DPEP

जिला प्राथमिक शिक्षा कार्यक्रम
DISTRICT PRIMARY EDUCATION PROGRAMME

"DPEP IMPACT ON PRIMARY EDUCATION"

SELECTED STUDIES PRESENTED AT

NATIONAL RESEARCH SEMINAR HELD AT
JAMIA MILLIA ISLAMIA, DELHI IN JUNE 2003

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FOREWORD

The District Primary Education Programme aimed at achieving universalisation of primary education started in 42 districts of 7 states in 1994 but gradually expanded to cover 273 districts of 18 states. In this programme, there was emphasis on decentralized planning, improvement in quality of education, removal of gender and other disparities and systematic monitoring of the progress to achieve certain pre-defined goals. Considerable importance was given to research under DPEP for designing research based interventions, monitoring of the progress and evaluation of outcomes and impact of various inputs and interventions. As a result of the impetus given to research in the field of primary education, one could see substantial proliferation of studies in this area. Universities and other research institutions began to take interest in research on problems of primary education and there emerged a new trend of conducting studies that were no longer theoretical in nature or only of academic interest but were of practical value to educational practitioners, policy makers and administrators.

While a large number of studies have been conducted on various facets of DPEP at the national level as well as in the states during the last seven to eight years, quite a few conducted in the recent years, were impact studies that attempted to assess the changes brought about by DPEP in primary education.

This seminar was organized jointly by the Ed.CIL's Technical Support Group for DPEP & SSA and Jamia Millia Islamia, to provide a forum for presentation and discussion of selected research studies conducted in the last two years or so under the aegis of DPE P. The focus was more on the studies that aimed at assessing the impact of DPEP interventions. The studies have highlighted the gains and improvement attributable to DPEP as well as deficiencies and shortfalls in achieving the targets. The seminar also discussed the policy and strategy of research under Sarva Shiksha Abhiyan and lessons drawn from DPEP for researches to be conducted in the future. It has provided valuable lessons for the strategy to be adopted for research activities to be organized under SSA.

This volume presents the highlights of discussions in various sessions and also includes the text of selected papers presented at the seminar. I hope it will be useful to the researchers and academicians interested in primary

education, in general and administrators and others concerned with implementation of Sarva Shiksha Abhiyan, in particular.

I am grateful to Shri Syed Shahid Mahdi, Vice-Chancellor of Jamia Millia Islamia for hosting this seminar, to Prof. Mohammad Miyan and Prof. ABL Srivastava for coordinating it, to Shri V. Lakshmiratan for inaugurating the seminar and to Dr. R. V. Vaidyanath Ayyar for delivering a thought provoking valedictory address. Also I thank all the participants for presenting papers and taking part in discussions and my colleague, Shri Parveen Kumar and all others who helped in organizing it so successfully.

Vrinda Sarup

PREFACE

The District Primary Education Programme (DPEP) was a major programme of the Government of India in which with some financial support of the World Bank and other external funding agencies, a special thrust was provided to achieve Universalisation of Primary Education. The programme took a holistic view of primary education with the strategy of developing district specific plans of providing quality primary education to all children of the covered districts. The emphasis was on decentralized planning and management, participatory processes, equity, capacity building and quality improvement through creation of cluster and block level academic support systems and a variety of pedagogic interventions.

Implementation of DPEP started in 1994 in 42 districts of seven states of India which gradually expanded to cover 273 districts in 18 states over a period of 8 years. It was a time bound programme which ended in June, 2003 in 133 districts and will end in the remaining districts in 2004. The main goal of DPEP was to provide quality education to all the children at the primary level of education. The specific objectives of the programme were:

- to reduce differences in enrolment, drop-out rate and learning achievement among gender and social groups to less than five percent.
- to reduce overall primary dropout rates for all students to less than 10 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 level 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.

The programme was also expected to strengthen the capacity of national, state and district institutions and organisations for the planning, management and evaluation of primary education.

During the period of DPEP implementation, various activities were undertaken in the DPEP districts for bringing the out-of-school children to school, reducing the dropout rate and improving the quality of education in order to increase the achievement level of pupils. These activities ranged from community mobilisation, construction of new school buildings and classrooms, providing pedagogical inputs through teacher training, improvement of textbooks and teaching learning materials; providing academic support to schools through BRCs and CRCs; removal of gender and caste related inequities; strengthening support to education of the disabled; and establishing alternate educational facilities for the children not having access to regular schools. For better monitoring of the progress a new Educational Management Information System (EMIS) was established. Also research in the area of primary education was given impetus and a large number of research and evaluation studies were undertaken at the national, state and district levels. These studies were expected to provide inputs for enhancing the efficiency and effectiveness of various DPEP interventions. Quite a few studies were designed to evaluate the impact of these interventions on primary education in DPEP districts.

The main purpose of the seminar was to share the findings of some significant studies conducted in the recent years at the national and state level, and deliberating on problems confronting primary education highlighted by these studies. Apart from presentation of selected studies, two panel discussion sessions were organized

and thematic papers were presented by a few invited speakers on specific themes. The subjects for panel discussion were

(i) Strategy for research in Elementary Education - lessons from DPEP for SSA

(ii) Impact of DPEP on Primary Education - feedback from research studies

The studies presented at the seminar were broadly in the following areas

(1) Achievement level of pupils

(2) Retention rate and dropout rates

(3) Community mobilization and management issues

(4) Gender and social equity issues

(5) Pedagogical issues, teachers and teacher effectiveness, and academic support systems created under DPEP.

There was presentation of a few studies from the different states in the above mentioned broad areas. A few studies conducted at the national level by apex institutions such as NCERT and NIEPA were also presented at the seminar. Since SSA has been launched recently, the discussions in the seminar proved to be useful for devising the strategies for research under SSA. It was of interest to know what research studies had to say about the impact of various interventions of DPEP. This volume includes a few selected papers that were presented at the seminar.

The seminar was organised jointly by the Department of Educational Studies, Faculty of Education, Jamia Milia Islamia, New Delhi and the Research, Evaluation & Studies Unit of Technical Support Group for DPEP under Ed.CIL, with the support of the Elementary Education Bureau in the Department of Elementary Education & Literacy, Ministry of Human Resource Development.

We are grateful to Shri Sumit Bose, the then Joint Secretary, Smt. Vrinda Sarup, Joint Secretary and Shri Praveen Kumar, Director from the Bureau of Elementary Education for their unflinching support for this programme. We are also grateful to the participants who presented papers and participated in discussions and all our colleagues who were actively involved in organisation of the seminar. In particular, we thank, Prof. Kuldip Kumar, former Professor of NCERT and Ms. Neeru Bala, Consultant at Ed.CIL's Technical Support Group for their valuable assistance in editing this report.

Lastly, we are particularly indebted to Shri Syed Shahid Mahdi, Vice-chancellor or Jamia Millia Islamia for providing all the facilities for holding the seminar and taking personal interest in its organisaiton; to Shri V. Lakshmiratan, the then Advisor (Education), Planning Commission, for inaugurating the seminar; and to Dr. R.V. V. Ayyar the then Secretary, Department of Women and Child Development, Ministry of Human Resource Development for delivering a thought provoking valedictory address.

ABL Srivastava

Mohammad Miyan

CONTENTS

1. Introduction and Summary of Presentations

1.1 The District Primary Education Programme (DPEP) was operational in a number of districts of India, in some for nearly seven years and in others for about 5 years during the late nineties and early years of the current decade. In some districts the programme ended in 2003 and in others the concluding year is 2004. Several impact studies were conducted during the final stages of the programme. A few studies were selected for presentation and discussion at a seminar organised in June 2003 at Jamia Millia Islamia, New Delhi. The studies were also of interest because of the lessons that could be drawn from them for Sarva Shiksha Abhiyan, which was launched in 2001 for achieving universalisation of elementary education by the year 2010. Only the papers that were considered to be more relevant have been included in this volume. In the following sections, we are reporting a summary of the presentations made in different sessions of the seminar.

1.2 **Prof. ABL Srivastava** initiated the seminar proceedings. He said that research was given considerable importance in DPEP from the very beginning throughout its implementation. To begin with, several baseline studies were conducted when DPEP was launched in 42 districts of 7 states in 1994. Interventional strategies were developed on the basis of inputs from such studies. Later a number of studies were conducted not only at the national level but also at the state and district levels for monitoring the progress, evaluating the effectiveness of various interventions and getting research based answers to problems faced during implementation. While at the national level, the apex institutions like NCERT and NIEPA and Ed.CIL's Technical Support Group for DPEP provided the needed support to research, at the state level, institutions such as SCERTs and SIEMATs and at the district level, DIETs also played important role in conducting studies on primary education in the context of DPEP. As a result, a large number of studies have been completed at various levels and many of them in the recent years were evaluation studies focussing on the impact of DPEP on the different aspects of primary education. The main purpose of the seminar was to discuss some of these studies and to learn about the overall impact of DPEP in its concluding year.

1.3 **Ms. Vrinda Sarup,** expressing her views on importance of research in DPEP and SSA programmes said, that the seminar provided an opportunity for reflection. Drawing attention to the fact that there was an exponential expansion of DPEP since its inception in 1994, she observed that a major contribution of the programme was in creating an environment of research and innovation in the school education sector, since the earlier research in education had remained largely confined to the universities only. She expressed satisfaction that as the DPEP expanded, the capacity to cope with this change had increased through decentralization of research and by diversity of research projects that teachers and schools have been engaging in. She observed that during the closing years of DPEP, there was more space for innovation, commitment and change in the research process and hoped that the present seminar would help in providing the agenda and design for future research and also help in linking theory with practice.

1.4 **Shri V. Lakshmiratan** who delivered the inaugural address, said that although DPEP had covered a large part of the country and made significant contribution in universalisation of primary education, there were still 2198 blocks spread over 294 districts that were educationally very backward. They needed more resources and special attention in the coming years, if the goal of *Sarva Shiksha Abhiyan* has to be achieved.

1.5 **Shri Syed Shahid Mahdi,** Vice-Chancellor of Jamia Millia Islamia and Chairperson of the session expressed satisfaction that the Government was taking keen interest in primary educatior but observed that the country still had very low literacy rate. There was need for a firm political will to eradicate illiteracy. At the macro-level, he said, explicit expression of dedicated political will could bring about qualitative and quantitative changes in education. At the micro-level, he felt, it was necessary to arrive at a consensus among people to implement educational programmes, as social

fragmentation was the main barrier to community involvement in education. Referring to the importance of nutritional programme for children, he observed that an underweight child was underprivileged both physically and psychologically. He concluded by emphasizing the need for educational institutions to introspect on these issues and to conduct research which is application oriented.

The points covered in the papers presented in different sessions of the seminar are summarised in the following sections

I. Impact on Achievement of Pupils

Chairperson : Dr. N. K. Jangira

1.6 **Prof. M.S. Yadav** presented the lead paper entitled "Impact of DPEP on Learner Achievement". He began by explaining the context of DPEP, starting from mid 1980's when universalization of primary education was mainly attempted through provision of inputs like opening more schools, appointing teachers, supplying teaching learning materials, expanding teacher training facilities etc.. He referred to NPE (1986) as a landmark which made a significant shift from enrolment to participation and retention, and later CABE's endorsement of the World Declaration of 'Education for All' as well as its highlighting the need for increased financial assistance from international agencies for undertaking large scale projects to achieve these goals. Prof. Yadav further pointed out that CABE emphasized that the resources generated by external assistance should be utilized for educational reconstruction, which should go beyond conventional measures of constructing school buildings and appointing more teachers. In the 90's several large scale projects were implemented for achieving the goals of EFA and DPEP was the largest of all covering 42 districts spread over 7 states to begin with in 1994, which later spread to 273 districts in 18 states. Stating the DPEP objectives in respect of Learner Achievement, he referred to the core elements of quality of education reiterated in Dakar Framework of Action 2000, that included learning environment, learning process, teacher, teacher development programme, support and supervisory mechanism, and parent and community involvement. Prof. Yadav then presented some findings of learner achievement studies conducted at national and state levels. His main observations were:

- The achievement surveys, BAS, MAS and TAS, seem to have served the purpose of providing benchmarks and monitoring the progress in respect of levels of achievement in different DPEP districts. This has been done largely on the basis of mean achievement scores of students. The overwhelming use of quantitative indicators has ignored process related aspects like teacher ingenuity and creative behaviour, and contextuality of instructional situation. The domain of learner achievement has been viewed in a rather limited sense ignoring such aspects as value inculcation, life skills etc. as focus was on testing achievement in language and Mathematics only.
- Report on learner achievement reflects technological and behaviouristic orientation to pedagogical process and seeking improvement therein to raise the level of learner achievement. This is not in consonance with the basic approach which includes holistic view of pedagogic process and educational goals.
- With universalisation of access to primary education the heterogeneity of learner groups in terms of learning condition and learning environment both at home and school, has increased. The assessment of learner achievement for such groups when carried out through large-scale surveys with mean performance as the main indicator may conceal more than what it reveals about achievement. Assessment studies need to focus on the heterogeneity aspect and differential learning of different learner groups.

Prof. Yadav concluded his presentation by appreciating the role of DPEP in bringing primary education centre stage in the realm of education and initiation of a large number of research and development programmes in primary education in the country, with the universities also waking up to the need for more research in primary education.

1.7 The paper entitled 'Students Achievement in Phase –I DPEP Districts' was presented jointly by **Dr. S.K.S.Gautam and Dr. Avtar Singh** of the Department of Educational Measurement and Evaluation, NCERT, New Delhi. They reported the results of Baseline Assessment Survey (BAS), Mid Term Assessment Survey (MAS) and Terminal Assessment Survey (TAS) conducted by

NCERT in Phase I districts. They explained the purpose and methodology of these surveys and gave an account of their coverage in respect of districts, classes and subjects in which testing was done, and gave details of the sample of schools and the number of students who were tested. The results were presented on the status of students' achievement measured through the competency based achievement tests in language and mathematics both at the end of class I and the penultimate class of primary schooling. Comparisons of mean achievement scores of BAS (1994), MAS (1997) and TAS (2000) as well as in respect of gender, area and social groups were reported for Phase I districts by the authors.

The authors emphasised the need for sustained efforts to maintain the tempo of progress in high achieving districts and more spirited efforts in low performing districts. They suggested that intensive efforts should be made through continuous and comprehensive evaluation of students, supervised study programmes, adoption of locality specific instructional methods and making purposeful reinforcement and motivation an integral part of teaching and learning process, in order to improve the achievement level of pupils. They also suggested further investigations and analysis of data of poor performing districts with a view to find out the real reasons of poor performance.

1.8 **Shri R.P.Arora** presented the findings of Baseline, Midterm and Terminal assessment surveys (BAS, MAS and TAS) in DPEP Phase I districts of Haryana State. Comparison of mean achievement scores of BAS (1994), MAS (1997) and TAS (2001) showed that in classes I/II, substantial improvement had occurred between BAS and MAS in both the subjects, but further improvement after MAS was only marginal since the mean scores were already quite high in MAS. In classes IV/V, however, there was hardly any increase between BAS and MAS, but mean scores increased substantially between MAS and TAS in two districts, Hisar and Jind, but not in Kaithal and Sirsa. The relatively low achievement in classes IV/V in TAS is a matter of concern.

1.9 **Prof. S. Swaminathan** presented the results of achievement surveys conducted in DPEP districts of Tamil Nadu. He observed that though the results of student learning under DPEP had been encouraging in the seven districts of Tamil Nadu where DPEP was implemented, there were some points of concern such as the following.

(i) The problem of single teacher schools remained even though a second teacher had been appointed in many schools since one of them would often remain on leave and the one acting as headmaster or headmistress would generally remain engaged in administrative work. These seven districts being the most backward districts of Tamil Nadu, the teachers who were appointed usually did not stay in the same habitation and hence were not accessible most of time.

(ii) Caste conflicts were very pronounced in these areas; the social disparity had an adverse effect on learner achievement.Prof. Swaminathan was, however, appreciative of DPEP as it had helped in providing various facilities in schools for quality improvement, which had made positive impact on learning achievement of students.

1.10 **Prof. R.G. Kothari** presented a paper on Terminal Assessment Survey (TAS) in three DPEP districts of Gujarat, namely, Banaskantha, Panchamahal and Dangs. These were very backward districts with large tribal population. He reported significant increase from BAS (1996) to MAS (1999) and again from MAS to TAS (2002) in achievement scores of both Gujarati and Mathematics in classes I/II. However, in classes III/IV, the increase was just marginal between BAS and MAS in two districts. In one district (Banaskantha), a significant decrease had taken place between BAS and MAS. But between MAS and TAS, every district registered some increase. He observed that the same interventions showed different results in different districts mainly because of differences in their geographical and socio-economic conditions. Although the programme of Minimum Levels of Learning (MLL) was being implemented in all schools, the teaching of Mathematics needed improvement and teahcers needed more in-service training.

1.11 **Prof. N.K. Jangira,** Chairperson of the session, in his concluding remarks, observed that when DPEP was planned, it was envisaged that subsequent to Baseline Assessment Studies, qualitative indepth studies would be conducted to find out the deficiencies in classroom practices that were responsible for low achievement of pupils,

but such studies were not undertaken in any systematic way. There should have been a research agenda, with provision for impact assessment from the very beginning. He also commented on weaknesses in research design and deficiencies in analysis of data obtained from assessment surveys. The reasons for low achievement in Terminal Assessment Survey required probing. Prof. Jangira, concluded by observing that DPEP had provided learning experience which was valuable, and we had to reflect on how these experiences would help us in *Sarva Shiksha Abhiyan* (SSA). He further observed that research should be an in-built component of SSA and the experience of research in DPEP would go a long way in providing guidelines for research inputs under SSA.

II. Enrolment and Retention

Chairperson: Prof. Mohammad Miyan

1.12 The lead paper was presented by **Prof. ABL Srivastava** on 'Enrolment and Retention at Primary Level under DPEP'. He observed that the Gross Enrolment Ratio (GER) in DPEP Phase I districts had increased from 83.9% in 1995/96 to 95.1% in 1999/2000 and if enrolment in EGS and Alternative schools is included, GER would be about 102% . However, when GER of DPEP districts is compared with that of the whole state based on official enrolment statistics, we find that GER of DPEP districts was less in most of the states, the exceptions being Himachal Pradesh and Uttar Pradesh, where GER in DPEP districts was higher. This was hard to explain, except for the possibility of over-reporting of enrolment in official statistics and errors in projection of child population.

Also he pointed out that considerable increase in the percentage of school going children in the age group 6-10 had occurred in most of the states between 1995/96 and 1998/99, according to the data of National Sample Survey (1995/96) and National Family Health Survey (1998-99). Thus the large increase in enrolment during the late nineties was a global phenomenon in India and not confined to DPEP districts. He also drew attention to the trend of declining enrolment in class I in most of the states, which could be attributed partly to decline in birth rate and partly to greater attention given to quality of data in the recent years, that resulted in curbing the tendency to over-report enrolment.

Commenting on the problem of dropouts, he said that the dropout rates were still quite high in most of the states and in a number of DPEP districts despite the DPEP goal of reducing the dropout rate between class I and the last primary class to less than 10%. In the country as a whole, the 'gross' dropout rate at the primary level had declined just marginally from 42.1% to 40.7% between 1995/96 and 2000/01, according to the MHRD statistics. He also presented the figures of cohort dropout rates derived by the Reconstructed Cohort Method for the DPEP districts and discussed the major reasons for children dropping out from school as shown by NSS and NFHS surveys. The major reasons which both the surveys highlighted were 'child not being interested in studies' and 'unfriendly atmosphere in school'. For both of these, the schools and teachers were largely responsible. Poor economic condition of the family was also a reason but not as important as the other two.

1.13 Cohort studies have been conducted in a number of DPEP states to assess the completion and dropout rates by following up a cohort of class I students of some previous year and finding out how many of them completed the last primary class successfully (class V in most states) in the minimum 5 years, how many dropped out in between and how many repeated grades. It was assumed that those who left with a transfer certificate were continuing schooling in some other place, while others who left without it were dropouts. The cohort study required collection of data on individual students from school registers of the last 5 years or more. In this session, the findings of cohort studies conducted in Karnataka, Tamil Nadu and Uttar Pradesh were presented by Shri N. Prabhakar, Dr. D. Gangatharan and Shri Shardindu respectively. A similar study for DPEP districts of Rajasthan was presented by Dr. S. N. Methi.

1.14 **Shri N. Prabhakar** presented the cohort study conducted in all the 15 DPEP districts of Karnataka, covering all the 22741 schools of these districts. The class I cohort of 1996-97 was followed for 4 years till 1999-2000, since the primary stage comprises classes I to IV only in Karnataka. Also another cohort study with 1998-99 cohort was

undertaken that covered the primary cycle upto 2001-02. It was found that the percentage of pupils in class I in 1996-97, who dropped out before completing class IV in 1999-2000, varied between 9.9% in Mandya and 26.7% in Raichur, the overall average being 17.9% for the 15 districts. The overall completion rate (in 4 years) was 67.1%. There was not much difference between completion rates of boys and girls.

The study helped in identifying the schools showing poor performance. The districts Gulbarga and Raichur were most backward with highest cohort dropout rate.

1.15 **Dr. Gangatharan** who presented the cohort study of Tamil Nadu, said that the study was conducted successively for three years, 1994-95, 1995-96 and 1995-97, in all the seven DPEP districts. For 1996-97 class I cohort, the study was conducted in all non-DPEP districts also. The study was repeated in 2002-03, using 1997-98 cohort in all the districts of the state. Class I cohorts of these years were followed up to 5 years in all the schools of these districts.

He reported that completion rate (in 5 years) varied between 51.0% (in Dharmapuri) and 60.4% (in Thiruvannamalai) for 1994-95 cohort. These rates were much higher in all the seven districts for 1995-96 cohort, the lowest being 55.0% in Dharmapuri and the highest being 66.2% in Thiruvannamalai. The average cohort dropout rate that was 17.8% for DPEP districts in 1998-99 (for 1994-95 class I cohort), had reduced to 11.1% in 2000-01 (for 1996-97 cohort). For the state as a whole, the cohort dropout rate was 13% in 2002-03 (for 1998-99 cohort); it was highest (27%) for ST children whereas it was only 14% for SC children.

Dr. Gangatharan said that concerted efforts were made to reduce the dropout rate in schools that the study identified to be having high dropout rate. Such measures as School Adoption Programme (adoption of low performance schools by BRCs) and school based teacher training for improving the quality of education had proved to be effective in reduction of dropout rates.

1.16 In Uttar Pradesh, the cohort study was conducted in 32 DPEP Phase III districts with class I cohort of 1995-96. The findings of the study were presented by **Shri Shardindu.** The study was conducted in a sample of 100 schools in each district. The same procedure of data collection was used as in Tamil Nadu and Karnataka. The cohort dropout rate for the total of all the 32 districts was 56.5%, whereas the completion rate (in 5 years) was only 29.6%. The cohort dropout rate was slightly higher for boys (57.7% for boys and 54.9% for girls). The cohort dropout rate of the different social groups differed considerably, the lowest being 50.9% for SC students and the highest being 64.0% for Muslim Minority children. For OBC students it was 59.0% and for the general category (comprising of higher castes), it was 56.8%.

In the study, the variation in completion and dropout rates was examined for schools having or not having certain facilities such as toilets, drinking water, playground, boundary wall, book bank and attached pre-primary classes. The presence or absence of most of these facilities did not appear to have much impact on the dropout rate. Also the correlation of school level cohort dropout rate was studied with such variables as number of teachers, number of classrooms and number of maps, charts, kits for teaching science and mathematics available in school. The correlations were not significant for any of these variables.

Shri Shardindu concluded his presentation by observing that the situation required a suitable management strategy and a quality drive with provision for continuous monitoring of the pedagogical renewal programme at the grassroot level, for reducing the high dropout rate that most of the districts have at present.

1.17 **Dr. S. N. Methi** presented a study on retention conducted in 10 DPEP districts of Rajasthan. The study covered six different types of schools that existed in these districts. The sample included 268 primary, 64 upper primary, 122 Rajeev Gandhi Swarn Jaanti pathshalas, 34 Alternative Schools (22 of 4-hours and 12 of 6-hours) and 4 madarasas. Indepth study of causes of low retention was carried out in 2 schools of each type. Dr. Methi presented data of 10 districts on completion, repetition and dropout rates. He observed that some students took more than one year to complete a grade, inspite of the 'no detention' policy of the government. He found that the percentage of children who had continued to remain in the same school for 3 years after entering class I and who had not repeated any class, was 43% in 2002-03.

Three years earlier, in 1999-2000, it was 40%. He also reported correlations between retention and certain school variables. Finally, he made some suggestions like taking measures to check over-reporting of enrolment, promoting contact between teachers and parents and expanding the system of 'Toli Nayaks' for improving school attendance of students.

The session concluded with a few observations of Prof. Mohammad Miyan, Chairman of the session. He emphasized the need to use situation specific methods instead of the same standard methods for all researches, particularly in the context of studies on retention and dropouts. He further pointed out that capacity building workshops should be organised so that research is of satisfactory quality and the findings of research can be trusted.

III. Equity Issues

Chairperson: Prof. Kuldip Kumar

1.18 **Dr. Vimala Ramachandran** presented her lead paper on 'Equity issues in primary education under DPEP'. She observed that almost total enrolment of children of the age group 6-10 has been achieved, as about 99% boys and 82% girls of this age group are reported to be enrolled in school. But there are significant disparities in respect of residence (rural / urban), gender and social groups (SC, ST, etc.). Children from different social groups attend different kinds of school. Those from low socio-economic strata attend schools in which the quality of education is poor, and so despite the increase in numbers, the learning outcomes are poor. Not only there is shortage of teachers, there is gender problem too, as only about one-third teachers are women, and very few of them are in single-teacher schools. And 72% two-teacher schools have no female teacher. Among other things, the gender of the teachers in school has impact on girls enrolment.

She listed the factors that some studies have shown to be conducive to girls education. These include availability of school within reachable distance, presence of adults in the family who value education and of teachers in school who are affectionate and kind. She also mentioned the home and school factors that deter girls from going to school. These include poverty, burden of household work at home, negative role models in the family, negative teacher attitudes and tendency of teachers to punish the children.

She felt that there was need for sustained efforts, strict monitoring of schools and teachers' treatment of children, and making them accountable. Also political commitment and a change in administrative ethos were needed to improve the quality of government schools. Further, to address the problem of reaching out to the hard core of the most deprived sub-groups among SC and ST, and particularly of girls in these communities, special strategies will be needed. She concluded her presentation by stating that for developing equity 'strategies', the problems of the deprived groups should be understood and appreciated, and that there were no magical solutions or shortcuts for that.

1.19 A paper on "Strategies for Education of Special focused group in DPEP states – a review" was presented by **S. C. Chauhan & Laxmidhar Behera** of NCERT . They gave a review of strategies and action plans of DPEP states for addressing social equity issues and suggested strategies to plug in the gap areas in action plans of DPEP states.

For the study, while some data from secondary sources such as Census reports, Selected Educational Statistics published annually by MHRD and some other reports were used, information was also collected through questionnaires sent to the states and visits made to the states for getting greater insight into the problems.

The data were analysed to focus on three areas namely attitudinal shift and environment building; enrolment & retention and teacher preparation for capacity building.

Shri Behera discussed various steps taken by different states for attitudinal shift and environment building such as *Maa Beti mela, Kalajathas, Munia Mela* and enrolment drives and house-to-house survey before the commencement of each academic session.

He also referred to steps taken by some of the states for increasing access and enrolment such as by identification of school-less habitations and opening of Education Guarantee Scheme centres and Alternative Schools.

He pointed out that over the last 20 years, the increase in enrolment and retention has been greater for ST and SC children compared to the general category of children. A few states have taken steps to train teachers specially for teaching ST students, preparation of contextual textbooks, making schools attractive, sensitizing the community and increasing community involvement in education. In most states, teaching learning material has been developed with local specificity.

He said that contextualisation of education was important particularly for ST children. Suggestions were also made for conducting comparative studies on access, enrolment, retention and achievement of children of the different groups; for studying the migratory pattern of parents in certain states; developing teaching-learning materials in tribal dialects; and training of teachers in culture specific pedagogies.

1.20 A national study on 'Class room culture & processes from gender perspective in Bhilwara, Nagpur and Ganga Nagar districts of Rajasthan' by **V. Singh** and **V. Gupta** was presented by Ms. V. Singh.

The study was undertaken with a view to measure teachers' attitudes, and to ascertain the difference between boys and girls on various behavioural aspects. The data were collected from 21 schools on several non-cognitive aspects in day-to-day activities in schools through questionnaires, group discussions, interviews, observations and secondary sources.

Observations were made right from the beginning of the school day, on activities performed outside the class room and after the school, on class room processes, seating arrangement, students behaviour in presence and absence of teacher, disciplining strategies, monitor's role, etc. She reported gender difference in extra-curricular activities, for example, teachers generally assigned such non-academic work to girls as bringing water, chalk etc. Gender segregation was also observed.

Parents' interviews indicated that they educated the girl child mainly for getting them married in good families, whereas the purpose of educating boys was to enable them to earn well.

1.21 A social assessment study among tribal groups conducted by **Dr. P. Sudhakar Reddy** and **K. Raja Reddy** was presented by **K. Sudhakar Rao**, Research & Evaluation Coordinator of DPEP, Andhra Pradesh.

Data for the study were collected from sixty four schools of 32 mandals in Andhra Pradesh. Teachers working in tribal areas and 640 parents were interviewed. Analysis of data brought forth the major issues of teacher absenteeism and lack of training in teachers for teaching tribal children. Children were interested in studying but did not find schools attractive as they lacked infrastructural facilities. Most teachers did not use home language while teaching.

Clarifications were sought about certain aspects like statement made about the presence of less qualified teachers in private schools. The presenter clarified that the statement was for the informal private schools operating in the state. It was suggested by a participant that since the children do not get time at home to revise what is learnt at school, provision of time for revision should be made in the school itself.

1.22 **Dr. Kuldip Kumar,** Chairperson, remarked that the equity issue cannot be divorced from social realities while making policy decisions. Teacher behaviour both conscious and otherwise, influences students' environment. We take too simplistic a view of teacher behaviour in teacher training. Equity is also part of quality . Students' achievement is affected by such factors as home support, time available, etc. and the teacher should be sensitive to it. There is a difference between what is expected and what actually takes place. For example, the way mid-day meal is provided and is expected to impact are two different things. In order to make the idea implementable, it is necessary to make the message simple enough to be absorbed into behaviour.

IV. Role of Management structures – BRC, CRC, VEC & Community Mobilisation Activities Chairperson: Prof. B. P. Khandelwal

1.23 **Prof. B.P. Khandelwal** set the pace by emphasizing the relevance of the current seminar where it was possible to share the concerns related to DPEP with the concerned authorities, functionaries, international organizations, donors and NGOs. Assessment of the success of community mobilization was one such relevant issue. He observed that with the constitutional amendment there was strong political commitment

to EFA but the need of the hour was to work out strategies that would make these plans a reality.

1.24 The first speaker, **Dr. S.M.I.A. Zaidi,** presented his paper on 'A study of management structures under DPEP.' Based on the study of two DPEP districts from two different states viz. Malapuram in Kerala, an advanced state, and Gaya in Bihar, an educationally backward state. The study was reported to be undertaken with the twin objectives of studying the role and functions of district and sub-district management structures in DPEP and of analyzing the vertical and horizontal linkages of district and sub-district management structures created under DPEP with the existing administrative and management structures.

The study covered three blocks each from Malapuram and Gaya. In all 56 CRCS comprising 20 in Malapuram and 36 in Gaya were studied.

The main findings from the study indicate existence of a close linkage and coordination between DIET and District Project Office of DPEP, but non-existence of such linkage between the Deputy Director of Education and the District Project Office DPEP. There was strong vertical linkage between management structures created under DPEP such as linkage of DPO with BRC and linkage of BRC with CRC. Deputation of DIET teachers to BRCs leaves them with little time for their duties in DIETs.

Dr. Zaidi expressed his apprehension about the sustainability of the activities undertaken under DPEP towards quality improvement after DPEP comes to an end and the District Project Office is closed. This was because of non-involvement of mainstream educational administration in DPEP activities, which are implemented by a parallel structure at district and block levels. He made the following suggestions:

- The state government must ensure the sustainability of BRCs and CRCs as we now move towards SSA.
- There should be closer horizontal linkage between state educational structures and BRCs and CRCs.

1.25 The second speaker of this session, **Dr. Pramila Menon,** presented a paper based on Content Analysis of Training manuals for Village Education Committees (VEC) in DPEP states. Following were the patterns and trends that emerged from the content analysis:

- The purpose and objectives of the modules include: achieving UEE; creating awareness about DPEP through community mobilization; enhancing enrolment, retention and completion.
- Materials produced for training took the form of modules, guidelines, manuals and handbooks. Kerala was unique in bringing out district specific manuals.
- Most states took the support of existing organizations for module development e.g. in Assam, Voluntary Health Association (VHA), and NIEBM helped in material developed, while SCERT was intensely involved in this exercise in Haryana. Similarly, Lok Jumbish, Eklavya and State Recourse Centre were the organizations that provided guidance in Madhya Pradesh.
- The components of the module are largely objective based, which include sensitization, awareness building, knowledge and skill building. Very little attention seems to have been given to developing teaching-learning material.
- Content of the modules differ across states depending on objectives, constitution and functions of the Village Education Committees. Kerala is the only state which allows VEC to monitor the teaching learning process.
- Duration of training programme varies from one to five days.

Suggestion given by Dr. Menon for effective implementation of educational plans at micro-level were:

- True decentralization is not possible without active participation of local bodies. It is therefore important to build the capacity of village panchayats to mobilize the community and to get political commitment.
- Need analysis at the local level should be done before starting a training programme.
- Continued state organizational support is essential.
- Support of parents, teachers, local bodies, community leaders and NGOs should be sought.
- There is an urgent need for developing planning and management skills at the local level.

1.26 **Dr. Jyotsna Jha** presented her paper entitled 'Management Process in Elementary Education

and DPEP', based on a study of management processes in three DPEP states, namley, Bihar, Maharashtra and Madhya Pradesh. Her main observations were as follows.

- The management processes in elementary education are a product of the inter-relationship of the larger administrative system, the relative autonomy of educational institutions and the responsibilities and powers of Panchayati Raj institutions.
- Linkages remain vertical and rigid rather than horizontal and flexible which undermines effectiveness of educational programmes.
- Accountability is seen as adherence to rules and procedures with no sense of responsibility to the stakeholders.
- There is lack of a large scale sartorial planning and monitoring guidelines to the extent that even an understanding of what constitutes a good school is missing.
- With the 73rd and 74th Constitutional amendments, the role of Village Education Committees has expanded. However, the effectiveness of VECs has varied across states depending on the space available for their functioning.

Dr. Jha pointed out the following areas of concern that need to be addressed.

- Personnel and information management are two crucial areas, which require reorientation.
- While there has been large scale investment in teacher-training, ground realities such as skewed pupil teacher ratio do not allow it to bear fruit.
- Programmes like DPEP provide only additional measures. There is need to redesign programmes taking into account the existing policies and guidelines in order to make them more effective.

1.27 The fourth speaker of the session, **Dr. M.S.R.Sarma,** presented the main findings of a qualitative evaluation of Village Education Committees/School Committees conducted in 11 mandals of district Vizianagaram of Andhra Pradesh including tribal, rural and urban mandals.

Following are the main findings of the study reported by Dr. Sarma.

- School Head Masters convened VEC/SC meetings regularly by inviting the members personally or by writing.
- Women's representation was high in tribal and urban areas.
- The agenda items of VEC meetings varied across rural urban and tribal areas. However, school attendance was a common concern.
- The duration of VEC/SC meetings varied from 30 minutes to one hour.
- Members of VEC sometimes made contribution in cash or kind (*Shramdan*)

1.28 A paper on 'Role of Community in Learners Achievement and Absenteeism' was presented by **Shri Avinav Kumar** of Jharkhand. It was based on an experimental study conducted in four schools of Kumardungi block of West Singhbhum district. In two schools that formed the experimental group, there was community involvement for ensuring that children attended school regularly and also studied at home. In the two schools of control group, there was no such community involvement. The study showed that the students of the experimental group performed better in achievement tests and also had less of absenteeism compared to those of the control group.

V. Research Evidence on Impact of DPEP : Panel Discussion
Chairperson: Ms. Vrinda Sarup

1.29 The session started with a presentation by **Dr. Prema Clarke** from the World Bank who had reviewed 147 state level and 33 National level studies to assess the impact of the DPEP. She talked of impact of five major intervention of the programme viz. Community Mobilization and participation, access to school, textbook re-creation, teachers' professional development and classroom processes. She said that there was definite positive impact of DPEP in a number of areas, but wanted to highlight the areas where problems and shortcomings still remained.

Community mobilisation: Research evidence indicated that the VECs were more successful in construction of school buildings, micro-planning and use of Rs. 2000 school grant but were less successful in monitoring, participation and empowerment of members. She suggested evaluation of relative effectiveness of VECs vis-à-vis user groups.

Access: DPEP was reported to have been successful in creating school infrastructure by way of classrooms, buildings, toilets, drinking water facilities etc., but there was still a long way to go before a satisfactory quality infrastructure is created.

Text Book re-creation: A major success area was consultative process of writing books and preparation of activity based books. Studies indicate that there were attempts to remove gender bias but caste bias is still not addressed.

***Teacher's professional development*:** There has been substantial increase in teacher training programmes though there is variation in number of teachers trained and content of training. The training programmes also do not take into account the different levels of skills of teachers but are delivered as a whole package which tends to reduce its effectiveness. Very few studies have been conducted to evaluate the usefulness of training programmes leading to paucity of information on this important dimension of impact of DPEP.

Classroom processes: Some reform is indicated by the studies. Children are reported to be more comfortable in classroom and interaction between teachers and children has improved in the last 8 years. A few studies indicate the reluctance of teachers to use new teaching methods. But there are very few studies that actually try and assess change in the teaching process. This area needs to be addressed for research in the SSA programme .

Early Childhood Education (ECE) & other areas: Hardly any study has been conducted in ECE area. There were a few studies on management and planning. These indicated that although the structures of DPEP were in place, the issues of teacher accountability and absenteeism were not addressed. Planning needed to be more contextual and flexible. For proper financial management it is important to analyse expenditure on components and link it with output/ process/outcomes across states and districts. She also emphasized the need to undertake large-scale statistical studies alongside small descriptive studies.

1.30 **Prof R. Govinda** who was the next speaker, observed that information on status of primary education had increased enormously after DPEP implementation, but we need to reflect upon what research studies tell us about DPEP and what they do not. He raised six basic questions and deliberated upon how much researches conducted so far helped us in answering these questions. The questions and reflections are given below:

(1) Has DPEP brought more children to school?

Prof. Govinda observed that there was considerable increase in enrolment, particularly of girls, but was it because of DPEP or the cumulative effect of all other interventions being carried out simultaneously? Research studies do not answer this question appropriately. Also researches fail to provide information on the effect of the programme on enrolment in different contexts and how factors like SC/ST interplay.

(2) Has DPEP made any impact on Completion Rate?

Research studies do not indicate that the children who are enrolled actually complete five years of schooling. Gross Enrolment Ratio (GER) is what is indicated in studies but is the school able to hold students? Data on that aspect is not available and he wondered why the Net Enrolment Ratio (NER), a better indicator of enrolment rate, is not generally reported.

(3) How has DPEP impacted on teacher quality?

Prof. Govinda observed that teacher improvement was attempted through (a) direct training and (b) providing materials to teachers. Research evidence is inconclusive about links between training and teacher competence as these researchers depend on teachers' reports and do not investigate the cumulative transformation of teachers over a period of time. Most of the studies focused on pedagogical training; none stressed improving the knowledge base of teachers. More studies were needed to investigate the deeper links between training and teacher competence.

(4) Has DPEP actually helped in improving classroom processes?

Prof. Govinda felt that not many studies addressed this issue adequately and only piecemeal information of a few successful case studies was available rather than looking at the issue across the states.

(5) Do children learn better than what they were doing before DPEP?

Prof. Govinda raised this issue and observed that data from achievement surveys is presented at district, state and national levels but there is a problem in interpretation because of use of just averages and not other indicators.

(6) Are the schools qualitatively better now in DPEP districts?

Prof. Govinda remarked that the focus is on blocks, districts, state and so forth but school as an entity has not been considered. Research studies conducted so far do not tell us about the progress of a school over a period of time.

He concluded by observing that those areas in which research evidence is lacking or is unsatisfactory, should be given more attention in the research agenda of SSA.

1.31 The next panelist **Dr. Vimla Ramchandran** made three main observations related to gender and equity issues. Firstly, DPEP was one such programme where these issues formed an integral part of the programme rather than providing separate programmes for addressing issues of gender and equity. Secondly, in spite of this provision some recent studies indicated that the poorest of the poor children were still not being targeted by the programme and no learning was taking place among these groups across states and districts. Thirdly, she emphasized the need to develop appropriate and more sensitive measures and indicators to capture the gender and equity issues and to contextualise these indicators for village, district and state levels.

1.32 The Chairperson, **Ms. Vrinda Sarup,** while summing up, made observations on two main issues raised by the panelists during discussions. The first observation was that while planning and implementing the DPEP certain variables could not be controlled but these variables seem to have significantly affected the outcome of the programme. This has provided lessons for future planning.

Her second observation was on parameters for assessing impact. She said that we do not seem to have perfect parameters of impact, and some work needs to be done in this area. She also said that there were often shortcomings in designing of research studies by the state level educational institutions and that needs to be improved.

VI. Teachers and TeacherTraining
Chairperson: Prof.M.S.Yadav

1.33 The last session on the second day of the seminar began by a lead presentation by Prof. A.S. Seetharamu. He presented a review of researches conducted on Teachers and Teacher Effectiveness in the DPEP districts of India. His basic resource material for the review were the two volumes of research abstracts published by the Technical Support Group of Ed.CIL.

He observed that sample survey technique had been used extensively in DPEP researches. Two very popular tools used by researchers were questionnaires and interview schedules. In a few cases classroom observations also supplemented these tools.

DPEP researches were mostly confined to effectiveness of DPEP inputs such as impact on in-service training, use of teacher grants, activity based learning, material preparation and the like. He made the following suggestions:

- there is need for developing a national-level research agenda in primary education.
- there is need for conducting action research.
- the research agenda has to be built upwards-through grass root level workshops at CRC/BRC/ DIET/SPO/SCERT/SIEMAT levels using participative mechanisms.

He concluded his presentation with the remark that research on teacher and teacher effectiveness in school education in India is still in its stage of infancy and needs to be promoted further.

1.34 The presentation of 'Study of Impact of Multigrade Teaching' by **Prof. Hemlata Parasnis** highlighted the following points.

- Teachers have adopted innovative strategies.
- Local resources have been utilized to make the teaching learning process enjoyable. Guidance for preparing teaching learning materials was initially provided but later it was left to the initiative of the teacher.

- Importance is accorded to self – learning which has remained confined to copying practice and revision.
- Remedial teaching has been seen merely as re-teaching.
- Existing teaching places/rooms are meant for one grade, while teachers have to teach multi-grade classes.
- Studies should focus on the level of freedom given to a child in multi-grade teaching and also assess the effect of imposing self learning on such young children.

1.35 The paper entitled 'Social Acceptability of Primary schools in comparison with other types of schools in the same area' was presented by **Dr. Nibedita Sahu.** The study was conducted in 9 talukas of district Banaskantha. She compared the educational system of govt. and non-government schools. Primary education index was derived from the weightage acquired on five variables – school profile, teachers quality, social acceptability, satisfaction of different stakeholders and critical ratios – girls / boys ratio, male/female teacher ratio). She reported the following conclusions:

- Each category of school demonstrated strengths and weakness in certain areas.
- The aggregate score for non-government schools was better (76.48) compared to 72.68 for government schools.
- Government schools are better on availability of library, contact with parents of disadvantaged groups, knowledge about PTA/MTA, Sarpanch attention.
- Favourable pupil teacher ratio in non governmental schools (18.2).
- Parental perception is better for non-govt. schools with reference to teaching methods, learners' evaluation and up-keep of workbooks.

1.36 **Dr. Khushi Ram** presented a paper on 'Effectiveness of Tele-conferencing in Teacher Training Programmes'. Tele-conferences are organized to facilitate need based in-service teacher training programmes to combat transmission loss through cascade model of teacher training. The study was carried out in 4 blocks of district Mahendergarh in Haryana.

The impact of Tele-conferencing was evaluated on such variables as: orienting teachers to new techniques in teaching learning process; examining the role of panelists and facilitators; clarity of tele-material; time for discussion & question answers, solving classroom problems and achievement of children. It was reported that while 30% liked the tele-conferencing method, 62% favoured the traditional method of learning. This indicates that they need more exposure and time to benefit from the use of tele-conferencing in professional development. It is interesting to observe that at the same time 66% of the participants approved organization of such programmes in future.

Some of the elements needing attention in this regard are:

- quality of picture & audio
- access to phone
- time for discussion
- number of demonstrations / examples
- questions asked by viewers need to be subject related

The author suggested that

- duration of the programme should be two days and not just one day;
- audio-video quality of the programme should be good;
- every participant should get an opportunity to ask questions;
- the training module should be sent along with the deputation letter for the programme so that the teachers can identify hard spots and prepare themselves for the programme.

1.37 **Dr. Najma Saxena** and **Prof. Kuldip Kumar** made a presentation of 'Feedback study of Teacher training inputs in DPEP II in Uttar Pradesh' by highlighting the pivotal role of a teacher in the teaching learning process and the need for capacity building of teachers for improvement in the quality of education. It was an experimental study conducted in 48 schools 2 districts (Ferozabad and Lalitpur)in Uttar Pradesh. Results indicated that 47 out of 48 schools showed better implementation of training techniques, increase in enrolment, active teaching learning process and friendly classroom climate.

She suggested that more supervision of classroom teaching needs to be conducted on a regular basis.

and academic support should be provided by DIETs to BRCs. She concluded her presentation by suggesting that training packages should be reviewed and follow up programmes revived.

1.38 **Dr. J.P. Sharma** presented a paper based on a small study conducted by **A. K. Garg** to assess the in-service teacher training programmes organized in Ganganagar district of Rajasthan. In the study, teachers were asked to give their opinion on the training programmes they had attended, and the head teachers were asked to give their views on the impact of training on the teachers' performance. The main finding of the study was that training had made positive impact on teachers functioning, but there is need for follow up of the training programmes.

Issues raised by the participants in this session were whether there was a change in the attitude of teachers after attending these programmes and if teachers were satisfied with the content and transaction methodology of these programmes. The presenter said that these aspects were not investigated in the study.

1.39 **Prof. M.S.Yadav,** Chairperson, concluded the session with the observation that good researches are required in the area particularly in the context of Sarva Shiksha Abhiyan. He also concurred with the views of Prof. Seetharamu that research agenda should start from grass root level and for that participatory approach was needed.

VII. Classroom Processes
Chairman: Prof. K.P. Pandey

1.40 Classroom observation study in school of DPEP II districts of Uttar Pradesh was presented by **Shri Shardindu,** Director, SCERT, Lucknow. It focused on prevailing teaching learning practices and their effectiveness; interaction pattern between the teacher and the students and the support available to teachers. Findings indicate opening of schools in time (96%), high rate of teachers attendance (75%) and availability of textbooks to teachers and students (95%). Activity based methods (44%) show an edge over the traditional methods of book reading and lecture method (36%). Children's active participation in class activities is improving; 50% children in 54% of schools were seen as active participant in class room activities.

In general, greater attention (in over 70% cases) is being given to children from disadvantaged groups, girl child, SCs and disabled students Substantial number of teachers (70%+) scored high on various competencies – organized behaviour, dynamism, flexibility, warmth, acceptance and creativity and exhibited positive attitude towards DPEP intervantion. Practice of continuous evaluation of students was found to be quite common in schools.

Greater use of praise, encouragement and acceptance was observed in classroom instruction. The magnitude of teacher talk followed by student talk and vice versa was observed to be high in classes II to V in all the four subjects – a pointer to increased teacher student interactivity.

1.41 **Prof. Prerna Mohite's,** paper on ' Impact of Teachers and School grant on Effectiveness of the class room transactions' was presented by **Ms. K. Shah & Ms. R. Patel.** The study was undertaken in three districts of Gujarat-Banaskantha, Panchmahal & Dang.

Teachers are using different types of educational aids and they demonstrate a high degree of awareness of educational programme along with provision and purpose of the grant.

The grant is utilized for various activities such as procurement of raw material for educational activities and to prepare TLM for students.

Their decisions on use of grants were made after consultation with the Principal and colleagues and at times subject experts. Learning Resource Centre staff also provided guidance.

They receive grant either in cash or by cheque in lumpsum mostly from the Principal. Village Education Committee is also the source in some cases.

In Banaskantha, the community assisted teachers by providing useful material for children to the school and participating in activities like preparing playgrounds for children, providing games equipment and celebration of national festivals.

Over all, the availability and utilization of grant has resulted in more classroom activities and has served the purpose of improving teaching learning process, students attendance and overall teachers effectiveness.

The chairperson, who was associated with the Classroom Observation study in Uttar Pradesh, stressed the need of more studies in this area as most of the interventions were essentially meant for improving the classroom processes leading to better achievement of students. As a large number of schools in the country had shortage of teachers, it was important to improve the quality of education in multi-grade teaching situation. He also stressed the need for capacity building in research and development of a suitable strategy for research under SSA.

VIII. Strategy for Monitoring, Research and Evaluation under SSA : Panel discussion

Chairperson: Shri Sumit Bose

1.42 **Prof. A.K. Jalaluddin,** who was the first panelist to be invited to present his views, pointed out that the educational structure for primary education and upper primary education are two separate administrative structures and Sarva Shiksha Abhiyan is going to face a problem of major structural adjustment and curricular re-alignment. Realignment of curriculum from primary to elementary stage will, therefore, be an important research area under the SSA.

For quality improvement in the school system the management would have to be quality conscious. Quality assessment teams should be constituted. Community should be constructively involved in educational endeavors. For this the role of Village Education Committees should be re-defined as they will have to be concerned with quality also.

Prof. Jalaluddin referred to certain small scale experiments which are already going on, such as Vikalp (U.P), Vidya jyoti (Assam), and SLIP (West Bengal), systematic reforms may well be the extension of these small experiments for which strategic interventions are needed. To make such reforms possible, social mobilisation both within and outside the system is the way out. Generation of demand for quality education as a right by the community is therefore, another important area for research.

Regarding reforms in curriculum, Prof. Jalaluddin reminded that Kothari Commission had proposed general education up to Grade 10. Could any level of education be taken as terminal? Will a middle level school be viable?

What is the cost effectiveness of secondary schools up to grade ten? Curricular alignment, its relevance, language usage are the issues to be researched. Major curricular reform is not an easy task. There is national curriculum framework now, and rest of it flexible for states. This flexibility, however, has not been articulated and is a grey area for researchers to discover.

He emphasised that DPEP initiatives have raised the quality consciousness. It is indeed a matter of study as to how to assure quality in classrooms, classroom processes and school environment.

He pointed out the visible gap between the training received by teachers and its implementation by teachers in view of the class room reality and suggested constitution of quality control teams. These teams must make it clear to teachers what should happen in the classroom and how to do it, how to get ommunity support and how to make VECs aware of their responsibilities in respect of quality reforms.

He suggested a few areas of research such as

- Participatory learning in action;
- What community can do for education;
- Reading recovery campaign for class V; and
- Confidence building exercise in teachers and students through convergence of efforts.

1.43 The second Panelist was **Ms. Shanti Jagannathan** of European Comission. She said that the importance of a high quality monitoring, research and evaluation programme cannot be overstated in SSA. The SSA is the national flagship programme will take India towards the goals of Universalization of Elementary Education (UEE). A reliable and robust Monitoring and Evaluation (M&E) system that tracks India's progress towards this goal is a vital component of the programme. Discussions on programme implementation, management and achievement of targets will be based on the reliability of such a system.

The participation of external agencies in the financing of SSA makes the need for a nationally designed and managed M&E mechanism even more important. With external agencies likely to support SSA in a sector support mode, it is the information, analysis and reporting emerging from a national M&E at various levels which will assist in the smooth operation of external collaboration

and flow of external funds. The flow of external funds will be based on a demonstration of results and impact from using M&E.

She talked about the lessons gained from the implementation of DPEP and said that DPEP experiences has a lot to contribute in the design of a strategy for monitoring, research and evaluation for SSA.

1.44 Lastly, the third panelist, Prof **M. S. Yadav,** made the following points in the course of his presentation.

(1) Since DPEP is a large-scale field based programme which aims at educational reconstruction, the approach to its implementation has to be holistic. Therefore the concerns of quality of education have to be viewed at multi-levels. The concepts in pedagogy which were generally considered in a summative way with singular perspectives of cognate disciplines like psychology and sociology, have now acquired dimensions of several disciplines for their adequate understanding and explanation e.g. motivation. Also, the pedagogical processes can be viewed from different theoretical positions which lead to varied explanations to these. This paradigm to research in pedagogy has led to the following:

- Concerns of research are action oriented, and directly relate to pedagogical processes;
- Formulating specific concerns of research requires 'widest conceptualistion' to capture essence of the educational environment in which educational action and process operate.

(2) Designing researches to bring concerns of quality of education as viewed under (1) above, requires a more comprehensive view of pedagogical situations and their organisation. This complexity to be tackled effectively required viewing researches at several levels, such as surveys-large and small scale; studies to relate learning and organisational conditions to learner achievement; and process studies to capture the complexity underlying the seemingly simple, concrete and observable pedagogical tasks. Viewing researches in this manner will render them as pursuits of knowing and understanding a composite and complex field of education.

(3) Organisation of researches in pedagogy with the paradigm outlined in (1) & (2) above will require linking studies undertaken by young researchers – students of Masters' Courses, M. Phil and Ph.D. in Education. This will create synergistic effect to address the common concerns of quality of education. The participation of universities in direct action related pedagogy research has been to a lesser degree.

(4) For doing all this fruitfully, there is a need to bring the concerns of research in pedagogy more concretely in discourse on education. To enrich the discourse, it would be a good idea to produce relevant resource materials in the form of glossary of concepts in education, varied perspectives and paradigm shift, use of multi-method approach to research and composite understanding of educational phenomenon.

1.45 After the presentations **Shri Sumit Bose,** who chaired the session, invited comments from the participants. Commenting on the issue of qualitative and quantitative type of studies, Prof. ABL Srivastava observed that both qualitative and quantitative studies are needed for monitoring and evaluation. Drawing lessons for researches conducted under DPEP, he felt that there was greater need for ensuring that the findings of research studies are used effectively for monitoring and diagnostic purposes and for planning suitable follow up action. Also it is important that, for research and evaluation studies to be conducted in the future, the research design is technically sound, tools of data collection are well designed and methods of data analysis are appropriate. In order to improve the quality of research, these points need attention. It is also important that suitable need based training programmes for capacity building in the field of research are organized at various levels and for different client groups. Also there should be a suitable mechanism for selection and approval of topics of research, and research projects to be undertaken at the national, state and district levels.

Shri Sumit Bose concluded the discussion by giving details of provision for research under Sarva Shiksha Abhiyan. He said that a sum of Rs. 1500/- per school has been earmarked for research and monitoring activities. He highlighted the need for developing research capabilities of State level institutions and DIETs. He said that research will be undertaken by both governmental and

non-governmental organisations and monitoring and periodic assessment for SSA will be done through well recognized institutions such as those responsible for research in Social Sciences and Management Institutes. It will be important that they keep in mind the lessons drawn from research and evaluation activities of DPEP.

1.46 The concluding session was chaired by **Shri Syed Shahid Mahdi,** Vice-Chancellor of Jamia Millia Islamia. In this session, **Prof. M. Miyan** made a brief presentation on the proceedings and outcomes of the seminar, and invited **Dr. R. V. Vaidyanatha Ayyar,** the chief guest, who was then Secretary, Department of Women and Child Development, MHRD, to deliver the valedictory address. Dr. Ayyar in his valedictory address stated that District Primary Education Programme can offer valuable lessons for achieving the objectives of UEE, as few can match DPEP in the variety of strategic and tactical approaches for achieving the UEE objectives. As SSA is built upon DPEP strategy and experience, all the elements of the DPEP strategy are discernible in SSA. He pointed out that in spite of remarkable progress made by DPEP in achieving its objectives, the quantified goals have not been fully achieved. SSA faces an awesome challenge as it goes far beyond DPEP in its scope, coverage and goal setting. This calls for concerted action based on deep thinking and analysis, which would include critical evaluation of DPEP strategy, processes and interventions giving due consideration to inter-State and inter-district variations. Also there was scope for introducing new strategic elements as well as tactical processes and interventions under SSA. The strategic thinking of SSA calls for a rigorous evaluation of the management of change and systematic examination of the improvement in the administrative capacity that DPEP attempted. He emphasized that UEE cannot be achieved in the foreseeable future just by pursuit of quantitative goals. For that if we take care of the means – the processes, capacity building, institutional strengthening and well-structured reforms, the quantitative goals would be achieved automatically.

2. Conclusions and Suggestions Emerging from the Seminar

The conclusions that emerged from the seminar and suggestions made in various sessions are summarised below.

1. **There is a strong need for developing a national level policy and agenda for research in elementary education in the context of SSA.** Research based inputs will go a long way in ensuring efficient implementat ion of the programme and achieving the goals of UEE in a cost-effective manner.
2. **A Research Advisory Committee may be set up at the national level to take decision on research policy issues,** coordinate the research activities of different national level institutions and to guide the states in their research efforts.
3. **Research Advisory Committee may be set up at state level also** to decide on the strategies for commissioning research projects, to determine the areas of research in the context of the problems being faced and to approve research proposals submitted by institutions, NGOs and individuals. The committee should also monitor the research projects to ensure the quality of research and to help in organizing capacity building programmes.
4. Although a large number of research studies have been conducted in the different states under the umbrella of DPEP, **the quality** of some was not of the desired level. **It is important to take suitable steps to ensure that the design of research projects is sound so that their findings can be trusted.** Also in several studies in the past, sampling design, tools of research and data analysis left much to be desired. It is important that due attention is given to these aspects particularly in large scale empirical studies so that their findings can be generalized with confidence.
5. **Studies conducted to assess the impact of DPEP have shown that overall, there has been definite positive impact of DPEP in a number of areas but there were still some deficiencies and shortfalls in achievement of targeted goals.** An assessment made by the World Bank on the basis of analysis of a number of research and evaluation studies related to DPEP, highlighted the following points:

(i) There has been considerable success in improving access, by providing more infra-structural facilities for schooling (school buildings, classroom, toilets, etc.) and opening EGS and Alternative Schools but the quality of infra-structure is often not satisfactory.

