both in language and mathematics.
- Identical pattern of growth and sequence surface in both the subjects across the state.
- Belgaum tops in performance.

2.1.4 Kerala

The students' performance in language in the state of Kerala ranged from 69.30% in Wayanad to 81.45% in Malappuram. On similar lines the performance in mathematics varied from 66.10% in Wayanad to 76.10% in Malappuram.

- Students' performance crosses 69% mark in language and 66% in mathematics.
- Similar growth pattern prevails in both the subjects across the state.
- Malappuram claims the key position.

Class I Students' Achievement on MAS

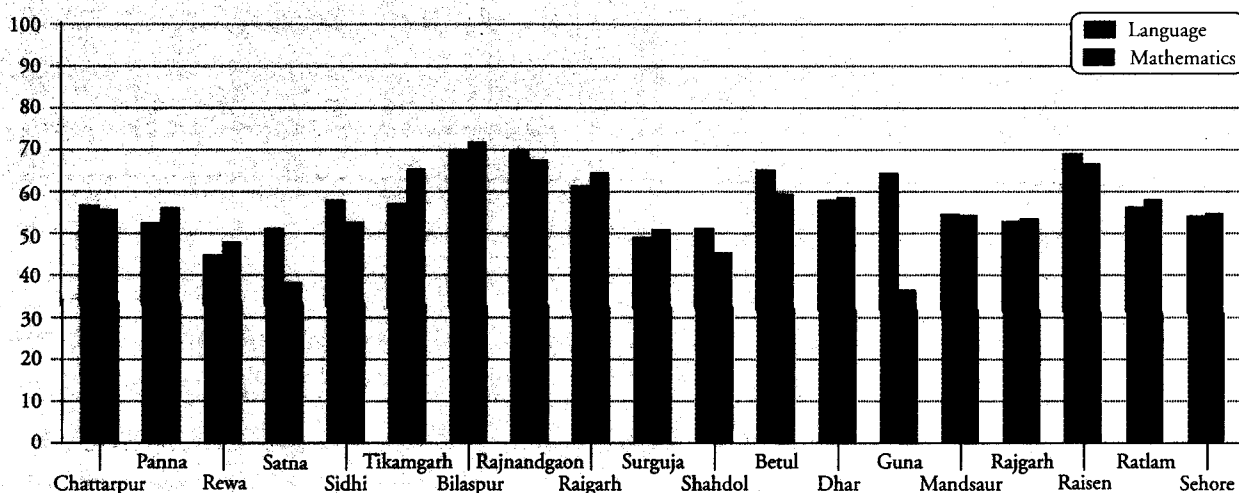


2.1.5. Madhya Pradesh

Students' achievement in class I in language in the state of M.P. ranged from 44.52% in Rewa to 69.90 in Bilaspur. In mathematics, it varied from 36.51% in Guna to 71.85% in Bilaspur.

- Students achievement crosses 44.52% mark in language and 36.51 mark in mathematics.
- Bilaspur captures the ace position in both subjects.
- Sequential growth in performance visible in a large number of districts.

Class I Students' Achievement on MAS



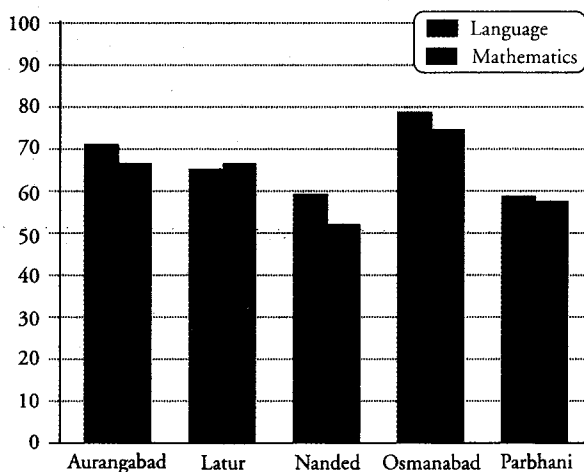
2.1.6. Maharashtra

The performance of students in language in the state of Maharashtra ranged from a low of 58.63% in Parbhani to a high of 79.02 % in Osmanabad. In mathematics the performance ranged from 52.19% in Nanded to 75.10% in Osmanabad.

in Parbhani to a high of 79.02 % in Osmanabad. In mathematics the performance ranged from 52.19% in Nanded to 75.10% in Osmanabad.

- Performance in language and mathematics crosses 58% and 52% mark respectively.
- Growth in performance follows sequential pattern in three out of five districts.
- Osmanabad captures the ace position.

Class I Students' Achievement on MAS

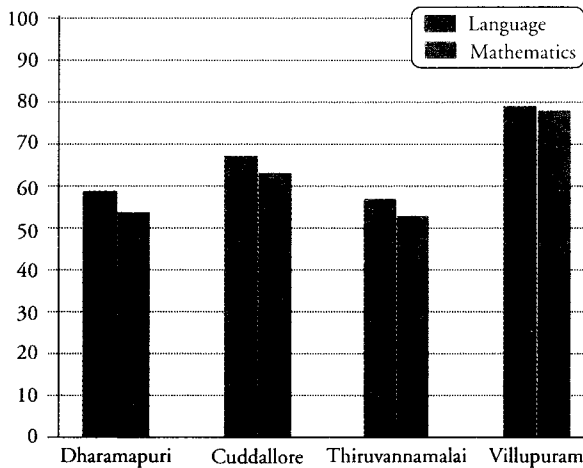


2.1.7. Tamil Nadu

The mean percent of performance in language varied from 56.34% in Thiruvannamalai to 79.40% in Villupuram. In mathematics it varied from 52.27% in Thiruvannamalai to 77.60% in Villupuram.

- Students achievement crosses 56% mark in language and 52% mark in mathematics.
- Growth pattern follows an identical sequence.
- Villupuram comes through as the winner.

Class I Students' Achievement on MAS



The figures shown in the Table 2.1 indicate that the measure of variability in class I in language indicated in the form of Standard Deviation (SD) varied from 22.60 to 28.55 in the state of Assam; 26.03 to 29.79 in the state of Haryana; 20.00 to 29.65 in the state of Karnataka; 19.65 to 22.85 in the state of Kerala, 26.30 to 35.70 in Maharashtra; 19.98 to 30.00 in Tamil Nadu and 5.40 to 28.20 in Madhya Pradesh.

The measure of variability appeared to be slightly on a higher side in all the states which might be

attributed to the length of the test. It may be pertinent to mention here, that the number of items in the test was restricted to 20 items for the simple reason that the test was to be administered orally and the target population was class I students.

The measure of variability in class I in mathematics indicated in the form of Standard Deviation (SD) varied from 21.85 to 26.00 in the state of Assam; 20.97 to 28.73 in Haryana; 18.65 to 27.55 in Karnataka; 23.65 to 25.20 in Kerala, 30.00 to 33.60 in Maharashtra, 24.92 to 33.88 in Tamil Nadu and 6.45 to 32.00 in Madhya Pradesh. The measure of variability in mathematics also appeared to be slightly on the higher side for the reasons applicable in language.

2.1.8. Dispersion of Scores

This section highlights the dispersion of scores classified into ten categories shown in descending order with a view to ascertaining the percentage of students crossing a particular level of achievement.

Table 2.2 gives an account of the cumulative frequency distribution of class I students' achievement in language and mathematics.

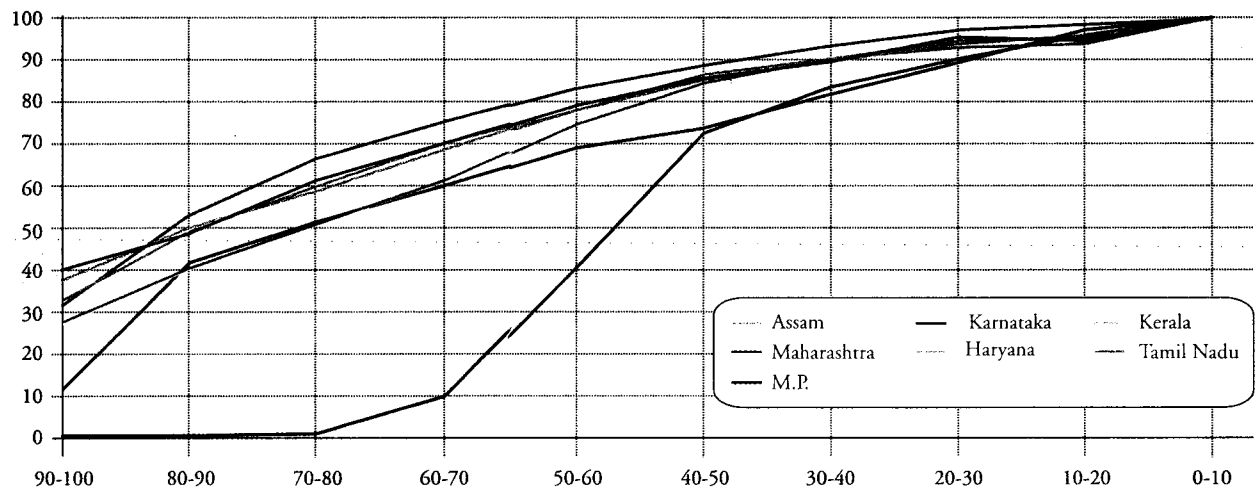
Table 2.2. Distribution of students of class I on the basis of their achievement level in language and mathematics

State			Achievement Level (Percent)									
			90-100	80-90	70-80	60-70	50-60	40-50	30-40	20-30	10-20	0-10
Assam	L	f	767	405	310	211	195	156	123	90	68	104
		cf(%)	31.58	48.25	61.01	69.70	77.73	84.15	89.21	92.92	95.72	100.00
	M	f	736	453	335	260	192	145	104	67	54	83
		cf(%)	30.30	48.95	62.74	73.44	81.35	87.32	91.60	94.36	96.58	100.00
Haryana	L	f	1285	409	330	289	271	275	247	161	55	113
		cf(%)	37.41	49.32	58.92	67.35	75.23	83.23	90.42	95.11	96.71	100.00
	M	f	1639	423	306	265	244	206	152	117	38	45
		cf(%)	47.71	60.03	68.94	76.65	83.76	89.75	94.18	97.58	98.69	100.00

Contd

State	Achievement Level (Percent)											
			90-100	80-90	70-80	60-70	50-60	40-50	30-40	20-30	10-20	0-10
Karnataka	L	f	396	884	335	294	251	128	243	266	183	127
		cf(%)	12.75	41.20	51.98	61.44	69.52	73.64	81.46	90.02	95.91	100.00
	M	f	345	845	373	383	367	245	203	121	122	103
		cf(%)	11.10	38.30	50.30	62.63	74.44	82.33	88.86	92.75	96.68	100.00
Kerala	L	f	757	534	324	218	196	160	121	81	30	26
		cf(%)	30.94	52.76	66.00	74.91	82.92	89.46	94.40	97.71	98.94	100.00
	M	f	726	352	299	301	232	234	125	87	39	52
		cf(%)	29.67	44.05	56.27	68.57	78.05	87.62	92.73	96.28	97.87	100.00
Madhya Pradesh	L	f	0	20	91	1016	3722	3570	1213	896	669	418
		cf(%)	0	0.17	0.96	9.70	41.75	72.48	82.93	90.64	96.40	100.00
	M	f	15	30	194	1654	5108	1989	1068	737	467	353
		cf(%)	0.13	0.39	2.06	16.30	60.28	77.40	86.59	92.94	96.96	100.00
Maharashtra	L	f	1715	321	280	258	271	357	321	250	118	274
		cf(%)	41.18	48.89	55.61	61.80	68.31	76.88	84.59	90.59	93.42	100.00
	M	f	1469	407	329	316	311	281	247	276	199	330
		cf(%)	35.27	45.04	52.94	60.53	68.00	74.74	80.67	87.30	92.08	100.00
Tamil Nadu	L	f	947	419	421	379	453	344	168	80	74	176
		cf(%)	27.36	39.47	51.63	62.58	75.67	85.61	90.47	92.78	94.91	100.00
	M	f	1037	376	322	300	273	266	215	234	136	302
		cf(%)	29.96	40.83	50.13	58.80	66.69	74.37	80.58	87.34	91.27	100.00

Cumulative Frequency Distribution of Class I Students' Achievement in Language



The figures shown in Table 2.2 revealed that the distribution of achievement scores in language in Assam had spread over the entire range. It was observed that least number of cases (68) happened to be in the range from 10% to 20% and maximum number of cases (767) lay between 90% and 100%. The frequencies against the rest of the intervals showed a positive upward progression tending to create a negatively skewed distribution. It was encouraging to note that 1888 out of 2429 students were achievers between 50% and 100%. An almost identical trend was observed in mathematics achievement in Assam.

In Haryana, the distribution of achievement scores in language covered the complete range. Least number of cases were posted in the range from 10% to 20% and the maximum from 90% to 100%. The frequencies against the rest of the intervals indicated positive upward progression tending to form a negatively skewed distribution. Distribution of scores in mathematics achievement followed the trend of language in Haryana.

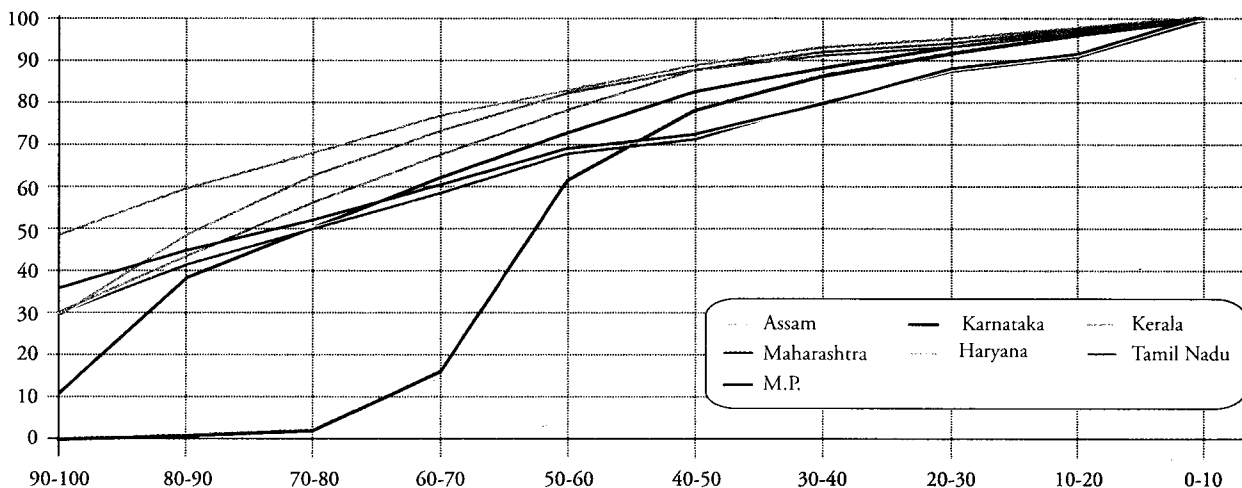
Distribution of achievement scores in language in Karnataka had utilised the entire range. Least

number of cases (127) were observed in the range from 0% to 10% and maximum number of cases (884) in the range from 80% to 90%. The frequencies against the rest of the intervals showed a positive upward progression with the exception of a decline in the range 40-50 and 90 - 100, yet tending to create a negatively skewed distribution. Similar pattern was also observed in mathematics achievement.

In the state of Kerala the distribution of achievement scores in language spanned the entire range. Least number of cases were seen in the range from 0% to 10% and maximum number of cases in the top range from 90% to 100%. The frequencies against the rest of the intervals displayed a positive upward progression tending to producing a negatively skewed distribution. The distribution of language achievement scores seemed to be replicated in mathematics achievement.

Distribution of achievement scores in language in the state of Maharashtra exhausted the entire range. Least number of cases were placed in the range from 10% to 20% and maximum in the range from 90% to 100%. The frequencies against the rest

Cumulative Frequency Distribution of Class I Students' Achievement in Mathematics



of the interval signified a positive upward progression resulting into the formation of a negatively skewed distribution. The same trend was emulated in mathematics achievement.

Like the earlier five states, the distribution of achievement scores in language in Tamil Nadu utilised the entire range. Least number of cases were noticed in the range from 10% to 20% and maximum number of cases in the range from 90% to 100%. The frequencies against the rest of the intervals registered a positive upward progression tending to forming a negatively skewed distribution. In mathematics, distribution of achievement scores happened to be identical with that of language.

In the state of M.P. the distribution of achievement scores in language did not utilise the entire range. Least number of cases were observed in the range from 80% to 90% and maximum number of cases in the range from 50% to 60%. The frequencies against the rest of the interval tended towards forming a non skewed distribution. In mathematics, the distribution of scores had utilised the entire range. The least number of cases were found in the range from 90% to 100% and maximum number of cases in the range from 50% to 60%. The frequencies against the rest of the intervals tended towards producing a non skewed distribution.

- Achievement scores in language and mathematics utilise entire range in all the states except in language in Madhya Pradesh.
- The higher range claims maximum number of cases in most of the states.
- Positive upward progression of frequencies against higher intervals tend to produce negatively skewed distribution in a large number of cases.

2.1.9 Levels of Achievement of Class I Students

Table 2.3 illustrates the number of districts showing average levels of achievement of Class I students both in language and mathematics.

Table 2.3: Number of districts showing levels of achievement of class I students

Range %	Language	Mathematics
80 and up	2	3
70-80	8	11
60-70	15	10
50-60	15	14
40-50	2	2
Below 40	0	2
Total	42	42

Figures shown in Table 2.3 revealed that average performance in 2 out of 42 districts in language and in 3 in mathematics had crossed 80% mark. In 23 districts the average performance in language was found to be between 60-80% while in mathematics the same was true for 21 districts. Further, it was observed that there were still 2 districts in language and 4 in mathematics where the average performance stood below 50%.

Summing Up

The analyses of the results in the preceding paragraphs indicated that of all the states the students of Assam and Kerala, displayed better performance in both the subjects than their counterpart. However, the students of Karnataka and Haryana tended to approximate their performance with Assam and Kerala followed by Maharashtra, Tamil Nadu and Madhya Pradesh. The analyses also highlighted that in most of the districts the students' performance followed an identical pattern of growth and sequence. Besides, the measure of variability in both the subjects appeared to be slightly on the higher side which may be attributed to the length of the test. As regards the distribution of achievement scores, the entire range was utilised in both the subjects in all the states except in Madhya Pradesh in language. The higher range claimed maximum number of cases in most of the states. Besides, positive upward progression of frequencies was observed

against higher intervals that tended to producing negatively skewed distribution in a large number of cases. The results also revealed that the average performance in 25 districts in language and 24 in mathematics crossed 60% level. Except two districts in language and four in mathematics in the state of Madhya Pradesh; all other districts have crossed 50% level of achievement in the two subjects.

2.2. Mean Percent of Achievement of Class III Students

Table 2.4 depicts the performance of class III students in language and mathematics in the states of Assam, Karnataka, Kerala and Maharashtra. Statewise performance of students is indicated in the subsequent paragraphs.

2.2.1 Assam

While in all the three districts of Assam, the students displayed identical performance in language, bordering around 58%, in mathematics it varied from 55.58% in Morigaon to 61.25% in Dhubri.

Class III Students' Achievement on MAS

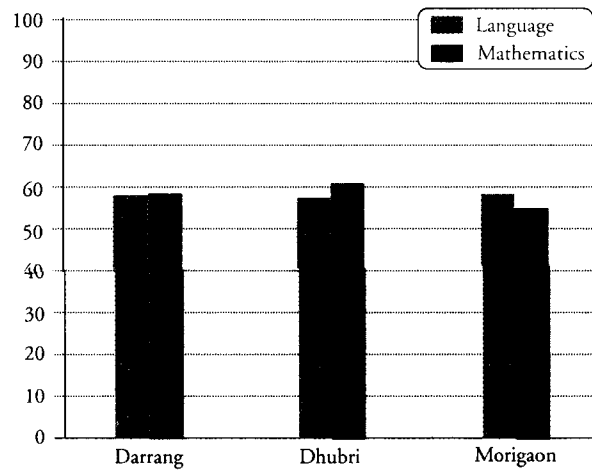


Table 2.4: Mean achievement of class III students in language and mathematics on MAS

State	District	N	Language		Mathematics	
			M%	SD	M%	SD
Assam	Darrang	656	58.11	19.72	59.18	29.53
	Dhubri	777	57.48	19.74	61.25	25.55
	Morigaon	731	58.38	16.43	55.58	21.90
Karnataka	Belgaum	937	51.63	22.25	57.98	25.58
	Kolar	763	37.94	19.66	33.98	19.83
	Mandya	913	42.28	20.92	41.30	25.80
	Raichur	857	47.26	20.98	48.33	24.98
Kerala	Kasargod	1254	51.29	17.75	38.83	17.25
	Malappuram	1371	53.38	15.34	37.03	15.98
	Wayanad	788	49.97	16.65	37.10	16.85
Maharashtra	Aurangabad	1120	46.82	21.90	36.43	25.00
	Latur	1117	40.22	18.60	26.87	17.70
	Nanded	996	38.06	21.00	24.82	19.30
	Osmanabad	1091	43.67	17.40	31.82	17.10
	Parbhani	1029	36.24	14.60	23.44	14.10

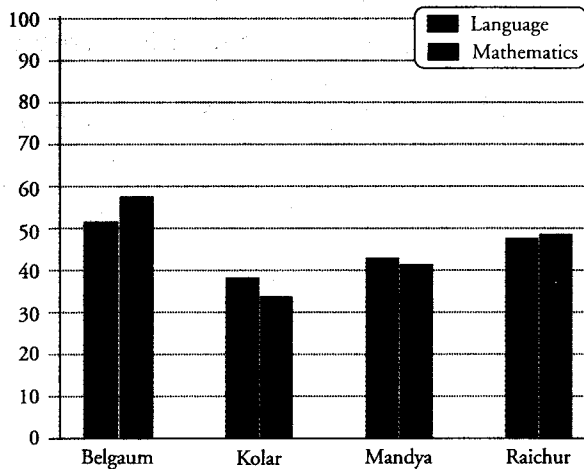
- All districts register almost identical performance in language crossing 57% mark.
- Students' performance crosses 55% mark in both subjects across the districts
- The ace position is shared by Morigaon and Dhubri in language and mathematics respectively.

2.2.2. Karnataka

Students' performance in language ranged from a low of 37.94% in Kolar to a high of 51.63% in Belgaum. In mathematics the performance varied from a low of 33.98% in Kolar to a high of 57.98% in Belgaum. The results revealed a sequential growth pattern in both subjects in all districts.

- Students' performance crosses 37% mark in language and 33% mark in mathematics.
- Growth in performance follows sequential pattern.
- Belgaum tops the list in both the subjects.

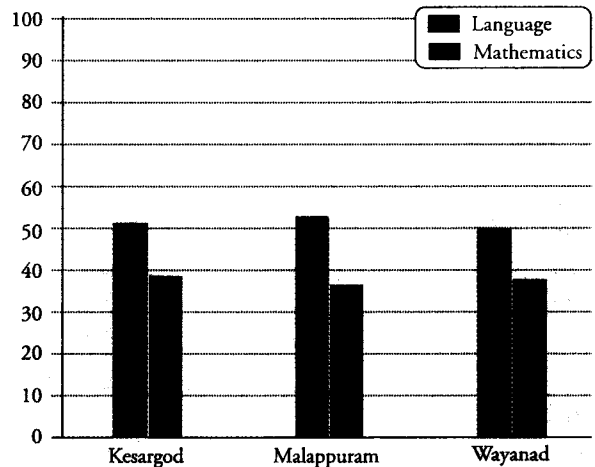
Class I Students' Achievement on MAS



2.2.3 Kerala

Performance in language varied from 49.97% in Wayanad to 53.38% in Malappuram. In mathematics it varied from 37.03% in Malappuram to 38.83% in Kasargod. Although the performance in language touched 50% mark, in mathematics it stood under 40%.

Class III Students' Achievement on MAS

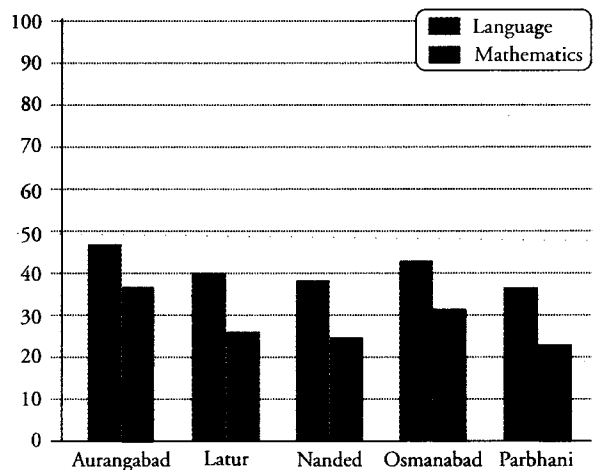


- Performance in language supersedes that of mathematics.
- Achievement in mathematics way below 40%.

2.2.4 Maharashtra

Students' performance in language varied from 36.24% in Parbhani to 46.82% in Aurangabad. Similarly in mathematics it varied from 23.44% in Parbhani to 36.43% in Aurangabad. Although in three out of five districts the performance in

Class III Students' Achievement on MAS



language crossed 40% mark, in mathematics it stood below 40% mark. Notwithstanding the low performance of students, growth in performance followed a sequential pattern in all the districts in both subjects.

- Students demonstrate better performance in language than in mathematics.
- Student performance shows sequential growth in both subjects in all districts.
- Aurangabad bags the top position.

The measure of variability shown in the form of Standard Deviation (SD) in Table 2.4 under language varied from 16.43 to 19.74 in Assam, 19.66 to 22.25 in Karnataka, 15.34 to 17.75 in Kerala and 14.60 to 21.90 in Maharashtra. The measure of variability turned out to be within the acceptable range. It may be mentioned here that number of items in class III language test was 65 and that it was a group test.

The measure of variability in class III mathematics test indicated in the form of Standard Deviation (SD) varied from 21.90 to 29.53 in Assam, 19.83 to 25.80 in Karnataka, 15.98 to 17.25 in Kerala and 14.10 to 25.00 in Maharashtra. By and large the measure of variability in mathematics turned out to be within the acceptable range barring only a few cases. The test in mathematics comprised 40 items and was a group test.

2.2.5. Dispersion of Scores

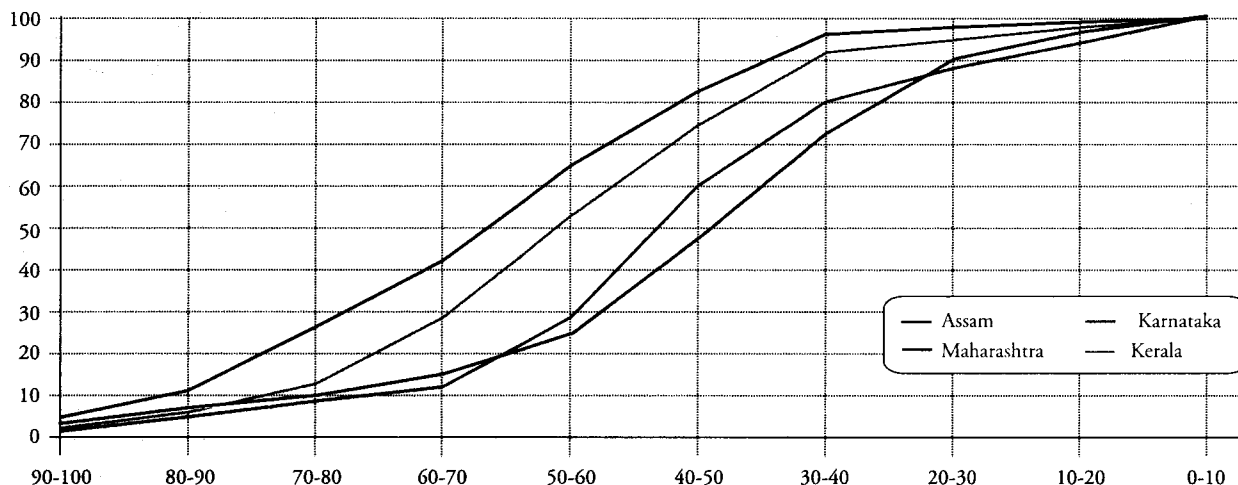
This section highlights the dispersion of scores classified into ten categories shown in descending order with a view of ascertaining the percentage of students crossing a particular level of achievement.

Table 2.5 gives an account of the cumulative frequency distribution of class III students' achievement both in language and mathematics.

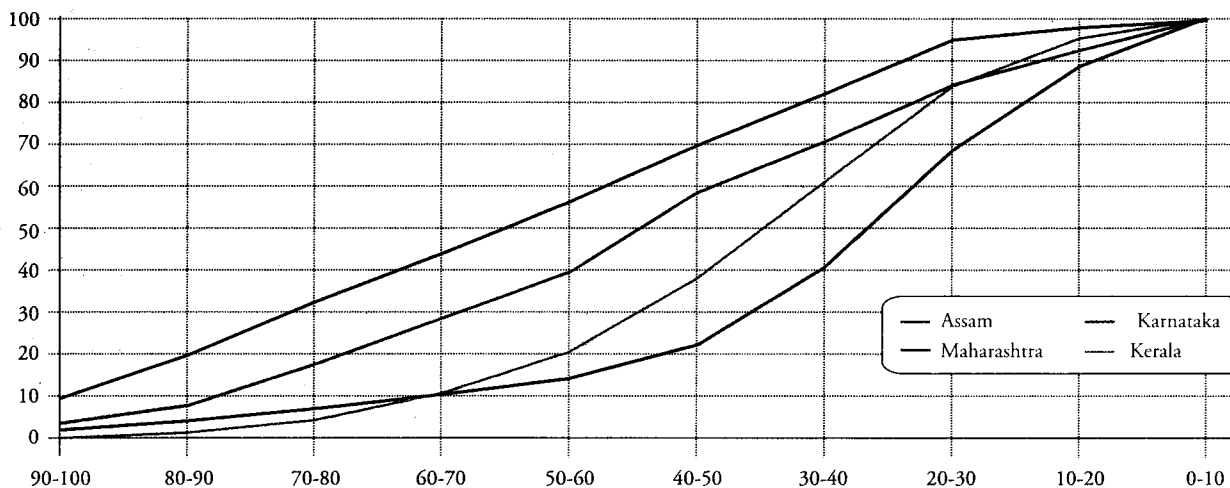
Table 2.5 : Distribution of students of class III on the basis of their achievement level in language and mathematics

State		Achievement Level (Percent)										
		90-100	80-90	70-80	60-70	50-60	40-50	30-40	20-30	10-20	0-10	
Assam	L	f	72	174	320	339	494	402	285	58	16	4
		cf(%)	3.33	11.34	26.16	41.82	64.65	83.23	96.40	99.08	99.82	100.00
	M	f	184	241	270	256	268	273	266	256	124	26
		cf(%)	8.50	19.64	32.12	43.95	56.33	68.95	81.24	93.07	98.80	100.00
Karnataka	L	f	25	107	149	174	564	1057	699	284	203	208
		cf(%)	0.72	3.80	8.09	13.11	29.36	59.83	79.97	88.16	94.01	100.00
	M	f	83	178	355	375	386	614	443	475	276	274
		cf(%)	2.40	7.55	17.81	28.65	39.81	57.56	70.37	84.10	92.08	100.00
Kerala	L	f	35	116	321	515	863	732	560	170	76	55
		cf(%)	1.02	4.39	13.71	28.67	53.73	74.99	91.26	96.20	98.40	100.00
	M	f	3	28	86	209	373	589	808	817	360	171
		cf(%)	0.09	0.90	03.40	09.47	20.30	37.40	60.86	84.58	95.03	100.00
Maharashtra	L	f	132	168	224	344	489	1136	1377	957	369	157
		cf(%)	2.47	5.61	9.79	16.22	25.36	46.58	72.30	90.18	97.07	100.00
	M	f	65	120	139	174	251	390	998	1529	1050	639
		cf(%)	1.21	3.45	6.05	9.30	13.99	21.27	39.91	68.46	88.07	100.00

Cumulative Frequency Distribution of Class III Students' Achievement in Language



Cumulative Frequency Distribution of Class III Students' Achievement in Mathematics



The entries posted in Table 2.5 signified that the distribution of achievement scores in language in Assam had utilised the entire range. The least number of cases were posted against the range from 0% to 10% and the maximum number of cases from 50% to 60%. The number of frequencies against the rest of the intervals gradually rose upto the range 50-60 and crashed thereafter tending to producing a non skewed curve. The picture was almost replicated in mathematics achievement in the state.

In the state of Karnataka the distribution of achievement scores in language used the complete range. The least number of cases were found in the range from 90% to 100% and the maximum number of cases from 40% to 50%. The number of frequencies against the rest of the intervals declined in the higher ranges and thus tended to create a positively skewed distribution. A similar trend was also observed in the distribution of achievement scores in mathematics.

In Kerala the distribution of achievement scores in language spanned the entire range. The least number of cases were seen in the range from 90% to 100% and maximum number of cases from 50% to 60%. The frequencies against the rest of the intervals showed an incline upto the range 50-60 and thereafter a decline in the higher ranges thus tending to create a non skewed distribution. In mathematics too the trend was almost identical.

The distribution of achievement scores in the state of Maharashtra consumed the entire range. Least number of cases were found in the range from 90% to 100% and maximum in the range from 30% to 40%. The number of frequencies against the rest of the intervals showed a rise upto the range 30-40 and a gradual fall thereafter, tending to produce a positively skewed distribution. In mathematics, the distribution of achievement scores was almost the same.

- The entire range stands occupied by achievement scores in language and mathematics in all the four states.
- Higher range claims least number of cases in 3 out of four states.
- Distribution of achievement scores tend to produce non skewed distribution in Assam in both subjects and in Kerala only in language.
- Positively skewed distribution seen in both the subjects in Karnataka and Maharashtra and in mathematics in Kerala only.

Summing UP

The results displayed in the preceding paragraphs revealed that while in some districts the student performance touched sixty percent mark in both the subjects, in others it stood below forty percent mark. Of all the states, the state of Assam demonstrated better performance than their counterpart. It may be pertinent to mention here that even in class I Assam had outscored other states. The students of Karnataka and Kerala tended to approximate their performance with the students of Assam only in the performance of language and not in mathematics. In Maharashtra although the students' performance in language touched the 46% mark, it could hardly touch the 36% mark in mathematics.

It is also evident from the results that all the 3 districts of Assam rendered identical performance in language. The states of Karnataka and Maharashtra showed identical pattern of growth and sequence. The measure of variability in both the subjects was found to be within the acceptable range in most of the districts, across the states. In so far as the distribution of achievement scores in language and mathematics was concerned, the entire range was utilised by them in all the four states. In contrast to class I, in class III the higher range claimed least number of cases in three out of four states. Distribution of achievement scores tended to produce non skewed distribution in Assam in both the subjects and only in language in Kerala. Positively skewed distribution was observed in both subjects in Karnataka, Maharashtra and only in mathematics in Kerala.

Table 2.6 : Mean percent of achievement of class IV students in language and mathematics on MAS

State	District	N	Language		Mathematics	
			M%	SD	M%	SD
Haryana	Hissar	996	38.30	10.10	43.31	19.62
	Jind	1020	37.58	10.93	39.73	17.87
	Kaithal	891	42.67	10.80	45.02	16.99
	Sirsa	1027	46.89	10.13	60.64	20.92
Madhya Pradesh	Chattarpur	541	41.84	5.24	36.12	5.20
	Panna	503	35.73	3.49	24.97	6.87
	Rewa	760	35.91	13.11	24.10	15.50
	Satna	788	30.91	9.97	23.09	4.12
	Sidhi	593	38.84	9.89	28.65	15.05
	Tikamgarh	512	40.63	17.99	30.93	18.00
	Bilaspur	792	48.31	10.46	36.28	6.88
	Rajnandgaon	538	34.41	3.33	24.97	7.20
	Raigarh	626	43.34	3.87	30.13	4.25
	Surguja	505	43.83	10.10	29.78	10.79
	Shahdol	589	32.07	16.88	22.67	14.91
	Betul	887	40.81	3.68	35.59	7.85
	Dhar	544	40.46	16.85	31.75	18.00
	Guna	495	32.60	6.00	32.77	8.60
	Mandsaur	721	39.60	13.31	26.60	10.75
	Rajgarh	568	34.06	5.07	34.90	10.25
	Raisen	424	37.60	17.53	30.62	19.53
Ratlam	563	35.25	3.68	29.55	5.55	
Sehore	849	31.97	3.40	20.60	2.57	
Tamil Nadu	Dharampuri	1030	44.17	14.64	37.78	19.73
	Cuddalore	957	59.77	18.33	47.55	24.55
	Thiruvannamalai	921	43.63	17.21	30.94	17.91
	Villupuram	1102	51.25	14.46	50.98	20.85

2.3 Mean Percent of Achievement of Class IV Students

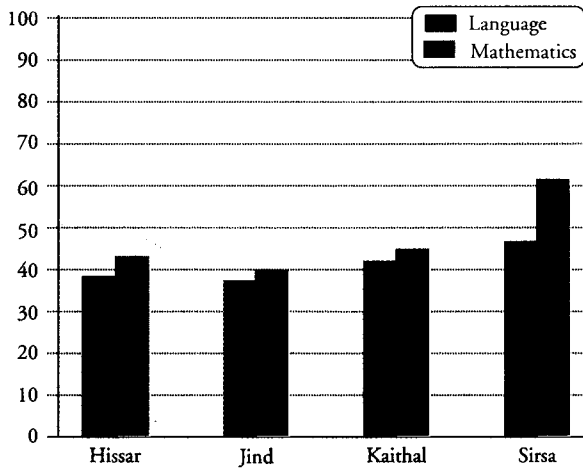
The Table 2.6 illustrates the performance of Class IV students exhibited during MAS 1997.

The performance exhibited by class IV students both in language and mathematics in the states of Haryana, Tamil Nadu and Madhya Pradesh is discussed in the following paragraphs.

2.3.1 Haryana

In all the four districts of Haryana the students' performance in language varied from 37.58% in Jind to 46.89% in Sirsa. In mathematics the performance of the students ranged from 39.73% in Jind to 60.64% in Sirsa. The results showed identical pattern in growth and sequence in both the subjects across the districts.

Class IV Students' Achievement on MAS



- Students' performance crosses 37% in language and 39% in mathematics.
- Growth in performance follows sequential pattern in both the subjects across the districts.
- Sirsa takes the lead.

2.3.2 Madhya Pradesh

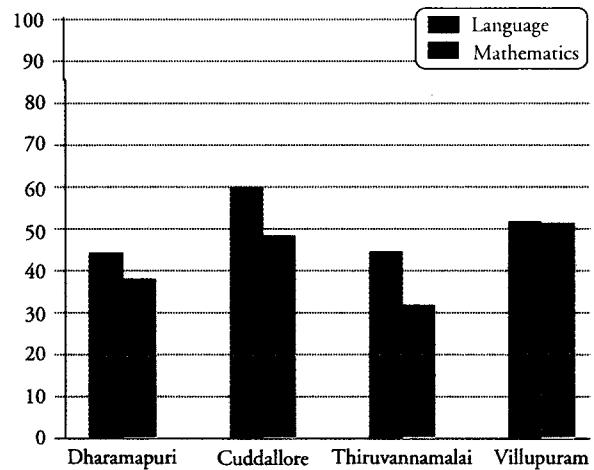
The performance of class IV students in language in Madhya Pradesh varied from 30.19% in Satna to 48.31% in Bilaspur. In mathematics the students' performance ranged from a low of 20.60% in Sehore

to 36.28% in Bilaspur. The results showed pattern of growth and sequence in both the subjects in a large number of districts in the state.

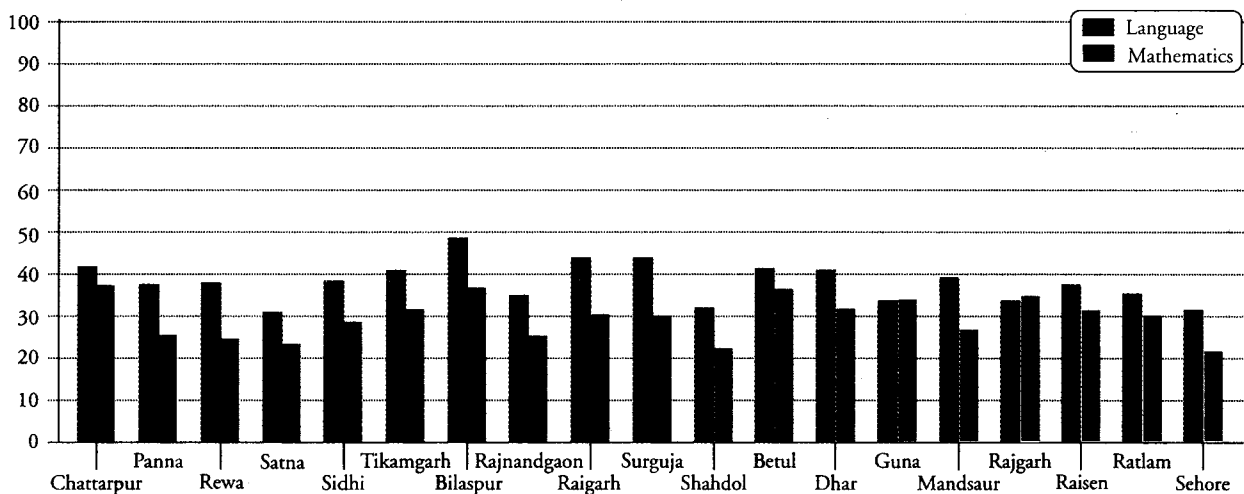
- Students' achievement crosses 30% mark in language and 20% in mathematics.
- Bilaspur takes the lead both in language and mathematics.
- Growth in performance follows the sequential pattern in both the subjects in majority of the cases.

2.3.3 Tamil Nadu

Class IV Students' Achievement on MAS



Class IV Students' Achievement on MAS



Students' performance in language ranged from 43.63% in Thiruvannamalai to 59.77% in Cuddalore. In mathematics the performance ranged from 30.94% in Thiruvannamalai to 50.98% in Villupuram.

- Students' performance crosses 43% mark in language and 30% mark in mathematics
- Cuddalore and Villupuram hold the key position in language and mathematics respectively.

The measure of variability shown in the form of standard deviation in the aforesaid table in language varied from 10.10 to 10.93 in the state of Haryana, 14.46 to 18.83 in Tamil Nadu and 3.49 to 17.99 in Madhya Pradesh. The range of the variability turned out to be within the acceptable range. It may be pertinent to mention here that the number of items in language was 70 and that it was a group test.

The measure of variability in class IV mathematics test shown in the form of standard deviation varied from 16.99 to 20.92 in the state of Haryana, 17.91 to 24.55 in the state of Tamil Nadu and from 4.12 to 19.53 in Madhya Pradesh. The measure of variability

in some of the districts was found to be on a slightly higher side which may be attributed to the number of items, that happened to be 40 in the test.

2.3.4. Dispersion of Scores

This section highlights the dispersion of scores classified into ten categories shown in descending order with a view of ascertaining the percentage of students crossing a particular level of achievement.

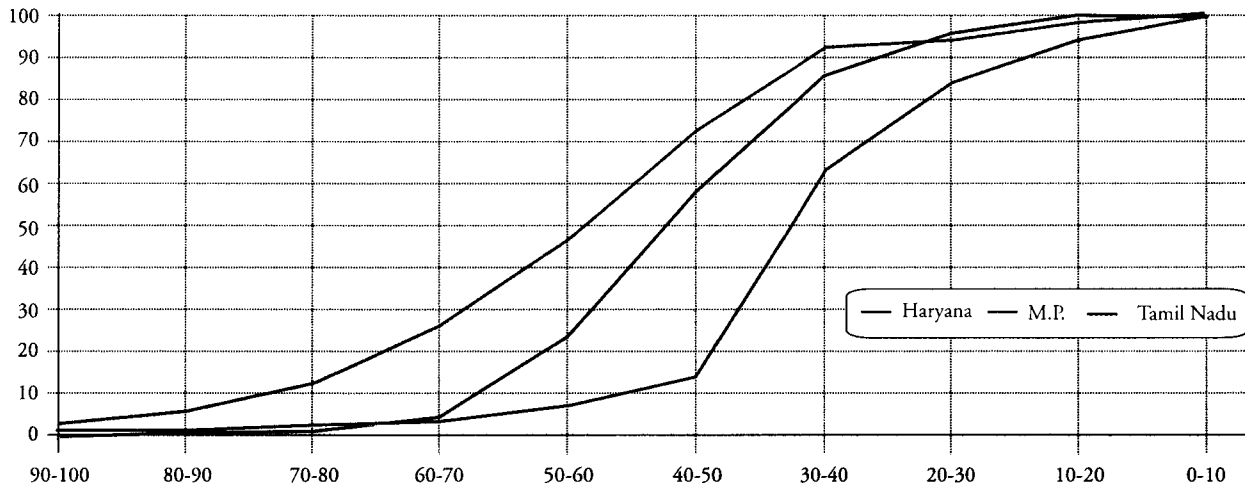
Table 2.7 provides for the cumulative frequency distribution of class IV students' achievement in language and mathematics in the states of Haryana, Tamil Nadu and Madhya Pradesh.

The entries in the Table 2.7 signified that the distribution of achievement scores in language in Haryana did not utilise the entire range, it halted at the range 70-80. Least number of cases were found in the range 0-10 and maximum in the range 40-50. The frequencies against the class intervals tended to rise upto the range 40-50 and fell gradually thereafter, thereby tending to produce a positively skewed distribution. However, in the

Table 2.7: Distribution of students of class IV on the basis of their achievement level in language and mathematics

State			Achievement Level (Percent)									
			90-100	80-90	70-80	60-70	50-60	40-50	30-40	20-30	10-20	0-10
Haryana	L	f	0	0	16	156	796	1336	1129	430	100	12
		cf(%)	0	0	0.40	4.33	24.35	57.96	86.36	97.18	99.70	100.00
	M	f	116	207	366	457	593	740	736	489	195	76
		cf(%)	2.92	8.13	17.33	28.83	43.75	62.36	80.88	93.18	98.09	100.00
Madhya Pradesh	L	f	0	55	100	156	525	707	6079	2339	1184	764
		cf(%)	0	0.46	1.30	2.61	7.02	12.96	64.00	83.64	93.58	100.00
	M	f	0	42	97	169	224	552	2571	4422	2525	1307
		cf(%)	0	0.35	1.17	2.59	4.47	9.10	30.69	67.82	89.03	100.00
Tamil Nadu	L	f	54	175	328	569	785	949	774	253	57	66
		cf(%)	1.35	5.71	13.89	28.08	47.66	71.32	90.62	96.93	98.35	100.00
	M	f	86	225	331	354	418	546	709	796	364	181
		cf(%)	2.14	7.76	16.01	24.84	35.26	48.88	66.56	86.41	95.49	100.00

Cumulative Frequency Distribution of Class IV Students' Achievement in Language



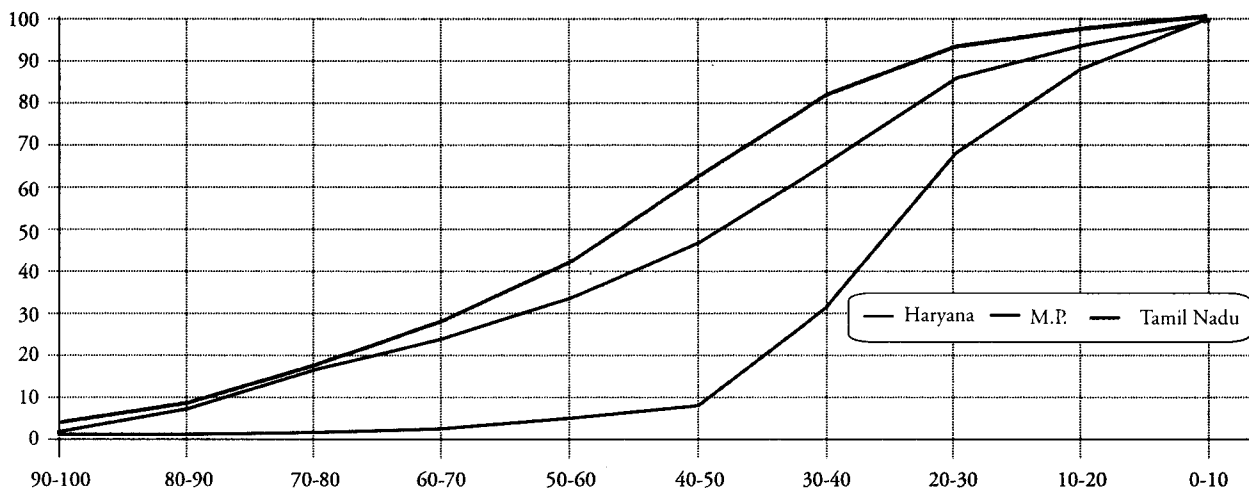
case of mathematics not only the entire range was utilised but the frequencies also tended to produce a non skewed distribution.

In Madhya Pradesh the distribution of scores in language did not utilise the entire range, it halted at the range 80-90. Least number of cases were observed in the range 80-90 and maximum number of cases were in the range 30-40. The frequencies against the class intervals tended to rise upto the

range 30-40 and decline thereafter. In mathematics also the distribution turned out to be almost identical except that the number of cases swelled in the range 20-30. In both the subjects the distribution of scores tended to producing positively skewed distribution.

In the state of Tamil Nadu the distribution of scores in language utilised the entire range. Least number of cases were seen in the range 90-100

Cumulative Frequency Distribution of Class IV Students' Achievement in Mathematics



and maximum number of cases in the range 40-50. The frequencies stepped up upto the range 40-50 and subsequently showed a decline, thereby tending to create a non skewed distribution. In mathematics the distribution was observed to be positively skewed.

- Distribution of scores utilise the entire range in both subjects in Tamil Nadu and only in mathematics in Haryana.
- Achievement scores tend to produce non skewed distribution in language in Tamil Nadu and in mathematics in Haryana.
- Distribution of scores in language in Haryana and mathematics in Tamil Nadu and in both the subjects in Madhya Pradesh tend to produce a positively skewed distribution.

2.3.5 Levels of Achievement of Class III/IV Students

Table 2.8 portrays the number of districts showing average levels of achievement of Class III/IV students in both subjects.

Table 2.8: Number of districts showing levels of achievement of class III & IV students

Range %	Language	Mathematics
80 and up	0	0
70-80	0	0
60-70	0	2
50-60	8	4
40-50	17	5
30-40	17	18
Below 30	0	13
Total	42	42

The entries in Table 2.8 indicated that there were only two districts wherein the average performance in mathematics had crossed 60% level. There were as many as 17 districts in language and 31 districts

in mathematics wherein the average performance stood below 40%.

Summing Up

The analyses of the results in the preceding paragraphs revealed that while in some of the districts the students' performance in both the subjects touched 60% mark in others it stood below the mark of 40%. The students of Tamil Nadu demonstrated better performance in language than the students of Haryana. But in mathematics the position was reversed Unlike Tamil Nadu in M.P. the students exhibited better performance in language than in mathematics. The states of Haryana registered a sequential pattern of growth in both the subjects. It is also evident from the results that the measure of variability in language and mathematics across the districts in all the states was found to be within the acceptable range barring a few exceptions and those too were only in mathematics. As regards the distribution of scores, the entire range was utilised in both the subjects in Tamil Nadu and only in mathematics in Haryana. Further, achievement scores tended to produce non skewed distribution in language in Tamil Nadu and in mathematics in Haryana. Distribution of scores in language in Haryana, in mathematics in Tamil Nadu and in both the subjects in M.P. tended to produce a positively skewed distribution. The data further revealed that unlike in Class I the average performance of students in Class III/IV was found to be below 50% in 34 districts in language and in 36 districts in mathematics. Of them, there were 3 districts in Maharashtra and 10 in Madhya Pradesh where the average performance in mathematics stood below 30% level. Dhubri in Assam and Sirsa in Haryana were the only two districts where the average performance in mathematics crossed 60% level.

A Comparison of Students' Achievement on BAS Tests 1994 vs 1997

This chapter provides for the comparison of students' achievement on BAS tests administered during the initial survey of 1994 with that of the same set of tests readministered in the year 1997, conducted as a subsequent to the MAS test. The exercise of comparison between the two sets of scores would reveal the gains or losses or status quo in respect of students' achievement in

language and mathematics. In addition, the comparison would also throw some light on the outcome of DPEP interventions. It may be pertinent to mention here, that during BAS 1994 and MAS 1997 there was a slight variation in the criteria for the sampling of the schools. The criteria employed in both the surveys is depicted in the undermentioned table.

<p style="text-align: center;">BAS 1994 Criteria for the Selection of Schools</p>	<p style="text-align: center;">MAS 1997 Criteria for the Selection of Schools</p>
<ul style="list-style-type: none"> ● 10% of the total number of government and government aided primary schools including primary sections attached to middle, secondary and senior secondary institutions located in the district with a maximum of 45 schools; of them, a minimum of five schools from the urban area. 	<ul style="list-style-type: none"> ● 10% of the total number of government and government aided primary schools including primary sections attached to middle, secondary and senior secondary schools with a maximum of 50, of them, a minimum of 10 from the urban area. ● For 1994 tests readministered under MAS 1997, 5 schools were randomly selected from amongst the sampled 50 schools.

3.1 Comparative Profile of Class I students on BAS 1994 with 1997

A comparative profile of class I students' achievement on BAS tests conducted in 1994 with that of the same set of tests readministered in 1997

is given in the subsequent paragraphs. While making these comparisons, one should not lose sight of the fact that sample size of BAS 1994 and 1997 differed substantially.

3.1.1. Comparative Profile of Class I Students in Language

Table 3.1: Comparison of achievement of class I students in language on the BAS test administered during the Initial Survey and Mid-term Survey

State	District	BAS test administered during						Difference (2-1)	CR Value
		Initial Survey (1994)			Mid-term Survey (1997)				
		(1)			(2)				
N	M%	SD	N	M%	SD				
Assam	Darrang	595	58.47	19.15	72	84.49	19.00	26.02	10.91*
	Dhubri	580	59.25	14.60	99	60.75	30.45	1.50	0.48
	Morigaon	400	66.68	15.00	55	60.17	25.05	-6.51	-1.86
Haryana	Hissar	621	53.10	37.83	94	60.80	32.96	7.70	2.06*
	Jind	552	55.30	39.26	86	56.28	37.79	0.98	0.22
	Kaithal	665	53.30	39.32	78	67.37	35.12	14.07	3.29*
	Sirsa	593	50.95	38.01	94	67.55	31.34	16.60	4.60*
Karnataka	Belgaum	714	61.76	34.67	69	87.76	10.90	26.00	14.03*
	Kolar	586	46.39	30.98	50	81.73	11.05	35.34	17.38*
	Mandya	587	56.01	32.59	30	87.79	8.80	31.78	15.02*
	Raichur	613	57.96	33.03	5	88.70	5.45	30.74	10.11*
Kerala	Kasargod	722	69.00	33.50	85	65.70	25.95	-3.30	-1.07
	Malappuram	794	66.00	33.00	96	73.55	30.80	7.55	2.24*
	Wayanad	714	65.50	33.50	82	47.46	29.15	-18.04	-5.28*
Madhya Pradesh	Chattarpur	366	39.80	18.10	68	61.54	4.85	21.74	19.46*
	Panna	273	26.20	17.00	44	45.00	7.50	18.80	12.21*
	Rewa	511	48.40	16.70	81	47.73	16.50	-0.67	-0.34
	Satna	451	41.00	17.95	90	49.60	6.00	8.60	8.12*
	Sidhi	475	44.70	17.95	49	35.51	4.00	-9.19	-9.13*
	Tikamgarh	372	37.10	19.70	54	38.31	12.00	1.21	0.62
	Bilaspur	670	65.10	15.90	64	59.67	10.05	-5.43	-3.86*
	Rajnandgaon	612	61.70	15.70	54	58.06	15.00	-3.64	-1.69
	Raigarh	316	60.00	16.85	69	52.38	16.00	-7.62	-3.53*
	Surguja	297	49.90	17.75	43	52.30	23.50	2.40	0.64
	Shahdol	361	49.90	17.30	34	56.55	27.00	6.65	1.39
	Betul	583	56.20	18.00	83	42.66	15.50	-13.54	-7.25*
	Dhar	471	49.10	18.50	63	39.67	26.50	-9.43	-2.72*
	Guna	414	37.30	18.50	55	58.27	12.00	20.97	11.22*
	Mandsaur	479	52.40	18.00	69	53.34	9.00	0.94	0.69
	Rajgarh	368	55.80	18.00	68	39.00	23.50	-16.80	-5.56*
Raisen	370	45.60	17.50	47	70.00	14.00	24.40	10.81*	
Ratlam	497	61.60	18.50	78	60.00	16.00	-1.60	-0.80	
Sehore	445	35.20	21.00	60	58.00	9.50	22.80	13.89*	

Contd.

State	District	BAS test administered during						Difference (2-1)	CR Value
		Initial Survey (1994)			Mid-term Survey (1997)				
		(1)	(2)	(3)	(4)	(5)	(6)		
N	M%	SD	N	M%	SD				
Maharashtra	Aurangabad	674	53.60	34.75	100	65.65	31.20	12.05	3.53*
	Latur	756	54.10	36.85	99	42.90	40.95	-11.20	-2.57*
	Nanded	634	37.60	37.80	88	63.65	30.55	26.05	7.22*
	Osmanabad	719	44.65	38.95	77	55.90	33.50	11.25	2.74*
	Parbhani	714	57.50	36.45	94	46.95	35.25	-10.55	-2.70*
Tamil Nadu	Dharmapuri	574	39.55	27.82	100	44.70	33.55	5.15	1.44
	Cuddalore	740	40.25	27.36	95	40.95	26.07	0.70	0.24
	Thiruvanamalai	542	32.45	26.37	83	38.61	28.74	6.16	1.83
	Villupuram	--	40.25	27.36	91	52.75	34.08	12.50	3.35*

* p < .05

Assam

Students' performance showed positive trends in two out of three districts with one district namely Darrang clearly showing significant improvement in language. The hike in achievement in Darrang was recorded at 26.02 percent. The differences in the average performance of students in the remaining districts were not found to be significant.

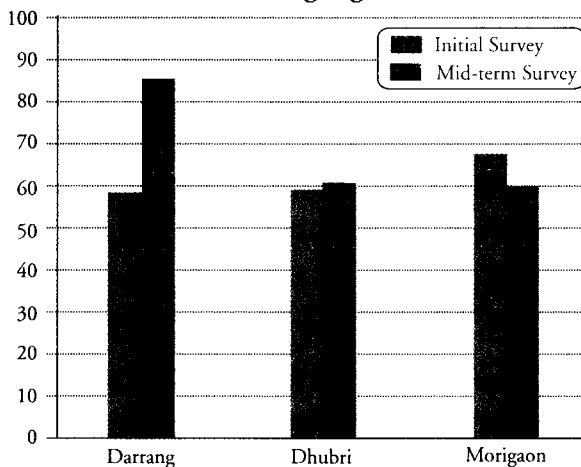
- Two districts show positive trends in achievement.
- Darrang exhibits spectacular hike in language.

Haryana

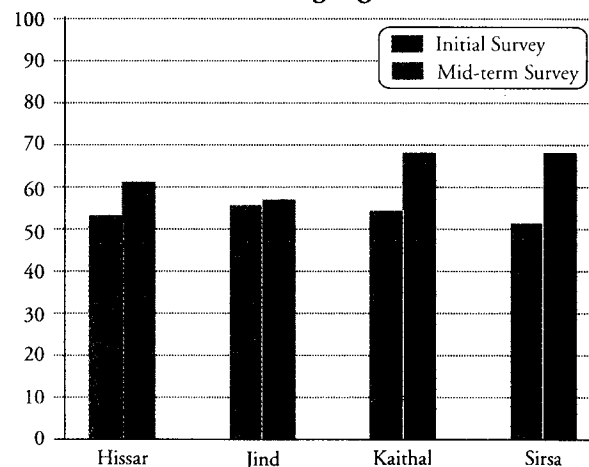
All the districts in Haryana demonstrated positive trends in achievement in language with three districts namely Hissar, Kaithal and Sirsa, showing significant improvement. The hike in achievement was 7.70 percent in Hissar, 14.07 percent in Kaithal and 16.60 percent in Sirsa. Although the students' achievement in Jind registered a marginal hike, the hike did not turn out to be significant.

- All districts portray positive trends in language achievement.
- Three out of four districts register significant improvement.

Comparative Profile of Class I Students in Language



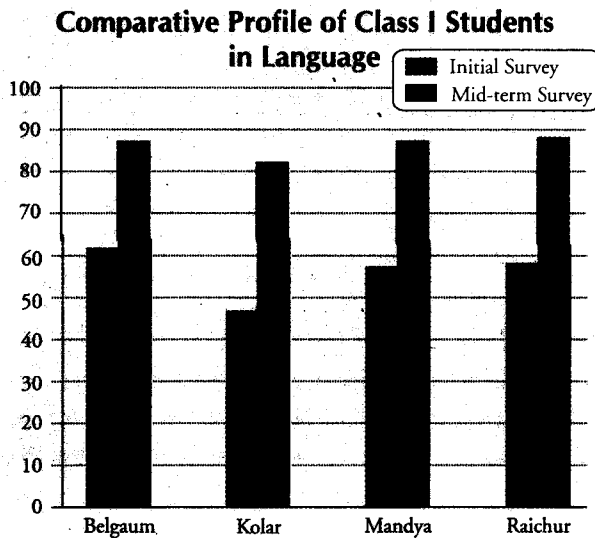
Comparative Profile of Class I Students in Language



Karnataka

Students' performance in language in 1997 as against BAS 94 showed significant improvement in all the DPEP districts of the state of Karnataka. The hike in achievement ranged from 26 percent in Belgaum to 35.34 percent in Kolar.

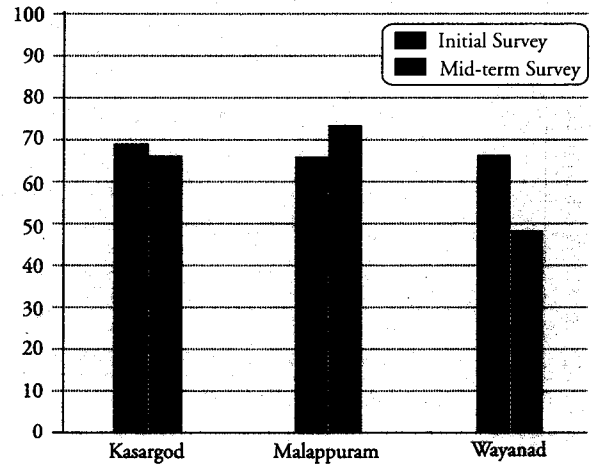
- All districts display significant improvement in language.



Kerala

Students' performance in the state of Kerala varied distinctly from one district to another. While the students of Malappuram registered significant hike in achievement to the tune of 7.55 percent, the students of Kasargod did not show any improvement and the district of Wayanad demonstrated a

Comparative Profile of Class I Students in Language



significant decline upto 18.04 percent.

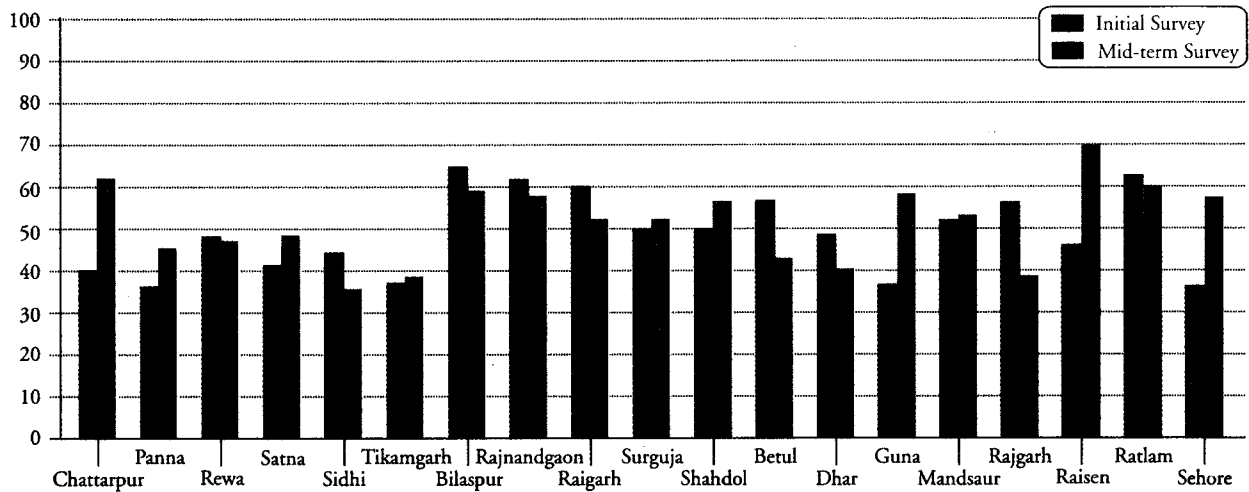
- Malappuram portrays significant improvement
- Performance in Wayanad plummets.

Madhya Pradesh

Of the 19 districts in Madhya Pradesh, 10 districts demonstrated positive trends with six clearly showing significant improvement in language ranging from 8.60% to 24.40%. The remaining 9 districts showed negative trends with six of them pointing at significant decline varying from 5.43% to 16.80%.

- 10 districts show positive trends in language.
- Raisen renders ace performance
- Rajgarh displays poor performance.

Comparative Profile of Class I Students in Language



Maharashtra

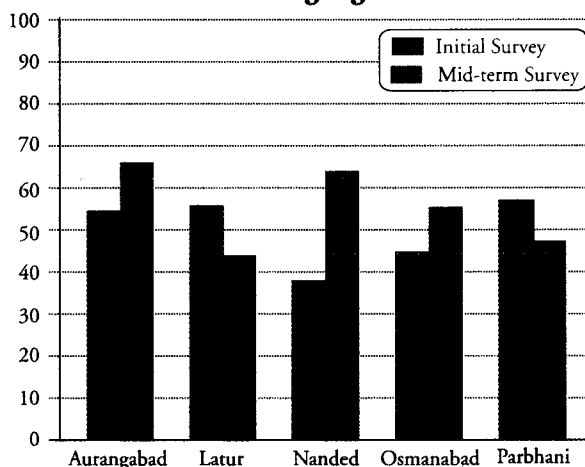
Twin patterns have been found in the state of Maharashtra. Of the five districts, three districts namely Aurangabad, Nanded and Osmanabad demonstrated significant improvement in students' achievement in language that varied from 11.25 percent to 26.05 percent. In the remaining two districts namely Latur and Parbhani the students' performance, however, registered a significant decline upto 11.20 percent and 10.55 percent, respectively.