(ii) New textbooks of good quality have been written in most states. The issue of gender bias has been addressed in the books but not so much of caste bias.

(iii) There was substantial increase in in-service teacher training programes, but these were generally delivered as a package without taking into account the different training needs of teachers. Studies on impact of training on classroom processes were very few.

(iv) Although there has been some improvement in the classroom atmosphere with greater interaction between teachers and students, teachers, in general, were reluctant to use new teaching methods. More studies are needed for assessing the change in teaching learning process.

(v) The area of Early Childhood Education was neglected in research

6. **There are certain research questions that were not answered properly** by the research studies conducted under DPEP. Such questions are:

- How much of the increase in enrolment, particularly of girls, is attributable to DPEP and how much to other factors and interventions?
- To what extent has DPEP made an impact on completion rate? While GER is reported, NER is not usually reported which is a better indicator of enrolment rate.
- To what extent have the DPEP training programmes been effective in improving teacher competence, quality of teaching and classroom processes?
- Is there research evidence that children are learning better now compared to pre-DPEP period? In achievement surveys like MAS and TAS, there was scope for reporting more indicators and results of analysis that would have provided greater insight into hard spots of learning and factors affecting achievement.
- Why are the poorest of the poor still not targeted adequately and hardly any learning is taking place among these groups?

7. A number of **suggestions** were made for **further research** in certain areas. In brief, these suggestions were

(i) More sensitive indicators should be developed to capture gender and other types of disparities and to highlight the equity issues particularly in the context of local situations at village, district and state levels.

(ii) Studies on impact should go beyond the assessment of impact on achievement and completion rate and should cover such educational goals as personality development of the child, development of self-image and self-esteem particularly amongst girls, SC and ST students and achievement in various co-curricular areas.

(iii) There should be greater focus on monitoring and evaluation of processes in quality related interventions and their impact on indicators of quality. The role of community in monitoring of quality also needs to be assessed.

(iv) Studies should cover all aspects of the programme in a balanced way. While the studies should be need based, there should not be too many studies in one area and very few in others. In general, research problems should emanate from experiences at the grassroot level.

(v) Cost-effectiveness of different strategies of providing elementary education such as distance education mode, EGS and alternative innovative education programmes should be studied.

(vi) Studies on causes of poor performance and low achievement in any area should be conducted in order to devise suitable remedial measures.

(vii) Problems of upper primary education should be studied from the point of view of access, retention, completion and quality of education.

(viii) The role of BRCs and CRCs and training needs of their staff and teachers should be studied in the context of SSA.

(ix) Studies on retention and dropouts need greater attention from the point of view of data requirements, methodology adopted and appropriateness of indicators used in methodology would help in comparing indicators of retention and internal efficiency across states.

8. **There is great need for capacity building in research at all levels,** as it is important for improving the quality of research. The capacity building can be done through suitable training programmes and involvement of experts in designing of the study, selection of samples, preparation of tools and data analysis, specially when major studies are undertaken at the national and state level.

9. **The reports of research studies should be widely disseminated** through publication of the study reports and their abstracts and getting papers published in periodicals. Dissemination seminars should be organized and action plans should be drawn up taking into consideration the implications of research findings.

10. While small scale studies in a limited geographical area are important for the particular area, **a few large scale studies should also be undertaken which have implications for the programme as a whole.** Such studies may include studies of cost effectiveness, efficiency of the interventions in achieving the objectives, longitudinal studies on processes of change in schools and teachers, cross-sectoral studies that link elementary education with other levels and types of education and the world of work.

11. **Both qualitative and quantitative researches are important.** Different types of research are needed to tackle different types of problems. The studies could range from small qualitative studies, case studies, action research, research based on analysis of secondary data to experimental studies and large scale sample surveys. Very few experimental studies have been conducted in the past, but these need to be given greater attention as they provide scientific basis for selection of best methods and tools to achieve the goals.

12. The money earmarked for research under SSA needs to be properly utilized and should not be spent on unimportant and meaningless research. As such, **there is greater need to ensure that research is done on carefully selected topics, is of good quality and leads to findings that have practical application** and can be used for better implementation of the programme.

13. **There should be some studies that assess the impact of the programme** after the end of the interventions in order to see their **long term effect** and sustainability of the gains achieved. Also where possible, comparison should be made with

the units which have not received the inputs in order to see whether the change, if any, can be attributed to the inputs. Such studies were lacking in the past.

14. **Studies that can be conducted by using already available data such as the data from EMIS, should be given due consideration in the research agenda.** Researches should make use of data available from other sources where possible and avoid collection of fresh data where the problem can be easily studied by analysis the available data.

15. **So far as the achievement of students is concerned, the impact of DPEP has been far from uniform over the districts.** The achievement level of class I students as measured by the tests used in BAS and MAS was quite high in a number of districts. In nearly one-third Phase I districts, mean marks in language and mathematics exceeded 80%, and in over 80% districts these exceeded 70%. But there were a few districts in which the achievement level was not satisfactory. In classes III and IV, however, the results were not so good since in less than 50% districts, the mean marks exceeded 60%. The increase in mean marks between BAS and TAS varied considerably from district to district. The overall target of at least 25% increase over the baseline achievement level was achieved only in a few districts. In several districts, only a small increase had occurred and in some of them, the mean marks had even declined. In most of the districts, the difference between mean achievement scores of boys and girls was small and less than 5 percentage points. **Studies should be conducted to find out why the average achievement level declined in some districts and what factors were responsible for exceptionally high level of achievement in some others.**

16. **Enrolment in primary classes** was expected to increase substantially in DPEP districts because a large number of out of school children had to be brought to school. According to EMIS data of 124 districts of 13 states, the enrolment in primary classes had increased by 7.6% between 1997 and 1999 and by 1.2% between 1999 and 2000. But there was considerable variation from state to state; in Assam and Bihar enrolment had declined instead of increasing between 1997 and 1999, whereas the enrolment increased substantially in Gujarat, Karnataka, Madhya Pradesh, Uttar Pradesh and West Bengal. The enrolment in class I declined in a number of districts, the overall decline being of the order of 12.5% in 124 districts between 1997 and 2000. Studies have shown that the decline in class I enrolment could be attributed to such factors as increase in intake in private unrecognized schools, declining trend in birth rate in some of the states and even to curbing the tendency of schools to report inflated figures of enrolment. However, studies are needed to ascertain which groups of children remained out of school and why? Corrective measures need to be taken when it is found that the decline in enrolment is largely due to parents' preference of private schools, poor quality of the existing government schools and aberrations in the data collection system.

17. **Dropout rates are still very high in number of DPEP districts;** the decrease in dropout rates between 1998 and 2000 was far from uniform across the districts. The dropout rates actually increased in 19 districts over this period, whereas in 74 out of 93 districts there was either no change or there was some decline in the dropout rate. **There was, however, hardly any gender related disparity in dropout rates in most of the districts.**

The **cohort dropout rate** (percentage of those admitted in the school who dropout before reaching the last primary grade) was expected to be reduced to less than 10% as a result of DPEP interventions. There was some reduction in the dropout rates which were very high to start with, in some of the states. However, the cohort dropout rate was still quite high in number of districts as shown by the reconstructed cohort studies based on EMIS data as well as retrospective cohort studies conducted in DPEP districts of some states, based on follow up of actual grade I cohort of some previous year. According to cohort studies conducted in DPEP districts of Tamil Nadu, Karnataka and Uttar Pradesh the percentage of 1996 class I students completing primary education in 5 years (in Karnataka, 4 years) was 60.6%, 73.7% and 29.6% respectively. In Assam, Bihar, Madhya Pradesh and Uttar Pradesh, the problem of dropouts was still quite serious.

A close monitoring of the phenomenon of dropout is needed in the states with high

dropout rates. The quality of EMIS data also needs to be checked particularly in the districts in which the dropout rates derived from such data were found to be very high or greatly fluctuating from year to year. **Data on transfer to and from unrecognized and Alternate Schooling system should also be collected to get a clearer picture of dropouts.** It was observed that evaluation studies should take into account the widely differing conditions and differences in the pre-project situation in the districts rather than judge the performance against a fixed target set uniformly for all the districts.

18. **External evaluation of DPEP Phase I was carried out by the Indian Institutes of Management, Bangalore, Ahmedabad, Lucknow and Kolkata** in 2001-02. In the seminar, papers based on evaluation studies of DPEP in Tamil Nadu, Kerala and Maharashtra, which were entrusted to IIMs of Banglore and Ahmedabad, were presented. **The findings of external evaluation varied from state to state. These, however, pointed out both 'major strengths' and 'major weaknesses' of DPEP.** For example, among the positive points of DPEP impact are: development of good school infrastructure (new buildings); higher attendance rate; better community participation and academic support provided to schools by BRCs and CRCs. The negative points appear to be: decline in class I enrolment even though some children are out of school; high dropout rates particularly in grades I and II; lack of proper maintenance of old school buildings; inadequate facilities for drinking water and toilets; lack of teaching aids in schools; lack of management training in district level staff.

The suggestions made for improvement included: provision of basic facilities in all schools; strengthening of monitoring and supervision mechanism; training in management and accounting procedures for the concerned staff; enhancement of community participation; more attention to co-curricular activities and school health programme and better coordination between DIETs and District Project Offices. The areas of weakness so identified and the suggestions for improvement made by the IIMs require special attention in implementation of SSA.

3. Some Critical Issues in Primary Education

*Shri Lakshmiratan, IAS**

There are a number of critical issues related to primary education that need to be considered and deliberated on by the research community.

One of the major concerns is that although DPEP has completed nearly ten years, however, one of its major objectives to achieve hundred per cent enrolment of children in schools has still not been achieved. The fact is that about 41 million children still continue to be out-of-school.

With regard to literacy the position is also dismal: every 3rd person in the country is illiterate and every 2nd woman cannot read or write. The gender gap continues to be high (21.7%) in-spite of remarkable progress, made in the field of literacy since independence. The literacy rate has risen from 16.7% in 1951 to 64% in 2001 and is believed to be about 75% in 2003.

On the basis of certain indicators, 2198 blocks located in 294 districts (i.e. almost 50% of the total number of districts) in the country, have been categorised as most backward educationally. They need special consideration and more inputs in the 10th Five Year Plan.

It appears that the model of development as followed in Kerala in the past was rather ambitious. We need to learn more from Karnataka or Tamil Nadu model, which is more realistic. Whatever model is adopted, the focus should be on development of backward areas for which extra efforts will have to be made.

Reforms in syllabus, curriculum, teaching of science, mathematics, languages and other subjects were needed to make them relevant for life and helpful in decent living. It was another area marked out for research. In this context, we have to recognise the relevance of Dr. Zakir Hussain's Nai Taleem and Basic Education concepts which aimed at making education relevant to life. Also vocationalisation of education has to be paid more attention.

In order to attract children to school, such measures as Mid-day meals programme should be promoted. We have to keep in mind that to achieve universalisation of elementary education, enormous funding and effort are needed. There is need for more private initiative and flow of funds from private sources into education sector. It is also necessary to develop suitable model for evaluating the impact of various programmes that take into account the differences that exist between the different states and regions of the country. In the case of backward regions, it is important to set up reasonable goals and not to use the same yardstick for all the states irrespective of their level of development.

Coming to the administrative issues, it appears that there are many more administrative positions now, but the officers remain pre-occupied with routine matters of leave, transfers, promotion etc. There is need for community based approach to manage primary education. It is also a matter of concern that there is no proper utilization of available resources in order to get something achieved in concrete terms in the field of elementary education. The need for realistic decentralized planning in the education sector is strong. The researchers should explore the potential of community power to tackle teacher absenteeism, accountability of teachers to the community and related matters.

There is need for focused research in certain critical areas in primary education and to follow up the research findings by taking practical steps to know what will work or not work under different conditions. The research findings should be followed by practical steps to make necessary changes in the system.

It is important that whatever research evidence becomes available is put to practical use for improving the quality of education and making it more relevant to life for our children.

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* *The Chief guest, (Former Principal Advisor [Education] in Planning Commission and later Secretary, Parliamentary Affairs). This article is based on his inaugural address at the seminar.*

4. Impact of DPEP on Learner Achievement

*M.S. Yadav**

1. Context

Till the mid 1980s universalisation of primary education was mainly attempted through measures to ensure availability of schooling facilities and augmenting other educational inputs, viz., opening schools, appointing teachers, supplying teaching learning materials, expanding teacher training facilities, etc. This seemed to be based on the assumption that the children did not attend the primary school because basic facilities for schooling were not available.

The National Policy on Education (1986) defined universalisation of elementary education in a broader framework. It made a significant shift from enrolment to participation and retention. The goal of universal elementary education was enlarged to include provision of education of a satisfactory quality to all children. It further emphasised that all learners must attain certain levels of achievement through schooling. Thus, universal achievement by learners is considered as a significant component of universal education.

The Central Advisory Board of Education (CABE) considered the World Declaration on 'Education For All' and the 'Framework of Action to Meet Basic Learning Needs (1990)' in 1991and 1992. The CABE endorsed the Declaration and called for further strengthening of the processes initiated through the NPE (1986). Also, the CABE highlighted the need for increased financial inputs to achieve the goals of EFA and formulated a broad operational framework for receiving financial assistance from international agencies for undertaking large-scale projects to achieve these goals. It is significant to note that the CABE emphasised that the additional resources generated through external assistance should be utilised for educational reconstruction, which should go beyond the conventional measures such as opening new schools, construction of school buildings and appointing teachers.

In 1990s, several large-scale projects with external assistance were implemented for achieving goals of EFA. The District Primary Education Programme (DPEP) was the largest of all spread over 7 states, to begin with in 1994; later it spread to 273 districts spanning over 18 states.

In respect of learner achievement the following specific objectives were specified in respect of the DPEP:

- to reduce differences in enrolment, dropout rate and learning achievement among gender and social groups to less than five 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 level in other competencies, by all primary school children.

As reiterated in Dakar Framework of Action 2000, the quality of education is recognised as 'multi-level concept'. Core elements of quality can be viewed as learning environment, learning process, teacher, teacher development programme, support and supervisory mechanism, parent community involvement (EFA Forum, March 2002). It implies improving every aspect of the quality of education, and ensuring excellence so that recognised and measurable learning outcomes are achieved by all, specially in literacy, numeracy and essential life skills.

In the context of DPEP, its impact on learner achievement can be viewed in two ways. One relates to devising measures of learner achievement at various stages of project implementation and making them integral part of its activities. They serve the purpose of change in assessing levels of learner achievement at successive stages, and also help in introducing necessary corrective and remedial inputs intermittently.

Two, apart from monitoring of the project implementation in terms of specific goals set for learning achievement in quantitative terms as stated earlier, the DPEP has a much larger goal to accomplish. It flows from the basic

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approach of DPEP to primary schooling. The approach is holistic and views various aspects of quality of education in an integrated manner which requires high degree of coordination among various project activities and involvement of community. This represents a movement in primary schooling to bring about a basic change in all pedagogical processes and their management. Impact of DPEP on such a change process needs to be seen in a more comprehensive way involving various aspects of primary schooling. This requires designing assessment studies with focus on broader goals and seeking appropriate indicators, mainly qualitative, derived from empirical and experiential evidences, and arriving at impact statements. These statements will present a composite picture of change that is taking place in primary schooling and the consequential outcomes in all its aspects. Also reflected in such statements will be learner achievement – its quality, sources contributing to it, varied forms, along with their relevance to life and environment. Such impact studies would be indicative of the contribution of DPEP towards educational reconstruction at primary stage.

2. Major studies to assess learner achievement

Assess ment studies have been conducted by NCERT as part of implementation of DPEP. The major ones were of three types, namely, Baseline Assessment Survay (BAS), Mid-Term Assessment Survey (MAS) and Terminal Assessment Survey (TAS). These are briefly described hereunder.

Baseline Assessment Survay

The first BAS was conducted in 42 DPEP districts of 7 states in 1994. The main purpose of this survey was to ascertain the level of students' achievement in language and mathematics at the end of the first year of initial schooling and at the end of the penultimate stage of primary schooling. The survey covered 1742 schools, 47688 students and 4908 teachers. It provided benchmark data for comparative study of learner achievement subsequently during the course of project implementation. Later BAS was conducted in other districts too as and when they were covered under DPEP. Here we shall confine our comments to BAS, MAS & TAS of Phase I districts.

Mid-term Assessment Survey

The MAS for Phase I districts was conducted in 1997 covering 2068 schools, 64674 students and 6221 teachers from 42 DPEP districts. The MAS was intended to assess:

- The average performance of students of class I and at the end of penultimate stage of primary schooling (PSPS) as measured by newly developed competency based achievement tests in language and mathematics.
- The comparative average performance of students of two stages (class I & PSPS) as measured by BAS tests administered in 1994 and 1997.
- The learner achievement in respect of: i) group and ii) the other variables like home, school and teachers. These were studied with achievement evidence collected through MAS tests.

ii) Terminal Assessment Survey

Towards the end of Phase I of DPEP, TAS was conducted in 49 districts from 8 states, covering 2444 schools, 80697 students and 7587 teachers in 2001. The achievement tests used in TAS were those used in MAS. The main purpose of conducting TAS was to assess the extent to which DPEP has fulfilled the objectives set for this project.

All the three survey-cum-assessment studies have been conducted on large samples drawn from large number of schools and teachers in different states. Also, the samples had been drawn according to pre-determined sampling design by following systematic sampling procedures.

Increase in learner achievement during DPEP Implementation

i. National Level Studies

Learner achievement as measured through BAS, MAS and TAS have been presented in detail in NCERT publications prepared by Jangira et al (1994) Ved Prakash et al (1997) and Gautum et al (2002). A perusal of these documents reveal the following results, when viewed in terms of quantitative norms fixed for the DPEP, as stated earlier.

The following Table presents the learner achievement data in the DPEP districts where BAS, MAS and TAS have been conducted.

Table 1: IMPROVEMENT IN LEARNER ACHEVEMENT IN DPEP DISTRICTS FROM BAS TO MAS & MAS TO TAS

No. of districts	Class	Subject	Stage of DPEP Implementation	Extent of Improvement in mean % marks		
				More than 25%	15 to 25%	Less than 15%
49	I	Language	BAS to TAS	23	9	5
			MAS to TAS	7	11	24
15	III	-do-	BAS to TAS	12	1	2
			MAS to TAS	1	4	7
34	IV	-do-	BAS to TAS	27	1	2
			MAS to TAS	13	7	11
49	I	Mathematics	BAS to TAS	38	3	5
			MAS to TAS	9	11	24
15	III	-do-	BAS to TAS	10	1	3
			MAS to TAS	2	2	9
34	IV	-do-	BAS to TAS	25	3	2
			MAS to TAS	12	4	14

1. On closer examination of the results presented in Table 1 and also those reported in documents referred to above, the following trends emerge in respect of learner achievement in DPEP districts.
   - In a large number of districts more than 25 percent increase in achievement has been observed in both subjects language and mathematics; in percentage form it ranges from 47 to 80 taking BAS as base.
   - Number of districts, in respect of which more than 25% increase in achievement is noticed from BAS to TAS is markedly greater than those for which increase in achievement to the same degree is observed from MAS to TAS both for language and mathematics.
   - If the limit of more than 25 percent increase in achievement is relaxed, and the improvement upto 25 percent is considered from MAS to TAS the number of districts is far greater than the number of districts with more than 25 percent increase in achievement, for both subjects and all the classes.
   - There are six districts where achievement in language and four where achievement in mathematics in class I has declined from BAS to TAS.
2. As stated earlier, the goal to reduce difference in learner achievement for boys and girls to less than five percent was set for the DPEP. This goal has been fulfilled in most districts. However, this parity needs to be studied in respect of actual achievement levels attained by both groups. A clear trend in difference in achievement level between boys and girls suggests that the number of districts where difference is in favour of girls is larger in language than the corresponding number for mathematics.
3. Difference in learner achievement of rural and urban areas have reduced to a great extent; this effect has been observed in more than 50 percent districts. Also, the parity in achievement in rural and urban groups is noticed more clearly from TAS results as the differences observed show trends in favour of rural areas in more than 50 percent districts for which the goal of area wise difference has been attained. For class III, it is more prominent.
4. Learner achievement difference between ST and SC groups and 'others' have considerably reduced. This difference in achievement has got reduced to less than five percent in more than 60 percent districts. Further, this difference is observed in favour of SC and ST groups in quite a few districts.

It may be relevant to make a few observations here. These may provide methodological perspective for the conclusions cited above. These are briefly stated in the following paragraphs.

- Strictly speaking in psychometric terms the tests used in BAS, MAS and TAS were different, administered for given purpose at different times on select samples. They were, thus, not parallel tests as such. They do not warrant an unqualified generalisation. Yet, it needs to be recognised that all these tests were designed to measure 'basic competencies' sought to be developed at primary stage. Therefore, they provide a basis for meaningful comparison of mean achievements computed for different groups of learners from same classes at different points in time. Such comparisons do serve useful purpose but in a limited manner.
- However, there is a technical problem in such comparisons. While seeking such comparisons, the researcher tends to look for similarities in tools, conditions under which evidences are collected, the purpose of research and even technicalities like significance of differences in mean achievement; and, he tends to ignore the differences that exist in all these. In fact, this problem exist in empirical verification which is basic feature of research with ' positivistic' orientation. This led to see a reason in what Karl Popper said about research conducted by using scientific

method with mechanism of empirical verification. He emphasized the need and legitimacy of looking for 'differences' consciously and testing them as way of research to establish the truth. Second half of twentieth century witnessed great influence of Popper's orientation to seek refutation of conjectures consciously on methodology of research in social sciences including education.

Of late, search for contextual knowledge arising out of limited and situation specific understanding by using multi-method approach has, therefore, become more urgent. Generating such understanding consisting of conceptual inputs in teaching-learning, skill based competence, insights into pedagogical action and other experiential knowledge inputs - seems to serve better purpose of educational research. Because, it accommodates basic features of current thinking in pedagogical processes viz., it is contextual, it needs to be guided by holistic approach, it should ensure community participation, it is human endeavor in which equity and rights are basic parameters, etc. Researches conducted under sponsorship of DPEP do not seem to reflect this methodological trend by and large.

ii. State Level Studies

For studying learner achievement a large number of researches have been conducted at state and district levels. They have yielded a vast pool of findings and suggested several action points. Some of them are cited here. The main purpose of giving brief description of these studies is to reflect the intent of the researcher in respect of what was investigated and what it leads to do further in the field. Some researchers have also raised basic questions of pedagogical and methodological nature. They have been highlighted. Further, in order to reflect the intent of the researcher and the nature of questions raised, these descriptions are kept very close to the wordings used in the project reports. Alongside, a few remarks have also been made about certain issues raised in these reports. These descriptions and the remarks made have also been utilised later to formulate comments and observations in next section.

1) *DPEP Core Research Group (2000) Students Achievement under MAS in Phase II, State of Andhra Pradesh, NCERT, New Delhi.*

In those districts where the hike in achievement was found to be exceptionally outstanding, intervention efforts may be continued to sustain the gains.

For districts, with moderate gains, intervention efforts may be stepped up to boost the level of students' achievement through intensive teaching and cooperative learning.

In districts where students' performance has taken a dip, spirited intervention efforts may be made in the direction of rejuvenating the system not only by undertaking analysis of research data but also introducing research based interventions.

Teaching-learning material which are area specific and tribal specific are needed to a greater extent.

2) *Md. Ahmed, Jafar Ali (2000) A study of learner achievement of primary schools of Bongaigaon district, Assam.*

It is necessary to improve the achievement in word reading for language and in addition and subtraction for mathematics in class II. In class IV special care should be taken in mathematics and language, specially in minority areas.

3) *Jayalakshmi, T.K. (2002) Terminal Achievement Survey of DPEP Phase I districts, Karnataka, R.V. Educational Consortium, Bangalore.*

i. The TAS showed an over all steadiness of achievement compared to BAS / MAS except in Raichur district.

ii. The performance of the students in class I in both language and mathematics was in the range of 75-80 percent as in previous surveys but Mandya and Raichur showed a slight dip in percent scores achieved. This implies that the achievement was nearer the target.

4) *Upadhya S.N. et al (2000) Learning achievement of primary school children in language and mathematics, MAS. Assam, Agricultural Finance Corporation Ltd., Guwahati.*

i. Achievement level of students was found to be independent of educational status of parents and guardians.

ii. Students' performance was affected by the occupational level of parents and guardians.

iii. Most students receive academic assistance from their family members.

5) *SCERT (U.P). (2000) Classroom observation in schools of UPBEP districts, Lucknow.*

i. The achievement levels of students in the UPBEP schools as evident from the results reported through the averages and dispersions of scores seem to have reflected considerable increase. Viewed in terms of the MLL criteria, the overall trend appears to be quite encouraging.

ii. It may be affirmed that in a majority of the UPBEP districts the teaching-learning processes in the classroom and the teaching styles and competencies of teachers as evident from their participation in various programmes provide sufficient evidence of a favourable change having set in.

6) *DPEP Karnataka: TAS 2000-03*

"The expected mastery level of learning though not achieved in standards III/IV, the trend of achievement towards this end, is seen in standards I/II. May be, some of the competencies are not easily attainable at that age. A review of competencies attainable at III/IV is necessary. Competency based learning is successful and desirable however, the techniques of teaching higher primary classes be reviewed."

These are very relevant observations. The questions arising out of these must form part of discourse on teaching-learning at primary level. This should further lead to conduct of researches related to basic conceptualization and process of schooling.

7) *DPEP Gujarat: TAS 2002*

"On comparison of performances of class I/II students on the TAS tests both in language as well as mathematics with that of class III/IV students, it was found that the performance of students of class I/II was relatively superior."

Other state reports also have arrived at similar findings.

8) *Directorate of Teacher Education and SCERT: Learner Achievement under DPEP: Orissa, 2003*

The empirical findings are hard to comprehend. It is considered important that one needs to have a relook at the data structure and carry out on-the-spot assessment of what might have caused these deviations (decline in achievement from MAS to TAS). The empirical quantitative findings can hardly be respected at this point without having a fresh look into the qualitative nature of the data and item-wise performance level of students.

In other reports on Learner Achievement also, issues related to psychometric premises taken for developing tools used in BAS, MAS & TAS and the methodological aspects have been raised. All those alongwith the questions raised by Orissa Assessment must form part of discourse on learner achievement to understand variations observed in mean achievements across districts and classes. It may be remarked here that conclusions drawn from "performance means" to explain such variations can only be speculative. Towards this end, process related studies have got to be organised.

9) *Students Achievement, SCERT Lucknow, 2003*

"The data of such districts which tend to highlight better performance have to be scrutinized and looked into with a view to finding out positive features of programme implementation so that they may be replicated in other districts as well."

In several other reports on learner achievement, the need for qualitative improvement is expressed.

Towards that end, the need for 'replication of 'potential inputs' and 'positive features' as found workable has been emphasized. In this connection, it may be remarked that the underlying assumption here is that solutions to pedagogical problems can be derived in the form of technological actions / task. And, this can be obtained from science of learning, teaching-learning and even pedagogy as a whole. This needs in-depth consideration in relation to basic features of DPEP approach mentioned earlier to assess the validity of this assumption.

iii. Main Observations

1) The achievement surveys, viz., BAS, MAS & TAS have been conducted to serve as:

- benchmarks about levels of achievement in different states, districts and other sub-groups;
- basis to assess contribution of pedagogical renewal towards improvement in learner achievement;
- research base to provide remedial measures and other enrichment instructional inputs;

These purposes have been served by seeking very generalized understanding of mean achievement of students and drawing implications to improve pedagogical processes. Varied implications are drawn to improve learning conditions also. This approach has led to:

i) seek defensible similarities in testing procedures warranting comparisons of mean achievements vis-à-vis learning conditions. Thus, it has led to rely mainly in common denominator.

ii) get more tangible evidences in quantitative form about learner achievement and improvement therein over time.

Emphasis rather over-emphasis on these has centred around fulfillment of organizational and implementation goals. Use of quantitative indicators in this overwhelming way has resulted to lesser emphasis on process related aspects like teacher ingenuity and creative behaviour, and contextuality of instructional situation.

It may, however, be added that the comments made about large-scale surveys (BAS, MAS & TAS) should not be taken to mean that they have no relevance. The import of the comments is to emphasise that such large scale surveys serve the purpose of providing general trends in learner achievements in respect of states, districts, and other groups – gender, social, areas, etc. For assessing the progress of project implementation in a general way, these are useful. However, for relating learning conditions with learner achievement in specific situation, 'contextuality' is an important consideration. This can be studied more appropriately through studies with a focus on contextuality of the situation and processes therein.

The outcomes of process studies bring out clearly and specifically the role of teacher, learner participation and operation of other conditions in a given situation. Further, these can develop better appreciation of teacher role and contribution of his own role and other conditions towards learner achievement, on the part of readers specially the practising teachers. Such increased appreciation on the part of teacher would help him see teaching – learning with greater professionalism.

2) As a corollary of what is mentioned under 1 above, the domain of learner achievement has been viewed in a rather limited range. For instance, attitudinal make-up and value inculcation have not been brought to any conscious focus to create appropriate learning environment and assessing its impact on learner achievement. The matters like contribution of school as an organizational set-up and its day to day routine, and teachers' behaviour both in instructional setting and in general in school premise have not become part of conscious efforts to understand attitudinal development and value inculcation as part of learner achievement, as yet. The sole emphasis has been on language and mathematics. Even within language area, emphasis is restricted to word knowledge and reading comprehension. Other aspects like expression, grammar, communication of feelings, etc. have been completely ignored. If they are considered less significant, this position needs to be owned by teachers. Towards that end, there is a need to include such issues in the discourse on teacher development. Similarly, life skills, though included in curricular scheme of DPEP, have not been very consciously pursued for their operationalisation and inclusion in assessment of learner achievement.

3) The results of various surveys of learner achievement serve useful purpose for effective implementation of DPEP and monitoring its progress. However, this needs to be recognised that the results of such surveys can at best be the indicators of learner achievements under varied conditions. They cannot be part of teaching-learning process; they serve organizational purpose largely. In order to become part of teaching-learning, the educational testing and assessment has to be carried out by teachers themselves. In such pursuits, conscious efforts need to be made to make sure that the teachers try varied form of testing and develop insights into the process of tool development, their utilization and reviewing them to assess their appropriateness with experience in a more home-made manner rather than adopting any standardized way. In surveys which have dominated the DPEP efforts to assess learner achievement, one finds that for organizational reasons perhaps, formatting of testing procedures have remained rather unchanged. For instance, use of certain item types like ' completion type' has not been made in DPEP studies largely. Such trends strengthen the view that there are certain testing formats which are the only effective ways of educational measurement. This is obviously not an educationally sound view.

4) From most DPEP research reports on learner achievement, a particular approach to improvement in pedagogy emerges. Most researchers seem to have made an assumption that:

- the inputs to constitute ' pedagogical renewal' have been identified and these can be utilized effectively.
- the improvement in schooling must result into raising the learner achievement in quantitative form.

This approach basically points to technological and behaviouristic orientation to pedagogical processes. Further, it leads to viewing learner achievement as a dependent variable which can be explained with the help of independent variables. And, the contribution of these variables to learner achievement can be identified and apportioned by using techniques based on 'mathematical models.' Acceptance of this methodological orientation by researchers in the area of learner achievement, by and large is reflected in the use of techniques based on the mean performance of students and further treatment to it as 'unit' for inferential purpose. Also, the general implications drawn for seeking pedagogical renewal are suggestive of the reliance on the same orientation. Implications for improving learner achievement and reduction in group disparities are often stated like the following:

'Tempo in the programme be maintained'

'Motivation and encouragement be provided'

'Special efforts be made'

'Positive features of pedagogical renewal be identified for replication'

'Training of teachers should be such that the goal of 80 percent learner achievement is achieved'.

It may be remarked here that this orientation to view the pedagogical process and seeking improvement therein to raise the level of learner achievement is not in consonance with the basic features of the DPEP approach. As mentioned earlier these features are suggestive of holistic view, contextual knowledge about pedagogy, teacher competence to act as a professional and decision-maker, education as human endeavour, equity and human right in education, etc. These features need to be viewed in a composite manner to design meaningful researches on learner achievement. This composite view demands 'widest conceptualisation' possible of the pedagogic process. And, each research must fit into that to be relevant and contributory to overall purpose. Such a linkage in researches on learner achievement is largely missing so far.

5) As a corollary of what is mentioned under 4 above, the 'widest conceptualisation' on pedagogical process would lead to a 'composite understanding' of pedagogical process within which singular perspective-based knowledge components would act as supportive conceptual inputs. However, the knowledge in pedagogy would be 'professional knowledge'; the essential components of which will be perspective base conceptualisation, skills and competence, and insights to use them, with due linkages among them. Thus, knowledge-base in pedagogy is 'professional' and 'personalised' by the practitioner. The knowledge in pedagogy is also contextual.

Viewing K-base in pedagogy in this way would create a 'composite perspective' to undertake researches on all pedagogical themes like learner achievement. When such a perspective of research on learner achievement is taken, it would be essentially action oriented, task related and process guided. This perspective would also make the classification of researches into 'research studies', 'evaluation studies' and 'action research' blurred, and perhaps, redundant. The significant point in favour of such process related research is that it brings research in consonance with basic features of DPEP, which is learner-centred, participatory and holistic.

6) While considering impact of DPEP on learner achievement it needs to be recognised that with universalisation of access to primary education, the heterogeneity of learner groups has increased. The heterogeneity is more in terms of learning conditions obtained in learning environment both at home and school. As such these learner groups are 'difficult groups' educationally. The assessment of learner achievement for such groups when carried out through large scale surveys with mean performance as the unit for analysis and understanding may conceal more than what it would reveal about achievement. This has methodological implications for organising assessment studies by viewing learning achievement and learning

environment in a process related manner, and selecting units of analysis appropriately.

7) For designing such studies care will have to be taken that the students of 'difficult groups' dawn into primary schools through special efforts made under DPEP, are clearly identified and their total learning environment is closely observed, analysed and related to social conditions. Anthropological aspects of educational setting in such studies will become very crucial. For instance, mere arrival of student belonging to 'difficult group' to the school does not mean that she has become a full fledged member of the class as a 'social group'. It all depends on how she perceives herself in the midst of others in the class; how she is perceived by fellow students specially by those belonging to other social groups; how she is perceived by the teacher vis-à-vis her family background; and how she is treated by the teacher and other students during interactions in the classroom and other social interactions in the school premise. And, all these perceptions influence pedagogical processes and their effectiveness. Impact studies with a focus on learner achievement must take cognizance of such influences on students' learning and seek appropriate methods to arrive at authentic understanding of the teaching-learning as a total process. And, such understanding needs to be utilised for devising inputs for pedagogical renewal. Such studies are meager in number in DPEP as yet.

4. Concluding remarks

Learner achievement is most significant indicator of effectiveness of schooling. It seems to amalgamate the effects of various aspects of teaching-learning and provide a major criterion to assess the effectiveness of the composite programme and its processes. The DPEP has followed this line of thinking while assessing its impact on learner achievement. Towards this, a large number of researches of varied kinds – evaluation, diagnostic, developmental, social assessment, etc., have been conducted. They have provided certain trends of improvement in learner achievement through period of programme implementation and across stages of primary schooling. Along side some serious challenges have been brought to surface by assessment studies about learner achievement. For instance, it has been difficult to explain a. to why for certain districts, schools and groups of students the achievement has been at very low level or even deteriorated. Apportioning of contribution of varied learning conditions and other organisational factors towards learner achievement has not been adequately done through the researches carried out for this purpose. Therefore, the need for designing process related investigations with multi-method approach to bring complex teaching-learning situations under in-depth observation, analysis and insightful composite understanding, has emerged to pursue the concerns of research related to learner achievement in a comprehensive manner.

Another lesson that emerges from researches carried out under DPEP can be derived from the inherent delimitation in respect of setting research concerns and the methodological perspective preferred by researchers. Usually, the learner achievement is considered as distinct area for organising researches. This arrangement tends to influence researchers to see the area in a rather bounded sense delineating concerns of research with uniperspective approach for conceptualisations involved. There is a need for the researcher to release oneself from the uniperspective of academic nature to 'action perspective' which is inherently multi-perspective. This will help the researcher to adopt comprehensive conceptualisation for any pedagogical theme like learner achievement. This orientation on the part of educational researcher need to be strengthened through teacher preparation programmes and other courses of studies in education at various levels.

The points made above are specially intended to emphasize an orientation to view the concept of quality of education as a multi-dimensional concept which operates at multi-levels involving learning environment, learning process, teacher, teacher development programme, support and supervisory mechanism and parents community involvement as stated earlier in the paper.

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5. Students' Achievement in Phase-I DPEP Districts

-S.K.S. Gautam & Avtar Singh*

1. Introduction

The District Primary Education Programme (DPEP) was launched in the year 1994 with twin purposes, one to operationalise decentralized planning and management and two, to accelerate the pace of universalization of primary education in the country. Consciously the districts, wherein the female literacy was lower than the national average and where the total literacy campaign has generated enough demand for the universalization of elementary education were selected for the implementation of the programme. The DPEP which emphasises on contextuality aims at reducing gender and social disparities that do prevail in the existing system. More specially, the DPEP aims at fulfilling the objectives that are given as under:

- 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.

Initially the DPEP was introduced in as many as 42 districts spanning over seven DPEP Phase-I states. Since then the DPEP has traversed a iong distance in terms of its coverage. It has embraced more than fifty percent of both student and teacher population of about 277 districts spanning over 18 states. It has given fresh impetus to the process of Unviersalizatian of primary education in the country by way of creating massive infrastructure besides the coverage and increase in enrolment, retention and participation.

2. Studies to Asses Students Achievement

NCERT conducted some major studies on students achievement as part of implementation of DPEP which are being discussed below.

2.1 Baseline assessment survey

Prior to implementing the DPEP in the initial districts of phase-I states, the 'Baseline Assessment Survey' was carried out in all the 42 project districts of seven DPEP Phase-I states in the year 1994. The purpose of this survey was to ascertain the level of students' achievement both in language and mathematics at the end of the first year of initial schooling and at the end of the penultimate stage of primary schooling. This study in itself was a very massive exercise covering 1742 schools, 47,688 students, 4908 teachers from amongst as many as 42 districts. It was a unique proposition after the earlier studies on students' achievement carried out in 1965-66 in mathematics (Kulkarni, 1970), in 1990 both in language and mathematics by the NCERT (Shukla et al, 1994), again in 1994 in the same subjects by the NCERT (Jangira et al, 1995). All these studies created a wealth of data that have been used for designing research based intervention strategies for realizing the goal of universalizing primary education in the project districts.

2.2 Mid-Term assessment survey

The DPEP has been in progress in the expansion districts of the states of Assam, Haryana, Karnataka, Kerala, Madhya Pradesh, Maharashtra and Tamil Nadu since 1994. As per the agreement of the World Bank, the assessment studies in all these states were to be carried out in all the project districts during the third and the sixth year of the project. Since the BAS in the districts under reference was carried out in 1994, the second round of assessment survey which is more popularly known as Mid-Term Assessment Survey (MAS) was mounted in all these project districts in 1997. The study covered 42 districts, 2068 schools, 64,674 students and 6221 teachers. It is pertinent to mention here that MAS was not conducted in Karbi Anglong district of Assam whereas South Arcot district of Tamil Nadu was bifurcated into two districts Cuddalore and Villupuram.

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The purpose of this survey was to learn both the adequacies and inadequacies of the programme besides applying mid-course corrections to realize the desired results. The findings of the study provided an opportunity to the policy planners to have a relook at the strategies. It also made it possible to assess the quantum of activities being carried out in different operational areas, highlighting areas that require additional inputs and identifying pockets, hitherto, unknown and unexplored. Moreover, the findings of the study provided pointers for carrying out mid-course corrections.

The Mid-Term Assessment Survey was undertaken with the focus on the following 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 re-administered during MAS in 1997.
3. To compare the achievement differences in regard to area, gender and social groups on MAS tests.
4. To study the effect of variables like home, school and teacher on students' achievement.

2.3 Terminal assessment survey

The Terminal Assessment Survey was conducted in these districts during 2001. It is pertinent to mention here that the state of Madhya Pradesh was bifurcated into two states Madhya Pradesh and Chhattisgarh. The Mid-Term Assessment Survey was conducted in 19 initial districts of Madhya Pradesh of which 4 districts Bilaspur, Raigarh, Rajnandgaon and Surguja are now in the new state of Chhatisgarh. These districts were further bifurcated into 9 districts. The district Bilaspur was bifurcated into three districts Bilaspur, Korba and Jangjir-Champa, Raigarh into two districts Raigarh and Joshpur, Rajnandgaon into two districts Kawardha and Rajnandgaon and Surguja into two districts Korea and Surguja. The two districts Mandasour and Shahdol of Madhya Pradesh were bifurcated into two districts each. Mandasour was bifurcated into Mandasour and Neemuch where as Shahdol was bifurcated into Shahdol and Umaria.

Thus Terminal Assessment Survey was conducted in 49 districts covering 2,444 schools, 80,697 students and 7,587 teachers.

Design of the Survey

Normative correlational survey design was used for conducting the Assessment Surveys. The survey covered 49 districts of the 8 DPEP Phase-I states of Assam, Haryana, Chhattisgarh, Karnataka, Kerala, Madhya Pradesh, Maharashtra and Tamil Nadu.

Tools

Following tools were employed for conducting the terminal 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 Schedule
6. Field Notes
7. Training Manual
8. Field Handbook

It is pertinent to mention here that the achievement tests based on the competencies of classes I, and III/IV were administered at the beginning of the session on to the students of Classes II and IV/V respectively.

Target population

The target population covered in the survey 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 of the schools.

Students

- All students at the end of the initial stage of primary schooling.
- All students at the end of the penultimate stage of primary schooling (III/IV).

Sampling design

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

Total Schools Selected

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. The schools 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.

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.

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.

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 sections 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.

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 Class 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.

Tests used in BAS, MAS and TAS

The same tests were used during TAS as used during 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 and TAS were developed by the EdCIL. A broad classwise outline of the tests used under both the BAS and the MAS and TAS is given as under.

Class I

Language Tests

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 alphabets 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 and TAS 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 recognizing the word that would associate with the picture.

Mathematics Tests

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 and TAS 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

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 and TAS 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 MAS and TAS tests were different from BAS.

Mathematics Tests

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

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 and TAS 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 and TAS test had a different set of words and comprehension passages from that of the BAS tests.

Mathematics Tests

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

Strategy for the conduct of TAS

The conduct of the TAS was a shared responsibility between the NCERT and the states. The NCERT in its role as a 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 of all the districts across the eight 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. The same test as used during MAS were used for TAS also.

Data Collection

The data under TAS 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 analyses.

A detailed account of statewise sample pertaining to the BAS-1994, MAS 1997 and TAS 2001 is presented in Table 1,2 and 3 respectively.

TABLE 1: STATE-WISE DISTRIBUTION OF SAMPLE FOR BAS TEST (1994)

S.No.	State	No. of Districts	No. of Schools	No. of Students		No. of Teachers
				Class I/II	Class III/IV	
1	Assam	4	161	1981	1710	452
2	Haryana	4	145	2462	2516	548
3	Chhattisgarh	4	169	1895	2026	454
4	Karnataka	4	177	2498	2598	442
5	Kerala	3	113	2230	3089	502
6	Madhya Pradesh	15	632	6436	6745	1455
7	Maharashtra	5	225	3497	3804	698
8	Tamil Nadu	3	120	1856	2345	357
	Total	42	1742	22855	24833	4908

TABLE 2: STATE-WISE DISTRIBUTION OF SAMPLE FOR MAS TEST (1997)

S.No.	State	No. of Districts	No. of Schools	No. of Students		No. of Teachers
				Class I/II	Class III/IV	
1	Assam	3	150	2429	2164	418
2	Haryana	4	190	3435	3975	623
3	Chhattisgarh	4	200	2471	2461	543
4	Karnataka	4	200	3008	3323	638
5	Kerala	3	128	2447	3403	601
6	Madhya Pradesh	15	750	9229	9337	1847
7	Maharashtra	5	250	4165	5356	888
8	Tamil Nadu	4	200	3461	4010	663
	Total	42	2068	30645	34029	6221

TABLE 3: STATE-WISE DISTRIBUTION OF SAMPLE FOR TAS TEST (2001)

S.No.	State	No. of Districts	No. of Schools	No. of Students		No. of Teachers
				Class I/II	Class III/IV	
1	Assam	3	150	2085	2170	519
2	Haryana	4	194	3459	4268	779
3	Chhattisgarh	9	450	5884	5579	853
4	Karnataka	4	200	2905	3479	798
5	Kerala	3	150	2911	4042	676
6	Madhya Pradesh	17	850	9368	15197	2144
7	Maharashtra	5	250	4305	5399	920
8	Tamil Nadu	4	200	3951	5695	898
	Total	49	2444	34868	45829	7587

Data analysis

The data were analysed with a view to assessing the current status of students' achievement on 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 data were also subjected to making a comparison of achievements during BAS 1994, MAS, 1997 and TAS 2001. Besides, the data were also analysed to find out the achievement gaps on TAS tests in respect of gender, area and social groups.

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 Terminal Assessment Surveys" was developed by the DPEP Core Resource Group of the NCERT and distributed amongst the states.

3. Major Findings

Assam

Class I

The average performance of class I students in the state of Assam has ranged from 81.04% to 85.11% in language and from 78.90% to 91.81% in mathematics. In all the 3 districts of Assam the students performance crossed 81% mark in language and 78% mark in mathematics. Of all the districts, Morigaon has taken the lead by crossing 85.11% mark in language and Dhubri by 91.81% in mathematics.

Class III

The average performance of class III students in the state of Assam has ranged from 58.61% to 70.69% in language and 66.84% to 67.54% in mathematics. While Morigaon occupied the top position in language, Darrang topped in mathematics.

Haryana

Class I

In Haryana, the average performance has varied from 70.19% to 71.47% in language and 78.63% to 79.63% in mathematics. The students' performance is better in mathematics than in language.

Class IV

The average performance of class IV students in the state of Haryana has ranged from 44.55% to 58.61% in language and 44.75% to 59.95% in mathematics. Students of Haryana have displayed better performance in language than in mathematics. Hissar took lead in language and Sirsa in mathematics.

Chhatisgarh

Class I

The average performance in Chhattisgarh has ranged from 59.00% to 77.08% in language and 51.51% to 76.68% in mathematics. Seven districts in language and 5 in mathematics, have crossed 70% mark. Performance of students in Korea is poorest in both language and mathematics.

Class IV

The average performance in Chhattisgarh has varied from 27.09% to 56.04% in language and from 29.40% to 40.09% in mathematics. The achievement in language is better than in mathematics in 7 out of 9 districts. Korba tops the position in both the subjects. Achievement in Korea is lowest in language and Rajnandgaon in mathematics which are even below 30%.

Karnataka

Class I

The average performance in Karnataka has ranged from 60.05% to 84.00% in language and 63.48% to 85.32% in mathematics. Belgaum has toped in achievement in both the subjects. The performance of students in Raichur was poorest.

Class III

In Karnataka, the average performance has ranged from 36.53% to 64.74% in language and from 28.07% to 56.75% in mathematics. The performance of students in language is better than in mathematics. Mandya in language and Belgaum in mathematics has toped the position. The performance in Raichur is poorest in both the subjects.

Kerala

Class I

The average performance in Kerala has ranged from 76.90% to 80.40% in language and 72.70% to 77.25% in mathematics. It is evident from the results that all the districts in Kerala have crossed 72% mark in both the subjects and that all the three districts have displayed better performance in language than in mathematics.

Class III

In the state of Kerala, the average performance has varied from 52.00% to 52.67% in language and from

39.00% to 44.00% in mathematics. In all the 3 districts students performed better in language than in mathematics.

Madhya Pradesh

Class I

In Madhya Pradesh, the average performance has ranged from 63.36% to 87.03% in language and from 65.16% to 85.00% in mathematics. Five of the districts has crossed 80% mark in both the subjects.

Class IV

In the state of Madhya Pradesh, the average performance of class IV has varied from 47.07% to 77.50% in language and from 31.95% to 70.01% in mathematics. The district of Tikamgarh has excelled all other districts in both language and mathematics. The achievement in language in all the districts was found to higher than mathematics.

Maharashtra

Class I

The average performance in Maharashtra has ranged from 66.83% to 88.95% in language and 63.62% to 88.29% in mathematics. The Nanded district have captured the top position in both subjects by crossing 88% mark.

Class III

Students' achievement in the state of Maharashtra has varied from 43.65% to 85.66% in language and from 37.62% to 86.19% in mathematics. The district of Nanded in Maharashtra has outshined all other districts both in language and mathematics by crossing 85% mark in both the subjects.

Tamil Nadu

Class I

In Tamil Nadu, the achievement in language has ranged from 76.13% to 91.24% and in mathematics it varied from 81.18% to 93.13%. The district of Thiruvannamalai has taken the lead by crossing 91% mark in both the subjects.

Class IV

The average performance of students in the state of Tamil Nadu has ranged from 67.79% to 91.90% in language and from 61.26% to 90.16% in mathematics. The students of Tamil Nadu have demonstrated better performance in language than in mathematics. The district of Thiruvannamalai has outshined the other two districts by crossing 90% mark in both the subjects.

Summing Up

The performance displayed by class I students in both the subjects reveals that out of 49 districts 17 districts in language and 16 in mathematics have crossed 80 percent mark. Further scrutiny of the data reveals that of 49 districts as many as 41 in language and 47 in mathematics have crossed 70 percent mark where as all districts except 1 in language and 2 in mathematics have crossed 60 percent mark.

Students' achievement by class III students in both the subjects reveals that 7 out of 15 districts have crossed 60 percent mark in language and 4 out of 15 in mathematics. Further, it shows that out of 15 districts 12 in language and 8 in mathematics have crossed 50 percent mark. Two districts each in Karnataka and Kerala and 1 in Maharashtra has stood even below 40 percent mark is mathematics. Raichur in Karnataka in the only district where performance in both subjects is below 37%.

The performance of class IV students in both the subjects reveals that out of 34 districts 14 in language and 9 in mathematics have crossed 60 percent mark. Further analyses of the data indicates that 4 districts in language and 12 in mathematics have stood below 40 percent mark.

3.1 Variability

The measure of variability across the states has demonstrated lower variability amongst the high performing districts. Achievement scores in all the states have utilized entire range from 0 to 100 percent in both the subjects. Further, it is also evident that higher ranges have achieved maximum number of cases than the lower ranges. The performance displayed by class I students in both the subjects reveal that out of 49 districts, 17districts in language and 16 in mathematics have crossed 80 percent mark. Further, scrutiny of the data reveals that of 49 districts as many as 41 in language and 47 in mathematics have crossed 70 percent mark where as all districts except 1 in language and 2 in mathematics have crossed 60 percent mark.

The measure of variability has demonstrated that the variability in Nanded district of Maharashtra is low as compared to other districts while achievements is highest. In other districts, SD ranged from 17.10 to 26.12 without showing any pattern. The distribution of scores in all then states has covered the entire range from 0 to 100 percent in both the subjects. The shape of the curve

appeared to be negatively skewed in both the subjects, except in mathematics in Maharashtra where it is nearly normal.

The measure of variability has demonstrated almost identical pattern across the states except few districts. The spread of scores in all the 3 states has covered the entire range in both the subjects. The distribution of both subjects in Haryana and language in Madhya Pradesh were approaching to be normal, whilst distribution was negatively skewed in mathematics in Madhya Pradesh and in both subjects in Tamil Nadu.

3.2 Comparative assessment of students' performance

A comparative assessment of students' performance in language in class I on MAS tests administered in 1997 with that of the same test re-administered in 2001 has shown positive trends in 42 out of 49 districts across 8 states. Of these 42, as many as 41 districts have registered significant hike in achievement in language. The degree of hike in language achievement in class I has varied from 25% to 36% in 7 districts, from 15% to 25% in 11 districts, upto 15% in 24 districts. However, in as many as 7 districts achievement has suffered a decline, of them, 3 districts showing significant decline that ranged from 2.63% to 7.80%. In mathematics, 44 out of 49 districts have shown positive trends in students' achievement. Out of these 44 districts, 41 have registered significant hike in mathematics achievement. The hike in achievement ranged from 25% to 45% in 9 districts, from 15% to 25% in 11 districts and upto 15% in 24 districts. The remaining 5 districts have displayed negative trends, of them, 2 districts in Karnataka and 1 district in Maharashtra have exhibited significant decline in mathematics achievement.

A comparative analysis of students' achievement in language in class III on MAS test administered during 1997 with that of the same test re-administered in 2001 has demonstrated significant improvement in 10 out of 15 districts in three states. The hike in achievement was 47.60% in Nanded district of Maharashtra. The hike in achievement varied from 15% to 25% in 4 districts and upto 15% in 7 districts. The rest of the 3 districts have displayed negative trends, of them, 2 showing significant decline in achievement.

In mathematics, 13 out of 15 districts have portrayed positive trends, of them, 12 showing significant improvement. The hike in achievement has ranged from 25% to 61% in 2 districts, from 15% to 25% in 2 districts and upto 15% in 9 districts.

A comparison of class IV students' achievement in language indicates that 30 out of 34 districts in 4 states have demonstrated significant positive trends. The hike in achievement has ranged from 25% to 48% in 13 district. Besides, it has ranged from 15% to 25% in 7 districts and upto 15% in 11 districts. Sirsa in Haryana and Korea & Surguja in Chhattisgarh has demonstrated significant decline in language achievement. In mathematics, 30 out of 34 districts have registered significant positive trends. Kaithal & Sirsa in Haryana and Jashpur & Raigarh in Chhattisgarh have demonstrated decline in mathematics achievement. The hike in achievement varied from 25% to 60% in 12 districts, from 15% to 25% in 4 districts and upto 15% in 14 districts. Rest of the 4 districts have shown negative trends.

The DPEP goal of reducing the differences in achievement between boys and girls in class I has been realized in 42 out of 49 districts in language and in 40 out of 49 districts in mathematics across 8 states. In class III, genderwise differences in achievement has been overcome in 14 out of 15 districts in language and in 15 out of 15 in mathematics. Differences in achievement between boys and girls in class IV have been squeezed to less than five percent in 31 out of 34 districts in language and in 31 out of 34 in mathematics.

Differences in achievement between urban and rural students have been overcome to the level of the DPEP goal in 37 out of 49 districts in language and 29 out of 49 districts in mathematics in class I, in 10 out of 15 districts in language, in 9 out of 15 in mathematics in class III and in 25 out of 34 in language and 30 out of 34 in mathematics in class IV.

The DPEP goal of reducing the differences between SC and Others and ST and Others in class I in language has been realized in 38 out of 49 and 29 out of 45 districts respectively. In class I mathematics the goal has been reached in 39 out of 49 districts between SC and Others and in 33 out of 45 between ST and Others. The DPEP goal of reducing the differences among social groups in class III h as been accomplished in 13 out of 15 districts

between SC and Others and 12 out of 15 districts between ST and Others. In class III mathematics, the goal has been realized by 13 out of 15 between SC and Others and 10 out of 15 between ST and Others. In class IV language, the DPEP goal has been achieved by 26 out of 34 districts between SC and Others and by 20 out of 30 between ST and Others. In mathematics it has been overcome by 30 out of 34 districts between SC and Others and by 21 out of 30 between ST and Others.

One of the objective of the DPEP is raise the level of achievement by 25% over the baseline achievement. The data reveals that in class I language 24 out of 49 districts have achieved the DPEP goal. In the remaining 25 districts, 9 districts have achieved hike between 15% to 25%, 5 less than 15%. Six districts have declined in achievement. In class I mathematics, 37 out of 49 districts have achieved the DPEP goal. In the remaining 12 districts, 3 have achieved hike between 15% to 25%, 5 less than 15% and 4 have declined in achievement. In class III language, out of 15 districts, 12 have achieved the DPEP goal. Out of the remaining 3 districts one has achieved hike between 15% to 25% and 2 less than 15 percent. In class III mathematics, 10 districts have achieved DPEP goal. Of the remaining 5 districts, one has achieved hike between 15% to 25%, 3 less than 15% and 1 district has shown decline in achievement. In class IV language out of 34 districts, 27 have achieved DPEP goal. Of remaining 7 districts, one has achieved between 15% to 25%, 2 less than 15% and 4 districts have declined in achievement. In class IV mathematics, 25 districts have achieved DPEP goal. Of the remaining 5 districts, 3 have achieved hike between 15% to 25%, 2 less than 15% and 4 districts have declined in achievement.

In all those districts where the DPEP goal of reducing the gaps in achievement to less than five percent among gender and social groups has not yet been attained, concerted efforts need to be made to realizing the goal. Besides sustained efforts are required to maintain the tempo of progress in high achieving district and spirited intervention efforts in low performing districts. Greater emphasis need to be laid on intensive drilling trough continuous and comprehensive evaluation. The data of all those districts that have displayed poor performance need to be re-analyzed with a view to finding out the real reasons. 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.

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6. Terminal Assessment Survey in DPEP Phase I districts of Andhra Pradesh

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1. Introduction

DPEP was introduced in Andhra Pradesh in 5 Phase I districts (Karimnagar, Kurnool, Nellore, Vizianagaram and Warangal) in 1996-97 with the main objective of achieving Universalisation of Primary Education (UPE) by 2003 A.D. It is a programme concerned with quantitative expansion and qualitative enrichment to achieve UPE within a specific time span. It is based on contextuality, local area planning and community participation.

Before launching DPEP, Baseline Assessment Survey (BAS) was conducted in the year 1995-96 to provide the benchmark data on the level of achievement in language and Mathematics at the end of Class I and Class IV. The results helped in planning the interventions and accelerating the pace of UPE of improved quality at primary level.