- Aurangabad, Nanded and Osmanabad display significant hike in language.
- Latur and Parbhani show significant decline.

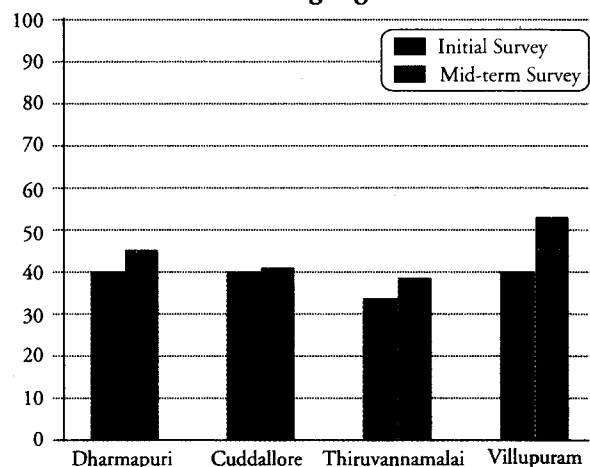
Tamil Nadu

In the state of Tamil Nadu, all the districts had demonstrated a positive trend with Villupuram clearly showing significant incline to the tune of 12.50 percent. In the rest of the three districts, though the average performance of students in 1997 increased, the hike was not spectacular enough to be significant.

Comparative Profile of Class I Students in Language



Comparative Profile of Class I Students in Language



- All districts display positive trends.
- Villupuram alone demonstrates significant hike in language.

Summing Up

The results discussed in the preceding paragraphs revealed that Class I students' performance in language showed positive trends in 28 out of 42 districts, of them, 19 districts showed significant improvement. Karnataka is the only state in which all the districts demonstrated significant improvement in language achievement. On the other hand, one district in Kerala, two in Maharashtra and six in Madhya Pradesh showed significant decline in language achievement. It is evident that of the 42 districts, 6 districts demonstrated a hike in achievement in language that ranged from 25 percent to 36 percent, in 10 districts from 10 percent to 25 percent, and in 12 districts upto 10 percent. However, in the case of 14 districts, achievement suffered a decline that ranged from 0 percent to 18 percent. Six districts

in Madhya Pradesh, two in Maharashtra and one in Kerala portrayed significant decline in achievement. In Karnataka all the four districts showed significant hike in language ranging from 25-36%.

It may be pertinent to mention here that the BAS tests used in 1994 and in 1997 were developed in the year 1994, obviously, on the then prevailing syllabi. Apparently, the BAS 1994 test was compatible with the existing curricular material, during the initial survey. By 1997 several states had undergone a change in the curriculum and instructional material under the aegis of the DPEP. Those districts and states that could enable the students to acquire the basic competencies through DPEP interventions, thus striking a balance between the test contents and the changed course contents, performed better than the others. Because of this very reason the test happened to produce varied results in language achievement both within a state and across the states.

3.1.2 Comparative Profile of Class I Students in Mathematics

Table 3.2: Comparison of achievement of class I students in mathematics on the BAS test administered during the Initial Survey and Mid-term Survey.

State	District	BAS test administered during						Difference (2-1)	CR Value
		Initial Survey (1994)			Mid-term Survey (1997)				
		(1)	(2)	(3)	(4)	(5)	(6)		
N	M%	SD	N	M%	SD				
Assam	Darrang	595	68.53	14.21	72	84.71	17.50	16.18	7.49*
	Dhubri	580	78.37	12.86	99	78.42	21.50	0.05	0.02
	Morigaon	400	64.61	14.29	55	61.40	26.07	-3.21	-0.89
Haryana	Hissar	621	56.93	37.27	94	72.34	28.44	15.41	4.68*
	Jind	552	39.29	35.75	86	53.65	34.85	14.36	3.54*
	Kaithal	665	58.64	36.70	78	80.68	24.88	22.04	6.98*
	Sirsa	593	47.38	28.67	94	72.49	27.77	25.11	8.12*
Karnataka	Belgaum	714	62.40	31.97	69	89.24	9.79	26.84	15.88*
	Kolar	586	40.52	29.95	50	83.47	10.50	42.95	22.07*
	Mandya	587	46.23	28.91	30	83.78	10.07	37.55	16.90*
	Raichur	613	50.40	33.45	5	82.39	3.86	31.99	13.58*

Contd.

State	District	BAS test administered during						Difference (2-1)	CR Value
		Initial Survey (1994)			Mid-term Survey (1997)				
		(1)	(2)		(1)	(2)			
N	M%	SD	N	M%	SD				
Kerala	Kasargod	722	66.43	33.14	85	71.21	16.55	4.78	2.18*
	Malappuram	794	54.29	29.29	96	75.90	17.70	21.61	10.31*
	Wayanad	714	58.87	30.00	82	48.00	16.80	-10.87	-4.99*
Madhya Pradesh	Chattarpur	366	25.80	18.50	68	51.00	7.14	25.20	19.34*
	Panna	273	26.40	15.93	44	40.00	4.29	13.60	11.66*
	Rewa	511	43.80	17.79	81	49.23	15.00	5.43	2.93*
	Satna	451	26.90	16.93	90	40.47	22.79	13.57	5.33*
	Sidhi	475	33.30	17.29	49	30.51	4.29	-2.79	-2.77*
	Tikamgarh	372	33.70	19.57	54	27.95	18.57	-5.75	-2.09*
	Bilaspur	670	54.10	15.93	64	72.56	15.43	18.46	9.05*
	Rajnandgaon	612	54.60	16.00	54	59.28	30.00	4.68	1.12
	Raigarh	316	54.80	16.57	69	39.30	22.86	-15.50	-5.30*
	Surguja	297	35.50	15.71	43	52.30	33.57	16.80	3.19*
	Shahdol	361	35.20	17.43	34	48.88	20.72	13.68	3.68*
	Betul	583	45.20	17.86	83	29.37	15.00	-15.83	-8.72*
	Dhar	471	43.60	17.14	63	27.22	20.71	-16.83	-5.96*
	Guna	414	44.20	19.29	55	54.49	24.29	10.29	2.99*
	Mandsaur	479	42.30	15.00	69	50.22	19.29	7.92	3.25*
	Rajgarh	368	55.50	22.14	68	57.00	25.00	1.50	0.46
	Raisen	370	44.70	17.86	47	64.00	12.14	19.30	9.57*
Ratlam	497	53.50	19.29	78	67.00	10.00	13.50	9.43*	
Sehore	445	55.00	18.57	60	38.00	7.14	-17.00	-13.27*	
Mahara-shtra	Aurangabad	674	47.71	33.64	100	67.36	30.79	19.65	5.86*
	Latur	756	37.14	35.07	99	52.36	41.50	15.22	3.47*
	Nanded	634	42.29	34.43	88	72.86	32.12	30.57	8.25*
	Osmanabad	719	41.21	38.07	77	61.29	28.21	20.08	5.68*
	Parbhani	714	49.64	34.21	94	46.29	32.50	-3.35	-0.93
Tamil Nadu	Dharmapuri	574	35.29	26.86	100	56.93	29.77	21.64	6.78*
	Cuddalore	740	34.79	23.68	95	57.59	33.55	22.80	6.39*
	Thiruvannamalai	542	30.64	24.14	83	62.39	27.05	31.75	10.03*
	Villupuram	--	34.79	23.68	91	78.41	26.07	43.62	15.12*

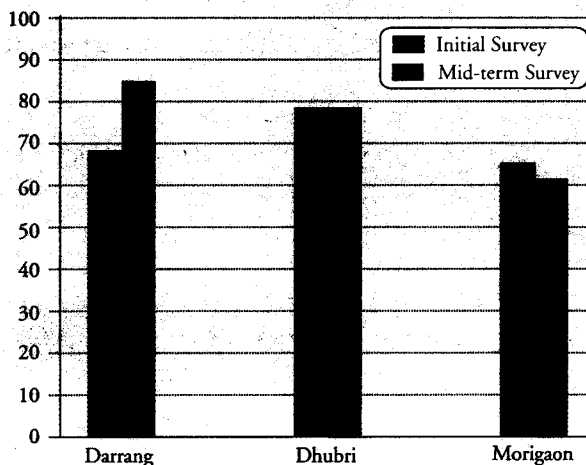
* p < .05

Assam

Of the three districts of Assam, the students' achievement in mathematics showed positive trends in two out of three districts with Darrang showing significant hike to the tune of 16.18 percent. This district had also registered spectacular hike in achievement in language. In the remaining two districts the students' achievement in mathematics was not found to be significant.

- Two districts display positive trends.
- Darrang portrays significant improvement in mathematics.

Comparative Profile of Class I Students in Mathematics

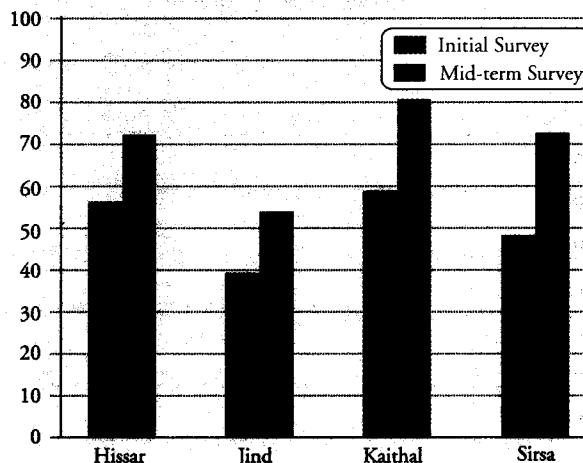


Haryana

Students' achievement in mathematics in Class I recorded significant hike in 1997 as against BAS 1994 in all the four DPEP districts. The hike in achievement ranged from 14.36 percent in Jind to 25.11 percent in Sirsa.

- All districts exhibit significant improvement in mathematics achievement.

Comparative Profile of Class I Students in Mathematics

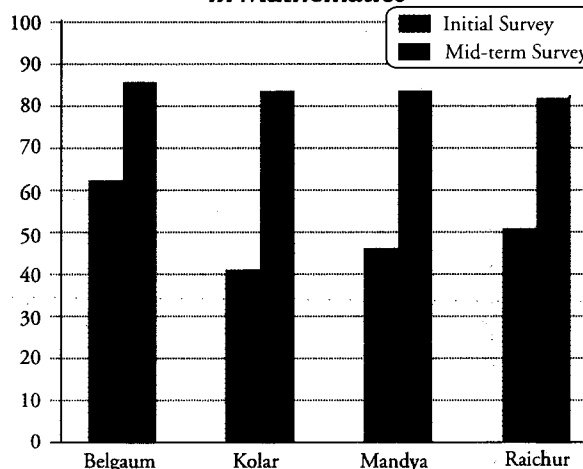


Karnataka

Like in language, all the four districts in Karnataka displayed significant hike in mathematics achievement in Class I. This hike in achievement ranged from 26.84 percent in Belgaum to 42.95 percent in Kolar.

- All districts demonstrate outstanding rise in mathematics achievement.

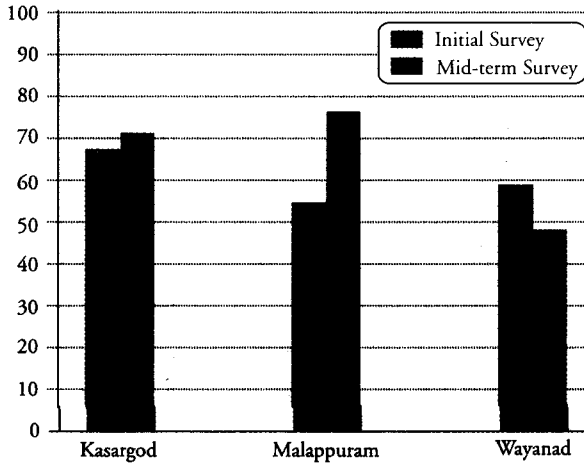
Comparative Profile of Class I Students in Mathematics



Kerala

Students' performance in mathematics registered

Comparative Profile of Class I Students in Mathematics



significant improvement in two out of three districts, namely Kasargod and Malappuram. The hike in achievement was 4.78 percent in Kasargod

and 21.61 percent in Malappuram. Achievement of students in the district of Wayanad, however, showed a significant decline to the tune of 10.87 percent.

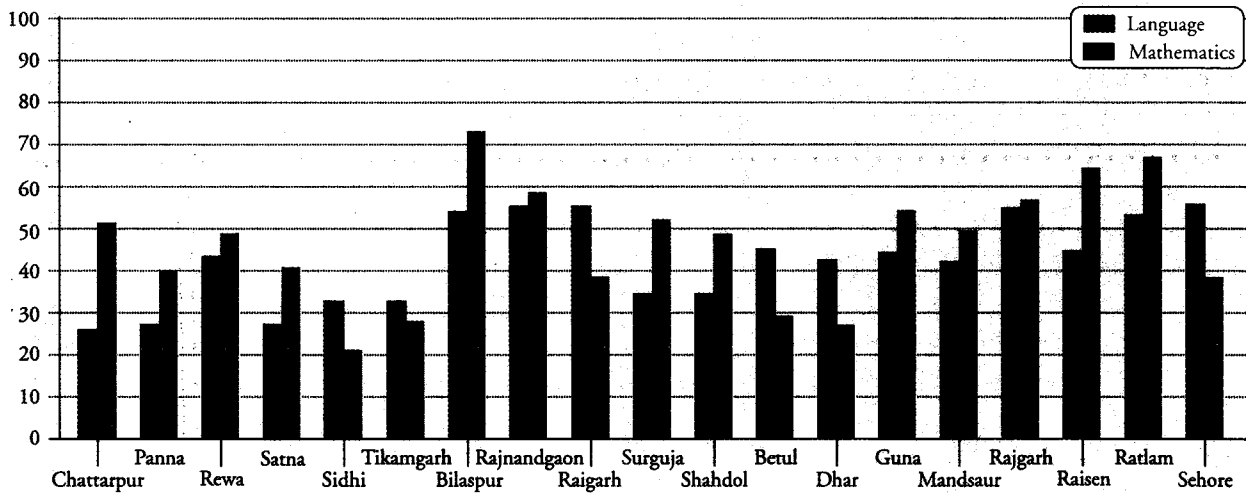
- Kasargod and Malappuram display significant improvement in mathematics achievement.
- Wayanad shows significant decline.

Madhya Pradesh

In Madhya Pradesh the students' achievement in mathematics showed positive trends in 13 out of 19 districts with 11 districts showing significant improvement ranging from 5.43% to 25.20%. The remaining six districts, however, registered negative trends ranging from 2.79% to 17%.

- 13 districts indicate positive trends in mathematics achievement.
- 6 districts indicate depressed results.
- Chattarpur takes the lead while Sehore occupies the lowest rung.

Class I Students' Achievement on MAS

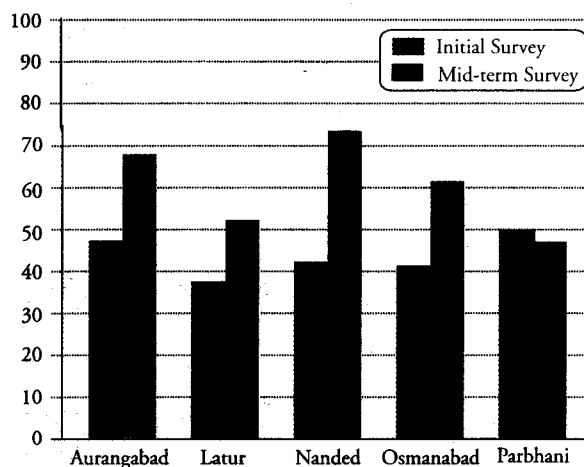


Maharashtra

In Maharashtra, the students' achievement in mathematics showed significant improvement in four out of five districts ranging from 15.22 percent to 30.57 percent. However, in Parbhani the performance in mathematics registered a downside trend, though it was not found to be significant.

- Four out of five districts display significant incline in mathematics achievement.

Comparative Profile of Class I Students in Mathematics

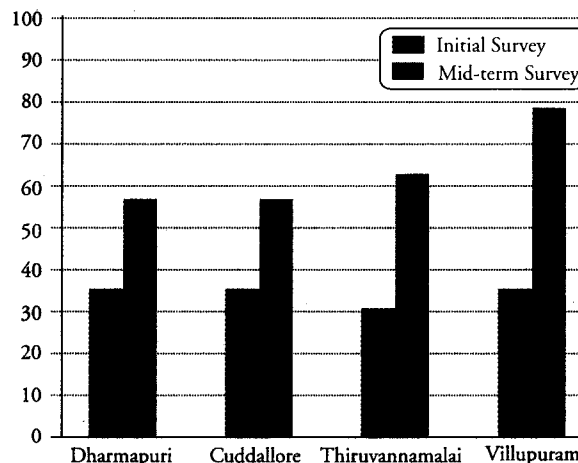


Tamil Nadu

Students' achievement in mathematics in the state of Tamil Nadu demonstrated significant improvement in all the four districts namely Dharmapuri, Cuddalore, Thiruvannamalai and Villupuram. The hike in achievement ranged from 21.64 percent to 43.62 percent.

- All districts in Tamil Nadu display remarkable progress in achievement in mathematics.

Comparative Profile of Class I Students in Mathematics



Summing Up

The results shown in the preceding paragraphs revealed that students' performance in mathematics in class I showed positive trends in 33 out of 42 districts, of them 30 showing significant. Of these 30 districts, in 9 districts, the hike in achievement ranged from 25 percent to 44 percent, in 18 districts from 10 percent to 25 percent and in three districts upto 10 percent. All districts in Haryana, Karnataka and Tamil Nadu had registered significant hike in achievement in mathematics. One district in Kerala and six in Madhya Pradesh turned out to be such districts wherein the performance of students plummeted significantly. Besides, two districts, one each in Assam and Maharashtra demonstrated a downside performance, though not significant. The overall performance of Class I students in mathematics turned out to be better than in language.

Of all the states, three states namely Haryana, Karnataka and Tamil Nadu formed a group, wherein, all the districts demonstrated significant improvement in mathematics achievement. In the rest of the states some of the districts which showed a downside performance failed to develop the basic competencies amongst the students. This might be partly attributed to the non-compatibility

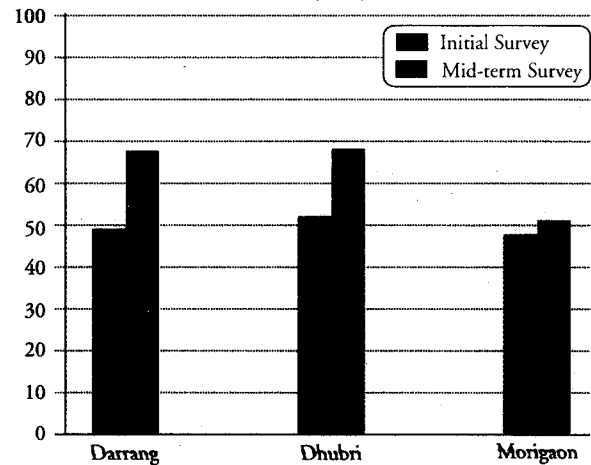
between the test contents based on the 1994 existing syllabi and the instructional material based on the 1997 revised syllabi. Those states and the districts which could succeed in developing basic competencies through DPEP interventions had demonstrated better performance than their counterpart.

3.2 Comparative Profile of Class III Students on BAS 1994 with 1997

A comparative assessment of class III students' achievement on BAS tests conducted in the year 1994 with that of the same set of tests readministered in the year 1997 is discussed here as under. While making these comparisons one should take note of the difference between the sample size of BAS 1994 and 1997.

Assam

Comparative Profile of Class III Students in Language



3.2.1. Comparative Profile of Class III Students in Language

Table 3.3: Comparison of achievement of class III students in language on the BAS test administered during the Initial Survey and Mid-term Survey

State	District	BAS test administered during								Difference (2-1)	CR Value
		Initial Survey (1994)				Mid-term Survey (1997)					
		N	M%	SD	SE _M	N	M%	SD	SE _M		
Assam	Darrang	472	49.32	9.41	0.43	81	67.73	26.91	2.99	18.41	6.09*
	Dhubri	532	52.02	9.55	0.41	78	67.74	17.18	1.96	15.72	7.85*
	Morigaon	400	47.02	9.95	0.50	54	50.89	15.07	2.07	3.87	1.82
Karnataka	Belgaum	798	40.09	14.21	0.50	89	77.90	13.63	1.45	37.81	24.65*
	Kolar	550	31.70	14.07	0.60	48	59.30	12.15	1.77	27.60	14.77*
	Mandya	640	34.66	13.77	0.54	38	56.98	11.85	1.95	22.32	11.03*
	Raichur	580	36.23	16.45	0.68	38	58.33	12.00	1.97	22.10	10.60*
Kerala	Kasargod	977	45.28	18.40	0.59	110	56.82	16.08	1.54	11.54	7.00*
	Malappuram	1129	44.76	17.99	0.54	142	53.55	16.05	1.35	8.79	6.05*
	Wayanad	983	51.32	18.25	0.58	131	49.93	16.12	1.41	-1.39	-0.91
Maharashtra	Aurangabad	746	36.70	18.80	0.69	148	45.00	22.80	1.88	8.30	4.14*
	Latur	816	30.11	21.91	0.77	109	44.00	20.23	1.95	13.89	6.63*
	Nanded	610	37.11	22.11	0.90	111	35.25	21.93	2.09	-1.86	-0.82
	Osmanabad	842	30.66	24.00	0.83	129	42.55	15.95	1.41	11.89	7.27*
	Parbhani	790	39.07	16.48	0.59	111	47.20	23.70	2.26	8.13	3.48*

* p < .05

Students' achievement in language in 1997 showed significant improvement as against BAS 1994 in two out of three districts in the state of Assam with Darrang setting a record in hike at 18.41 percent followed by Dhubri at 15.72 percent. In the third district i.e. Morigaon, though the achievement trend is positive, it was not found to be significant.

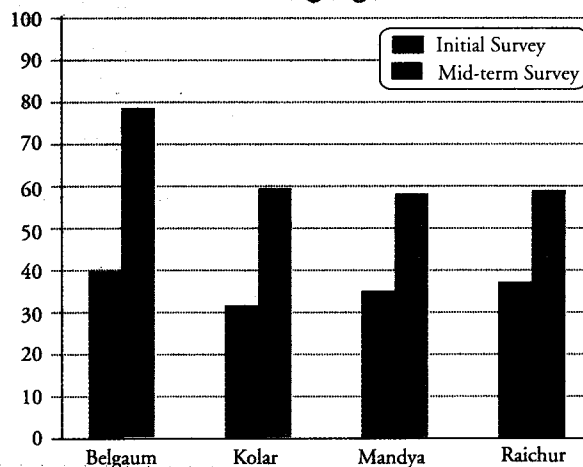
- All districts display positive trends in achievement.
- Two out of three districts display significant improvement in language.

Karnataka

Students' achievement in all the districts of the state of Karnataka portrayed significant improvement in language in 1997 as against BAS 1994. The hike in achievement ranged from 22.10 percent to 37.81 percent.

- All districts register significant improvement in language.

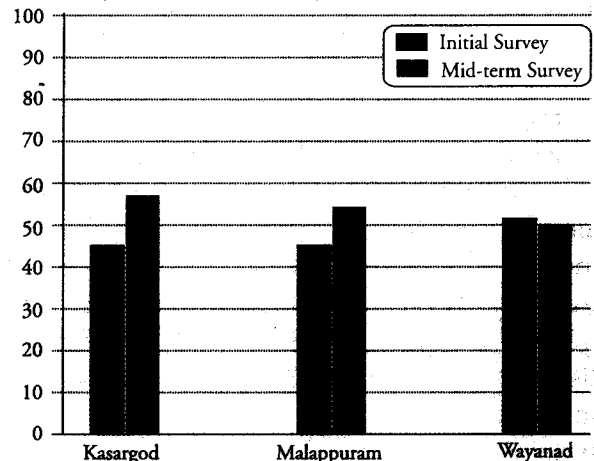
Comparative Profile of Class III Students in Language



Kerala

Of the three districts in the state of Kerala, students' achievement displayed significant improvement in language in Kasargod to the tune of 11.54 percent and 8.79 percent in Malappuram.

Comparative Profile of Class III Students in Language



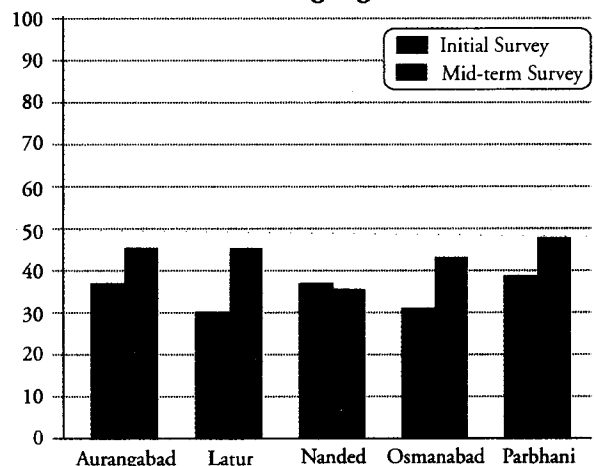
However, in the district of Wayanad achievement in language had taken a downswing though it was not found to be significant.

- Kasargod and Malappuram show significant hike in language

Maharashtra

Achievement in language in four out of five districts of Maharashtra showed significant improvement

Comparative Profile of Class III Students in Language



in 1997 as against BAS-1994 ranging from 8.13 percent to 13.89 percent. The only exception was in Nanded district where the performance took a dip in Language, though not significant.

- Four out of five districts demonstrate significant rise in language achievement.

Summing up

The results discussed in the aforesaid paragraphs revealed that the performance of class III students in language showed positive trends in 13 out of 15 districts, of them, 12 districts displayed significant improvement. Of these 12 districts, in two districts the hike in achievement ranged from 25 - 38 percent, in 7 from 10 - 25 percent and in the rest upto 10 percent. The remaining two districts namely

Wayanad and Nanded showed a negative trend but not significant.

From the above discussion, it is clear that Morigaon from Assam, Wayanad from Kerala and Nanded from Maharashtra did not exhibit significant improvement in language achievement. One reason for this could be that the DPEP interventions did not produce the desired results in these three districts. Another factor that could be attributed to the "no-hike" situation would be the variation between the test contents developed in the year 1990 and the revised course contents being transacted in the year 1997. This goes to prove that in all those districts where the DPEP interventions were able to develop the basic competencies, language improvement made a significant stride

3.2.2. Comparative Profile of Class III Students in Mathematics

Table 3.4: Comparison of achievement of class III students in mathematics on the BAS test administered during the Initial Survey and Mid-term Survey

State	District	BAS test administered during								Difference (2-1)	CR Value
		Initial Survey (1994)				Mid-term Survey (1997)					
		N	M%	SD	SE _M	N	M%	SD	SE _M		
Assam	Darrang	472	51.87	17.30	0.80	81	54.82	20.90	2.32	2.95	1.20
	Dhubri	532	55.64	19.00	0.82	78	50.15	22.35	2.55	-5.49	-2.05*
	Morigaon	400	45.42	17.33	0.87	54	37.22	17.75	2.44	-8.20	-3.17*
Karnataka	Belgaum	798	46.25	21.93	0.78	89	75.07	14.75	1.57	28.82	16.44*
	Kolar	550	32.75	15.28	0.65	48	48.50	12.83	1.87	15.75	7.96*
	Mandya	640	39.50	15.38	0.61	38	40.83	11.25	1.85	1.33	0.68
Kerala	Raichur	580	38.00	22.65	0.94	38	55.51	18.68	3.07	17.51	5.45*
	Kasargod	977	38.42	14.63	0.47	110	48.35	15.03	1.44	9.93	6.56*
	Malappuram	1129	34.10	13.58	0.41	142	43.28	15.80	1.33	9.18	6.60*
Maharashtra	Wayanad	983	39.60	13.77	0.44	131	35.85	13.18	1.16	-3.75	-3.02*
	Aurangabad	746	27.20	19.51	0.72	148	39.93	21.70	1.79	12.73	6.60*
	Latur	816	25.48	14.68	0.51	109	35.17	17.15	1.65	9.69	5.61*
	Nanded	610	29.50	17.23	0.70	111	28.88	17.03	1.62	-0.62	-0.35
	Osmanabad	842	25.43	15.50	0.53	129	35.83	13.23	1.17	10.40	8.10*
	Parbhani	790	30.73	13.87	0.49	111	44.88	24.53	2.34	14.15	5.92*

* p < .05

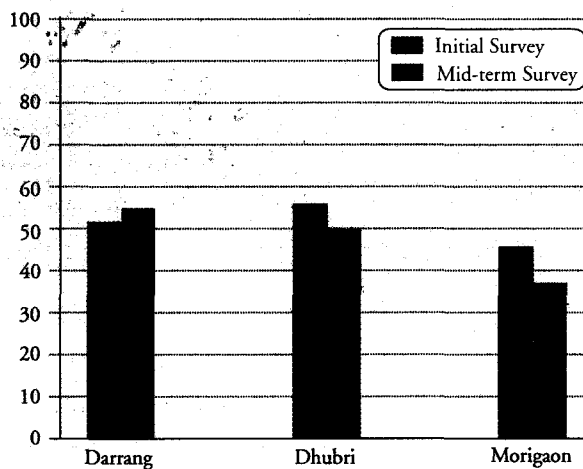
but wherever there was no such compatibility, the results did not show significant improvement.

Assam

It is evident from Table 3.4 that the students' achievement in mathematics in the state of Assam did not show any encouraging improvement. Whereas Darrang showed a positive trend though not significant, Morigaon and Dhubri demonstrated a significant decline to the tune of 8.20 percent and 5.49 percent respectively.

- Two out of three districts display significant decline in mathematics.

Comparative Profile of Class III Students in Mathematics

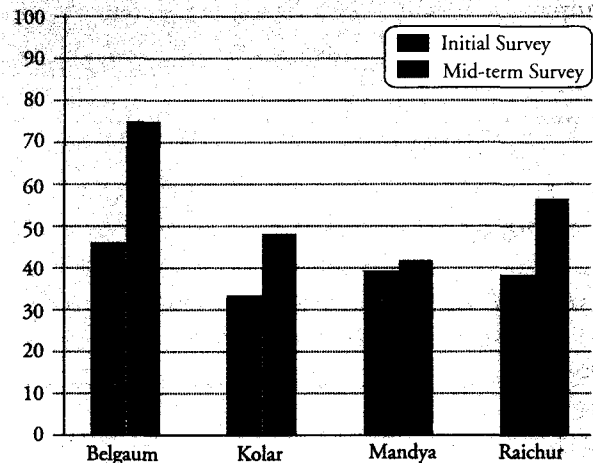


Karnataka

In the state of Karnataka all the districts had displayed positive trends with three of them showing significant improvement. The hike in achievement ranged from 15.75 percent to 28.82 percent. Even in the fourth district an upward trend was observed, though not significant.

- All districts display positive trends in achievement.
- Three out of four districts register significant improvement in mathematics.

Comparative Profile of Class III Students in Mathematics

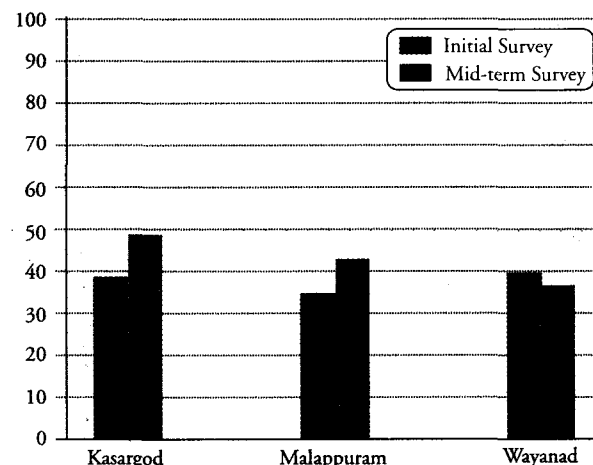


Kerala

Students' achievement in mathematics showed significant improvement in two out of three districts in the state of Kerala with Kasargod recording a hike at 9.93 percent and Malappuram at 9.18 percent. However, the district of Wayanad displayed a significant decline to the tune of 3.75 percent.

- Two out of three districts exhibit significant improvement in mathematics.
- Wayanad shows significant decline.

Comparative Profile of Class III Students in Mathematics

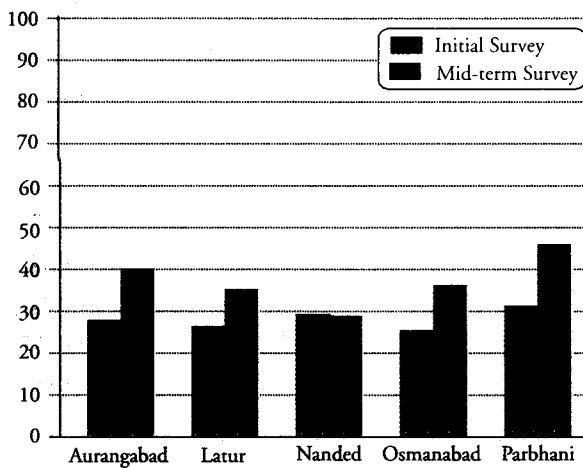


Maharashtra

Four out of five districts registered a significant improvement in mathematics achievement. This hike in achievement ranged from 9.69 percent to 14.15 percent. The fifth district, however, showed a marginal decline though not significant.

- Four out of five districts portray significant improvement in mathematics achievement.

Comparative Profile of Class III Students in Mathematics



Summing Up

From the above discussion, it is evident that 11 out of 15 districts exhibited positive trends in mathematics achievement, of them 9 districts showed significant improvement. In six out of nine districts, the hike in achievement ranged from 10 percent to 28.82 percent and in the remaining three upto 10 percent. There are three districts, of them, two in Assam and one in Kerala where students' performance in mathematics showed a significant decline. Interestingly, almost all those districts which did not register significant improvement in language also did not display significant improvement in mathematics. The reasons stand to be the same as indicated above in the case of the summing up of the language achievement.

3.3 Comparative Profile of Class IV students on BAS 1994 with 1997

A comparative profile of class IV students' achievement on BAS tests conducted in the year 1994 with that of the same tests readministered in the year 1997 is presented in the following paragraphs.

3.3.1. Comparative Profile of Class IV students in Language

Table 3.5: Comparison of achievement of class IV students in language on the BAS test administered during the Initial Survey and Mid-term Survey

State	District	BAS test administered during						Difference (2-1)	CR Value
		Initial Survey (1994) (1)			Mid-term Survey (1997) (2)				
		N	M%	SD	N	M%	SD		
Haryana	Hissar	593	41.99	18.14	130	37.77	14.95	-4.29	-2.78*
	Jind	717	46.33	15.77	100	41.21	12.03	-5.12	-3.80*
	Kaithal	651	46.42	16.55	86	54.01	22.00	7.59	3.06*
	Sirsa	555	41.15	16.28	112	61.27	19.50	20.12	10.19*

Contd..

State	District	BAS test administered during						Difference nce (2-1)	CR Value
		Initial Survey (1994)			Mid-term Survey (1997)				
		(1) N	M%	SD	(2) N	M%	SD		
Panna	Chattarpur	398	29.70	8.57	42	37.17	1.19	7.47	15.94*
	280	25.00	8.17	36	41.56	3.45	16.56	21.76*	
	Rewa	588	33.50	9.40	78	32.78	3.21	-0.72	-1.35
	Satna	478	21.10	7.81	71	27.29	4.15	6.19	10.12*
Madhya Pradesh	Sidhi	386	38.20	5.27	42	30.48	14.76	-7.72	-3.33*
	Tikamgarh	399	27.90	8.57	60	32.20	2.86	4.30	7.56*
	Bilaspur	807	40.20	6.79	44	55.11	4.29	14.91	21.41*
	Rajnandgaon	609	38.60	9.01	60	39.50	3.33	0.90	1.59
	Raigarh	299	43.20	7.63	70	36.24	3.45	-6.96	-11.48*
	Surguja	311	37.90	8.45	46	45.69	4.08	7.79	10.05*
	Shahdol	406	33.50	8.71	50	24.90	3.99	-8.60	-9.52*
	Betul	714	39.50	10.24	106	36.00	5.00	-3.50	-5.64*
	Dhar	499	32.40	10.24	53	45.00	10.71	12.60	8.11*
	Guna	403	32.50	10.24	30	35.00	5.00	2.50	2.36*
	Mandsaur	539	27.50	9.76	63	38.00	4.29	10.50	15.25*
	Rajgarh	342	34.30	11.07	65	27.00	4.88	-7.30	-8.54*
	Raisen	389	36.30	10.36	52	53.00	9.17	16.70	12.04*
	Ratlam	428	35.70	8.69	51	36.00	8.52	0.30	0.21
	Sehore	496	31.70	10.24	76	26.58	3.33	-5.12	-8.54*
Tamil Nadu	Dharampuri	692	38.47	11.23	150	46.41	17.52	7.94	5.32*
	Cuddalore	961	36.50	12.68	84	43.62	14.53	7.12	4.34*
	Thiruvannamalai	644	33.73	14.39	96	36.23	12.93	2.50	1.73
	Villupuram	—	36.50	12.68	147	57.30	20.34	20.80	12.03*

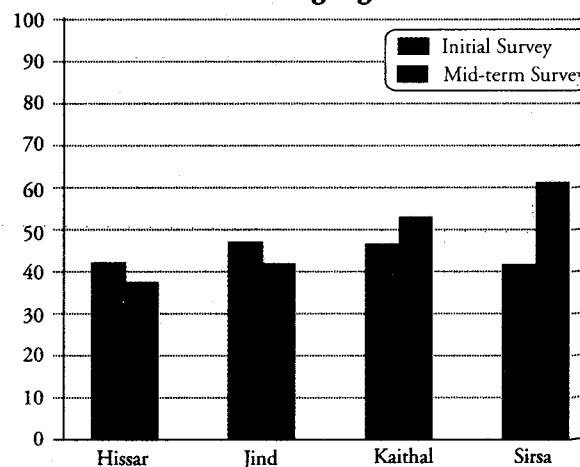
* p < .05

Haryana

Students' achievement in two out of four districts in Haryana was found to be significant in language. The hike in achievement was 20.12 percent in Sirsa and 7.59 percent in Kaithal. Contrary to this progress, the remaining two districts namely Hissar and Jind demonstrated a significant decline in achievement.

- Two districts display significant improvement while the other two a significant decline.

Comparative Profile of Class IV Students in Language



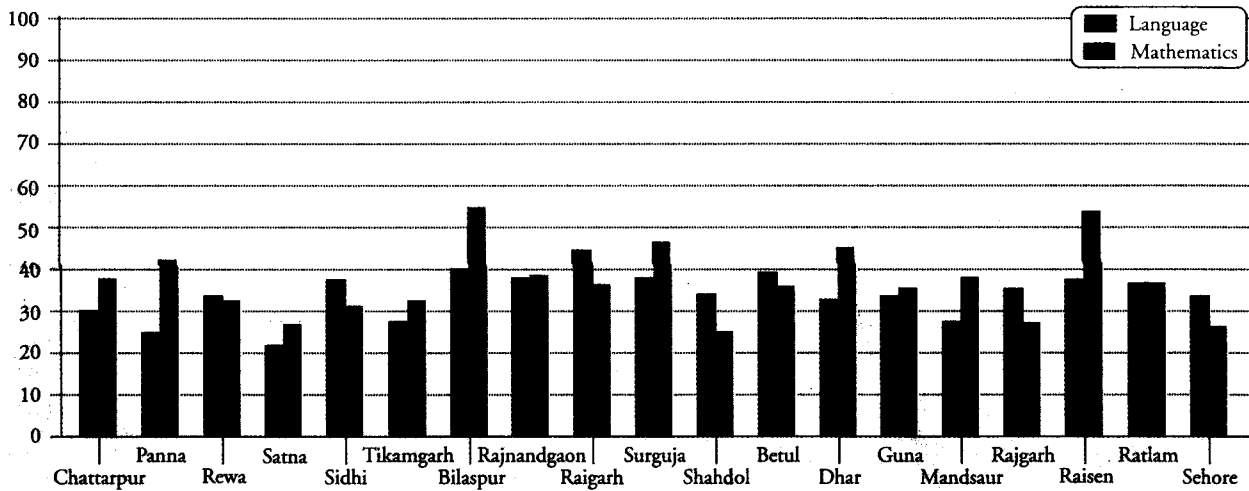
Madhya Pradesh

The performance in language in Madhya Pradesh had shown positive trends in 12 out of 19 districts with 10 districts indicating significant improvement ranging from 2.50% to 16.70%. Negative trends were traced in 7 districts, of them, six indicating

significant decline ranging from 0.72% to 8.60%.

- 10 districts display significant hike and 6 significant decline.
- Raisen comes through as a winner.
- Performance in Shahdol plummets.

Comparative Profile of Class IV Students in Mathematics



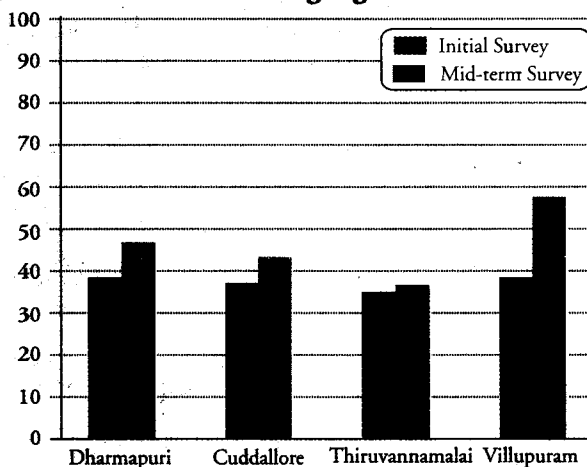
Tamil Nadu

All the districts in Tamil Nadu had shown positive trends with three out of four districts showing

significant improvement in language achievement.

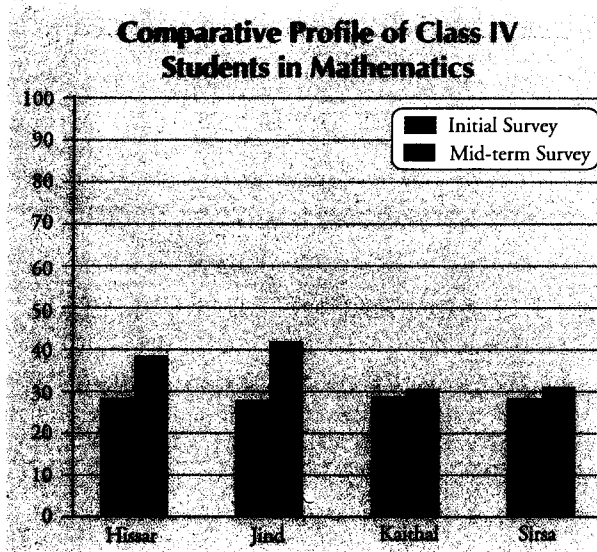
- All districts portray positive trends in achievement.
- Three districts display significant improvement in language.

Comparative Profile of Class IV Students in Language



Summing Up

It is evident from the aforesaid discussion that 18 out of the 27 districts demonstrated positive trends, of them, 15 portrayed significant improvement in language achievement in class IV in the states of Haryana, Tamil Nadu and Madhya Pradesh. In seven districts the hike in achievement ranged from 10-21 percent and in the remaining districts upto 10 percent. Two districts in Haryana and six in Madhya Pradesh, however, displayed significant decline in achievement. Besides, there was one more district in Madhya Pradesh where the trend was negative but not significant.



- All districts show positive trends.
- Three out of four districts exhibit significant hike in mathematics achievement.

Summing Up

The results shown in the preceding paragraphs reveal that eighteen out of twenty seven districts demonstrated positive trends, of them, 14 districts

displayed significant improvement in mathematics achievement in the states of Haryana, Tamil Nadu and Madhya Pradesh. The hike in achievement was found to be from 10-24 percent in four districts and upto 10 percent in the remaining districts. Two districts in Madhya Pradesh showed marginal decline which, however, was not found to be significant. It was only Jind in Haryana and six more districts in Madhya Pradesh which exhibited significant decline in mathematics achievement. Interestingly almost all those districts which displayed significant hike in language achievement also exhibited a similar level of performance in mathematics achievement. The reasons for dismal performance in the aforesaid districts stand to be the same as indicated earlier in the case of the summing up of the language achievement.

An overview of the comparative profile of students' achievement on BAS 1994 vs 1997 indicating hike in achievement in both the subjects across classes I, III & IV discussed in paras 3.1 to 3.3 are presented in Tables 3.7 and 3.8.

Table 3.7: Districts claiming Hike in Achievement in Language - BAS test 1994 vs 1997

Class	Total Districts	Districts claiming hike			Total	Districts with significant hike
		>25%	10-25%	<10%		
I	42	6	10	12	28	19
III	15	2	7	4	13	12
IV	27	0	7	11	18	15

Table 3.8: Districts claiming Hike in Achievement in Mathematics - BAS test 1994 vs 1997

Class	Total Districts	Districts claiming hike			Total	Districts with significant hike
		>25%	10-25%	<10%		
I	42	9	18	6	33	30
III	15	1	5	5	11	9
IV	27	0	4	14	18	14

Genderwise Differences in Achievement on MAS Tests

4

The present chapter provides for genderwise differences in achievement on newly generated competency based achievement tests employed during the conduct of mid-term assessment survey in the year 1997. A detailed account of genderwise differences in achievement both in language and mathematics in respect of classes I, III and IV is discussed in the subsequent paragraphs.

4.1 Differences in Achievement in Class I
Genderwise differences in achievement exhibited by class I students both in language and mathematics are reflected as under:

4.1.1. Differences in Achievement in language

Table 4.1 presents differences in achievement in language of class I students.

Table 4.1: Genderwise mean achievement of class I students in language

State	District	N	Boys		N	Girls		Difference Boys - Girls	CR Value
			M%	SD		M%	SD		
Assam	Darrang	361	76.90	25.05	362	74.00	26.30	2.90	1.49
	Dhubri	464	68.55	28.80	444	66.00	28.30	2.55	1.34
	Morigaon	386	77.90	22.65	412	78.25	22.50	-0.35	-0.22
Haryana	Hissar	436	71.09	28.28	421	68.31	29.74	2.78	1.40
	Jind	474	64.46	30.05	445	62.02	29.09	2.44	1.25
	Kaithal	409	72.18	24.17	317	70.57	28.39	1.61	0.81
	Sirsa	442	73.79	27.37	491	73.72	25.32	0.07	0.03
Karnataka	Belgaum	350	85.70	20.40	245	86.25	19.70	-0.55	-0.33
	Kolar	259	61.50	27.60	229	60.75	27.90	0.75	0.30
	Mandya	315	64.05	30.00	281	65.05	30.55	-1.00	-0.40
	Raichur	447	66.55	27.70	261	70.05	28.00	-3.50	-1.61
Kerala	Kasargod	468	75.15	22.95	439	75.40	22.75	-0.25	-0.16
	Malappuram	500	80.75	20.25	485	82.10	19.05	-1.35	-1.08
	Wayanad	291	70.80	23.40	264	67.60	26.90	3.20	1.49
Madhya Pradesh	Chattarpur	439	58.55	5.65	308	54.70	6.20	3.85	8.65*
	Panna	290	53.25	11.50	222	49.25	12.00	4.00	3.80*
	Rewa	385	46.30	26.25	316	42.35	28.45	3.95	1.89
	Satna	396	51.40	5.90	360	50.50	7.85	0.90	1.77
	Sidhi	344	58.95	24.00	280	57.75	25.40	1.20	0.60
	Tikamgarh	313	58.45	24.55	154	54.85	24.20	3.60	1.50
	Bilaspur	440	69.10	14.35	373	70.90	15.45	-1.80	-1.71
	Rajnandgaon	177	70.85	5.55	314	69.00	11.75	1.85	2.36*
	Raigarh	340	64.25	11.00	280	57.60	15.65	6.65	5.98*
	Surguja	266	53.15	28.35	271	45.60	27.85	7.55	3.11*
Shahdol	269	50.80	23.81	239	50.90	25.02	-0.10	-0.05	

Contd.

State	District	N	Boys		N	Girls		Difference Boys - Girls	CR Value
			M%	SD		M%	SD		
	Parbhani	445	61.74	33.10	419	53.84	33.40	7.90	0.49*
	Dharmapuri	499	54.36	33.53	375	51.44	34.27	2.92	0.26
Tamil Nadu	Cuddalore	408	64.67	30.06	432	60.45	30.51	4.22	0.02*
	Thiruvannamalai	408	54.38	33.50	424	50.25	31.74	4.13	0.82
	Villupuram	456	77.79	24.43	459	77.41	25.38	0.38	0.23

* p < .05

Maharashtra and 12 in Madhya Pradesh, genderwise differences in achievement between boys and girls in mathematics were found to be significant. It may be pertinent to mention here that of these 17 districts, in eight of them the percentage of differences in achievement was below the range of the DPEP goal. It is only in the case of Aurangabad and Parbhani in Maharashtra and Chattarpur, Rewa, Tikamgarh, Rajnandgaon, Surguja, Shahdol and Mandasaur in Madhya Pradesh where the differences were more than 5 percent and found favour with the boys.

- 31 out of 42 districts in seven states claim the DPEP goal of reducing genderwise differences in achievement.

4.2 Differences in Achievement in Class III

Genderwise differences in achievement displayed by class III students both in language and mathematics are shown as under.

4.2.1. Differences in Achievement in language

Table 4.3 depicts the differences in achievement in language of class III students.

Table 4.3: Genderwise mean achievement of class III students in language

State	District	N	Boys		N	Girls		Difference Boys - Girls	CR Value
			M%	SD		M%	SD		
Assam	Darrang	336	58.74	20.29	320	57.45	19.11	1.29	0.84
	Dhubri	395	56.60	19.57	382	58.37	19.89	-1.77	-1.25
	Morigaon	355	57.31	16.43	376	59.40	16.45	-2.09	-1.72
Karnataka	Belgaum	523	49.11	22.37	414	54.80	22.12	-5.69	-3.87*
	Kolar	419	36.43	20.12	344	39.82	19.02	-3.39	-2.38*
	Mandya	457	43.20	20.92	456	41.35	20.92	1.85	1.33
	Raichur	526	48.15	24.34	331	45.85	23.60	2.30	1.37
Kerala	Kasargod	653	50.85	17.25	601	51.78	18.28	-0.93	-0.93
	Malappuram	683	53.74	15.46	688	53.03	15.22	0.71	0.86
	Wayanad	392	49.83	15.31	386	50.11	17.92	-0.28	-0.23
Maharashtra	Aurangabad	580	48.30	22.20	540	45.25	21.60	3.05	2.34*
	Latur	549	40.36	18.40	568	40.09	18.90	0.27	0.25
	Nanded	518	40.15	20.10	478	35.82	21.70	4.33	3.26*
	Osmanabad	494	44.95	16.90	597	42.62	17.76	2.33	2.21*
	Parbhani	540	36.34	14.20	489	36.13	15.10	0.21	0.23

* p < .05

The figures printed in Table 4.3 signified that genderwise differences in achievement in language were not found to be significant in 10 out of 15 districts in four states. Assam and Kerala were the two states wherein the genderwise differences in achievement in class III did not exist at all. However, there were five districts, namely, Belgaum and Kolar in Karnataka, Aurangabad, Nanded and Osmanabad in Maharashtra, wherein the differences in achievement among gender were found to be significant. These differences though significant were very much within the 5 percent limit except in the case of Belgaum. Interestingly, genderwise differences in achievement in Kolar and Belgaum stood in favour of girls. In the rest of the three districts the differences in achievement could be minimised by focusing the interventions in favour of girls.

- Fourteen out of fifteen districts in four states achieve the DPEP goal.
- Girls stand to gain in Belgaum and Kolar.

4.2.2. Differences in Achievement in Mathematics

Table 4.4 displays the differences in achievement in mathematics of class III students.

The figures indicated in Table 4.4 revealed that the differences in achievement in mathematics between boys and girls were not found to be significant in as many as twelve districts out of fifteen in four states. However, there were only three districts, namely, Kasargod and Malappuram in Kerala and Nanded in Maharashtra in which the differences in achievement between boys and girls were observed to be significant though less than 5 percent.

- All the fifteen districts lay claim to the DPEP goal.

4.3 Differences in Achievement in Class IV

Differences in achievement demonstrated by class IV boys and girls both in language and mathematics are listed as under.

Table 4.4 Genderwise mean achievement of class III students in mathematics

State	District	Boys			Girls			Difference Boys-Girls	CR Value
		N	M%	SD	N	M%	SD		
Assam	Darrang	336	59.85	29.35	320	58.48	30.40	1.37	0.59
	Dhubri	395	60.38	26.23	382	62.13	24.85	-1.75	-0.96
	Morigaon	355	55.18	21.95	376	55.95	21.88	-0.77	-0.48
Karnataka	Belgaum	523	57.73	25.83	414	58.28	25.30	-0.55	-0.33
	Kolar	419	32.90	19.48	344	35.23	20.35	-2.33	-1.60
	Mandya	457	42.48	25.90	456	40.13	25.68	2.35	1.37
Kerala	Raichur	526	48.93	25.38	331	47.40	24.35	1.53	0.88
	Kasargod	653	40.05	17.55	601	37.45	16.80	2.60	2.68*
	Malappuram	683	38.13	16.78	688	35.95	15.08	2.18	2.52*
Maharashtra	Wayanad	392	36.85	16.00	386	37.35	17.70	-0.50	-0.41
	Aurangabad	580	37.12	25.10	540	35.71	24.90	1.41	0.94
	Latur	549	27.11	17.00	568	26.44	18.20	0.67	0.64
	Nanded	518	26.90	18.60	478	22.57	19.90	4.33	3.54*
	Osmanabad	494	32.70	18.30	597	31.10	16.10	1.60	1.52
	Parbhani	540	22.89	13.80	489	24.05	14.30	-1.16	-1.32

* $p < .05$

4.3.1. Differences in Achievement in language

Table 4.5 illustrates genderwise differences in achievement in language in class IV.

The figures shown in Table 4.5 revealed that in the state of Haryana no significant differences in achievement in language were found among gender. In the state of Tamil Nadu, while three districts did not show any significant differences

in achievement between boys and girls, the district of Dharmapuri showed results to the contrary. In this case the differences were, however, found to be less than 5 percent thereby achieving the DPEP goal. In Madhya Pradesh the situation was found slightly different. In 15 out of 19 districts the differences in achievement between boys and girls were found to be significant. However, there were only three districts out of fifteen where these

Table 4.5: Genderwise mean achievement of class IV students in language

State	District	Boys			Girls			Difference Boys - Girls	CR Value
		N	M%	SD	N	M%	SD		
Haryana	Hissar	522	38.32	10.00	474	38.29	10.22	0.03	0.05
	Jind	552	37.31	11.11	468	37.89	10.71	-0.56	-0.85
	Kaithal	547	42.92	10.60	344	42.28	11.13	0.64	0.85
	Sirsa	529	46.52	10.67	498	47.28	9.53	-0.76	-1.20
Madhya Pradesh	Chattarpur	362	40.44	5.45	179	44.71	4.80	-4.27	-9.29*
	Panna	283	38.68	2.89	220	31.94	4.14	6.74	20.53*
	Rewa	456	34.91	12.18	304	37.43	14.41	-2.52	-2.51*
	Satna	418	31.94	9.03	370	29.74	10.23	2.20	3.18*
	Sidhi	344	36.57	9.21	249	41.98	9.16	-5.41	-7.07*
	Tikamgarh	341	42.31	18.67	171	37.29	16.01	5.02	3.15*
	Bilaspur	419	49.23	11.71	373	47.29	9.80	1.94	2.53*
	Rajnandgaon	222	32.88	2.63	316	35.49	2.07	-2.61	-12.32*
	Raigarh	343	45.00	3.63	283	41.34	4.16	3.66	11.58*
	Surguja	277	42.97	9.87	228	44.89	9.74	-1.92	-2.19*
	Shahdol	343	33.13	18.51	246	30.60	15.09	2.53	1.82
	Betul	461	41.26	3.45	426	40.33	3.92	0.93	3.73*
	Dhar	305	39.97	15.57	239	41.10	15.42	-1.13	-0.84
	Guna	329	33.32	5.57	166	31.18	5.43	2.14	4.09*
	Mandsaur	372	40.26	12.97	349	38.91	13.63	1.35	1.36
Rajgarh	389	34.90	5.06	179	32.33	5.13	2.67	5.77*	
Raisen	224	36.07	17.59	200	39.31	17.46	-3.24	-1.90	
Ratlam	348	36.55	3.42	215	33.14	3.70	3.41	10.91*	
Sehore	465	32.18	4.17	384	31.70	2.10	0.48	2.17*	
Tamil Nadu	Dharmapuri	607	45.61	14.43	423	42.11	14.69	3.50	3.80*
	Cuddalore	485	59.89	17.81	472	59.64	19.82	0.25	0.21
	Thiruvannamalai	490	43.68	18.17	431	43.58	16.05	0.10	0.09
	Villupuram	594	51.25	14.70	508	51.24	14.18	0.01	0.01

* p < .05

differences were slightly higher than the DPEP goal. It means that 16 out of 19 districts in Madhya Pradesh had achieved the DPEP goal of reducing the genderwise differences to less than five percent mark. In the remaining three districts, the differences in achievement found favour with boys in Panna and Tikamgarh and with girls in Sidhi district in Madhya Pradesh.

- All districts in Haryana & Tamil Nadu and 16 out of 19 in Madhya Pradesh claim to achieve the DPEP goal.

4.3.2. Differences in Achievement in Mathematics

Table 4.6 reflects genderwise differences in achievement in mathematics in class IV.

The figures posted in table 4.6 revealed that genderwise differences were not found to be

significant in three out of four districts in Haryana, in all the four districts in Tamil Nadu and in seven out of nineteen districts in Madhya Pradesh. The only exceptions are one district in Haryana and twelve districts in Madhya Pradesh wherein differences in achievement between boys and girls were found to be significant. However, these differences were found to be less than 5 percent mark in Haryana and also in 10 out of 12 districts in Madhya Pradesh. In Tikamgarh & Betul in Madhya Pradesh where the differences in achievement were more than 5%, the differences found favour with boys.

- All districts in Haryana & Tamil Nadu and 17 out of 19 in Madhya Pradesh achieve the DPEP goal.

Table 4.6: Genderwise mean achievement of class IV students in mathematics

State	District	Boys			Girls			Difference Boys- Girls	CR Value
		N	M%	SD	N	M%	SD		
Haryana	Hissar	522	41.93	17.91	474	44.84	21.26	-2.91	-2.32*
	Jind	552	38.73	17.69	468	40.90	18.03	-2.17	-1.93
	Kaithal	547	44.57	16.60	344	45.74	17.27	-1.17	-1.00
	Sirsa	529	61.38	22.33	498	59.85	19.29	1.53	1.18
Madhya Pradesh	Chattarpur	362	35.67	4.17	179	37.00	6.85	-1.33	-2.38*
	Panna	283	26.90	6.87	220	22.40	6.45	4.50	7.53*
	Rewa	456	25.60	16.10	304	21.87	14.60	3.73	3.31*
	Satna	418	23.35	4.12	370	22.80	2.70	0.55	2.24*
	Sidhi	344	28.28	18.13	249	29.18	13.30	-0.90	-0.70
	Tikamgarh	341	33.05	19.00	171	26.73	14.75	6.32	4.13*
	Bilaspur	419	37.00	6.38	373	35.45	7.75	1.55	3.05*
	Rajnandgaon	222	24.85	7.63	316	25.07	6.75	-0.22	-0.34
	Raigarh	343	29.83	3.70	283	30.50	4.73	-0.67	-1.94
	Surguja	277	28.03	11.31	228	31.90	11.40	-3.87	-3.80*
	Shahdol	343	23.50	15.63	246	21.65	14.15	1.85	1.49
	Betul	461	38.15	7.92	426	32.82	6.67	5.33	10.86*
	Dhar	305	33.38	20.50	239	29.70	15.10	3.68	2.41*
	Guna	329	33.65	8.31	166	31.03	8.88	2.62	3.16*

Contd.

State	District	Boys			Girls			Difference		CR
		N	M%	SD	N	M%	SD	Boys- Girls	Value	
Tamil Nadu	Mandsaur	372	27.23	10.99	349	25.93	10.48	1.30	1.62	
	Rajgarh	389	36.12	10.25	179	32.22	10.22	3.90	4.21*	
	Raisen	224	31.80	21.15	200	29.30	17.83	2.50	1.32	
	Ratlam	348	29.30	5.67	215	30.00	5.37	-0.70	-1.47	
	Sehore	465	21.42	2.42	384	19.60	2.77	1.82	10.07*	
	Dharmapuri	607	45.61	14.43	423	37.35	19.14	0.73	0.59	
	Cuddalore	485	47.20	24.50	472	48.31	24.59	-1.11	-0.70	
	Thiruvannamalai	490	29.94	18.48	431	29.85	17.24	0.09	0.08	
	Villupuram	594	50.11	21.20	508	52.00	20.39	-1.89	-1.51	

* p < .05

Summing Up

An overview of the districts that laid claim to the DPEP goal of reducing genderwise differences in achievement is depicted in Table 4.7.

The results discussed in the preceding paragraphs reveal that the DPEP goal of reducing the achievement gaps between boys and girls in language in class I has been attained in 40 out of 42 districts across seven states. In so far as mathematics achievement is concerned, the DPEP goal of reducing the achievement gaps between boys and girls has been realised in 31 out of 42 districts.

Table 4.7: Districts claiming DPEP goal in regard to Gender

Class	Total Districts	Districts claiming DPEP goal	
		Language	Mathematics
I	42	40	31
III	15	14	15
IV	27	24	25

In the remaining districts greater attention is required so as to attain the DPEP goal in its entirety.

The findings in respect of genderwise differences in achievement in language in class III signify that the DPEP goal of reducing the achievement gaps has been accomplished in 14 out of 15 districts in four states. Of the four states, Assam, Maharashtra and Kerala are the three states wherein the DPEP goal has been achieved in totality. In case of mathematics the DPEP goal of reducing the achievement gaps between boys and girls has been overcome in all the 15 districts.

The discussion in regard to genderwise differences in achievement in Class IV signifies that the DPEP goal of reducing the achievement gaps between boys and girls has been completely fulfilled in all the districts of Haryana and Tamil Nadu while in Madhya Pradesh it has been realised in 16 districts in language and 17 in mathematics out of a total of 19 districts.

Areawise Differences in Achievement on MAS Tests

5

This chapter deals with areawise differences in achievement on newly generated competency based achievement tests employed during the conduct of the Mid-term Assessment Survey in the year 1997. Areawise differences in achievement both in language and mathematics in respect of classes I, III and IV are discussed in the following paragraphs.

5.1 Differences in Achievement in Class I
Areawise differences in achievement demonstrated by class I students both in language and mathematics are indicated as under:

5.1.1. Differences in Achievement in language
Table 5.1 displays differences in achievement in language of class I students

Table 5.1: Areawise mean achievement of class I students in language

State	District	Urban			Rural			Differ- ence %	CR Value
		N	M%	SD	N	M%	SD		
Assam	Darrang	170	87.95	19.00	553	71.60	26.95	16.35	8.80*
	Dhubri	174	79.30	24.00	734	64.45	28.85	14.85	7.03*
	Morigaon	169	90.20	17.20	629	74.85	23.85	15.35	9.40*
Haryana	Hissar	134	73.17	29.30	723	69.09	28.94	4.08	1.44
	Jind	188	81.68	23.73	731	58.55	29.36	23.13	11.30*
	Kaithal	180	71.19	28.40	546	71.57	25.31	-0.38	-0.16
	Sirsa	198	79.97	25.02	735	72.07	26.40	7.90	3.90*
Karnataka	Belgaum	66	89.10	20.55	529	85.05	20.55	4.05	1.50
	Kolar	109	66.05	24.95	379	59.75	24.95	6.30	2.31*
	Mandya	101	65.45	28.65	495	64.35	31.20	1.10	0.34
	Raichur	294	71.75	27.80	414	65.05	27.80	6.70	3.16*
Kerala	Kasargod	209	80.25	21.05	698	73.80	23.20	6.45	3.79*
	Malappuram	217	88.60	15.25	768	79.40	20.30	9.20	7.25*
	Wayanad	95	63.60	25.70	460	70.45	24.90	-6.85	-2.37*
Madhya Pradesh	Chattarpur	161	56.25	6.95	586	57.15	5.55	-0.90	-1.51
	Panna	92	53.65	12.00	420	51.05	12.00	2.60	1.87
	Rewa	135	50.03	25.85	566	43.20	27.60	6.83	2.72*
	Satna	142	50.80	6.25	614	51.03	6.55	-0.23	-0.39
	Sidhi	171	56.50	25.50	453	58.65	23.00	-2.15	-0.96
	Tikamgarh	124	64.75	24.30	343	54.55	24.30	10.20	3.99*
	Bilaspur	176	70.85	20.80	637	69.65	11.80	1.20	0.73
	Rajnandgaon	124	79.70	14.44	367	66.30	8.50	13.40	9.74*
	Raigarh	149	70.95	15.00	471	58.20	6.40	12.75	10.06*
	Surguja	151	58.83	28.20	386	45.63	27.95	13.20	4.88*

Contd

State	District	Urban			Rural			Differ- ence %	CR Value
		N	M%	SD	N	M%	SD		
	Shahdol	123	47.85	23.02	385	51.80	25.75	-3.95	-1.60
	Betul	200	64.00	17.50	584	65.14	18.00	-1.14	-0.79
	Dhar	157	69.45	23.70	380	54.00	28.05	15.45	6.48*
	Guna	129	67.45	16.60	452	62.58	15.54	4.87	2.97*
	Mandsaur	185	58.20	24.43	534	54.20	23.46	4.00	1.93
	Rajgarh	158	57.20	17.60	522	52.60	17.90	4.60	2.86*
	Raisen	101	68.75	27.68	250	69.72	25.00	-0.97	-0.30
	Ratlam	135	64.15	13.15	477	54.45	13.90	9.70	7.45*
	Sehore	126	65.90	30.00	534	51.50	6.75	14.40	5.33*
Maharashtra	Aurangabad	158	65.73	32.50	687	71.75	28.80	-6.02	-2.14*
	Latur	181	70.41	38.30	683	63.17	34.90	7.24	2.3*
	Nanded	220	74.64	28.10	542	52.81	31.10	21.83	9.43*
	Osmanabad	187	76.66	28.90	643	79.71	25.50	-3.05	-1.31
	Parbhani	180	66.69	37.50	684	56.51	33.20	10.18	3.34*
Tamil Nadu	Dharmapuri	181	60.14	30.38	693	58.46	29.89	1.68	0.67
	Cuddalore	163	68.71	23.46	677	65.96	25.81	2.75	1.24
	Thiruvanamalai	144	58.26	28.68	688	55.94	26.22	2.32	0.95
	Villupuram	209	81.77	22.88	706	78.70	18.98	3.07	1.95

The figures placed in table 5.1 revealed that areawise differences in achievement in language in class I were not found to be significant in 18 out of 42 districts in seven states. Contrarily, areawise differences in achievement were found to be significant in as many as 24 districts. Of these 24 districts, there were 2 districts, one each in Kerala and Maharashtra where the achievement differences were found to be favouring rural students, while in the remaining districts the differences found favour with urban areas. Further, there were two districts namely Guna and Rajgarh in Madhya Pradesh where the differences, though significant were less than five percent mark. Tamil Nadu is the only state wherein the achievement differences were not found to be significant in any of its districts. The results revealed that the DPEP goal of reducing areawise differences in achievement to less than five percent mark had been achieved by 20 out of 42 districts across the states.