As per the provisions of DPEP guidelines it was obligatory that the impact of DPEP interventions be assessed after a period of 3 years of implementation and at the end of the project. Accordingly Mid-term Assessment Survey (MAS) was conducted in September 1999 in all the five districts.

At end of the project period the Terminal Assessment Survey (TAS) was conducted in December 2002 in these districts in Language and Mathematics for students who had completed class I and class IV. The findings of TAS and comparison of results of TAS with those of BAS and MAS are presented in this paper.

2. Objectives

The objectives of TAS were

- to measure the average achievement of students in the competency based tests in Language and Mathematics at the end of class I and class IV of primary schooling.
- to compare the students' achievement in the TAS tests with that of MAS and BAS.
- to study the achievement differences with regard to area (rural and urban), gender & social groups and
- to study the effect of variables like home, school, teacher, classroom practices, incentive schemes etc., on students achievement.

3. Methodology

3.1. Sampling

The sample of schools and students was selected by broadly following the guidelines provided by NCERT. Specifically the sampling plan was as follows:

- 7 (4 rural and 3 urban) mandals were selected in each of the 5 districts
- 50 primary schools were selected in each district from the selected mandals.
- 30 Class V students were tested in language & Maths per school
- 20 Class II students were tested in language and Maths per school

In each district, there were 10 schools from urban area and 40 from rural area. Selection at each stage was done by random sampling method.

All the teachers handling primary classes including the Head Master of the school were interviewed. In the schools having more than 5 teachers, the teachers who had handled classes I & IV in the previous academic year and the Head Master were interviewed.

Details of the size of samples of schools, students and teachers in the 5 districts are given in Table 1.

Research & Evaluation Coordinator, SPO, AP-DPEP, Hyerabad (The paper was presented by R&E Coordinator Dr. K.S. Rao, Principal Investigator K. Sesidhara Rao (Retired Principal, IASE, Hyd.)

Table 1: District-wise distribution of total sample

Sl. No	District	No. of Schools	No. of Students		No. of Teachers
			Class II	Class V	
1	Karimnagar	50	718	974	153
2	Kurnool	50	862	979	182
3	Nellore	50	513	658	119
4	Vizianagaram	50	655	846	133
5	Warangal	50	781	927	198
	TOTAL	350	3529	4384	785

3.2. Tools used

The following tools supplied by NCERT were used for data collection

- School Record Schedule
- Teacher Schedule
- Student Schedule
- Class I Language Test
- Class I Mathematics Test
- Class IV Language Test (Comprising of word knowledge and reading comprehension items)
- Class IV Mathematics Test
- Consolidation Sheets
- Field Notes
- Field Handbook
- Training Manual

Class-I tests were administered to students of class-II and Class-IV tests to students of Class-V at the beginning of the school year.

3.3. Data collection

KRP Master Trainers cum field supervisors comprising of 1 DIET Lecturer and 3 Mandal Resource Persons (MRPs) from each district were trained at the State Project Office in the process of implementation and monitoring of TAS.

The state level training was followed by the district level training to 24 identified D.Ed students of DIETs in collection of data and administering the achievement tests in Maths & Languages. They worked as field investigators.

4. Analysis of data and findings

The analysis of data was carried out according to NCERT guidelines - Results pertaining to average performance of students on competency based achievement tests under TAS 2002 across subjects, classes and districts are reported here. There is pre-eminence of the element of contextuality as the results varied considerably across districts.

The inter - district variation with respect to students' achievement may be attributed to a number of factors like the degree of accessibility, availability of schools, other geographical variations, efficiency of administration, political will, community demands, infrastructural facilities, cultural variations etc.,

Tables 2 to 14 show the mean scores (out of 100) in BAS, MAS and TAS in Language and Mathematics for the students of classes II & V. Alongwith the mean, the sample size and standard deviation are also given in the tables.

4.1. Achievement in Language test for Class I

Table 2 shows the achievement scores in Language of the students at the end of class I or beginning of class II at various stages.

Table 2: Achievement scores (%) of students in Language, BAS, MAS and TAS

District	BAS			*MAS*			TAS		
	N	M%	SD	N	M%	SD	N	M%	SD
Karimnagar	661	50.60	30.00	763	78.28	21.84	717	84.74	21.87
Kurnool	621	41.50	31.00	814	78.03	24.46	842	92.64	10.59
Nellore	494	37.00	32.50	660	69.67	30.43	511	86.36	17.12
Vizianagaram	442	48.00	34.50	669	71.52	26.54	655	74.81	26.78
Warangal	626	57.50	30.00	744	82.45	18.97	781	82.59	17.28
Total	**2844**	**48.00**	**6.50**	**3650**	**76.28**	**24.97**	**3506**	**84.50**	**20.00**

M = Mean, N = No. of Students, SD = Standard Deviation

A cursory look at the above table reveals that

- the mean scores of BAS, MAS and TAS expressed as percentage of maximum marks are 48.00, 76.28 and 84.50 respectively. It is evident that all the districts have crossed the target of more than 25% increase in TAS over BAS. Also TAS scores are higher than MAS scores in all the districts.
- Kurnool district has achieved the highest mean score among the DPEP phase I districts.

Table 3 shows mean scores of boys and girls in TAS and highlights the gender disparity

Table 3: Gender-wise performance of class-II students in Language in TAS

District	Boys			Girls			$M_1 - M_2$	CR
	N	M_1	SD	N	M_2	SD		Values
Karimnagar	345	83.54	21.66	372	85.86	22.01	-2.32	1.42
Kurnool	425	92.75	10.43	417	92.52	10.74	0.23	0.32
Nellore	256	86.89	17.02	255	85.82	17.21	1.07	0.71
Vizianagaram	334	75.06	26.45	321	74.55	27.13	0.51	0.24
Warangal	327	82.11	17.06	454	82.94	17.42	-0.83	0.67

CR=Critical Ratio

The figures in above table reveal that

- there is no significant difference in the achievement levels of boys and girls in all the five districts in Class-II Language test of TAS.
- the DPEP objective of reducing the difference in achievement levels of boys and girls to less than 5% is achieved in case of class-II Language.
- in Karimnagar and Warangal districts the achievement of girls is found to be slightly more than that of boys.

Table 4 shows the achievement in TAS of the different social groups

Table 4:Category-wise performance of Class-II Students in Language in TAS

Dist	SC			ST			Others			Diff SC & Others	CR Value	Diff ST & Others	CR Value
	N	M %	SD	N	M %	SD	N	M %	SD				
KRM	135	84.15	22.37	52	90.19	13.66	530	84.36	22.33	-0.21	0.10	5.83	2.74*
KNL	195	92.56	9.73	22	95.91	6.51	625	92.54	10.93	0.02	0.02	3.37	2.31*
NLR	167	85.78	18.24	63	83.73	19.06	281	87.50	15.86	-1.52	0.89	-3.57	1.38
VZM	102	72.55	28.14	44	79.66	23.29	509	74.84	26.73	-2.29	0.76	4.82	1.30
WGL	212	84.36	16.57	110	82.05	16.30	459	81.91	17.76	2.45	1.75	0.14	0.08

* $P < 0.05$

The data presented in the above table reveals that

- there is no significant difference in the achievement level of SC and other students in all the five districts, which indicates the realization of DPEP objective of reducing the difference to less than 5%.
- SC students excelled others in their achievement in Kurnool and Warangal districts
- the DPEP objective of reducing the achievement level of ST students and others to less than 5% is achieved in Nellore, Vizianagaram and Warangal districts.
- even though the CR value is significant in Karimnagar and Kurnool districts the difference between achievement levels of ST students and others in Kurnool is below 5% and in Karimnagar it is just at 5.83%. It is to be noted that the performance of ST students is better than that of others in all the districts except Nellore.

4.2. Achievement in Class-II Mathematics tests for class I

Table 5 shows the achievement of students in mathematics at the end of class I or beginning of class II at various stages of programme implementations.

Table 5: Achievement (%) of Students in Mathematics BAS, MAS and TAS

District	BAS			*MAS*			TAS		
	N	M %	SD	N	M %	SD	N	M %	SD
Karimnagar	661	54.00	32.14	761	80.61	19.25	718	87.74	18.63
Kurnool	621	40.70	28.57	817	84.52	19.82	862	93.81	9.82
Nellore	494	38.50	32.85	663	74.74	26.26	513	88.78	16.57
Vizianagaram	442	43.50	33.57	670	76.51	24.38	655	82.95	23.14
Warangal	626	62.10	26.42	758	85.87	20.41	781	87.39	14.00

M = Mean, N = No. of Students, SD = Standard Deviation

Table 5 reveals that

- the achievement scores in mathematics of class II students, indicates that there is an increase of more than 25% marks over the baseline in all the districts, which is in accordance with the DPEP objective.
- in every district, mean scores of TAS exceeded 80% level. Kurnool scored highest marks out of all DPEP Phase I districts.

Table 6 shows mean scores of boys and girls in TAS and gender disparity.

Table 6:Gender-wise performance of Class II Students in Mathematics in TAS

District	Boys			Girls			$M_1 - M_2$	CR Values
	N	M_1	SD	N	M_2	SD		
Karimnagar	347	88.40	17.86	371	87.12	19.29	1.28	0.93
Kurnool	435	93.60	10.60	427	94.02	8.94	-0.42	0.63
Nellore	263	88.71	16.12	250	88.86	17.04	-0.15	0.10
Vizianagaram	332	83.66	22.59	323	82.21	23.66	1.45	0.80
Warangal	327	88.29	13.34	454	86.75	14.41	1.54	1.53

The figures of the above table indicate that there is no significant difference between the achievement levels of boys and girls in all the five districts in Class II Mathematics.

Table 7 shows the achievement in TAS of different social groups.

Table 7: Category-wise performance of Class II students in Mathematics in TAS

Dist	SC			ST			Others			Diff SC & Others	CR Value	Diff ST & Others	CR Value
	N	M %	SD	N	M %	SD	N	M %	SD				
KRM	136	85.26	20.74	50	93.30	10.33	532	87.85	18.54	-2.59	1.33	5.45	3.27*
KNL	190	92.55	9.76	23	95.65	5.38	649	94.11	9.92	-1.56	1.92	1.54	1.30
NLR	159	91.10	14.91	79	88.99	14.11	275	87.38	17.93	3.72	2.32*	1.61	0.84
VZM	101	80.35	25.19	48	83.23	23.79	506	83.44	22.61	-3.09	1.14	-0.21	0.06
WGL	213	87.44	14.34	89	88.82	12.76	479	87.11	14.04	0.33	0.28	1.71	1.14

* $P < 0.05$

The information provided in the above table shows that

- there is no significant difference between the mean scores of the SC students and others in case of Karimnagar, Kurnool, Vizianagaram and Warangal districts, but the CR value is significant in case of Nellore district. However, the difference between achievement level of SC students and others is below 5% and the mean score of SC students is higher than that of others.
- significant difference is observed between mean scores of ST students and others in the case of Karimnagar district only. However, the mean score of ST students is higher than that of others.
- In all the districts the mean scores of ST students were higher compared to the mean scores of 'others' except Vizianagram, where the two were almost the same.

4.3. Achievements of Class V students in Language test for class IV

Table 8 shows the achievement scores in Language of the students of at the end of class IV at the beginning of class V at various stages of programme implementation.

Table 8: Achievement (%) of class V students in language BAS, MAS and TAS

District	BAS			*MAS*			TAS		
	N	M %	SD	N	M %	SD	N	M %	SD
Karimnagar	778	40.20	9.47	861	56.74	17.78	973	67.26	4.75
Kurnool	604	36.23	13.46	866	58.84	18.37	979	66.21	4.47
Nellore	509	39.22	12.73	615	53.13	17.48	657	71.32	4.55
Vizianagaram	327	42.07	13.94	728	61.67	14.86	846	67.62	5.58
Warangal	617	42.48	11.91	798	60.97	17.62	948	68.39	4.35

The data in Table 8 shows that the TAS mean scores in language of class V students are over 25% more than the BAS mean scores, which is in agreement with the set objectives of DPEP.

Table 9 shows the mean score of boys and girls and highlights the gender disparity.

Table 9: Gender-wise performance of Class V students in Language

District	Boys			Girls			$M_1 - M_2$	CR Values
	N	M_1	SD	N	M_2	SD		
Karimnagar	434	67.41	4.84	539	67.13	4.67	0.28	0.90
Kurnool	500	66.15	4.40	479	66.27	4.54	-0.12	0.41
Nellore	318	71.54	4.42	339	71.12	4.67	0.42	1.18
Vizianagaram	412	68.22	5.24	434	67.06	5.83	1.16	3.04*
Warangal	421	68.40	4.22	527	68.38	4.45	0.02	0.06

** $P < 0.05$*

The figures in table 9 indicate that

- the difference between achievement levels of boys and girls is reduced to less than 5% in all the districts, which indicates the achievement of DPEP objective.
- in Vizianagaram District the CR value is significant, but the difference between achievement levels of boys and girls is less than 5%.

Table 10 shows the mean scores in TAS of different social groups.

Table 10: Category-wise performance of class V Students in Language in TAS

Dist	SC			ST			Others			Diff SC & Others	CR Value	Diff ST & Others	CR Value
	N	M %	SD	N	M %	SD	N	M %	SD				
KRM	208	67.23	4.79	45	67.97	4.04	720	67.22	4.78	0.01	0.03	0.75	1.20
KNL	229	65.42	4.72	25	64.52	4.40	725	66.51	4.34	-1.09	3.12*	-1.99	2.23*
NLR	193	70.60	4.52	58	72.14	4.83	406	71.55	4.49	-0.95	2.43*	0.59	0.87
VZM	116	68.06	5.33	42	70.17	4.54	688	67.39	5.63	0.67	1.24	2.78	3.77*
WGL	240	68.21	4.69	65	68.27	4.45	643	68.48	4.18	-0.27	0.78	-0.21	0.35

** $P < 0.05$*

The data given in table 10 reveals that

- there is no significant difference between the mean scores of SC students and others in Karimnagar, Vizianagaram and Warangal districts.
- in Kurnool and Vizianagaram, the CR value is significant for the difference between the mean scores of SC and 'Other' even though the absolute difference is below 5%.
- SC Students performed slightly better than others in Karimnagar.
- there is no significant difference between the achievement levels of ST students and others in Karimnagar, Nellore and Warangal districts.
- significant differences between achievement levels of ST students and other exist in Kurnool and Vizianagaram districts. However the absolute difference in these districts is below 5%.
- mean scores of ST students of Karimnagar, Nellore and Vizianagaram districts slightly exceeded those of other students.

4.4. Achievement of students in class IV Mathematics test

Table 11 shows achievement scores in mathematics of the students at the end of class IV or beginning of class V at various stages of programmes implementation.

Table 11:Students performance in Mathematics in BAS, MAS and TAS

District	BAS			*MAS*			TAS		
	N	M %	SD	N	M %	SD	N	M %	SD
Karimnagar	729	28.15	12.30	867	44.62	20.87	965	58.17	5.56
Kurnool	539	26.25	12.57	836	50.57	19.71	979	52.30	6.22
Nellore	496	24.80	11.12	624	40.06	19.06	658	51.19	7.47
Vizianagaram	297	33.12	15.00	745	52.34	17.64	846	56.04	5.34
Warangal	560	29.72	12.72	830	45.45	21.45	927	54.84	7.88

The information given in Table 11 shows that in all the DPEP I districts the mean scores in Class IV Mathematics of TAS are over 25% more than the BAS mean scores, which is in agreement with the DPEP objectives.

Table 12 shows the mean scores of boys and girls and gender disparity

Table 12:Gender-wise performance of class V students in Mathematics

District	Boys			Girls			$M_1 - M_2$	CR Values
	N	M_1	SD	N	M_2	SD		
Karimnagar	434	57.82	5.48	540	58.45	5.61	-0.63	1.77
Kurnool	500	52.55	6.48	479	52.04	5.93	0.51	1.28
Nellore	320	51.38	7.61	338	51.02	7.34	0.36	0.61
Vizianagaram	412	56.21	5.22	434	55.88	5.46	0.33	0.89
Warangal	410	55.49	7.95	517	54.32	7.78	1.17	2.25*

* $P < 0.05$

The data given in Table 12 indicates that

- there is no significant difference between the mean achievement levels of boys and girls in all the five districts except Warangal.
- in Warangal, the CR Value is significant at 0.05 level even though the actual mean difference among boys and girls fall below 5%.
- girls scored more than boys in Karimnagar district.

Table 13 shows students achievement in TAS as per social groups

Table 13: Category-wise performance of class IV Students in Mathematics on TAS

Dist	SC			ST			Others			Diff SC & Others	CR Value	Diff ST & Others	CR Value
	N	M %	SD	N	M %	SD	N	M %	SD				
KRM	208	58.43	5.61	45	58.78	4.76	721	58.05	5.59	0.38	0.84	0.73	0.98
KNL	229	53.06	6.03	25	52.00	5.24	725	52.07	6.30	0.99	2.15*	-0.07	0.06
NLR	173	49.80	7.29	61	49.06	8.28	424	52.07	7.27	-2.27	3.45*	-3.10	2.70*
VZM	116	55.28	5.18	42	56.61	5.08	688	56.13	5.37	-0.85	1.63	0.48	0.58
WGL	240	55.30	8.39	64	54.38	7.23	623	54.70	7.72	0.60	0.96	-0.32	0.34

* $P < 0.05$

The figures in Table 13 show that

- there is no significant difference between the mean achievement scores of SC students and others in three districts-Karimnagar, Vizianagaram and Warangal. In the case of Kurnool and Nellore the CR values are significant though the difference between their mean achievement scores fall below 5%.
- SC students performed slightly better than others in Karimnagar, Kurnool and Warangal districts.
- there is no significant difference between the mean achievement scores of ST students and others in Karimnagar, Kurnool, Vizianagaram and Warangal districts. The CR value is significant in Nellore, though the actual difference between the mean achievement of ST students and others is below 5%.
- ST students performed slightly better than others in Karimnagar and Vizianagaram districts.

4.5. Overall comparision of BAS, MAS and TAS results

Table 14 shows the mean scores of students on the tests for Language and Mathematics for class I and IV at various stages of programme implementation and difference in the scores at various stages.

Table 14: Mean scores (total of all the 5 districts) of student performance in Class I & Class IV Language and Mathematics in BAS, MAS and TAS

Class	Subject	BAS	MAS	TAS	Increae between		
					BAS &MAS	MAS &TAS	BAS & TAS
I	Language	48	76	85	28	9	37
	Maths	62	81	88	19	7	26
IV	Language	40	58	68	18	10	28
	Maths	28	47	55	19	8	27

The figures exhibited in the above table reveal that

- the overall mean scores of DPEP Phase I districts exhibited an increase of more than 25% in TAS over BAS.
- the increase in achievement scores from MAS to TAS is not so much as increase from BAS to MAS.

5. Items found difficult in TAS tests

- In Class I Language test the students could not answer those questions well in which they were not familiar with words. Such words were *Godugu, Enugu, Oda, Uduta* etc.
- In Class I Mathematics test students could not answer well the questions on (i) subtraction like 8 – 2, 6 – 6; (ii) which number comes before or after a given number; (iii) comparison of numbers.
- In Class IV word knowledge test, students failed to give the correct antonyms for such words as *Sukumaramu, Modalu, pogadu, daggara, gatti, santoshamu, sayantram.* With regard to synonyms, such words as *Addanki, Manava, Sikharamu*, were found to be difficult. Their performance is low on items requiring naming of antonyms.
- In Class IV Reading Comprehension test, students' performance is found to be low on questions of what, why and how Students failed to grasp the main theme of the given passages to indicate the lessons learnt from the passage and also failed in giving a title to the passage. The questions requiring critical and creative thinking on the part of the students were found to be difficult.
- In class IV Mathematics, students could not do questions on addition and subtraction of large numbers. Some could not do even the sums of simple addition and subtraction like 2000 + 200 and 7895 – 5704.
- All the 5 districts achieved the DPEP goal of improving achievement level by 25% or more over the measured baseline levels in Class I and class IV Language as well as in Mathematics tests.

6. Other findings

On the basis of the data collected from schools and students, the following observations are being made about availability of certain facilities in schools and other school related issues.

- Most schools have the minimum equipment like maps, globes, charts, blackboard, chalk and duster etc.
- There are still some schools without bell mats for students to sit on, notice boards, dustbins and water facilities. Toilet facilities in schools are poor. Many schools lack electricity facilities.
- It is a general expectation that more qualified teachers handling classes result in better achievement of pupils. But it was found to be otherwise in Warangal district, which may perhaps be due to the fact that B.Ed. and M.Ed. qualified teachers are not exposed to primary school pedagogy.

- Training programmes in Vizianagaram district were organised as scheduled but not in Warangal and Karimnagar districts.
- The in-service training provided to the teachers was found to have some impact on teaching both in Language and Mathematics in all the five districts.
- It was found that the knowledge gained by the teachers during the in-service training programmes was being utilised by them in their teaching – learning process in all the districts.
- It was observed that the performance of students from illiterate families was by and large at par with that of the students of parents with degree and above qualifications.
- People at the lower end of socio-economic scale are becoming aware of the importance of education and paying more attention to the education of their children.
- In all the five districts the mean percent achievement score crossed 50% level in Mathematics and 65% level in Language, which shows a positive impact of DPEP interventions for quality improvement.

7. Suggestions for action

Based on the results of this study the following suggestions are made.

- Sharing workshops should be organised at district level to disseminate the study findings and to discuss question-wise performance of the students on the TAS tests.
- It is necessary to identify the hard spots in learning based on the performance of the students in TAS and to take corrective measures.
- In the teaching learning process there is need to implement supervised study, co-operative learning, extra drill methods to improve the achievement level of students.
- The six pedagogical principles of the APPEP project need to be adopted in the teaching learning process by the teachers.
- More language and mathematics exercises should be given to students for practice in order to improve their learning on items in which their performance was poor.
- All schools should be provided with adequate academic tools and infrastructural facilities. There are many schools without electricity which hampers the use of electronic gadgets to facilitate effective learning.
- School grant and teacher grant to be utilised to the maximum extent for improving the academic environment in the school and make teaching more effective.
- The teachers who have B.Ed or M.Ed qualification need to be exposed to primary school pedagogy.
- There is need for organizing in-service training programmes for centres teachers in competency based teaching learning processes. Teacher centres and DIETs should take the lead in providing academic guidance and support to the primary school teachers.
- Academic monitoring of the students should be strengthened.

As the DPEP objective of increase in learning achievement by 25% in language and mathematics over BAS has been achieved in all the 5 districts in TAS, there is need to continue the interventions in the SSA programme also to sustain the impact of various interventions of DPEP.

7. Terminal Assessment Survey in DPEP districts of Gujarat

- *R. G. Kothari*[*]

1. Introduction

The District Primary Education Programme (DPEP) was launched in 1994 as a centrally sponsored programme to reconstruct primary education as a whole to realize the goal of UEE through district specific planning and disaggregated target setting. Each district project has its own specified activities, responsibilities, definite time schedule, and specific targets. In Gujarat, DPEP started in 1997 in three districts of Gujarat - Banaskantha, Dangs and Panchmahals.

The main objectives of DPEP in relation to Students Achievement Level was to increase the average achievement levels at least by 25 % over the measured baseline levels and to reduce disparities in learning achievement among gender and social groups to less than five percent.

The Terminal Assessment Survey (TAS) was conducted in the three DPEP districts with a view to provide feedback regarding the extent of realization of DPEP objectives and to provide a data base for decisive correctional measures. It focused on assessing the learning achievement of students in Language and Mathematics and the factors affecting it and comparing the achievement level with level found during the Baseline Assessment Survey (BAS) conducted in 1996 and the Mid Term Assessment Survey (MAS) conducted in 1999.

2. Main Objectives of TAS

The main objectives of TAS were:

- to measure the average achievement of students' of classes II and IV on the competency based achievement tests in Language and Mathematics as was done in BAS and MAS.
- to compare the average performance of students' achievement on the BAS tests administered during the initial survey with that of students performance on the same tests re-administered during MAS and TAS.
- To study the achievement differences on the TAS achievement test with regard to gender, area (rural / urban) and social groups (like SC, ST and Others) and to compare them with BAS and MAS.

3. Methodology

3.1 Sampling Design

Multistage Stratified Random Sampling technique was used for selection of sample units and respondents at various stages (blocks, schools and students).

i) Blocks: Four blocks each from Banaskantha (3 Non tribal & 1 tribal) & Panchmahals (all non tribal) and one (Tribal) of Dangs were selected for the study. In all there were nine blocks- 2 tribal & 7 non -tribal.

ii) Schools: A sample of 150 schools, comprising 50 schools from each of the three districts, was selected. Dangs district consisted of only rural schools. In the case of Banaskantha and Panchmahals, stratified random sampling was used for the selection of 50 schools from each of the two districts; out of the 50 schools, 10 were urban schools and 40 were rural.

iii) Students: For class II, if the number of divisions (sections) was more than one, one division was randomly selected. When the number of students was twenty or less in the class, then all the student's were selected. If the number of students was more than twenty, a list of boys and girls in the class was prepared from which twenty students were selected at random.

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A similar pattern of random selection was followed for class IV students Here the target was to select a maximum of thirty students from each selected school. Thus a total of 2107 students of class II and 2517 students of class IV comprised the final sample.

3.2 Tools

Following tools were used to collect the required data:

(1) School Record Schedule

(2) Students' Schedule

(3) Achievement Test of Language (Gujarati) for class I

(4) Achievement Test of Mathematics for class I

(5) Achievement Test of Language (Gujarati) for class III

(6) Achievement Test of Mathematics for class III

3.3 Data collection & analysis

The above achievement tests were made available by NCERT for the students of classes I and III and were meant to be administered at the end of their academic session. However owing to communal tension in Gujarat, the procedure of data collection got delayed and hence the tests were administered to students of classes II and IV. The Project Team along with a team of Master Trainers and Field Investigators personally visited each sampled school and administered the tests to collect the required data.

The test scores of class II and class IV students in Language and Mathematics were analysed using a specifically developed software package in terms of the mean percentage and standard deviation. Significance of difference in the achievement score was tested by calculating the Critical Ratio.

The data were also analysed with regard to disparities in respect of gender as well as category (SC, ST and Others). The TAS achievement scores of class II and IV students in Language and Mathematics were also compared with the scores obtained on the BAS and MAS tests conducted previously.

The improvement in the achievement of students of class II and IV in Language as well as Mathematics was studied by finding the differences in the average mean percentage of BAS and MAS and by calculating total percentage improvement from BAS to TAS.

4. Major Findings

The Major findings are presented in the following sections. These include achievement of class II & IV students in language and mathematics with respect to gender, area and caste categories along with a comparative picture of the students achievement in BAS, MAS and TAS.

4.1 Achievement Scores in TAS of Class II & IV students

Details about the achievement of students in language and mathematics in relation to gender, area and caste categories are being presented in the following sections. Tables 1 to 8 summarize all the results. In these table the sample size (N). Mean (%), Standard Deviation (SD) and Critical Ratios (CR) are given for comparison of mean scores (%) of boys and girls, of students in rural and urban areas and of students belonging to SC, ST and Others categories. In the case of Dangs, all the schools are in rural area only and 545 out of 552 students of class II and 548 out of 555 students of class IV belong to ST category.

4.1.1 Achievement in Language – class II

The achievement of class II in language was studied in relation to gender, area and caste categories. The results are presented in Tables 1 and 2 respectively.

The average scores (%) of class II students in language range from 81.97 to 88.76 in case of boys and from 76.37 to 87.53 in case of girls. There was no gender difference in achievement except in Dangs where the performance of the boys appeared better and in Panchmahals, where girls performed better in urban area. Also, the mean percent achievement of the students of urban areas was higher compared to the achievement of the students of rural areas in Banaskantha and Panchmahals districts. The mean score of the urban girls of Panchmahals was the highest.

Table 1: Gender and Area-wise Achievement of Class II Students in Language

District		Rural		Urban		Total		CR Value	
		N	Mean (SD)	N	Mean (SD)	N	Mean (SD)	Rural v. Urban	Boys v. Girls
Banaskantha	B	314	87.34	122 (17.21)	92.42	436 (12.01)	88.76	2.99* (16.08)	0.43 R
	G	252	86.73 (16.68)	90	89.78 (14.67)	342	87.53 (16.21)	1.54	1.44 U
	T	566	87.07 (16.97)	212	91.30 (13.24)	778	88.22 (16.14)	3.28*	1.06 T
Dangs	B	274	81.97 (20.61)	–	–	274	81.97 (20.61)	–	2.9 R –
	G	278	76.37 (24.68)	–	–	278	76.37 (24.68)	–	–
	T	552	79.15 (22.90)	–	–	552	79.15 (22.90)	–	2.9 T
Panchmahals	B	344	84.01 (18.49)	75	85.87 (17.31)	419	84.34 (18.27)	0.83	0.21 R
	G	320	83.70 (19.56)	38	94.08 (11.44)	358	84.80 (19.12)	4.82*	3.01* U
	T	664	83.86 (18.99)	113	88.63 (16.01)	777	84.5 6(18.66)	2.84*	0.34 T

R:CR Value for rural area, U: CR value for urban area, T: CR value for total

Table 2: Area and Category-wise Achievement of Class II Students in Language

District		SC		ST		Others		Total		CR Value	
		N	Mean (SD)	N	Mean (SD)	N	Mean (SD)	N	Mean (SD)	SC v. others	ST v. others
Banaskantha	R	38	82.24 (19.20)	118	80.42 (23.26)	410	89.43 (13.75)	566	87.07 (16.97)	2.26*	4.01*
	U	44	94.32 (9.74)	4	96.25 (4.79)	164	90.37 (14.05)	212	91.30 (13.24)	2.16*	2.23
	T	82	88.72 (15.98)	122	80.94 (23.06)	574	89.70 (13.83)	778	88.22 (16.24)	0.53	4.01*
Dangs	R	2	95.00 (7.07)	545	79.03 (22.97)	5	86.00 (17.82)	552	79.15 (22.90)	0.96	0.87
Panchmahals	R	49	84.59 (16.77)	400	83.60 (20.43)	215	84.19 (16.62)	664	83.86 (18.99)	0.15	0.38
	U	9	80.56 (25.67)	46	89.13 (17.07)	58	89.48 (13.03)	113	88.62 (16.01)	1.02	0.12
	T	58	83.97 (18.20)	446	84.17 (20.16)	273	85.31 (16.05)	777	84.56 (18.66)	0.52	0.60

Others include OBC ; R=Rural; U=Urban; T= Total

Area wise and category wise comparisons in all the three districts showed variation in the results. While the rural areas of Banaskantha showed the achievement disparity to favour 'Others' category, the picture of the urban areas depicted that the SC as well ST communities had an edge over the 'Others' category as far as achievement was concerned. Dangs reported no exceptionally high achievement gaps between the various categories and Panchmahals reported only marginal differences.

4.1.2 Achievement in Mathematics – class II

The achievement scores of class II in Mathematics in relation to gender, area and caste category are presented in Tables 3 and 4.

Table 3: Gender & Area-wise Achievement of Class II Students in Mathematics

District		Rural		Urban		Total		CR Value	
		N	Mean (SD)	N	Mean (SD)	N	Mean (SD)	Rural v. Urban	Boys v. Girls
Banaskantha	B	314	88.26 (19.30)	122	94.10 (12.06)	436	89.90 (17.75)	3.78*	1.12 R
	G	252	86.27 (22.22)	90	95. 17 (9.93)	342	88.61 (20.11)	5.09*	0.71 U
	T	566	87.38 (20.65)	212	94.55 (11.19)	778	89.33 (18.82)	6.19*	0.91 T
Dangs	B	274	83.28 (23.52)	–	–	274	83.28 (23.52)	–	3.26* R
	G	278	76.10 (28.09)	–	–	278	76.10 (28.09)	–	–
	T	552	79.66 (26.15)	–	–	552	79. 66 (26.15)	–	3.26* T
Panch Mahals	B	344	84.16 (20.89)	75	85.33 (15.56)	419	84.37 (20.03)	0.55	0.48 R
	G	320	83.34 (22.95)	38	78.82 (18.54)	358	82.86 (22.54)	1.38	1.86 U
	T	664	83.77 (21.89)	113	83.14 (16.83)	777	83.67 (21.22)	0.35	0.98 T

R:CR Value for rural area, U: CR value for urban area, T: CR value for total

The variations in the mean scores across the districts were in the range from 79.66 to 89.33 for total sample, from 83.28 to 89.90 for boys and from 76.10 to 88.61 for girls. Gender as well as area wise comparisons did not indicate significant achievement gaps in Banaskantha and Panchmahals. However in Dangs, gender wise gaps seemed prominent and in favour of the boys. Only in Banaskantha, area-wise disparities were found to be significant, with urban students doing better than rural students.

Table 4: Area and Category-wise Achievement of Class II Students in Mathematics

District		SC		ST		Others		Total		CR Value	
		N	Mean (SD)	N	Mean (SD)	N	Mean (SD)	N	Mean (SD)	SC v. Others	ST v. Others
Banaskantha	R	38	90.00 (13.61)	118	75.42 (30.34)	410	90.57 (16.03)	566	87.38 (20.65)	0.24	5.22*
	U	44	96.48 (10.09)	4	100.00	164	93.90 (11.54)	212	94.55 (11.99)	1.46	–
	T	82	93.48 (12.21)	122	76.23 (30.16)	574	91.52 (14.95)	778	89.33 (18.82)	1.31	5.46*
Dangs	R	2	100.00 (25.99)	545	79.68	5	70.00 (44.72)	552	79.66 (26.15)	–	0.48
Panch Mahals	R	49	87.24 (17.53)	400	80.83 (27.17)	215	88.44 (16.92)	664	83.77 (21.89)	0.43	4.56*
	U	9	82.22 (16.79)	46	82.72 (16.56)	58	83.62 (17.32)	113	83.14 (16.83)	0.23	0.27
	T	58	86.47 (17.37)	446	23.49	273	87.42 (17.09)	777	83.67 (21.22)	0.38	4.21*

Others include OBC ; R=Rural; U=Urban; T= Total

An interesting feature observed in all the three districts was that overall the students belonging to SC category scored over the ST and 'Others' category, but the differences are not significant. Dangs showed cent percent mean achievement of the students belonging to SC community but it was a sample of only 2 students. In Dangs category wise comparison had no meaning as samples of SC and 'Others' were too small. In the other two districts, the achievement differences were more in favour of the 'Others' category compared to ST category, particularly in rural areas.

4.1.3 Achievement in Language – Class IV

The achievement of class IV students in language was studied in relation to gender, area and caste categories. The results are presented in Tables 5 and 6. Overall, Banaskantha recorded better performance (66.20) compared to Dangs (50.53) and Panchmahals (60.40).

Table 5: Gender and Area-wise Achievement of Class IV Students in Language

District		Rural		Urban		Total		CR Value	
		N	Mean (SD)	N	Mean (SD)	N	Mean (SD)	Rural v. Urban	Boys v. Girls
Banaskantha	B	480	64.62 (18.06)	156	71.94 (17.57)	576	66.60 (18.21)	4.41*	1.37 R
	G	282	62.74 (17.60)	141	71.47 (17.46)	423	65.65 (18.01)	4.83*	0.23 U
	T	702	63.87 (17.89)	297	71.72 (17.49)	999	66.20 (18.12)	6.44*	0.82 T
Dangs	B	257	51.99 (18.12)	–	–	257	51.99 (17.34)	–	1.94
	G	298	49.27 (15.38)	–	–	298	49.27 (15.38)	–	–
	T	555	50.53 (16.36)	–	–	555	50.53 (16.36)	–	1.94
PanchMahals	B	406	60.31 (16.71)	146	61.44 (16.98)	552	60.61 (16.77)	0.70	0.54 R
	G	311	59.65 (15.89)	100	61.55 (20.01)	411	60.11 (16.98)	0.86	0.04 U
	T	717	60.02 (16.35)	246	61.49 (18.23)	963	60.40 (16.85)	1.11	0.45 T

R:CR Value for rural area, U: CR value for urban area, T: CR value for total

The scores in Language were arrived at by adding the scores of Word meaning and Reading Comprehension. The rural – urban disparity was not significant in Panchmahals, but urban students performed better than rural students in Banaskantha. Boys in both rural and urban areas performed better than the girls in Banaskthana but the gender difference was not significant in the other two districts.

Category-wise, the overall achievement shown in Table 6 indicates that, the achievement of 'Others' category was significantly higher than that of SC and ST students in both Banaskantha and Panchmahals. Among the girls the category wise disparities in achievement were more prominent and the significant achievement gaps were in favour of the 'Others' category.

Table 6. Area & Category-wise Achievement of class IV students in language

District		SC		ST		Others		Total		CR Value	
		N	Mean (SD)	N	Mean (SD)	N	Mean (SD)	N	Mean (SD)	SC v. Others	ST v. Others
Banaskantha	R	57	61.07 (15.76	148	61.80 (19.84)	497	64.80 (17.45)	702	63.87 (17.89)	1.67	1.66
	U	32	61.60 (18.69)	11	80.89 (11.96)	254	72.60 (17.09)	297	71.72 (17.49)	3.17*	2.20
	T	89	61.26 (16.77)	159	63.12 (19.97)	751	67.44 (17.71)	999	66.20 (18.12)	3.36*	2.52*
Dangs	R	1	77.62	548	50.35 (16.33)	6	62.90 (10.87)	555	50.53 (16.36)	–	2.79*
Panchmahals	R	120	53.34 (16.11)	377	59.91 (15.80)	220	63.86 (16.29)	717	60.02 (16.35)	5.73	2.89
	U	11	63.72 (16.91)	104	61.88 (18.47)	131	60.98 (18.26)	246	61.49 (18.23)	0.51	0.37
	T	131	54.21 (16.37)	481	60.34 (16.41)	351	62.79 (17.08)	963	60.40 (16.85)	5.06*	2.08*

Others include OBC ; R=Rural; U=Urban; T= Total

4.1. 4 Achievement in Mathematics – Class IV

The achievement of students of class IV in Mathematics was studied in relation to gender, area and caste categories. The results are presented in Tables 7 and 8.

Table 7: Gender and Area-wise Achievement of Class IV Students in Mathematics

District		Rural		Urban		Total		CR Value	
		N	Mean (SD)	N	Mean (SD)	N	Mean (SD)	Rural v. Urban	Boys v. Girls
Banaskantha	B	420	61.36 (24.47)	156	63.80 (22.03)	576	62.02 (23.84)	1.15	1.39 R
	G	282	58.79 (23.45)	141	65.48 (21.03)	423	61.2 (22.87)	2.96*	0.67 U
	T	702	60.33 (24.08)	297	64.60 (21.54)	999	61.60 (23.43)	2.76*	0.67 T
Dangs	B	257	49.68 (18.89)	–	–	257	49.68 (18.89)	–	0.56 R
	G	298	48.76 (19.51)	–	–	298	48.76 (19.51)	–	–
	T	555	49.19 (19.25)	–	–	555	49.19 (19.25)	–	0.56 T
Panchmahals	B	406	56.60 (22.58)	146	48.94 (24.00)	552	54.57 (23.19)	3.36*	0.52 R
	G	311	55.76 (20.44)	100	56.40 (20.35)	411	55.91 (20.40)	0.28	2.62* U
	T	717	56.23 (21.67)	246	51.97 (22.84)	963	55.15 (22.04)	2.56*	0.95 T

R:CR Value for rural area, U: CR value for urban area, T: CR value for total

As far as achievement in Mathematics in class IV is concerned, Banaskantha district showed the highest mean achievement. Gender wise, the performance of boys in rural areas was better than that of girls in rural areas. However, in urban areas the girls showed significantly higher performance than boys in Panchmahals.

Table 8 shows the performance of class IV students in Mathematics area-wise and caste category-wise.

Table 8: Area and Category-wise Achievement of Class IV Students in Mathematics

District		SC		ST		Others		Total		CR Value	
		N	Mean (SD)	N	Mean (SD)	N	Mean (SD)	N	Mean (SD)	SC v. Others	ST v. Others
Banaskantha	R	57	58.95 (23.05)	148	47.30 (25.54)	497	64.37 (22.34)	702	60.33 (24.08)	1.69*	7.34*
	U	32	57.66 (24.37)	11	56.82 (12.70)	254	65.81 (21.30)	297	64.60 (21.54)	1.81	2.22*
	T	89	58.48 (23.40)	159	47.96 (24.96)	751	64.85 (21.99)	999	61.60 (23.43)	2.44*	7.91*
Dangs	R	1	30.00 (19.31)	548	49.38 (8.94)	6	35.00 (19.25)	555	49.19	–	2.81*
Panchmahals	R	120	50.54 (17.28)	377	54.73 (23.44)	220	61.92 (19.37)	717	56.23 (21.67)	5.56*	4.04*
	U	11	47.50 (26.05)	104	57.60 (21.79)	131	47.88 (22.61)	246	51.97 (22.84)	0.05	3.34*
	T	131	50.29 (18.06)	481	55.35 (23.10)	351	56.68 (21.7)	963	55.15 (22.04)	3.27*	0.85

Others include OBC ; R=Rural; U=Urban; T= Total

Once again Banaskantha has shown the maximum performance (61.60) followed by Panchmahals (55.15) and Dangs (49.19). Category-wise, the overall achievement of 'Others' was significantly better than that of SC or ST in Banasakantha and rural school of Panchmahals. The performance of students belonging to ST category was lowest in Banaskantha and of SC category, lowest in Panchmahals. The performance of ST students was, however, significantly better than that of SC and 'Others' in rural schools of Panchmahals. Rural – Urban achievement disparities have shown somewhat mixed result: the urban students have performed better in Banasakantha, while the rural students have performed better in Panchmahals. In Banaskantha, the comparison between ST and 'Others' category showed a highly significant difference in favour of 'Others' category in both rural and urban areas. In Dangs the rural sample of ST students when compared with 'Others' showed a significant difference in favour of ST students but the sample of 'Others' is very small.

4.2 Comparison of Achievement Levels of BAS, MAS and TAS

Overall in comparison to MAS, the TAS results have shown improvement as far as achievement of students of class II and class IV in language and mathematics is concerned. The results are presented in Tables 9 and 10.

4.2.1 Class II-Language

The improvement (%) in the average academic achievement of students of Class II from BAS to TAS of all the three DPEP districts i.e. Banaskantha, Dangs and Panchmahals are being presented in Table 9.

Table 9: Achievements (%) of Class II Students in Language and Mathematics on the BAS, MAS and TAS

Districts	BAS		MAS-BAS*		TAS- MAS**		Total Improvement (TAS-BAS)	
	Language	Maths	Language	Maths	Language	Maths	Language	Maths
Banaskantha	57.55	54.42	07.55	08.73	23.12	26.18	30.67	34.91
Dangs	53.45	61.92	14.65	09.13	11.05	08.61	25.70	17.74
Panchmahals	62.25	58.29	13.65	16.71	08.66	08.67	22.31	25.38

* Performance on the BAS test administered during MAS

** Performance on the MAS test administered during MAS as well as TAS

From the Table 9, it is observed that the total improvement percentage in the average academic achievement of students of Class II in Language from BAS to TAS are 30.67, 25.70 and 22.31 respectively for Banaskantha, Dangs and Panchmahals. The gain in mean (%) achievement of students of class II in Language from BAS to TAS is more than 20 % in all the thee districts. The gain is highest in Banaskantha.

From BAS to MAS, Dangs and Panchmahals districts showed almost same level of improvement in the mean percentage achievement while the gain was much less in the case of Banaskantha district. However, from MAS to TAS, this improvement was maximum in the case of Banaskantha district and much less in Dangs and Panchmahals.

4.2.2 Class II- Mathematics

Table 9 shows the improvement percentage in the average academic achievement of students of Class II in Mathematics from BAS to TAS as 34.91, 17.74 and 25.38 respectively for Banaskantha, Dangs and Panchmahals. The difference in the mean percentage of achievement of students is highest in Banaskantha district and lowest in Dangs district. In Banaskantha and Panchmahals districts students of class II gained more than 25 % in Mathematics from BAS to TAS.

It is also observed that, the improvement in the mean percentage achievement from BAS to MAS was almost similar in Banaskantha (8.73) and Dangs (9.13) while in Panchmahals, this difference was nearly double (16.71). From MAS to TAS, the improvement was observed to be maximum in the case of Banaskantha district (26.18) whereas in Dangs and Panchmahals districts this difference was small (8.61 and 8.67 respectively).

4.2.3 Class IV - Language

The improvement in the average academic achievement of students of Class IV in Language and Mathematics from BAS to TAS of all the three DPEP districts are presented in Table 10.

Table 10: Achievements (%) of Class IV Students in Language and Mathematics on the BAS, MAS and TAS

	BAS		MAS-BAS*		TAS- MAS**		Improvement (TAS-BAS)	
Districts	Language	Maths	Language	Maths	Language	Maths	Language	Maths
Banaskantha	45.02	46.05	- 06.50	- 14.08	27.68	29.63	21.18	15.55
Dangs	44.88	43.90	03.78	03.40	01.87	1.89	5.65	5.29
Panchmahals	49.02	43.87	04.72	0.95	06.66	10.33	11.38	11.28

* Performance on the BAS test administered during MAS;

** Performance on the MAS test administered during MAS as well as TAS;

From the Table 10, it is observed that the total improvement in the average academic achievement of students of Class IV in Language from BAS to TAS is 21.18, 5.65 and 11.38 respectively for Banaskantha, Dangs and Panchmahals. The gain in the mean achievement of students is highest in Banaskantha district and lowest in Dangs district. The students of class IV of Banaskantha and Panchmahals achieved better in Language in TAS compared to MAS. Only Banaskantha district showed over 20% increase in the mean (%) achievement of students of class IV in Language from BAS to TAS in spite of a decline of 6.50 % from BAS to MAS.

4.2.4 Class IV - Mathematics

From Table 10, it is observed that the total improvement in the average achievement (%) of students of Class IV in Mathematics from BAS to TAS is 15.55, 5.29 and 11.28 respectively for Banaskantha, Dangs and Panchmahals. The difference is highest in Banaskantha district and lowest in Dangs district. Overall, the class IV students of Banaskantha and Panchmahals have achieved better in Mathematics in TAS compared to MAS. Banaskantha district showed an increase of 15.55 in the mean percentage from BAS to TAS in spite of a decline of 14.08% from BAS to MAS. However, the gain is less than 20% from BAS to TAS in all the three districts.

5. Conclusion & Implications

With regard to the achievement in Language and Mathematics, it can be concluded that all the students of class II and IV of all the three DPEP districts have achieved better in TAS compared to MAS.

The achievement of students of Banaskantha district is found to be higher than that of the students of other two districts. This can be attributed to the differential specific features of the three districts in terms of geographical location, customs, traditions, lifestyle, educational needs, educational awareness of parents, avenues for progress and development. The following are the implications of the study:

- Since the districts differ widely in several aspects, there should be more district specific intervention programmes.
- More attention need to be devoted to Mathematics in the school from class III onwards including individual guidance by the teacher and peer students, since most parents cannot provide much help at home.
- Greater thrust need to be given to increase the co-ordination between different agencies, for bringing about better achievement.
- Superior performance of class II students on the TAS tests both in Language and Mathematics compared to that of class IV students, might be due to such interventions as introduction of new textbooks for class II in 2000-01 and pedagogical renewal along with activity based joyful teaching-learning. Greater attention need to be given to pedagogical renewal in class IV also.
- The ratio of male teachers to female teachers in the rural areas of the three districts was found to be more in favour of male teachers. Therefore some concrete steps should be taken to increase the proportion of female teachers in rural areas.
- Pre-primary exposure to education might induce the students to prepare their mind for academics and the performance of these students might show enhancement. Schools should have adequate facilities for pre-primary education specially in the rural areas.
- There is a need to diagnose the subject specific problems of the students and develop appropriate remedial programmes for the same.

- Greater emphasis is also required to be given to academic counselling and assistance to students as well as periodic monitoring of the educational progress.
- Steps must be taken to ensure the deployment of adequate number of teachers in the rural areas.
- Efforts should be made to retain good teacher in schools for longer periods as frequent transfers affect student' performance.
- Training as per the needs of local situation should be provided during vacations to newly transferred teachers with the help of teachers who are effective, efficient and well versed with the local context.

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8. Terminal Assessment Survey (TAS) in DPEP Phase-I Districts of Haryana

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1. Introduction

District primary Education Programme (DPEP) was launched in Haryana in four districts: Sirsa, Hisar (including Fatehabad), Jind and Kaithal in the year 1994-95 and extended to the districts of Gurgaon, Mahendergarh and Bhiwani in the year 1997-98.

Learning achievement of students who had passed class I and class IV was assessed in Language and Mathematics at different stages of the project tenure.- BAS (1994), MAS (1997) and TAS. (2001) The Terminal Assessment Survey (TAS) in DPEP Phase-I districts (Hisar, Sirsa, Jind and Kaithal) was completed in the year 2001 and in Phase-II districts (Gurgaon, Bhiwani, and Mahendergarh) in the year 2002. In this paper. The main findings of TAS of Phase-I districts are presented along with those of BAS and MAS.

2. Objectives

The exercise aimed at assessing the achievement of students of classes II and V in TAS and comparing the same with the achievement in Baseline Assessment Survey (BAS) and Midterm Assessment Survey (MAS).

3. Methodology

The methodology, the of tests used and the procedure of finding mean achievement scores for BAS, MAS and TAS were as per the guidelines provided by NCERT.

The survey was conducted through a cross-sectional survey design, the major focus being on the study of achievement level of students and related teacher and school characteristics.

3.1 Sampling of schools, students and teachers

50 primary schools from each district (40 rural and 10 urban primary schools) were selected using multi stage sampling procedure.

From each selected school, 20 students from class II and 30 students from class V were selected randomly. The plan had to be modified in the schools for class V where the number of students was 30 or less than that, in which case all the students were included in the sample. If the number of students was more than 30, only 30 students were selected. In case the number of students was less than 5, the school was excluded from the sample and it was replaced with another school. A similar procedure was adopted for selection of students of class II with a maximum of 20 students from each school. The tests based on competencies of class I and class IV were administered to students of class II and V respectively at the beginning of the session.

It was not possible to fix the target for number of girls in the sample. Random selection of students was made after arranging boys and girls alternately using the class register and then the students were selected at random .

Five teachers including the head teacher were selected for the study if the school had more than 5 teachers. Out of the five, one was head teacher and one was the teacher who taught the sampled students of class I/II. The third teacher was the one who taught the sampled students of class IV/V. The other teachers were selected randomly from amongst the remaining teachers. In case a lady teacher was not included in the sample, one lady teacher was selected randomly from the female teachers working in the school, by dropping the last male teacher from the list.

3.2 Tools

The following tools supplied by NCERT were administered:

i. School record schedule
ii. Teacher schedule
iii. Student schedule
iv. Achievement test in language for class I.
v. Achievement test in Mathematics for class I.
vi. Achievement test in Language for class IV. This test consisted of two parts i.e. word meaning and reading comprehension with 35 items each.
vii. Achievement test in Mathematics for class IV.

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3.3 Project staff

The project team at the state level was headed by the officer-in-charge of SIEMAT, Haryana, who acted as the State Coordinator. He was assisted by a four-member team at SIEMAT for providing training and guidance to the Principals and staff of DIETs of the districts in which the survey was undertaken. Field investigators were recruited for carrying out field work in the districts. The training programme of DIET personnel was organized by SIEMAT team. Separate training programmes were organized in the districts for the benefit of field investigators and supervisors. These training programmes included practical work under the supervision of SIEMAT team. All the persons concerned with the survey were given actual experience of various field situations.

3.4 Data collection and scrutiny

Field investigators were given the guidelines for collection of data from respondents and for listing of students and teachers, along with random number tables for sampling. The field notes were to be filled providing all details of the field work undertaken. The following precautionary measures were taken to ensure reliability of the data.

(a) The sample of classes II and V were drawn as per guidelines.

(b) The selection of sample was not influenced by the teachers of the school.

(c) No teacher was allowed to be present during the administration of tests.

(d) Example test items were explained thoroughly and as far as possible the tests. were administered in a congenial atmosphere.

(e) Adequate measures were taken to avoid copying.

(f) No time limit was specified for completion of the tests.

The collected data was scrutinized at two levels. First scrutiny was done by the field investigators to correct the errors and omissions and the second scrutiny was done by the field supervisors and investigators under the supervision of the District Coordinator. Separate data files were created for each schedule of schools, teachers, students and for each test. The entered data were validated within and across schedules for consistency.

3.5 Statistical Analysis

SPSS software package was used to analyze the data. The analysis of data including preparation of tables was undertaken as per the guidelines provided in the framework for analysis of data by NCERT.

4. Findings

The observations on school profile and findings on achievement level and a comparative picture of scores of BAS, MAS & TAS are presented below.

4.1 Profile of schools

No teaching post was vacant in any district. In Kaithal, the teachers in position exceeded the number of sanctioned post. The number of female teachers posted in urban schools is more than the number of male teachers.

Teaching Learning Material is available in most of the schools in all the districts. The problem appears to be with infrastructure facilities. Most of the schools have no electric connection. Mats and furniture for students were available in only 47.9% schools in Jind. This is quite inadequate. Separate toilet facilities are not found in a quite good number of schools. Though more than 75% schools have playground facility, games material is available in lesser percentage of schools ranging from 57.1% in Hisar to 82.0 in Sirsa. Similar is the case with music instruments.

Competency based textbooks, teacher handbooks and teaching aids were available in most of the schools. Mid-day meal scheme has benefited a large number of students in all the districts. All the schemes that targeted SC students and girls were being implemented successfully.

4.2 Profile of Teachers

The teachers in primary schools are mostly matriculates. The percentage of teachers with academic qualifications as 10^{th} pass, 12^{th} pass, graduate and post-graduate degrees are 44.41%, 25.29%, 22.51% and 8.09% respectively. All the teachers have either a diploma or certificate in primary education. Teaching Learning Material (TLM) for efficient teaching was available with most of the teachers. Almost all the teachers were provided in-service training. The emphasis in these training programmes was on orientation and content enrichment. BRCs were most active in organizing in-service training programmes and providing academic support to teachers. The impact of these training programmes on knowledge gain, teaching skills and effective use of TLM has been rated as average in all the districts. Head teachers are reported to be main source of guidance and support from whom teachers get help.

4.3 Achievement of class II students in Language & Mathematics in BAS, MAS and TAS

Table 1 shows the mean scores (% of maximum marks) of class II students in language and mathematics in BAS, MAS and TAS in the four Phase I districts.

Table 1: Achievement level (mean %) of Class II in BAS, MAS & TAS in DPEP-I districts

Subject	*District*	*BAS*	*MAS*	*TAS*	*Difference*	
					TAS-MAS	TAS-BAS
Language	Hisar	53.10	69.73	71.47	+1.74	+18.37
	Sirsa	50.95	74.13	71.12	-3.01	+20.17
	Jind	55.30	63.28	70.19	+6.91	+14.89
	Kaithal	53.30	71.47	70.96	-0.51	+17.66
Maths	Hisar	56.93	74.13	78.67	+4.54	+21.74
	Sirsa	47.38	80.58	79.55	-1.03	+32.17
	Jind	39.29	70.90	78.63	+7.73	+39.34
	Kaithal	58.64	88.03	79.63	-8.40	+20.99

(i) Achievement of class II students in TAS

The average level of performance of students in class II in Language does not show much variation across the districts. The scores ranged from 70.19% in Jind to 71.47% in Hisar, the overall average score being 70.94%. The mean scores in Mathematics also show a similar trend. The mean score of class II in Mathematics varies from 78.63% to 79.63%, the average being 79.12%.

(ii) Comparison of Class II achievement in BAS, MAS and TAS

Some district to district variations were observed with regard to mean scores achieved at different assessment stages. Variation in the difference of TAS and BAS mean scores range 14.89% in Jind to 20.17% in Sirsa in the Language test. However, when we compare the mean scores of TAS with MAS, only a marginal improvement was observed in Hisar and Jind whereas there was a slight decline from MAS to TAS in Kaithal and Sirsa. Similar trend was also observed with regard to difference in the mean scores of Mathematics for class II. In Mathematics, a substantial improvement of 39.34% was observed between BAS and TAS in Jind. In every district, the maximum increase in mean scores occurred between BAS and MAS and there was not much change after that.

4.4 Achievement of Class V students in BAS, MAS and TAS (mean %)

Table 2 shows the mean scores (%) of class V students in language and mathematics in BAS, MAS and TAS.

Table 2: Achievement levels (mean %) of Class IV/V in BAS, MAS & TAS in DPEP-I districts

Subject	*District*	*BAS*	*MAS*	*TAS*	*TAS-MAS*	*TAS-BAS*
Language	Hisar	41.99	38.30	58.61	+20.31	+16.52
	Sirsa	41.15	46.89	44.55	-2.34	+3.40
	Jind	46.33	37.58	46.40	+18.82	+10.07
	Kaithal	46.42	42.67	48.35	+5.68	+1.93
Maths	Hisar	38.15	43.31	47.80	+4.49	+9.55
	Sirsa	34.65	60.64	59.95	+0.69	+25.30
	Jind	39.55	39.79	46.60	+6.87	+7.05
	Kaithal	39.13	45.02	44.75	-0.27	+5.62

(i) Achievement of class IV students in TAS

The mean scores in Language of class V students varied widely across districts from 44.55 in Sirsa to 58.61 in Hisar, the overall average score being 51.98. Their mean scores in Mathematics also varied widely, from 44.75 in Kaithal to 59.95 in Sirsa with overall average score being 49.78.

(ii) Comparison of Class V achievement in BAS, MAS and TAS

Improvement from BAS to TAS in the mean scores of language for class V seems to be quite appreciable in Hisar (16.52%) followed by Jind (10.07%), but in the other two districts improvement is marginal. There is substantial improvement from MAS to TAS in Hisar and Jind, but there is a marginal decline of 2.34% in Sirsa.

Further a large gain of 25.30% is seen in Sirsa in the mean score of Mathematics between BAS and TAS, while in the other three districts the gain ranges from 5.62% in Kaithal to 9.55% in Hisar.