- 20 out of 42 districts claim to realise the DPEP goal of reducing areawise differences.
- Tamil Nadu takes the credit for reaching the DPEP target.
- Achievement differences favour rural students in eight districts.

5.1.2. Differences in Achievement in Mathematics

Table 5.2 illustrates differences in achievement in mathematics of class I students.

The figures posted in Table 5.2 indicated that areawise differences in achievement in mathematics in class I were not found to be significant in 12 out of 42 districts in seven states. In the remaining thirty districts these differences were found to be significant. Of them, there were three such districts namely Aurangabad in Maharashtra, Dharmapuri in Tamil Nadu and Sidhi in Madhya Pradesh

wherein the achievement differences favoured rural students. Kasargod in Kerala and Chattarpur, Sidhi & Betul in Madhya Pradesh were the only exception where the differences in achievement were significant but they were within the prescribed ceiling of DPEP goal. The results revealed that 16 out of 42 districts had achieved

the DPEP goal of reducing areawise difference to less than five percent.

- 16 out of 42 districts claim to reach the DPEP goal.
- Achievement differences find favour with rural students in three districts.

Table 5.2: Areawise mean achievement of class I students in mathematics

State	District	Urban			Rural			Differ- ence %	CR Value
		N	M%	SD	N	M%	SD		
Assam	Darrang	170	83.10	15.40	553	71.25	27.80	11.85	7.18*
	Dhubri	174	76.70	23.15	734	70.35	26.35	6.35	6.13*
	Morigaon	169	88.60	15.95	629	74.85	23.15	13.75	8.87*
Haryana	Hissar	134	85.37	20.55	723	72.05	29.55	13.32	6.36*
	Jind	188	84.87	21.10	731	67.31	25.85	17.56	11.88*
	Kaithal	180	82.36	22.77	546	80.60	20.34	1.76	0.92
	Sirsa	198	88.74	15.88	735	78.39	24.21	10.35	7.18*
Karnataka	Belgaum	66	91.15	18.85	527	86.75	18.85	4.40	1.78
	Kolar	109	69.65	25.80	379	60.35	25.80	9.30	3.30*
	Mandya	101	63.70	28.20	495	64.40	28.20	-0.70	-0.23
	Raichur	294	77.15	25.15	414	67.55	25.15	9.60	5.00*
Kerala	Kasargod	209	77.20	24.80	698	72.55	25.20	4.65	2.36*
	Malappuram	217	85.20	20.10	768	73.50	23.95	11.70	7.24*
	Wayanad	95	64.55	24.15	460	66.40	24.55	-1.85	-0.67
Madhya Pradesh	Chattarpur	161	59.98	11.55	586	55.16	6.65	4.82	5.05*
	Panna	92	54.70	14.00	420	55.90	12.27	-1.20	-0.76
	Rewa	135	52.00	31.95	566	47.35	32.05	4.65	1.51
	Satna	142	49.25	25.70	614	36.45	9.35	12.80	5.83*
	Sidhi	171	49.70	13.00	453	54.15	23.10	-4.45	-3.02*
	Tikamgarh	124	70.75	26.10	343	64.30	29.20	6.45	2.28*
	Bilaspur	176	79.15	14.45	637	69.85	10.40	9.30	7.97*
	Rajnandgaon	124	78.70	17.50	367	64.30	5.00	14.40	9.00*
	Raigarh	149	68.85	15.40	471	62.65	6.55	6.20	4.76*
	Surguja	151	55.45	28.80	386	49.32	29.75	6.13	2.19*
	Shahdol	123	60.50	24.41	385	40.80	31.00	19.70	7.25*
	Betul	200	61.14	11.40	584	59.25	9.35	1.89	2.11*
	Dhar	157	69.85	23.95	380	53.55	26.56	16.30	6.93*
	Guna	129	56.33	31.00	452	30.86	27.50	25.47	8.40*
Mandsaur	185	61.40	26.89	534	53.10	25.89	8.30	3.64*	

Contd

State	District	Urban			Rural			Differ- ence %	CR Value
		N	M%	SD	N	M%	SD		
	Rajgarh	158	58.50	19.00	522	52.70	28.80	5.80	2.94*
	Raisen	101	69.28	29.75	250	65.03	26.05	4.25	1.25
	Ratlam	135	70.00	6.35	477	55.35	7.20	14.65	22.88*
	Sehore	126	73.10	28.45	534	50.40	3.95	22.70	8.90*
Maharashtra	Aurangabad	158	58.06	32.90	687	68.38	29.00	-10.32	-3.63*
	Latur	181	75.66	31.40	683	63.47	33.20	12.19	4.58*
	Nanded	220	64.48	30.80	542	45.18	32.20	19.30	7.72*
	Osmanabad	187	75.53	32.80	643	74.98	29.50	0.55	0.21
	Parbhani	180	59.61	36.40	684	57.46	32.60	2.15	0.72
Tamil Nadu	Dharmapuri	181	48.29	34.18	693	54.37	33.69	-6.08	-2.15*
	Cuddalore	163	60.15	27.77	677	63.06	30.93	-2.91	-1.10
	Thiruvannamalai	144	49.10	32.61	688	52.94	32.66	-3.84	-1.28
	Villupuram	209	79.64	24.68	706	76.99	24.96	2.65	1.35

* p < .05

5.2 Differences in Achievement in Class III

Areawise differences in achievement displayed by class III students both in language and mathematics are discussed in the following paragraphs.

5.2.1. Differences in Achievement in language

Table 5.3 demonstrates areawise differences in achievement in language of class III students.

Table 5.3: Areawise mean achievement of class III students in language

State	District	Urban			Rural			Differ- ence %	CR Value
		N	M%	SD	N	M%	SD		
Assam	Darrang	186	50.51	15.25	470	61.12	20.31	-10.61	-7.26*
	Dhubri	191	56.42	18.91	586	57.82	19.83	-1.40	-0.88
	Morigaon	211	52.45	14.02	520	60.80	17.31	-8.35	-6.79*
Karnataka	Belgaum	76	60.00	11.05	861	50.90	11.05	9.10	6.84*
	Kolar	226	39.88	20.12	537	37.14	19.84	2.74	1.72
	Mandya	199	45.38	21.94	714	41.42	21.94	3.96	2.25*
	Raichur	401	50.62	23.44	456	40.30	23.44	10.32	6.42*
Kerala	Kasargod	329	54.38	18.31	925	50.20	17.38	4.18	3.60*
	Malappuram	302	61.29	13.65	1069	51.15	15.05	10.14	11.14*
	Wayanad	144	56.74	17.54	634	48.43	16.15	8.31	5.20*
Maharashtra	Aurangabad	242	41.19	17.30	878	48.37	22.80	-7.18	-5.30*
	Latur	261	44.36	22.70	856	38.95	17.00	5.41	3.56*
	Nanded	272	43.48	22.00	724	36.03	20.20	7.45	4.86*
	Osmanabad	260	48.74	15.60	831	42.08	17.60	6.66	5.82*
	Parbhani	275	43.30	17.60	754	33.66	12.40	9.64	8.33*

* p < .05

Figures printed in Table 5.3 revealed that areawise differences in achievement in language in class III were found to be significant in thirteen out of fifteen districts in four states. Of the thirteen districts, there were as many as three districts, Darrang and Morigaon in Assam and Aurangabad in Maharashtra wherein these differences were found to be favouring rural students. Kolar in Karnataka and Dhubri in Assam were the districts which had realised the DPEP goal. The results also indicated that of the thirteen districts where the differences in achievement were found to be significant, there were two districts namely Mandya in Karnataka and Kasargod in Kerala where the differences were well within the DPEP range. Therefore it might be concluded that the DPEP goal of reducing the differences to less than five percent had been achieved in as many as four districts.

- Four out of 15 districts realise the DPEP goal.
- Differences in two districts in Assam and in one in Maharashtra favour rural students

5.2.2. Differences in Achievement in Mathematics

Table 5.4 portrays the differences in achievement in mathematics in class III students.

Figures shown in Table 5.4 revealed that the differences in achievement in mathematics in class III were found to be significant in thirteen out of fifteen districts in four states. Out of these thirteen districts there were two districts in Assam and one each in Karnataka, Kerala and Maharashtra where the differences in achievement favoured the rural children. Besides, there were three districts where though the differences were significant, they were found to be under the DPEP ceiling. Only Kolar in Karnataka and Latur in Maharashtra were the two districts where the differences in achievement were not found to be significant.

- Five districts out of 15 overcome the DPEP goal.
- Differences in achievement find favour with rural children in five districts.

Table 5.4: Areawise mean achievement of class III students in mathematics

State	District	Urban			Rural			Differ- ence %	CR Value
		N	M%	SD	N	M%	SD		
Assam	Darrang	186	50.63	20.60	470	62.58	31.78	-11.95	-5.69*
	Dhubri	191	66.23	26.70	586	59.60	24.80	6.63	3.05*
	Morigaon	211	45.68	18.73	520	59.60	23.08	-13.92	-8.44*
Karnataka	Belgaum	76	49.03	25.48	861	58.75	25.48	-9.72	-3.19*
	Kolar	226	32.90	18.38	537	34.43	23.53	-1.53	-0.95
	Mandya	199	46.70	24.60	714	39.78	24.60	6.92	3.51*
	Raichur	401	56.83	22.65	456	40.63	22.65	16.20	10.43*
Kerala	Kasargod	329	41.70	19.00	925	37.80	16.45	3.90	3.30*
	Malappuram	302	46.40	16.70	1069	34.38	14.73	12.02	11.33*
	Wayanad	144	34.00	16.20	634	37.80	16.95	-3.80	-2.51*
Maharashtra	Aurangabad	242	29.71	18.30	878	38.27	26.20	-8.56	-5.79*
	Latur	261	26.74	19.10	856	26.91	17.10	-0.17	-0.13
	Nanded	272	28.06	22.00	724	23.60	18.00	4.46	2.98*
	Osmanabad	260	38.25	17.20	831	29.81	16.60	8.44	6.96*
	Parbhani	275	30.96	16.70	754	20.68	11.80	10.28	9.39*

* p < .05

5.3 Differences in Achievement in Class IV

Areawise differences in achievement exhibited by class IV students both in language and mathematics are given as under.

5.3.1. Differences in Achievement in language

Table 5.5 illustrates areawise differences in achievement in language in class IV.

The figures displayed in Table 5.5 revealed that areawise differences in achievement in language in class IV were not found to be significant in eight out of twenty seven districts in Haryana, Tamil Nadu and Madhya Pradesh. There were two districts each in Haryana and Tamil Nadu and fifteen in Madhya Pradesh where the differences in achievement were found to be significant. However, in most of the cases these differences were also found

Table 5.5: Areawise mean achievement of class IV students in language

State	District	Urban			Rural			Difference	CR Value
		N	M%	SD	N	M%	SD		
Haryana	Hissar	213	39.87	10.42	783	37.88	9.98	1.99	2.58*
	Jind	215	37.41	10.54	805	37.62	11.03	-0.21	-0.26
	Kaithal	226	42.93	11.73	665	42.59	10.48	0.34	0.39
	Sirsa	244	49.10	9.86	783	46.20	10.12	2.90	3.98*
Madhya Pradesh	Chattarpur	145	44.22	5.94	396	40.97	4.90	3.25	5.89*
	Panna	125	37.98	2.71	378	34.96	2.29	3.02	11.17*
	Rewa	122	31.31	13.32	638	36.80	13.05	-5.49	-4.17*
	Satna	147	26.26	12.09	641	31.97	7.97	-5.71	-5.44*
	Sidhi	175	38.33	11.17	418	39.05	9.30	-0.72	-0.75
	Tikamgarh	145	45.10	23.33	367	38.87	15.00	6.23	2.97*
	Bilaspur	221	50.31	11.60	571	47.57	10.00	2.74	3.09*
	Rajnandgaon	170	35.35	5.81	368	33.97	4.90	1.38	2.68*
	Raigarh	170	45.01	4.03	456	42.73	3.83	2.28	6.36*
	Surguja	173	45.83	9.97	332	42.80	10.20	3.03	3.21*
	Shahdol	130	31.90	16.25	459	32.13	17.50	-0.23	-0.14
	Betul	252	42.76	3.98	635	40.03	3.60	2.73	9.44*
	Dhar	186	41.75	13.57	358	39.80	15.71	1.95	1.50
	Guna	164	35.02	5.86	331	31.41	5.71	3.61	6.49*
	Mandsaur	219	35.37	11.53	502	41.43	13.61	-6.06	-6.12*
	Rajgarh	164	30.51	4.73	404	35.50	5.21	-4.99	-11.03*
Raisen	141	30.56	14.66	283	41.10	18.77	-10.54	-6.32*	
Ratlam	138	32.68	3.17	425	36.08	3.34	-3.40	-10.77*	
Sehore	167	31.91	3.97	682	31.98	3.24	-0.07	-0.21	
Tamil Nadu	Dharmapuri	227	44.21	15.59	803	44.16	14.36	0.05	0.04
	Cuddalore	220	59.65	16.79	737	59.80	19.39	-0.15	-0.10
	Thiruvannamalai	156	47.12	18.02	765	42.92	16.95	4.20	2.67*
	Villupuram	303	54.04	12.07	799	50.19	15.14	3.85	4.39*

* p < .05

to be under the DPEP ceiling of five percent. It was therefore, evident that all but five districts spread across the states had realised the DPEP goal. Besides, there were as many as six districts in Madhya Pradesh where the differences in achievement stood favouring rural students.

- All districts of Haryana and Tamil Nadu and 14 districts of Madhya Pradesh reach the DPEP goal.

- Differences in achievement find favour with rural students in six districts.

5.3.2. Differences in Achievement in Mathematics

Table 5.6 depicts areawise difference in achievement in mathematics in class IV.

Table 5.6: Areawise mean achievement of class IV students in mathematics

State	District	Urban			Rural			Difference	CR Value
		N	M%	SD	N	M%	SD		
Haryana	Hissar	213	48.11	19.42	783	42.01	19.48	6.10	3.94*
	Jind	215	46.00	19.39	805	38.05	17.07	7.95	5.44*
	Kaithal	226	39.97	14.25	665	46.74	17.50	-6.77	-5.75*
	Sirsa	244	62.30	16.82	783	60.12	22.02	2.18	1.67
Madhya Pradesh	Chattarpur	145	35.80	8.85	396	36.25	2.93	-0.45	-0.60
	Panna	125	25.80	6.50	378	24.70	7.02	1.10	1.60
	Rewa	122	22.25	15.87	638	24.47	15.45	-2.22	-1.42
	Satna	147	20.20	2.92	641	23.75	4.62	-3.55	-11.72*
	Sidhi	175	28.03	18.03	418	28.93	13.63	-0.90	-0.59
	Tikamgarh	145	38.78	23.75	367	27.83	14.00	10.95	5.19*
	Bilaspur	221	35.98	7.65	571	36.38	6.58	-0.40	-0.68
	Rajnandgaon	170	22.82	8.88	368	25.99	4.98	-3.17	-4.38*
	Raigarh	170	29.53	4.80	456	30.35	3.68	-0.82	-2.01*
	Surguja	173	31.83	11.25	332	28.70	11.46	3.13	2.94*
	Shahdol	130	21.65	13.37	459	23.02	16.30	-1.37	-0.98
	Betul	252	40.11	7.85	635	33.79	7.87	6.32	10.79*
	Dhar	186	35.28	19.78	358	29.92	16.03	5.36	3.18*
	Guna	164	32.38	8.17	331	32.96	9.00	-0.58	-0.72
	Mandsaur	219	25.93	8.66	502	26.88	11.54	-0.95	-1.22
	Rajgarh	164	31.55	10.37	404	36.25	10.17	-4.70	-4.19*
	Raisen	141	26.95	14.20	283	32.45	21.70	-5.50	-3.12*
Ratlam	138	27.17	5.57	425	30.32	5.55	-3.15	-5.76*	
Sehore	167	25.00	1.77	682	19.52	2.75	5.48	31.65*	
Tamil Nadu	Dharmapuri	227	36.40	21.57	803	38.18	19.16	-1.78	-1.12
	Cuddalore	220	45.34	21.30	737	48.47	25.39	-3.13	-1.82
	Thiruvannamalai	156	31.22	17.07	765	29.63	18.06	1.59	1.05
	Villupuram	303	56.05	17.31	799	49.06	21.74	6.99	5.55*

* p < .05

The entries posted in Table 5.6 revealed that areawise differences in achievement in mathematics in class IV were not found to be significant in one out of four districts in Haryana, three out of four in Tamil Nadu and eight out of nineteen in Madhya Pradesh. Significant differences in achievement, however, were observed in three out of four districts in Haryana one out of four in Tamil Nadu and eleven out of nineteen in Madhya Pradesh. One district in Haryana and six in Madhya Pradesh were found to be such districts wherein significant differences in achievement favoured rural children. In Madhya Pradesh 6 out of 11 districts which showed significant differences in achievement were found to be within the ceiling of the DPEP.

- One district in Haryana, three in Tamil Nadu and fourteen in Madhya Pradesh realise the DPEP goal
- Achievement differences affect three districts in Haryana, one in Tamil Nadu and five in Madhya Pradesh
- Significant differences favour rural students in seven districts, one in Haryana and six in Madhya Pradesh

Summing Up

An overview of the districts that laid claim to realising the DPEP goal of reducing areawise differences in achievement is illustrated in Table 5.7.

The findings enumerated in the earlier paragraphs reveal that the DPEP goal of reducing the achievement gaps between urban and rural students in language in Class I has been attained only in twenty out of forty two districts in seven states. The remaining districts have still to bring

Table 5.7: Districts claiming DPEP goal in regard to area

Class	Total Districts	Districts claiming DPEP goal	
		Language	Mathematics
I	42	40	31
III	15	14	15
IV	27	24	25

down the differences in achievement to less than five percent. Of all the seven states, Tamil Nadu is the only state wherein all the districts have realised the DPEP goal in language in class I. Areawise differences in achievement in language have favoured the rural students in two districts, one each in Maharashtra and Kerala. In mathematics, thirty out of 42 districts have shown significant differences in achievement, of them four districts have these differences within the ceiling of the DPEP. In all 16 out of 42 districts have achieved the DPEP goal of reducing the differences to less than five percent. There have been three districts namely Aurangabad in Maharashtra, Dharmapuri in Tamil Nadu and Sidhi in Madhya Pradesh where the differences in achievement have favoured rural students.

The analyses of results in respect of areawise differences in achievement in language in class III signify that although significant differences have been observed in thirteen out of fifteen districts, there have been two districts in the lot where these differences are under the ceiling of the DPEP. It shows that the DPEP goal has been achieved in 4 out of 15 districts. There are three districts, Darrang and Morigaon in Assam and Aurangabad in Maharashtra where the differences in achievement find favour with the rural students. In mathematics in class III the situation has been slightly different. Whereas significant differences have been observed in 13 out of 15 districts, there are three districts out of the lot of 13 which have been well within the goal of the DPEP. Of the thirteen districts there have been two districts in Assam and one each in Karnataka, Kerala and Maharashtra where the differences in achievement find favour with the rural students. It is, therefore, evident that the goal of the DPEP has been realised by five out of fifteen districts.

The analyses of results in respect of areawise differences in achievement in language in class IV

signify that although one half of the total number of districts both in the states of Haryana and Tamil Nadu have shown significant differences, but even these differences have been found to be sited under the ceiling of the DPEP. In Madhya Pradesh out of 15 districts that have shown significant differences, in ten districts these differences have been found to be less than five percent. . Thus, all districts of Haryana and Tamil Nadu and 14 out of 19 districts of Madhya Pradesh have reached the DPEP goal. In mathematics the situation has been slightly

different. The differences in achievement in mathematics have been found significant in three districts in Haryana, one in Tamil Nadu and eleven in Madhya Pradesh. Of these districts, achievement differences in one district in Haryana and four in Madhya Pradesh have favoured rural students. It indicates that the DPEP goal of reducing the areawise differences in mathematics to less than five percent has been realised in one district in Haryana, three in Tamil Nadu and fourteen districts in Madhya Pradesh.

Differences in Achievement Among Social Groups

This chapter deals with categorywise differences in achievement on newly constructed competency based tests administered during the conduct of the Mid-term Assessment Survey in the year 1997. A detailed description of categorywise differences in achievement both in language and mathematics in respect of classes I, III, & IV is presented below. It may be pertinent to mention here that the CR values shown in the chapter have been computed on the basis of SC versus others and ST versus others. Others comprise categories other than SC & ST. In

certain cases these values are not available for want of data.

6.1 Differences in Achievement in Class I

Categorywise differences in achievement demonstrated by class I students both in language and mathematics are discussed as under.

6.1.1. Differences in Achievement in language

Table 6.1 illustrates differences in achievement in language of class I students.

Table 6.1: Categorywise mean achievement of class I students in language

State	District	SC			ST			Others			Differ- ence Value between SC and others	*CR	Differ- ence Value bet- ween ST & others	**CR
		N	M%	SD	N	M%	SD	N	M%	SD	others	others	others	
Assam	Darrang	86	81.80	20.60	110	61.60	32.00	527	77.30	25.00	-4.50	-1.81	15.75	4.85*
	Dubri	79	74.30	26.00	35	60.60	21.30	794	66.90	29.10	-7.35	-2.37*	6.35	1.69
	Morigaon	160	79.70	18.80	128	75.60	23.60	510	78.30	23.40	-1.40	-0.76	2.70	1.15
Haryana	Hissar	397	64.20	30.30				460	74.50	26.90	10.26	5.31*	—	—
	Jind	290	61.90	31.20				629	63.90	29.00	1.97	0.93	—	—
	Kaithal	244	65.80	27.20				482	74.30	25.00	8.49	4.11*	—	—
	Sirsa	402	69.50	28.00				531	77.00	24.50	7.54	4.28*	—	—
Karna- taka	Belgaum	73	74.60	28.80	64	85.00	20.50	458	87.10	17.80	12.55	3.6*	2.15	0.79
	Kolar	170	60.40	27.80	47	70.40	26.90	271	60.40	27.50	—	0	-10.05	-2.34*
	Mandya	99	61.40	31.90	15	78.40	21.00	482	66.80	28.60	5.45	1.57	-11.55	-2.01*
	Raichur	124	63.60	27.80	100	60.40	28.50	484	72.20	26.40	8.60	3.09*	11.80	3.81*
Kerala	Kasargod	71	74.00	23.10				836	75.40	21.10	1.45	0.51	—	—
	Malappuram	70	79.40	21.80				915	81.60	15.30	2.20	0.83	—	—
	Wayanad	148	59.50	24.90				407	72.90	24.40	13.40	5.64*	—	—
Madhya Pradesh	Chattarpur	232	53.15	14.00	25	51.50	4.80	490	58.95	13.65	5.80	5.23*	7.45	6.43*
	Panna	134	56.85	14.50	27	46.00	8.70	351	49.50	8.00	-7.35	-5.53*	3.50	1.99*
	Rewa	156	48.80	21.75	82	45.85	26.10	463	42.84	25.70	-5.96	-2.82*	-3.01	-0.96
	Satna	202	45.40	14.75	97	55.85	10.20	457	52.35	15.60	6.95	5.47*	-3.50	-2.75*

Contd

State	District	SC			ST			Others			Differ- ence Value between SC and others	♣CR Value	Differ- ence bet- ween ST & others	♣♣CR Value
		N	M%	SD	N	M%	SD	N	M%	SD				
	Sidhi	85	61.07	23.60	105	53.50	24.30	434	59.05	21.75	-2.02	-0.73	5.55	2.13*
	Tikamgarh	124	53.94	22.75	12	57.08	16.50	331	58.45	24.95	4.51	1.83	1.37	0.27
	Bilaspur	224	65.10	17.05	127	68.42	17.20	462	72.63	11.55	7.53	5.97*	4.21	2.59*
	Rajnandgaon	134	71.60	9.75	117	54.15	27.90	240	76.11	15.50	4.51	3.44*	21.96	7.91*
	Raigarh	96	61.13	13.60	267	62.65	12.45	257	59.84	12.35	-1.29	-0.81	-2.81	-2.59*
	Surguja	52	52.13	27.80	275	43.40	28.05	210	56.45	27.60	4.32	1.00	13.05	5.11*
	Shahdol	55	52.70	25.50	222	45.99	21.50	231	55.08	25.50	2.38	0.62	9.09	4.10*
	Betul	160	63.55	13.00	142	62.55	12.50	482	65.96	13.50	2.41	2.01*	3.41	2.80*
	Dhar	146	62.35	25.25	243	57.20	29.00	148	56.84	31.00	-5.51	-1.67	-0.36	-0.11
	Guna	107	61.23	12.00	21	63.52	12.00	453	64.25	17.00	3.02	2.14*	0.73	0.26
	Mandsaur	177	53.75	25.56	24	55.35	20.47	518	55.76	27.82	2.01	0.88	0.41	0.09
	Rajgarh	121	51.05	17.10	159	47.90	18.65	400	56.72	19.80	5.67	3.07*	8.82	3.93*
	Raisen	63	75.75	23.35	49	46.65	20.50	239	72.46	23.50	-3.29	-0.99	25.81	7.76*
	Ratlam	112	50.70	12.00	197	49.65	13.10	303	63.30	12.45	12.60	9.36*	13.65	9.83*
	Sehore	225	46.45	5.95	75	53.45	14.10	360	59.29	15.45	12.84	14.15*	5.84	3.19*
Mahara- shtra	Aurangabad	144	65.73	31.10	218	72.41	28.80	483	71.27	29.41	5.54	1.90	-1.14	-0.48
	Latur	195	57.15	39.10	222	66.15	34.80	447	67.26	34.20	10.11	3.13*	1.11	0.39
	Nanded	304	61.74	31.80	230	56.78	31.50	228	57.96	31.90	-3.78	-1.35	1.18	0.40
	Osmanabad	193	75.98	26.80	185	78.90	26.50	452	80.35	25.90	4.37	1.92	1.45	0.61
	Parbhani	204	58.99	35.10	95	62.79	32.20	565	57.81	32.70	-1.18	-0.42	-4.98	-1.39
Tamil Nadu	Dharmapuri	233	55.62	27.84				641	59.97	30.66	4.35	1.90	—	—
	Cuddalore	331	63.28	25.29				509	68.59	25.25	5.31	2.98*	—	—
	Thiruvanna- malai	308	50.49	28.23				524	59.78	25.09	9.27	4.92*	—	—
	Villupuram	413	79.46	18.85				502	79.36	20.86	-0.10	-0.07	—	—

Note: In Haryana, Kerala and Tamil Nadu data of SC & ST were combined

♣CR Value between SC and others

♣♣CR Value between ST and others

* p < .05

The figures shown in Table 6.1 revealed that in twenty one out of forty two districts in seven states the differences in achievement between SC and others were not found to be significant. In contrast to this, the differences in achievement between SC and others were found to be signifi-

cant in the remaining 21 districts, of them, 3 favouring SC students. In Madhya Pradesh there were three districts where these differences, though significant were found to be less than five percent. The results in respect of ST versus others indicated that the differences in achievement were

not found to be significant in two out of three districts in Assam, one out of four in Karnataka, five out of nineteen in Madhya Pradesh and in all the five districts of Maharashtra. In 19 out of 31 districts in four states where the differences in achievement were found to be significant, 4 favoured ST students. In Madhya Pradesh there were five such districts where though the differences were found to be significant, they were within the ceiling of the DPEP. It was evident from the above discussion that out of Assam, Maharashtra, Karnataka and Madhya Pradesh it was only Maharashtra where the DPEP goal had been fully realised.

- 21 out of 42 districts claim to reach the DPEP goal of reducing the achievement differences between SC and others.
- Differences in achievement between ST and others ruled out in 17 out of 31 districts in four states.
- Maharashtra takes the lead in ceasing differences between ST and others.

6.1.2. Differences in Achievement in Mathematics

Table 6.2 highlights differences in achievement in mathematics of class I students.

Table 6.2: Categorywise mean achievement of class I students in Mathematics

State	District	SC			ST			Others			Differ- ence Value between SC and others	♣CR	Differ- ence Value bet- ween ST & others	♣♣CR
		N	M%	SD	N	M%	SD	N	M%	SD	others		others	
Assam	Darrang	86	78.85	22.20	110	56.20	32.70	527	76.95	24.80	-1.90	-0.73	20.75	6.29*
	Dubri	79	66.60	26.05	35	72.55	18.05	794	72.00	26.30	5.40	1.74	-0.55	-0.17
	Morigaon	160	76.05	19.60	128	73.85	22.05	510	79.30	22.30	3.25	1.76	5.45	2.48*
Haryana	Hissar	397	71.44	29.82				460	76.46	27.50	5.02	2.52*	—	—
	Jind	290	70.41	27.16				629	71.12	25.50	0.71	0.26	—	—
	Kaithal	244	78.20	23.80				482	82.47	19.00	4.27	2.54*	—	—
	Sirsa	402	78.00	24.36				531	82.54	22.00	4.54	2.90*	—	—
Karna- taka	Belgaum	73	83.95	22.70	64	88.75	13.45	458	87.65	18.45	3.70	1.32	-1.10	-0.58
	Kolar	170	62.55	27.95	47	68.40	23.95	271	61.25	25.90	-1.30	-0.49	-7.15	-1.85
	Mandya	99	59.30	29.20	15	80.35	18.95	482	67.15	26.30	7.85	2.46*	-13.20	-2.54*
	Raichur	124	68.25	27.10	100	65.95	26.00	484	75.35	22.55	7.10	2.70*	9.40	3.35*
Kerala	Kasargod	71	70.90	26.15				836	73.85	25.10	2.95	0.92	—	—
	Malappuram	70	73.00	24.20				915	76.35	23.60	3.35	1.12	—	—
	Wayanad	148	54.10	25.15				407	70.45	22.70	16.35	6.95*	—	—
Madhya Pradesh	Chattarpur	232	58.33	7.45	25	52.94	14.25	490	55.35	6.90	-2.98	-5.13*	2.41	0.82
	Panna	134	59.00	7.20	27	52.40	11.35	351	54.66	8.65	-4.34	-5.59*	2.26	0.99
	Rewa	156	50.50	25.25	82	45.10	27.35	463	48.05	27.25	-2.45	-1.02	2.95	0.90
	Satna	202	34.95	27.70	97	37.20	12.55	457	40.92	23.50	5.97	2.65*	3.72	2.20*
	Sidhi	85	49.95	22.35	105	50.40	24.35	434	54.13	27.70	4.18	1.50	3.73	1.36

Contd

State	District	SC			ST			Others			Differ- ences Value between SC and others	♣CR Value	Differ- ences bet- ween others	♣♣CR Value
		N	M%	SD	N	M%	SD	N	M%	SD			CR	
	Tikamgarh	124	68.05	24.50	12	71.25	31.95	331	65.05	28.75	-3.00	-1.10	-6.20	-0.64
	Bilaspur	224	73.01	12.05	127	72.18	16.05	462	71.20	14.50	-1.81	-1.72	-0.98	-0.62
	Rajnandgaon	134	61.70	19.75	117	56.50	30.45	240	76.92	18.15	15.22	7.33*	20.42	6.67*
	Raigarh	96	69.73	14.65	267	65.51	11.85	257	60.53	11.85	-9.20	-5.49*	-4.98	-4.80*
	Surguja	52	32.68	28.40	275	49.24	29.05	210	57.89	28.90	25.21	5.66*	8.65	3.25*
	Shahdol	55	44.50	31.50	222	42.01	29.50	231	49.20	30.50	4.70	0.99	7.19	2.54*
	Betul	160	56.30	12.00	142	57.10	10.90	482	61.75	8.00	5.45	5.35*	4.65	4.71*
	Dhar	146	63.65	24.00	243	54.55	26.50	148	61.18	26.50	-2.47	-0.84	6.63	2.39*
	Guna	107	29.08	17.00	21	29.53	12.00	453	38.59	17.00	9.51	5.18*	9.06	3.06*
	Mandsaur	177	58.90	25.70	24	46.45	24.16	518	54.34	28.67	-4.56	-1.97*	7.89	1.52
	Rajgarh	121	50.95	20.35	159	49.00	20.80	400	56.91	18.40	5.96	2.87*	7.91	4.18*
	Raisen	63	68.40	27.35	49	60.39	23.76	239	66.87	25.19	-1.53	-0.40	6.48	1.71
	Ratlam	112	50.85	7.05	197	48.95	6.20	303	67.64	5.05	16.79	23.01*	18.69	35.29*
	Sehore	225	50.70	12.80	75	56.25	12.40	360	56.97	16.45	6.27	5.14*	0.72	0.43
Mahara- shtra	Aurangabad	144	59.76	29.70	218	63.51	30.40	483	69.78	29.50	10.02	3.56*	6.27	2.55*
	Latur	195	63.59	34.40	222	66.15	32.40	447	67.02	33.10	3.43	1.18	0.87	0.33
	Nanded	304	55.64	32.30	230	50.26	33.80	228	49.54	34.80	-6.1	-2.06*	-0.72	-0.22
	Osmanabad	193	70.29	32.70	185	75.76	30.10	452	76.89	29.05	6.6	2.43*	1.13	0.44
	Parbhani	204	55.34	35.10	95	62.79	31.20	565	58.02	33.10	2.68	0.95	-4.77	-1.37
Tamil Nadu	Dharmapuri	233	48.67	31.73				641	54.72	34.49	6.05	2.34*	—	—
	Cuddalore	331	59.11	28.97				509	64.71	31.04	5.60	2.62*	—	—
	Thiruvana-malai	308	46.70	35.01				524	55.54	30.77	8.84	3.80*	—	—
	Villupuram	413	78.34	23.74				502	76.98	25.84	-1.36	-0.82	—	—

Note: In Haryana, Kerala and Tamil Nadu data of SC & ST were combined

♣CR Value between SC and others

♣♣CR Value between ST and others

* p < .05

The figures printed in table 6.2 signified that in 18 out of 42 districts in seven states, the differences in achievement between SC and others were not found to be significant. Contrarily significant differences were found in all the remaining 24 districts with the exception of two districts from Haryana and three from Madhya Pradesh falling under the ceiling of the DPEP. Of the districts showing significant difference, in five districts the

differences in achievement favoured SC students. It was evident that 22 out of 42 districts had realised the goal of reducing the differences between SC & others to less than five percent mark. The results in respect of ST versus others showed that the achievement differences were not found to be significant in sixteen out of thirty one districts in four states where the data were available. Like in language, in mathematics also the state

of Maharashtra seemed to have achieved the goal of reducing these differences in all its districts except in Aurangabad. In two districts namely Mandya & Raigarh where the differences were significant, favoured ST students.

- 22 out of 42 districts in seven states realise the DPEP goal of reducing the differences between SC and others.
- Differences in achievement between ST and others cease to exist in 15 out of 31 districts in four states.
- Assam takes the lead in reducing differences between SC and others in all its districts.
- Maharashtra achieves success in reducing the achievement gaps between ST & others in 4 out of 5 districts.

6.2 Differences in Achievement in Class III

Categorywise differences in achievement exhibited by class III students both in language and mathematics are presented in the subsequent paragraphs.

6.2.1. Differences in Achievement in language

Table 6.3 portrays differences in achievement in language of class III students.

The figures posted in Table 6.3 indicated that the differences in achievement in language between SC & others were not found to be significant in 10 out of 15 districts in four states. These differences were, however, found to be significant in five districts, one each in Assam, Karnataka and Kerala and in

Table 6.3: Categorywise mean achievement of class III students in language

State	District	SC			ST			Others			Differ- ence Value between SC and others		Differ- ence Value between ST & others	
		N	M%	SD	N	M%	SD	N	M%	SD	♣CR	♣♣CR		
Assam	Darrang	98	53.80	19.95	144	61.88	22.05	414	57.82	18.78	4.02	1.81	-4.06	-1.97*
	Dubri	85	58.15	18.48	24	46.48	16.08	668	57.78	20.00	-0.37	-0.17	11.30	3.28*
	Morigaon	134	55.55	14.23	134	51.71	16.78	463	61.12	16.88	5.57	3.81*	9.41	5.68*
Karna- taka	Belgaum	123	59.66	21.45	129	59.77	23.23	685	59.02	21.88	-0.64	-0.30	-0.75	-0.43
	Kolar	182	36.43	19.29	116	42.00	21.78	465	38.22	19.11	1.79	0.56	-3.78	-1.71
	Mandya	150	42.34	21.26	32	47.20	19.42	731	42.22	21.02	-0.12	-0.06	-4.98	-1.39
	Raichur	170	46.43	24.09	124	51.29	23.05	563	41.48	23.17	-4.95	-2.36*	-9.81	-4.27*
Kerala	Kasargod	97	52.10	15.65	9	39.14	14.68	1148	51.31	17.91	-0.79	-0.48	11.38	2.47*
	Malappuram	96	48.09	14.77	11	48.38	21.75	1264	53.83	15.25	5.74	3.66*	14.69	0.83
	Wayanad	47	47.55	14.88	109	42.77	17.17	622	51.41	16.37	3.86	1.70	8.64	4.87*
Mahara- shtra	Aurangabad	154	42.97	20.70	23	50.97	17.70	942	47.39	22.20	4.42	2.43*	-3.58	-0.96
	Latur	241	39.66	19.50	70	36.38	17.30	806	40.70	18.50	1.04	0.74	4.32	1.98*
	Nanded	238	38.80	23.10	143	38.22	20.80	615	37.75	20.20	-1.05	-0.62	-0.47	-0.25
	Osmanabad	228	40.83	15.20	41	43.19	19.70	822	44.48	17.80	3.65	3.08*	4.94	0.41
	Parbhani	178	35.74	15.90	64	34.23	14.90	787	36.52	14.30	0.78	0.60	3.07	1.18

♣CR Value between SC and others

♣♣CR Value between ST and others

* p < .05

two in Maharashtra. Of these five districts, in three districts though the differences were significant yet they were under the ceiling of the DPEP. Thus it signified that the goal of the DPEP was achieved in 13 out of 15 districts. The results in respect of ST versus others showed that the differences in achievement in language in class III were found to be significant in 7 out of 15 districts in four states, two of them favouring ST students. Two out of these seven districts though had demonstrated significant differences, they were still within the 5 percent ceiling of the DPEP. It indicated that nine out of fifteen districts had realised the DPEP goal of reducing the differences in achievement to less than 5 percent between ST and others.

- 13 out of 15 districts in four states achieve the DPEP goal of reducing differences in achievement between SC and others.
- 9 out of 15 districts realise the DPEP goal of reducing the differences in achievement between ST and others.
- Maharashtra makes an edge over other states in reducing achievement differences across social groups.

6.2.2. Differences in Achievement in Mathematics

Table 6.4 illustrates differences in achievement in mathematics of class III students.

Table 6.4: Categorywise mean achievement of class III students in mathematics

State	District	SC			ST			Others			Differ- ence Value between SC and others	♣CR Value	Differ- ence Value bet- ween ST & others	♣♣CR Value CR
		N	M%	SD	N	M%	SD	N	M%	SD				
Assam	Darrang	98	49.40	22.20	144	63.50	28.25	414	60.00	31.43	10.60	4.13*	-3.50	-1.24
	Dubri	85	60.25	27.83	24	49.38	19.80	668	61.78	25.43	1.53	0.48	12.40	2.99*
	Morigaon	134	53.43	20.35	134	51.98	22.35	463	57.30	22.18	3.87	1.89	5.32	2.42*
Karna- taka	Belgaum	123	62.43	22.93	129	58.23	23.75	685	57.25	26.00	-5.18	-2.29*	-0.98	-0.42
	Kolar	182	31.65	20.78	116	37.38	19.60	465	34.08	19.50	2.43	1.35	-3.30	-1.61
	Mandya	150	42.65	24.50	32	44.78	24.68	731	41.40	26.25	-1.25	-0.56	-3.38	-0.77
	Raichur	170	45.10	25.55	124	54.10	22.63	563	46.48	22.25	1.38	0.63	-7.62	-3.39*
Kerala	Kasargod	97	36.78	15.23	9	45.55	12.05	1148	38.93	17.40	2.15	1.32	-6.62	-1.64
	Malappuram	96	35.98	16.50	11	36.83	17.18	1264	37.10	15.93	1.12	0.65	0.27	0.05
	Wayanad	47	34.78	15.03	109	38.45	18.78	622	37.03	16.65	2.25	0.98	-1.42	-0.74
Mahara- shtra	Aurangabad	154	32.33	23.80	23	32.61	20.90	942	37.20	25.20	4.87	2.33*	4.59	1.04
	Latur	241	24.84	15.70	70	25.85	15.70	806	27.57	18.30	2.73	2.28*	1.72	0.86
	Nanded	238	26.48	20.70	143	20.96	18.60	615	25.07	18.80	-1.41	-0.91	4.11	2.37*
	Osmanabad	228	29.88	15.80	41	32.98	17.00	822	32.30	17.40	2.42	2.01*	-0.68	-0.25
	Parbhani	178	22.82	13.80	64	24.39	14.00	787	23.50	14.10	0.68	0.59	-0.89	-0.47

♣CR Value between SC and others

♣♣CR Value between ST and others

* p < .05

The figures displayed in Table 6.4 demonstrated that the differences in achievement in mathematics in class III between SC & others were not found to be significant in ten out of fifteen districts in four states. These differences were, however, found to be significant in one district each in Assam & Karnataka and three districts in Maharashtra. However, these differences in Maharashtra were within the ceiling of the DPEP. It signified that the goal of the DPEP had been realised in 13 out of 15 districts. Out of the remaining two districts, one found favour with SC students.

The entries in respect of ST versus others showed that the differences in achievement were not found to be significant in eleven out of 15 districts in four states. In the remaining 4 districts where these differences were significant, one district namely Nanded happened to be under the ceiling of the DPEP. Eleven out of 15 districts had realised the goal of the DPEP of reducing differences in achieve-

ment between ST and others to less than 5% . Of the remaining 4 districts, two favoured ST students. It was evident from the results that of all the four states, Kerala is one such state which has completely realised the goal of the DPEP across the social groups.

- Of 15 districts in 4 states, 13 districts succeeds in realising the goal of reducing differences in achievement between SC & others and 11 districts between ST & others.
- Kerala achieves the singular distinction of realising DPEP goal across the social groups.

6.3 Differences in Achievement in Class IV

Categorywise differences in achievement exhibited by class IV students both in language and mathematics are discussed in the following paragraphs.

6.3.1. Differences in Achievement in language

Table 6.5 illustrates differences in achievement in language of class IV students.

Table 6.5: Categorywise mean achievement of class IV students in language

State	District	SC			ST			Others			Differ- ence Value between SC and others	▲CR	Differ- ence Value bet- ween ST & others	▲▲CR
		N	M%	SD	N	M%	SD	N	M%	SD				
Haryana	Hissar	385	38.00	9.93	14	31.53	11.88	597	38.66	10.29	0.66	1.08	7.13	2.24*
	Jind	262	36.20	11.69	1	31.43	—	757	38.06	10.66	1.86	2.29*	6.63	—
	Kaithal	247	40.74	10.86	5	46.00	12.47	639	43.40	10.64	2.66	3.36*	-2.60	-0.46
	Sirsa	369	46.46	10.88	2	47.86	1.01	656	47.12	9.70	0.66	1.08	-0.74	-0.09
Madhya Pradesh	Chattarpur	153	36.26	5.41	19	36.29	9.10	369	44.40	3.82	8.14	24.45*	8.11	3.76*
Pradesh	Panna	144	37.04	3.29	25	29.77	3.43	334	35.61	3.14	-1.42	-4.38*	5.84	8.10*
	Rewa	105	35.40	11.67	69	37.31	13.67	586	35.83	13.96	0.43	0.34	-1.48	-0.84
	Satna	181	28.89	9.71	52	24.37	10.37	555	32.17	13.03	3.28	3.60*	7.80	5.02*
	Sidhi	52	35.17	10.34	151	36.86	10.23	390	40.09	9.31	4.92	3.23*	3.23	3.37*
	Tikamgarh	142	39.15	19.14	13	29.56	11.57	357	41.64	18.29	2.49	1.32	12.08	3.47*
	Bilaspur	169	49.36	6.30	132	50.55	6.29	491	47.35	7.69	-2.01	-3.36*	-3.20	-4.92*
	Rajnandgaon	81	24.60	9.31	117	30.27	5.32	340	38.17	5.32	13.57	12.56*	7.90	13.81*
	Raigarh	56	41.83	5.59	279	43.67	3.84	291	43.31	7.34	1.48	1.70	-0.36	-0.74

Contd

State	District	SC			ST			Others			Differ- ence Value between SC and others	♣CR Value	Differ- ence bet- ween ST & others	♣♣CR Value
		N	M%	SD	N	M%	SD	N	M%	SD				
	Surguja	16	41.51	10.30	230	43.26	10.17	259	44.51	10.54	3.00	1.10	1.25	1.33
	Shahdol	62	35.86	12.00	257	25.33	9.14	270	37.62	9.71	1.76	1.07	12.29	14.94*
	Betul	100	32.01	3.60	138	32.57	3.32	649	43.91	4.57	11.90	29.46*	11.34	33.78*
	Dhar	127	39.58	17.00	183	43.04	16.00	234	38.92	15.00	-0.66	-0.37	-4.12	-2.67*
	Guna	101	31.03	7.00	21	32.24	7.60	373	33.05	7.20	2.02	2.55*	0.81	1.23
	Mandsaur	144	38.16	12.08	17	36.87	9.93	560	40.03	20.02	1.87	1.42	3.16	1.20
	Rajgarh	94	30.31	3.58	28	32.57	4.31	446	34.94	4.34	4.63	10.91*	2.37	2.77*
	Raisen	97	31.17	15.77	45	39.49	15.67	282	39.51	18.08	8.34	4.30*	0.02	0.01
	Ratlam	96	37.05	2.55	128	27.21	3.10	339	37.76	3.74	0.71	2.14*	10.55	30.84*
	Sehore	229	31.64	3.94	61	33.16	4.14	559	31.97	3.30	0.33	1.11	-1.19	-2.15*
Tamil	Dharmapuri	202	41.28	15.01	43	49.83	13.12	785	44.60	14.48	3.32	2.89*	-5.23	-2.32*
Nadu	Cuddalore	350	59.96	19.07	5	47.14	27.38	602	59.76	18.56	-0.20	0.16	12.62	1.51
	Thiruvan- namalai	219	43.44	15.91	127	26.59	18.18	575	47.47	15.03	4.03	3.33*	20.88	13.61*
	Villupuram	390	49.78	14.12	59	53.00	16.60	653	51.97	14.39	2.19	2.40*	-1.03	-0.52

♣CR Value between SC and others

♣♣CR Value between ST and others

* p < .05

The figures indicated in table 6.5 showed that the differences in achievement in language in class IV between SC and others were not found to be significant in two out of four districts in Haryana, eight out of nineteen in Madhya Pradesh and one out of four in Tamil Nadu. These differences were found to be significant in two districts in Haryana, three in Tamil Nadu and eleven in Madhya Pradesh. However, these differences in Haryana and Tamil Nadu and also in seven out of eleven districts in Madhya Pradesh were under the DPEP ceiling of 5 percent. In all, twenty three out of twenty seven districts had realised the goal of DPEP of reducing differences between SC and others. The entries made in respect of ST & others revealed that the differences in achievement were not found to be significant in two districts each in Haryana and Tamil Nadu and in six in Madhya Pradesh. In 13

districts in Madhya Pradesh where the differences in achievement were significant, six districts were well within the limit of the DPEP ceiling. In Dharmapuri, where the differences in achievement exceeded five percent, it favoured ST students.

- All the DPEP districts in Haryana and Tamil Nadu and 15 in Madhya Pradesh achieve the DPEP goal of reducing differences in achievement between SC and others.
- Two districts in Haryana, 1 in Tamil Nadu and 11 in Madhya Pradesh reduce differences in achievement between ST and others.

6.3.2. Differences in Achievement in Mathematics

Table 6.6 indicates differences in achievement in mathematics of class IV students.

Table 6.6 Categorywise mean achievement of class IV students in mathematics

State	District	SC			ST			Others			Differ- ence Value between SC and others	♣CR Value	Differ- ence bet- ween ST & others	♣♣CR Value
		N	M%	SD	N	M%	SD	N	M%	SD				
Haryana	Hissar	385	42.18	19.29	14	34.11	20.01	597	44.26	18.50	2.08	1.59	10.15	1.89
	Jind	262	38.34	18.35	1	27.50	—	757	40.22	17.75	1.88	1.52	12.72	—
	Kaithal	247	40.96	16.42	5	52.00	19.87	639	46.54	16.00	5.58	4.52*	-5.46	-0.62
	Sirsa	369	60.60	22.03	2	48.75	37.12	656	60.69	20.75	0.09	0.18	11.94	0.46
Madhya Pradesh	Chattarpur	153	35.93	4.67	19	32.78	14.35	369	36.35	6.00	0.42	0.85	3.57	1.05
	Panna	144	23.20	2.77	25	20.47	5.10	334	26.07	3.15	2.87	9.93*	5.60	5.31*
	Rewa	105	21.52	17.25	69	26.22	14.90	586	24.32	17.75	2.80	1.52	-1.90	-0.97
	Satna	181	22.37	8.20	52	14.85	6.37	555	24.09	3.95	1.72	2.71*	9.24	10.18*
	Sidhi	52	23.10	16.65	151	27.15	13.90	390	29.97	14.63	6.87	2.81*	2.82	2.08*
	Tikamgarh	142	28.32	18.68	13	23.65	7.25	357	32.25	16.45	3.93	2.19*	8.60	3.79*
	Bilaspur	169	35.95	5.53	132	35.58	7.65	491	36.58	6.53	0.63	1.21	1.00	1.37
	Rajnandgaon	81	16.90	6.19	117	17.15	4.02	340	29.58	5.25	12.68	11.16*	12.43	26.43*
	Raigarh	56	31.37	6.00	279	28.33	5.40	291	31.62	3.50	0.25	0.30	3.29	8.58*
	Surguja	16	23.45	10.90	230	29.15	11.37	259	30.72	10.50	7.27	2.52*	1.57	1.58
	Shahdol	62	23.76	21.75	257	23.88	15.75	270	21.27	14.25	-5.39	-1.85	-2.61	-1.99*
	Betul	100	33.42	6.17	138	30.71	5.35	649	36.95	9.93	3.53	4.82*	6.24	10.38*
	Dhar	127	31.33	15.70	183	32.68	16.68	234	31.25	17.13	-0.08	-0.04	-1.43	-0.49
	Guna	101	26.88	7.00	21	28.58	7.60	373	34.60	7.20	7.72	9.93*	6.02	3.46*
	Mandsaur	144	26.15	11.06	17	23.45	7.47	560	26.78	13.40	0.63	0.58	3.33	1.71
	Rajgarh	94	21.95	11.42	28	21.57	13.20	446	38.47	12.92	16.52	12.39*	16.90	6.26*
Raisen	97	26.81	16.15	45	32.23	21.68	282	31.67	20.53	4.86	2.37*	-0.56	-0.16	
Ratlam	96	34.47	7.20	128	34.57	4.32	339	26.26	4.87	-8.21	-10.46*	-8.31	-17.83*	
Sehore	229	21.50	1.67	61	34.45	2.90	559	18.37	4.32	-3.13	-14.65*	-16.08	-38.59*	
Tamil Nadu	Dharmapuri	202	34.57	19.29	43	40.12	20.53	785	38.48	19.71	3.91	2.53*	-1.64	-0.53
	Cuddalore	350	45.91	24.00	5	35.50	24.05	602	48.91	24.77	3.00	1.82	13.41	1.21
	Thiruvannamalai	219	29.13	17.68	127	16.69	14.39	575	33.12	17.31	3.99	2.88*	16.43	9.95*
	Villupuram	390	52.26	21.52	59	42.46	23.00	653	50.98	20.05	-1.28	-0.97	8.52	3.09*

♣CR Value between SC and others

♣♣CR Value between ST and others

* p < .05

The entries made in table 6.6 revealed that the differences in achievement in mathematics in class IV were not found to be significant in 12 out of 27 districts between SC & others in three states. In the remaining districts where these differences were found to be significant, in eight of them, they were under the ceiling of five percent. The DPEP goal had been realised in 19 out of 27 districts. Of the remaining 8 districts where the goal had not been achieved, the differences in achievement favoured SC students in two districts.

As regards the differences in achievement between ST and others, the differences were not found to be significant in 12 districts. In the remaining districts where these differences were found to be significant, in three of them, they were under the ceiling of five percent. However, 11 out of 27 districts had reached the goal of the DPEP. Of the remaining districts the differences in achievement in three districts stood in favour of ST students.

- 19 out of 27 districts in Haryana, Tamil Nadu and Madhya Pradesh realise the goal of the DPEP in reducing the differences between SC and others.
- Differences in achievement between ST and others overcome eleven districts in three states.

Summing Up

An overview of the districts that laid claim to achieving the DPEP goal of reducing categorywise differences in achievement is highlighted in Table 6.7.

The analyses of the data presented in the preceding paragraphs signify that the DPEP goal of reducing the differences in achievement between SC and others and between ST and others in class I in language have been realised in twenty one out of forty two districts in seven states and in seventeen out of thirty one districts in four states respectively. The remaining districts have still to reach the level of the DPEP goal. Of all the states, Maharashtra is one such state where differences in achievement in language in class I ceases to exist across the social groups except in Latur and that too between SC and others. In mathematics it is evident from the results that the goal of the DPEP have been realised in 22 out of 42 districts by reducing the differences between SC & others and in 15 out of 31 districts in four states by reducing the achievement gaps between ST and others. In Assam these differences between SC & others cease to exist in all the districts.

The analyses of results in respect of categorywise differences in achievement in language in class III reveal that the goal of the DPEP has been achieved in 13 out of 15 districts in so far as the differences between SC & others and in 9 out of 15 between ST & others are concerned. Of the four states, the state of Maharashtra appears to have made an edge over other states in reducing the achievement differences across social groups. In mathematics achievement in Class III, 13 out of 15 districts have succeeded in realising the goal of the DPEP by reducing the differences in achievement between SC

Table 6.7: Districts claiming DPEP goal in regard to categories

Class	Total Districts	Districts claiming DPEP goal			
		Language		Mathematics	
		SC vs Others	ST vs Others	SC vs Others	ST vs Others
I	42	21	17*	22	15*
III	15	13	9	13	11
IV	27	23	14	19	11

* out of 31 districts

& others and 11 districts by reducing it between ST & others. Of all the states, Kerala has got the singular distinction of realising the DPEP goal across the social groups.

The discussion in regard to categorywise differences in achievement in class IV in language signify that all the eight districts in the states of Haryana and Tamil Nadu and fifteen in Madhya

Pradesh have overcome the goal of the DPEP by reducing these differences between SC and others and two districts in Haryana, one in Tamil Nadu and eleven in Madhya Pradesh have reached the DPEP goal by reducing these differences between ST and others. In mathematics the differences in achievement in class IV between SC & others cease to exist in nineteen out of twenty seven districts and in eleven districts between ST & others.

Influence of Intervening Variables on Students' Performance

This chapter provides for the influence of intervening variables on students' performance such as qualifications of the parents, language used at home and the medium of instructions in school, the availability of competency based teaching learning material and teacher training. An account of the impact of each intervening variable is discussed as under:

7.1 Influence of Parental Qualifications on Students' Achievement

Prior to discussing the results, it may be pertinent to mention that since the number of parents possessing senior secondary and college level qualifications is lesser than the number of parents

in illiterate and primary segments, any attempt to make a comparison between each cell may not be desirable. Hence, it is preferable to analyse the trend of students' achievement of those who belong to illiterate parents vis-a-vis parents with primary education and secondary and above qualifications. It is also important to mention here that the information of parental qualifications had been collected through an interview mode from the students of penultimate classes (III/IV), therefore, the data subscribe to only all such

Table 7.1 to 7.4 illustrates the average performances of the students in language and mathematics computed on the basis of the qualifications of their parents.

Table 7.1: Mean percent of achievement of students in language and mathematics in class III tests according to Fathers' Qualifications

State	District		Illiterate	Literate	Primary	Secondary	Sr. Sec.	College	Don't know/ Can't Say
Assam	Darrang	N	102.00	47.00	96.00	218.00	40.00	31.00	122.00
		Math	50.96	57.98	55.13	57.68	61.00	60.32	60.04
		Lang.	50.56	56.73	56.40	59.70	58.69	61.14	62.16
	Dhubri	N	266.00	46.00	136.00	219.00	64.00	23.00	23.00
		Math	60.79	61.30	55.33	61.37	61.25	59.35	54.78
		Lang.	59.09	60.70	55.67	59.73	59.38	55.32	55.65
	Morigaon	N	169.00	78.00	144.00	175.00	49.00	21.00	95.00
		Math	62.31	55.61	56.81	55.66	49.13	53.21	45.39
		Lang.	62.48	60.49	59.96	57.77	57.43	63.59	52.28
Karnataka	Belgaum	N	278.00	55.00	184.00	297.00	51.00	29.00	45.00
		Math	37.75	38.75	30.35	32.03	31.70	27.23	31.33
		Lang.	46.46	47.69	37.35	39.42	39.02	33.51	38.55
	Kolar	N	221.00	25.00	75.00	184.00	15.00	6.00	54.00
		Math	34.33	39.10	41.75	35.03	39.25	40.25	30.95
		Lang.	36.74	35.94	48.62	39.08	44.62	30.15	34.06

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State	District		Illiterate	Literate	Primary	Secondary	Sr. Sec.	College	Don't know/ Can't Say
	Mandya	N	247.00	42.00	88.00	237.00	30.00	15.00	109.00
		Math	44.05	61.53	41.68	40.30	45.50	41.50	38.30
		Lang.	44.12	50.77	40.80	40.00	45.63	44.62	43.32
	Raichur	N	291.00	28.00	158.00	190.00	34.00	16.00	28.00
		Math	48.15	52.30	45.18	47.98	61.75	57.03	42.13
		Lang.	49.42	60.98	49.54	50.52	69.66	59.60	44.83
Kerala	Kasargod	N	20.00	137.00	167.00	427.00	34.00	36.00	417.00
		Math	35.75	37.13	39.15	40.08	46.33	50.35	36.78
		Lang.	40.23	49.74	49.74	52.71	60.40	66.11	50.42
	Malappuram	N	31.00	287.00	183.00	436.00	43.00	16.00	358.00
		Math	26.38	34.83	37.45	37.68	49.43	62.65	36.48
		Lang.	41.63	52.23	51.63	54.11	67.66	75.38	52.75
	Wayanad	N	24.00	87.00	92.00	236.00	30.00	8.00	289.00
		Math	32.70	34.40	32.70	35.15	41.93	42.50	40.78
		Lang.	44.88	49.28	49.32	50.54	60.66	65.97	48.88
Maharashtra	Aurangabad	N	229.00	75.00	174.00	404.00	67.00	26.00	145.00
		Math	37.40	32.50	36.50	37.95	39.48	47.33	30.03
		Lang.	46.95	44.58	45.55	48.74	48.69	62.42	39.06
	Latur	N	241.00	87.00	111.00	432.00	90.00	50.00	105.00
		Math	24.58	25.78	28.23	27.63	26.58	33.60	26.20
		Lang.	36.52	44.42	41.77	41.51	40.18	49.03	34.35
	Nanded	N	245.00	224.00	116.00	209.00	67.00	53.00	81.00
		Math	22.13	19.98	23.80	26.53	30.48	36.63	31.60
		Lang.	34.26	31.66	34.00	39.48	44.05	54.91	45.11
	Osmanabad	N	305.00	60.00	111.00	414.00	91.00	41.00	71.00
		Math	29.15	24.00	33.35	33.58	35.15	43.23	27.18
		Lang.	41.25	36.89	43.78	45.95	48.06	53.08	37.65
	Parbhani	N	269.00	103.00	138.00	346.00	69.00	46.00	59.00
		Math	20.55	21.65	22.53	24.03	25.10	36.40	24.30
		Lang.	32.52	33.89	35.29	36.71	42.62	51.29	36.62

Table 7.2: Mean percent of achievement of students in language and mathematics in class III tests according to Mothers' Qualifications

State	District		Illiterate	Literate	Primary	Secondary	Sr. Sec.	College	Don't know/ Can't Say
Assam	Darrang	N	251.00	37.00	27.00	31.00	16.00	6	88
		Math	50.77	56.69	62.42	60.40	58.13	52.50	61.96
		Lang.	52.20	54.43	62.68	61.43	56.73	59.74	63.48
	Dhubri	N	454.00	34.00	112.00	138.00	21.00	1	17
		Math	60.19	53.09	62.25	58.91	56.43	35.00	57.65
		Lang.	58.30	53.85	60.52	58.02	56.12	63.08	53.21
	Morigaon	N	324.00	71.00	121.00	109.00	21.00	4	73
		Math	61.27	55.32	49.34	54.70	56.43	41.25	42.81
		Lang.	62.32	57.72	53.79	59.32	66.30	53.08	49.82
Karnataka	Belgaum	N	456.00	33.00	162.00	211.00	20.00	5.00	42.00
		Math	35.05	33.18	32.68	30.83	30.25	24.00	37.48
		Lang.	40.58	40.92	37.32	34.68	36.62	24.00	47.38
	Kolar	N	338.00	25.00	64.00	108.00	5.00	-	38.00
		Math	36.35	38.30	36.05	34.48	29.00	-	30.05
		Lang.	39.60	41.72	39.75	37.88	32.00	-	30.92
	Mandya	N	379.00	30.00	84.00	181.00	18.00	3.00	78.00
		Math	44.63	61.30	39.00	39.23	39.09	31.78	42.28
		Lang.	43.88	53.02	43.91	38.74	38.09	31.78	42.28
	Raichur	N	544.00	22.00	87.00	55.00	9.00	1.00	18.00
		Math	-	56.70	50.23	48.85	54.70	55.00	37.35
		Lang.	50.71	52.86	57.91	50.28	63.91	76.92	36.74
Kerala	Kasargod	N	44.00	174.00	217.00	365.00	47.00	14.00	377.00
		Math	33.13	38.75	38.85	41.03	43.93	52.33	36.55
		Lang.	47.34	47.48	49.85	54.17	61.57	68.35	50.09
	Malappuram	N	58.00	295.00	198.00	465.00	35.00	8.00	295.00
		Math	30.55	34.65	38.10	38.18	58.65	52.63	35.55
		Lang.	41.57	51.78	53.28	46.32	70.42	70.18	51.60
	Wayanad	N	52.00	73.00	100.00	254.00	32.00	6.00	249.00
		Math	31.10	38.88	33.15	36.60	38.35	54.18	39.55
		Lang.	45.26	51.28	49.22	59.42	58.71	77.18	49.01
Maharashtra	Aurangabad	N	566.00	38.00	174.00	222.00	27.00	2.00	91.00
		Math	37.35	32.38	35.48	38.95	45.65	76.25	26.00
		Lang.	47.09	44.43	47.49	47.83	53.08	87.69	37.94

Contd.

State	District		Illiterate	Literate	Primary	Secondary	Sr. Sec.	College	Don't know/ Can't Say
Maharashtra	Latur	N	448.00	64.00	173.00	317.00	29.00	6.00	80.00
		Math	25.03	25.60	28.08	29.85	30.50	44.50	21.65
		Lang.	38.34	44.66	41.95	42.37	46.51	63.58	31.28
	Nanded	N	542.00	131.00	87.00	146.00	28.00	10.00	51.00
		Math	23.53	17.00	24.25	31.35	35.73	35.75	33.60
		Lang.	35.65	29.60	39.02	44.80	52.25	46.31	41.42
	Osmanabad	N	424.00	36.00	193.00	334.00	42.00	10.00	54.00
		Math	31.08	26.40	33.25	33.15	34.05	42.50	25.28
		Lang.	42.72	38.38	44.28	45.88	44.49	59.38	37.52
	Parbhani	N	580.00	63.00	116.00	207.00	25.00	6.00	33.00
		Math	21.65	20.55	24.45	25.83	33.95	50.43	24.85
		Lang.	33.75	36.12	37.48	40.57	48.72	61.28	33.98

Table 7.3: Mean percent of achievement of students in language and mathematics in class IV tests according to Fathers' Qualifications

State	District		Illiterate	Literate	Primary	Secondary	Sr. Sec.	College	Don't know/ Can't Say
Haryana	Hissar	N	448.00	36.00	129.00	327.00	22.00	27.00	7.00
		Maths	42.00	44.50	41.00	45.25	41.00	51.75	46.75
		Lang.	38.43	38.00	37.71	38.14	40.57	38.14	39.86
	Jind	N	386.00	15.00	132.00	389.00	42.00	27.00	29.00
		Maths	38.50	49.75	37.00	40.75	40.50	46.75	40.25
		Lang.	37.14	39.43	37.00	37.86	40.14	40.43	34.71
	Kaithal	N	453.00	16.00	107.00	279.00	18.00	18.00	-
		Maths	44.50	37.75	43.50	46.25	57.00	43.50	-
		Lang.	42.00	43.29	42.29	43.43	47.57	45.29	-
	Sirsa	N	450.00	29.00	187.00	290.00	36.00	33.00	2.00
		Maths	61.50	55.00	60.00	60.75	53.00	60.75	91.25
		Lang.	46.86	44.00	46.57	47.43	46.29	48.29	53.57
Tamil Nadu	Dharmapuri	N	257.00	110.00	315.00	267.00	43.00	16.00	8.00
		Maths	36.09	40.36	37.06	38.30	40.52	56.25	30.94
		Lang.	41.86	47.90	44.13	44.57	44.08	51.52	37.14
	Cuddalore	N	210.00	44.00	289.00	265.00	73.00	11.00	47.00
		Maths	46.48	57.67	47.69	48.01	48.32	51.36	38.83
		Lang.	56.62	67.14	59.35	60.53	62.49	60.26	61.49

Contd.