5. Conclusion

Overall it can be said that though achievement has improved to a certain degree all the districts, the increase in the achievement level of class II students is much higher than that of class V students . Special efforts are needed for improving the performance of students in classes IV and V.

9. Enrolment and Retention at Primary Level under DPEP

- *ABL Srivastava*

1. Introduction

District Primary Education Programme was launched in 1994 to achieve the long eluding goal of universalisation of primary education. Its aim was to enroll all the children of school going age (6-10) in school and to ensure that they complete the full cycle of primary education successfully. For that not only all the children of age 6 (or of age 5 where the entry age is 5 years) had to get enrolled in grade I, but it was to be ensured that they did not drop out from school before completing the last grade. Hence, necessary inputs had to be provided for quality improvement of primary education to achieve universalisation not only in terms of access and enrolment but also retention and adequate learning in school.

Since, to begin with, a large number of children were out of school, DPEP focussed on measures to get them enrolled in regular schools or alternative schooling systems such as schools under Education Guarantee Scheme. Programmes of community mobilisation and providing academic support to schools by establishing Block Resource Centres, Cluster Resource Centres and Village Education Committees, were undertaken in all DPEP districts. Curriculum renewal, new textbooks, recurrent in-service teacher training and support for preparation and use of teaching learning materials by the teachers, were important inputs for quality improvement. There was some provision for opening new schools and construction of school buildings, classrooms, toilets, etc. also under DPEP. These new support systems and measures were expected not only to improve the quality of education, but also to enhance enrolment and retention in schools.

DPEP was implemented in 42 districts spread over seven states in 1994, of which 19 were in Madhya Pradesh. These were Phase I districts in which the inputs of DPEP were to be provided for a period of 7 years. Later in 1996 and 1998, several more districts of the same states and of some other states too were covered under DPEP. Eventually, DPEP became operational in 273 districts spread over 18 states. As the DPEP is coming to end this year (that is, 2003) in all Phase I and most of Phase II districts, it is time to assess its impact on some crucial parameters such as access, enrolment, retention and achievement of pupils in primary schools. In this paper we shall confine ourselves to the discussion of achievements in enrolment and retention under DPEP.

2. Enrolment ratio

So far as enrolment is concerned, significant progress was made during the years 1995/96 to 1999/2000. In Phase I districts, the Gross Enrolment Ratio (GER) based on enrolment in formal schools increased from 83.9% to 95.1% over this 4-year period. If enrolment in EGS and other Alternative Schools is included, GER became 101.7% in 1999/00 (Y. Aggarwal, 2000). Aggarwal (2000) estimated that 8 to 10 percent children would be attending unrecognised schools, which if added, would raise GER to nearly 110%. But there was wide variation among districts in respect of GER and NER (Net Enrolment Ratio) as the progress varied greatly from state to state and from district to district within each state.

In 87 Phase II districts, GER had declined from 84.5% in 1997/98 to 82.8% in 1999/00. Even if some children had started attending Alternative Schools, there appeared to be stagnation of enrolment at about 85% GER. NER which is a better indicator of enrolment rate, was over 95% in 16 (out of 40) Phase I districts, but was below 75% in 8 Phase I and 44 (out of 84) Phase II districts (Y. Aggarwal, 2000).

However, for proper assessment of the impact of DPEP on enrolment, retention or learning achievement, one would have liked to compare the progress made in DPEP districts with that of non-DPEP districts. But such comparison is difficult because of two reasons. Firstly, only educationally backward districts were initially covered under DPEP, the criterion for selection being low female literacy rate. So, any comparison with other districts would not be fair. Secondly, the data on a number of variables crucial for comparison was going to be available only for DPEP districts as a part of monitoring system introduced under DPEP, and not for non-DPEP districts. In particular, the kind of data that the Educational Management Information System (EMIS) in DPEP districts provided was not, and is still not available for non-DPEP districts. For assessing the progress in achievement of pupils, while Baseline, Mid-term and Terminal Assessment Surveys (BAS, MAS and TAS) were conducted in DPEP districts, no such surveys were

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undertaken in non-DPEP districts. So, we have to be satisfied by assessing the impact only in terms of improvement over the baseline values.

Unfortunately, when it comes to enrolment rate or dropout rate, even satisfactory baseline data is not available. No surveys were conducted to find out the number or percentage of out of school children, and the information on dropout rate was either not available or was very scanty and crude at the district and even the state level. Anyway, with whatever data we have, let see what the position is of enrolment and retention in the closing years of DPEP Phase I and Phase II. Have we achieved the DPEP goal and if not, whether any substantial progress has been made or not? In the following sections, an attempt is made to review the position of enrolment and dropout rates in DPEP districts and DPEP states (total of all districts including non-DPEP).

3. Out of school children

Recently household surveys have been conducted in several states in the context of Sarva Shiksha Abhiyan (SSA) to find out which and how many children of school going age are out of school, but their results in compiled form are not yet available at the national level. A few sporadic results show the following position about percentage of out-of-school children in the DPEP states:

Andhra Pradesh	9.7%
Karnataka	10.0%
Orissa (14 districts)	13.4%
Uttar Pradesh (70 districts)	9.1%
West Bengal	11.8%

The results show that in several major states 9 to 14 percent children of the 6-10 age group are still out of school. Of course, SSA will focus on providing primary education to these children but generally more inputs and intensive efforts would be needed to tackle the last segment of 5 to 10 percent children who need lot more incentives to be brought in the fold of education.

In order to see how much overall progress was made in enrolment of children in the age group 6-10 after the mid-nineties, the years in which DPEP-Phase I had become fully operational and Phase II was launched, we look at two sources of data, one the 52nd round of National Sample Survey conducted in 1995-96 and the other, the second National Family Health Survey (NHFS) conducted in 1998-99. Table 1 shows the Age Specific Attendance Rate (ASAR), that is, percentage of children who attend school in this age group, derived from these two sources for 15 DPEP states.

Table 1: Age Specific Attendance Ratio and Gross Enrolment Ratio

State	ASAR			GER		
	NSS-52 1999-00	NFHS-2 1995/96	Increase 1998/99	MHRD 1995/96 – 1998/99	DPEP-I 1999-00	DPEP-II 1999-00
Andhra Pradesh	75.8	86.2	10.4	103.3	–	–
Assam	74.3	80.3	6.0	114.9	101.7	75.0
Bihar	46.4	62.6	16.3	78.6	–	69.0
Gujarat	80.3	82.6	2.3	113.4	–	107.1
Haryana	83.7	91.6	7.9	82.0	79.9	75.5
Himachal Pradesh	91.0	–	–	86.7	–	114.7
Karnataka	75.9	85.5	9.6	109.4	100.3	101.3
Kerala	98.2	97.5	-0.7	85.3	90.0	–
Madhya Pradesh	64.4	79.6	15.2	115.0	109.8	107.4
Maharashtra	88.6	91.6	2.9	114.1	108.8	98.9
Orissa	65.8	83.3	17.5	108.8	–	84.3
Rajasthan	60.1	78.8	18.8	111.9	–	90.0
Tamil Nadu	91.5	95.7	4.2	100.7	86.0	90.3
Uttar Pradesh	62.4	79.2	16.8	65.0	–	89.2
West Bengal	68.8	83.0	14.2	100.0	–	–
India	–	–		94.9	101.7	85.3

Surely, the overall progress between 1995 and 1998 was significant, as ASAR had increased by 10 or more percentage points over these three years in 8 major states (Andhra Pradesh, Bihar, Karnataka, Madhya Pradesh, Orissa, Rajasthan, Uttar Pradesh and West Bengal) where ASAR was low (76% or less) in 1995-96. In all other states except Assam, ASAR was already over 80% in 1995-96. We have no data to show how the increase in ASAR in DPEP districts compared with the increase in non-DPEP districts over the years of DPEP implementation, but clearly the increase would have been quite significant in both DPEP and non-DPEP districts, as quite a few states had extended the community mobilisation measures and special enrolment drives to the entire state and had not confined them to DPEP districts only.

4. Comparison of GER in DPEP districts with state GER

For DPEP districts, the Gross Enrolment Ratio (GER) which is only a crude measure of enrolment rate, was derived from EMIS data and available child population estimates for the year 1999-2000 (Aggarwal, 2000). Table 1 also shows state-wise GER values for DPEP-I and DPEP-II for 1999-2000 as reported by Aggarwal (2000) and compares them with GER of the same year for the whole state reported in Selected Educational Statistics published by the Ministry of HRD. The GER in DPEP districts is higher than the state GER only in Himachal Pradesh, Kerala and Uttar Pradesh and less in other states. The comparison, however, is not fair since GER values depend on the estimates of child population which can be quite off the mark. In the case of MHRD statistics, even the enrolment figures as reported in Selected Educational Statistics often lack reliability and accuracy and tend to be inflated.

For estimating enrolment rates, more detailed and better quality age specific data on enrolment and attendance in the age groups 6-10 and 11-13 are needed. The household surveys conducted or proposed to be conducted in the different states should be analysed and compiled at district and state levels to provide better estimates of Age Specific Attendance rates and out-of-school population. Also the Census 2001 data should be analysed soon to provide enrolment indicators for the different age groups. Another source of data will be the Seventh All India Survey of School Education, which will provide valuable information for the year 2002, for assessing the progress made in participation of children in elementary education.

5. Growth or decline in enrolment between 1997 and 2000

Table 2 shows the trend in total enrolment of grades I to IV/V in 13 DPEP states (based on MHRD statistics) and the trend in DPEP districts of these states (based on EMIS data). In this table, Andhra Pradesh and Rajasthan were excluded due to non-availability of EMIS data for 1997/98 and the statistics of the new states, such as Jharkhand, were included in the statistics of the original states.

Table 2:Growth/decline in class I and total primary level enrolment in DPEP states and districts, 1997 to 2000

State	Whole state (MHRD)				DPEP districts (EMIS)			
			% increase				% increase	
	Class	Enrolment 1997	1997 to 1999	1999 to 2000	No. of districts	Enrolment 1997	1997 to 1999	1999to 2000
Assam	I	1074	20.8	0.6	6	435	-23.7	-6.6
	I-IV	**3143**	**4.8**	**0.8**		**1278**	**-6.6**	**-10.2**
Bihar	I	3632	2.1	-7.7	13	1124	-22.2	9.7
	I-V	**10267**	**2.0**	**1.0**		**3770**	**-7.6**	**6.2**
Gujarat	I	1465	-1.0	14.0	3	183	3.3	2.7
	I-V	**5911**	**4.0**	**10.2**		**742**	**17.7**	**5.8**
Haryana	I	540	-20.7	-5.1	7	217	-20.3	5.8
	I-V	**2096**	**-0.7**	**-3.0**		**868**	**5.0**	**-3.6**
Himachal Pradesh	I	177	-12.3	-10.7	4	42	-31.0	0.0
	I-V	**694**	**-4.2**	**4.4**		**180**	**3.9**	**-1.1**
Karnataka	I	1388	4.2	-3.1	11	869	-2.3	-1.9
	I-IV	**5360**	**1.0**	**1.3**		**2719**	**23.4**	**-0.9**
Kerala	I	493	-7.2	3.8	6	190	-2.1	0.5
	I-IV	**2163**	**-7.8**	**1.8**		**828**	**-1.6**	**-0.9**
Madhya Pradesh	I	2634	7.5	-6.8	28	1031	3.7	-2.4
	I-V	**10161**	**12.7**	**-3.0**		**4344**	**11.8**	**0.3**
Maharashtra	I	2759	-7.3	-5.2	9	654	-11.3	-3.1
	I-V	**11880**	**1.7**	**-3.0**		**2817**	**1.9**	**-2.3**
Orissa	I	1141	9.7	3.8	8	291	-17.2	-4.6
	I-V	**3945**	**17.0**	**2.1**		**1087**	**3.8**	**0.6**
Tamil Nadu	I	1537	-12.1	-2.6	7	292	-1.0	-2.3
	I-V	**6814**	**-10.7**	**-6.1**		**1485**	**0.3**	**-0.1**
Uttar Pradesh	I	4028	3.2	0.6	14	1238	0.9	1.0
	I-V	**13708**	**2.9**	**0.4**		**3650**	**18.6**	**5.1**
West Bengal	I	2845	-0.6	7.9	5	823	-9.0	-2.4
	I-IV	**7643**	**5.1**	**5.8**		**2298**	**11.4**	**3.3**
Total	I	23713	0.9	-0.9	124	7385	-12.4	-0.1
	I-V	**83758**	**3.2**	**9.4**		**26066**	**7.6**	**1.2**
India	I	30580	1.7	-1.9	–	–	–	–
	I-V	**108782**	**4.4**	**0.2**	**–**	**–**	**–**	–

The enrolment in classes I to V increased by 4.4% in the country between 1997/98 and 1999/2000 but by only 0.2% in the following year. The class I enrolment increased by only 1.7% between 1997/98 and 1999/00, while it decreased by 1.9% in the following year. The decline is thus a nation-wide phenomenon and not confined to DPEP states or districts. However, the trend is not the same in all the states. According to MHRD statistics, the total

enrolment declined between 1997/98 and 1999/00 in Haryana, Himachal Pradesh, Kerala and Tamil Nadu, but increased in other states. The largest increase was by 12.7% in Madhya Pradesh and by 17.0% in Orissa. Between 1999/00 and 2000/01, the enrolment declined in 5 out of 13 DPEP states and increased by less than 5% in other states, except Gujarat where the enrolment increased by about 10%.

Between 1997 and 1999 the enrolment at the primary level increased by 7.6% in the total of 124 DPEP districts whereas it increased by only 3.2% in the total of all districts of these states. Similarly, the decline in Class I enrolment in DPEP districts was by 12.4%, whereas in the total of all districts, there was a small increase of only 0.9%. The increase between 1999 and 2000 in total primary enrolment of DPEP districts was a little more (1.2%) compared to the increase in total of all districts of these states, which was only 0.4%.

While the overall growth in enrolment was higher in DPEP districts, the trend differs widely from state to state. For example, in Assam while the class I enrolment increased by 20.8% between 1997 and 1999 in the whole state, it declined by 23.7% in the DPEP districts. In Uttar Pradesh, while the total primary enrolment of the state increased by only 2.9% between 1997 and 1999, it increased by 18.6% in DPEP districts. But before making such comparisons, the points to be kept in mind are: (1) the sources of data in the two cases are very different and as we all know, the statistics of the same year from two sources generally do not match, and (2) the DPEP districts are not necessarily typical of all the districts of the state. The general trend is, however, of decline in class I enrolment between 1997 and 1999 and to some extent, between 1999 and 2000 also. The total enrolment of classes I to IV/V, has however, increased marginally in most states and substantially in DPEP districts of Gujarat, Karnataka, Uttar Pradesh and Madhya Pradesh and West Bengal. There is large state-to-state variation in the rates of growth or decline. The states in which the decline in class I enrolment was very large, are Assam, Bihar, Haryana, Himachal Pradesh, Maharashtra and Orissa. In most of these states, factors other than the decrease in fertility rate appear to be the reason for such marked decline in intake in class I. The matter requires investigation and corrective measures. The increase or decrease in class I enrolment should eventually become consistent with increase or decrease in the population of entry age, that is, 6 year olds.

5.1 Decline in Class I Enrolment

Even though quite a significant percentage of children are out of school even now, the trend of decline in class I enrolment in a number of states is quite disturbing. The questions that arise are. Was the decline because all the over age out-of-school children got enrolled by 1997 and very few such children were left to be enrolled in the following years? Or was it because more children had started going to unrecognised schools (not covered under EMIS) that had begun to proliferate in a number of states? Or was it because of decline in child population due to decreasing fertility rate?

When a decline in class I enrolment between 1997 and 1998 was noticed in a number of DPEP districts, it became a matter of concern. The decline was by more than 5 percentage points in 18 Phase I districts. It was conspicuous in districts of Assam, Bihar, Haryana, Himachal Pradesh, Maharashtra, Orissa and a few districts of Uttar Pradesh. There was some decline in Kerala and Tamil Nadu too. In order to find out the causes of this decline, a study was undertaken by Ed.CIL's Technical Support Group in three states: Uttar Pradesh, Maharashtra and Tamil Nadu. In each of these states, two districts were selected for in-depth study. Although there were some state-specific reasons for decline, the common reasons appeared to be the following:

(i) There was significant increase in class I enrolment in 1996 and 1997 because of special enrolment drives, launching of mid-day meals programme in 1995 and community mobilisation efforts of DPEP. As a result quite a few out-of-school children and some under-age children too were enrolled in 1996 and 1997, which led to a decrease in intake in the following year.

(ii) Particularly in Uttar Pradesh, a large number of private unrecognised schools came up which began to attract children who otherwise would have gone to government schools or private recognised schools.

(iii) Although the overall impact of declining growth rate in child population on enrolment was not significant, it had some effect on decline in class I enrolment in Tamil Nadu, where the study found that in quite a few villages, every child went to school but there were fewer children left for entering grade I in 1998 compared to the previous year.

A large decline in some cases could also be due to measures taken to improve the quality of data. Initially there was tendency to report inflated enrolment figures, which was later curbed as EMIS got strengthened in the states. Also, in Uttar Pradesh, such factors as teachers' strike in 1998, delay in distribution of mid-day meals, shortage of teachers and poor facilities in government schools and emergence of private (unrecognised) schools were responsible for the decline.

Studies are needed to find out which groups of children remain out of school and why, inspite of various incentives that are given and other measures that are taken for universalisaiton of primary education. Also, if the decline is largely due to emergence of private (unrecognised) schools or due to shortcomings in data collection system, then some necessary corrective action is required. The decline because of demographic reasons or that resulting from the repercussions of enrolment drives, need not cause worry.

6. Retention and Dropouts

A major objective of DPEP was to reduce the dropout rate to less than 10% and to bridge the gap between the dropout rates of boys and girls and of different social groups to less than 5%. The dropout rate here meant the percentage of children entering grade I who would drop out from school before completing the last grade. The target of reducing it to less than 10% was fixed irrespective of initial level of dropout rate in the DPEP districts. Considering that dropout rates were very high (even more than 50% in a number of districts), this target was rather ambitious and unrealistic for the districts with very high dropout rate. However, a uniform high target for retention was perhaps needed to achieve universalisation in the real sense.

Unfortunately no reliable baseline estimates of dropout rate were available for DPEP districts. Only some crude estimates were reported by the states and that too without indicating the method and the data used for deriving them. Even now there is no uniformity in reporting of dropout rates and different methods based on different sets of assumptions often give conflicting results. Before presenting the results, let us briefly review the different methodological approaches to estimation of dropout rates.

7. Methods of estimating Dropouts rates

There are different methods of estimating dropout rates, some of which are crude whereas others are more sophisticated. The choice of method, however, largely depends on the nature of data that is available. When only the data on class-wise enrolment is available, one can calculate the dropout rate in a crude way by finding out how much less is the enrolment in any class in a given year compared to the enrolment of the preceding class in the previous year. The Apparent Cohort method of estimating the percentage of dropouts between the first and last grade of any education cycle, is based on this approach. However, when the data on number of repeaters in each class are also available, one can use the Reconstructed Cohort method which provides better estimates of the cohort dropout rate. In this method, it is assumed that out of the students enrolled in any class, those who neither get promoted to the next class nor repeat the same class in the following year, are dropouts. The transfer cases from one school to another are automatically taken care of, when data are collected from all the schools of an educational system. However, when some schools function outside the system (such as unrecognised private schools in many states), then the data on those who migrate from one system to another needs to be collected and used for making necessary adjustments in the Cohort Dropout rate derived by the Reconstructed Cohort method.

Sometimes special studies may be undertaken to provide data specifically for the determining dropout rates instead of estimating the same from the available statistics on enrolment and repeaters. A few DPEP states have conducted studies, commonly known as Cohort studies, in order to provide estimates of dropout rate and completion rate by following up a cohort of class I students that began schooling some 5 or 6 years ago. This method has been termed as Retrospective Cohort method.

In the official educational statistics published annually by Ministry of HRD, the so called Gross Dropout Rates are reported which are just crude estimates of the percentage of students who dropout between grade I and grade V or grade VIII or grade X. These are derived by comparing the enrolment in the last grade with the enrolment in grade I of the relevant previous year. For example, for the primary education cycle of 5 years, the Gross Dropout Rate in 2002 is calculated as so far as

$$\frac{\text{(Enrolment in grade I in 1998) - (Enrolment in grade V in 2002)}}{\text{Enrolment in grade I in 1998}} \times 100$$

state level and all India level dropout rates are concerned, these statistics of Gross Dropout Rates are the only ones that are widely quoted.

8. Gross Dropout Rates and Cohort Dropout Rates derived by Apparent Cohort method

The Gross Dropout Rates for grades I to V for the DPEP states and for the whole country in 1995/96 and 2000/01

as reported in the Educational Statistics published by MHRD, are shown in Table 3.

Table 3: Gross Dropout Rate and Cohort Dropout Rates (CDR) derived by Apparent Cohort method

State	Gross Dropout Rate (State level)			CDR (State level)	CDR(DPEP)		
	1995/96	2000/01	Decrease 1995-2000	1999	1997	1998	1999
Andhra Pradesh	55.4	41.5	13.9	43.9	–	–	–
Assam	55.1	32.9	22.2	58.9	78.3	70.5	73.1
Bihar	60.3	59.6	0.7	55.9	68.4	64.5	56.8
Gujarat	41.2	73.4	17.8	0.3	31.1	31.9	36.6
Haryana	12.8	21.9	-9.1	25.8	25.5	18.6	30.1
Himachal Pradesh	24.5	27.5	-3.0	-3.5	19.3	26.5	22.2
Karnataka	42.0	71.9	20.1	6.7	8.4	13.8	16.1
Kerala	-4.0	-7.9	3.9	-20.8	–	-7.1	-13.9
Madhya Pradesh	23.8	17.3	6.5	22.5	26.1	21.1	33.5
Orissa	52.6	42.1	10.5	45.1	52.9	44.0	74.0
Rajasthan	56.0	55.3	0.7	67.8	–	–	–
Tamil Nadu	15.9	42.6	-26.7	41.6	17.0	17.6	11.9
West Bengal	59.5	51.5	8.0	39.3	–	40.0	-9.7
India	**42.1**	**40.7**	**1.4**	**39.9**	**–**	**–**	2

We find that the Gross Dropout rates (GDR) in the DPEP states had decreased considerably between 1995/96 and 2000/01 in several states such as Andhra Pradesh, Assam, Gujarat, Karnataka, Orissa and West Bengal and had remained almost unchanged in Bihar, Himachal Pradesh, Madhya Pradesh and Rajasthan. But in Tamil Nadu and Uttar Pradesh, there was large increase in GDR, as a result of which at the all India level, GDR had declined only marginally from 42.1% to 40.7% over the 5-year period. It may be stressed that GDR is only a crude indicator and the large increase or decrease in GDR may be just because of some flaw in the data.

The Cohort Dropout Rate CDR derived by Apparent Cohort method, shows that at the state level, the dropout rates were high (over 40%) in Andhra Pradesh, Assam, Bihar, Rajasthan, Tamil Nadu and Uttar Pradesh, in 1999/00. An absurd result of –20.8% CDR in Kerala shows that there is either considerable lateral entry in classes II to IV or there is serious problem with the data supplied to MHRD. However, in the DPEP districts of these states, CDR derived by the Apparent Cohort method has been much higher than the CDR derived by the same method from MHRD statistics. In particular, CDR for DPEP districts of 1998/99 exceeds the state CDR in Assam, Bihar, Gujarat, Himachal Pradesh and Karnataka, but is much less than the state CDR in Madhya Pradesh, Tamil Nadu and Uttar Pradesh.

On comparing the CDR of 1999-2000 with that of 1997-98 in DPEP districts, we find that there has been some decline in the dropout rates in Assam, Bihar, Orissa, Tamil Nadu and Uttar Pradesh but in most other states the dropout rate appears to have increased. In particular, in a few states, like Assam, Bihar, Orissa and Uttar Pradesh the dropout rate is still very high. Clearly, the DPEP target for reduction of dropout rate is far from being achieved in most of the states.

Comparison of CDR of DPEP districts (based on EMIS data) with the CDR of the whole state (based on MHRD statistics) for the year 1999-2000, again shows that DPEP districts have higher dropout rate except in Madhya Pradesh, Tamil Nadu and West Bengal. In Uttar Pradesh, the two CDRs are comparable. In Kerala and West Bengal, negative values of CDR indicate that there is either considerable lateral entry in grades II, III, etc or the data are faulty.

9. Cohort Dropout Rate based on Reconstructed Cohort method

This method makes use of data on number of repeaters in each class and hence gives more dependable estimates

of cohort dropout rate. The only significant assumption in this method is that those who leave any school before completing the full primary cycle and go to some unrecognised school, are also included among the dropouts. For computing CDR by this method for the year 1999, the repetition and dropout rates had to be calculated for each grade from the data on enrolment and repeaters of the years 1999/00 and 2000/01. Table 4 show the grade-wise repetition and dropout rates for 102 DPEP districts of 13 states. The table shows that the dropout rate is generally quite high in grade I compared to other grades. It is over 10% in Assam, Bihar, West Bengal and Uttar Pradesh. The repetition rates are also very high in some of the states, particularly in Assam Bihar, Gujarat, Himachal Pradesh, Orissa, Tamil Nadu and West Bengal.

Table 4: Class-wise repetition and dropout rates (RR & DR) for the total of all DPEP districts in 1999/2000 derived from EMIS data of 1999/2000 and 2000/01

State	Number of districts		I	II	III	IV	V
Assam	6	RR	22.2	15.0	13.5	7.1	–
		DR	37.6	11.2	13.9	–	–
Karnataka	9	RR	5.7	4.5	5.8	5.1	–
		DR	5.7	4.6	7.4	–	–
Kerala	6	RR	0.0	5.3	5.4	5.3	–
		DR	0.5	0.5	0.5	–	–
West Bengal	5	RR	23.4	4.6	3.7	3.4	–
		DR	13.1	7.2	8.0	–	–
Bihar	15	RR	21.6	7.5	6.3	4.8	3.4
		DR	14.3	11.6	13.8	12.5	–
Gujarat	3	RR	23.1	14.4	15.3	11.2	11.8
		DR	5.5	5.0	6.3	5.5	–
Haryana	4	RR	6.0	8.3	13.1	11.9	6.3
		DR	5.4	7.3	9.7	4.5	–
Himachal Pradesh	4	RR	19.5	13.0	12.2	10.7	5.8
		DR	0.7	3.2	2.4	2.8	–
Madhya Pradesh	20	RR	4.2	3.3	4.5	4.2	4.9
		DR	8.6	2.0	10.9	3.7	–
Maharashtra	8	RR	5.5	3.6	4.6	4.7	3.8
		DR	7.0	4.3	5.0	9.8	–
Orissa	7	RR	27.7	10.9	9.8	7.5	5.3
		DR	3.0	9.1	12.0	10.8	–
Tamil Nadu	7	RR	10.5	9.1	9.4	9.4	8.2
		DR	4.8	1.1	0.8	2.2	–
Uttar Pradesh	8	RR	4.8	2.9	2.9	2.3	1.2
		DR	16.0	9.7	16.6	13.0	[illegible]

The CDR based on the Reconstructed Cohort method was computed for all the 102 districts. There was wide variation in their values, as CDR ranged from less than 10% in a few districts to more than 50% in some others. The distribution of DPEP districts according to CDR for the year 1999-2000 is shown in Table 5.

Table 5: Distribution of DPEP districts according to Cohort Dropout Rate derived by Reconstructed Cohort Method for 1999/2000

State	No. of districts	Number of districts with Cohort Dropout Rate (1999/2000)					
		< 10.0	10.0-19.9	20.0-29.9	30.0-39.9	40.0-49.9	≥50.0
Madhya Pradesh	23.8	17.3	6.5	22.5	26.1	21.1	33.5
Assam	6	–	–	–	–	1	5
Bihar	15	–	–	–	6	4	5
Gujarat	3	–	–	–	1	–	–
Haryana	4	1	1	–	2	–	–
Himachal Pradesh	4	1	3	–	–	–	–
Karnataka	9	1	4	4	–	–	–
Kerala	6	6	-	–	–	–	–
Madhya Pradesh	20	–	6	6	6	2	–
Maharashtra	8	–	2	4	2	–	–
Orissa	7	–	–	1	3	3	–
Tamil Nadu	7	4	3	–	–	–	–
Uttar Pradesh	8	–	–	–	4	1	3
West Bengal	5	–	1	2	2	–	–
Total	**102**	**13**	**20**	**19**	**26**	**11**	**13**
Percentage	***100.0***	***14.7***	***17.8***	***16.3***	***20.9***	***11.6***	***18.6***

The uneven results in reduction of dropout rates are clearly visible. There are about 15% districts in which CDR was below 10%; 18% districts in which it was between 10% and 20%; 37% districts in which it was between 20% and 40% and 30% districts in which it was above 40%.

The CDR values of the previous year, 1998-99, also calculated using the Reconstructed Cohort method for the DPEP districts. For 93 districts, CDR values became available for both the years. Table 6 shows the distribution of districts according to increase or decrease in CDR between 1998-99 and 1999-2000.

Table 6: Distribution of districts according to increase or decrease in Cohort Dropout Rate obtained by Reconstructed Cohort method, between 1998/99 and 1999/2000

State	Number of districts	Number of districts in which CDR in 1999/00		
		changed by < 5 points	decreased by ≥ 5points	increased by ≥ 5points
Assam	6	4	1	1
Karnataka	7	5	1	1
Kerala	6	6	–	–
West Bengal	3	3	–	–
Bihar	15	4	9	2
Gujarat	3	3	–	–
Haryana	4	–	2	2
Himachal Pradesh	4	4	–	–
Madhya Pradesh	15	5	4	6
Maharashtra	8	3	1	4
Orissa	7	1	3	3
Tamil Nadu	7	3	4	–
Uttar Pradesh	8	5	3	–
Total	**93**	**46**	**28**	**19**

We find that out of 93 districts, CDR decreased by more than 5 percentage points in 28 districts and increased by more than 5 percentage points in 19 districts, whereas there was not much change (the increase or decrease was less than 5 percentage points) in 46 districts. Thus there are no uniform results about change in favourable direction.

The net conclusion is that the dropout rates are still very high in a number of DPEP districts; the change in dropout rates between 1998-99 and 1999-2000 is not of a uniform nature over the districts. However, in 74 out of 93 districts there was either no change or a change of positive nature, whereas in the remaining 19 districts, the dropout rate appears to have increased. The need is for monitoring the phenomenon of dropping out more closely, and for improving the quality of data from which the dropout rates are derived. As unrecognised schools and Alternate schooling system are growing, the need for collecting data on transfers to and from such schools has also assumed great importance.

11. Causes of children Dropping out from school

In the 52nd Round of NSS, data was collected on reasons for children's dropping out from school. Of the reasons given for dropping out (for those in the age group 5-24) the highest percentage (24.4%) was of those who gave 'child not interested in studies' as the reason and the second highest percentage (22.5%) was of those who gave 'unfriendly atmosphere in school' as the reason. Every other reason for dropping out was endorsed by less than 10% of the dropout cases.

The National Family Health Survey (NFHS-2) also showed that for the children who were not currently attending school the highest percentage (42.5%) was of those who gave 'child not interested in studies' as the reason for dropping out. The next highest was 'education costs too much' in 15.2% cases and the third was 'child required to work outside to earn' (11.3%). The other reasons like 'child being required to take care of siblings at home', 'child required for household work or family business' and 'repeated failures' were given only in very few cases (less than 6% each).

In appears that the maximum dropout cases are of those who are not interested in studies and who find the school atmosphere unfriendly. For both of these, the responsibility is essentially of the school. If schools are attractive and take care of the low achievers properly, there will be fewer dropouts. Economic reasons are also there, but they account for a relatively smaller percentage of dropout cases, compared to school related reasons.

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10. A Cohort Study to Estimate Completion Rate in DPEP-III Districts

- *Shardindu*[*]

1. Introduction

The state of Uttar Pradesh has taken a number of initiatives to reach the out of school children for providing basic education in the last decade. The Uttar Pradesh Basic Education Project (UPBEP) was launched in 10 districts in 1993, followed by the District Primary Education Programme (DPEP) Phase II, which was introduced in additional 15 districts in 1997 (which became 18 as a result of formation of new districts). It was further extended to 4 more districts in 1999-2000 and finally DPEP Phase III was undertaken in April 2000 to promote primary education in another 32 districts.

As a result of the educational inputs under the above mentioned mission mode initiatives, a marked increase has taken place in the number of primary schools in the State which has gone up from 76,734 in 1991 to 1,05,304 now. Almost all unserved habitations have been provided schooling facilities within a radius of 1.5 kms. However, the progress made in terms of reduction of wastage due to pupils repeating grades or dropping out from school has remained a matter of concern. The percentage of children in the age group 6 –10 attending school was 79.2 according to National Family Health Survey (NFHS) conducted in 1998-99. The gross drop-out rate, which is a rough estimate of the percentage of students who dropout from school between grades I and V in the state was reported to be 56.5 percent in 2000-01, while in the country as a whole, it was 40.7 percent (according to Selected Educational Statistics, 2000-01, MHRD, New Delhi, 2002).

While the overall access and participation in primary education has increased considerably in the State, the drop out rate continues to be very high, leading to wastage of scarce financial and manpower resources. There are studies which provide estimates of dropout rate on the basis of available educational statistics, but there has been no study based on follow up of a cohort of class I students to assess their completion and dropout rates. While such studies have been conducted in other states in the recent years, there was need for such a study in Uttar Pradesh in order to provide actual cohort based estimates of the indicators of completion, repetition and dropping out.

In the present study an attempt has been made to examine the actual flow of students entering class I over a period of five to six years. It has helped in generating reliable and accurate estimates of the indicators of internal efficiency of primary school system in Uttar Pradesh in respect of the 32 districts covered under the DPEP Phase III. The study uses a variant of true cohort method as it examines the flow of students for a cohort beginning their primary schooling in 1995-96. From school registers each student was traced to determine whether he or she completed primary education in five or six years or dropped out from school or has remained in the school without completing primary education because of repeating grades. It is assumed that no child is given a double promotion in a year. Also since it was not possible to trace the students who migrated to other schools, they have been excluded from the cohort. It is assumed that those who left school with a transfer certificate had migrated to other schools, while others who left without such certificate, were dropouts.

2. Objectives

This cohort study has been contemplated basically as a baseline study for UPDPEP -III districts. Children admitted in grade I in 1995-96 have been taken up as the starting cohort. The objectives of the present study have been formulated as follows:

- To estimate completion rate over the five years of primary education cycle for 1995-1996 Grade I cohort in 32 DPEP III districts
- To estimate cohort dropout and repetition rates in these districts
- To assess gender and social group disparities in completion, dropout and repetition rates
- To examine the relationship of the completion, dropout and repetition rates with certain school variables on which data was available from the District Information System for Education (DISE) database

3. Methodology

There are various methods generally employed for estimating the indicators of internal efficiency. The present

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study has followed the **retrospective cohort method** in a sample of schools of DPEP-III districts of U.P. The study has covered grade I children of 1995-96 academic session. The flow of students has been recorded for a period up to six years in a prescribed format. The progress of each child has been recorded in terms of promotion to the next grade, dropout, repetition and transfer to other school. The examination result of each child studying in the school has also been recorded for academic year 1999-2000, which shows whether the student failed or passed at the end of grade V.

In order to develop a better understanding of the phenomenon of repetition in schools, and completion of primary cycle for those who took an extra year due to repeating same grade, effort was made to record the progress of such cases in the sixth year also.

A child who had dropped out in a particular year was not followed up any further. Similarly, the transfer cases were not taken into account and the children who had left with a transfer certificate, were excluded from the study.

3.1 Details of indicators derived from the data

i. Completion Rate

In general, the Completion Rate for primary education is the ratio of number of pupils of grade I cohort who actually complete primary education to the total enrolment in grade I at the beginning of the cohort. In particular, the Completion Rate in Five years (CRF) is the percentage of those who complete the 5-year course of primary education in 5 years and is computed as

$$CRF = \frac{\text{No. of pupils in the cohort completing primary education in 5 years}}{\text{Total enrolment at the beginning of the grade I cohort}} \times 100$$

Ideally all the pupils should be able to complete primary education in five years, in which case the value of CRF would be 100. . The total transfer cases in the sample schools of all the districts were 8216; these were excluded from the database while calculating the completion rate for all the districts as a whole. Thus the flow of only those pupils of grade I was studied who did not leave the school with a transfer certificate during the 6-year period, 1995/96 – 2000/01.

ii. Cohort Dropout Rate

One of the important indicators of internal efficiency is the dropout rate which can be computed grade-wise as well as for the total of all students in a defined education cycle. Dropouts are those students who are neither promoted to the next grade nor are repeaters. Before the dropout rate for any grade is computed, the first requirement is to obtain the number of dropouts between the grades.

The following procedure was adopted for estimating the dropout rate in this study from the data collected from the sampled schools through the school form or data capture sheet.

1. All the dropout cases bearing code 6 or 8 were counted for each year. Code 6 represents those dropouts who had left the academic session after passing and code 8 represents those who had left the academic session after failing.
2. All such cases were aggregated for the cohort over schools.
3. For each grade, the dropouts were counted separately in the ensuing sessions of 1996-97, 1997-98, 1998-99 and 1999-2000. The overall cohort dropout rate (CDR) was estimated by aggregating all the dropout cases (excluding number of entrants in the academic session 1995-96 (excluding transfer cases), which was designated as the initial cohort for the district in grade-I. The obtained ratio was multiplied by 100 to express it in the form of percentage.
4. For finding out the distribution of dropouts by grade,, the number of dropouts after a particular grade was divided by the total number of dropouts from the cohort of 1995-96 over the 5 year period.. Thus, the following formula was used to find out the percentage of dropouts after grade i.

$$\% \text{ of dropouts after grade i} = \frac{\text{No. of dropouts after grade i}}{\text{Total number of dropouts from the initial cohort}} \times 100$$

5. Similar procedure was followed to estimate the Cohort Dropout Rate separately for boys and girls; and for SC, OBC and Muslim Minority community.

iii. Cohort Repetition Rate

The proportion of pupils enrolled in a given grade in a given school year who study in the same grade in the following school year is known as repetition rate for that grade. This indicator provides a measure of the extent of wastage due to repetition in a particular grade. In the present case the Cohort Repetition Rate (CRR) was worked out by dividing the total number of repeaters from the cohort over the 5-year period (1996/97-2000/01) by the number of pupils in the cohort enrolled in grade 1 in

1995/96. These rates were expressed in the form of percentage for each district.

The following operational procedure was followed for calculating CRR and grade-wise distribution of repeaters, that is, percentage of repeaters in each grade out of total number of repeaters.

I. The total number of repeaters for the cohort was found out over the period of five years 1996-97 to 2000-01

II. For the cohort beginning in 1995-96, the number of repeaters for each grade (that is, grade I, grade II, grade III, grade IV, and grade V) was calculated.

The Cohort Repetition Rate (CRR) was calculated in the following manner:

$$CRR = \frac{\text{No. of repeaters in total period of 5 years commencing from academic session 1996-97}}{\text{Total no. of enrolled students in the cohort in academic session 1995-96}} \times 100$$

and the percentage of repeaters after a given grade I, is given by

$$\%\text{ of repeaters in grade i} = \frac{\text{Total number of repeaters in the grade i}}{\text{Total number of repeaters over all grades commencing from 1996-97}}$$

Obviously, the total of these percentages for grade I to V will be 100.In an ideal situation there should be no repeaters in the system. High repetition rates lead to low internal efficiency of the education system and generally reflect a poor level of instruction. When these percentages are compared across grades, the pattern can indicate specific grades with relatively higher repetition rates. In some cases low repetition rates merely reflect policies or practices of automatic promotion

iv. Completion Rate after Six years (CRS)

In this study, completion rate for the cohort has been worked out for a six year period also, which has been abbreviated as CRS. For calculating this CRS, the following procedure was adopted.

1. The total number of students in the cohort who took six years instead of five years to complete the primary school cycle.
2. The number so obtained was divided by the initial enrolment for the cohort under study.
3. The obtained ratio was multiplied by 100 to express the same as a percentage.

$$CRS = \frac{\text{No. of students of a cohort completing primary education in 6 years}}{\text{Total no. of students at the beginning of the cohort (in grade I)}} \times 100$$

3.2 The sampling frame

The study is based on the data collected from a sample of schools and not all the schools of the 32 districts. A **systematic random sampling procedure** has been followed for selecting schools. A sample of 100 schools has been selected from each of the 32 districts covered under DPEP Phase III in the state. To give due representation to schools located in urban areas, 15 schools were drawn (out of a total of 100 in each district) from such areas except in the districts without clearly designated urban areas. In these districts, all 100 schools were selected from the total number of schools of the districts. The schools were selected proportionately from all the blocks of each district. Only *Parishadiya* schools were covered in the study as it was confined to schools in which DPEP inputs were provided.

A brief description of the tool used and the fieldwork undertaken

The data capture form was developed by the study team at SCERT on the same lines as that used in other states in which similar cohort study has been carried out. It is in the form of a table to be completed by every school. In it, there is one row for each student enrolled in class I in 1995/96. There are 14 columns in the table for recording information on the following items:

- first 6 columns for admission number, name of the student, sex, age at entry, social group (SC, OBC etc),
- the next 5 columns for showing the status of the student in academic sessions from 1995-96 to 1999-2000,
- 12th column for the examination result for 1999-2000 academic session,
- Columns 13 and 14 were meant for repeaters only to show the position in 2000-01.

Instructions for filling in the form were clearly indicated. Information was to be entered in the form using pre-determined numerical codes that were explained at the bottom of the table.

From the data collected through this form, the flow of students for the cohort beginning primary schooling in 1995-96 was studied. Each student was traced to

determine whether he/she completed primary education in 5 years or not. The children admitted to grade I after September 1995 were not included in the study. For the fieldwork, the faculty members of 32 DIETs in the concerned DPEP-III districts were assigned the task of collecting data from the sampled schools.

4. Findings

1. The values of Completion Rate in Five year (CRF) and Cohort Dropout Rate (CDR) for all the children and those in different population sub-categories are shown in the following table for the total of 32 districts.

	Category	CRF (%)	CDR (%)
1.	Overall	29.55	56.48
2.	Boys	28.93	57.68
3.	Girls	30.37	54.89
4.	SC students	33.05	50.89
5.	OBC students	27.96	59.04
6.	Muslim Minority	23.79	64.00
7.	General	30.47	56.77

We find that only 29.55% of the children of grade I in 1995/96 could complete grade V successfully in the minimum period of 5 years required to complete primary education cycle. Others either dropped out or took one or more extra years to complete grade V due to repeating grades in between. CRF is slightly higher for girls compared to boys. Among the caste categories, it is highest for SC students the next highest is for general category students and the lowest is for Muslim Minority students.

The findings about CDR are consistent with those of CRF. The overall CDR for all the districts has been found to be 56.48. The CDR is slightly higher for boys compared to girls and it is lowest for SC category of students and highest for those belonging to Muslim Minority community.

2. Going by the age at entry in grade-I, for those who were of age less than 5 years in 1995/96, CRF is 24.61 per cent, for those of age 5 years 28.71%, for those of age 6 years 32.05%, and for those of age 7 years 26.02%. It is highest for the children of age 8 in class I (35.93%) and much less for those of ages 9 and 10 (18.49% and 19.60% respectively).

3. The Dropout Rate is highest (53.91%) in grade I; it reduces gradually from grade II onward, being 28.15%, 19.03%, 11.44% respectively in grades II, III and IV.

4. The completion Rate in Six year (CRS) is 8.51%. It means 8.51% students of the cohort took an extra year to complete grade V successfully due to repeating some grade in between.

5. Of the total students who dropped out from different grades, there were some who dropped out after passing a given grade and others who dropped out after failing. In all the 32 districts, the percentage of those who dropped out after passing was much higher (41.83) compared to those who dropped out after failing (14.65). Cohort dropout rates for those dropping out after passing (CDRP) or failing (CDRF) for boys and girls and different social groups are:

	Category	CDRP	CDRF
1.	Overall	41.83	14.65
2.	Boys	42.57	15.10
3.	Girls	40.85	14.04
4.	SC students	37.00	13.89
5.	OBC students	43.88	15.16
6.	Muslim Minority	48.08	15.92
7.	Other Castes	42.97	13.80

CDRP = Cohort Dropout Rate after passing the academic year;
CDRF = Cohort Dropout Rate after failing the academic year

The CDRP and CDRF are slightly lower for girls compared to boys. The CDRP for the children in the category of SC is comparatively less than that of OBC, Minority and general categories. The CDRF for the children of SC category compares favourably and is almost the same as for general category. In every sub-group, the percentage of those who dropped out after passing is about thrice than that of those who dropped out after failing.

6. The highest CDRP and CDRF were sighted in grade I and the lowest for the same were sighted in grade IV.

Grades	Overall CDRP	Overall CDRF
Grade I	43.40	35.63
Grade II	27.47	30.12
Grade III	18.25	21.24
Grade IV	10.89	13.01

7. The percentage of those in class I cohort of 1995/96 who repeated any grade during the 5-year period, (1996/97 - 2000/01), is termed as Cohort Repetition Rate (CRR) in this study. The values of CRR were derived for all the districts. For the total of all the

32 districts, CRR was obtained as 16.79%. The values of CRR for boys and girls and different social groups were as follows:

	Category	CRR
1.	Overall	16.79
2.	Boys	16.40
3.	Girls	17.31
4.	SC students	18.16
5.	OBC students	16.17
6.	Muslim Minority	15.79
7.	General (Others)	15.83

8. The highest repetition rate was in grade I and the lowest in grade V. The grade-wise repetition rates for the cohort in the total of the 32 districts were:

Grade I	53.91%
Grade II	20.09%
Grade III	14.69%
Grade IV	7.57%
Grade V	3.73%

9. The values of CRF were compared for schools having certain facilities such as toilets, drinking water, playground, boundary wall etc. with those, which did not have these facilities, separately in respect of each facility. This was done for each district separately and also for all the 32 districts. For the total of all the districts, there was no significant difference observed between the values of CRF of the schools which had or did not have
   (i) toilets
   (ii) separate toilets for girls
   (iii) boundary wall
   (iv) play ground
   (v) attached pre-primary school
   (vi) book bank
10. Only the CRFs differed significantly for schools with drinking water facility from those without this facility (the mean CRF being 30.37 in the schools with drinking water and 28.28 in those without drinking water). The difference though statistically significant, is not large. There are, however, 2 or 3 districts out of 32 in which CRF differed significantly for schools with and without such facilities as toilets, boundary wall, play ground, book bank, etc.
11. The findings in respect of relationship of CDR with availability or non-availability of these facilities are almost similar. For the total of 32 districts, the overall CDR was significantly lower in the case of schools having (i) playground, (ii) drinking water, compared to those, which did not have these facilities.
12. The Cohort Repetition Rate (CRR) does not appear to be related with availability of the different facilities. The overall CRR is significantly higher in the schools with (i) playground and (ii) drinking water, which is difficult to explain. However, the difference was not much, the overall CRR of 32 districts being (i) 15.51 for schools having playground and 13.39 for schools without playground, and (ii) 14.57 for schools with drinking water and 11.62 for schools without drinking water. However, the schools without drinking water facility were very few, only 10.6% of the total schools.
13. In the case of following variables, correlations were calculated with CRF, CDR and CRR:
   (i) Number of teachers in position
   (ii) Number of blackboards
   (iii) Number of classrooms
   (iv) Number of maps/charts
   (v) Number of Mathematics kits
   (vi) Number of Science kits
   (vii) Distance of school from district headquarters.

While in a few districts these correlations were found to be significant, for the total of 32 districts, they were all not significant at all. This means that there was no relationship between these indicators and variables like number of teachers, blackboards, classrooms, etc.

Implications

The status survey conducted for the cohort of 1995-1996 session provides a glimpse into the actual reality situations of the primary education sector of the state of Uttar Pradesh. The evidences adducted from this study have tremendous implications for evolving management strategy of primary schools, the quality assurance in respect of teaching-learning experiences to be engendered and for a pedagogic renewal to be undertaken on war footing. These findings can be utilized for monitoring the programmes of those districts, which have demonstrated low completion rates, coupled with high cohort dropout rate and high repetition rates. A systematically worked out plan in this regard is the need of the hour. The various apex level bodies such as the

SCERT, the SPO, the SIEMAT and the department of Basic education have to work in tandem in order to facilitate the achievement of universalization of primary education in the state and contribute towards realizing higher CRF and lower dropout and repetition rates in terms of gender category and area related variables. Towards this end a quality drive will have to be launched at the grassroots level itself where the role of districts, the block and Nayay Panchyat will have to be re-conceptualised and activated.

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11. Equity Issues in Primary Education under DPEP

Vimala Ramachandran[*]

Recapturing trends

One of the most significant contributions of DPEP was that social equity issues and gender concerns were given considerable attention by Government of India – in the formulation of the guidelines, in designing the EMIS and in ongoing monitoring. The project also generated a wealth of data, commissioned a range of research studies and monitoring reports. DPEP also generated a number of comprehensive assessment reports, especially since 2001. They have been discussed in DPEP Joint Review Missions and a range of SSA preparatory meetings and missions. This paper recaptures a select number of issues / achievements / concerns with respect to gender and social equity in primary education.

Where do we stand today with respect to the gender and equity goals of DPEP:

1. **Significant increase in enrolment across the country**:

   There has been a sharp increase in enrolment rates across the country and the percentage of never enrolled children has been steadily decreasing. Dropout rates have started showing a positive trend.

a. GER in the primary stage exceeds 100 per cent, yet gaps between girls and boys and between different social groups persist – with the gap being quite significant at the upper primary level.

b. Census 2001 has recorded impressive gains in literacy rates and most qualitative studies point out that there is a growing demand for education across the country – even among the most underprivileged groups.

c. Physical access to primary schools has improved considerably with almost 67000 new primary schools opened in the decade of the 1990s. (Select Educational Statistics, GOI, 2002)

d. The NFHS data reveals that overall 79% of children in the age group of 6-14 are attending school in 1998-99 and this is up from 69% in 1992-93. School attendance varies across states - more than 90% attend school in Himachal Pradesh and Kerala to less than 60 per cent in Bihar in the 6-14 age group. (NFHS II, 1998) Attendance rates vary across different age groups – they decline as we move towards higher ages. This is more marked for girls in rural areas, where they decline from 75.1 per cent for 6-10 years, to 61.6 per cent for 11-14 years, and 32.8 per cent for 15-17 years. This is symptomatic of not only the traditionally backward states like Bihar, Rajasthan, Madhya Pradesh and Uttar Pradesh, but also for Gujarat, Karnataka and Tamil Nadu. This highlights yet again the problematic nature of transition and retention in higher classes for girls, especially in rural areas. (NFHS I and II).

e. The dropout rate at the primary level has come down to 42 per cent for girls and 40 per cent for boys. However the dropout rate at the upper primary level stands at 50 per cent for boys and 58 per cent for girls. The gap between states is worrisome - zero in Kerala to 78 per cent in Meghalaya! (Select Educational Statistics, GOI, 2002)

2. **Schooling as a social norm**

   A significant issue flagged by recent qualitative studies one of changing social norms with regard

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[This paper is based on the following three research studies done by Educational Resource Unit and coordinated by the author of this paper:

- Getting children back to school – case studies in primary education (Sage Publications, New Delhi 2003)
- Hierarchies of access – Gender and Social Equity in Primary Education (European Commission, New Delhi, 2002)
- Snakes and ladders – factors that facilitate / impede successful primary school completion (World Bank, New Delhi 2003)]

to schooling. Studies done in Madhya Pradesh, Karnataka and Andhra Pradesh reveal that sending children to school has become a norm in the community – but this cannot be said for Uttar Pradesh, Rajasthan, Bihar and Orissa. Government initiated campaigns (*Chinnara Angala*, *Ma Marali Shale*, *Chaduvula Pandaga*), intensive NGO led mobilisation against child labour (notably the contribution of M V Foundation in Andhra Pradesh) and sustained efforts to make school a joyful experience (*Nalikali* and *Kalinali* of Karnataka) have made a major difference. Conversely, lack of sustained mobilisation and corresponding governmental efforts to ensure functioning schools is perhaps responsible for the persistent apathy in the more backward regions, especially for the poor who rely on government schools. (Vimala Ramachandran 2002, Jha and Jhingran 2002)

3. **Poverty continues to exert a strong influence**

It is now universally accepted that poverty is not only about income, it also encompasses factors like health, education, nutrition and access to basic needs and services. Notwithstanding decades of poverty alleviation and income generation programmes and an average rate of economic growth of GDP of about 5 per cent per year, the country's performance on the poverty alleviation front has been disappointing, especially during the 1990s. The impact of rising food prices on the real consumption of the poor and of stagnant rural employment opportunities continues to be a matter of significant concern. A sharp decline in the off-take of the public distribution system (PDS) food grains by states where poverty is concentrated is the result of a combination of fiscal pressures on state budgets and the effect of policies resulting in higher prices for food grains. Besides this, the increasing debt ratio and interest payment in the 1990s in contrast to the 1980s, when the growth rates were at similar levels, worsened the scenario. The implications of these trends on the nutritional levels of the poor and especially of women and children are deeply worrying. Recent research supported under the aegis of DPEP reveal that despite regional and inter-state variations in macro data with regard to availability of resources and provision of social services, little difference with regard to access and utilisation of services by very poor households across the three states (Karnataka, AP and UP). Poverty continues to exert a strong influence on nutrition, health and education[1]. (Vimala Ramachandran et al 2003)

a. **Effects of poverty on children:** The level of poverty significantly impacting on food and nutrition security is closely related to availability of work. Jha and Jhingran argue, 'The issue of acute food shortage faced by poor people in drought affected areas in the midst of gigantic 'surplus' food stocks rotting in godowns has been an area of debate and discussion... What is important to point out in this respect is that the poor do not face food insecurity only during drought or drought-like situations. In many places, periodic food crises are an annual phenomenon, the intensity of the crisis and length

[1] "While most observers would agree that at least in the education sector - tremendous progress has been made in the decade of the 1990s, a 'hard core' of 5 to 15 per cent of children (depending on the region and social groups) continue to remain outside the ambit of primary schooling. Additionally, irregular attendance, high drop out rate and poor learning achievement appear endemic among certain specific sections / groups in society. Recent studies have also highlighted the phenomenon of children from different social and economic groups accessing different types of schools – regular government primary schools, alternative / Education Guarantee Scheme schools (EGS), private schools. Given the gradual increase in the number of private schools on the one hand and an exponential rise in the number of alternative / habitation specific schools on the other, children from different socio-economic groups are increasingly attending different kinds of schools. As the more powerful and the better-off shift their children to private or special schools, societal pressure on government schools to function well reduces considerably (Aggarwal 2000). Similarly, where children of relatively better-off communities in rural and urban areas rely on private tuitions, the importance of ensuring requisite teaching/learning in schools also goes down. This phenomenon, for example, has recently been highlighted as a major area of concern in West Bengal in the Pratichi Education Report. (Vimala Ramachandran et al, 2003)

of the period increases during years of bad or no crop... Nearly one third of these families usually face a food crisis for more than four months in a year, the rest go through this for about two-three months' (Jha and Jhingran, 2002). Non-availability of food is not a function of landlessness alone, availability of wage labour in agriculture or non-farm work affects access to cash for food. The notion of scarcity is also subjective and differs across economic groups. During 'normal' times, most poor (below poverty line families) eat less nutritious food than households above the poverty line. Recent qualitative research done in three states reveal that children ate little *dal* or vegetables and ate meat / fish very infrequently. Discussions on intra-household food distribution also revealed that adult men get precedence followed by boys, girls and finally women. As discussed in section two above, girls said that they invariably get the gravy while their fathers and then brothers get the meat pieces. Seasonal migration or short-term movement to construction sites and richer agricultural areas also indirectly effects schooling as it has a significant impact on the frequency and quality of food children eat. Children reported that mothers cook only twice a day and they either eat the previous night's leftovers or go hungry in the morning hours when their mother has to report for work. (Vimala Ramachandran et al, 2003)

b. **Work burden of children:** The economic situation of the households affects children in several other ways. A large number of children from poor households work long hours. If enrolled, they either work before and after school or skip school resulting in irregular attendance. Our study, along with others (see table below) reveals that apart from household work and supporting the family on the farm, non-farm or home based work, placing young boys in short-term bondage to tide over extreme economic crisis is not uncommon. Collection of fuel wood, minor forest produce and other such chores are most often the responsibility of older children (most of them 8+). Taking care of other people's cattle is mostly left to young children. Understanding the world of poor children is extremely crucial, in particular the heavy burden of work of older girls in poor households. This is particularly important when mothers are burdened with household work and a range of farm and non-farm work in rural areas and work in the informal sector in urban areas. Children of domestic workers, especially girls, are overworked, even when they are attending school regularly.

c. **Hunger, nutrition and health**: In the four to five years of severe drought in many parts of the country, short term and persistent hunger among children was flagged as an important issue in recent qualitative studies. Equally, poor health and frequent illness impedes regular attendance in school. The link between health and education is yet to be addressed, especially in the case of children from the poorest quartile of the population. In this connection the universalisation of the mid-day meal scheme in most parts of the country in 2001-02 has made a significant contribution towards reducing hunger in the classroom. Recent studies reveal that this has contributed to increase in enrolment and attendance rates (Jean Dreze et al, 2003).

d. **First generation learners:** Almost all the children from very poor households are first generation learners – who get very little educational support from home. As a result their performance in school is affected – this issue has attracted a lot of attention after the publication of the Pratichi Education Report (2003) where the phenomenon of private tuitions has been highlighted. Supplementary educational support (very important in a situation where educational quality is poor) is a serious issue.

4. Gender equity

The DPEP programme paid considerable attention to gender sensitisation through training / orientation, appointment of gender coordinators and insisting on gender disaggregated data at all levels. Notwithstanding the commendable efforts made, many districts record high gender disparity (more than 35 percentage points in literacy rate of men and women in the 2001 Census). For example the following districts of Rajasthan are particularly worrisome: Alwar (35), Dungarpur (35), Chittorgarh (35.4), Karauli (35.5), Rajsamand (36.2), Pali (36.4), Dausa (37.2), Bharatpur (37.3) and Sawai Madhopur (41.3) (Census 2001).

a. The Selected Educational Statistics (GOI, 2002) reveal that 59 million children in the 6-14 age group are still out of school, out of which 35 million are girls – i.e. approximately 59 per cent are girls. Equally disturbing is the distribution of out of school children by social group and by location. According to NFHS-2, rural girls belonging to disadvantaged groups like SC and ST are perhaps the worst off with a staggering 50 per cent and 56 per cent respectively having dropped out.

b. There are wide discrepancies between the percentage of boys and girls completing primary school - according to NFHS-2 data, 100 per cent enrolled children completed primary school in Kerala, 82 per cent in Maharashtra and 86 per cent Tamil Nadu as compared to 28 per cent in Bihar, 30 per cent in Rajasthan and 26 per cent in West Bengal. A recent study commissioned by the World Bank reveals that slightly more than a third of the population within the age group of 9-11 (or in some states 10-12) has completed primary school. Moreover, for females, lower castes, and those in rural areas, completion shares are lower. The worst off are the STs. A further break-up by quintiles reveals that the male-female differences are highest among the lowest quintiles. This is true both for rural and urban areas. Moreover, the divergence (in terms of percentage point difference) between the top and the bottom quintiles is similar across rural and urban areas. (L Bhandari et al, 2003)

5. **Social equity**

Bridging social equity gaps have remained an area of concern. Unfortunately, DPEP interventions are not significant when it comes to changing attitudes and perceptions of teachers towards socially disadvantaged groups. (Jha and Jhingran 2002) The historical biases in educational access have led to significant and persistent discrepancies in educational achievements. Within each category, the situation of girls is far worse than that of boys. Gender inequalities in fact are more pronounced among these groups. For instance the proportion of SC girls to all SC children in school is 36.5 per cent and that of ST girls it is 36 per cent, while the corresponding figure for forward castes is almost 48 per cent. (Select Educational Statistics, GOI, 2002)[2]

a. **Different schools for different groups:** Recent studies point out that schools located in different localities in the same village are endowed differently in infrastructure, teacher-pupil ratio, training and capacity building of teachers. There is also a significant difference in the quality of schools that come directly under the education department and those that come under social or tribal welfare. For example the primary schools that come under the Adi Dravida Welfare Board in Tamil Nadu did not get the same DPEP inputs. On the other hand, the residential schools run under social welfare and tribal departments in Andhra Pradesh are extremely well endowed and the quality of education seems to be appreciably good. The situation of Ashram Schools in some tribal areas of Orissa, Bihar, Jharkhand and Chhattisgarh merits careful scrutiny. (PROBE 1999, Vimala Ramachandran 2002)

b. **Birth order significant**: Girl children, especially those who are higher in birth order seem to be the biggest losers in poor households. They are burdened with the drudgery of household chores and often lose out on completion of primary schooling.

[1] The PROBE (1999) report mentions Dalit students in some villages of Mirzapur being sent to government schools, while most high-caste students attend private schools. This could also mean that higher caste families are richer, and spend more to send their children to private schools, but there are signs that an even bigger problem could be emerging on this front. In a short survey of schools in different parts of the country, Ramachandran (2002) writes "there is a divide between the Government Primary School (GPS) located in the *Dalit basti* and the GPS in the forward caste hamlet – only SC students attend the former school, while the latter have very few SC students." This issue has also emerged in focus group interviews with households with members belonging to one of lower castes stating that they were openly advised against enrollment in particular schools on account of their caste, although in household surveys poverty is still identified as the key stumbling block and caste status or tribe status being given much less importance. (Deepa Shanker, World Bank 2003)

Table 1: Factors that facilitate (ladders) / impede (snakes) successful primary school completion

Mild +	Strong ++	Very strong +++	Exceptionally strong ++++
Factors that facilitate (LADDERS)			
School within reachable distance (boys)			++
Being in good health			++
Having fewer siblings, but not being the eldest			+++
Being the youngest child			+++
School within reachable distance (girls)			+++
Having an adult in the family who values education			+++
Having teachers who are affectionate, kind and empathetic			++++
A bright and welcoming school			++++
Adults in the family who can care for siblings and supervise the home			++++
Factors that impede (SNAKES)			
GIRLS AND BOYS			
Being in a lower caste / disadvantaged community			++
Taking care of cattle / other livestock			++
Hunger (Every morning)			++
Teachers get children to do personal chores			++
Teacher beat children / other harsh punishment			++
Being sick or disabled			+++
Death, disability and illness in the family			+++
Work during peak agricultural cycles			+++
Drought / other disasters			+++
Hunger (Persisting)			+++
Large family and many siblings to care for			+++
Birth order – being eldest			++++
GIRLS			
School that is far away			++
Social practices: dowry (more education leads to greater demand for dowry)			++
Burden of work (at home / outside)			+++
Social practices: early marriage			+++
Being the oldest child			++++
Sibling with disability			++++
Teacher alcoholism / addiction (safety of girls threatened)			++++

Source: Vimala Ramachandran et al. 2003

6. Teachers

One of the important issues that emerged during the course of DPEP is the severe shortage of teachers in general and the proportion of single teacher schools does not auger well. In DPEP I districts the overall share of single teacher schools declined from 18.5 % in 95-96 to 14.3 % 99-00. In DPEP II districts proportion increased from 14.3 % in 95-96 to 19.1 % in 99-00. An alarming revelation was that 6.12 million children are enrolled in 25,553 single room schools – implying a Student Classroom Ration more than 90! The gender dimension of these single teacher / single room schools is indeed grade. While approximately 1/3rd of teachers are women, 72 % two-teacher schools are without female teachers. Studies reveal more than the gender of the teacher, dysfunctional schools and teacher absenteeism has a negative impact, parents not happy leaving daughters unsupervised (Ravi Srivastava 2001).

In 2001, the percentage of female teachers to total teachers was 35.60 per cent in primary and 38.15 per cent in upper primary schools. Again, the states that have a higher number of female teachers per hundred male teachers' are as follows: Kerala (250), Goa (244), Gujarat (101), Haryana (101), Maharashtra (106), Punjab (181) and Tamil Nadu (156); while lower numbers are found in Assam (41), Bihar (24), Madhya Pradesh (40), Orissa (33), Rajasthan (36), and West Bengal (32). (Select Educational Statistics, GOI, 2002). Teacher Pupil Ratio (TPR) has reached 1:43 (all India) at the primary level and 1:38 (all India) at the upper primary level. However, there is considerable variation between the states. The evidence for the lowest TPRs are from Goa (20), HP (25), and the different states of the North-east - Manipur (21), Mizoram (22), Nagaland (20). The higher TPRs are in Bihar (67), Andhra Pradesh (45), Gujarat (60), Madhya Pradesh (43), Rajasthan (51), West Bengal (55), & Uttar Pradesh (42). However Joint Review Mission report and sample studies done in DPEP districts, reveal wide variations within the state – with some rural schools recording TPR of 1:90 or even 1:120 in some areas.

7. Learning outcomes and quality issues

Notwithstanding commendable efforts to measure learning outcomes through MAS and TAS – there is countrywide consensus over the fact that learning outcomes leave much to be desired[3]. It is not uncommon to come across children in grade four and five who are barely literate. This may be due to a range of in-school and community / family factors namely (Vimala Ramachandran et al, 2003):

a. Given the multi-grade teaching situation in a majority of primary schools – especially in rural / backward areas, the actual teaching time is fairly low. Single and two teacher schools are more prevalent in areas where literacy levels are low and where most of the children are first generation school goers. An overwhelming proportion of single and two teacher schools do not have female teachers. In some states, like Rajasthan, the number and intensity of non-teaching duties of teachers has increased in the last five years. Teachers in Ajmer admit that it is as low as 140 days in some schools.

b. Given the automatic promotion system, children are promoted from one grade to the next without ascertaining their educational level. There is no pressure on the teacher to ensure satisfactory learning outcomes at all stages / levels.

c. The workload of children from very poor households before and after school, comes in the way of their revising / reading after school hours. This problem is particularly severe with first generation school goers.

d. New joyful teaching practices introduced in DPEP have made a difference in select areas; classroom observations done under the aegis of DPEP confirm that we still have a long way to go before classroom practices change for the better.

8. Language and tribal children

Language of instruction remains a complex issue. Teachers admit that they are not able to communicate effectively in tribal dialects / languages. The vocabulary of children in the mainstream language is poor, affecting comprehension. Parents want their children to learn mainstream languages (the language of power) and in some areas, they want English. They are quite clear that they do not want their own dialect to be the language of instruction. This has been a big problem for over 50 years and even the DPEP programme has not been able to make progress on this extremely complex issue. Recent qualitative study as well as learning assessment

reveals that the ability of children to learn in a language other than their own (language or dialect) comes in the way of effective learning – leading to poor learning outcomes.

At the close of the Phase I of DPEP there was recognition that the situation on the ground is indeed complex in relation to gender and social equity. Macro trends revealed in Census 2001 and educational statistics mask this complexity. A range of social and systemic factors creates a mosaic of opportunities and constraints. Approximately 70 to 80 per cent of children from poor households are enrolled in government schools. The growing numbers of private schools do not cater to the poorest of the poor. If poor parents do exercise a choice, they prefer to send their boys to private schools and their girls to government schools. This is particularly so in urban areas. (Yash Aggarwal 2000, Vaidhyanathan and Gopinathan Nair 2001, Vimala Ramachandran et al. 2003)

What can we learn from the experience of DPEP?

1. Given that it is the poor who access government schools, the raison *de etre* of government schools should be to provide good quality education. Government needs to invest more rather than spend less! Ensuring functioning government primary, upper-primary and middle schools of good quality extremely important – especially for first generation learners. Notwithstanding prevalent social and economic barriers to schooling, overwhelming message emanating from DPEP is that the presence of a good quality government school that functions regularly, where teaching actually happens, can indeed surmount many obstacles. This is the core equity issue!
2. Statistics on gross enrolment to be read with care. We need data / information on net enrolment, retention, transition and average years of schooling – all of them: disaggregated social groupings and within each by gender and type of school – before we can make any valid analysis of gender and social equity issues. Notwithstanding recurrent recommendations of Joint Review Missions and evaluation studies – this remains a big problem. Since DPEP (and now SSA) specifically targets girls and children from socially deprived backgrounds, there is a need to refine method of calculating both the gender and social equity gaps especially in learning, as a way of assessing its efficacy.
3. First generation learners start off with huge disadvantage – at home and in school. Therefore investing in improving the quality of teaching and learning inside the classroom needs to be addressed on a urgent basis. Classroom processes studies done under the aegis of DPEP highlight the negative impact of teacher attitudes on retention and learning of children from socially disadvantaged groups. Casteist remarks of teachers, tendency to brush aside children who are seen as 'dirty' or 'junglee' (meaning wild) exert a strong negative influence on children. While DPEP has definitely made significant inroads into gender attitudes and gender stereotypes, the programme has not been able to address social prejudices of the teaching community.
4. Parents, teachers, children or community members do not have one homogeneous identity and hence cannot be subsumed under a generic category – the community. Though gender is no doubt a source of stratification, it is also stratified along the lines of caste, class and community. Broad categories of social stratification render invisible competing inequalities that define children's lives & their experiences in school. Therefore, special strategies necessary to reach out to the hard core – most of whom are people who not only belong to the most deprived subgroups of scheduled castes and tribes; they are people with no voice in society.
5. The social and economic geographies of marginal settlements and its impact on access to 'functional' schools needs focused attention. Members of a social group do not necessarily share the same economic standing and there may be differences within the community. Understanding and appreciating this is essential for equity strategies!
6. There are no magic formulae and no short cuts!

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12. Strategies For Education Of Special Focused Groups In DPEP States: A Review

*S.C. Chauhan & Laxmidhar Behera**

Introduction

Educational development has been deemed central to strengthen human resources for which primary education is the necessary foundation. Low educational achievement among certain sections of society particularly among the scheduled castes, scheduled tribes and women is a major constraint to their social and economic development. Scheduled castes and tribes have remained socially, educationally and economically disadvantaged and have been subjected to exploitation despite various constitutional provisions, legislations, policies and programmes.

The constitutional provision ensuring free and compulsory education to all children upto the age of 14 years and the policy orientation combine to provide the right impetus to primary education in the country. Backed by such well-defined and supportive constitutional and policy guidelines, the District Primary Education Programme was evolved to ensure achievement of the goal of universalisation of primary education in India. DPEP is functioning to reduce the disparities in access, drop out, and strengthen learning achievement among and children including children from special focused groups.

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

- To reduce differences in enrolment, drop out 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 atleast 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 whenever possible, or its equivalent non formal education.

Equity defined

Due to historical reasons India is characterized by the persistence of gender and social (caste, religion, region and race) disparities in general and in educational development in particular. The Constitution of India while taking note of these factors identified growth with equity and social justice as the major thrust of development and planning. It also provides for positive discrimination for the upliftment of the socially and economically deprived sections of the society. It forbids any type of discrimination based on caste, creed, religion or any social or economical factors.

DPEP is focusing mainly on equity issues viz. gender equity and social group equity. Equity implies fair allocation of share/facilities to the individual/ groups that are proportional to their population. Thus gender equity in education implies the share of girls enrolment in relation to their share in population. Similarly social group equity in relation to education implies the share of the enrolment of social groups (SC/ STs) in relation to their share in the population.

DPEP has well defined equity focus. For this it has emphasized on access and participation of girls, scheduled castes, scheduled tribe students at primary level.

Gender Equity

The persistent backwardness of girls has been the prime factor that informed thrust of the NPE 1986 and POA 1992 – under DPEP, measures has been taken to remove gender inequalities in enrolment on priority basis at the

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planning level. For this special interventions/ provision of incentives has been given to girls in general and girls of special focused groups in particular.

At the national level male-female differences in literacy rate declined from 24.8 percent in 1991 to 21.7 percent in 2001 due to faster increase in female literacy rate than male literacy during the 1990s. Consequently the male-female gap in literacy rate declined in all the states and union territories except Dadra and Nagar Haveli during this period.

Social Group Equity

The census of India 2001 is yet to publish data pertaining to SC and STs. Census data of 1991 suggests that 16% of the population in the states covered under DPEP were SCs. The same report also suggests that the population growth rate of the SCs was much higher than that for the over all population. (decadal growth rate 1981 and 1991 – overall : 23.79% SCs, 30.99%). Thus it may be presumed that in the project area covered under DPEP at present, SCs could comprise 16% or more of the over all population.

A little above one fourth (26%) of the children enrolled in the primary classes were from SC community. There is high inter state variation in SC enrolment. For example in case of Kerala it was 7% where as in Himachal Pradesh and West Bengal it was 31% each. States where 20% or more enrolment of SCs in primary classes were Haryana (29%) Himachal Pradesh (31%), Karnatka (20%), Tamil Nadu (28%), Uttar Pradesh (30%) and West Bengal (31%).

From table1 it is evident that gender gap remained an issue in Uttar Pradesh as the index was less than 95. In Uttar Pradesh 40% of the younger population were girls, whereas only 44% of the enrolled children were girls.

A reference to Primary Census Abstract 1991 data suggested that 8% of the population of States covered under DPEP were STs. The same report also suggests that the population growth rate of the STs was higher than that of the overall population (decadal growth rate between 1981 and 1991 – over all : 23.79%; STs 25.67%). Now some

groups of population have been newly included in the category of STs. Thus it is presumed that in the project area covered under DPEP at present STs would comprise more than 8% of the overall population.

District Information System for Education (DISE) data of Ed.CIL suggests that of the total enrolled children in primary grades, STs constituted 13%. There is also variation among States. States with more than 20% enrolment of STs were Assam (21%), Maharashtra (28%), Madhya Pradesh (22%), Orissa (33%) and Gujarat (33%).

Table 2 indicates sex ratio (no. of female per thousand male) enrolment of STs at primary level in five most ST enrolled DPEP states

Table 1: Sex Ratio, Girls enrolment of six states where 20% or more children enrolled were SCs**

State	Sex Ratio (Female per 1000 males)				% of girls in Primary schools	Socio Gender * Indices	
	Overall		0-6 years		2000-01	Overall-6 years	
	Nos.	%	Nos.	%			
Haryana	861	46%	820	45%	47%	102	104
HimachalPradesh	970	49%	897	47%	49%	100	104
Karnataka	964	49%	947	49%	48%	98	99
Tamil Nadu	986	50%	939	45%	49%	99	101
Uttar Pradesh	898	47%	916	48%	44%	93	92
West Bengal	934	48%	963	49%	48%	99	98

*: 100 Xcol.6/ col. 3 or 100 X Col.6/ Col. 5; **Source: Census 2001 and DISE data, ED.CIL

Table 2: Sex Ratio, Girls enrolment of five states where 20% or more children enrolled were STs**

State	Sex Ratio (Female per 1000 males)				% of girls in Primary schools	Socio Gender * Indices	
	Overall		0-6 years		2000-01	Overall-6 years	
	Nos.	%	Nos.	%			
Assam	932	48%	964	49%	49%	102	100
Gujarat	921	48%	878	47%	44%	92	99
Maharashtra	922	48%	917	48%	47%	98	98
Madhya Pradesh	920	48%	929	48%	44%	92	91
Orissa	972	49%	950	49%	45%	91	92

*: 100 X Col. 6/ Col. 3 or 100 X Col. 6/ Col. 5; **Source: Census 2001 and DISE data, ED.CIL

Table 2 shows that gender issue is prevalent in three out of five States. These states are Gujarat, Madhya Pradesh and Orissa. The index of socio gender equity in these states was less than 95.

Rationale of the Study

The District Primary Education Programme was launched in the year 1994 as a pioneering approach for achieving the goals of universlisation of elementary education. The DPEP strategies were drawn in tune with the national objectives of universal access, retention and achievement of minimum levels of educational attainment with the focus on girls and children belonging to socially and economically backward classes. Since the functioning of DPEP, considerable progress has been made in the direction of improving access to education at primary level. There is consistent improvement in enrolment and retention including that of girls, SC and ST children (Agarwal, Y; 1999). As Compared to non-DPEP Blocks, the DPEP blocks have shown higher enrolment rates. The success of DPEP can be attributed to innovative models of alternative schooling which now accounts for 6 percent of the total enrolment in primary classes in DPEP districts (Agarwal, Y; 2000). DPEP has changed the classroom climate. Child centred and activity centred learning is emphasized in District Primary Education programme. Nair P.V. from his study of academic climate of DPEP and non-DPEP schools of Kerala found that the classroom climate in the DPEP classroom is better than the non-DPEP classrooms. However, the problem of enrolling and retaining children from disadvantaged groups has put up a challenge in front of almost all the states. Therefore the States had to visualize and develop special programmes and strategies to bring them to school. The present paper is an attempt to review such programmes and interventions and also to identify the shortcomings so that appropriate remedial actions could be taken.

2. Objective

1. To identify and review strategies adopted by DPEP states for addressing social equity issues
2. To review State action plans to strengthen, social equity strategies and interventions
3. To suggest strategies/action plans to plug in the gap areas in action plans of DPEP states.

3. Methodology

The study involved the use of both primary and secondary sources of data. The secondary data was collected from census report and other reports. The primary data was collected through questionnaires sent to DPEP states. Visits made to States also provided insight into the problems.

The data collected through questionnaires and schedules from 11 states which responded to the request were analyzed. These states were Andhra Pradesh, Chhatisgarh, Gujarat, Haryana, Himachal Pradesh, Jharkhand, Maharashtra, Tamil Nadu, Uttar Pradesh and West Bengal. The study included both the quantitative as well as qualitative information.

Analysis

The information collected from the states was analyzed in terms of the objectives of DPEP programme. To review the efforts made by the States to attain equity, the following parameters were selected.

1. Attitudinal shift and Environment building
2. Access and Enrolment
3. Retention and Achievement
4. Teacher Preparation.

4. Results

The Results obtained are being discussed below in terms of the selected parameters.

4.1. Attitudinal shift & Environment Building

Attitudes play an important role in education of special focused groups. Studies reveal that negative attitudes of teachers towards scheduled caste and the scheduled tribe children affect their academic achievement (Nambissan 1986). In DPEP states due to special campaigns for parents, community members and orientation/ training programme for teachers their attitude have been gradually changing. In most of the DPEP states training/ orientation has been given to functionaries involved, regarding their attitudinal changes.

A variety of activities such as enrolment drive, awareness campaigning, childrens' fair, participation in community fair cultural programmes etc have been carried out in all the states. Campaigns and mobilization initiatives have been organized in almost all the states focus on specific issues like enrolment, retention of girl children of special focused groups particularly the SCs and STs. Munia Campaign (Himachal Pradesh and West Bengal), Maa Beti Mela (Andhra Pradesh, Chhatisgarh, Jharkhand, Gujarat, Haryana, Himachal Pradesh and Uttar Pradesh), Balika/Kishori Mela (Jharkhand and Maharashtra), Mahila Sammilaans/ Mela (Himachal Pradesh and Maharashtra) are the initiatives to mobilize the communities to ensure increased enrolment and reduced drop out of girl children. Similarly awareness campaigns like Kalajatha (Andhra Pradesh, Chhatisgarh, Gujarat and Uttar Pradesh) house to house survey/ contact programme before the commencement of academic session (Haryana, Gujarat, Jharkhand), issue of green card to children enrolled (West Bengal) are the initiatives taken up by the states for increasing enrolment and retention of children from special focused groups.

4.2. Access and Enrolment

Provision of schooling facilities within easy walking distance to all children is a pre-requisite in achieving universal access. Although there are still some school less habitations, however child physical access no more remains a major problem in DPEP States/districts. Status of access and enrolment is discussed below:-

Identification of school-less habitations and their coverage

Identification of school less habitations has been done in all the States covered by this study except Andhra Pradesh and Himachal Pradesh, where identification work is in progress. Some areas with special focused groups population viz., STs, and SCs are still school less. In West Bengal 30% of scheduled tribe habitations are reported to be schoolless. In Chhatisgarh 4500 habitations don't have primary schools and 12800 habitations do not have upper primary schools. In Jharakhand out of 13217 habitations identified as school less, 10379 have been served with EGS centers.

The schoolless habitations are covered either by formal schools or AIE/EGS centers. Different States have different innovative models like Mabadi and Girijan Vidya Vikash Kendras in Andhra Pradesh, Bastishalas and Mahatma Phule Shikhyan Hami Centres in Maharashtra, Shishu Shikhya Kendras in West Bengal and Jagjagi centres in Jharkhand.

Groups requiring alternative arrangements

There are certain groups that require more/alternative arrangements for their education. In Andhra Pradesh and Tamil Nadu tribals living on hill tops and scattered areas are the groups requiring special arrangements. Other groups that require alternative arrangements are children from slums, migrant families and minorities of Chhatisgarh, working children in plantation areas, tribals of remote areas and street children of Kerala, girls from minority communities in Haryana and primitive tribes like Birhore, Kharia, Pahria in Jharkhand. In case of Gujarat migrating children, working children, children with sibling care responsibilities and repeaters/irregular students and in case of Uttar Pradesh street and working children have emerged as clientele groups requiring some alternative arrangements.

Enrolment

Indian society is a multilingual and multicultural society. There are areas/ groups of population that attained universal literacy long ago while others are still striving to cross even single digit threshold. Therefore, India is

committed to reduction of disparities and achieving universal literacy and primary education. Over the years there has been considerable increase in the number of children enrolled in various grades of primary education. The following table shows the number of enrolment (Total, SC and ST) in last two decades at primary level.

Table 3: Enrolment at Primary Level (in thousand)

Year	General			Scheduled Castes			Scheduled Tribes		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
1980-81	45300	28500	73800	7213	3968	10981	3133	1527	4660
1990-91	57000	40400	97400	9737	6057	15794	4958	2911	7869
2000-01*	64000	49800	113800	12059	9136	21195	6330	4665	10995

* Projected figure of SC, STs

Source – Selected Educational Statistics 2000-01, MHRD, New Delhi.

The above table reveals that general enrolment increased 1.5 times during two decades(1980-81 to 2000-01) where as it increased 1.9 times in case of SC and 2.3 times in case of ST population. Similarly enrolment of girls increased 1.7 times in case of general population and 2.3 times, and 3 times in case of SC and ST girls population respectively. Increase in enrolment, particularly of Special focused Groups may be attributed partially to interventions made by Central and State government. Similarly the growth of enrolment may be attributed to the DPEP efforts of opening new primary schools and AS/ EGS centers in access less habitations.

4.3. Retention and Achievement

Access and enrolment is not a major problem for children of special focused groups in DPEP states at primary level. More or less their habitations have been covered by formal/ non-formal schools. But retention of these groups of children in school is a great challenge as large scale dropout is prevalent in these groups. Due to problem of medium of instruction, unsuitable timetable, lack of contextuality of textbooks and TLM and rigidity of school system they drop out from school during their schooling. Even if some of them are retained, their achievement is very low as compared to the general children.

Medium of Instruction

Mother Tongue is the most vital factor for children's intellectual, emotional and spiritual growth. It is the central factor in the nurturance of children's mental and emotional development. So medium of instruction ought to be the mother tongue of children enrolled in schools. But the difference in mother tongue and school language create severe problem in education of tribal and linguistic minorities children.

In States like Andhra Pradesh, Kerala, Maharashtra, Chhatisgarh, Orissa, Karnataka and West Bengal medium of instruction is a major problem in education of special focused groups. In certain districts like Parvati Puram, Paderu, Seethampeta, Etura Nagaram, Bhadrachalam and Utnoor in Andhra Pradesh, the medium of instruction (Telgu) is a problem for tribal children. Similary in Dhule, Gaddiroli and Yestainal in Maharashtra and ST dominated southern part and SC dominated northern part of West Bengal the children of special focus groups face problem in learning. It affects their low retention and achievement. In Orissa for tribal children of Bolangir, Gajapati, Kalahandi, Keonjhar, Baragarh and Rayagada the school language is different from home language of tribal learners.

Preparation of Teaching Learning Materials

In Maharashtra glossary has been developed in tribal dialects like Bhili, Maochi, Koakani and Pawari. In Orissa bilingual books have been prepared in tribal languages like Saora, Bonda, Kui, Koya and Juang languages. Indigenous teaching learning materials have been developed and used and senior students are helping junior students in solving language problems of junior tribal children in West Bengal. Supplementary teaching learning materials have been prepared in Chhatisgarh and Jharkhand. Much more efforts are needed in this direction.

Contextualisation of Curriculum and Teaching Learning Material

It is felt and emphasized by educationists that pedagogy for the tribal students should be remodeled on the basis of tribal life styles, belief system and tribal way of acquiring knowledge, traditional tribal games and sports.

festivals, ceremonies and tribal culture. Besides, content areas of tribal specific curriculum should be derived from suggested solutions related to the problems of tribal society, tribal songs, folk tales, legends and tribal oral traditions need to be integrated to pedagogy and teaching learning.

In most of the states teaching learning materials have been developed taking into account the local specificity/ context. States like Andhra Pradesh have taken the initiative to develop Anand Lahari kits under Janashala Programmes. In West Bengal Teaching Learning Materials have been developed as per need, requirements and problems of SC/ST children. In Gujarat self learning bilingual concepts along with pictures have been developed for tribal children. In Gujarat exhibition on teaching learning aids made of locally available materials have been organized during local festivals to create awareness among tribal communities.

Interventions and Schemes

A number of interventions, incentives are available to children belonging to special focused groups. Midday meals are available to all students enrolled in Primary grades. Some states have reportedly withdrawn the midday meals due to various management and delivery problems. The State governments have also introduced various other types of incentives.

Field studies have shown that enrolment, retention and achievement are greatly influenced by the introduction or withdrawal of various incentive schemes. Many villagers, particularly from special focused groups in order to avail of the benefits started sending their children to schools. Some of these schemes are as follows:-

Tamil Nadu

- School Mapping exercise
- Opening of primary schools and upgrading of primary schools
- Opening of EGS Centres
- Grants to school and teachers (Infrastructure and TLM grant)
- Provision of additional classrooms, drinking water and toilet facilities
- Ongoing welfare schemes of the government
- Appointment of additional teachers
- Involvement of community
- Effective supervision and monitoring mechanism.

West Bengal

- Setting up Sishu Sikhya Kendras in school-less habitations/areas
- Setting up AIE/ EGS Centres
- Special enrolment drive involving community members.
- Appointment of tribal teachers in ST areas and female teachers in minority dominated schools.
- Extensive use of local TLMs in the lower grades to make classroom transaction more participatory, active and joyful.
- Improving infrastructure conditions of school as well as its environment.
- Emphasis of indigenous games and sports as well as development of indigenous creative and productive skills.

Andhra Pradesh

- Setting of EGS/ AS centers
- Opening of model ashram schools on hill top regions.

4.4 Teacher Preparation

Capacity building of teachers as well as of other project functionaries is an important component of quality primary education. For this reason it is imperative to review the extent to which various states have taken the initiative for the capacity building of project functionaries.

In many DPEP states concrete steps have been taken in terms of training of teachers for child centered and activity based teaching learning. States began their pedagogical renewal/ upgradation process with teacher training rather than textbook development. In states such as Kerala, the need to change textbooks was an outcome of a new pedagogic vision that evolved through training programmes. Various issues like how to handle multigrade classrooms, how to prepare effective teaching learning material, how to improve situations in remote tribal schools etc. are some emerging issues/ problems emphasized during training programmes.

Teachers have also been trained by national level organizations like NIEPA, NCERT and DEP, DPEP (IGNOU). Besides these SCERTs, DIETs, IASEs and some NGOs have conducted training programmes for teachers.

In DPEP states large scale trainings have been provided to AIE/ EGS and para teachers to prepare teachers for

remote and inaccessible areas. Briefly, teacher training in DPEP states improved radically in quantitative as well as qualitative terms.

All the DPEP states have recognized the need for concentrated efforts for skill development of personnel. A review of the programmes of DPEP states reveals that most of the States are focusing on capacity building for assisting teachers to undertake action researches.

All the DPEP states have made plans to sensitize members of SCERT, TWD, DRGs, ATDC, DIET, BRCs and CRCs regarding education of special focused groups (SC, STs and Minorities). In Chattisgarh a national level workshop is planned for addressing complex issues related with education of children of special focus group. NIEPA is requested to orient the project functionaries of DPEP district of Chhatisgarh.

State Resource Group on tribal education is formed in Jharkhand. DIET, Ranchi is working for educational upliftment of tribal children. Workshop has been organized to address tribal specific issues. In Maharashtra, Resource Group is formed at state, district as well as at block level. In Kerala an Advisory Committee has been formed to advise the state project team in matters related with education of special focused groups.

Strategies Adopted for Education of Special Focused Groups in DPEP States

DPEP states have taken initiatives for education of special focused groups. Strategies are adopted in DPEP states in order to ensure accessibility, total enrolment and retention. Some of the state specific interventions strategies have been given below:-

(i) Andhra Prasdesh

- Maabadis for slum children
- Model Ashram Schools on hill tops–(ITDA regions in remote tribal areas)
- Girijan Vidya Vikash Kendras – Tribal Children

(ii) Chhatisgarh

- DADA (Der Aaye Durast Aye) Centres for late joiners
- Camp schools for migrant children.

(iii) Gujarat

- Back to School Centres – Drop out children
- Vocational course in Residential Migration Schools, Dang District.

(iv) Haryana

- Raon Basora (Residential Hostels)
- Seasonal Hostels – Children from migrant families.

(v) *Jharkhand*

- Camp Schools
- Bridge Courses
- Jagjagi/Baljagjagi centers

(vi) Karnataka

- Residential camp
- Seasonal Hostels
- Setu Kendragalu (Bridge Courses)

(vii) Kerala

- Regular Alternate Schools (Out of school children of 6-14 age group)
- Evening class centres (working children engaged in day time duties).
- Night class centres (working children engaged in full time day duties)
- Back to school camps (Dropout children from Normal schools)
- Alternate Schools (Coastal – Dropout/ non enrolled children)
- Alternate schools for working children belonging to fishing communities.
- Alternate Schools (out of school children within the age group of 6-14 years from tribal communities).

(viii) Maharashtra

- Bridge Courses
- Sugar Schools – children of Migrant families
- Prerana Centres – Child labour
- Residential Camps – Street Children.

(ix) Tamil Nadu

- National Child Labour Project (NCLP) for Child Labours
- Camp Schools (Children of migrant families)
- Bridge course to make up the academic loss.

(x) West Bengal

- Sishu Sikhya Kendras under Sishu Shikshya Karmasuchi

Strategies for education of Children from Migrant families

Children from such families either do not enroll or drop out of schools. Migration of families in search of work is a phenomenon seen across the country. Universalisation of Primary Education cannot be possible without

addressing the problems of education of these category of children. Majority of this category of children are from special focused groups (SC, STs and Minorities). States under DPEP have made certain efforts in this direction which include:-

- Residential camps, Nalgonda, Andhra Pradesh.
- Vocational Course, Dang, Gujarat
- Seasonal Hostels, Lok Jumbish, Rajasthan
- Seasonal Hostels, Bolangir, Orissa
- Mobile School, Kerala
- Camp Schools, Chhatisgarh
- Residential Schools, Tamilnadu
- Sugar Schools, Maharashtra.

Strengths

All the DPEP States have appointed a State Tribal Coordinator who is responsible for implementing various activities for education of special focused groups i.e Scheduled Castes and Scheduled Tribes. On the basis of analysis of the information provided by the DPEP states one could notice a number of significant steps taken by the States to ensure availability of education to these populations. These are –

- Most of the States have conducted surveys and have identified schoolless habitations and have taken steps to provide education from these habitations. However, the States of West Bengal, Jharkhand and Haryana are still to do it.
- Most of the States have identified special clientele groups needing special attention and developed alternative educational programmes for them to address to their educational needs. These groups include tribal populaton at the hill tops in scattered areas, children from urban slums, migrant population, children from tribes, minority groups, street and working children. Alternative educational models developed include Model Ashram Schools, Der Aaye Durast Aaye, Camp Schools, Morning classes during plantation season, Bridge course, Mahatma Phule Shikshan Hami Centres, Shikshalaya Prakalpa and Jagjagi Centres.
- Awareness programmes have been organized by all the States. These include Kalajathas, Nukkad Natak, Enrolment drives, Maa Beti Mela, Munia Mela,Convergence with Panchayat Raj Institutes and NGOs. Issues of Green Card to enrolled students and training of VEC members and district level functionaries.
- Most of the States have provided incentives to children from weaker sections. These incentives include mid day meal, free uniforms, scholarships, free textbooks and notebooks and transportation allowance. These interventions have been made to fulfill the educational requirements of children from special focused groups thus contribute towards higher retention.
- Some States have taken up steps to overcome the language related problems of children from tribes. These steps include preparation of bilingual glossaries/ dictionaries, development of bilingual primers and development of supplementary reading material. However, this is an area which needs more attention by the States.

The gap areas identified

From the analysis of information provided by them, the gap areas identified are as follows:

- In most of the States District Level coordinators are not in place, for looking after the specific components of education of special focused groups. This is to be done on priority basis.
- Although welfare schemes have been initiated in different States; these have not benefited by the special focused groups due to lack of monitoring and coordination among different functionaries.
- The teachers working in tribal areas require specific training/ orientation to solve their motivational and attitudinal problems.
- There is no proper coordination/ convergence among health department, forest welfare department and NGOs working in the area of education of special focused groups.
- State strategies/ specific models to meet the educational requirements of special focused groups and clienteles are to be developed taking into consideration the local specificity.

5. Suggestions and Recommendations

- As the focused groups are always lagging behind the general population it is important to undertake

comparative study on access, enrolment, retention and achievement of SC/ST/ Minority students with general students.

- Migration is a major problem in States like Gujarat, Tamilnadu, Maharashtra, Andhra Pradesh and Kerala. As the Migratory pattern of parents influence the education of their children. Studies may be undertaken on migration patterns of parents.
- Develop specific models/strategies to reach specific groups requiring special attention.
- Review of curriculum from the viewpoint of relevance, contextualisation of education to the special focused groups need to be emphasized.
- Teaching learning materials in tribal dialects are to be prepared. This needs to be done as per State policy. However, the material prepared should be comparable to the material being used by the State in schools.
- Teachers both tribal and non-tribal should be provided in-service training in the use of culture specific pedagogies with a focus on the socio-cultural environment of children. Specific training packages should be developed for this purpose.
- Intensive monitoring of the benefits of incentives provided to children of special focused groups is to be ensured.
- Convergence of various departments like health, welfare, forest, Panchayati Raj Institutions and education is to be attained.

The States could incorporate the above components in their Sarva Shiksha Abhiyan also.

Summing Up

DPEP is the first national level programme in India, which has recognized the necessity to focus attention on education of the disadvantaged groups of children and has taken concrete steps to make quality education available to them. It has visualized specific interventions, put them in practice and thus contributed significantly towards education for all. Contextualization of education which acquires special significance in the context of education of special focused groups is based on the sound principles of equity and equality and is not only an educational concern but is also a human rights issue. The states, which have already done significant work in this area have to ensure that the same concern and efforts are reflected in the current programme education for all. Those who could not achieve significant result have to do substantial efforts in this direction. The success of DPEP programme should provide the basis of the new programme of "Education for All". The sort coming should act as eye openers, which have to be taken care of.

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13. A Social Assessment Study among the Tribal Groups in Andhra Pradesh

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1. Introduction

The main objective of District Primary Education Program (DPEP) was to achieve universal enrolment, retention and improve the quality of education. Its emphasis on accessibility and quality of education was to ensure universal access, universal enrollment and quality achievement. It was assumed that its focus on innovative, creative and child centered teaching methodology would create interest among the children resulting in the decrease of dropouts and reduction of wastage.

Different approaches are needed to deal with the problems of the diverse populations. Scheduled Tribes are one of the major disadvantaged groups with diverse cultural background. It is pointed out that the enrolment in primary education from these communities is around 90 per cent but the dropout rate is as high as 60 per cent. This necessitated the need for the introduction of suitable interventions. As the DPEP is being implemented in 19 districts out of 23 districts in the State, it became necessary to examine the factors that were responsible for the low rate of enrolment and retention among the Scheduled Tribes. A Social Assessment Study among the Scheduled Tribes was undertaken as a part of a larger study to analyse the educational scenario of disadvantaged social groups in Andhra Pradesh. The study was designed in such a way that the hitherto neglected aspects of under-development of education among the Scheduled Tribes could be explored.

There are significant variations amongst the tribal communities and regions in tribal areas. Keeping these differences in mind the study was commissioned by the DPEP to find out the reasons for educational under-development of these groups and to identify strategies to overcome them. The study team in consultation with the Project Director, DPEP formulated the objectives of Social Assessment Study (SAS).

2. Objectives of the study

The major objectives of the study were:

i. to briefly describe the socio-economic background, accessibility of education and literacy levels of the tribal groups under study;

ii. to identify what sources of information the tribal parents have about schooling at primary education level and how the communication strategies work;

iii. to bring out the efficacy of school teachers at primary level and to analyze the reasons for irregular attendance of the tribal children;

iv. to discuss the role of community participation and the functioning of the education committees to greater sensitivity to the needs of the tribal groups; and

v. to suggest policy interventions for the success of primary education intervention programme among the tribal groups.

3. Methodology

Sample

The area of the study consists of tribal villages with schools in both Agency and Non-Agency areas of Andhra Pradesh. Five districts namely, Adilabad, Khammam, Vizianagram, Visakhapatnam and Warangal in the Agency area were selected based on large percentage of tribal population in the State. Besides, in Non-Agency area, 3 tribal communities namely, Yerukalas in Guntur district, Chenchus in Mahaboobnagar district and Yanadis in Nellore district, were selected as they are distributed largely in these districts. In the next stage, 4 Mandals having large tribal population in each district were selected for the present study. The secondary data relating to number of children enrolled in all villages of each selected mandal were gathered and two villages consisting of one high enrolled, and one low enrolled were selected. Thus there were 64 villages in 32 mandals of the 8 districts in the sample. As the sampling unit was a tribal parent, from each selected village, 5 parents of school going children and 5 parents of non-school going children were selected randomly. Thus, 320 parents under school going

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and 320 parents under non-school going categories were covered in the study.

Among the 33 Tribal groups, 21 tribal groups including 7 primitive tribal groups were covered in the study. The Chenchu, Yanadi and Yerukula, each consisting of 40 respondents were included in the sample as their concentration is more in non-agency area. Among the other tribal groups Koyas, Lambada and Gond respondents were more in number in the sample as they have large number of populations followed by other groups.

Among the respondents 90.6% in school going category and 85.6% in the non-school going category are males. The age-wise distribution of respondents indicates that 88.36% of the respondents in school going category and 79.69% of the respondents in non-school going category belong to the age group of 21-45 years.

Tools Used

The primary data were gathered through administration of an interview schedule. Two separate interview schedules were prepared, one for parents of school going and another for non-school going children. To supplement the quantitative data, 5 Focus Group Discussions (FGD) in each region viz., Telangana, Rayalaseema, and Coastal Andhra were conducted for collection of qualitative data. FGDs are envisaged to provide some understanding of perception and opinions of parents of school going and non-school going children, community leaders, educated youth and teachers. Besides, a few key informants from Mandal Resource Persons (MRPs), union leaders, officials at mandal level, tribal leaders, teachers and members of School Educational Committees (SEC) were also interviewed.

4. Findings

Findings of the study are being discussed below in terms of the objectives in view.

4.1. Socio-Economic Profile

Andhra Pradesh with 41.9 lakh tribal population has the lowest literacy rate with 17.16 per cent among the tribes compared to other states in India (1991 Census). Owing to geographical isolation and small and scattered habitations with low density of population, a large number of tribal habitations lack access to schools which is a basic essential condition for educational participation and progress.

The wide disparity in the levels of education is found not only among the tribals of various districts but also among different tribal groups in the State. Out of 33 Scheduled Tribes in the state, 12 tribal groups identified as Primitive Tribal Groups (PTGs) have the literacy rate of 27.82% which is less than the state average. The rate of female literacy among the tribes in Andhra Pradesh is the second lowest in the country according to both 1981 and 1991 Census reports.

There is no doubt that the establishment of single-teacher schools has provided an opportunity to a large number of school aged children to come in to the fold of education who otherwise would not be attending schools and this is more so in the case of girls. However, the equity perspective and flexible policies did not pay attention to quality of education, which in turn hindered the regular attendance, and learning process of children. The enrolment figures available at state level indicate satisfactory performance, but at field level the situation is different. The rate of dropouts among the children belonging to Scheduled tribes is highest when compared to the general and scheduled caste population.

The location and distribution of schools in forest areas, forest policy, seasonal variations, natural resources and occupational patterns, nature of isolation, school environment, academic curriculum, health factors and cultural ecology play a dominant role in the education of the tribals.

The data on the levels of literacy among the respondents reveal that 63.80% in school going category and 82.2% in non-school going category are illiterates and this clearly indicates that illiteracy is more in the non-school going category. The data on the levels of literacy among the family members including respondents clearly indicate that there is a large difference between school going and non-school going categories.

The type of housing among the respondents consists of thatched huts, tiled and RCC. It is interesting to note that more respondents under school going category have availed the benefit of the housing schemes.

Among both school going and non-school going children, agriculture based families constitute about 90% of the total sample. However, it is interesting to note that there are more agricultural families (54.10%) among school going children and more agricultural labourers (58.10%) among the non-school going children. The non-school going category has more of mixed type of livestock. As this requires more children to herd it may be one of the factor affecting enrollment and retention.

Most of the respondents (70.03%) in school going and (73.47%) in non-school going categories spent sums

ranging from Rs. 2,001 to Rs. 10,000 on clothing, medicines etc. per annum. The data indicate that though the school going children get free clothing, their parents spent more on clothing than the non-school going category. It is interesting to note that the respondents who were not spending any money on liquor were more (54.39%) in school going category than among the non-school going category (46.25%). More than 40% of the total respondents spent less than Rs. 500 per annum on festivals and rituals. However, the frequency is higher (48.44%) in non-school going category than in the school going category (39.06%).

As the tribal society is patri-lineal, father has major say in decision making with regard to their enrollment, withdrawing from school, assigning work, daughter's marriage, attending meetings, taking loans etc.

4.2. Means of Information

For getting information, tribals depend on several sources. In school going category co-villagers, tribal leaders, school teachers and radio are the major sources of information. About 50% of the respondents in school going category and 40% in non-school going category depend on officials for reliable information. Regarding the best means of information, data on three best alternatives were gathered and analyzed. The data reveal that *dandora* was the best means followed by radio, television and print media in both the categories.

The data relating to priority regarding awareness of various development programmes being implemented among the tribal communities show that 64.40% of the respondents in school going and 76.30% of the respondents in non-school going categories are aware of *Janmabhoomi* programme in first preference as it is the most popular program among the tribal folk. The tribals use both print and electronic media for news and entertainment. However, the print media is used mostly for news and electronic media is used mostly for entertainment.

Regarding awareness about the date of school admission, free education, free text books, provision of free rice to those having 75% of attendance, free uniform and compulsory attendance for promotion, respondents in school going category were more aware than the respondents in non-school going category.

Lack of awareness leads to misuse of incentives and consequent failure of intended goals of the programme. The extent of satisfaction on incentives differs based on supply, quantity, quality and nature of incentives. Most of the parents were satisfied with the quality of textbooks and mid-day meal programme. However, 34.74% of the parents expressed dissatisfaction with the quality of clothing and hostel facilities. Due to a few administrative lapses the implementing agencies are not able to provide the material in time and which leads to improper use of these items. However, 86.8% of the parents said that the incentives like mid-day meal and textbooks were provided in time. It is reported that in some of the schools, instead of serving mid-day meal, the concerned teachers distribute raw rice to the parents due to lack of community participation and proper infrastructure facilities. The respondents mentioned different problems like non-payment of cook's salary, irregular supply of rice, vegetables and firewood, lack of proper kitchen and utensils.

Due to insufficient and irregular supply of incentives, some of the parents were spending their meager income on their children's books including stationary, fee and other items like soap, hair oil etc. In the said categories, 45.31% and 8.70% of parents respectively spent less than Rs. 200/- and between Rs.201 to 500 towards their children's education.

Despite spending huge amount on incentives the intended target group was not able to receive the benefits. Some of the educational incentives were being misused and not reaching the beneficiaries due to lack of proper awareness among the tribal parents about the nature, quality, quantity and mechanism involved in the distribution of incentives.

4.3. Reasons for Irregular Attendance

The parents attributed several reasons for irregular attendance of their children, such as irregular functioning of school, lack of accessibility, festive days, rainy season, ill health, looking after younger siblings, lack of incentives and being busy in agricultural activities and collection of minor forest produce. Continuous absence even after vacation and lack of interest among the children in attending the school were also noticed.

4.4. Utilisation of Hostel Facilities

Most of the tribal parents are not utilizing the hostel facilities. The data reveal that only 97 (30.3%) out of 320 respondents kept their children in hostels and the rest were not able to avail the hostel facility due to various reasons. 10.31% in school going and 5.93% in non-school going categories expressed that their children were not staying in hostels during the night due to poor accommodation.

Some of the children did not stay in hostels particularly during winter and rainy seasons. The hostels lack proper sleeping material and the children are unable to sleep in unfamiliar and large buildings without proper clothing and bedding. The rest of the parents expressed several other reasons like early departure of teachers and hostel staff, and consequential early serving of dinner and belief in the presence of ghosts and spirits in the hostel premises. Inaccessibility, lack of discipline in hostels, grazing cattle, unwilling to keep the girl children and lack of vacancy in hostel are some of the reasons for not admitting their children in hostels.

4.5. Community Participation

The data reveal that 60.9% and 55.9% of the respondents in school going and non-school going categories respectively are aware of the existence of educational committees constituted for promoting peoples participation in the universalization of Primary Education. However, 58.4% and 53.1% of the respondents in school going and non-school going categories respectively knew some of the members of these committees.

The data indicate that among the respondents, 38.75% in school going category and 43.43% in non-school going category were not aware of the process of formation of the committees. However, 40.31% and 30.93% of the respondents in school going and non-school going categories respectively opined that the committees were proper representative bodies. The remaining respondents expressed some dissatisfaction on the formation and performance of these committees.

It is interesting to note that more than two thirds of the respondents in non-school going category were not aware of the functioning of the committees. The remaining respondents said that meetings of the committees were held once or twice in a month. The parents get the information relating to decisions made in the committees through different means like members of SES/VEC, village leaders, teachers, sarpanch, neighbours, ward members and *dandora*. From these committees, parents expect the activities like collection of funds, giving donations, approaching government on development of school, donating land for school, protecting and repairing school building, supervising mid-day meal programme, appointing voluntary teachers, supervising school admissions and ensuring regular and quality teaching.

The parents extend help in the form of cash, kind and *shramadan* (voluntary physical service). The *shramadan* as part of *Janmabhoomi* (a popular programme of people's participation in development) being implemented by the government has good impact on the tribals and they are aware of the importance of *shramadan* in development of infrastructure in villages.

The parents feel that the teacher/Head master has greater role in enrollment of children. The role of School Education Committee (SEC) is less in encouraging enrollment of tribal children in schools. The village elders, leaders and the educated also contribute in motivating tribal children to get enrolled in school. Only 2.19% in school going and 0.62% in non-school going categories said that it was the responsibility of education committee to enroll the children in schools.

DPEP seeks to promote convergence with the services like ECEC, ICDS, PHCs, NFE Centres etc., where these exist rather than replicating the services. It is observed that there is no proper co-ordination between these agencies in promoting primary education programme. The data indicate that the tribals lack awareness about the facilities like NFE center, Back to school, Open school and other continuing education programmes being provided by the government.

4.6. School Teacher

The effectiveness of a teacher in tribal situation depends on various factors like socio-economic background, educational qualifications, age, service conditions, experience, understanding of tribal culture, interaction with the community, knowledge of tribal dialects, attitude towards tribals and willingness to work in tribal areas.

There were 58 tribal and 44 non-tribal teachers working in the schools under study. Among the non-tribal teachers a little less than fifty percent expressed their dislike to continue in tribal areas. Lack of basic facilities like roads, transport, electricity, drinking water, medical aid, higher education facilities etc, have been the reasons for a majority of the teachers from both tribal and non-tribal groups to seek transfer from tribal areas.

The data reveal that 68.96% of non-tribal teachers needed special training to teach tribal children. All the tribal teachers who were untrained also felt that training in pedagogy was essential for effective classroom teaching. It was also reported that the DIETs established in tribal areas were not working properly to sensitize and train the teachers to meet the needs of the schools in tribal areas.

Teacher's attendance to school depends on several factors such as infrastructure facilities at the school, lack of transportation, adjustment with tribal population, service

interest etc. Regarding teacher's irregular attendance, 89.37% of the respondents in school going and 90.62% of the respondents in non-school going category did not respond it seems they were reluctant to give their opinion. The rest of the respondents have given different reasons for irregular attendance such as lack of adjustment with local population, political influence, understanding with the officials, understanding with local leaders, lack of teaching ability and transportation facilities etc.

The DEOs have no powers to take action against teachers who are irregular and not discharging duties properly in schools maintained by ITDA. Lack of proper guidance, supervision and periodical inspection leads to improper maintenance of school records and providing inconsistent information.

It is observed that most of the teachers were not regular and not imparting quality education due to various factors like socio-cultural background of the teacher, residing at a far away place, lack of qualifications particularly among the tribal teachers, lack of proper training inputs and the mind set developed against the tribal children. In this regard, the DIETs have to play a major role in moulding a person to be a good teacher.

4.7. Suggestions

On the basis of the empirical study, the following suggestions are being made:

- Remove 1st, 2nd and 3rd classes from *ashram* school to avoid duplication as *Maabadi*/GVVKs are located in every village.
- Do not start *ashram* schools without proper infrastructure facilities.
- Converge ICDS, ECEC and *Maabadi*/GVVK to bring them under one roof for better services.
- Strengthen Ashram School complexes for better interaction and quality education.
- Frequent surprise visits by higher officials for better monitoring and implementation.
- Vacations should be based on local festivals, economic activities and seasonal variations.
- Training should be provided to cooks working in hostels.
- Wherever the schools have electricity, television should be provided to enable the children to have exposure to mass media.
- Provide suitable training inputs to the teachers in maintenance of school and hostel records.
- Bring schools and hostels in an Integrated Tribal Development Project (ITDA) area under the purview of the District Education Officer instead of District Tribal Welfare Officer to avoid role conflict between them. However, the Project Officer, ITDA should have over all supervision.
- Teachers should be appointed from both tribal and non-tribals on contract basis with better remuneration.
- Strengthen DIETs in tribal areas with necessary infrastructure including suitable training modules and by appointing experienced teachers.
- Encourage and mobilize NGOs and industrialists in tribal areas for material contributions to schools / hostels.
- Encourage folk media (*kalajathas*) to bring changes in the perception of both parents and children about the importance of education.

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14. Impact of Integrated Education for the Disabled in DPEP

*Anupriya Chadha**

1. Introduction

In 1994-95 DPEP was launched in 42 districts of seven states namely Karnataka, Kerala, Maharashtra, Haryana, Tamil-Nadu, Madhya-Pradesh and Assam. After a series of workshops, the guidelines on Integrated Education for the Disabled (IED) in DPEP were developed in 1997. IED became operational in DPEP in 1998. After action plans on IED were developed by different states, state specific strategies on how to educate children with special needs evolved differently in every state, depending on state specific vision and need.

IED in DPEP has been in operation for five years. Hence, a need was felt to conduct a regular study to evaluate those various indicators that are vital for inclusive education. The best way to assess this is to establish parameters on the basis of which the quality of work done in IED could be assessed. There has been a substantial expansion of IED in terms of the number of disabled children identified and enrolled in DPEP schools. So far, the number identified is 877000 and the number of disabled children enrolled in schools is 621760, which means that around 71% of Children With Special Needs (CWSN) have been integrated.

Without evaluation, we have no means of assessing how effective IED has been in giving quality education to disabled children. The main variable to be evaluated is how children with special needs placed in regular schools have benefited from this programme. Other variables like teacher training, peer acceptance, teacher attitudes and retention also have to be evaluated. Thus, this calls for a dedicated study of a few states on the basis of which tentative conclusions could be reached. This will provide adequate justification for continuing the programme as well as to carry out mid-course corrections.

Such a study would also provide a direction to all those programmes, which are dealing with or propose to take up inclusive education for children with special needs. In this sense, this study could be regarded as a baseline study.

While reading this report, it is important to bear in mind that IED in DPEP, though a path breaking starting point, is by no means the complete approach. A limited number of variables were chosen for this initial study. Many more experiments may have to be done and a number of more comprehensive studies carried out before reaching firm conclusions.

2. Objectives of the Study

- To analyse the effect of inclusion on learning achievement of CWSN
- To examine the retention of CWSN
- To assess teacher attitudes towards CWSN
- To evaluate the content, duration and type of teacher training
- To study how well peers had accepted their children with special needs
- To learn basic lessons on the basis of which suggestions could be made to SSA for further fostering the development of this programme.

Scope

The scope of the study was to study five states from the five regions of the country. Five states (one from each region) were chosen for the study. Phase I states of Tamil Nadu, Maharashtra, Madhya-Pradesh and Phase II states of West- Bengal and Uttar Pradesh were selected for this study. In these states, 10-15 schools were chosen for the study. Only those schools that had enrolled children with special needs for 1-2 years were taken up for the study.

3. Methodology

The following methodology was used:

- One competent NGO/agency was entrusted the task of conducting the study in each state
- Each NGO/agency was to conduct a study in 10 schools in one district from each state
- Purposive cum convenience was used in the selection of schools to be studied was made. Preference was given to those schools where IED programme had been running for at least 1-2 years. The schools chosen for each state were selected randomly.
- Each NGO/agency was requested to include as

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far as possible all categories of disabled children being considered in DPEP. These include visual impairment, hearing impairment, orthopaedic impairment and others

- In all 100 case histories from all states (2 case histories from each school) had to be collected and compiled on the basis of the guidelines provided
- The following variables were studied:
- Learning achievement in language and math
- Teacher attitudes
- Teacher training and its impact on the student
- Peer acceptance
- Retention of the disabled children

Tools

Questionnaire and interviews constituted the tools for this study. A detailed questionnaire was finalised in August 2000 by TSG in the area of inclusive education.

Design of the Study

The following design was adopted:

- A format was developed by TSG for recording the case histories of every child studied. Focus was on the benefits accruing to the child on account of his/her placement in regular schools. This was evaluated by examining those aspects that are vital for the success of any programme on inclusive education. Peer attitudes were studied through direct observation of interaction between disabled and non-disabled peers in the following points:
- Whether or not the disabled peers were accepted by the non-disabled peers
- Whether the attitudes of the non-disabled peers were condescending
- Whether the attitudes of the non-disabled peers were rejecting

For learning achievement, where possible, pencil and paper test was administered to the children. The NGO/ agency undertaking this study developed these tests based on the existing curriculum. (50 marks were assigned to every test and the percentage of marks obtained by every student in each subject was indicated).

Teacher training programmes conducted were also evaluated on the basis of whether or not the teaching strategies/ methods used were effective in helping children with special needs to learn better. The type, duration and the contents of teacher training programmes were also assessed. All those teachers teaching disabled children in the 10 schools chosen for the study were observed.

Teacher attitudes were judged by observing the teacher on the following:

- Whether his/her attitude is positive/ in different / negative

Retention of CWSN was measured by the classroom register. An attempt was made to obtain a category wise idea of the retention rate.

The study was conducted through case histories including direct observation of teacher and peer behaviour and not through mailed questionnaires. Thus, this was basically a case study and an observational design.

Sample Size

The following table shows the sample size from each state and the number of case studies provided, which formed the basis of the preliminary findings presented here.

Name of the state	Name of the district	Name of the blocks/Taluka	Schools selected for the study (n)	Case studies provided (n)
Madhya Pradesh	Dewas	Devas, Sonkuch, Tonkkhurd	10	20
Maharashtra	Nanded	Nanded, Ardhapur, Himayat Nagar, Hadgaon, Mudkhed, Kandhar, Degloor, Dharmabad, Umri, Biloli	10	20
Tamil Nadu	Ramnad	Thiruppullani, Mandapam and Ramnad	15	21
Uttar Pradesh	Hardoi	Sursa, Sandila & Kachhauna	10	20
West Bengal	South 24 Parganas	Falta & Baruipur	11	35
Total			**56**	**116**

Hence, a total of 56 schools were chosen from the five states for the study. Case histories of 116 children were collected from these states.