State	District		Illiterate	Literate	Primary	Secondary	Sr. Sec.	College	Don't know/ Can't Say
Tamil Nadu	Thiruvanna- malai	N	200.00	53.00	318.00	245.00	40.00	4.00	50.00
		Maths	23.59	29.29	31.21	33.87	33.31	42.50	26.35
		Lang.	35.27	42.96	45.97	48.49	42.89	52.86	40.60
	Villupuram	N	173.00	174.00	311.00	327.00	72.00	13.00	19.00
		Maths	47.14	55.95	50.02	50.77	53.75	43.65	44.34
		Lang.	52.69	51.31	49.77	51.24	53.37	53.85	52.71

Table 7.4: Mean percent of achievement of students in language and mathematics in class IV tests according to Mothers' Qualifications

State	District		Illiterate	Literate	Primary	Secondary	Sr. Sec.	College	Don't know/ Can't Say
Haryana	Hissar	N	781.00	47.00	74.00	77.00	8.00	4.00	5.00
		Maths	42.75	47.00	41.25	47.75	44.00	61.25	44.00
		Lang.	37.86	38.14	39.14	40.75	42.00	39.14	44.00
	Jind	N	796.00	19.00	117.00	61.00	4.00	3.00	20.00
		Maths	38.75	50.25	43.50	42.50	43.25	65.00	39.00
		Lang.	37.43	41.71	37.57	38.57	38.29	41.00	36.57
	Kaithal	N	711.00	9.00	86.00	75.00	7.00	3.00	-
		Maths	44.75	40.75	44.25	46.75	66.50	55.75	-
		Lang.	42.43	47.75	42.57	43.86	44.29	46.71	-
	Sirsa	N	801.00	16.00	110.00	89.00	5.00	4.00	2.00
		Maths	60.50	49.00	65.00	57.25	72.00	69.50	62.50
		Lang.	47.00	42.57	47.14	46.71	48.57	40.00	48.57
Tamil Nadu	Dharma- puri	N	495.00	99.00	238.00	160.00	21.00	4.00	7.00
		Maths	37.14	42.15	35.55	40.20	46.43	43.13	23.57
		Lang.	43.79	48.34	42.15	45.59	50.07	42.14	31.02
	Cuddalore	N	401.00	43.00	250.00	171.00	29.00	2.00	38.00
		Maths	49.22	62.91	44.45	48.01	42.76	26.25	40.06
		Lang.	58.70	70.90	58.74	61.00	60.34	48.58	63.87
	Thiruvanna malai	N	419.00	82.00	253.00	112.00	5.00	2.00	39.00
		Maths	26.66	33.38	32.96	32.81	31.00	23.75	31.92
		Lang.	39.30	49.70	47.51	47.44	49.43	44.29	43.66
	Villupuram	N	416.00	184.00	297.00	162.00	20.00	3.00	11.00
		Maths	50.54	52.95	50.37	50.14	49.25	65.83	59.09
		Lang.	52.23	49.65	50.11	52.35	57.71	56.19	45.32

The entries posted in Tables 7.1 to 7.4 revealed that in the state of Assam in Darrang district the influence of parental qualifications on students' achievement in both the subjects turned out to be positive. While the district of Dhubri exhibited mixed results, Morigaon showed a decline. In the State of Karnataka, it is only in the district of Raichur where positive effects of parental qualifications on students' achievement both in language and mathematics had emerged. The remaining three districts demonstrated mixed results. In all the three districts of Kerala increase in parental qualifications had demonstrated an increase in the achievement level of students in both the subjects. In Maharashtra with the exception of Aurangabad the parental qualifications in the remaining four districts seemed to have a positive influence on students' achievement in both the subjects. The state of Haryana demonstrated mixed results with more number of positive cases of parental qualifications influencing students' achievement in both the subjects. Like Haryana, Tamil Nadu also displayed mixed results where, in a large number of cases the parental qualifications tended to make a positive influence on students' achievement in both the subjects. Similar data for the state of Madhya Pradesh was

not available and hence not included.

- Increased parental qualifications effect in higher students' achievement in most cases.
- Influence of parental qualifications more pronounced in the state of Kerala.

7.2 Influence of Language Used at Home vs School on Students' Achievement

It is not necessary that the language spoken at home is the same as that of the medium of instructions at school. There are certain pockets in the country where the language at home differs from the language at school. Whether these differences result in any gains or losses are highlighted and discussed in the following paras.

Tables 7.5 and 7.6 display a comparative assessment of students' achievement of penultimate classes where the language used at home is similar to the official state language against where the language used at home is dissimilar from the official state language. It may be pertinent to mention here that in the absence of such a dichotomy in Madhya Pradesh, the table does not provide for the data from Madhya Pradesh.

Table 7.5: Medium of instructions and achievement of students in class III tests

State	District		Language Used at Home			Language Used at Home			CR Value
			Same as Official State Language			Different from Official State Language			
			N	M%	SD	N	M%	SD	
Assam	Darrang	L	480	38.45	12.49	176	35.91	14.11	2.02*
		M	480	25.03	12.97	176	19.99	11.35	4.83*
	Dubri	L	48	39.08	11.69	729	37.24	13.00	1.04
		M	48	27.88	10.94	729	24.27	10.27	2.20*
	Morigaon	L	527	36.23	10.99	204	42.4	11.13	-6.73*
		M	527	22.07	9.04	204	22.63	8.31	-0.78
Karnataka	Belgaum	L	859	35.72	34.33	78	17.74	31.49	4.78*
		M	861	36.00	36.25	78	17.5	31.5	4.87*
	Kolar	L	290	40.46	18.97	459	38.31	21.04	1.43
		M	297	35.75	20.30	457	35.50	20.25	0.17

Contd.

State	District		Language Used at Home			Language Used at Home			CR Value
			Same as Official State Language			Different from Official State Language			
			N	M%	SD	N	M%	SD	
	Mandya	L	761	42.00	20.93	151	40.46	17.26	0.96
		M	774	42.25	27.00	138	40.25	25.25	0.85
	Raichur	L	650	47.08	23.92	199	49.08	25.10	-0.99
		M	645	49.00	24.75	209	46.05	25.50	1.24
Kerala	Kasargod	L	1203	25.71	10.18	34	25.82	8.94	-0.07
		M	1203	38.73	17.28	34	46.33	13.45	-3.17*
	Malappuram	L	1373	26.68	9.82	1	37.64	--	--
		M	1355	37.13	15.95	1	77.50	--	--
	Wayanad	L	757	24.98	9.89	11	25.46	11.46	-0.13
		M	755	37.25	16.73	11	29.55	17.70	1.37
Mahara-shtra	Aurangabad	L	870	46.33	21.40	244	48.76	23.80	-1.44
		M	870	36.19	24.70	244	37.69	26.30	-0.80
	Latur	L	976	39.78	18.40	141	43.30	19.80	-1.99*
		M	976	26.85	17.10	141	27.02	17.20	-0.11
	Nanded	L	816	37.94	21.20	180	39.56	20.10	-1.09
		M	816	25.19	19.60	180	23.14	18.10	1.36
	Osmanabad	L	968	43.30	17.40	123	46.17	17.30	-1.70
		M	968	31.54	17.10	123	34.02	17.00	-1.53
	Parbhani	L	882	36.25	14.60	147	36.19	14.10	0.05
		M	881	22.98	13.90	148	26.18	14.10	-2.48*

* p < .05

Table 7.6: Medium of instructions and achievement of students in class IV tests

State	District		Language Used at Home			Language Used at Home			CR Value
			Same as Official State Language			Different from Official State Language			
			N	M%	SD	N	M%	SD	
Haryana	Hissar	L	967	38.40	17.82	29	36.45	14.85	0.68
		M	967	43.00	19.20	29	53.70	27.90	-1.88
	Jind	L	101	37.60	18.06	2	30.00	4.58	1.54
		M	101	39.80	17.90	2	26.30	5.30	2.41*
	Kaithal	L	843	42.55	18.65	48	44.85	19.59	-0.79
		M	843	44.50	16.80	48	53.60	18.60	-3.28*
	Sirsa	L	709	47.00	18.70	318	46.60	19.10	0.31
		M	709	58.80	20.20	318	62.60	22.30	-1.91
Tamil Nadu	Dharmapuri	L	913	44.31	14.79	117	43.10	13.38	0.84
		M	913	38.20	19.88	117	34.55	18.19	1.89

Contd.

			Language Used at Home			Language Used at Home			CR Value
			Same as Official State Language			Different from Official State Language			
			N	M%	SD	N	M%	SD	
Cuddalore	L	952	59.85	18.77	5	44.28	22.39	1.85	
	M	952	47.87	24.53	5	25.00	14.40	2.08*	
Thiruvanna- malai	L	897	43.51	17.26	24	48.15	14.35	-1.30	
	M	897	29.87	18.01	24	31.04	13.54	-0.32	
Villupuram	L	1083	51.25	14.48	19	51.28	13.29	-0.01	
	M	1083	51.07	20.79	19	45.92	23.55	1.07	

* p < .05

The figures posted in Tables 7.5 and 7.6 revealed that in the state of Assam the performance of those students who had the same language both at home and school were found to be significant than their counterpart both in mathematics and language in Darrang, only in mathematics in Dhubri and in language in Morigaon. In rest of the cases the differences were not found to be significant. In the state of Karnataka these differences were found to be significant only in the district of Belgaum in both subjects. In the remaining three districts these differences were not found to be significant. In Kerala no significant differences were observed in all the three districts except in mathematics in Kasargod. These differences were found to be significant only in two out of ten cases in Maharashtra, 2 out of 8 cases in Haryana and 1 out of 8 cases in Tamil Nadu. Apparently, the difference between the language spoken at home and at school failed to produce any remarkable change in students' achievement in both subjects as is evident in 18 out of 22 cases in language and in 14 out of 22 cases in mathematics where the differences in achievement did not turn out to be significant. Not only this, even in those cases where the differences were found to be significant, the differences in achievement found favour with students using different language at home than the language used at school in 2 out of 4 districts in language and 3 out of 8 districts in mathematics.

- Difference in the language spoken at home and used at school fails to create an adverse impact on students' achievement in most cases.

7.3 Influence of the Availability of Competency Based Teaching Learning Materials on Students' Achievement

The availability of competency based teaching learning materials to more and more school is expected to produce desirable improvement in students' achievement. Tables 7.7 and 7.8 depict the number of schools having competency based teaching learning material in terms of textbooks, work books, teachers' handbooks and teaching aids along with the mean achievement of class I and III/IV students across the states.

The figures printed in Tables 7.7 and 7.8 revealed that whichever district had maximum number of schools holding the complete range of competency based teaching learning materials, the better was their performance as reflected in the last four columns of the aforesaid tables. It is evident from the entries against Kolar in Karnataka, Wayanad in Kerala, Jind in Haryana and Thiruvannamalai in Tamil Nadu that in those districts where least number of schools had competency based teaching learning material, the performance of their students turned out to be lower as compared to other districts. In Madhya Pradesh the picture is slightly

Table 7.7: Number of schools having competency based teaching learning materials available for students and teachers of classes I and III

State	District	Textbooks		Workbooks		Teacher's Handbooks		Teaching Aids		Achievement			
		I	III	I	III	I	III	I	III	Class I		Class III	
										L	M	L	M
Assam	Darrang	37	39	5	5	18	18	35	37	75.45	74.45	58.11	59.18
	Dubri	38	35	1	1	18	15	36	27	67.30	71.55	57.48	61.25
	Morigaon	50	50	19	3	40	33	49	23	78.10	77.75	58.38	55.58
Karnataka	Belgaum	31	28	22	19	29	26	27	26	83.90	86.95	59.34	58.70
	Kolar	9	6	10	7	14	6	16	16	59.95	63.35	38.26	34.28
	Mandya	16	16	14	9	19	10	15	13	65.59	68.45	43.52	42.55
	Raichur	33	31	24	22	35	28	30	27	67.50	71.35	46.88	48.08
Kerala	Kasargod	16	16	9	11	9	9	8	9	75.30	73.60	51.29	38.83
	Malappuram	14	14	6	7	14	14	12	14	81.45	76.10	53.38	37.03
	Wayanad	11	10	9	9	9	9	10	10	69.30	66.10	49.97	37.10
Mahara-shtra	Aurangabad	45	47	1	0	28	27	45	45	76.62	66.46	46.82	36.43
	Latur	29	34	4	5	19	22	23	21	64.69	66.02	40.22	26.87
	Nanded	32	26	6	4	21	18	23	21	59.11	52.19	38.06	24.82
	Osmanabad	24	30	5	6	25	26	23	25	79.02	75.10	43.67	31.82
	Parbhani	42	41	9	7	27	24	33	33	56.83	57.91	36.24	23.44

Table 7.8: Number of schools having competency based teaching learning materials available for students and teachers of classes I and IV

State	District	Text Books		Work Books		Teacher's		Teaching		Achievement			
		I	IV	I	IV	I	IV	I	IV	Class I		Class IV	
										L	M	L	M
Madhya Pradesh	Chattarpur	32	31	6	5	11	13	4	6	56.96	56.20	41.84	36.12
	Panna	26	22	0	0	29	11	9	2	51.50	55.68	35.73	24.97
	Rewa	16	13	1	1	16	11	9	4	44.52	48.25	35.91	24.10
	Satna	50	30	4	3	37	9	27	6	50.95	38.85	30.91	23.09
	Sidhi	15	16	2	1	15	11	8	4	58.40	52.93	38.84	28.65
	Tikamgarh	36	25	14	6	27	11	27	10	57.25	66.00	40.63	30.93
	Bilaspur	35	199	7	0	14	1	22	1	69.90	71.85	48.31	36.28
	Rajnandgaon	35	38	0	0	10	15	21	39	69.65	67.90	34.41	24.97
	Raigarh	43	36	15	2	31	12	27	4	61.25	64.10	43.34	30.13
	Surguja	26	25	0	0	15	4	16	3	49.35	51.02	43.83	29.78
	Shahdol	35	18	9	0	17	6	26	3	50.85	45.55	32.07	22.67
	Betul	0	0	16	20	22	7	15	5	64.85	59.80	40.81	35.59
	Dhar	0	0	20	17	21	8	11	7	58.50	58.85	40.46	31.75

Contd.

State	District	Text Books		Work Books		Teacher's		Teaching		Achievement			
		I	IV	I	IV	I	IV	I	IV	Class I		Class IV	
										L	M	L	M
	Guna	0	0	16	23	11	6	9	3	63.67	36.51	32.60	32.77
	Mandsaur	0	0	33	15	22	11	16	8	55.25	55.20	39.60	26.60
	Rajgarh	0	0	11	15	15	4	11	5	53.65	54.00	34.06	34.90
	Raisen	26	21	13	8	15	8	14	4	69.45	66.24	37.60	30.62
	Ratlam	0	0	23	19	16	11	18	8	56.60	58.60	35.25	29.55
	Sehore	0	0	25	25	17	9	15	7	54.25	54.75	31.97	20.60
Haryana	Hissar	23	23	0	0	11	10	29	29	69.73	74.13	38.30	43.31
	Jind	0	0	0	0	0	0	0	0	63.28	70.90	37.58	39.73
	Kaithal	2	2	0	0	12	10	29	21	71.47	81.03	42.67	45.02
	Sirsa	0	0	0	0	0	0	0	2	73.75	80.58	46.89	60.64
Tamil Nadu	Dharmapuri	50	0	0	0	43	0	48	0	58.81	53.11	44.17	37.78
	Cuddalore	50	0	0	0	30	0	47	0	66.49	62.50	59.77	47.55
	Thiruvannamalai	50	0	0	0	1	0	17	0	56.34	52.27	43.63	30.94
	Villupuram	50	0	0	0	14	0	50	0	79.40	77.60	51.25	50.98

different. Eleven out of 19 districts in the state of Madhya Pradesh had textbooks but no workbook for their students. On the other hand there were examples of 6 districts which had the workbooks but no textbooks available. Raisen was the only district where all types of teaching learning material was available resulting thereby good performance of its class I students.

- Students' achievement stands related to the availability of competency based teaching learning materials.
- Higher the number of schools in a district possessing the complete range of competency based teaching learning material, the better is the students' performance.

7.4 Inservice Training

Table 7.9 demonstrates the status of inservice training record of the sampled teachers sited in rural urban segments.

It is evident from Table 7.9 that of the 42 districts, all the sampled urban teachers from 11 districts

had received in service training during the past three years, of them three districts were from Kerala, two each from Assam & Tamil Nadu, one from Haryana and three from Madhya Pradesh. Significantly, all the five districts from Maharashtra, all districts of Karnataka, three in Haryana, one in Assam and 16 in Madhya Pradesh reported a number of untrained teachers. However, in seven districts the number of teachers without inservice training was found to be insignificant.

In the rural sector, teachers who had received some kind of inservice training figured in seven districts only, namely Osmanabad in Maharashtra, Kaithal and Sirsa in Haryana, Kolar in Karnataka, Dharmapuri in Tamil Nadu and Bilaspur & Rajnandgaon in Madhya Pradesh. In 17 out of remaining 35 districts it was observed that more than 90% of the sampled teachers had received inservice training. It was in 18 out of 42 districts where the number of untrained teachers was worth significant notice.

Table 7.9: Number of Teachers who did not receive inservice training during last 3 years.

State	District	Rural Teachers			Urban Teachers		
		Sampled	Without Training	%	Sampled	Without Training	%
Assam	Darrang	101	7	6.93	47	0	0
	Dubri	94	20	21.28	36	0	0
	Morigaon	95	7	7.37	45	11	24.44
Karnataka	Belgaum	--	--	10.00	--	--	20.70
	Kolar	--	--	0	--	--	10.00
	Mandya	--	--	5.00	--	--	21.40
	Raichur	--	--	8.30	--	--	9.00
Kerala	Kasargod	182	8	4.40	42	0	0
	Malappuram	184	5	2.72	54	0	0
	Wayanad	116	5	4.31	23	0	0
Madhya Pradesh	Chattarpur	87	28	32.18	30	3	10.00
	Panna	102	21	20.59	46	5	10.87
	Rewa	120	2	1.67	41	0	0
	Satna	117	30	25.64	33	8	24.24
	Sidhi	102	36	35.29	30	15	50.00
	Tikamgarh	88	6	6.82	37	3	8.11
	Bilaspur	105	0	0	43	0	0
	Rajnandgaon	85	0	0	40	0	0
	Raigarh	99	7	7.07	39	8	20.51
	Surguja	95	22	23.16	37	14	37.81
	Shahdol	98	32	32.65	22	3	13.64
	Betul	49	14	28.57	40	8	20.00
	Dhar	96	14	14.58	41	11	26.83
	Guna	65	5	7.69	44	5	11.36
	Mandsaur	52	14	26.92	46	9	19.57
	Rajgarh	63	18	28.57	35	8	22.86
Raisen	73	14	19.18	33	8	24.24	
Ratlam	40	13	32.50	34	7	20.59	
Sehore	140	25	17.86	43	16	37.21	
Maharashtra	Aurangabad	130	25	19.23	34	5	14.71
	Latur	150	10	6.67	46	16	34.78
	Nanded	129	15	11.63	46	17	36.96
	Osmanabad	143	0	0	45	4	8.89
	Parbhani	122	15	12.30	43	10	23.26

Contd.

State	District	Rural Teachers			Urban Teachers		
		Sampled	Without Training	%	Sampled	Without Training	%
Haryana	Hissar	130	2	1.54	45	0	0
	Jind	140	5	3.57	47	10	21.28
	Kaithal	82	0	0	36	10	27.78
	Sirsa	97	0	0	46	15	32.61
Tamil Nadu	Dharmapuri	114	0	0	46	0	0
	Cuddalore	138	21	18.42	36	3	8.33
	Thiruvanamalai	118	11	9.32	27	0	0
	Villupuram	133	8	6.02	51	3	5.88

In order to assess the influence of inservice training of teachers on students' achievement, districtwise mean achievement scores were correlated with the percentage of teachers who received inservice training. The values of coefficient of correlation thus obtained are shown in Table 7.10.

Table 7.10: Showing correlation between Inservice training of teachers and students' achievement.

Class I		Class III/IV	
Language	Mathematics	Language	Mathematics
0.51	0.48	0.34	0.37

The figures printed in Table 7.10 revealed moderate influence of inservice training on students' achievement.

- Kerala sets a record in imparting inservice training.
- Teachers both in urban and rural sectors lack in service training.
- Moderate influence of inservice training of teachers on students' achievement.

7.5 Influence of Inservice Training

Table 7.11 illustrates the impact of inservice training conducted during the last three years as reported by the teachers in both the subjects during an

interview session. The table provides for combined weightages separately for language and mathematics that had been used for ascertaining the impact of inservice training programmes on the teaching of language and mathematics. A weighted score of 2.2 and above indicated an incremental impact. Any value lying between 2 and 2.2 signified a marginal impact.

The figures printed in Table 7.11 revealed that in language teaching there was an incremental impact in all the districts of Karnataka, Maharashtra, Haryana, Tamil Nadu, in two out of three districts in Kerala and in 12 out of 19 districts in Madhya Pradesh. Marginal impact was observed in all the districts of Assam, in Kasargod in Kerala and in 6 districts in Madhya Pradesh. In mathematics teaching, inservice training seemed to have an incremental impact in all the districts of Karnataka, Tamil Nadu, Maharashtra, in one district each in Kerala and Assam, three out of four districts in Haryana and in 11 out of 19 districts in Madhya Pradesh. Marginal impact of inservice training was observed in two districts each in Kerala, Assam, in one district in Haryana and six districts in Madhya Pradesh. The results are corroborated by the coefficients of correlation shown in Table 7.10.

Table 7.11: Impact of training

State	District	Language Teaching				Mathematics Teaching			
		High (3)	Average (2)	Low (1)	Combined Weightage	High (3)	Average (2)	Low (1)	Combined Weightage
Assam	Darrang	27	85	9	2.17	30	87	2	2.24
	Dubri	13	94	3	2.09	23	81	6	2.15
	Morigaon	18	100	4	2.11	14	104	4	2.08
Karnataka	Belgaum	117	64	7	2.59	107	72	9	2.52
	Kolar	78	58	6	2.51	79	53	10	2.49
	Mandya	74	90	6	2.40	68	98	4	2.38
	Raichur	71	62	5	2.48	61	74	3	2.42
Kerala	Kasargod	55	132	29	2.12	58	133	25	2.15
	Malappuram	74	145	13	2.26	63	144	26	2.16
	Wayanad	66	57	21	2.31	49	63	22	2.20
Madhya Pradesh	Chattarpur	41	47	1	2.45	39	47	3	2.40
Pradesh	Panna	62	47	10	2.44	59	48	12	2.39
	Rewa	73	62	2	2.52	69	64	4	2.47
	Satna	59	53	1	2.51	62	49	2	2.50
	Sidhi	65	16	0	2.80	40	41	0	2.49
	Tikamgarh	58	56	2	2.48	59	54	2	2.50
	Bilaspur	50	91	7	2.29	48	93	7	2.28
	Rajnandgaon	0	125	0	2.00	0	125	0	2.00
	Raigarh	38	97	3	2.25	31	103	4	2.20
	Surguja	43	49	4	2.41	44	46	5	2.41
	Shahdol	35	55	2	2.36	30	55	4	2.29
	Betul	20	57	3	2.21	15	61	2	2.17
	Dhar	7	18	7	2.00	12	15	11	2.03
	Guna	18	56	21	1.97	31	51	13	2.19
	Mandsaur	16	63	10	2.07	13	75	11	2.02
	Rajgarh	18	62	11	2.08	17	49	23	1.93
	Raisen	34	58	2	2.34	29	59	4	2.27
	Ratlam	19	32	11	2.13	13	34	16	1.95
Sehore	43	83	23	2.13	27	75	17	2.08	
Maharashtra	Aurangabad	112	51	0	2.69	110	53	0	2.67
	Latur	96	67	11	2.49	90	68	13	2.45
	Nanded	42	97	7	2.24	38	101	7	2.21
	Osmanabad	117	58	4	2.63	103	68	7	2.54
	Parbhani	79	82	3	2.46	71	86	7	2.39

Contd.

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State	District	Language Teaching				Mathematics Teaching			
		High (3)	Average (2)	Low (1)	Combined Weightage	High (3)	Average (2)	Low (1)	Combined Weightage
Haryana	Hissar	93	77	2	2.53	93	73	5	2.51
	Jind	93	71	8	2.49	42	54	5	2.37
	Kaithal	26	34	3	2.37	71	34	3	2.63
	Sirsa	25	17	2	2.52	21	29	10	2.18
Tamil Nadu	Dharmapuri	52	100	2	2.32	53	100	1	2.34
	Cuddalore	40	111	0	2.26	38	112	1	2.25
	Thiruvanamalai	36	102	1	2.25	38	97	3	2.25
	Villupuram	105	67	0	2.61	99	73	0	2.58

Implications

This chapter provides for a brief discussion on those findings that have been discussed in the earlier chapters and have possible intervention implications.

The analysis of results pertaining to average performance of students on the newly generated competency based achievement tests under MAS across the subjects, classes, districts and states confirm the preeminence of the element of contextuality. This warrants further research focussing on the dilemmas of individual districts and offering of local specific solutions and possibilities.

Examinations of the average performance of class I students on MAS tests in language and mathematics suggest that those districts where the achievement level has crossed the eighty percent mark, continued efforts may be carried through to sustain the tempo of progress. In those districts where the achievement level is below 80% but above 60%, focussed attention may be directed so as to boost the achievement to the level of mastery. And, in those districts where the achievement level is below 60%, the hard spots of learning may be identified and remedial programmes may be organised rigorously in order to escalate the achievement level to the level of mastery.

Scrutiny of the average performance of class III and IV students on MAS 1997 tests both in language and mathematics across the states of Assam, Kerala, Karnataka, Maharashtra, Haryana, Tamil Nadu and Madhya Pradesh warrants an immediate action plan that provides for a multipronged strategy. The data from all the low performing districts may be thoroughly reanalysed to identify the hard spots of learning and corrective measures may be devised on the basis of the subjectwise and districtwise analyses to realise the desired results. Besides, the

quality of the instructional materials and the inservice training programme that are in vogue may also be subjected to a thorough review.

Analyses of results reveal that the students' performance in class I on MAS tests both in language and mathematics has been relatively superior than the performance exhibited by students of classes III and IV. The superior results in class I may be attributed to the faster pace of pedagogical renewal processes in class I than in classes III and IV. It calls for focussed attention on the implementation of research based interventions in classes III and IV.

Comparative assessment of students' achievement in classes I, III and IV in both the subjects on the tests used in 1994 and readministered in 1997 reveals spectacular results in class I in a large number of districts, whereas in classes III and IV the results are either moderate or not very encouraging. In those districts where the hike in students' achievement is found to be exceptionally outstanding, intervention efforts may be continued to sustain the gains. For districts showing moderate but positive trends, intervention efforts may be stepped up to raise the level of students' achievement through intensive coaching and cooperative learning. Whereas in the case of districts where a decline in performance is discernible, spirited intervention efforts may be made in the direction of rejuvenating the system not only by undertaking the exercise of the reanalysis of their data but also by introducing research based interventions. For such districts the success stories of districts showing remarkable results may also provide an impetus for building the basic competencies amongst their students to such a level where they become competent to handle any kind of test items related to the competencies laid down in their curriculum.

On examining the results pertaining to differences in achievement in language and mathematics in classes I, III and IV among gender, it is revealed that in almost all the districts the gender bias has been removed. This cautions that while taking measures to increase the levels of students' achievement, special care may be taken to maintain the present balance between the gender. Where the differences in achievement across the social groups still persist beyond the DPEP goal, special attention may be paid to the students from underprivileged sections of the society. It may be taken up in a variety of ways like conducting extra drills, supervised study programmes, proliferation of local specific instructional materials and purposeful reinforcement and motivation.

Assessment of the influence of parental qualifications on the achievement of students of penultimate classes in both the subjects reveals an incremental influence in most of the cases. Although parental qualifications have proved to have a positive influence on students' achievement any kind of acceleration in the parental qualifications may be shouldered by the state governments.

On studying the influence on students' achievement caused by differences between the language used at home and the medium of instruction at school, it is observed that it does not have any adverse effect.

This provides a pointer that duplication of efforts may be avoided in so far as the preparation of differential resource material is concerned.

Analysis of the influence of the availability of competency based teaching learning material on students' achievement signifies that it stands positively related. It implies that the DPEP interventions may ensure that all the schools are equipped with the competency based teaching learning materials.

Review of the inservice training reveals that barring Kerala, a large number of districts have substantial number of urban and rural teachers who have not undergone any inservice training during the past three years. This calls for refocusing on the inservice training programmes. All the teachers employed in primary institutions both in urban and rural sectors may be provided with recurrent, need based and district specific training.

The Executive responsible for the implementation of the programme at the state level may organise sharing workshops to disseminate the findings and implications of the study and to deliberate upon the ensuing directions that the interventions may take in future. Besides, the findings of the study may be related to the data available at various levels.

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An Overview of the tests used in BAS and MAS

Class 1 Language Tests

BAS (n=20)	MAS (n=20)
(i) Recognition of Syllables (n=10)	(i) Recognition of words (n=20)
(ii) Recognition of Words (n=10)	

Class I Mathematics Tests

S. No.	Competency	Number of Items included during	
		MAS (n=20)	BAS (n=14)
1.	Counting of Objects	2	-
2.	Counting of Two sets of Objects (addition)	2	-
3.	Oral addition of two numbers upto 10	2	-
4.	Problem sums involving subtraction of single digit numbers	2	-
5.	Identifying a number after a given number	2	-
6.	Identifying a number just before a given number	2	-
7.	Identifying greater of two given numbers	2	3
8.	Identifying smaller of two given numbers	2	3
9.	Writing the sum of two numbers upto 10	2	4
10.	Writing the difference of two numbers upto 10	2	4

Class III Language Tests

BAS (n=44)	MAS (n=65)
(i) Word Knowledge (n=20)	(i) Word Knowledge (n=30)
(ii) Reading Comprehension (n=24)	(ii) Reading Comprehension (n=35)

Class III Tests in Mathematics

S. No.	Competency	Number of Items included during	
		MAS (n=40)	BAS (n=40)
I.	Understanding whole numbers		
1.	Reads and writes number names of 2-digit numbers	1	-
2.	Reads and writes number names of 4-digit numbers	-	2
3.	States the place value of a digit in 3-digit number	1	1
4.	Identifies numbers preceding 3-digit numbers	1	-
5.	Identifies a number immediately after a 4-digit number	-	1
6.	Writes a 4-digit number in expanded form	-	2
7.	Identifies the smallest amongst the 4-digit numbers	-	1

Contd.

S. No.	Competency	Number of Items included during	
		MAS (n=40)	BAS (n=40)
8.	Arranges 4-digit numbers in ascending and descending order	-	1
9.	Identifies a number between 2 given numbers	1	-
10.	Identifies odd and even 2-digit numbers	1	-
11.	Identifies the place of a digit in 4-digit number	-	2
12.	Demonstrates understanding of ordinal numbers from 1-10	1	-
II. Addition, subtraction, multiplication and division of whole numbers			
13.	Adds two or three, 4 - digit numbers with carrying	2	2
14.	Subtracts 3-digit numbers with borrowing	1	2
15.	Subtracts 4-digit numbers without borrowing	-	1
16.	Subtracts 4-digit numbers with borrowing	-	1
17.	Solves word problems using addition and subtraction	2	2
18.	Represents repeated addition in terms of multiplication	1	-
19.	Uses the concept of multiplication to compare the numbers	1	-
20.	Multiplies two or three digit number with a single digit number using carrying	1	1
21.	Multiplies two or three digit number with a single digit number without carrying and involving zero	-	2
22.	Multiplies numbers by zero	1	-
23.	Divides a 3-digit number by a single digit without borrowing	1	2
24.	Solves word problems using multiplication and division	1	1
III. Simple Problems of Daily-life Relating to Units of Money, Length, Mass, Capacity, Area and Time			
25.	Makes any value upto Re. 1 using varying collections of coins	-	2
26.	Adds value of notes of different denominations	1	-
27.	Writes money in decimal notation	-	1
28.	Solves simple money problems using either addition or subtraction without conversion	1	1
29.	Solves simple money problems using both addition and subtraction without conversion	1	-
30.	Solves simple money problems using either addition or subtraction with conversion	-	1
31.	Solves simple money problems using multiplication or division without conversion	2	2
32.	Solves simple money problems using multiplication or division with conversion	-	1
33.	Identifies the appropriate unit of length	1	-
34.	Solves simple problems of length	1	-
35.	Adds lengths given in kilometres and metres, without conversion	-	1
36.	Converts kilograms into grams	1	1
37.	Solves simple problems of weight	1	-
38.	Converts litres into millilitres	1	1

Contd.