4. Findings of the Study

As already mentioned, five variables of learning achievement, teacher training, teacher attitudes, peer acceptance and retention were taken up for the study. The state wise findings, on each of these variables, are presented below.

Retention

- The average attendance of children with special needs (CWSN) was better than that of non-disabled children in Tamil Nadu. Children with visual impairment, hearing impairment and locomotor impairment had 84.4% retention. Children with mental retardation had 73.3% retention (average 78.9%). A few reasons provided for this high rate of retention were that children with special needs enjoyed the experiences with peer group, their parents could go to work, teachers on seeing the development of children with special needs were keen that they never missed any class and above all child's own positive achievement was by in itself a motivating factor for the child to come to school regularly
- The attendance of children with special needs in the 10 schools chosen for the study in M.P. was found to be regular. The IED friendly environment in schools, peer acceptance, positive behaviour of the teachers and headmasters and encouragement provided to these children to participate in different school activities have facilitated the retention of these children in school. The attendance of locomotor impaired children was highest (96%) followed by hearing impaired children (84%). The attendance of visually impaired children was found to be (80%).
- During evaluation, the enrolment of CWSN in U.P. was found to be 95%. The retention of CWSN varied from disability to disability. The retention rate of orthopaedically impaired children was the maximum (80.5%). This was followed by visual impairment with a retention rate of 79.63%. The retention rate of hearing impaired children was 71.25% and that of mental retardation was 74.11%. The average retention rate was 81.6%.
- In West Bengal, the retention rate of disabled children was found to be high. The primary reason given was that teachers of these schools after being trained on IED had learnt to maintain a conducive environment, which could promote learning of CWSN in regular schools. The teachers also maintained a close contact with the family of these children and would act as counsellors. The retention of locomotor impaired children was the most (81%). Hearing impaired children, who had 78% attendance followed next. Mentally retarded children had an attendance of 65% and visually impaired children had an attendance of 55%. Average attendance in West- Bengal was 75.73%.
- The average percentage of attendance of disabled children in the 10 schools selected in the state of Maharashtra was 51.33%. Retention of orthopaedically handicapped children was the maximum (73%) followed by visually impaired children (66%). The hearing impaired children had 50% attendance and mentally retarded and multiply handicapped children had 33.33% attendance.

By and large, except in Maharashtra where the retention of CWSN is 51.33%, the retention of CWSN enrolled in schools in the other four states is very high. This has been attributed to congenial environment created by sensitised teachers, their continued contact with the families of CWSN and positive attitude on the part of headmasters, teachers and peers. Moreover, it appears that children with orthopaedic impairment had the highest retention. This is because in DPEP schools are being made barrier free to promote easy access for children with moving problems.

Peer Acceptance

- In Tamil Nadu, the study revealed that initially, the peer attitudes were negative and taunting towards CWSN. However, with proper interventions by teachers, the peer attitudes became more positive and accepting. All the CWSN had 100% peer acceptance.
- Evaluation in M.P. showed that peer attitude was positive and supportive. The peers, on the whole, were aware of the needs and problems of CWSN. All the categories (visual, hearing and orthopaedic) of CWSN had 100% peer acceptance
- Peer acceptance was very positive and encouraging at every school in U.P., where the study carried out. Peers were supportive and different forms of peer tutoring were observed.

In all activities, the participation of students having disabilities and without disabilities were non-discriminatory

- Peer acceptance of CWSN in the schools selected in Maharashtra depended on the category of disability. Children with orthopaedic impairment were accepted most by their peers (60%). Children with visual impairment had a peer acceptance of 57% and children with hearing impairment had a peer acceptance of 37.50%. Children with multiple handicaps and mental retardation had the lowest peer acceptance of 17% and 15% respectively.
- In all the schools studied in West Bengal, peer acceptance was good and both CWSN and their non-disabled peers participated together in all school activities. Peers also helped CWSN in those areas, where they needed assistance. The acceptance of hearing impaired children was the most (91%). Children with locomotor impairment had 88% peer acceptance. Visually impaired children had a peer acceptance of 65% and mentally retarded children had lowest acceptance of 65%.

Generally speaking, peer acceptance towards CWSN improved in gradual stages. Over a period of time, attitudes became more positive and joint participation became more visible between CWSN and non-disabled children. This establishes the long held view that attitudes change through warm personal interactions.

Teacher Training

- In Maharashtra, 88 teachers and 25 headmasters of the various schools in Nanded districts were interviewed to gather information. There were 142 cluster heads in the 10 blocks chosen for the study. Only 24 cluster heads out of a total of 142 cluster heads had completed 45-day orientation training on IED. These cluster heads further train their teachers in their cluster for 3 days. The sample taken up for the study comprised 88 teachers. Out of these, only 3 teachers (3.4%) had been oriented to IED. No evaluation of the impact of teacher training on CWSN was given.
- Among the 10 schools selected in U.P., the total number of teachers in the sample was 19 and the number trained was 17 (89.47%). The number of teacher having 5 days training was about 16. This training exposed the teachers to types, causes, symptoms, and identification and classroom management of different kinds of disabilities. Besides one teacher was also imparted training for 10-days. Most of the teachers in these schools had received training from these master trainers and those BRCCs who had been given 45-day training. It was also observed that the teachers were using those effective pedagogical strategies that they were exposed to during training.
- In M.P., 34 teachers in the sample selected had been trained for 1 day on integration, identification, causes and prevention of disabilities. 12 teachers were trained for 5 days on types, curricular adaptation, educational implications, planning, management and monitoring of IED. Four teachers had been trained for 13 days on identification, classroom management, early detection, prevention and philosophy and practices of inclusive education. One teacher had undergone the one-year multi-category training on IED. The total number of teachers in the sample was 51 and all the teachers had received training in some form or the other. This means that 100% teachers taken up in the sample were trained. The teachers were using those techniques in the classroom to which they were oriented in their training programmes while teaching CWSN.
- In Tamil-Nadu, the number of teachers taken up for the sample was 51. All the 51 teachers (100%)had been given a two-day orientation on identification, classroom management, special pedagogical techniques and use and maintenance of aids and appliances required by CWSN. Focussed discussions with the teachers revealed the fact that the teachers were aware of simple tips essential for effective management of CWSN.
- In West- Bengal, 11 schools were taken up for the study and 39 teachers were evaluated. Nine teachers from these schools i.e. (23% teachers) had been given the 6–day intensive training on IED. The content of the 6-day training mainly dealt with the kind of remedial support needed by each kind of disability. 34 teachers out of 39 i.e. 87.17% in the sample had been given a 2- day orientation on identification and classroom management of CWSN. Only the teachers who had been given the 6-day training were using the strategies that were taught to them in the training in the classroom.

Although in the states chosen for the study, teacher

training did take place, it was of different duration and types. In U.P., teachers are being trained by those master trainers who have had either 10-day training or 45 day training on IED. In Maharashtra, teachers have received training from resource persons trained for 45-days. In Tamil Nadu trained special educators from the NGOs have trained general teachers.

Teacher Attitudes

- In W.B., attitudes of teachers were favourable to inclusion, but expressed concern for safety of CWSN as well as anxiety for support from special educators. 74% teachers had positive attitudes, 21% had negative attitudes and 5% teachers had indifferent attitudes
- In U.P., 50% teachers were positive, 15% were in different and the remaining 35% had negative attitudes. This implies that 50% of the CWSN may have had to encounter in different or negative attitudes, which could influence their school performance.
- All the teachers in M.P. favoured inclusion of CWSN in regular schools and their attitudes were co-operative and supportive. None of the teachers were found to have negative or indifferent attitudes.
- In Maharashtra, 50.55% teachers had a negative attitude towards CWSN. They felt that the development of CWSN was not possible in a regular class. CWSN needed individual attention and remedial assistance, which affected their progress on essential learning skills.
- The evaluation in Tamil Nadu showed that initially the teachers felt anxious and apprehensive regarding the presence of CWSN in the regular classrooms. But these negative feelings diminished as the teachers realized the strengths of CWSN.

By and large, except in Maharashtra, in the sample chosen in the other states, the teachers favoured inclusion. The teachers of all the states had positive feelings towards CWSN. In the beginning, the teachers had initial apprehensions, but these feelings tended to dissolve after witnessing the learning achievement of these children. Situation would probably improve with more support from good special educators.

Learning Achievement

In Maharashtra, M.P. and West Bengal the evaluators administered two tests, one for mathematics and one for language. These tests were based on the prescribed curriculum. Main components in this test were sums of the numbers having two-two to three digits, simple addition and subtraction with and without carrying numbers, place value of digits, writing the numbers etc. These test carried the total of 50 marks. After administration of mathematic test to disabled children, systematic evaluation of each and every student was carried out.

Similarly, a language test was developed and administered by the evaluators. This test was based on a basic language, grammar, written expression and perceptive language. The questions contained in the paper and pencil test developed were according to the descending order of their difficulty level.

- In Maharashtra, the performance of CWSN varied according to the nature of disability of the child. In math, achievement of hearing impaired children was 16.4% and their language achievement was 30.4% (average 23.4%). Visually impaired children had 12.85% in Math and 53.05% in language (average 32.95%). Children with orthopaedic impairment had an achievement of 8.66% in math and their language development was 60.17% (average 34.41%). Children with mental retardation had mathematical achievement of 4.00% and language achievement of 13.57% (average 8.78%). Children with multiple disabilities could not score at all in math and their score in language was 12.85% (average 12.85%).
- In U.P., children with orthopaedic impairment had the best performance. They scored 42% in Hindi and 42.5% in math (average 42.5%). Children with visual impairment came next with 30% in math and 21.66% in Hindi (average 25.83%). Hearing impaired children scored 13% in math and 13.5% in Hindi (average 13.25). The performance of multiply disabled children was 30% in Hindi and 10% in math (average 20%). Children with mental retardation had the lowest performance with 13.5% in Hindi and 9% in math (average 11.25%).
- In Tamil Nadu, children with orthopaedic impairment had the best performance with 56% in Tamil and 56.60% in math (average 56.3%). This was followed by the performance of the hearing impaired children, who had 42.75% in Tamil and 46.25% in math (average 44.5%). Visually impaired children came next with 25.20% in Tamil and 36.00% in math (average 30.6%). Children with mental retardation had the lowest performance with 24.00% in Tamil and 33.00% in math (average

28.5%). The average obtained by CWSN in Math and English was 43 and 37 respectively. The average of the entire class in Math was 53.84%, which means that there was a gap of 10.84 in the achievement level of CWSN and rest of the class. Similarly, the average of the entire class in language was 55.86%, which means that there was a gap of 18.86 in the achievement level of CWSN and rest of the class.

- In West Bengal, children with hearing impairment had the best performance in both language and mathematics. They had an average of 52.1% in math and 48.7% in language. The classes taken up for the study had an average of 57.9% in math and 53.6% in language. When compared to rest of the class the gap in the achievement level of math was 5.8% and 4.9% in language. Children with orthopaedic impairment came next they had an average of 50.3% in math and 48.6% in language. The gap between the achievement level of locomotor disabled children and rest of the class was 7.6% in math and 5.0% in language. The visually impaired children had an average of 39.8% in math and 38.3% in language. When compared with rest of the class, the gap was 18.1% in math and 15.3% in language. Mentally retarded children had the lowest performance with 32.6% in math and 23.5% in language. The gap was 25.3% in math and 30.1% in language. Visually impaired and low vision students could recite poems from their textbook from memory and could speak their names, addresses, schools' names, friends' names. Hearing impaired students learn by copying and have no skill of language and total communication. But they can write their names, fathers' names, addresses, work out small sums and do simple drawing with the help of family, teachers and friends. Slow learners can write small poems and work out sums at their own pace. Social and daily living skills of these students are excellent for all these students. Most of these schools have the record of educating orthopaedically handicapped students in the past.
- In M.P., paper pencil test were also developed for different classes and in different subjects to assess the learning achievement of children with special needs. The performance of orthopaedic impaired children was best in M.P. There performance was 55% in math and 62% (average 59.5%) in language. The average of the entire class in math and language was 59% and 63% respectively. The difference in the performance of orthopaedically impaired children when compared to the entire class was 4% in math and 1% in language. The performance of visually impaired children came next with 43% in math and 49% in language (average 46%). The gap was 16% in math and 14% in language. Hearing impaired children had the lowest performance with 51% in math and 40% (45.5%) in language. The gap between them and the entire class was 8% in math and 23% in language.

Generally speaking, the school performance of CWSN was not as good as that of their non-disabled peers. In U.P., Maharashtra, Tamil Nadu, West Bengal and Madhya Pradesh children with orthopaedic impairment performed the best. This would be attributed to the fact that usually children with locomotor impairment require no special educational services in the form of resource support or remedial assistance. Another common finding in all the states, except M.P. where children with mental retardation were not included, was that children with mental retardation and multiple disabilities had the lowest performance. This could be because children with mental retardation and multiple disabilities require remedial tutoring and more time and attention from a well-trained teacher. They also require ample practice, repetition of instruction and concretization of experiences to grasp any concept.

Summary of the Findings

An evaluation study on IED was undertaken in 5 DPEP states, drawn from each region of the country. These were M.P., Maharashtra, Tamil- Nadu (all Phase-I states) and U.P. and W.B., which are Phase-II states. Five variables of learning achievement, peer acceptance, retention, teacher training and teacher attitudes were chosen for the study. The most important variable was learning achievement. The summary of the findings in each of these variables is as follows:

- Children with orthopaedic impairment performed the best in all the states and mentally retarded and multiply handicapped children received lowest marks when compared to other categories of disabled children.
- Most of the teachers had favourable attitudes towards inclusive education in all the states. In many cases, teachers initially had apprehensions

but these fears tended to reduce with more interaction with CWSN.

- Retention of CWSN in all the states was excellent. In Tamil Nadu, retention rate of CWSN was found to be 100% with their absenteeism being less than their non-disabled peers.
- All the states have conducted teacher trainings of varying durations. In M.P., Uttar Pradesh, West Bengal and Tamil Nadu teachers were using effective pedagogical strategies, which were taught to them during training. However, in Maharasthra, the impact of teacher training could not be properly assessed.
- The most encouraging finding was that in almost all the states taken up for the study, peers had accepted their disabled classmates and were very supportive and cooperative.

5. Recommendations and Suggestions

- All the teachers who are specially trained for inclusive education in DPEP should provide adequate resource support to the CWSN as the teachers provided a 2-day or 6-day orientation find it difficult to deal with the special needs of CWSN without adequate support
- Another special recommendation is that, wherever feasible, family members of CWSN involved in the educational process of their children
- More emphasis needs to be placed on the classroom management of CWSN
- Action research needs to be taken up to review the programme on a continuing basis with experienced NGOs/experts in the area of inclusive education
- Research should be encouraged in the areas of development of assistive devices for CWSN, relevant teaching learning material required for them
- Teachers should conduct action research to so that some basis of the most effective pedagogical strategies for CWSN is developed
- Most important, research should be encouraged to evaluate as to which is the best model of service delivery for CWSN.

15. A Study of Management Structures under DPEP

*S.M.I.A. Zaidi**

The importance of education has been realized by not only educationists, intellectuals, planners and policy makers but also by the framers of the Indian Constitution. In this regard Article 45 under the Directive Principles of State Policy in the Constitution of India enjoins to provide free and compulsory education to all the children of the country upto 14 years of age. The interpretation of this article is that it is the directive of Constitution to achieve the goal of Universalisation of Elementary Education (UEE). The goal as per the Constitutional directive should have been achieved within 10 years of promulgation of the constitution, which thereby means the first target date for achieving the goal of UEE was 1960.

All Committees and Commissions set up by the Government as well as the National Policies on Education (NPE) formulated by Government of India, while dealing with elementary education have emphasized on the need to achieve the goal of UEE at the earliest possible time. However, it is disheartening to note that even after 56 years of independence and 53 years of adoption of the Constitution the country still does not seem to be insight of achieving this goal in near future. It is specifically true of backward states of the country. However, the problems related to quality of elementary education are cause of concern even in educationally advanced states also.

Though the goal of UEE could not be achieved in the country so far but this does not mean that there is no progress made in this direction. The data reveals that tremendous progress has been made on various aspects of elementary education. During 50 years of planned development the progress with regard to elementary education is as given below.

The number of primary and upper primary schools that were 209671 and 13596 only in 1950-51 have increased to 638738 and 206269 in 2000-01 respectively. This shows an impressive average annual growth rate of 2.25 percent for primary and as high as 5.59 percent for upper primary schools. Similarly the number of teachers at primary level of education has increased from 537918 in 1950-51 to 1896791 in 2000-01 and at upper primary level it has increased from merely 85496 in 1950-51 to as high as 1326652 in 2000-01. These data show average annual growth rate of teachers at primary level as 2.55 percent and 5.64 percent at upper primary level. If one looks at the enrolment trend one realizes that primary level enrolment has increased from 19.2 million in 1950-51 to 113.8 million in 2000-01 while at upper primary level enrolment which was only 3.1 million in 1950-51 has increased to 42.8 million in 2000-01. These figures show average annual growth rate of primary level enrolment as 3.62 percent and that of upper primary level enrolment as 5.39 percent (Source: Selected Educational Statistics 2000-2001, Department of Secondary and Higher Education, Ministry of Human Resource Development, Government of India, New Delhi 2002).

The figures presented above for primary and upper primary level of education reveal that average number of teachers per school have slightly increased. This is from 2.56 teachers per school in 1950-51 to 2.96 teachers per school in 2000-01 at primary level. The respective figure for upper primary is 6.29 teachers per school in 1950-51 to 6.43 teachers per school in 2000-01. But the primary schools are now far more crowded than what was earlier because the average enrolment per primary school which was 91.57 in 1950-51 has increased to almost double i.e.178.16 in 2000-01. However for upper primary the position is slightly better now than earlier. The average enrolment per upper primary school has declined from 228.01 in 1950-51 to 207.50 in 2000-01. Further the teacher pupil ratio in the country has sizeably increased at primary level from 35.69 in 1950-51 to as high as 60 in 2000-01. But at upper primary level the teacher pupil ratio has slightly declined from 36.26 in 1950-51 to 32.26 in 2000-01.

As far as participation of children at primary and upper primary level is concerned the official statistics of Department of Secondary and Higher Education, Ministry of Human Resource Development, Government of India shows that Gross Enrolment Ratio (GER) at primary level has increased from 42.6 percent in 1950-51 to 95.7 percent in 2000-01 while the same at upper primary level has increased from 12.7 percent in 1950-51 to 58.6 percent in 2000-01. Though in 50 years GER has increased sizeably but the concern is that still about 15 to 20 percent children of 6-11 years age and about 55 to 60 percent

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children of 11-14 years age are out of school. Further the retention rates, which were 36.8 and 21.3 percent at primary and elementary level respectively in 1974-75 have increased to 59.8 percent and 46.3 percent in 2000-01. This shows that the dropouts are still quite high at about 40 percent at primary and about 54 percent at upper primary level.

Though no data on achievement levels of children at primary and upper level is available for the country but the achievement tests conducted under Baseline Assessment Studies in DPEP districts reveal that quality of education at primary level is still not satisfactory. This is despite the fact that some progress has been made in this regard as a result of DPEP interventions.

Primary/Elementary Education Projects/ Programmes

In order to achieve the goal of UEE in general and UPE in particular apart from the efforts made by the Central Government and specially state governments on regular basis certain centrally sponsored schemes have been launched which are Non-Formal Education Programme which has new been renamed as Alternative and Innovative Education, Operational Blackboard, Teacher Education programme as a result of which DIET's have come into existence, mid-day meals scheme etc. Further to speed up the process of development of elementary education/primary education a few programmes/projects have been launched in various states as joint ventures of Central Government and State Governments and many a time external funding agencies are also involved in these projects. In this regard the programmes/projects are Andhra Pradesh Primary Education Project (APPEP), Bihar Education Project (UPBEP), Lok Jumbish and Shiksha Karmi projects of Rajasthan, District Primary Education Programme (DPEP) and latest in this series is Sarva Shiksha Abhiyan programme.

District Primary Education Programme (DPEP)

This programme started in 1993-94 was based on the experiences gained in the country through the implementation of the projects mentioned above. The main thrust of DPEP is on district level planning, community participation and decentralized management, thrust on education of special focus groups and deprived sections of population and improving the effectiveness of education through training of teachers, improvement in learning material and providing better infrastructure facilities in the schools.

The programme in its first phase was launched in 42 districts of 7 states of the country where the implementation started in 1994-95. However after expansion of the programme in its subsequent phases the programme now covers 271 districts of 18 major states of the country.

Management Structure under DPEP

The District Primary Education Programme has evolved a management structure from national level down to the village level with substantial autonomy, high degree of flexibility and space to experiment with different method and models. The management structure of the programme have been created at several levels namely national, state, district, block, cluster and the village.

The District level and sub district level structure created under the programme includes District Project Committee headed by District Collector or the Chief Executive Officer of Zilla Parishad. The Committee reviews the progress of DPEP in the district and works towards widening the network of supporting agencies. The Committee has representation of NGOs, panchayats, educational institutions, Village Education Committees and experts in different areas apart from government departments. Apart from it there is also a District Implementation Committee which functions as the executive body at the district level.

The District Project Offices (DPOs) have been established as a separate structure in all the DPEP districts. Day to day implementation of the programme is managed by a full time District Project Coordinator (DPC) who is assisted by Assistant Project Coordinator, Resource Persons etc. Generally staff of the Education Department posted in the district including supervisory officials are expected to work closely with the district project office of DPEP. The District level structure is also supported by the District Institute of Education and Training (DIET), District Resource Group created for the said purpose and other institutes.

At the sub-district level in many districts there is a Block Project Implementation Committee. Block Resource Centre (BRC) created under DPEP lends academic support at the block level whereas the same support is given by Cluster Resource Centre (CRC) at the cluster level. Further at the village level there are Village Education Committee (VEC), Parents Teachers Association (PTA) and Mother Teacher Association (MTA) to oversee the implementation of the programme at the grass root level.

The Present Study

The present paper focuses on studying the district, block and cluster level management structures created under DPEP, their functioning and linkage of these newly created structures with the educational administrative structure already created by state government at these levels. More specifically the following are the objectives of this study:

(i) To study the role and function of district and sub-district management structures as perceived in DPEP

(ii) To analyze the vertical and horizontal linkages of district and sub-district management structures created under DPEP with existing administrative and management structures.

Methodology and Coverage

The study is based on both secondary and primary sources of information. The secondary data was collected from District Education Office, Block Education Office as well as from District Project Office DPEP, BRC, and CRC. However primary data was generated by administering questionnaires at district level for District Project Office (DPEP), DIET and District Education Office (Elementary). At the Block level primary data was collected by administering questionnaire on Block Education Office and BRC while a questionnaire was administered on CRCs for collection of primary data at the cluster level. The study does not cover village and grass root level structures at all.

In order to make in depth study of the management structures and their linkages, two DPEP districts from two different states were selected. One DPEP phase I district named Malappuram was selected from Kerala which is the most advanced state of the country from the point of view of educational development. The other selected district was DPEP Phase III district named Gaya from Bihar, which is educationally the most backward state.

The Malappuram district in Kerala has 15 blocks out of which 3 blocks were selected for the study and these blocks are Areacode block which is a tribal block with average literacy rate, Manjeri block having high literacy rate and Tanur block having low literacy rate. Out of these 3 blocks the CRCs covered are : 8 CRCs out of total 14 in Areacode block, 5 CRCs out of total 17 CRCs in Manjeri block and 7 CRCs out of total 15 CRCs in Tanur block. Thus out of total 46 CRCs in these 3 blocks the study covers 20 CRCs.

The Gaya district of Bihar has total 24 blocks out of which 3 blocks were selected for the study. There are: Imamganj block which is a backward block and is a naxalite effected area, Tikari block which is forward block and Wazirganj block which is an average literacy block of the district. The CRCs covered for the study under the 3 blocks are: all 13 CRCs of Imamganj, all 13 CRCs of Tikari and 10 out of 12 CRCs of Wazirganj block. Thus out of the total 38 CRCs in these 3 blocks the study covers 36 CRCs.

The sample and coverage of CRCs in the study is as presented in the following table:

Coverage of CRCs in Selected Blocks

Malappuram District			Gaya District		
Block	**Total CRCs**	**CRCs Covered**	**Block**	**Total CRCs**	**CRCs Covered**
Area code	14	08	Imamganj	13	13
Manjeri	17	05	Tikari	13	13
Tanur	15	07	Wazirganj	12	10
Total	**46**	**20**	**Total**	**38**	**36**

Profile of the Selected Districts

The two districts selected for the study are demographically large districts in their respective states. The 2001 Census shows that population of Malappuram (Kerala) was 3624640 where as population of Gaya (Bihar) was 3464983. The sex ratio in these two districts is 1063 and 937 for Malappuram and Gaya respectively. These two districts are densely populated, as the population density for Malappuram is 1022 as against that of Gaya as 696 persons per sq.kms. Surprisingly Gaya district is more urbanized than Malappuram, as the percentage of urban population in these two districts is 9.81 and 13.71 percent respectively. Gaya has substantial SC population (30.20 percent) where as Malappuram has only 8.3 percent SC population. Population of Scheduled Tribes is negligible in both these districts, which is 0.34 percent in Malappuram, and 0.05 percent in Gaya.

The administrative structure of the districts shows that Malappuram has 15 blocks 5 urban areas 225 clusters and 101 Gram Panchayats. However Gaya has 24 blocks, 4 urban areas 148 clusters, 2896 inhabited villages and 4501 habitations.

Despite being educationally backward district in Kerala, Malappuram had literacy rate of 88.61 percent in 2001, which was 91.46 percent for males, and 85.96 percent for females. In Gaya the total literacy rate was 51.07 percent in 2001, which was 63.81 percent for male and 37.40 percent for female. The literacy rate of Gaya is slightly ahead of the literacy rate of Bihar where as Malappuram literacy rate is less than its state average.

Elementary Education Scenario in the Districts

The two districts selected for the study are big districts. However the number of primary and upper primary schools in the two districts shows a different picture. The data of year 2001-02 shows that in Malappuram (Kerala) there are 833 primary and 351 upper primary schools where as in Gaya (Bihar) the number is 2220 and 324 respectively. The reason perhaps is that Malappuram has larger schools with higher enrolment per school while Gaya has comparatively smaller schools with lower per school enrolment. This is also evident from the fact that in Malappuram there are 9826 teachers in primary and 7860 teachers in upper primary schools as against only 3434 and 1655 teachers at these two levels respectively in Gaya. It is important to note that the ratio of primary and upper primary schools in Malappuram is 2.37:1 whereas in Gaya this ratio is as high 6.85:1which shows far better accessibility to upper primary schooling in Malappuram as compared to Gaya district.

As evident from the number of teachers, the teacher pupil ratio at primary level in Malappuram is 1:23 whereas in Gaya it is as high as 1:78. Similarly at upper primary level Malappuram has teacher pupil ratio as 1:32 while it is 1:55 in Gaya district. It shows that sufficient number of teachers are available in Malappuram whereas in Gaya there is shortage of teachers as the teacher pupil ratio is far high than the prescribed ratio of 1:40. The percentage of trained teachers at primary and upper level (combined) is 86.8 percent in Gaya while in Malappuram 92.46 percent are trained teachers at primary and 73.26 percent at upper primary level. Further, about one third primary schools in Gaya (33.69 percent) are single teacher schools while in Malappuram percentage of single teacher primary schools is 2.7 only and that even in remote areas where schools have been recently opened.

The participation of children in schools is almost universal in Malappuram as 2001-02 data reveals that Net Enrolment Ratio at primary level is 99 and it is more than 90 percent at upper primary. However in Gaya the Gross Enrolment Ratio at primary level is 76.11 percent. It shows that sizeable percentage of relevant age group children in Gaya are still out of schools. Similarly the transition rate from primary to upper primary level is about 99 percent in Malappuram while it is only 67 percent in Gaya district.

The dropout rates at primary and upper primary level are almost negligible (it is less than 1 percent) in Malappuram whereas at primary level Gaya district reports 49 percent dropout, which shows a great wastage in primary education and low efficiency of primary schools in Gaya.

Management Structure at the District Level

In Malappuram district in Kerala the Deputy Director of Education (DDE) is incharge of elementary education who is assisted by AEOs who are block level education officers dealing with elementary education. In addition to this there is a DIET also which caters to the need of quality improvement of elementary education. The management structure created under DPEP in Malappuram consists of a district project office (DPO), which is responsible for implementation of DPEP at the district level. Incidentally both DPO (DPEP) and DDE offices are located in the same campus. Further the District Project Coordinator DPEP is a person from State Education Department only and his rank is equivalent to DDE and the posts are interchangeable also. The present DPC was DDE Malappuram about two year ago. Because of such an arrangement the coordination between DPC and DDE Office is expected to be better. However, during discussion with the district level functionaries it is was found that the coordination is not as good as it appears to be. The District Project Office DPEP has the responsibility of implementation of DPEP and his office works independently without involving much the DDE office, which is only next-door. However for administrative matters DPC consults the DDE office whereas for academic matters DPC office work independently and DDE office does not have much idea as to what activities District Project Office is doing in connection with DPEP.

The linkage between DIET and DPC office is ensured by making DIET Principal as ex-officio Additional DPC of DPEP and so the coordination between DIET and DPC office is fine. For sometime in Malappuram DIET principal also had charge of DPC.

In order to see the horizontal linkages between the three district level offices namely DDE, DPC and DIET certain questions were asked. The findings in this regard are as follows:

- DDE office has a role in convening meetings of BRC coordinators, and AEOs and also in deputing teachers to work as trainers in BRC and attend various training programmes conducted at BRC. This is how DDE Office has some role in DPEP activities but as is clear this role is limited to administrative matters only. The DDE is also invited to participate in planning and monitoring meetings of DPEP. Further DDE office has some linkage with DIET also which is in the form of mutual consultations in academic matters like teacher training, planning and school activities.
- The DIET is involved in DPEP activities very closely. The DIET faculty members have been appointed as Academic Coordination of BRCs. Further DIET conducts training for District Resource Groups (DRG), Block Resource Groups (BRG) and is involved in all academic programmes conducted under DPEP at the district level. DIET principal is invited in meetings at DPO as well as at DDE office.
- As told by Officials, the DPC office of DPEP gets support and cooperation from DDE office as well as from DIET as and when DPC office seeks help and guidance from these offices. This help and cooperation is taken by inviting the Officials in various meetings and by having informal discussion with them.

In Gaya district in Bihar, the District Superintendent of Education (DSE) is in charge of elementary education. He is assisted by Block Education Extension Officers (BEEO) who are block level officers dealing with elementary education. In Gaya there is a DIET also which one of the very few functional DIETs of Bihar. The structure created under DPEP at the district level consists of District Project Office, which is headed by District Project Coordinator (DPC). Incidentally in Gaya the DIET principal is also DPC from the very beginning of DPEP implementation and DIET as well as DPC office are located in the same campus. It is therefore quite clear that there is a perfect coordination between DIET and DPC office as incharge of both these organization is the same person. It may be noted that in Bihar the DPCs have been recruited through rigorous selection process and many DPCs selected were from out side Education Department. It was therefore more pertinent to see the linkage between DPC office created under DPEP and DSE office, which is part of mainstream educational administration in the state.

By visiting all the three district level offices in Gaya it was found that despite perfect coordination between DIET and DPC office the linkage between DPC office and DSE office is not upto-desired level. The DSE office is generally unaware about the DPEP activities in the district and does not seem to be even interested to know about DPEP activities. This may be due to the fact that DSE is too over burdened with his routine work that there is hardly any time to bother about DPEP activities. Despite several attempts and personal visits to the DSE office the investigator could not get an audience with DSE Gaya. However information regarding DSE office were taken from his subordinate staff.

Some important findings with regard to the horizontal linkage between DSE office, DPC office of DPEP and DIET are as presented below:

- The role of DSE office vis-à-vis DPEP activities has been limited to the extent of providing data relating to schools and teacher and giving administrative support. However, DSE office is not much aware about the DPEP activities.
- Even the linkage between DSE office and DIET is also almost non existent and is limited up to DSE's sometimes casual visit to DIET when teacher training is conducted. The officials of DSE office have not much idea as to what type of training are conducted in DIET and other details of the trainings imparted for their teachers etc.
- On probing it was revealed that the DSE office cooperation with DPEP activities is in the form at not creating any hurdle in the functioning of D.P.C. office of DPEP in the districts. The interpretation that may be made is that DSE office does not bother much about D.P.O. and DIET activities.
- The DPC office seeks help and cooperation from DSE office by inviting them in the meetings regularly. However it is a matter of fact that DSE officials do not attend the DPO meetings regularly and even when they come and sit in the meeting they hardly participate in its discussion.
- In connection with DPEP the DIET has undertaken the responsibility of capacity building of BRC Resource Persons, training of CRC Coordinators, attending monthly reflection meetings, conducting

learners evaluation and conducting action research etc.

- During discussion it was found that there is almost no linkage between DIET and DSE office. However DIET Principal is sometimes invited in the meetings conducted by DSE office and DIET also invites DSE to participate in the meetings but the response from DSE office is not much encouraging.
- It was found that DIET faces problem in getting support and cooperation from DSE office in connection with appointment of staff, resource support etc.

Management Structure at Block Level

At block level in the existing educational administration Block Education Officer is incharge of Elementary Education. However the nomenclature of this officer varies from state to state. In Malappuram (Kerala) it is known as Assistant Education Officer (AEO) where as in Gaya (Bihar) it is known on Block Education Extension Officer (BEEO). The jurisdiction of AEO in Malappuram (Kerala) in terms of number of primary schools ranges between 60 and 100 whereas in Gaya (Bihar) it ranges between 125 to 200 primary schools. For the 3 selected blocks in Malappuram Kerala namely Areacode, Manjeri and Tanur average number of primary and upper primary schools is 75 and 24 respectively while in 3 selected blocks of Gaya districts in Bihar namely imamganj, Tikari and Wazirganj average number of primary and upper primary schools is 165 and 20 respectively.

The structure of Block Education Office also varies from state to state. In Malappuram Kerala the AEO office has a staff of 11 persons, which includes AEO, Senior Superintendent, Typist, 6 clerks, peon, and a full time menial staff. But the BEEO office in Gaya Bihar has virtually no staff as it has only BEEO himself and a peon. In order to perform routine work BEEO generally takes one of two primary teachers in his office which is only an informal arrangement.

Under DPEP at the block level an academic support institution has been created which is named as Block Resource Centre (BRC). Each block is expected to have one BRC. This is the situation found in Malappuram (Kerala). However, in Gaya (Bihar) due to some reason it was decided to establish one BRC for every two blocks. So in Gaya where there are 24 blocks the number of BRCs is only 12. The BRCs have been established to provide on site support to teachers in terms of school visits, demonstration and feed back, teacher training, material preparation etc. The BRCs set up under DPEP has the following roles.

1. Academic

- Building BRC into a resource centre where books, discussion papers etc. are available
- Training
- Developing teaching learning material
- Visits to schools and monthly meetings

2.Planning, Organizing Coordination and Administration

- Collaborating and Coordinating with BEO and DIET
- Preparing AWPB, training calendar
- Disbursing payments
- Providing support to activities undertaken at CRC level
- Setting up of CRCs and AS centers
- Coordinating with ECCE Centres
- Planning environment building activities
- Coordinating with DPO

3. Monitoring and Follow up

- Monitoring of CRC activities
- Collecting reports of various meetings and submitting it to DPO
- Feedback from teachers through school visits
- Attending review meetings
- Supervision of Civil works

The Block Resource Centres are headed by BRC Coordinators who are generally school teacher. BRC may also have resource persons, trainers, teacher educators, subject experts and academic coordinators.

The staffing in BRC office also is different in different states. In Malappuram Kerala BRC has a staff of 8 persons, which includes, BRC Coordinator, Academic Coordinator, 3 Resource persons, 2 trainers and a peon. However in Gaya, Bihar the BRC personnel include BRC coordinator and 3 or 4 resource persons only. Further even BRC coordinator is not full timer as the BEEO is nominated as ex-officio BRC coordinator. This is the reason that in Gaya BRC is run virtually by resource persons. This staff of 4 or 5 persons in BRC in Gaya is despite the fact that one BRC has to cater to 2 blocks

because the number BRCs setup is only half the number of blocks.

In order to have an idea about the linkage and coordination between BRC and BEO office questionnaires were administered on both BRC coordinator and Block Education Officers. In this regard 3 BRC Coordinators each in Malappuram and Gaya and 3 AEOs in Malappuram and 3 BEEOs in Gaya were contacted. Findings of these interaction are as follows:

- Since in Gaya BEEO is ex-officio BRC coordinator also the linkage and coordination between BRC and BEEO office is proper. However since jurisdiction of a BRC is on 2 blocks in which there are 2 BEEO but only one of them is nominated as BRC coordinator. It was found that the BEEO who is not a BRC coordinator takes absolutely no interest in DPEP activities and many a time he is quite critical of BRC activities. It was found that these BEEOs are sometimes biased also against BRC and DPEP activities as they could not be made BRC coordinator.
- In Malappuram most of the BRC Coordinators have left and Academic Coordinators who are faculty members of DIET were found to be incharge of BRC at the time of visit by investigator.
- The linkage between BRC and AEO/BEEO office is generally seen in terms of AEO/BEEO deputing teachers for training conducted at BRC, providing data to BRC about schools and teachers etc., AEO attending CRC Coordinators meeting. Planning and Review Meeting, Discussion with AEO/BEEO on BRC programmes etc.
- The BRC Coordinator in Gaya attends teachers monthly meeting with BEEO, takes part with BEEO in the formation of Vidyalaya Shiksha Samiti (VSS) and in connection with teachers training related works. However in Malappuram BRC coordinators visit AEO office in connection with discussion on awareness building programmes, for PTA orientation, for IEDC medical camp etc.
- The BEEO/AEO sometimes visit BRC to see the training conducted there, to attend CRC reflection meeting, to get and take various information, to attend headmasters meetings, to see IEDC medical camp etc.

Cluster Level Structure

In the existing educational administrative structure there is no cluster level officer who looks after elementary education. In almost all states below Block Education Officer there are primary and upper primary school headmasters only. However under DPEP an academic support institution is created at cluster level known as Cluster Resource Centre (CRC). The CRCs are created for a group of 8 to 10 villages where there may be 12 to 15 primary schools.

In many states CRCs have been involved in conducting training programmes for teachers whereas in some states they have supervisory powers also. In the monthly meetings conducted by CRC all the teachers come together to share their academic and administrative problems. The CRC Coordinator facilitates the discussion and sometimes also gives demonstration lessons.

The functions of CRCs set up under DPEP are as follows:

- Training at cluster level
- Organizing and conducting monthly meetings for teachers
- Follow up and support visits to schools
- Making CRC a resource centre
- Collecting data and information sought by BRC
- Holding meeting with VEC members
- Undertaking environment building activities
- Collecting information about civil works
- Feedback to BRCs
- Attending monthly meetings at BRCs

In both Malappuram as well as Gaya the CRC coordinators are school teachers. In Malappuram it was found that the CRC coordinators generally work at BRC as BRC trainers and at CRC level not many activities are undertaken. There is generally no room or building for CRC also. Out of 20 CRCs, which were covered in the study in 3 blocks of Malappuram only 7CRCs had a room of its own. In Gaya district in Bihar the CRC coordinators are not full time persons as they teach in their respective schools as well as work as CRC Coordinators. Many a time the distance between the CRC and the school of CRC Coordinator is 5 to 6 Kms and in such cases the CRC coordinator finds it very difficult to perform both duties efficiently. In Gaya out of 36 clusters which were covered in the study 29 CRCs have their own building.

In Malappuram district in the 20 CRCs covered in the study from 3 blocks average number of primary schools in a CRC are 6.3 while average number of upper primary schools is 1.5. As against this in Gaya district where 36

CRCs from 3 blocks were covered in the study it was found that average number of primary schools per CRC is 15 while there are 2 upper primary schools per CRC.

Vertical Linkages

As noted above there are three institutions at the district level out of which two namely DDE/DSE office and DIET were in existence in the states even before DPEP while one structure named District Project Office has been created under DPEP. Similarly at block level there are two structures one already in existence was AEO/BEEO office and the other created under DPEP is the Block Resource Centre (BRC). However at the cluster level there is only one structure and that even created under DPEP is known as Cluster Resource Centre (CRC).

The paper focuses on studying the vertical linkages between various structures which were already existing before DPEP and the one created under DPEP. In this regard the linkages between DPC office and AEO/BEEO office, between DDE/DSE office and BRC, between DIET and BRC and between AEO/BEEO office and CRC have been analyzed as follows.

Linkage Between DPC Office DPEP and AEO/BEEO Office

The study focusses on linkage between the District level structure created under DPEP and block level structure already existing before DPEP. In Gaya district in Bihar since BEEO is also ex-officio BRC coordinator the linkage between this BEEO office and District Project Office is better as this BEEO in the capacity of BRC coordinator is totally involved in DPEP activities. However, the BEEO who is not a BRC Coordinator the linkage between his office and DPC office is almost non-existent. But DPO seeks help and support of BEEO/AEO for deputation of teachers for training. In Malappuram the DPC seeks support from AEO for conducting training programmes, to get in touch with local bodies and teachers organizations and also to provide on site support to teachers. For seeking this support sometimes DPO staff also visits AEO office. They also sometimes visit AEO/BEEO office to collect data about teachers and schools.

The BEEO/AEO generally visit the DPC Office when they are called for some purpose e.g. to participate in various meetings conducted by DPC. Sometimes some enthusiastic BEEO/AEO also visits DPC office to know about DPEP activities. More than that on day-to-day basis there is no concern of AEO/BEEO office with the District Project Office DPEP.

Linkage between DSE/DDE Office and BRC

At the district level DSE in Gaya and DDE in Malappuram is incharge of elementary education and this arrangement is in place since independence. But Block Resource Centre, which is an academic support institution at the block level, is a creation of DPEP. In this regard in Gaya district all the BRC coordinators are under the control of DSE in the capacity of being BEEO also. It is therefore clear that they are accountable to both DSE as well as DPC because of being BEEO and BRC coordinator respectively. However, there seems to be no direct linkage of BRC coordinator with DSE with respect to DPEP activities. In Malappuram the DDE sometimes visit BRCs to monitor the training programmes and ensure that teachers are regularly attending. They also depute their teachers as BRC trainers. Thus the DDE in many cases help BRC for its better functioning. But for day to day activities there is no direct linkage of BRC with DDE Office.

The Block Resource Centre seeks support of DSE office for deputation of teachers and resource persons in the BRC trainings. In Malappuram it was told that all DPEP programmes are planned after discussion with DDE office including the activities of Block Resource Centres. However it is very rare for DDE/DSE to visit the BRCs.

Linkage between DIET and BRC

The DIETs have come into existence as district level resource institutions after implementation of the teacher education scheme envisaged under National Policy on Education 1986. The Block Resource Centres though set up under DPEP are also supposed to be the resource institution at block level. So it is expected that DIET and BRC will be supporting each other as the capacity building of BRC coordinators and resource persons is the responsibility of DIET. In Malappuram, Kerala the BRCs have two coordinators out of which one is designated as Academic Coordinator and a faculty member of DIET is academic coordinator of each BRC and thus 15 faculty members of DIET are designated as academic coordinators of 15 BRCs. Thus on day to day basis there is a direct linkage between DIET and BRC. However it was found that because of this arrangement the activities of DIET suffer as out of 20 faculty members in DIET as many as 15 are deputed as academic coordinators who come to DIET not more than once or twice a month and only 5 faculty members are full time available for undertaking the activities of DIET.

In Gaya district also it was found that there is a good coordination between DIET and BRCs. All BRCs regularly report to DIET about their activities and take guidance from DIET. DIET also conducts monthly reflection meeting of BRC coordinators and resource persons of BRC. Further DIET faculty also takes part in the monthly reflection meeting of CRC coordinators at BRC.

In both districts namely Malappuram and Gaya the DIET gives guidance and reviews and monitors all the academic activities of BRC and help BRC to conduct training programmes and workshops. The DIET faculty frequently visit BRCs and BRC coordinators and Resource persons also visit DIET to discuss academic matters.

Linkage between AEO/BEEO Office and CRC

The CRC coordinators are generally the primary school teachers whose accountability is towards the block level education officers. In Malappuram Kerala the CRC does not seem to be a full-fledged resource centre and the CRC Coordinators generally act as BRC trainers and that is why many CRCs do not have even a room also. However in Gaya Bihar the CRC Coordinator has a dual role to play i.e. he is teacher in a school and continues teaching also and he also acts as a CRC Coordinator. So CRC coordinator is only a part time job for him. It was found that CRC coordinators have hardly any work in AEO/BEEO office in connection with CRC activities. Even if CRC coordinator visits AEO/BEEO office he does it in the capacity of being a primary school teacher rather than as a CRC coordinator. Even if he sometimes visit Block Education Office it is with a purpose of inviting BEEO/AEO to see CRC activities, share their experience of school visits and to ensure participation of teachers in CRC meetings

It was told by the AEO/BEEOs that sometimes they visit CRC though it may be once or two times in a quarter only. They visit to see and monitor CRC activities, to meet the teachers in monthly meeting to ensure that teachers attend CRC meetings regularly etc. In Gaya the CRC coordinators have also been given responsibility of supervising mid-day meal distribution, distribution of text books, scholarships etc. In order to undertake these works also CRC coordinators have to visit BEEO office for guidance and support.

Conclusion

On the basis of the above mentioned observations it may concluded that at the district level there is a close linkage and coordination between DIET and District Project Office DPEP and DIET supports and supplements the activities of DPO related to DPEP. However such coordination is missing between DDE/DSE office and the District Project Office DPEP. The DDE/DSE office remains busy in their routine administrative work and they seem to have neither time nor even interest to monitor the DPEP activities carried out by D.P.O. Similarly except the routine administrative work of deputing the teachers and headmasters for the training programmes conducted by DIET the DDE/DSE office has not much linkage with DIET.

It is further inferred that horizontal linkage between BRC and BEEO/AEO office is evident in Gaya where BEEO is ex-officio BRC Coordinator. However such coordination and linkage is missing where BEEO is not BRC coordinator or in case of Malappuram where AEO and BRC are working independently irrespective each others activities. The only linkage is in terms of AEO deputing teachers to attend training at BRC.

It may also be concluded that vertical linkages between the management structures created under DPEP are strong e.g. linkage of DPC office with BRC, linkage of BRC with CRC. Similarly vertical linkages are strong among the structures created by state government such as between DDE/DSE office and AEO/BEEO office.

There is only one exception found evident where vertical linkage between the structures created by DPEP and structure already existing before DPEP is strong and this is between DIET and BRC as well as CRC. The reason is that the activities of BRC are always to he monitored by DIET which has the responsibility of developing and the capacity building of BRC as well as CRC.

The mainstream educational administration in general is found to be detached from the activities of DPEP, which are implemented by a parallel structure at district and block levels. This puts a question mark on sustainability of the activities undertaken under DPEP towards quality improvement after the DPEP comes to an end and the District Project Office is closed. However the sustainability of BRCs and CRCs has to be ensured by the state governments as these academic resource institutions have to continue with their activities whether DPEP goes on or it comes to an end.

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16. Content Analysis of Training Modules for Village Education Committees: A Study of Seven DPEP States (Part II)

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Introduction

The District Primary Education Programme gives importance to the formation and functioning of Village Education Committees; it is an essential component of the DPEP programme. Most of the states have constituted Village Education Committees and they are expected to be functioning well in these areas. The programme has also undertaken to orient members of the Village Education Committee to equip them for facilitation, supervision, school improvement, and mobilization of the community. Training material for training of Village Education Committee members include VEC diary, films, VEC manual etc.

The present study was an exercise in examining the roles and functions perceived by the states in relation to the training modules developed. An to analysis of the patterns and trends that have emerged in seven DPEP-I States for different components are being given under

1. Purpose and Objectives

A closer scrutiny of the major purpose and objectives of these modules reveal that in almost all the states an attempt was made to familiarise the VEC members with the District Primary Education Programme. More importantly the effort was to involve people in the processes that affect their lives. In this context a beginning has been made to place before the participants the educational scenario of the concerned district/state so that the participants are fully sensitized about the status of education in the district. An attempt to create awareness about the existing schemes also has been made so that they are in a position to understand the benefits accruing from such schemes. In the ultimate analysis capabilities have to be built up so that they become more and more self-reliant.

2. Training Module / Material

As regards the preparation of training modules / material it has been found that there are three or four types of material. Across the states preparation of training material has taken shape in the form of modules, guidelines, manual, and handbook. In Assam two types of modules have been prepared, one each for the Village Education Committee and master trainers for VEC. This training module has been further revised to include local ownership. In the state of Haryana the training module has been entitled "Abhiyaan". This is a detailed design of training programme for five days. In Madhya Pradesh two types of documents have been prepared. The first one is in the form of a guideline which gives information on various aspects of peoples' participation, training, Village Education Committees and so on. In addition to this, one specific document on Village Education Committee which goes into the details of the formation, representation and functions of Village Education Committees. A handbook for Village Education Committees has been prepared by the State of Maharashtra and is a very comprehensive document looking at various aspects of Village Education Committees and evolving a state specific programme for primary education. In Karnataka a training package has been brought out. The first one is a training manual and second is a set of reading material which has been prepared to ensure continuous learning. Some of the dimensions which have been covered in the training manual get further enriched as the participants begin to read the supplementary material that is given to them subsequent to training. This reading material has been made interesting and relevant so that the interest of the participants is sustained. In Kerala however, the modules have been prepared in a district specific manner. Modules have been specifically designed keeping in view the district scenario, problems and issues specific to the district, and district specific strategies for teaching and learning. In addition to this, in the state a community construction manual has also been provided to the participants so that they can be educated on construction aspects. Moreover, Kerala has moved one step further by looking at design renewal which is based on research into construction. In Tamilnadu also training modules for Village Education Committees have been prepared in a district specific manner.

3. Strategies for Module Development

It is very interesting to note the different patterns adopted by each of the states while preparing modules/training

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material for Village Education Committees. Three or four trends are clearly visible. The variations in the kind of support that has been mobilized for the preparation of modules include identification of resource persons/groups from within the state, District Resource Groups, and agencies/institutions outside of the state. In Assam training modules for Village Education Committees have been developed in cooperation with the Voluntary Health Association of India and NIEBM. In Haryana the State Council of Educational Research and Training has been intensively involved in the preparation of the training module. In Madhya Pradesh however, an effort has been made to learn from the experiences/lessons of Lok Jumbish Parishad, Jaipur and Eklavya Sanstha. The resources of the State Resource Centre of Bhopal have also been tapped in order to bring out the two documents. In Maharashtra the handbook for Village Education Committee has been evolved through the efforts of Director MSCERT and Project Officer UNICEF. Karnataka marks a departure by having identified resource groups from within the state to include the State Project director, faculty from the Department of State Council of Educational Research and Training, and faculty from State Resource Centre, Mysore. The scene in Kerala is even more contextual, as it has identified a District Resource Group comprising of selected academic coordinators from Block Resource Centres, DIET faculty members, and District Project Coordinators. The involvement of such people in the exercise of module preparation would not only make it more context specific but also brings to bear the experience and background of individuals involved in such exercises. An important point to note is the involvement of programme officers in charge of training who have also been included in the District Resource group. This will have an important bearing on the content of the modules as they are based on the experiences of training already imparted, and hence an assessment of training needs also becomes a point of consideration while preparing the modules. In Tamilnadu also the District Resource Groups have been active in the preparation of district specific training modules for Village Education Committees.

4. Components of Modules

The details of the major components included in the modules guidelines / manual / reveal that some of the major areas are sensitization, awareness building, knowledge and skill building. In Assam attempts have been made through the training module to develop awareness about one's village and the District Primary Education Programme. The health component also comes in substantially and, therefore, one can see that women could be empowered through the knowledge of the preventive and the promotive aspects of health care. In Haryana the handbook imparts considerable awareness about the state and the district, and provides knowledge regarding some of the discriminatory practices. It also proposes to empower the participants through training and bring about confidence in them. In Madhya Pradesh the guidelines provides knowledge in several areas. But attempts are also made to provide skills to the participants. The handbook in Maharashtra seeks to sensitize the participants to the major issues, promotes awareness and imparts knowledge on different aspects of school management. In Karnataka the training module is an attempt to promote understanding of the DPEP programme, sensitization to issues and to bring about attitudinal transformation specially with reference to girls education. Feed back from the participants during training help the resource persons to identify the gaps and redesign the training programmes to make them more relevant. The inclusion of supplementary material helps to carry over the training experiences and sustain interest and urge to learn. In Kerala there is an attempt to provide knowledge through the modules but more importantly eliciting the perception of participants through worksheets. The skills of analysis are particularly sharpened through this exercise. The emphasis is on skills more than anything else. The technique of skill building provided in the modules helps the participants to get involved very closely in the actual functioning of the school. They become better prepared for school monitoring through this exercise. In Tamilnadu the emphasis in the modules are on awareness building, knowledge and group activities.

5. Content Areas

The content areas of modules / training material developed for the training of VEC members have been determined more or less by the objectives for which the modules were prepared. One of the major objectives of module development in all the states concerned has been capacity building in order to carry out the roles and responsibilities as member of the Village Education Committees. The broad range of areas have been covered across the states. Some of the common features in terms of content are information about DPEP, knowledge about the roles and responsibilities of VEC, issues related to the state context and role of community in achieving the goal of UPE.

On a closer analysis of the content areas with respect to each of the states, it is observed that in Assam the range

of topics/themes discussed follow more or less sections. With an initial discussion on the village in terms of its demography, socio-cultural profile etc, there appears to be a need to identify the skills and talents of participants attending the programme. Thereafter, the discussions centre round the DPEP programme, Village Education Committee, and what makes a good Village Education Committee. The importance of girls education has also been sufficiently stressed. Finally, the mechanisms for capacity building of Village Education Committee also appear to be in place. In the state there is also an emphasis on participatory training methodologies of the resource group i.e. SRG and BRG to undertake training of Village Education Committee members.

In Haryana there is a conscious attempt to train the VEC members through a five-day programme ranging from the initial ice-breaking sessions to the District Primary Education Programme and the role of VEC in the new panchayati raj. As a very name suggests, Abhiyaan and Campaign for education has been planned to enroll the out of school children. The education of girls/women also gets adequate attention. The guidelines for training evolved by the state of Madhya Pradesh initially looks at the importance of participation in education followed by an exploration of processes to involve the community in education. Training is envisaged at two levels, one for the members of the Village Education Committee, and the other for the motivators. What is particularly noteworthy about this document is its ability to familiarize the participants to the Village Education Survey, the Village Education Register, and the village education scheme. In fact, the proformae for each of these tools has been given adequate coverage. In addition to this in the last section of the guidelines the guidelines for filling up the survey form and the form for the disability have been added.

The training module for VEC in Maharashtra is designed for a three-day training of the same. The content areas of the module start with the original government order specifying the formation, functions and role of VEC. Subsequently the role of the VEC in the District Primary Education Programme is also spelt out. The details of organising VEC meetings and preparation of VEC development plan also receives a fair amount of coverage. The focus of this module is to finally prepare a plan and action to be implemented by the state. All the activities and issues addressed in the module relate specifically to the state of Maharashtra so that primary education in the state receives the required priority.

The development of a training manual conceived by the resource group in Karnataka has been guided by two major considerations. (a) District Primary Education Programme (b) Role of Village Education Committee. The focus of the DPEP Programme has been planned in the backdrop of social issues that prevail in the state. The participants are sensitized, therefore, to the need and importance of planning for education by the community. A very important section of the training manual relates to the actual conduct of VEC meetings.

The content of training modules in Kerala in specific manner are focussed on the school. Since the state has no problem in terms of access or retention, the focus of the modules is to build capabilities in the community to monitor the teaching learning process and the performance of students. This is probably the only state where the involvement and participation of the community is indicated in the actual teaching learning process.

The modules of Tamil Nadu also highlight the roles of the teachers in community mobilization and role of the community in achieving the goal of Universal Primary Education.

Training Design

The training designs in each of the States under the purview of the study envisaged the attainment of certain basic knowledge and awareness about DPEP and also aims at equipping the participants with some basic skills in survey and enumeration. This is but natural for states undertaking training programmes for the first time. These are orientation programmes meant essentially for creating the environment conducive to more and more learning and bringing home the message that education is important in the day-today life of each individual.

Assam has developed a training framework for the orientation of village Education Committees. Infact, it is called the Training Framework "Programme for the orientation of VECs". The broad areas of content to be transacted in this training programme range from knowledge about one's village to house to house survey, DPEP programme, and Village Education Committees. The mechanisms for capacity building of Village Educatgion Committees are in place, both the State Resource Groups and the Block Resource Groups are responsible for undertaking training of VEC members. Caution has also been taken to prepare both the SRG and BRG to train them on participatory training methodologies. An assessment of training carried out for these two groups has been evaluated as good training programmes.

VEC training in Assam has been need based. There is a group of State level master Trainers who have been trained in participatory training methodologies. These master Trainers along with other resource persons go to the villages and interact with the villagers to find out the local issues and priorities on which training should be focused. For example, in the flood affected areas, training imparted by DPEP is focused on disaster management. Relevant personnel from other government departments were invited to interact with VEC members and give them information about various government schemes. Response of VEC members to such training has been quite encouraging. Role of State Project Office has been limited to developing a broad framework of VEC training module which is used by each district to develop their respective detailed training module.

In every village VEC is maintaining two types of registers; one, on school going children and, the other, on non-school going children. Currently VECs are managing NFE and Alternative Schools.

Mahila Samitis have been formed and oriented with the help of Mahila Samakhya. School health programmes are conducted to orient the children on basic health and hygiene. In Dhubri district, the response of women to such school health programmes has been very encouraging.