S. No.	Competency	Number of Items included during	
		MAS (n=40)	BAS (n=40)
39.	Compares the capacity of given utensils	1	-
40.	Solves problems of capacity	2	-
41.	Compares the areas of given figures	1	-
42.	Identifies the sequence of the months	1	-
43.	Uses a calendar	1	-
44.	Reads time from the clock	1	1
45.	Adds time in hours and minutes without conversion	1	-
IV. Use of Fractions			
46.	Demonstrates understanding of fractions as part of regions	1	1
47.	Understands the concept of fraction as a part of one	-	1
48.	Addition of fractions with same denominator	-	1
V. Understanding of Geometrical Shapes			
49.	Counts the number of sides in a plane figure	-	1
50.	Identifies plane figures such as triangle and rectangle	2	-
51.	Identifies parts of a square and rectangle	2	-

Class IV Language Tests

BAS (n=84)	MAS (n=70)
(i) Word Knowledge (n=40)	(i) Word Knowledge (n=35)
(ii) Reading Comprehension (n=44)	(ii) Reading Comprehension (n=35)

Class - IV Mathematics Tests

S. No.	Competency	Number of Items included during	
		MAS (n=40)	BAS (n=40)
I. Understanding whole numbers			
1.	Finds the greatest number out of given 4-digit numbers	1	-
2.	Identifies odd and even numbers	1	-
3.	Identifies prime numbers	1	1
4.	States the place value of a digit in a given number	2	2
5.	Reads and writes the number names	-	2
6.	Writes the numbers in expanded form	-	1
II. Addition, subtraction, multiplication and division of whole numbers			
7.	Adds two or three 4-digit numbers with carrying	1	1
8.	Subtracts 4-digit numbers with borrowing	-	2
9.	Solves daily life problems involving addition and/or subtraction	2	2
10.	Understands various terms of multiplication such as multiple, multiplier and product	1	2

Contd.

S. No.	Competency	Number of Items included during	
		MAS (n=40)	BAS (n=40)
11.	Identifies the multiples of a given number	1	-
12.	Multiplies the numbers, one of them being zero	1	1
13.	Finds the L.C.M. of two given numbers	3	1
14.	Identifies the prime factors of a given number	1	1
15.	Understands various terms of division such as divisor, dividend, quotient and remainder	2	1
16.	Divides a number by one digit number	-	2
17.	Solves daily life problems involving division	-	1
III. Simple Problems of Daily-life Relating to Units of Money, Length, Mass, Capacity, Area and Time.			
18.	Solves simple money problems using addition, subtraction, multiplication and division	4	2
19.	Applies unitary method to buying and selling problems	1	2
20.	Solves simple problems related to standard units of length	2	2
21.	Converts kilograms into grams and vice-versa	2	-
22.	Solves simple problems related to weight	-	2
23.	States the unit of capacity	1	-
24.	Solves simple problems related to capacity	-	2
25.	Solves simple daily life problems related to time	3	1
IV. Use of Fractions, Decimals and Percentage			
26.	Demonstrates understanding of proper fractions as parts of regions	1	1
27.	Identifies simple fractions	2	2
28.	Finds equivalent fractions	1	2
29.	Adds and subtracts given fractions	1	-
30.	Converts fractions to decimals	2	2
31.	Expresses units of length into decimals	1	-
V. Understanding of Geometrical Shapes			
32.	Counts the number of sides in a plane figure	1	-
33.	States properties of a triangle and square	-	2
VI. Miscellaneous			
34.	Solves problems related to speed and distance	1	

Item Parameters of Tests in Haryana

Item Parameters of Class I Language Test in Haryana

Q. No.	HISSAR		JIND		KAITHAL		SIRSA	
	FV	DI	FV	DI	FV	DI	FV	DI
1	80.4	0.24	73.6	0.28	79.3	0.29	87.1	0.16
2	74.2	0.30	68.1	0.33	74.7	0.35	76.4	0.25
3	66.2	0.33	54.8	0.34	66.0	0.40	72.2	0.27
4	74.6	0.28	69.2	0.30	78.5	0.29	79.2	0.24
5	70.8	0.31	61.0	0.32	68.0	0.33	72.6	0.28
6	76.7	0.26	74.0	0.25	80.2	0.25	82.4	0.19
7	82.1	0.24	76.6	0.26	83.3	0.21	81.4	0.20
8	58.5	0.36	49.0	0.35	58.4	0.39	62.4	0.31
9	76.2	0.29	70.1	0.30	79.5	0.29	82.3	0.21
10	71.4	0.26	67.8	0.26	65.6	0.26	70.4	0.27
11	69.0	0.33	62.5	0.30	70.7	0.36	73.3	0.25
12	74.6	0.28	70.2	0.26	80.0	0.25	79.2	0.19
13	77.9	0.26	74.1	0.25	81.1	0.26	82.9	0.19
14	65.7	0.35	56.8	0.32	65.3	0.39	64.6	0.32
15	56.1	0.37	47.0	0.31	59.4	0.38	58.5	0.31
16	69.3	0.28	66.6	0.24	68.5	0.29	72.9	0.24
17	65.7	0.34	57.9	0.33	67.9	0.38	70.8	0.28
18	50.3	0.38	44.0	0.30	59.0	0.39	59.4	0.32
19	74.9	0.26	69.3	0.26	72.7	0.28	73.8	0.25
20	60.0	0.37	53.1	0.35	71.5	0.34	73.1	0.24

FV - Facility Value

DI - Discrimination Index

Item Parameters of Class-I Mathematics Test in Haryana

Q. No.	HISSAR		JIND		KAITHAL		SIRSA	
	FV	DI	FV	DI	FV	DI	FV	DI
1	94.00	0.08	95.20	0.06	97.10	0.04	97.20	0.04
2	94.30	0.09	93.10	0.08	96.40	0.05	95.70	0.05
3	95.00	0.07	95.30	0.06	94.60	0.07	98.00	0.02
4	89.10	0.12	91.00	0.10	92.70	0.08	93.90	0.06
5	74.90	0.31	61.60	0.33	78.90	0.30	81.00	0.23
6	69.10	0.36	63.50	0.33	76.30	0.33	75.70	0.27
7	70.80	0.35	66.30	0.29	76.70	0.30	82.20	0.19
8	66.50	0.38	55.10	0.34	74.10	0.32	74.10	0.27
9	78.90	0.28	84.10	0.18	86.60	0.19	86.70	0.15
10	69.30	0.35	71.60	0.29	80.60	0.24	76.50	0.25
11	64.80	0.39	62.00	0.33	73.40	0.33	78.10	0.25
12	66.00	0.34	56.80	0.34	70.80	0.34	70.10	0.32
13	72.50	0.33	79.40	0.22	80.60	0.22	82.50	0.20
14	68.50	0.36	71.10	0.28	79.30	0.26	74.80	0.28
15	71.30	0.32	75.40	0.23	80.60	0.23	82.40	0.21
16	68.70	0.34	73.40	0.23	83.50	0.23	78.50	0.25
17	72.30	0.35	65.50	0.32	81.30	0.29	79.50	0.24
18	66.70	0.36	53.40	0.36	70.40	0.39	68.50	0.32
19	61.10	0.38	49.80	0.36	70.80	0.34	65.90	0.32
20	68.60	0.34	54.20	0.34	75.90	0.31	70.30	0.29

FV - Facility Value

DI - Discrimination Index

Item Parameters of Class IV Word Knowledge Test in Haryana

Q. No.	HISSAR		JIND		KAITHAL		SIRSA	
	FV	DI	FV	DI	FV	DI	FV	DI
1	16.20	0.06	24.70	0.08	16.00	0.10	11.20	0.07
2	34.00	0.13	30.10	0.13	23.30	0.12	20.40	0.08
3	40.20	0.07	36.90	0.13	32.40	0.15	24.00	0.12
4	21.40	0.12	21.30	0.14	23.80	0.15	17.50	0.11
5	38.50	0.13	30.70	0.15	33.10	0.18	18.20	0.15
6	19.60	0.10	26.90	0.13	25.30	0.19	17.60	0.10
7	27.00	0.14	23.60	0.17	25.80	0.19	15.10	0.12
8	30.40	0.15	26.00	0.17	29.00	0.17	17.90	0.12
9	39.30	0.17	35.40	0.15	40.10	0.17	33.80	0.16
10	44.70	0.14	48.40	0.06	41.50	0.18	35.60	0.17
11	28.90	0.12	33.30	0.11	33.00	0.16	28.30	0.16
12	47.50	0.10	42.00	0.05	41.70	0.06	39.00	0.14
13	30.80	0.10	31.80	0.09	28.70	0.12	26.80	0.12
14	37.10	0.10	35.00	0.10	28.80	0.11	32.50	0.13
15	38.70	0.19	31.70	0.15	33.40	0.18	33.90	0.18
16	28.40	0.17	29.20	0.17	27.90	0.21	25.20	0.16
17	34.60	0.18	33.00	0.17	33.20	0.16	29.30	0.16
18	25.60	0.16	27.60	0.16	25.70	0.16	19.30	0.13
19	25.40	0.16	21.70	0.17	24.90	0.18	17.20	0.14
20	26.80	0.14	31.10	0.13	27.80	0.13	25.70	0.12
21	31.00	0.13	30.70	0.15	28.70	0.14	22.70	0.15
22	40.30	0.17	36.90	0.17	36.90	0.21	35.30	0.19
23	43.40	0.12	41.50	0.15	45.30	0.19	38.70	0.14
24	32.00	0.17	33.00	0.13	32.60	0.18	23.00	0.11
25	31.30	0.08	33.90	0.11	30.30	0.05	31.50	0.10
26	44.20	0.17	44.00	0.12	40.00	0.15	31.70	0.17
27	27.90	0.15	28.80	0.16	26.30	0.17	26.10	0.15
28	30.70	0.14	27.10	0.14	28.40	0.18	25.70	0.12
29	43.30	0.17	47.00	0.10	45.90	0.20	43.40	0.19
30	36.10	0.14	35.40	0.17	30.20	0.15	25.00	0.15
31	30.50	0.13	34.20	0.10	30.80	0.19	26.50	0.15
32	42.60	0.17	38.50	0.14	45.90	0.11	33.40	0.15
33	35.20	0.13	38.40	0.12	35.50	0.10	34.40	0.18
34	38.20	0.06	37.00	0.11	35.00	0.13	31.00	0.09
35	35.90	0.16	39.40	0.16	39.10	0.21	29.70	0.16

FV - Facility Value

DI - Discrimination Index

Item Parameters of Class IV Reading Comprehension Test in Haryana

Q. No.	HISSAR		JIND		KAITHAL		SIRSA	
	FV	DI	FV	DI	FV	DI	FV	DI
1	62.40	0.09	59.90	0.15	74.90	0.16	86.50	0.05
2	60.60	0.19	59.00	0.20	73.50	0.21	82.60	0.13
3	39.20	0.22	38.40	0.17	48.90	0.24	66.50	0.18
4	23.90	0.09	23.90	0.08	32.70	0.13	54.60	0.16
5	42.40	0.19	43.60	0.20	60.80	0.27	73.50	0.20
6	31.80	0.16	30.00	0.13	47.80	0.21	58.80	0.19
7	26.90	0.14	18.10	0.06	42.10	0.22	49.00	0.23
8	40.10	0.15	43.80	0.18	61.70	0.22	67.40	0.18
9	47.30	0.17	49.00	0.19	59.30	0.21	74.10	0.15
10	61.70	0.23	56.70	0.24	71.70	0.25	83.00	0.15
11	40.50	0.19	42.10	0.17	49.30	0.22	60.70	0.23
12	46.40	0.20	41.60	0.20	56.90	0.23	73.30	0.17
13	50.40	0.23	54.30	0.24	63.30	0.22	73.80	0.20
14	33.50	0.11	31.40	0.10	41.40	0.20	47.80	0.20
15	43.50	0.20	39.30	0.19	51.70	0.24	57.10	0.25
16	40.70	0.26	37.00	0.24	49.40	0.31	64.10	0.24
17	32.70	0.16	36.00	0.20	40.90	0.26	58.20	0.25
18	25.30	0.12	26.00	0.09	44.30	0.21	57.30	0.23
19	50.80	0.23	54.00	0.26	66.10	0.30	73.90	0.20
20	50.70	0.26	48.60	0.25	62.50	0.30	71.60	0.23
21	53.20	0.23	48.30	0.23	67.60	0.29	76.50	0.21
22	50.70	0.25	49.30	0.22	60.30	0.27	74.20	0.20
23	32.10	0.17	26.50	0.12	32.80	0.24	49.10	0.21
24	46.80	0.26	45.70	0.25	61.20	0.29	74.00	0.23
25	59.80	0.23	62.00	0.23	72.40	0.23	85.60	0.14
26	35.40	0.23	36.70	0.21	42.40	0.28	67.00	0.26
27	52.00	0.26	50.60	0.27	58.40	0.27	75.90	0.22
28	30.70	0.16	30.10	0.13	36.80	0.17	56.10	0.23
29	40.50	0.11	37.60	0.14	37.70	0.14	66.30	0.21
30	57.10	0.18	59.70	0.21	68.40	0.21	78.60	0.17
31	37.60	0.17	38.50	0.16	43.90	0.22	60.10	0.18
32	41.30	0.23	46.00	0.24	52.50	0.27	72.00	0.21
33	41.70	0.16	43.10	0.16	49.80	0.20	61.90	0.16
34	43.30	0.19	38.10	0.14	46.80	0.19	60.40	0.22
35	31.80	0.10	28.70	0.03	30.10	0.07	44.70	0.16

FV - Facility Value

DI - Discrimination Index

Item Parameters of Clas IV Mathematics Test in Haryana

Q. No.	HISSAR		JIND		KAITHAL		SIRSA	
	FV	DI	FV	DI	FV	DI	FV	DI
1	83.10	0.10	81.20	0.11	81.10	0.07	88.80	0.07
2	17.10	0.01	16.00	0.05	13.10	0.01	36.60	0.17
3	61.90	0.19	62.20	0.21	64.00	0.22	80.10	0.14
4	60.30	0.20	57.30	0.21	62.10	0.24	78.40	0.16
5	80.10	0.13	80.00	0.15	84.60	0.09	86.90	0.09
6	63.40	0.19	63.20	0.19	61.90	0.17	72.10	0.14
7	48.20	0.20	44.90	0.24	50.30	0.19	63.10	0.21
8	44.60	0.17	44.50	0.10	46.60	0.12	61.00	0.13
9	71.50	0.17	62.80	0.21	74.80	0.16	84.60	0.12
10	74.30	0.18	69.30	0.18	76.80	0.12	81.60	0.11
11	36.50	0.18	35.90	0.23	36.90	0.18	62.20	0.20
12	66.40	0.23	58.30	0.22	62.10	0.19	84.70	0.11
13	52.90	0.23	57.20	0.24	55.80	0.19	71.00	0.15
14	23.20	0.14	27.40	0.19	28.80	0.18	55.30	0.23
15	47.40	0.24	39.30	0.15	52.70	0.22	67.60	0.22
16	28.10	0.13	22.50	0.10	30.00	0.15	53.70	0.22
17	32.30	0.22	32.00	0.18	33.90	0.19	55.60	0.23
18	61.40	0.25	59.20	0.25	67.00	0.23	80.30	0.16
19	51.00	0.24	47.30	0.23	47.10	0.26	72.50	0.22
20	53.90	0.22	52.60	0.27	61.30	0.27	65.30	0.22
21	42.70	0.18	37.60	0.17	42.80	0.22	51.60	0.19
22	22.60	0.06	16.00	0.04	22.20	0.09	33.40	0.14
23	42.60	0.23	39.40	0.19	46.20	0.23	70.30	0.21
24	53.30	0.26	52.70	0.24	62.80	0.23	73.00	0.19
25	49.60	0.26	43.00	0.23	53.10	0.30	72.60	0.22
26	52.40	0.19	48.10	0.21	56.30	0.24	69.20	0.21
27	34.50	0.17	29.00	0.14	38.00	0.18	51.90	0.25
28	27.70	0.15	21.70	0.10	26.60	0.18	44.30	0.24
29	19.60	0.16	9.10	0.06	10.90	0.06	25.90	0.20
30	25.10	0.18	22.90	0.10	25.10	0.14	45.60	0.25
31	37.90	0.21	29.70	0.17	37.40	0.22	56.30	0.26
32	30.40	0.18	28.10	0.14	35.90	0.19	49.30	0.21
33	18.40	0.09	22.80	0.12	25.90	0.16	41.70	0.19
34	25.20	0.15	26.20	0.10	34.50	0.12	46.90	0.18
35	40.90	0.22	34.40	0.10	40.90	0.20	59.10	0.25
36	37.00	0.21	39.40	0.16	51.70	0.24	59.80	0.21
37	29.50	0.22	20.60	0.07	24.80	0.14	49.80	0.24
38	32.20	0.19	27.80	0.13	34.90	0.18	52.00	0.21
39	31.40	0.17	30.20	0.11	29.40	0.16	38.00	0.17
40	21.60	0.13	8.80	0.02	11.40	0.06	35.10	0.24

FV - Facility Value

DI - Discrimination Index

Reliability of the Tests Used in Haryana

Test	Test Used		Estimation of Reliability							
	Class	No. of Items	Hissar		Jind		Kaithal		Sirsa	
			Split Half	KR-20	Split Half	KR-20	Split Half	KR-20	Split Half	KR-20
L	I	20	0.96	0.94	0.96	0.96	0.95	0.95	0.96	0.96
M	I	20	0.97	0.94	0.93	0.89	0.93	0.91	0.92	0.89
WK	IV	35	0.88	0.91	0.87	0.92	0.85	0.88	0.79	0.87
RC	IV	35	0.85	0.86	0.86	0.87	0.87	0.88	0.90	0.90
M	IV	40	0.88	0.88	0.87	0.86	0.86	0.84	0.91	0.90
L	Drop-out	12	0.98	0.94	0.93	0.79	0.92	0.82	0.91	0.81
M	Drop-out	12	0.97	0.91	0.73	0.66	0.83	0.79	0.93	0.89

L - Language

M - Mathematics

WK- Word Knowledge

RC- Reading Comprehension

Item Parameters of Tests in Maharashtra

Item Parameters of Class-I Language Test in Maharashtra

Item No.	Aurangabad		Latur		Nanded		Osmanabad		Parbhani	
	FV	DI	FV	DI	FV	DI	FV	DI	FV	DI
1	73	0.37	74	0.41	66	0.38	79	0.30	58	0.43
2	72	0.37	60	0.48	57	0.38	80	0.30	58	0.45
3	67	0.42	70	0.44	58	0.46	73	0.43	52	0.46
4	72	0.40	68	0.44	64	0.42	78	0.35	58	0.44
5	65	0.44	56	0.49	54	0.45	74	0.38	55	0.42
6	77	0.33	72	0.43	72	0.36	88	0.19	70	0.40
7	78	0.30	71	0.41	71	0.36	87	0.21	70	0.42
8	63	0.46	61	0.49	49	0.47	71	0.45	50	0.49
9	69	0.43	62	0.51	55	0.47	78	0.39	54	0.47
10	79	0.29	75	0.41	71	0.39	88	0.21	71	0.41
11	73	0.40	68	0.48	57	0.46	80	0.37	60	0.44
12	79	0.29	69	0.44	68	0.40	87	0.22	72	0.39
13	79	0.31	59	0.48	68	0.42	88	0.20	68	0.43
14	60	0.41	66	0.46	53	0.44	72	0.38	52	0.42
15	64	0.42	55	0.52	49	0.44	69	0.42	50	0.46
16	74	0.34	61	0.46	62	0.42	82	0.25	61	0.44
17	63	0.43	61	0.52	45	0.43	72	0.43	50	0.49
18	66	0.45	65	0.51	51	0.50	76	0.42	51	0.50
19	71	0.35	57	0.48	59	0.40	83	0.22	61	0.41
20	68	0.45	64	0.49	54	0.47	76	0.41	52	0.49

FV - Facility Value

DI - Discrimination Index

Item Parameters of Class I Mathematics Test in Maharashtra

Item No.	Aurangabad		Latur		Nanded		Osmanabad		Parbhani	
	FV	DI	FV	DI	FV	DI	FV	DI	FV	DI
1	85	0.22	85	0.23	74	0.32	76	0.35	73	0.38
2	84	0.24	86	0.24	75	0.34	80	0.31	74	0.38
3	92	0.14	91	0.17	85	0.26	89	0.20	88	0.21
4	84	0.26	84	0.27	74	0.36	83	0.28	76	0.36
5	58	0.46	65	0.48	48	0.49	72	0.43	51	0.50
6	55	0.48	61	0.49	42	0.50	66	0.48	46	0.51
7	64	0.41	70	0.44	46	0.45	80	0.31	61	0.44
8	58	0.45	63	0.48	41	0.47	77	0.37	54	0.47
9	65	0.47	71	0.46	55	0.51	74	0.41	61	0.49
10	57	0.50	63	0.50	47	0.52	62	0.48	48	0.52
11	55	0.50	58	0.51	43	0.51	72	0.44	52	0.52
12	51	0.52	53	0.51	38	0.48	69	0.45	45	0.52
13	76	0.35	69	0.47	53	0.50	79	0.35	66	0.44
14	68	0.41	60	0.50	48	0.51	68	0.43	51	0.50
15	78	0.30	68	0.48	56	0.52	83	0.26	66	0.41
16	76	0.33	68	0.47	54	0.52	81	0.31	62	0.44
17	59	0.47	57	0.51	47	0.51	74	0.42	49	0.53
18	46	0.50	47	0.54	36	0.44	64	0.47	36	0.51
19	51	0.50	48	0.52	36	0.44	70	0.43	44	0.51
20	64	0.46	53	0.51	47	0.47	84	0.27	54	0.48

FV - Facility Value

DI - Discrimination Index

Item Parameters of Class III Word Knowledge test in Maharashtra

Item No.	Aurangabad		Latur		Nanded		Osmanabad		Parbhani	
	FV	DI	FV	DI	FV	DI	FV	DI	FV	DI
1	70	0.26	65	0.32	66	0.28	71	0.22	69	0.30
2	61	0.31	60	0.30	59	0.30	61	0.24	59	0.29
3	57	0.33	52	0.28	56	0.31	57	0.27	53	0.30
4	39	0.13	38	0.19	45	0.28	42	0.22	40	0.22
5	44	0.31	44	0.16	39	0.25	46	0.21	36	0.15
6	50	0.31	49	0.0	41	0.25	53	0.26	42	0.24
7	55	0.30	49	0.31	52	0.37	57	0.30	53	0.31
8	51	0.36	47	0.29	45	0.36	49	0.33	44	0.33
9	53	0.34	47	0.31	46	0.33	51	0.31	49	0.31
10	46	0.36	44	0.31	42	0.34	47	0.31	45	0.29
11	52	0.33	44	0.30	44	0.30	51	0.28	49	0.27
12	49	0.30	39	0.25	35	0.29	47	0.22	35	0.23
13	43	0.31	37	0.24	33	0.27	40	0.25	33	0.25
14	50	0.31	41	0.30	38	0.33	48	0.29	38	0.30
15	47	0.36	41	0.23	38	0.29	48	0.30	32	0.24
16	44	0.25	36	0.26	41	0.37	40	0.23	38	0.30
17	59	0.30	47	0.36	44	0.38	55	0.28	44	0.30
18	53	0.32	46	0.26	45	0.27	51	0.18	46	0.21
19	55	0.25	44	0.29	42	0.35	52	0.24	40	0.20
20	46	0.19	42	0.19	36	0.17	49	0.09	42	0.14
21	51	0.36	42	0.21	43	0.27	47	0.19	39	0.18
22	45	0.31	42	0.28	42	0.38	49	0.28	35	0.26
23	51	0.30	43	0.34	38	0.38	51	0.30	39	0.26
24	45	0.30	37	0.28	35	0.34	43	0.24	34	0.29
25	46	0.33	42	0.22	39	0.26	48	0.18	40	0.22
26	52	0.28	40	0.24	42	0.24	53	0.16	45	0.21
27	45	0.25	34	0.20	38	0.26	47	0.12	38	0.21
28	45	0.28	39	0.26	37	0.35	48	0.21	32	0.25
29	55	0.25	39	0.28	39	0.34	53	0.24	40	0.29
30	52	0.31	38	0.31	40	0.38	49	0.26	35	0.33

FV - Facility Value

DI - Discrimination Index

Item parameters of Class III Reading Comprehension Test in Maharashtra

Item No.	Aurangabad		Latur		Nanded		Osmanabad		Parbhani	
	FV	DI	FV	DI	FV	DI	FV	DI	FV	DI
1	65	0.35	66	0.29	56	0.32	66	0.33	61	0.29
2	38	0.38	32	0.36	24	0.25	28	0.24	27	0.24
3	56	0.33	48	0.23	52	0.34	51	0.25	45	0.23
4	62	0.33	61	0.33	51	0.30	57	0.33	46	0.35
5	47	0.29	40	0.27	32	0.24	41	0.26	39	0.16
6	48	0.33	48	0.37	37	0.27	47	0.30	42	0.27
7	57	0.40	51	0.36	44	0.36	53	0.36	43	0.30
8	37	0.44	26	0.30	26	0.27	32	0.30	19	0.21
9	43	0.41	37	0.27	35	0.13	42	0.26	34	0.24
10	34	0.25	40	0.25	26	0.19	43	0.18	30	0.20
11	41	0.39	40	0.34	36	0.33	34	0.29	28	0.24
12	39	0.38	38	0.28	33	0.31	35	0.22	33	0.17
13	54	0.40	40	0.33	39	0.30	43	0.33	30	0.23
14	43	0.36	40	0.30	36	0.33	37	0.30	39	0.23
15	46	0.38	36	0.39	38	0.41	38	0.39	29	0.33
16	36	0.35	37	0.32	34	0.32	36	0.26	31	0.26
17	49	0.41	31	0.33	40	0.41	33	0.30	35	0.26
18	41	0.38	32	0.27	30	0.31	34	0.26	24	0.20
19	40	0.36	32	0.30	27	0.19	30	0.22	24	0.12
20	39	0.41	29	0.36	28	0.30	33	0.35	28	0.28
21	39	0.32	34	0.20	27	0.18	32	0.14	28	0.08
22	42	0.42	40	0.29	35	0.35	38	0.25	30	0.20
23	26	0.31	19	0.22	21	0.26	20	0.20	17	0.14
24	44	0.41	34	0.30	30	0.30	32	0.35	26	0.23
25	39	0.39	34	0.33	32	0.32	35	0.30	23	0.20
26	47	0.45	44	0.35	40	0.41	47	0.35	36	0.33
27	44	0.38	40	0.37	34	0.32	38	0.31	32	0.24
28	39	0.36	34	0.29	26	0.29	39	0.24	26	0.18
29	49	0.38	46	0.34	44	0.41	53	0.33	44	0.32
30	34	0.33	23	0.20	26	0.28	23	0.18	16	0.10
31	38	0.40	30	0.23	28	0.25	22	0.13	19	0.07
32	48	0.40	38	0.25	38	0.32	46	0.22	35	0.12
33	45	0.38	35	0.25	34	0.30	40	0.24	32	0.16
34	45	0.35	30	0.25	33	0.36	35	0.26	26	0.12
35	33	0.35	24	0.27	22	0.22	25	0.26	17	0.19

FV - Facility Value

DI - Discrimination Index

Item Parameters of Class III Mathematics Test in Maharashtra

Item No.	Aurangabad		Latur		Nanded		Osmanabad		Parbhani	
	FV	DI	FV	DI	FV	DI	FV	DI	FV	DI
1	73	0.20	64	0.23	60	0.19	63	0.23	56	0.14
2	47	0.30	37	0.20	39	0.28	39	0.17	35	0.18
3	35	0.31	25	0.21	24	0.25	30	0.19	24	0.14
4	55	0.29	40	0.26	34	0.25	41	0.21	26	0.15
5	49	0.39	44	0.33	33	0.33	41	0.32	25	0.24
6	39	0.36	31	0.30	26	0.31	32	0.32	22	0.19
7	37	0.36	30	0.30	23	0.31	33	0.31	23	0.26
8	31	0.20	28	0.19	26	0.23	29	0.16	22	0.08
9	32	0.36	30	0.25	35	0.33	32	0.26	19	0.15
10	40	0.035	38	0.28	39	0.36	44	0.33	35	0.24
11	28	0.32	17	0.18	19	0.21	18	0.19	15	0.11
12	32	0.30	24	0.17	23	0.20	22	0.05	23	0.09
13	24	0.29	18	0.15	21	0.24	20	0.16	15	0.12
14	33	0.39	26	0.27	23	0.31	31	0.28	19	0.19
15	43	0.37	36	0.29	36	0.33	30	0.20	26	0.19
16	39	0.36	29	0.22	32	0.33	33	0.25	27	0.15
17	34	0.33	27	0.26	27	0.28	32	0.21	23	0.19
18	32	0.29	23	0.20	20	0.22	27	0.17	20	0.16
19	26	0.32	18	0.19	16	0.21	20	0.15	15	0.15
20	27	0.27	15	0.12	14	0.13	21	0.18	16	0.14
21	45	0.38	30	0.30	33	0.33	37	0.36	29	0.22
22	39	0.33	33	0.26	30	0.30	37	0.23	32	0.22
23	34	0.36	21	0.18	23	0.24	30	0.26	27	0.25
24	36	0.40	24	0.22	21	0.23	25	0.17	21	0.23
25	32	0.34	20	0.22	19	0.26	25	0.24	17	0.19
26	31	0.41	17	0.18	15	0.17	27	0.23	17	0.15
27	42	0.33	34	0.30	28	0.34	41	0.28	31	0.24
28	36	0.35	32	0.33	27	0.34	38	0.27	26	0.27
29	27	0.33	12	0.13	16	0.21	20	0.18	13	0.13
30	34	0.33	26	0.29	24	0.28	35	0.24	25	0.25
31	32	0.34	16	0.18	20	0.26	23	0.20	18	0.21
32	35	0.34	23	0.19	21	0.23	34	0.18	22	0.17
33	26	0.27	19	0.11	18	0.16	27	0.11	19	0.13
34	48	0.37	39	0.30	28	0.28	51	0.31	37	0.27
35	32	0.34	18	0.18	18	0.20	29	0.23	20	0.20
48	31	0.20	26	0.23	22	0.22	38	0.18	23	0.14
31	28	0.24	19	0.14	17	0.15	29	0.18	17	0.15
38	36	0.35	19	0.21	12	0.10	23	0.15	17	0.16
39	30	0.29	17	0.18	14	0.11	26	0.21	15	0.15
40	47	0.32	29	0.20	18	0.12	39	0.10	23	0.15

FV - Facility Value

DI - Discrimination Index

Reliability of the Tests Used in Maharashtra

Test	Test Used		Estimation of Reliability									
	Class	No. of Item	Aurangabad		Latur		Nanded		Osmanabad		Parbhani	
			Split Half	Kr-20	Split Half	Kr-20	Split Half	Kr-20	Split Half	Kr-20	Split Half	Kr-20
L	I	20	0.92	0.93	0.96	0.96	0.92	0.93	0.93	0.91	0.95	0.94
M	I	20	0.90	0.93	0.93	0.95	0.92	0.94	0.93	0.95	0.93	0.94
WK	III	30	0.86	0.86	0.85	0.84	0.89	0.88	0.80	0.79	0.86	0.82
RC	III	35	0.91	0.93	0.88	0.91	0.90	0.92	0.87	0.88	0.79	0.83
M	III	40	0.92	0.93	0.84	0.87	0.90	0.90	0.81	0.85	0.80	0.80
L	Drop-out	12	0.97	0.74	0.96	0.64	0.96	0.85	0.94	0.36	0.95	0.82
M	Drop-out	12	0.97	0.80	0.96	0.87	0.94	0.87	0.95	0.85	0.93	0.87

L - Language

M - Mathematics

WK- Word Knowledge

RC- Reading Comprehension

List of Abbreviations

BAS	Baseline Assessment Study
cf(%)	Cumulative frequency percent
DPEP	District Primary Education Programme
DPEPCRG	DPEP Core Resource Group
Ed.CIL	Education Consultants India Limited
f	Frequency
l	Language
m	Mathematics
M%	Mean Percent
MAS	Mid-term Assessment Study
MHRD	Ministry of Human Resource Development
N	Number of Cases
NCERT	National Council of Educational Research and Training
NPE	National Policy on Education
POA	Programme of Action
SC	Scheduled Caste
SCERT	State Council of Educational Research and Training
SD	Standard Deviation
SEM	Standard Error of Mean
ST	Scheduled Tribe
TLC	Total Literacy Campaign
UEE	Universalisation of Elementary Education