In **Haryana** VEC training is organised as a five day training programme. This is organised every year at cluster level. The broad areas of content are covered through the five-day training programme. Starting with an introduction of DPEP and formation of VECs, the greater emphasis has been laid on sensitizing the participants gradually by making them aware of the issues in gender, the socially deprived children and sharing of responsibilities. The focus of this training has been on building up themes so that in their day-today functioning the members are also able to discuss and implement their programmes through mutual discussions and implementation. The five-day training envisaged for VEC members is a conscious and committed effort to bring about change in both the attitudes and practices of members of the Village Education Committees. The modules for VEC training were originally developed by SCERT but thereafter the State Project Implementation Unit has also been involved in the exercise of module preparation with the help of national/state level, NGOs, and VEC/PRI members. It is particularly noteworthy that a follow up training has already been envisaged for the resource groups and mobilizing groups to meet quarterly at cluster level.

In **Madhya Pradesh** the guidelines for training evaluated through the experiences of other related projects is transacted to participants in trainings organised for the VECs. The broad content areas covered in these training programmes include the importance of peoples' participation in education, and environment building for both motivators and activists.

Prior to training the villagers are mentally prepared to meet in a group and hold discussions with VEC members. The training is organised with the help of two to three facilitators. It is envisaged that in the first phase of training, time should be devoted to skill development and becoming more conversant with the programme, and the remaining part of training should be devoted to knowing each other and developing relations, and strengthening of self-confidence. Training is imparted in local language. It is mandatory that both trainees and facilitators remain together for the entire duration of the training programme, and participate equally in all the activities.

Training is envisaged every month for one or two days as more of a meeting of teaching-learning process. Thereafter, every six months, reorientation/training is to be organised in imparting information regarding village development programmes.

In **Maharashtra** the training module for VEC is designed for a three-day training of VEC. The module is in Marathi. The broad areas of content in this module include the role of VEC in DPEP, and promotion of education in the village. The cooperation of VEC is also sought in implementing government programmes for universal primary education. Ultimately, the role of the VEC in improving the effectiveness of the school is emphasised.

So far one round of training has been imparted to VECs in DPEP-I districts. The cluster resource Centre coordinators have conducted these trainings. No training for Village Education Committees or any other grass root organisations has been conducted in DPEP-II districts so far. It is felt that training modules needs to be developed further for training activities of VECs and panchayats.

VECs are empowered through training and orientation. They are informed about the rights, duties and responsibilities of VEC members. They are also given the skills to participate in micro-planning, identify educational needs of the village as well as to monitor and evaluate village level schools and other educational institutions. VECs are also oriented on gender dimensions. Mother-Teacher Associations are given orientation on teaching-learning process, evaluation of students,

information on various government schemes and facilities, gender equity, concept of integrated education for disabled children health and nutrition.

In **Karnataka** the training design for VEC is envisaged as a five day programme. In the training design for preparing the members of Village Education Committees, on the first day an effort is made to make the participants more comfortable and create an atmosphere for the coming four days. As the programme enters the second day, efforts are made to present the scenario of education and its related problems. On the third day the themes of caste, sex and disability are discussed in details to bring about greater awareness regarding the present state of discriminatory practices. It is only on day four that the importance of setting up a Village Education Committee is brought to the notice of the participants. This session helps them to understand the rules of formation, and fund allocations. At the end of day four, the vision for a new school is brought before the participants and group activities are planned for the rest of the training time.

The training is organised as a residential one with an effort to see that issues are discussed in an atmosphere of openness thereby allowing the participants to express their views freely. The participants are encouraged to identify their own problems and discuss them.

CRC Co-ordinators and Assistant Co-ordinators are the trainers for VLCs. BRC personnel are the trainers of CRC Co-ordinators and Assistant Co-ordinators for VLC training. BRC personnel in turn are trained by the State Project Office at least once a year. Training modules are prepared by respective district offices. The major purpose of these modules are to :

1. Understand the aims and objectives of DPEP;
2. Improve infrastructure facilities;
3. Provide drinking water facility, toilet, etc. to the school;
4. Realise that it is the duty of the community to admit all the children in schools;
5. Minimize drop-out rate;
6. To ensure that children get quality education;
7. Watch whether free text books and free noon meals are distributed on time;
8. Participate in all school functions;
9. Ascertain whether all girl children are enrolled;
10. Have more interest in education of SC/ST children;
11. Integrate disabled children in formal schools;
12. Understand the importance of early childhood education;
13. Monitor evening coaching classes for SC/ST girls students;
14. Admit non-enrolled children, drop-outs and child-labourers in Alternative Schools;
15. Supervise construction work of DPEP buildings.

With respect to the first component that is contextuality it can be seen that three states Assam, Haryana and Karnataka have made a conscious attempt to introduce the contextual aspects of the village and its surroundings in the modules. The participants are also sensitized to the problems specific to the village so that they are able to visualize the inputs in education in this background. In Haryana the concept of DPEP has been introduced and a discussion generated on reasons for introducing DPEP in Haryana.

As regards component two states have introduced in some form or another the component of awareness in the modules. The areas where awareness have been generated are the nature of DPEP, formation of VEC, roles and responsibilities of VEC and the importance of community participation in education. In Maharashtra the role of VEC in the District Primary Education Programme has been projected against the government order for the VEC.

Kerala, however, marks a departure in trying to sensitize and clearing any misgivings about the same. The effort in the state has been to plunge directly into the teaching-learning process and also allow the participants to express their doubts if any on the new curriculum. In Tamil Nadu apart from introducing the aims and objectives of DPEP, the stress is on community accountability and responsibility for children's enrolment in primary education.

A close scrutiny of the knowledge base that has been provided in the modules across all the seven states reveal that there is a focus on understanding the Village Education Committee, its linkages with Panchayati Raj, training of motivators/activists and convergence of VEC activities with the panchayat. In certain states the importance of girls education has been highlighted so that this can become an important focus of VEC activities in the concerned state. Another aspect which has received equal attention is the concept of micro-planning and how to do micro planning?

Kerala once again makes a departure by familiarizing the VEC members with the contents of textbooks introduced by way of a new pedagogy. In addition to

this, a concept of school monitoring also finds an important place in generating knowledge about the need for monitoring, and analysing which aspects of school functioning need to be monitored. Perhaps for the first time the utilisation of funds under DPEP also find an important place in the module generated for VEC training.

In Tamil Nadu the focus is on the role of the VEC in minimizing the dropout rates. Quality education has been perceived as important, as also the integration of disabled children in the formal schools.

The importance of developing skills in the VEC members with respect to their functions has also been perceived by the resource groups during module development. In Haryana the mode of skill development has been highlighted through simulation exercises in sensitizing VEC towards their role in issues regarding gender in the educational needs of deprived children. In addition to this, team work has also been highlighted as a way of identifying the educational needs in a collective manner and thereby also sharing responsibilities. In Madhya Pradesh three types of exercises relating to village education survey, village education register and village education plan have found a place in the guidelines prepared for training of VEC members. This is perhaps the only training material which has gone into the details of developing the skills of participants in carrying out village education surveys and maintaining the village education register. In fact, this is one way of institutionalizing the activities of a Village Education Committee. In Maharashtra the perception is different. Since the state is looking at a plan of action for universal primary education, the role of the VEC and its cooperation in improving the effectiveness of school has been highlighted. In Karnataka skills of mobilization are highlighted so that resources can be generated for the school.

In Kerala, the skills of analysis have received a great amount of attention. The type of questions posed to the members allow them to think carefully about the different aspects of the DPEP programme. Some of the features that have been touched are the type of training for teachers, adequacy of the content of textbooks and how to prepare time bound annual work plans. In Tamil Nadu, the skills of monitoring coaching classes, and the skills of providing alternative education to both the enrolled children and dropout have received emphasis. The supervision of construction work of DPEP buildings is also a skill that gets enhanced through the knowledge of construction, materials and designs.

Issues related to sustainability

When the District Primary Education Programme was conceived it was felt that this was yet another strategy to achieve the goal of education for all. A very important dimension of the programme was to provide capacity building and professionalise local level planning in a participatory mode. In order to sustain these processes the programmes emphasised the need to strengthen the capacity of functionaries at the grass root level.

However, it has been seen that though the programme has been successful across several states the issues of sustainability still loom large. One of the foremost strategies that the programme adopted was to activate Village Education Committees teachers, parents/ guardians, and representatives of weaker sections to form a committee called the Village Education Committees. Village Education Committees have come up in almost in all the states and are active in their own way. Of the seven states that have come under the purview of the study, two or three states have moved quickly in mobilizing people for primary education. However, in the remaining four States these strategies will have to be continued for time to come. Mobilisation is not a one time strategy. This is specially true of those areas where segments of population have remained illiterate for many years. It would be difficult to assume that transformation of people would come about so soon, therefore, in order to sustain the programme it is important that in a few areas, strategies for mobilization may be continued for some more time.

On an analysis of the kind of structures that are available across the seven states, it was found that apart from Village Education Committees, there were Parent Teacher Associations, Mother PTA, School Level Committees, and other small committees which were in operation for a common purpose. For any programme to sustain, the structures that have been set up as a part of the programme will also have to be institutionalized. The present structure of Village Education Committees has within its scope representation from the school, from the parents and from the weaker sections of society. This structure if it has to operate on a permanent basis must continue to draw within its fold persons belonging to the society who will finally be both accountable and own the school for the village.

With the onset of the programme it was felt that participatory processes will have to be generated, and district level planning should be started from the grass roots. All district level plans have, therefore, been prepared through the participation of people. These

processes need to be sustained over time and this calls for a level of communication which must exist not only within the structures that are set up, but also between the school and the community and outside agencies and institutions which form part of the village. While horizontal linkages are encouraging and possible, the need for vertical linkages and communication are also equally important. If change is expected in a system, that system must begin to operate through different hierarchies the village, the block, the district and the state. Participatory processes which were set in motion at the grass root level must also make its way upwards as discussions about a school or schools become more broad based and as the visions of people get incorporated from time to time. This level of communication and dialogue will then result in planning for primary education and not merely primary schooling.

On a closer analysis of the training designs and training programmes that have been organised as part of the DPEP efforts, it can be seen that to begin with the programmes were more or less of two days orientation programme meant to organise people, facilitate their thinking and allow them to discuss issues and problems related to the immediate problems in the village. Thus, far one can say that the training programmes have managed to achieve their objective of awareness building but if these processes are to be sustained then orientation programmes must gradually transform into training programmes and allow for more skills to be built up in people. It is true once again that States like Tamilnadu and Kerala and Maharashtra do not so much have the problem of people who were illiterate but the remaining states will have to adopt strategies through training which will not only mean continuous awareness and knowledge building but a gradual upgradation to skill building. Planning for primary education after all means not only an understanding of primary education in terms of its requirements but also to be in a position to project future problems that are likely to arise in the changing circumstances that we are now facing.

Community Ownership of School Based Interventions

The District Primary Education programme started as a Centrally Sponsored Scheme in the year 1994. Barely six years have passed and different States are in different phases of implementation. As regards, the first phase DPEP states they are now almost six years old. Though the programme focused heavily on community participation as a mode and method to achieve UPE, perhaps it is too early to talk about the concept of ownership.

Ownership as a concept comes about when one begins to plan for a school based on a vision for the school. Community participation in school construction forms an important component of the DPEP programme. In fact States like Kerala have brought out a community construction manual which helps the community to understand different aspects of construction from raw materials to actually building a school. This manual will go a long way in helping people to make choices based on certain sound formulae that are explained in the manual. However, construction of schools may have to go ahead with an understanding of the problems related to the soil conditions and other environment hazards. Designs for construction may, therefore, be more enriched based on well researched areas in construction. Ownership through construction will only come about when decisions for school construction are based on a sound and better understanding of ground level conditions and scientific methods of construction.

Ownership of a school can also come about when one begins to conceive of the school plan, infrastructure, teaching-learning processes and the children. The present modules that have been designed appear to touch these concepts only in a peripheral manner and therefore, does not provide a deeper understanding of the different features of the school so that people become more aware and, therefore, become a part of planning.

A close scrutiny of the different modules that came for study reveal that the responsibility of the community is understood only in terms of enrolment, retention and prevention of dropouts. The involvement of the community in school development planning has not come anywhere in the modules. The involvement of the community in school development planning is an exercise that helps the community to not only diagnose the problems of the school and plan accordingly but also in course of time have to develop a vision for a better school. The feeling of ownership comes from within only when school development is visualized as a part of the village responsibility. This process also takes into consideration the ownership of milieu in which the school exists.

Emerging Scenario

Most of the studies tend to confirm that there is not simply one model for the effective implementation of educational planning and management at the district or micro level.

It is necessary to adopt a carefully considered approach, developing organizational and administrative structures that are locally appropriate. An effective starting point is often to adapt and build upon the very personnel mechanism, delivery system and infrastructures that already exist. Local bodies that mobilize community involvement started by local leaders and attracting the political commitment of the state level personnel are very important.

As there is typically a lack of significant technical and management skills at the local level, it is important in the first instance that local committees be given an important place in monitoring the implementation of plans. There is also an urgent need for training programmes in the technical skills of local planning. Such training programmes, should focus in part on management information system and quantitative skills. But they will also address local needs analysis, priority setting, and identification of larger groups, mobilization of community support, problem solving, and community skills. The planning and management skills that are needed combined with the quantitative (facts and figures) and interpersonal skills form the basis of training.

All of this is not to deny a continuing role for State level agencies particularly in educational development. It is difficult to envisage a situation where local communities should be called upon to be wholly self-reliant. State level agencies will have an important role to play for example in providing financial allocations from general taxation revenue to local agencies and organizations. And there will always be a need to view sector specific projects in an integrated way calling upon the necessary coordination amongst voluntary agencies and other organizations engaged in the tasks of social and economic development.

There is realization today that true decentralization in education is not feasible without active participation of local bodies in providing resources to schools and in managing them. It is the actual voluntary involvement of parents, community leaders, teachers and administrators that determine this adaptiveness of education to local conditions and requirements. The ultimate success of educational outcomes determine the nature of this collaboration.

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17. DPEP AND MANAGEMENT PROCESSES IN PRIMARY EDUCATION

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Management processes and practices play an important role in the quality and efficacy of the delivery of any system and the elementary education is no exception. There has been a growing realisation that full benefits of an increased investment in the expansion of services and improvement of quality in education cannot be realized without an effective management and delivery system. Although the District Primary Education Project (DPEP) was not designed to directly reform the delivery system per se, it did intend to impact the management practices in primary education by providing an alternative working model of efficient and effective processes.

The present paper analyses a few core management processes including administration and decision making, planning and fund flow, personnel management, and monitoring and accountability mechanisms in the primary education sector in the three states that have been implementing the DPEP for more than five years. These three states are Bihar, Karnataka and Madhya Pradesh (MP).[1] The three states cover a wide spectrum in terms of educational attainments, policy framework and institutional arrangements. An analysis of the existing processes and practices in primary education from the perspective of responsiveness to needs and reform measures initiated during the late 1990s in these three states provides an insight into the potentials and limitations of a project like DPEP in enabling change and achieving the goal of equitable educational access and participation for all. Although it is difficult to attribute any reform measure, or the lack of it, to the presence or functioning of DPEP per se, there is no denying the fact that it has been an important programme and a crucial influence in the sector at national as well as state levels. The analysis also shows that the DPEP's performance itself depended on the quality and responsiveness of the management processes existing in the larger system in the state to a large extent. In other words, while on the one hand, the DPEP's performance was facilitated or limited by the quality of delivery processes existing in the mainstream system, on the other it has also been instrumental in changing the management processes, albeit in a limited manner and only in few states which in turn resulted into better performance of DPEP.

Table 1 presents a few basic indicators for educational provisioning and participation at primary level in the states of Bihar, Madhya Pradesh and Karnataka for two years, 1994-95 and 2001-02. The data for 1994-95 indicates the situation that existed around the time DPEP was initiated.[2] It is obvious that the situation of educational participation rates were notably worse in Bihar than the other two in the mid-1990s and the relative positioning remains largely the same even after a lapse of seven years. Although the enrolment rates have increased in all three states, the rate of increase has been the highest in Madhya Pradesh. Karnataka was already at a higher level and the increase could not have as high as was witnessed in Madhya Pradesh. But the rate of increase has been relatively slower in Bihar and what is remarkable that though both Madhya Pradesh and Karnataka have succeeded in reducing the gender gap substantially, this has widened in Bihar during this period. The subsequent analysis shows that Bihar has also been the least responsive among all three in terms of introducing reforms and improving the quality of delivery system.

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[1] *This paper is based on analysis of relevant Acts, Office Orders and the interactions with large number of government functionaries as well as others in the three states. It also draws heavily from a study titled "Management Processes in Elementary Education: A study of existing practices in selected states in India" undertaken by the author in association with Prof. K.B. C. Saxena and Prof C. V. Baxi. The study was sponsored by the EC Education Project Office and the report has been published by them in a report form. The process of understanding the management processes in primary education by the author started with the above study, continued through various means and resulted into this paper.*

[2] *The DPEP was initiated in selected districts of seven states including Madhya Pradesh and Karnataka in its first phase in 1994. Subsequently more districts (still not all) were added in many states including these two in 1995-96. In Bihar, DPEP was introduced in several districts in its third phase in 1998. However, a similar programme, Bihar Education Project was operational in the state since 1991.*

Table 1: Selected Educational Provisioning and Participation Indicators in Bihar, Madhya Pradesh and Karnataka (1994-95, 2001-02)

Selected Educational Indicators (Primary Level)	Bihar		Madhya Pradesh		Karnataka	
	1994-95	2001-02	1994-95	2001-02	1994-95	2001-02
Gross Enrolment Ratio						
Boys	82.83	99.66	103.26	119.82	109.68	116.80
Girls	50.62	60.44	78.85	102.17	97.11	108.57
Total	67.61	80.43	91.42	111.23	103.49	112.74
Drop-out Rate						
Boys	60.01	57.92	28.25	46.51	39.42	8.68
Girls	63.27	62.21	35.65	48.21	44.92	13.74
Total	61.15	59..55	31.47	47.24	41.99	11.12
Teacher Pupil Ratio	65	67	42	43	61	32

Source: Education in India, Ministry of Human Resource Development, Government of India, 2001 for 1994-95, Annual Report (2002-03), Ministry of Human Resource Development, Government of India, 2003 for 2001-02 data for enrolment and drop-out rates and Selected Educational Statistics (2000-2001), Ministry of Human Resource Development, Government of India, 2002 for Pupil Teacher Ratio in 2001-2002.

The Structures

Management processes in elementary education need to be seen as being mainly guided by culture and practices of the larger administrative system. The administrative system in India is heavily dependent on structures and the powers conferred on these structures at different levels. Traditionally, administration held all the powers but the last two decades have witnessed several changes. The academic support institutions came in place for looking after the aspects of curriculum and teacher training leading to some alteration in the functioning of educational administration. The initiation of ambitious programmes such as DPEP through a separately registered society also triggered a few changes in the management functions in some of the states. But the most critical change has been brought by the 73rd and 74th Constitutional Amendment in 1993 which enabled transfer of powers to the local elected bodies or Panchayati Raj Institutions (PRIs).

The federal political and administrative set-up allows variety and within a broad similarity, there exists considerable difference in these structures in different states in terms of role, responsibilities and the powers conferred within administration and outside it to local bodies and others. For instance, the hierarchical position and controlling powers of the block level personnel vary across these three states influencing the nature of supervision and monitoring quite significantly. The Block Education Extension Officer (BEEO) in Bihar belongs to the Subordinate Education Service and happens to be the only functionary at that level. The BEEO's rank is similar to that of an upper-primary school's headmaster and therefore he/she has no control over the latter. In sharp contrast, the Block Education Officer (BEO) in Karnataka is a senior official equivalent to the District Superintendent of Education (DSE), the controlling officer for primary education at district level, in Bihar. The BEO is assisted by one Assistant Education Officer (AEO), one Physical Education Officer (PEO) and two Inspectors of Schools (who are equivalent to the BEEO in Bihar). In Madhya Pradesh, the BEO is assisted by two to three Assistant District Inspectors of Schools (ADIS – equivalent to the BEEO in Bihar)[3] and his rank is equivalent to that of the AEO in Karnataka. Similarly, the rank of officials posted at district level in Karnataka is higher than that in Madhya Pradesh and Bihar. These differences are significant as despite transfer of powers to PRIs, the role of administration remains paramount and hence the nature of the administration's functioning determines the nature of management processes considerably.

[3] *The positions of ADIS have been abolished recently with introduction of district government in Madhya Pradesh.*

There exist notable differences in the age and maturity that the PRIs have gained in the states as well as in the nature and kind of powers that have been transferred to them in the three states. Karnataka was one of the first states to transfer substantial powers to PRI institutions in the early 1980s itself, much before the 73rd and 74th Amendments came into force. However, a number of responsibilities and powers related to transfer of teachers and writing confidential reports of teachers and educational administrators were subsequently withdrawn. MP was the first state to hold Panchayat elections after the 73rd and 74th Amendments and devolve significant powers to the PRIs. The presidents of the village panchayats known as sarpanches were given the power to monitor teachers' attendance making the latter accountable to the local elected bodies. The panchayat elections were held in Bihar in 2001 after a gap of twenty years and till then administration held all the powers to themselves. Although significant responsibilities including monitoring of teachers' attendance and transfer of teachers have been devolved to the PRIs at different levels in the state, it is presently a little premature to see the impact of these measures on the delivery processes.

In between, towards the end of 1990s and early years of this decade, many states including these three focused on developing user-group based mechanisms for local monitoring of schools. While MP did so by extending the role of Gram Sabha or the full electorate, Karnataka and Bihar instituted parents based local bodies by passing Acts in their respective Assemblies. Since these bodies are also relatively new it is difficult to gauge the impact on delivery, at most only impressionistic comments are possible. However, these impressions are also important pointers if analysed in the light of historical and contemporary socio-political perspectives.

The analysis of structures and processes in these three states showed that while Karnataka chose the path of administrative reform measures to bring in greater efficiency in the delivery system, MP introduced a combination of administrative and political measures but the focus has been greater devolution of powers to elected bodies at local levels. Bihar has been a late starter and although well-meaning, many measures have been introduced without weighing all the implications and building sufficient safeguards to deal with those.

Administration and Decision-making

The educational administration is part of the larger administrative system and follows the prevalent culture and practices as a natural process. The functioning of the educational administration, therefore, remained bureaucratic and hierarchical, with the sense of responsibility towards stakeholders being almost absent. The emphasis on adherence to rules, procedures and orders from above defined the sense of accountability at all the levels. Administration is characterised by rigid and vertical linkages in all three states which lead to a hierarchical chain in decision-making and reporting. This implies the absence of formal and flexible horizontal linkages, and a lack of interdependence and duplicity of control at different levels.

Although the basic nature of administration remained the same, Karnataka introduced a number of measures to make the processes more efficient and improve the pace as well as quality of decision making within administration. The state initiates practices which tried to institutionalize practices of officials at state and districts levels to visit the lower levels (districts and blocks) on fixed periodicity for reviewing and taking all pending decisions then and there. The state has also successfully attempted to build information bases and develop objective criteria for decisions so as to bring in greater transparency in decisions related to location of schools and positioning of teacher. The devolution of powers to PRIs was accompanied by efforts to make the administration more transparent and bring in greater flexibility within bureaucracy in MP. The state made provisions for district government in 1999 by transferring certain administrative, financial and legal powers from state to districts and thereby decentralizing the administration. It later passed Peoples Education Act and introduced institutional reform measures to radically change the institutional arrangements and reduce the role of government functionaries in educational administration.

Such measures are near absent in Bihar. In fact, the situation has worsened due to mounting vacancies in education service positions at all levels. Paucity of staff coupled with the common practice of deploying educational administrators for general administrative duties such as maintaining law and order on all possible occasions leads to negligence of main responsibilities and delays in decision making. Karnataka and to some extent Madhya Pradesh had the vantage position of having highly qualified personnel at district and block levels because

of its policy of posting high rank functionaries at lower of administrative units. Although difficult to substantiate with hard evidence, greater emphasis on streamlining a few processes appears to have helped further in improving the pace and quality of decision making in Karnataka. In Madhya Pradesh, the impact of introducing district government and institutional development measures appear to be mixed in initial years. However, even if the impact is not uniform across all areas, the fact remains that the awareness of the need for steps to make administration more efficient and accountable exists in these states. In Bihar, no such awareness is reflected by any such measure and the lack of any firm initiative results into the administrative processes continuing to remain inefficient.

One of the major structural bottlenecks experienced in Bihar is that the secretariat and directorate are not separate. The educational administrative structures in most other states follow a pattern whereby the secretariat, headed by a secretary, represents the government and assists the minister in formulating policies and the directorate, usually headed by a Commissioner, implements government decisions being responsible for day-to-day management and monitoring. However, in Bihar, the directorate functions as an amalgamated part of the department of education. The directorate spends its maximum time in assisting the Secretariat in its duties such as providing information for various House Committees of the state Assembly and do not find time for monitoring the implementation. Apart from the fact that absence of close monitoring from the state level sends wrong signals to district and sub-district levels, the time taken in making decisions required to be made at state level is high and is perceived as lack of responsiveness by the district level.

The process of decision making, especially in the context of policy choices, is centralized in all states. Policy choices are guided by a number of factors such as Constitutional amendments, central directives, the need based on information analysis, public opinion, pressure groups' demand, political commitments and preferences and also vested interests. The government, represented by ministers and senior bureaucrats, is responsible for major decisions and policy-formulation. Political commitment and priorities are crucial for initiating reforms in a democratic set-up but bureaucracy also plays key role in building this commitment and convincing political masters and hence, individuals positioned at high level and their initiatives become critical. However, these individuals are usually generalists and in most cases require some grounding in any particular department before they could take firm initiatives. It implies that tenure of senior bureaucrats is also important in shaping the policy choices. The experiences in these three districts suggest that while the tenure of education secretaries has been sufficiently long in Madhya Pradesh and Karnataka, it has been very short in Bihar during the late 1990s.[4] This factor has also played a role in initiation of policy reforms, or the lack of it, in these states.

Planning and Fund-flow

The hierarchical culture and weak horizontal linkages have serious implications for planning and monitoring activities. In a broad sense, planning in elementary education in all three states is mainly guided by the schematic approach where schemes are designed centrally and funds are generally allocated on pre-designed norms. A number of departments provide funds for different schemes which are designed and monitored by the concerned department in isolation. A lack of coordination coupled with centralised control implies little space for need or negotiation based planning. Moreover, educational planning as a process is almost limited to financial planning, involving budgeting, allocation and release of funds, and that too, in practice, is based primarily on an upward revision of the previous year's budget. A highly centralised control of funds coupled with rigid procedures for devolution makes the process of fund-flow restrictive and slow.

The process of planning and fund flow is relatively more decentralized under DPEP. DPEP in its design emphasized decentralized, rigorous and need-based planning. However, in practice, the experience remains uneven across districts and states. There is greater decentralisation in the management of funds and processes of fund-flow to lower levels which is perceived by the functionaries as having enabled greater involvement and better implementation in the field. But it is important to mention that planning has been a relatively more composite exercise in DPEP because of certain specific factors. DPEP, a centrally sponsored programme, has been functioning in the framework of a registered society

During the fifteen year period of April 1988 - October 2002, 24 secretaries (not including those who served for less thanone week) were changed in the education department in Bihar, out of which 21 had tenures of ten months or less, and only three had tenures of more than a year. 20 out of these 24 served as education secrrtary for less than 6 months.

where all the funds are transferred to the Society without passing through the state budget. The problems associated with multiplicity of departments and variety of channels does not operate here and hence allow a non-fragmented approach to function. Thus, while the practice of annual planning at the district level in these programmes have helped in establishing the importance of need based planning and developing the local capacities, the process did not provide much insights into and solutions for complex sectoral planning with bases in several departments and sources.

Under the 10th five year plan, an effort has been made under the Sarva Shiksha Abhiyan (SSA) to merge almost all schemes in education department with an aim to do away with the schematic approach. Although it is a welcome step, planning in education is still going to be complex exercise because of the role of other departments such as Rural Development and Social Welfare, and therefore, the personnel need to be equipped in relevant skills. Presently, Planning is often understood as a post-financial allocation exercise whereby decisions regarding geographical allocation of available funds for different heads are undertaken. For instance, if a district has received money for building 20 primary school buildings the decision where should these be located is perceived as planning. Availability of information helps in quality of decisions which are otherwise not necessarily guided by need. Vested interests play a role leading to inefficient allocation of resources if relevant information is not available. The institution of Educational Management Information System (EMIS) in DPEP districts (and later extended to all districts in most states) providing updated information on a number of parameters is playing an important role in this context.

The success of the Society framework in streamlining fund flow, reducing red-tapism and expediting the implementation process has also led certain state governments like MP and Bihar to expand the role of these Societies beyond DPEP or any other such programme. Nonetheless, the nature and extent of powers transferred varies across states, while in MP this Society has been given control and responsibility for the entire elementary education sector, its role is limited to implementing DPEP and SSA in Bihar. Karnataka, on the other hand, has established a new Society to implement SSA. Despite this variation, the growing space allowed to Societies is a welcome step if the long run objective is to change the management processes of the sector.

Inadequate number of instructional hours, Teacher Absenteeism and Teacher Management

One of the major issues concerning school functioning is low number of school days and even lower number of effective instructional hours. Schools function for much smaller number of days than envisaged either by curriculum or even going by the number of official working days. On many occasions, even when they remain open, the number of teachers available for teaching is less than even those who are in position and therefore hardly any effective teaching takes place. Although the issue of engagement of teachers in non-teaching responsibilities has been highlighted in some recent discussions, the extent to which it affects school functioning, children's schooling participation and their learning is not yet realized. Low number of school days and instructional hours can be attributed primarily to deputation of teachers for non-teaching assignments. The situation has improved in Karnataka because of notable improvement in Teacher Pupil Ratio there whereas it has worsened in Bihar due to decreasing trend in the Ratio. In addition, due to lack of adequate staff available at block and district levels for managerial functions such as developing salary slips and other records for different schemes, it is also common in Bihar, and to a lesser extent in MP, to depute teachers to block and district education offices for these purposes. These practices reflect a casual approach towards the issue of the regular functioning of schools which in turn also leads to absenteeism among teachers. The lack of accountability towards children reflected among these practices fails to develop any sense of responsibility among teachers.

Six months of an academic Year: 35 to 45 school days

The academic session starts in January in Bihar. Between January and June 15th, 2003, more than 50% of primary schools have remained closed for majority of days during the first four months for the following reasons:

January	: Due to extremely cold weather, the government declared holidays
February	: Teachers were given the task of Revision of Election Voters' List
March-April	: Teachers conducting Below Poverty Line (BPL) Survey for the Department of Panchayats and Rural Development

Summer vacation started from June 15th and due to long winter holidays, it has been shortened to only three weeks instead of usual six weeks. Even if schools opened in between these assignments for a few days, students' attendance remain thin as they are not sure if the schools are going to function or not. Even in those schools which did not close because all teachers were not sent on this job, teaching suffered as the remaining teachers were not always able to teach all grades and students effectively.

Source: Based on Interactions with officials of the education and other departments, and PRI representatives in selected districts in Bihar (July 2003)

Personnel management practices including those for recruitment, transfer, professional development and support are critical for any organization or sector. Elementary education is a human resource intensive sector and is heavily dependent on teachers. The delivery of services in this case depends to a large extent on motivation and competence of teachers, which, in turn considerably depend on personnel management practices which can hardly be called enabling and comprehensive. An elaborate set of rules and regulations exist and at times even at deviance from each other on similar matters. The procedures dealing with these rules and regulations are often complicated and subject to subjective interpretations.

The recruitment and transfer policy for teachers and other functionaries remained static for many years in most states. The recruitment policy for teachers has undergone a change during recent past but the nature of change varies from one state to other. Karnataka introduced a well-conceived system based on objective criteria and transparent processes in 1999. This gives teachers an opportunity to have a choice in the place of transfer once their ranking is fixed on the basis of the given criteria. The use of computerised databases provides a good example of application of technology for promoting transparency and efficiency. This has led to saving in the time being spent by educational administrators on these tasks and increasing the satisfaction level of teachers. This has also brought in an element of objectivity and minimised political interference in the transfer and posting of teachers, a commonly experienced problem across the states. Taking a cue for Karnataka and other states that had introduced similar measures, Bihar has recently introduced a new transfer policy which takes teachers' preference into account. Zilla Parishad has been given the power of transferring teachers. However, the process not based on a computerized database and hence is not as dynamic and in its process as in Karnataka. The new transfer processes are likely to play a positive role in correcting PTRs and raising the motivation levels of teachers at least to some extent.

Due to stagnant population growth in the southern states, the need for expanding the provisioning is limited. On the contrary, because of the relatively smaller base in terms of school availability and increasing population, the needs for expansion are heavy in the eastern and central states. A number of states adopted the measure of hiring teachers at local level, usually known as para teachers (though in most cases they happen to be full time teachers) and recruited by panchayats or other non-government bodies on a contractual basis. MP is one such state. Apart from hiring *Shikshakarmis* as Block Panchcyat employees for regular schools, the state has opened a number of EGS (Education Guarantee School) schools with Gram Panchayat recruited local teachers. Although the experience in terms of their performance has not been uniform, it is clear that these so called para teachers are usually sincere in their work.[5] However, the presence of the dual system in terms of payments and provisions, one for so-called regular teachers and the other for local/ para teachers in the state has added other dimension, leading to confusion and dissatisfaction at many levels. A need to resolve this issue by developing a long term perspective taking all aspects into consideration exists. While the remuneration could vary on different grounds, it is essential that there is parity in professional development opportunities and recognition of efforts. Bihar has also appointed local teachers known as Panchayat Shiksha Mitra through panchayts in all primary schools and should be prepared to face similar issues in future.

The absence of any kind of career path for teachers as well as lower and middle ranking educational administrators in almost all states is a serious issue and one of the important factors contributing to the low levels of motivation, commitment and competence among functionaries. The use of seniority as the only criterion for whatever little promotional opportunities exist makes the situation worse as performance plays no role in upward career movement. The absence of a performance appraisal system results in the lack of any form of reward, incentive or recognition for quality work. Professional development opportunities either do not exist or are grossly inadequate and inappropriate for all types of employees.

Most of the present professional development opportunities are in the form of ad hoc, one time, centrally designed training programmes with little consideration for specific needs, long term perspective and follow-up requirements. The DPEP and other similar programmes have been successful in driving home the need for and utility of regular capacity-building efforts. But most of these efforts are also limited in their approach as these are being conducted as programme activities, with little sign of the practice being institutionalized as an essential part of the systemic functioning. Although the presence of SSA in all districts is going to help in making financial provision, there exists a need for designing this intervention more creatively. A definite need for regular on-site support for teachers is emerging but the new structures

developed for this purpose are responding to that only in selected places in each of the three states. In other words, the structures like District Institute for Education and Training (DIET), Block Resource Centre (BRC) and Cluster resource Centre (CRC) do not show uniform level of maturity and responsiveness everywhere, even within a state. Here again, the situation is worst in Bihar due to acute understaffing in DIETs and the lack of full-time personnel at BRCs and CRCs. An already over-burdened BEEO is the ex-officio BRC coordinator and a full time serving teacher in a low PTR scenario CRC coordinator in the state.

Monitoring and Accountability

The schematic approach of administration and planning gets reflected in parallel monitoring of activities/schemes. Information about individual activities/projects are collected, compiled and analysed at a macro level without trying to understand how all these schemes have contributed towards the functioning of any single school. The information collected is more suited to record keeping than feedback and improvement. Currently, there is also a gap in the understanding of a "good school" among different departments/functionaries. The administrative officials, elected representatives and the academic support personnel all vary in their understanding and approach, making it difficult for teachers to interpret and assimilate the suggestions and feedback.

DPEP and other similar programmes have highlighted the need and have provided some space to local units such as Village Education Committee for monitoring and impacting the local decisions. Despite the fact that the community is not a homogenous unit and such initiatives at times tend to take a naïve view of community participation, the measure did provide a space to people which did not exist till then. Though the active involvement of such committees did not become a norm everywhere, the measure did generate interest in many places. The positive experiences in certain places played a major role in enabling states to take legislative measures to insitutionalise the role of community or user-group based bodies in school monitoring. As mentioned earlier, PRIs and later Gram Sabha have been given substantial role in school monitoring in MP. Karnataka constituted School Development Management Committee (SDMC) as a parents' body to monitor schools. Bihar passed VSS (Vidyalaya Shiksha Samiti) in Bihar is a statutory body comprising of local men and women with a significant role in school monitoring. It is an important development as policy need not always precede or initiate change but it is a must to consolidate the process initiated by individual / collective / programmatic efforts.

Nevertheless, it is also important to realise that though policy measures are a necessary condition for change, these alone are not sufficient to bring transformation. A number of operational measures are needed to implement the intended policy measures in true spirit. Preparedness of all those who are involved in actualizing any policy measure is crucial, especially if it involves transfer of power and emergence on a new role for functionaries at all levels. Chances of failure are much higher in absence of measures which facilitate implementation. Devolution of power to PRIs or community bodies is essentially a political process in a democratic polity and it is bound to create some friction. Focussed operational measures can help in giving these frictions a positive direction and ensure that there is no backtracking in the process of change, especially because change processes are also politically more volatile in democracy. This is important for states like MP and Bihar where a number of well conceived policy decisions involving creation of new structures and transfer of power to lower levels are being taken in quick succession. Confusion is also created because of lack of clarity in certain decisions. For instance, submitting absentee record of teachers for salary disbursement figures in the list of responsibilities of the VSS as well as Gram Panchcyat in Bihar. It is important to remove these anomalies. Caution is important so that a few evidences of confusion regarding respective roles and resistance due to change in power equations in the initial phase are not used as signs of failure.

Conclusions

It is evident that the management processes in elementary education need to be transformed to attain a higher level of efficiency and effectiveness in delivery. It is also obvious that the last decade has seen an initiation of a process of change though varying in its nature, intensity and direction in different states. The above analysis reveals that the already developed states are more responsive in initiating certain reforms due to a number of reasons. Karnataka, which is an educationally advanced state, is also better placed in terms of fiscal position and administrative reforms as compared to backward states such as Bihar. Hence, it was possible for Karnataka to adopt a few successful measures from DPEP for scaled implementation. The required administrative frame existed and it was not difficult to secure financial commitment. On the other hand, Bihar, with its precarious financial situation and weak administrative set up does not provide

the similar facilitative environment. Political will is also important and at times offsets the constraints emerging due to educational and economic backwardness. The policy and institutional reform measures in an otherwise not so advanced state of MP amply demonstrate this point. However, the fact that though at a limited scale, Bihar has also initiated certain forward looking measures shows that the general environment in the country also has an influencing role.

Also important is to note the fact that education reforms do not always happen in isolation. Karnataka has tried to reform a number of administrative practices in general impacting the functioning of educational department along with others. Similarly, in MP, the measures such as formation of district government and devolution of powers to PRIs are not limited to education sector alone. Devolution of powers to PRIs in Bihar is also not linked to education alone. Therefore, changes in management processes in education are difficult to come by in isolation of changes in the overall quality of governance.

The analysis also highlights the limitations of a programmatic design which does not include policy measures in its realm. On the one hand, DPEP was expected to play a major role in expanding the provisioning and improving the quality of the primary education sector, while on the other, the aspects of core policies and processes were kept outside its ambit. In majority of the cases, these core policies and provisions constitute the necessary condition without which any amount of investment fails to bring substantial benefits. For instance, the distribution of teachers is quite skewed in favour of urban and advanced areas in most states and affects the school functioning in rural and remote areas adversely. Transfers are generally affected by political considerations and the teachers posted in remote areas with no network also have low motivation. DPEP is not supposed to deal with the issue as this is a state policy issue. In such situations, heavy investment on teacher training alone, which is within the ambit of DPEP, fails to create desired impact. The core issues of teacher redeployment, recruitment, transfer, appraisal, etc. remained outside the programme domain and investment on professional development in isolation of other measures has its limitations.

This brings the larger issue of whether or not to include policy issues in programmes that are primarily funded through external sources. Even if there is merit in excluding policy aspects from the ambit of externally funded programmes, it is crucial to understand the criticality of these reforms in facilitating the required changes and have space for those in the overall design for reform. Also important is to have differentiated approach for different states as a uniform approach tends to widen the differences because of variations that exist in enabling environment, the capacity to absorb investments effectively and respond to various kinds of needs timely. In absence of a differentiated approach, such programmes could become iniquitous in its impact. Thus, a large programme supported by the union government needs to be designed carefully taking these variations into account. It has implications for SSA, which is intended to cover all districts in the country and is being implemented as a centrally sponsored programme for universalisation of elementary education.

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18. School Committees - A Qualitative Study

M.S.R.Sarma[*]

1. Introduction

The indispensable role of community in the successful implementation of any extension and development programme as a participant in decision making, implementing and utilizing the benefit of the programme, is recognized by the policy makers as well as bureaucrats. Though the Panchayat Raj system was propounded by Balwant Rai Mehta Committee as early as 1957, implementation of its real content has been done in the recent past only. Formulation and implementation of development programmes both for agricultural and rural development also now support participatory approach for effective and efficient administration.

In the field of education DPEP programme was launched in five districts viz., Vizianagaram, Kurnool, Nellore, Warangal and Karimnagar in the year 1996-97. In the year 1998, Government of Andhra Pradesh formulated an Act, on School Education Committee (peoples participation) 1998 and implemented in the year 1998. This Act came into force and the system of School Committees was established.

Present paper is based on a qualitative study conducted in January, 1999; the study focused on understanding the perceptions of Chairmen & Members of School Committees, Villagers and respective school headmasters of Vizianagaram District towards School Committee (SC) functioning.

2. Objectives

Major objectives of the study were to study the

- effectiveness of functioning of School Committs by adopting observation method;
- perceptions of the Chairmen on the functioning of these committees.
- perceptions of villagers on the functioning of SCs
- perceptions of Headmasters of selected sample schools on the functioning of SCs.

3. Methodology

Survey design was adopted for the study.

3.1 Sample: The study covered 11 Chairmen of School Committees, 33 Members of School Committees, 11 Headmasters of Primary Schools and 67 Villagers from 11 villages from 3 Mandals in the Vizianagaram district. These mandals include one Tribal Mandal (Salur), one Urban Mandal (Vizianagaram) and one Rural Mandal (Pusapatirega). Out of 11villages, three villages each were from tribal and urban mandals and 5 villages were from rural mandals.

3.2 Tools used for data Collection:

i) Observation schedule for School Committee Meeting.

ii) Interview schedule for School Committee Chairman

iii) Interview schedule for School Committee Members

iv) Interview schedule for the Headmasters of Primary schools

v) Interview schedule for the villagers

Secondary data : The reports of various commissions that undertook studies on the functioning of Panchayat Raj Institutions with regard to Community involvement in Educational Development were used .

3.3 Procedure: District level training programme was organized for evaluators on administration of the tools and collection of data..The evaluators of the respective mandals visited the places and recorded the proceedings of the School Committee Meetings. They also interviewed the school Committee Chairmen, Members, villagers and headmasters of the respective schools and recorded the information which was later analyzed to derive the conclusions. The investigator visited the sample villages along with evaluators for collection of data from the respondents.

4. Findings

The Committees were formed in the month of July, 1998 in all the three areas. Committees were constituted either unanimously or through open election.

4.1 Members Profile: The age of respondents ranged from 23 to 50 years. The overall age was 39 years, whereas in tribal area the average age of the respondents was 35, in urban and rural area it was 41 years. The

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qualification of the SC chairmen ranged from 5 -15 years of schooling. The average schooling years of the respondents was 8. The average years of schooling was higher in urban area (10) than the rest i.e., Tribal (7), Rural (6). Number of female Members in School Committees is higher in Tribal and Urban areas than rural area.

4.2 Participation in Meetings

In all the areas i.e., Urban, Tribal and Rural, the attendance of School Committee Members in the meetings is high when members were invited personally and meeting was convened by the Headmaster. The participatory level of the SC members range from one meeting to ten meetings.

In some areas, Ex-Sarpanches, MPTC (Mandal Parishad Territorial Council) Members, VAOs, School Teachers (Retired), Ward members, parents etc., attend the School Committee meetings voluntarily

4.3. Meeting Agenda

Chairmen reported that '**Students Attendance**' was the main discussion item in the meetings of School Committees in all the three areas. Other Agenda Items for discussion varied from area to area – in Tribal Areas the focus was on Clean and Green environment, enrolment, irregular attendance, dropouts etc. In Urban area these covered : Power supply, conduct of Rallies, requirement of additional teachers, action for long absentees etc. In Rural area, focus is on completing construction of school buildings, improving discipline, cleanliness, performance of the backward children & children attendance.

Head masters reported that irregular attendance of pupil, repair of school building, neatness of children, establishment of ECE, dropouts arrest, girls education, child labour, academic progress of the school children, parent interest etc. were the items discussed by the SC in the last meeting.

4.4 Proceedings

- In all three areas there was discussion on the follow up action taken on the minutes of the previous meetings. The HMs - convenors of the meetings, recorded the minutes of the meetings regularly. In almost all the areas, minutes book was maintained with utmost care .
- The Meeting ranged from 30 minutes to 1 hour, in most of the places it was 1 hour.
- Resolution book was maintained - the resolutions were recorded and got signed by the Headmaster, Chairman and members. The resolution register was signed by all the SC members whenever they attend the meeting
- Visitors book was also maintained properly in all the three areas.

4.5 Number of Meetings conducted in a year

S.No	Area	Meetings conducted	Average
(1)	Rural	38	7.5
(2)	Urban	13	4.0
(3)	Tribal	29	9.7

In tribal area , total 29 meetings were conducted in a year whereas in urban it was 13 and in rural it was 38. It clearly shows that there is no common pattern of periodicity for conducting of meetings. The no.of meetings conducted in urban zone is low (4) as compared against tribal (9.7) and rural (7.6). In tribal and urban areas the meetings were convened by the chairmen once a month and whenever necessary.

4.6 Training Programme for Committee members

The participatory level of the members in the training programme ranged from 75 % (rural) to 100%. (urban). All the SC members expressed positive remark on the training programmes organized for SC members. . However they were not exposed to the procedure of School mapping and social mapping

The attendance of the members to the civil works-training programme was disappointing both in tribal and urban areas. whereas in rural area they attended it in two schools.

4.7 Contributions from School Committee (SC) & Community members

Majority of the schools reported no contributions for the development of school infrastructure facilities. Under the Janmabhoomi aspect committee members participated in Sramadanam, Clean & Green environment and enrollment drive. They also participated in various other programmes viz construction of sanitation, fencing or compound wall , community mobilization in all the three areas.

SC members from tribal and rural area stated that the Shramadanam was the major contribution for the development of school infrastructure facilities.

Community contributed cash in some cases and kind in some cases i.e., Asbestos sheets for school repairs.

4.8 Monitoring

Chairmen stated that monitoring of teacher attendance by the committee has begun. The periodicity varies from one place to another i.e., once a month to regular; the chairpersons made visits once a week/ twice or thrice in a month/ as often as required.

During their visits they observed - teachers attendance, classroom teaching, quality of pupil's learning and conduct of co-curricular activities. Chairmen of rural areas voiced concern about 'low' quality of learning.

Except few (two each in tribal and rural areas) , *chairmen* do not monitor the grants provided for the construction of buildings. Low level participation by VEC in civil works was also reported ,though they do not report lack of support from the officials.

School committee members stated that they visited the school once a week / once a month. They observed that at the time of their visits, the attendance of teachers and class work was encouraging; the fieldwork, play activities/competitions were taking place. However the achievement level of students was not so encouraging in all the three areas. The members never see the civil works taken up in the school.

All the ***headmasters*** remarked that the SC observe the attendance of teachers by visiting once a week. They are functioning well in the construction of school buildings, compound wall etc. The joint bank/post office accounts were opened and operating. Discussions were held with the SC in the purchase of materials.

Head Masters suggested following *areas for monitoring* by the SC :

- Enrolment;
- Arresting the drop out;
- Participation in National Festivals
- Community Mobilization for the school development;
- Distribution of mid-day meals;
- Creation of awareness and educating the parents
- Seeking cooperation from all corners
- Autonomy in taking decisions for the school development

4.9 Interactions

SC members from all the three areas expressed that the teachers cooperate with them when they visit the schools.

Headmasters of primary Schools stated that support received from the community was encouraging. All the HMs remarked that the SC is helpful and supportive in discharging their duties. Irrespective of the area, all voiced positive and significant opinion about support and help form the SC in discharging of their duties.

Headmasters of the urban and rural area expressed that the SC is not at all intervening unnecessary in the affairs of HM in discharging their duties. In tribal area, the headmasters stated that Members of the committee were not participating actively. They do not know the rules and dominate over teacher and school issues because of illiteracy and poverty

4.10 Community participation in school activities

Almost all the ***SC members*** participated in activities like door-to-door campaigns for regulation of school children and clean and green activities and responded positively to the conduction of exhibitions, play, festivals and competitions. They were actively involved in the survey in updating the School Census Register. Majority of the members took initiative in enrolling 6 – 11 years age group children in their respective schools irrespective of the locality.

SC members stated that villagers of the tribal area actively participated in the Shramadan and Janmabhoomi activities, they also contributed financially in constructing a school compound. At one school a bore well was installed with the matching grant from the government. In urban areas, the villagers donated amounts for additional classrooms, compound wall, white washing and actively took part in shrama-dan. It is also noticed that the participatory level in almost all the activities from all the areas was quite encouraging.

Other Community members

Community members stated that they participate in Janmabhoomi, Shramadanam activities and in rallies, campaign etc., on enrollment drive. Self-motivation lead them to active participation.

More than half of the sample (38 out of 68-56%) did not participated in enrollment campaigns organized by the Headmaster/Staff and the SC. The remaining respondents participated at various intervals as per their convenience. Some participated for one time, some participated for two times, some others three times and some more than three times.

4.11 Plans for future development of the schools

Committee members varied in their focus for future

development of the schools. In tribal areas items focussed in the plans were – repair work in the schools, bore-well, arresting dropout. Urban areas focused on additional classrooms, additional coaching for under achievers, power supply, cent percent enrollment, donating from the community for school development viz., science equipment, furniture and filling up of the vacancies.

In rural areas completion of the proposed activities, maintenance of positive classroom atmosphere and the construction of compound wall and toilets were the items focussed in the plan.

Headmasters from rural area expressed that their opinions should be given importance in taking up school developmental activities.

4.12 Efforts for increasing Retention & Enrolment

Headmasters of Primary Schools state that SC had taken action on the enrolment and retention by adopting households in all the three areas.

- Door-to-door campaigns, conduct of rallies, conduct of mother's association meetings, convincing and educating the parents are the steps taken by the headmasters for cent per cent enrollment.

Head teachers in tribal area voiced that the drop-outs should be admitted in NFE. whereas in urban areas they felt that the parents and community members should be convinced for sending the drop out to the regular schools. In rural areas all the school head teachers have taken qualitative steps for the enhancement of achievement levels.

4.13 Steps for increasing achievement

Headmasters reported that Reading competitions, observation exercises and conducting educational competitions were the steps taken by the schools for the enhancement of achievement levels. They also expressed encouraging opinions regarding the review of progress of children achievements

4.14 Reasons for Non-Enrolment & Measures taken for increasing retention

Committee members stated that *Poverty and illiteracy were the major causes for it in the tribal area.* In urban area the reasons varied viz., poverty among SC community, disinterest among parents particularly where the students look after siblings and child labour. Early child marriage, lack of knowledge on the importance of education, illiteracy among parents is the causes identified for non-enrollment in rural areas along with children engagement in a farm work and fish hunting.

Motivating parents, Door-to-door campaigns, organizing rallies, convincing parents, wall writings, slogans etc. were some of the measures taken in this direction. Tribal area SC members adopted children for enrollment enhancement & to arrest the dropout rate. They succeeded in their attempt.

4.15 Enrolment of girls/SC/ST

Conduct of Rallies, Door-to-Door campaigns to educate the parents, conduct of PTA/MA meetings, educating the parents on the importance of education, providing positive climate in the school were some of the activities conducted mainly for enrollment of girls/SC/ST. It was reported that with the activities conducted in the tribal area 18 members had been enrolled, 6 from urban area, and 6 from the rural area.

Suggestions

Tribal area SC members suggested providing building, development of quality in education, participation in all the developmental activities.

Urban area respondents suggested involvement of parents for quality education; creation of awareness among parents and provision of water facility etc.
The rural area respondents suggested strict discipline & Attractive school etc.

In tribal, urban and rural areas, for effective involvement of community ,the SC members made the following suggestions –

1. Conduct of PTA + MA + SC + Ward meetings
2. Conduct of games and sports competitions
3. Motivating and inviting public for developmental programmes.

4.16 Other Community organisations

Mostly **Mothers Associations** were constituted wherever the ECE centers were established. All categories of members as per the norms were taken for the Mother associations. Head masters of tribal and rural areas stated that the cooperation in between SC and Mother's Association was very much encouraging. Mothers Associations are yet to be formed in urban area

4.17 Villagers awareness and expectations:

Out of 68 villagers, 47 were male and 21 female respondents; occupation wise there were 25 labourers, 22 farmers, 3 tailors, 5 employees and 10 were housewives.

(i) Awareness

They were aware of the Committees and had knowledge on the functioning of SC- SC formed with an objective of school development. Majority (85%) expressed positive opinion viz., Door-to-Door campaigns, rallies, made the villagers aware on the items viz., enrollment, dropout etc. and stated that the activities taken by the SC are significant in enhancing the enrolment and expressed positive opinion towards the organization of functions by the SC. Majority (93%) of them are their children to govt. schools.

(ii) Expectations

Villagers expected following activities to be initiated from the SC – Provision of buildings; Construction of compound wall ; Provision of furniture; Provision of drinking water facility; Provision of additional teachers ; Qualitative Teaching; 100 per cent enrollment

5. Conclusions

The results of the present study highlighted the importance and advantages of the role and functions of SC towards the school developmental activities. The effective functioning of SC can improve enrollment, arrest dropout, enhance quality in primary education, improve school functionaries; better attention and participation of the community in successful achievement of the objectives prescribed for the schools and the students.

This study also highlights the role of the head teacher in the school as a member-convenor. In view of this it is suggested that the headmaster or the committee convenor should plan and maintain good rapport with staff, students, committee members and community. S/he must think practically and positively and allow the free discussion among members for school developmental activities. If s/he would maintain good rapport and make the community members aware of the school activities, the SC and community would extend spontaneous or voluntary support where and when s/he requires.

The better the relationship between the Headmaster, Teachers and School Committee- the better will be the quality of the Primary Education.

6. Suggestions

- The SC must make villagers aware of the importance of participating in the development and qualitative improvement of school activities, then only the villagers can extend their fullest support for the school developmental activities by contributing in terms of cash or kind in token of their support.
- The headmaster should act as an adviser or consultant using discussion to inspire, encourage, stimulate, thought, guide and develop the importance among the SC and their functionaries towards school activities.
- All SC Members should be present in the meetings irrespective of caste.
- Voluntarily participation by villagers in the meeting convened by the headmasters be allowed to promote villagers participation in the events related to school development.
- Headmasters should make a suitable plan for increasing participation of SC and parents in making students regular.
- Conduction of regular meetings in the urban areas at par with the rural and tribal areas.
- Motivating community or villages for enhancing contributions
- Promoting Active participation of Members in Shramadanam, Janmabhoomi
- Educating School committees on the importance of education and training to SC members on monitoring the quality of learning, procedure of school mapping and Social mapping .
- It is observed that the Chairman did not feel any difficulty in monitoring on the utilization of grants allocated under various heads viz., Civil Works grant, School Grant and Teacher Grant etc.
- Mothers Association should also be formed in the Urban areas.
- Active participation of SC members in monitoring – enrollment, arresting of drop out, participation of SC in National Festivals, mobilization of Community, participation in the distribution of Mid-day-meals etc.
- Suitable measures need to be taken with utmost care for arresting drop out. These include adoption of a school or the school children by the SC members; provision of buildings, quality education creation of parental awareness & involvement , provision of water facility , maintaining discipline and making schools attractive
- Steps are needed to be taken for the enhancement of participatory level of the villagers in the programmes. Suitable measures need to be identified and applied to achieve cent percent participation.

19. Teachers and Teacher Effectiveness - A Research Review

*A S Seetharamu**

1. Introduction

Research on teachers and teacher effectiveness has a history of more than 40 years. Teaching was considered as a calling, a career and a profession for several centuries since the beginning of organised social life in the world and till the early 20th century. With several developments such as increasing organisation of social life, complex institutional and social structures, growth of a welfare state, increasing demand for mass education, the onset of decolonialisation and birth of new nations, burgeoning population growth leading to pressures on State resources including employment, the demand for teachers on a large scale, 'TEACHING' got transferred from its status of a 'calling' to that of a 'job'.

Persons with/without interest, aptitude for teaching, with/without a love of learning entered the profession sometimes as a last resort or end of the road option. They carried diverse personality structures, intellectual potential and degrees of dedication. Diversities in entry level interests, preferences, aptitudes, abilities, and socio-economic backgrounds was equally true of student population.

Teacher preparation programmes in diversified communities hardly addressed the concerns for individual differences and community context differentials. Programme efficiency and effectiveness in school education varied with the personality of teachers and their functional efficiency. Teacher training programmes found it highly challenging to reorient and serve diversities among teachers and their functioning. This predicament led educational researchers to address the problems and issues on teachers and teacher effectiveness. One of the earliest reviews of these researches was compiled by Biddle and Ellena (1964). In an interesting article in this volume, Biddle argued that as per research based evidences, differentials in personality characteristics of teachers are not so significant as teaching processes set against classroom performance criteria. However, there prevailed an alternative and strong opinion that pupils perform according to what teachers expect of them. Teachers differ in their expectations from students and the same teacher has differential expectations within the same student group [Rosenthal and Jacobson, 1968].

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However, there was a growing emphasis on the significance of the structure and dynamics of classroom processes. Gage (1972) explained the need and significance of process models which subserve intrinsically important variables . Research on learning outcomes as a function of management of classroom processes became more pronounced [Dunkin & Biddle ,1974]. 'TIME' as a variable in classroom processes gained heightened attention among researchers.

J B Carroll (1963) identified five elements in classroom processes of which three were time-related : Time needed to learn a concept, master a skill, develop a thought-process; time allowed by the teacher for the same and time spent by individual children. The importance of 'time' in learning, in organisation of classroom processes, in curriculum restructuring, in evaluation processes and teacher preparation programmes has been well established by now. One of the earliest champions of 'Time' as a variable was Bloom (1974) who promoted the concept of 'Mastery Learning' Restructuring of classroom transactions, curriculum changes, textbooks and teacher training based on 'Minimum Levels of Learning' (MLL) in contemporary Indian schools is an outgrowth and reflection of insights and wisdom gained from researches on 'Mastery Learning'. Pace and context of learning under MLL is highly individualised and contextualised. All these developments in research in classroom processes/teacher effectiveness should not mean that the personality of teacher is not important in teacher effectiveness. In a comprehensive understanding of teacher effectiveness, the personality of teachers also become important. The internalisation of teaching styles and models of teaching within the teacher is quite crucial for the success of classroom processes and student outcomes. This is how Mitzel and Gross looked at the phenomenon of teacher effectiveness. Four classes of variables were identified as constituting the dynamics of effective teaching and effective teachers. They are as follows:

I	**Presage**	Teacher Characteristics , Competencies ; Training
II	**Process**	Interaction, Teacher Behaviour; Pupils Behaviour
III	**Product**	Learning Outcomes
IV	**Context**	Classroom; School ;Community

Interactions of teachers and students also was in focus in researches completed by Flanders (1972). Like this, a variety of researches concentrated on the classroom processes in developing different types of competencies in children. Assumptions about students, teachers and teacher effectiveness in the dynamics of processing of information, in learning concepts by students, in the exercise of their thinking/inquiry and in learning in group work got classified into 4 distinct models of teaching. These 4 models subsumed more than 100 teaching styles of teachers as revealed in research studies [Bruce and Marsha , 1990].

Since the publication of 'Models of Teaching' by Bruce & Marsha (1990), a number of research studies on the teachers and their techniques of transactions in the classrooms have been completed. A review of researches on Teaching was made by Medley (1987). Teacher Education programmes also incorporated several of these developments in their restructured curricula.

The basic questions that remain on surface are: Whether the insights gained from research efforts are used as inputs in training programmes. If, training efforts have taken research insights into account, then whether it is reflected in teacher effectiveness. Do effectiveness levels differ across teachers? What are the variables because of which teachers differ in their effectiveness, even though they have been exposed to comparable training experiences - pre-service and in-service? Are such variations teacher-specific irrespective of contexts/ environments in which schools function? What is the impact of training of teachers on classroom transactions?

2. Quality concerns and Teacher Training under DPEP

A variety of concerns displayed in research studies and reviews of such studies in the area of teachers and their effectiveness constitute the logic of review of researches under DPEP regime. The DPEP is a comprehensive, never-before, programme in primary education in India which included the enrichment of attainment levels. Quality improvement of classroom transactions and development of competence and efficiency of teachers was one of the significant strategies herein. Initially the programme began in 42 districts of 7 States in 1994 and since then it expanded in a phased manner to 242 districts (273 bifurcated districts now) in 18 States. This spread accounted for more than 40 percent of coverage of a large country like India. Concerns of access, participation, equity and quality in primary education are incorporated in this programme. The DPEP phases I and II are nearing termination by 2003 AD. It is essential that a review is made of all programmes of DPEP including research studies sponsored under DPEP and completed thereon. Researches sponsored by DPEP are 'applied' in nature and have a bearing on educational practices. Insights/ wisdom gained from these and other researches on DPEP objectives /strategies/ programmes including those relating to teachers and their effectiveness should serve as a mirror for on-going teacher- training programmes for teachers as well to fill the gaps in regard to the knowledge-base regarding the 'role of' and 'space for' teachers in the teaching-learning processes as well as in the schooling of children.

The supply side interventions provided under DPEP include: provision of physical infrastructure facilities; supply of materials and equipments to schools; curriculum restructuring to make it meaningful and contextual; refinement of evaluation procedures and activity orientation to classroom processes through in-service training of teachers. Structural adjustments in school management that facilitate initiatives for community participation and parental involvement in schooling of children are demand-side interventions. However, all these interventions did not lead to total success of DPEP in the country. Though the project was by and large hailed as useful all over, still criticisms about its inadequacies have surfaced everywhere. Base-line, Mid-term and Terminal assessments surveys of attainment of children indicate that there has been progress but not to expected levels in all the states.

Why is the project performance below expected levels and targets? Of the several explanations forwarded, it has been observed, that the role, space and significance of 'TEACHERS' is of phenomenal importance. Teachers are the ultimate delivery agents of a huge, megalithic and imposing system of schooling in the country. TEACHER EFFECTIVENESS is extremely critical in transforming all the inputs into the system in the form of expected outputs through teachers' efficient, judicious and meaningful management of classroom processes and school programmes.

Extensive and intensive programmes of capacity building and empowerment of teachers were taken up under DPEP . These include induction and in-service teacher training programmes to build teachers' capacities for managing their regular and project related functions, grants for schools and Teachers grants for development of teaching learning materials

Training programmes apart from providing teaching skills were expected to develop desirable attitudes and mind-sets (e.g.: gender concerns) among the teachers. Hence the effect of training has to be observed in real-life contexts, through feed-back from trainees and on the basis of differences between entry and exit-level behavioural /attitudinal /knowledge correlates. Research studies that are designed for the purpose can throw some light on the impact of these capacity-building exercises.

3. Review of research studies on teachers

In this paper the main objective was :

- to review the researches conducted under DPEP with specific reference to teachers in primary school, teachers effectiveness and teachers as a notable variable. These include studies on impact and effectiveness of teacher training programme also.

A document published by the Research, Evaluation and Studies Unit of the Ed.CIL Technical Support Group of DPEP entitled ***"Research Abstracts in Primary Education (1999-2002) Vol.2*** was taken as basic source material for this review. The review is limited to abstracts with focus on teachers in primary schools and their effectiveness. The review is also marginally supplemented by researches published or reported elsewhere.

The DPEP Research Abstracts, Vol.2, inlcudes 217 research abstracts. Only the researches wherein issues, concerns related to Teachers and Teacher Effectiveness are directly addressed have been considered for this review. There are 38 such studies in the volume [Type A]. There are other abstracts/researches wherein the Teachers and Teacher Effectiveness are one of the key variables of study or serve as background variables for analysis of key variables. They are also included in this review. There are 26 such studies [Type B]. In sum, there are 64 studies which throw light on Teachers as variables in schooling and classroom processes. This figure constitutes nearly one-third of the reported studies. Appendix 'A' gives brief summary of the findings of various teacher related research studies in a tabular form.

A large majority of studies are reported from 5 States. They are Gujarat (15), Assam (8), Orissa (7), Rajasthan (6) and Uttar Pradesh (5). These 5 States account for 41 out of 64 studies. No study on teachers is reported from Karnataka, Tamil Nadu and Maharashtra. A study from NCERT has directly addressed classroom processes involving teachers while in two studies each from Ed.CIL and NIEPA, teachers constitute key variables.

4. General trend - Objectives and Variables of researches

Research on in-service training of teachers and its impact on classroom processes has attracted maximum attention in researches on teachers. There are 20 studies in this genre. Study of teachers management of classrooms through Activity Methods and use of MLL as reflected in learners' achievements is also a popular area of research. There are 11 studies that address this concern. The way in which teacher grants are utilised for preparation and use of MLL materials and teachers' involvement in this work has got 8 subscriptions from researchers. Issues such as gender sensitisation of teachers (3), problems of enrolment, retention and other UPE related problems wherein teachers are involved (4), management of time by Principals of the schools and by teachers in classrooms (2) have also been researched. There are a number of miscellaneous issues relating to teachers on which researches have been completed. Some of these are teachers' unwillingness to serve in rural areas; their interest in Educational Broadcasting Services; improvement of handwriting of students, self-perception and others' perceptions of women teachers. DPEP researches also revolve around preparation and use of MLL materials in classroom processes and the impact of in-service training.

5. Methodologies Adopted in research

Survey techniques have been extensively used in DPEP researches. By and large Random Sampling and Stratified Random Sampling techniques have been used. There are a few studies wherein Purposive Samples have been drawn. There are a few studies which have reported that their samples are Random Selections. Perhaps, they have confused it with Random Sampling.

Questionnaires and Interviews are very popular among researchers. They are used in combination in several cases while in a few cases, classroom observations are also supplemented. There are at least 24 studies which have used questionnaires while in 24 studies interview technique (schedule) has been adopted. Classroom observation and observation in general have been used in 12 studies. Dependence on School Records (2)

Achievement Tests (5), Project Monitoring Information System data (1) School Monitoring Formats (1), attitude scales, adjustment inventories, Board Examination (V Standard) question papers have also been observed. One study has used a Single-Group Pre-test Post-test experimental design. Another study has used a quasi-experimental design. These are the only two exceptions.

Analysis of data is, by and large, parametric in nature or percentage-analysis. There is a case each of Chi-square analysis, ANOVA and Factor Analysis. Hence, it is inferred that DPEP researches, by and large, are highly simple in design, sampling, use of techniques and tools and in analysis of data.

6. Conclusions

DPEP researches are highly insulated in regard to the light they can throw on larger issues of Teachers and Teacher Effectiveness in schooling and classroom processes. They are mostly confined to DPEP Project/ programme effectiveness such as impact of in-service training for use of Teacher grants, activity-learning and MLL materials preparation.

Results appear to be mixed in regard to Teachers and Teacher Effectiveness in India, in DPEP contexts. There are several studies which show that they do not use the MLL materials in the classrooms. Teachers find difficulty in managing multi-grade classrooms. They are not adequately trained for the purpose. Activity classes and alternative schools are well received by the teaching community but only at standards I and II of schooling.

The route map between training of teachers, classroom efficiency of teachers and feedback to training institutions is quite amorphous. Transparent linkages between training, teaching and research on teaching as a feedback to training are not established. Much light is not thrown on teacher personality variables in relation to efficiency and effectiveness of classroom management processes.

Research on teachers and teacher effectiveness in school education in India is in its stage of infancy as compared to the volume, sophistication and variety of researches that have been so well documented in advanced countries. The present volume of researches can be considered to be the initial step of a long journey in prospect.

There is a need for developing a national-level research agenda by the DPEP/MHRD in primary education. This agenda has to be built upwards through grassroot level workshops at CRC/BRC/ SPD/SCERT/SIEMAT levels using participative mechanism and with inputs from practising teachers. Leadership for research funding/ sponsoring in organised ways should flow down after the agenda is developed.

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APPENDIX-A

RESEARCH STUDIES ON TEACHERS AND TEACHER EFFECTIVENESS DPEP UMBRELLA

Author/s & State	Title	Findings
1. Impact of In-Service Training Programmes as reflected in classroom practices		
Pulla Reddy et al, 2000, (Andhra Pradesh)	Impact of INST on improvement of Quality in Education	Teachers perceive students enrolment and retention as DPEP objective. Enrolment and Retention campaings strengthened teachers relationship with community and parents.
Md. Ahmed, Jafer Ali, 2000, (Assam)	Effect of Teacher training on Teaching learning process in Primary Schools.	90% teachers prepared TLM for Class I but 60 to 70 percent used them in classrooms and that too for initial lessons. 40 to 60% teachers prepared TLM for Class IV and only a small portion of the TLMs were used in classroom transactions. Considerable percentage of teachers showed negative attitudes towards teacher training.
DIET 2000 Morigaon (Assam)	Sample Monitoring on Impact of Training of teachers for Multi-grade Teaching	Multigrade teachers work in the classroom without any planning. Teachers do not go through teachers' handbook supplied by DPEP for multigrade teaching. Single teacher schools fail to manage multi-grade schools even with DPEP interventions.
I D Mehta & A D Zibba2000, (Gujarat)	Effectiveness of MLL related training to P^{y} teachers of V standard.	Training was more effective in backward regions inspite of handicaps in the schools.
B.C.Solanki 2000, (Gujarat)	A Study of Competency -based,Joyful, Activity -based, Textbooks and training in Shahera District.	Teachers liked residential training; Involvement of teachers in preparation of TLM worked well while they were used in classrooms; Teachers found the new text books to be useful for multi-grade teaching as well as joyful and competency based learning.
Khushi Ram Yadav, 2002, Mohindergarh, Haryana	Effectiveness of CRCs : An Evaluative Study	Young teachers work as CRCs in Haryana State – 58 per cent are below 40 years; 90 per cent CRCs are male; 83% CRCs have JBT/D.Ed while the rest are B.Eds.; 49 per cent of CRCs had more than 10 years of teaching experience; 37 per cent CRCs had not issued any library books to teachers; 16% CRCs conducted ETT training regularly while 22 per cent CRCs did not conduct ETT training during last 6 months; 29% CRCs felt that there was no specific agenda in ETT training; 9 per cent CRCs had not visited any school in recent months; 27 per cent teachers and head teachers were facing problems in using new text books; 21 per cent teachers had problems in preparation and use of TLM material.
A K Barik 2001 Orissa	Evaluation of Teachers' Training	Only in 20% classes activity-based learning was going on; Out of these 20% a few teachers were not using TLM;

	imparted on classroom transaction – An impact study of DPEP intervention in Bijepur block of Bargeh district, Orissa	Learning atmosphere was quite good in the classrooms; There was circular sitting arrangement of children; Multi-grade teaching situations in rural areas - but teachers had no planning.
Geeta Dei 2000 (Orissa)	Evaluation of Teachers' Training imparted on classroom transactions – An impact study of DPEP interventions.	Activity-based transaction adopted in majority of classes; 50 percent teachers prepared full length lesson notes; classroom organisation was conducive to activity-based learning; Multi-grade classes managed without any planning.
Niranjan Mishra2000, Sambalpur (Orissa)	Evaluation of Teachers' Training imparted and classroom transactions – An impact study of DPEP interventions.	Only 20 percent teachers used activity method of teaching; 60 percent teachers did not prepare lessons; 80 percent schools did not have activity banks; 66 percent teachers did not conduct evaluation at the conclusion of the class period.
A K Rana2001, Orissa	Impact of Teachers' Training on Activity-based, Participatory Teaching-Learning Processes in classroom transactions.	Most of the teachers adopted activity method of teaching; Classroom atmosphere was below par for activity method of teaching; Training for teachers in use of activity method had a good impact; Teachers had positive attitudes towards this method; TLMs were good and used in 80 percent classrooms; Evaluation of students at the end of the class was not satisfactory.
Trilochan Swain2001, Orissa	Evaluation of Teachers' Training in relation to classroom transactions – An impact study of DPEP interventions.	80 percent schools adopted activity-based method; However, teachers did not prepare lesson notes; 95 percent teachers had not prepared activity bank; None of the schools did regularly use DPEP/TLM; Most of the schools used local market TLMs; Teachers did not pay attention to disadvantaged groups; 55 percent teachers had a mixed attitude to Activity based teaching; Activity-based method did not bring in significant improvement in achievement levels.
N K Agarwal & B L Sharma2002, Rajasthan	Impact of Pedagogical Strategies	High pupil-teacher ratios; poor school facilities; teachers assigned non-academic responsibilities; Civil works, training, SFG and TLM grants have significantly improved the school environment; Enrolment and retention of Disadvantaged Girls has increased.
Ashok Garg2002, Rajasthan	An assessment of training programme for In-Service Teachers	All the teachers and HMs felt that training has been useful to them.

A.K.Sharma2000, Uttar Pradesh	A Feed back study of Teacher Training Inputs in DPEP-II in UP	Majority of teachers in all the districts received training in rounds 1 and 2. Teaching was mostly routine type with no involvement of students; Teaching methods varied from lecturing to reading to question-answers to a mix of all these; Teachers were concerned about problems of multi-grade teaching but had no consistent efficiency in managing multi-grade classrooms; student–teacher relationships were formal, in general; Evaluation of Learning was not taken seriously.

Attitudes/Opinions on INST

Jasraya Siddik, M2000, (Gujarat)	A Study of PTC trainees attitudes towards practical work in schools	Training in Spinning work on Amber Charka was considered to be useless. Prayer for 3 times in a day was not well received; workshop was mostly theory-based; No special attention to music; Physical Education training was given by an untrained person; Drawing skills could not be satisfactorily developed.
J.B.Joshi2000, (Gujarat)	A Study of Primary Teachers' opinions towards in-service training in Banaskantha District	Timings of training appropriate (day-time); Training could be more innovative and activity – based; No feedback was taken from trainees; Group-discussion needs more importance.
Vaishali Shah2000, (Gujarat)	A Study of Effectiveness of Training given to CRG of Surat Dt. For Class VI Science.	Training was found to be effective; Achievement on pre-test hard spots such as 'Mechanics' and 'Energy' increased to 100 & 75% respectively on these two topics as per post test scores.

Training Needs

B.P.Chaudhari2000, Gujarat	A Study of training needs of Primary School Principals of Mehsana Dt.	Principals need training in school planning and evaluation, financial, educational and school management, Co-operation between school and society.
A.V.Patel2000, Gujarat	A Study of training needs and difficulties in training of primary teachers.	Teachers were found deficient in appreciation of the objectives of training [may be in-service training]; Teachers found difficulties in preparation and use of TLM materials;

Impact Govt. Vs Private

P.J.Amin2000, (Gujarat)	A study of MLL training given to teachers of ZP schools and private managements	Positive attitudes towards MLL approach; problems experienced in Multi grade schools. Private school teachers more positive than ZP school teachers.

2. Utilisation of Teacher Grants for MLL Materials Preparation and use; Impact of DPEP Interventions

A.P.DPEP2000, A.P.	Utilisation of School and Teacher Grants (Qualitative Impact Study)	40 % teachers utilised grants in an unplanned way. 70 % teachers maintained stock and issue registers for the grants.
Jagdale, T.R.1999, Raipur	Resources availability and working arrangements from DPEP perspectives.	Positive effect of training under DPEP on the educational achievements of students Resources were partially utilised by teachers. Teachers were partially involved in school activities.
M.Sudhish2000, Chattisgarh	An in-depth study of the impact of DPEP interventions in achieving UEE in Raipur Dt.	Teachers have not fully transferred the training inputs provided to them in classroom situations; school contingency grant was not being properly used as per the norms. Quality watch programme was not satisfactory.
Trilochan Swain2001, Orissa	Utilisation of Teachers' Grants and School Improvement Grants – An Investigation	63 % schools did not preserve TLMs in a satisfactory way; No freedom to 54% teachers in spending TLM grants; Project work' was not prepared in any school. No proper monitoring by CRCs and BRCs of TLM and SIG grants.
B.K.Sharma et.al. 2002, Rajasthan	Study of utilisation of Teacher Grant for preparation of TLM	
K.S.Singh2002, Rajasthan	Use and Creation of Low Cost Material for Effective Learning 80 % teachers received TLM	grants and they had used it; 67 % teachers had positive attitudes towards training for TLM preparation; Teachers felt the need for subject-wise intensive training camps to decide about TLM needs; A considerable proportion of teachers felt dissatisfied with training and the size of TLM grant.
Kour Randeep Deka, U2000, Assam	DPEP interventions in classrooms in Darrang & Morigaon Districts	– A Study Despite availability of materials use of TLM in the classroom is limited. Teachers go to the classroom unprepared. Remedial Teaching was done in only 3 schools. Teaching is still teacher-friendly.
SCERT 2000 (UP)	Classroom observation in Schools of UP BEP districts	Teacher-talk followed by student –talk is very high in both the classes; this indicates increase in teacher-student interaction; Achievement of students using MLL criteria has increased; In majority of UP BEP schools, there is considerable improvement in Teaching-learning process, teaching styles and teacher compe-tencies.

3. Study of Learners' Achievement in relation to Teachers' use of MLL

Md.Ahmed, Jafer Ali2000, Assam	Study on the Assessment of Learners' Achievement in Primary Schools	Teachers prepare TLM only for initial lessons. 80% teachers did not know about integrated textbooks

Sarmah Gauri Sankar 2000, Bongaigaon, ASSAM	Usefulness of Resource Materials in activity-based TL process in classroom.	Most of the teachers do not understand how to coordinate the use of resource materials with textbooks.
Upadhya, S N et. al.,2000, Assam	L^g Ach. of P^y school children in Language and Mathematics	Low proportion of female teachers; Most of the teachers had class X qualification;15 per cent graduates are there; 65 per cent of teachers had training; Majority of teachers had undergone in-service training.
D.B.Behury2000, Haryana	A Study of Correlates of consistent high performance in primary schools	Teachers of Category A schools have higher scores on competency scale; Greater percentage of Heads of Category A schools were humble in their interaction with teachers and students as compared to Category B schools; Teachers with longer experience showed better adjustment; Teachers of Category A schools have better home and social adjustment in comparison to teachers of Category B schools.
N.M.Makwana2000, GujaratA	Study of Difficulties faced by Teachers in Module-based/MLL Approach teaching at V Standard Level	Administrative difficulties were more than educational difficulties; Module-based instruction was effective; difficulties; Module-based instruction was effective;
A.P.Patel2000, Gujarat	Difficulties faced by Primary School Teachers regarding MLL	Teachers fear that their work load would increase with MLL approach; section of teachers consider MLL approach as a misuse of government funds; Extra-school approach; assignments to teachers affects efficiency for MLL Even though MLL approach of teaching was adopted, promotion to II and III standards from I and II standards in some schools were based on attendance and not on competencies achieved.
Sandhya Rukmangad 1999, MP	Academic Monitoring of Primary Schools in Madhya Pradesh	Teachers found training programmes as useful, but had difficulty in applying their learnings into practice. Training has the least impact on classroom teaching-learning processes. Teachers were not using teachers' guidebooks made available to them.
Kamala Jain et.al., 2001, Rajasthan	Study of Learners' Evaluation Process from Classes I to V in Rajasthan State	79 percent teachers and HMs felt the need for training for setting of question papers.
Anisha Dutta2000, West Bengal	Assessment and Study for Improvement in the present status of lessons in Mathematics	Most of the teachers teach Mathematics mechanically and have failed to develop basic concepts in children. Teachers do not check students' class work; homework is not assigned regularly; Multigrade class rooms, high PTR, inadequate seating facilities, other problems contribute to poor quality of learning.
Ed.Cil2002, New Delhi	*Exploratory Study on Pupil Evaluation in 5 Phase I (DPEP) States and 2 NGOs*Report under preparation	

4. Gender Sensitisation

Renu Ohri2001, HP	Gender Sensitisation in Primary Schools in Himachal Pradesh, Towards new Curriculum Structures	Maximum number of teachers disapproved of separate books for boys and girls; large number of teachers did not approve of separate seating arrangements for boys and girls; some urban female teachers desired separate seating arrangements for boys & girls in the same classroom; teachers report that they give equal importance to boys and girls.
DIETs of Kasaragode & Idukki2001, Kerala	A Study on gender concerns in school activities and classroom practices in primary schools	Teacher directions were mostly given to boys; teachers' response to wrong answers – equal scolding for boys & girls; 'no response' and 'ridicule' more for boys; school leaders – always boys while class leaders – sometimes girls; Responsibility for storage and display mainly assigned to boys; library duty assignments – more to boys; cleaning leaders – always boys while class leaders – sometimes girls; Responsibility for storage and display mainly assigned to boys; library duty assignments – more to boys; cleaning activities – premises and toilets – mostly given to girls.activities – premises and toilets – mostly given to girls.
Vimal Singh & Virendra Guptha2002, Jaipur, Rajasthan	A study on classroom culture and process from gender perspective	Urban schools – More Female Teachers; Girls were given preference in answering questions; Girls were assigned the duty of bringing water; Alternative Schools – More male teachers; Girls preferred in checking copies, writing on block boards; Boys received more punishment than girls; Madarasahs: More male teachers; Teachers preferred boys to girls in assigning class-work; TLM distribution, ringing of bells by boys only;OBC Schools (Desert) : More male teachers; Girls preferred for assigning class work; Punishment more for boys; SC – Plain: Female teachers more in proportion; Teachers themselves do classroom tasks; Girls more disciplined; interaction between boys and girls was minimum.

5. UPE problems, Teachers in Enrolment/Retention Concerns

Satish Sharma & Kulwinder Singh 2000, HP	UPE in HP: Problems, Strategies, Prospects – A Case Study of Tissa (Chamba)	Shortage of Teachers; Low level of participation of teachers in school related out-of-school activities – teachers' plead ignorance of their role; Most schools do not have PTA/MTA.
Brij Kothari et.al, 2000, Ahmedabad	A Review of the Primary Education Package in Madhya Pradesh	Self-paced, non-graded, group-based nature of classroom learning and the integration of fun and learning in Alternative schools offers a fundamentally different and powerful mode for primary education.
Kalita Jagannath Saharia, K.K.2000, Assam	Poor rate of Girls' Enrolment in Primary Schools of Darrang Dist., Assam	Low proportion of female teachers is a cause of poor enrolment rates.

P.Banerjee2000, MP	Evaluation of factors responsible for enrolment, retention, achievements of students and impact of teachers' training and school variables on them.	Poor infrastructure in schools; schools not happy with . disbursement procedure of school contingency grant; school-wise mean achievement of students was found better in the schools where maximum teachers were graduates or post-graduates than in the schools where they were Higher Secondary pass. Surprisingly, highest mean achievement in schools was observed in Dhar where teachers were not even Higher Secondary Pass

6. Time Management – Principals Multi-grade Teachers

DIET- Kasargode & Iduki, 2001, (Kerala)	Time Management of Primary School Head Masters	Head Masters hardly perform teaching functions; They have a tendency to delegate this major function to unqualified, inexperienced persons.
M N Sethy2001, Orissa	Management of multi-grade classrooms by teachers & impact of teacher training for M-G management.	Instructional programme suffered heavily in Single Teacher Schools; Most of the teachers do not use Activity method; nor prepare lesson plans or practicse Mixed Ability grouping , had not received orientation in preparing TLM & avoided teaching difficult concepts.

7. Miscellaneous : Competence of EGS Trs; Teachers and Students' Handwriting; Lady Teachers; Service in Rural areas; Radio Listening Habits; Demand for Private Schooling etc.

Y.K.Tiwari2002, Chattisgarh	Competency of EGS Teachers A study in Raj Nandgaon Dt	33% of EGS teachers did not have required qualifications; local teachers were very poor in curricular competence, Teachers lacked study habits.
Sebika Bora2000, Assam	A Study on Assamese Alphabet Writings Proportion of teachers with good handwriting is very low.	Teachers are not very much concerned about students' handwriting.
V.A. Patel2000, Gujarat	Usefulness of Balmitra-Teachers view Balmitra Varga	Varga to Teachers of Class-I assignment work,drilling and evaluation; They felt in Classroom teaching the need for more training in the use of Balamitra Varga.as useful in teaching,
Reena Agarwal2002, Lucknow, UP	A Study of Perception of Lady Teachers of Parishad Schools	Lady teachers were not active in community involvement; workshops/ seminars/co-curricular activities; differentiated students on the basis of caste and religion; They perceive themselves as hard working, solve students' problems, give motherly guidance; community/principals have positive perceptions of competence of lady teachers.
R.K.Kaistha Gopal Sharma2002, H.P.	Problem of Unwillingness among teachers to serve in rural areas: A Case Study of Chamba Block in Himachal Pradesh	Male teachers are in a high proportion. They citem family responsibilities as a reason for not going to villages to serve; female teachers are reluctant because of their urban background; lack of comforts/facilities in in rural areas and lack of incentives; 85% of teachers

		are married; they were relatively young in age; late arrival and absenteeism on account of daily commuting by teachers
Shailendra Singh2000, P.K.Sahoo2002, Allahabad, UP	A Survey of Private Schooling Availability of Radio sets with Py Parishadiya Rural Teachers and their Radio Listening Habits	PTR in government schools 64: 1 and in private Only 6% teachers received orientation about radio broad cast programmes; Listening habit was more among experienced teachers; Teachers reacted positively to radio broadcasts; Mixed response to preferred timing of broadcasts; Topics preferred by teachers in EBP – development and use of TLM, use of kits and intenance of TLM, school activities management, classroom communication, use of local dialects, regional language and TLM for handicapped children.
Shailendra Singh2000, Lucknow, U.P	A Survey of Private Schooling and Children in DPEP-II Districts of Uttar Pradesh	PTR in government schools 64: 1 and in private schools 36: 1; Parents choice of private schools – Teachers come in time to school, disciplined, pay individual attention, use innovative methods. Good quality education.

20. Effectiveness of Teleconferencing in Teacher Training Programmes: An Evaluative Study

*Khushi Ram Yadav**

1. Introduction

School teachers face various pedagogical and management problems in their day-to-day teaching. Various attempts have been made to provide orientation to school teachers through various programmes. Due to large number of school teachers and limited resources, it is not possible to solve their problems through face-to-face interaction mode. So distance mode in education is the need of the hour. As a supportive component to DPEP programme, the Distance Education Programme (DEP) is sponsored by the MHRD, Govt. of India. The programme is a collaborative project of IGNOU and NCERT New Delhi and is being implemented in all the DPEP states. The teleconferencing is an important programme of DEP. In this programme the participants have the facility of multi-media learning, such as tele-material, discussion with facilitator, group activities, live presentation and demonstration by experts, pre-recorded audio and video excerpts of classroom activities, live interaction with experts. Live telecast of the programme was done from EMPC studio, IGNOU New Delhi through INSAT 3C satellite at Gyan Darshan Channel of Doordarshan. In Haryana this programme was received at 7 centres namely DIET Ding (Sirsa), Mattershyam (Hissar), Iccus (Jind), Palwal (Kurukshetra), Mahendergarh, Birhikalan (Bhiwani), Gurgaon. Teacher educators and experts in the studio facilitated the training. Live interaction with experts took place through telephone and fax. Nine teleconferences have been organised up to now. The present study was conducted to evaluate the effectiveness of teacher training through the teleconferencing mode.

2. Objectives of the Study

The study had the following objectives:

- To evaluate the impact of teleconferencing on awakening of teachers to new techniques in the teaching learning process.
- To examine the role of panelists and facilitators.
- To evaluate reception clarity and tele-materials.
- To examine the time of discussion and question-answer session.
- To find out the impact of teleconferencing in solving classroom problems and achievement of children.
- To suggest measures to make the programme more effective

3. Method

3.1 Sample

Teachers of only Mahendergarh district were selected for the study out of the seven DPEP districts in Haryana, namely, Sirsa, Hissar, Jind, Kaithal, Mahendergarh, Bhiwani and Gurgaon. The teachers, Head Teachers, and CRC's who attended the teleconferencing programme formed the universe of the study. Out of 9 educational blocks in Mahendergarh, 4 blocks were selected randomly. 179 Teachers, 62 Head Teachers, 12 CRC's and 20 Facilitators were selected. Feedback from 273 participants drawn from 103 schools was obtained.

3.2 Tools

Three interview schedules were developed, one for teachers, second for head teachers/CRC's and the third for facilitators. They were asked questions on the number of teleconferences attended, whether they learnt more in teleconferencing than traditional methods, the use of telephone and fax, the role of facilitators, the content of tele-material, the use of question-answer session, audio-video reception, group activities, the selection of experts and their presentations, the usefulness of the programme, the time of discussion, about technology by the use of TV and telephone, the need of teleconferencing, the use of this programme in solving classroom problems and in teaching the classes, impact on the achievement of children.

3.3 Data collection

Seven field investigators collected primary data from 4 blocks of Mahendergarh district by visiting 103 schools. The secondary data were collected from Distance

* *DIET, Mahendergarh (Haryana)*

Education Coordinator (State Project Office HPSPP, Chandigarh).

4. Findings

4.1 Profile of Selected Respondents

- The respondents represented the age groups including below 30, 31-40 yrs, 41-50 yrs and above 50 yrs.
- Among the respondents 74% were male 26% were female.
- 29% respondents were matriculates, 18% 10+2 and about 28% graduates and 26% post-graduates. Majority of respondents were graduates and with higher qualifications.
- 70% respondents had qualified JBT, 26% B. Ed and only 4% had M. Ed degree. 72% teachers had JBT and 28% B. Ed., 90% head teachers had JBT and only 10% B. Ed. 55% facilitators were B. Ed and 45% M. Ed. 50% CRC's had JBT, 41% B. Ed and 8% M. Ed.
- Majority of respondents including head Teachers and facilitators had more than 15 years of teaching experience i.e. 89% and 70% respectively. 35% teachers had less than 5 years teaching experience, whereas 37% had 5-9 years teaching experience.
- 70% respondents had attended only one programme i.e. Training on Teaching Learning of English. The duration of this programme was 2.10 hours On AIR. 72% teachers, 90% head teachers and 50% CRC's attended only one teleconferencing programme. 22% teachers had attended two teleconferencing programmes, 40% facilitators had attended four teleconferencing programmes and only 10% respondents had attended more than five teleconferencing programmes. The opinions of participants were influenced by the feedback on *Teaching Learning of English*. Only 12% respondents had the experience of attending more than two such programmes.

4.2 Traditional methods vs. Teleconferencing

During field investigation, the participants of teleconferencing were asked whether they had learnt more through teleconferencing than traditional methods. 62% participants favoured the traditional method whereas 38% favoured the teleconferencing method. 67% teachers, 60% head teachers and 50% CRC's were in favour of traditional method. 70% facilitators and 50% CRC's stated that they had learnt more through the teleconferencing method.

62% participants who favoured the traditional method were asked to substantiate their view. They opined that in traditional method problems were solved on the spot and all the participants were actively involved in discussion. Problems were not solved in the teleconferencing method due to transmission problem and poor sound and pictures quality. In this method every participant cannot resolve doubts due to time constraints and connectivity of telephone. All questions asked through phone and fax, were not answered by the panelist. In this method open debate is not possible. So doubts were not cleared immediately.

38% participants who favoured teleconferencing were asked how they have learnt more in teleconferencing method. They were of the view that during face-to-face training programmes the same local resource persons were available in each programme. In teleconferencing there was an opportunity to ask questions from experts and to learn more from their experiences. Also, the problems not solved by local resource persons were shared in teleconferencing programmes. Some participants stated that in this programme the problems were shared at the state level and the solutions of similar problems were also shared. Some newly appointed teachers replied that questions werre asked on telephone without any hesitation in teleconferencing, which is not possible in classroom. Some participants liked it because of its being a new technique for training programmes.

4.3 Use of Telephone and Fax

During the first session some presentations and demonstrations were presented by experts and some pre-recorded audio-video on classroom activities were also telecasted. Presentation session was followed by the question-answer session. In the question-answer session participants from various centres asked questions over telephone to experts sitting at EMPC studio IGNOU New Delhi. Live interaction with experts was through telephone. When participants were asked about the usefulness of telephone, 83% participants agreed that the use of telephone remained fruitful whereas 17% disagreed with the statement.

In answer to the connectivity of telephone line to EMPC studio, 60% participants agreed that it was easy to connect telephone line to studio whereas 40% stated that they were facing the problem of getting telephone line for a long time. In a teleconferencing programme about 40-55 telephone calls and 60-80 questions were asked.

To overcome the problem of connectivity through telephone to experts in the studio, fax could be used during the presentation session and OFF AIR also. Fax could also carry a set of consolidated questions without any transmission loss and the use of ON AIR time. Moreover, the participation of each and every trainee could be possible. During field investigation it was examined whether fax was used or not in the teleconferencing programmes. 80% participants agreed that fax was used whereas 20% not agreed to the statement.

4.4 Role of Facilitators

Before organising a teleconferencing programme, facilitators should be trained about their role. Accordingly, they were trained to receive and coordinate for covering all the questions form the field. Facilitators were supposed to carry out the following activities:

During field investigation participants were asked, "Are you satisfied with the role of facilitators"? 90% participants felt that the role of facilitators at receiving centres was satisfactory whereas 10% participants felt that it was not effective. 64% participants felt that sufficient time was provided to read the tele-material whereas 36% felt otherwise. It was the responsibility of facilitators to provide tele-material at least one hour before the programme. So 90% facilitators were of the opinion that tele-material was supplied to participants within the stipulated time. Some participants suggested that the tele-material should be provided 2 or 3 days before the programme. 36% participants expressed the view that one or two hours were not sufficient to read the tele-material on the same day.

4.5 Group Activities

A facilitator has to form groups of 4 to 5 persons and ask them to share the problems faced by them in teaching process. During the study participants were asked about the group activities. 75% participants participated in-group activities whereas 25% stated that group activities were not organised. All the facilitators stated that groups were formed and activities were held. But 30% teachers and 16% head teachers did not endorsed this view.

When asked whether the time provided for group activities was more than required, 83% participants disagreed with the statement. Around 17% participants felt that time was more than required to perform the group activities. 20% facilitators were also of the view that time was more than required.

4.6 Problems faced by Facilitators

The investigator tried to find out the nature of problems, which were faced by the facilitators.

- Some facilitators opined that reception clarity was the major problem in the programme.
- The second problem faced by them was that large group i.e. 50 teachers in a room created murmuring sound hence concentration was disturbed.
- Due to large number of participants in a room high volume of TV was needed which created echo problem.
- Some facilitators expressed that some teachers were not interested in the training programmes.
- The facilitators also observed that some teachers were non-cooperative.
- Some facilitators opined that arrangement of lunch also created problem in the programme.
- Whenever the tele-conferencing centre was created at a place other than DIET, the arrangement of telephone and fax became a problem.
- Some facilitators were of the view that answers to all the questions were not given which also created problems in the programme.

4.7 Tele-material

Before organising the teleconferencing programme the experts were invited to develop module for the training programme. The resource persons associated with the development of module and having experience of that field were selected as panelist for the teleconferencing. In the Distance Education Programme the following material is developed for the training of primary education personnel:

Shikshak Sandarshika (f'k{kd lanf'kZdk)**:**

This module was prepared for the teleconferencing of "Demystifying *Hanste Gate* (galrs&xkrs), *Antrang* (varjax) and orientation about integrated education and Alternative Schooling" Which was held on 28 June 1999 to 30 June 1999. In this module difficulties faced by teachers in the classroom in teaching books (Hanste Gate and Antrang) of classes 1st & 2nd were discussed by the experts who were involved in the development of these books. This module has issues related to Alternate Schooling also.

Mujhe Padana Hai (मुझे पढ़ना है) **:**

This module was prepared for the teleconferencing of

"Demystifying Gender sensitisation campaign and orientation about the gender issues" which was held on 27-28 September 1999. This module contains issues: Status of Girls Education, Gender issues in the text books, "Maa-Beti Mela" (eka&csVh esyk), The role of media, Mother Teacher Association for removing gender bias, increasing enrolment and retention of the Girl children.

Nai Pahal (नई पहल):

This module was prepared for the teleconferencing of "conceptual changes in pedagogy, the development of TLM, interaction with VEC members and strengthening of VEC's, which was held on 29-30 Jun 2000. This module contains issues: Discussion about new text book *Humjoli* (getksyh) for class III textbook, the development of TLM, what and why VEC, The role and function of VEC towards the improvement of primary education and structure of VEC in Haryana.

***Chetna* (चेतना):**

This module was prepared for the teleconferencing of "improving educational practices and action research that was held on 3-4 August 2000. This module contains issues: What is research? Types of research, action research and its characteristics, steps involved in action research, Report writing, examples of action research and the list of Action Research conducted in Haryana.

Teaching Learning of English

This module was prepared for the teleconferencing of "Training on teaching learning of English, which was held on 18-19 September 2000, 30 September 2000, 7,14,21,30 October 2000, 25 November 2000. This module contains issues: Motivation of primary teachers for understanding the importance of teaching of English of primary level, Child centred and activity based teaching method, listening and speaking competency development through activities.

***Prayaas* (प्रयास):**

This module was prepared for the teleconferencing of "Orientation of teachers/parents and community on Integrated Education for Disabled" which was held on 18-19 December 2000. This module contains issues: What is disability? Types, causes and prevention of disability, integrated education, role of teachers/parents/community and specific teaching method for each disability

***Amne-Samne* (आमने–सामने):**

This is a question-answer booklet based on: "Interaction with teachers and master trainers of Haryana through teleconferencing – on going teacher training programmes" were held on 5, 21 Jun 2001, 9 July 2001. This programme is based on Tarang-4 in which new pedagogy; education techniques and teaching of English were discussed. The questions asked in this programme were answered and printed in Amne-Samne booklet to send it to primary teachers as a reference material.

The above print material was provided to the participants of concerned teleconferences. During this study the participants were asked about the contents of these modules. 57% participants expressed the opinion that the contents of tele-material were average whereas 26% were of the opinion that contents of tele-material were good. About 17% participants were of the view that contents of module were below average. They were of the opinion that the contents need to be improved. When the investigator asked DEP-DPEP New Delhi officer about contents and modules of tele-material, they replied that layout, print and contents of modules developed by DPEP-Haryana were better than any other state developed tele-materials.

4.8 Reception Clarity

In teleconference-mode one-way video and two-way audio interactive television was used. So the quality of visual on TV is an important aspect. The study tried to find out about the quality of demonstration and visuals as received at the centres. 60% participants opined that the quality of demonstration and visual was good, whereas about 40% stated that the transmission of the programme was not good. They said that pictures were not visible properly hence nothing would be gained from poor signals/ disturbance in pictures.

38% participants agreed that the quality of sound was good but 62% participants stated that the quality of sound was not good. The voice of TV was not audible.

The participants were asked whether the number of demonstrations/examples shown in the programme were sufficient? Fifty percent participants agreed that the number of demonstrations/examples was sufficient whereas 50% disagreed. They said that more examples should have been included in the programme.

4.9 Panelist's presentation

In the training design presentation and demonstration by experts was live telecasted followed by question-answer by the participants. During field investigation, participants were asked whether the time of discussion by panelists was sufficient. 49% participants were of the opinion that the time of discussion was sufficient whereas 46% participants felt that it was inadequate.

In response to the statement that the selection of experts was proper and they discussed effectively, the majority of participants (73%) expressed that the selection of experts was good and they discussed effectively, whereas 27% expressed that the panelist were not experts and discussion was ineffective. Most of the head teachers (82%) and teachers (71%) were of the opinion that the selection of experts was proper and effective whereas 42% CRC's and 35% facilitators were of the opinion that the experts were not selected properly and remained ineffective particularly in 'Teaching Learning of English' teleconferencing.

In response to the statement that the discussion of experts was well planned, the majority of participants (71%) felt that experts were well prepared whereas 29% participants were of the opinion that experts were not well prepared. 92% head teachers and 66% teachers were of the opinion that experts were well planned whereas 42% CRC's and 40% facilitators were of the opinion that experts were not well prepared.

In response to the statement that 'the panelists solved the problems properly'- 52% participants disagreed that their problems were solved whereas 48% were of the view that the panelist solved the problems. 50% CRC's and about 58% teachers expressed that the panelist was unable to solve the problems properly.

4.10 Question-Answer Session

In this training, after the presentation session, question-answer session was held. In this session participants interacted live with experts and shared experiences through telephone and fax. Teacher-educators at receiving centres facilitated these sessions.

During field investigation it was enquired whether question-answer session was useful or not. 61% participants stated that question-answer session remained useful whereas 39% participants stated that the session was not useful.

In response to the statement, whether all the participants were active during question-answer session, 56% participants were of the view that all the participants were not active during the question-answer session whereas 44% participants agreed. 70% facilitators held the view that participants were active during the said session. They replied that participants remained active when their centre had connectivity to the studio and after that they were engaged in other business.

Regarding questions raised by the participants, whether they were related to the subject discussed in the teleconferencing programme, 68% participants disagree that most of the questions raised by participants were not related to the subject whereas 32% agreed to the statement. 45% facilitators also agreed that most of the questions raised were not related to the subject. This was the responsibility of the facilitator that he should allow teachers to ask those questions which are related to the subject.

When participants were asked whether the answers given by panelist were satisfactory or not, most of the participants (60%) agreed that answers given by the panelist were satisfactory, whereas 40% disagreed to this statement. About 46% teachers and 35% facilitators disagreed to the statement whereas 77% head teachers and 65% facilitators agreed to the statement.

4.11 Impact of Programme

Participants were asked whether their participation in the programme remained fruitful. 49% teachers and 40% of the total participants were of the view that participation in these programmes remained not useful whereas 60% of participants expressed that the participation in the programme was useful and provided an opportunity to learn and interact.

When the participants were asked whether this technology could replace face-to-face discussion, 59% participants agreed to this statement and about 41% disagreed to the statement.

When the participants were asked about the effect of this programme on the achievement of children, 48% participants were of the view that this programme was useful to improve the achievement level of children, whereas 52% denied that there was any effect on the learning achievement of students.

4.12 Future Programme

When the investigator asked the participants for the organisation of such programmes in future, 66% participants agreed that such programmes should be organised in future whereas 34% did not favour such programmes.

4.13 Suggestions

- Minimum duration should be for two days
- Improvement in audio-video quality
- Decrease in number of participants at a center
- Supply of telematerial along with the deputation letter for better prepared audience
- Phone facility in the room
- Panelist with good communication skills & knowledge
- Subject experts as facilitators

20. A Feedback Study of Teacher Training Inputs under the DPEP Phase II in Uttar Pradesh*

Najma Saxena[*]
Kuldip Kumar[**]

1. Introduction

The study was commissioned by the UP Basic Education Project and supported by the State Institute of Educational Management and Training, Allahabad. The researchers identified for the assignment included Dr Rukmini Banerji, Shri Julian Boyle, Prof.Umesh C. Vashishta and Prof Kuldip Kumar as Principal Investigators, and Prof. A. K. Sharma as the Lead Consultant. This write-up, based on the study report , reflects on the findings with a view to bring out the impact of text books recreated, teacher training materials and teacher training on classroom behaviour of teachers and students and other related parameters.

2. Objectives

The study had a focus on the following issues:

- Analysis of the new Textbooks and related Teaching-Learning-Materials (TLMs) prepared for classes 1 and 2.
- The strengths and limitations of the Teacher Training Packages (TTPs) developed to provide the necessary training to primary school teachers to utilize the pedagogical approaches adopted in preparing the instructional materials referred to above.
- Manifestation of pedagogical principles in the preparation of textbooks and TTPs, and in teacher and student behaviour in school and classroom situations.
- Intended improvement in student enrolment and retention

3. Methodology

To have an objective feedback on the quality of textbooks and the TTPs developed under the project, these materials were subjected to content-analysis following the standard procedure.

For examining the extent to which the training imparted to teachers was reflected in the classroom behaviour of teachers and students and other related parameters included in the objectives of the study, a sample survey was conducted in selected schools. The strategy adopted in the survey study was as follows.

3.1 Sampling

Out of 18 DPEP Phase II districts, 4 districts were selected on the recommendation of the State Project Office, two of which were adjudged to be better administered for teacher training inputs than the other two. The better administered districts, namely Lalitpur and Firozabad were, therefore, assumed to be experimental districts. The other two districts, namely Lakhimpur Kheri and Sidharthnagar were considered as control districts for the purpose of the present study.

Multilevel simple random sampling procedure was followed to select the blocks within a district, clusters within a block and schools within a cluster. A total of 48 schools from amongst 16 clusters, 8 blocks and 4 districts were selected for the study.

3.2 Assessment tools

The teaching— learning related aspects of interactions between teachers and students, and the overall school environment were studied by designing a comprehensive instrument (a multiple choice fixed answer check-list for observation by a trained observer in classroom and school situations) which included 38 items on academic aspects including pedagogical practices, 12 items on physical aspects of school and classroom and 10 items related to number of teachers, student enrolment, training received by teachers and related information

The data collection technique employed for various other parameters of the study included appropriately designed performae and Focused Group Discussion (FGD) with various stakeholders including students, teachers, teacher trainers, Basic Shiksha Adhikari (BSA), Coordinators of Block Resource Centers (CBRCs) and Nyaya Panchayat Resource Centers (NPRCs), and community representatives.

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3.2.1 Observation of Teacher and Student related behaviours

The teacher and student behaviours which were the focus of observation in the study included the following: (Relevant item No. in the observation check- list is indicated in the parenthesis)

(a) Teacher related behaviours:

1. Response to students' inquisitiveness (7)
2. Encouraging students to learn by doing (8)
3. Nurturing self-confidence in students (9)
4. Nature of teacher-assigned tasks to students (10)
5. Opportunity to students for oral expression (11)
6. Opportunity to students for written expression (12)
7. Ability based assigning of tasks to students (13)
8. Nature of teacher's style of inviting students to answer questions (14)
9. Teacher's attitude towards female students (15)
10. Teacher's approach to nurture creativity (16)
11. Teacher's knowledge of the subject being taught (17)
12. Teacher's use of previous knowledge and experiences of students in the teaching-learning process (18 & 37)
13. Teacher's presentation of the lesson (19)
14. Nature of activity based teaching (20)
15. Suitability of the language used by the teacher to enable students to comprehend the subject matter easily (21 & 23)
16. Teaching method of the teacher (22)
17. Use of teaching-learning materials by the teacher (24)
18. Availability of relevant text books (25)
19. Use of environmental inputs in teaching (26)
20. Use of teaching learning support materials by students (27)
21. Availability of teaching-learning-materials for teaching (28)
22. Use of songs, poems, stories in teaching (29)
23. Approach of the teacher to manage multi-grade related teaching situations (30)
24. Nature of assessment of the lesson taught (31& 38)
25. Teacher-student interaction in the class (32)
26. Teacher- behaviour during the assigned self-study to students (33)
27. Nature of teacher-behaviour during school hours (34)
28. Nature of reinforcement to students on their answering the questions asked by the teacher during the teaching process (35)
29. Nature of teacher-inputs to nurture character development of students during the teaching-learning process in the class (36)

(b) Student related behaviours

30. Seating arrangement of students (1 &2)
31. Student-teacher relationship (3)
32. Student-student relationship in the class (4)
33. Student involvement in the learning process in the class (5)
34. Student inquisitiveness (6)
35. Availability of textbooks (25)
36. Use of teaching-learning support materials by students (27)

(c) School-related aspects

Observations were also focused on school related aspects such as (a) educational environment and (b) cleanliness. In addition, other issues which were looked into were related to (c) enrolment, (d) drop-out, (e) attendance of students and teachers, (f) completion of five years of schooling, (g) concerns of community representatives related to schooling, (h) perceptions of trainers who were associated with the TTP and (i) supervisors involved in the follow-up activities regarding the potential of the TTP provided for expected change under prevailing conditions in primary schools, (j) teachers' perceptions of TTP received and its relevance to the facilities available in their respective schools to incorporate the new pedagogical practices emphasized in the TTP, and (k) students' perceptions of change in teachers' teaching behaviour after the latter had attended the Teacher Training Programme.

3.2.2 Data collection Techniques

In order to understand student enrolment patterns over the years, especially during 1996-2000, information was obtained from school records for the year 1997 (before DPEP Phase II was launched) and the year 2000 (three years after launching the DPEP) in the selected districts.

Actual attendance of students and teachers at the time of the school morning assembly, before recess interval and after recess interval were based on head-counts to see what percentage of students and teachers come to school in time and continue to remain in school up to before recess interval and after recess interval.

Interactions were held with students, teachers, teacher-trainers, BSA, CBRCs, CNPRCs and community representatives including parents of students attending village school and other residents of the village where the selected school was located. The nature and scope of interaction held with various stakeholders was focused on the following themes:

Interaction with teachers:

1. Teachers views on teacher-training programmes
2. Views on child-centered approach to teaching
3. Views on multi-grade teaching
4. Views on DPEP activities
5. Suggestions for aking school education effective
6. Views on prevailing conditions for teaching

Interaction with students:

1. Views on school
2. Views on teachers
3. Views on education authorities
4. Views on the curriculum being taught in school
5. Views on how to make school student friendly
6. Views on parents cooperation in studies

Interaction with supervisors:

1. Views on training of teachers
2. Problems of supervisors
3. Supervisors' contribution towards reforms in education
4. Views about their seniors
5. Any other suggestion

Interaction with community members:

1. View on present-day primary education
2. How to make primary education as per the wishes of village community
3. Views on teachers
4. Views on education authorities
5. Expectations from the education department
6. Role of community in reforming education
7. Parents' inquiring from children about happenings in school

3.3 Data Collection

Field Investigators engaged for data collection were trained in a three-day hands-on training programme. The intent of each item in the check-list and the mode of recording observations and information were discussed and the methodology was practised in a school situation under the guidance of the concerned Principal Investigator.

The required information was collected in November-December 2000 by visiting sampled schools and observing targeted behaviours from the time of school assembly in the morning up to mid-day recess in the afternoon.

4. Analysis of Data

Analysis of data was carried out mainly in terms of descriptive and qualitative aspects to achieve the stated objectives of the study. Observations on each of the items in the check-list were tabulated under different response categories for respective items. Percentages of frequencies in each response category were worked out for quantitative comparisons. In the case of responses to items in the check-list, 25 per cent and above were considered to be meaningful as most of the items had four options and i/4th could be due to chance factor.

For qualitative analysis, notes kept during FGD and interactions with respondents were analysed to have an overall view.

4. Findings

4.1 Textbooks and TTPs

Analysis of textbooks and teacher-training-packages developed suggests that due emphasis has been given on thinking, doing and learning through activities to be undertaken by students and teachers.

4.2 Teacher Training

Interactions with stakeholders have revealed that the teacher training was conducted methodically, emphasizing all key aspects related to pedagogy and attitudinal orientation to the tasks expected of the teacher. The identified gap is some bottlenecks in taking the pedagogical practices in totality to the teaching learning environment of the classroom which should be possible to overcome in future.

4.3 Findings related to teacher and student behaviour and other aspects

1. Out of 48 schools selected for the study, 47 schools were found to be functioning on the day of the commencement of the study.
2. The teacher average per school in per cent is the highest in Faizabad (2.91), followed by Lalitpur (2.36), Lakhimpur (2.15) and Sidharthnagar (1.75)
3. A majority of teachers working in the sampled schools in the four districtshave undergone teacher training rounds 1 and 2. Marginal shortfalls could be attributed to some teachers having retired after having undergone teacher training or some new ones might have joined.
4. There is a positive change in school enrolment in three out of four districts selected for the study. The increase in girls' enrolment was also higher than that of boys.
5 Although there are variations across districts, if all the four districts are taken together, students' attendance is more before the recess and reduces by about 9 per cent after the recess.
6. Out of 38 selected behaviours, in 26 marginal positive changes were observed.
7. Out of the four districts identified for the study the assumed experimental districts (Lalitpur and Firozabad) have come out better in terms of utilization of teacher training inputs

22. Classroom Observation Study in School of UPDPEP-II Districts

- *Shardindu*

The present study was planned and undertaken to assess the perceptible effects and impacts which may be attributed to the DPEP interventions. It also contemplated to provide a baseline data in respect of the existing physical environment as well as the visible changes in quality of teaching-learning system manifest at the school level. It was also hoped that the study would highlight the status of various policy implementing processes and their potentials for a sustainable teaching-learning system coming to sight.

1. Introduction

To ensure a speedy and expeditious realisation of the goal of universal access and the stipulations with regard to quality results, one of the most efficacious and timely interventions has been that of DPEP. It was launched as a national scheme of the central Government in 1994. Its focus of concern was to accelerate the national resolve to achieve universalization of primary Education in a time bound manner. UPDPEP became effective in September 1997 in 15 selected districts of U.P. The districts covered under DPEP were those where the literacy rate was found to be lower than the national average of 39.2%. Due to subsequent bifurcation of districts, DPEP-II project in Uttar Pradesh covered 18 districts including Balrampur bifurcated from Gonda, Sant Kabir Nagar bifurcated from Basti and Jyotibaphule Nagar which was bifurcated from Moradabad. Four more districts viz. Barabanki, Rampur, Behraich and Shrawasti having equally worrisome female literacy rates have also been taken up under DPEP-II from July 1, 1999. Thus, the addition of 4 new districts has raised the tally of DPEP-II districts to 22.

It consisted of creation and strengthening of institutional capacity augmenting quality and improving access. In consonance with the goal specific stipulations in DPEP coverage various inputs viz. improvement of physical resources, effectiveness and efficacy of teachers' training, improved pedagogy, provision of ECCE Centres, alternative schooling, attempting micro-planning and school mapping, making available financial aids for teachers to improvise teaching-learning materials, revitalising school curricula, text books and other supports with special attention on enlisting community participation have been focussed at different levels.

2. Objectives of the study

The main objectives of the study are as follows:

- To ascertain the extent to which UPDPEP inputs (physical, financial, training) have reached the schools.
- To find out the prevailing practices in respect of managing and executing teaching-learning operations in the classrooms.
- To assess the manifest level of effectiveness of teaching learning processes within the schools.
- To appraise the nature and extent of academic support available to teachers from BRC, NPRC and other supervisory staff.
- To esti mate the nature and forms of interaction patterns having taken place between the staff members in the school (head teachers, teachers etc.) and students within the actual class settings when the teaching work is in progress.

3. Method

3.1 Tools of the study

The entire study has been conducted in an overall framework of a **descriptive cum evaluative design**. Five types of assessment schedules were developed in order to procure data in respect of impacts on perceptible changes in school and **classroom processes, teaching competencies, teacher attitude and classroom interactions** impinging on class climate and structuring moves within nine categories of warming, accepting, amplifying, eliciting, responding, initiating, directing, correcting and cooling behaviour patterns.

3.1.1 School Schedule (OS-01)

For assessment of adequacy and effectiveness of physical facilities & other academic support structures provided to schools, a **school questionnaire** schedule was prepared. This tool consists of 13 broad areas which

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may offer a peep into the major interventions and their effects.

3.1.2 Assessment of school and classroom processes (OS-2).

The various training inputs and academic support which have been generated in the DPEP schools may be considered to be having a direct and indirect bearing on the school processes and the classroom practices. To what extent these facets of the school have undergone a transformation or are still in the process of undergoing a facelift is really another significant domain figuring in this probe. Notwithstanding several inherent difficulties, an effort has been made through this study to adumbrate the broad spectrum of changes being perceived in the school processes alongwith their accompanying operational structures. To this end, the observation schedule consisting of 20 questions was prepared with the help of various experts associated with the DPEP project and others having professional expertise in this regard. The areas of major concerns were identified in order to screen the visible and invisible impacts on the school processes and the teaching-learning systems evident in the classroom transactions:

3.1.3 Teacher Competence assessment schedule (OS-3)

In the present study the impact of training and other academic inputs has been assessed primarily through the teacher factor. It has been often contented that teacher is a pivotal factor in assimilating the emerging paradigm shifts in relation to educational processes. He/she is both the catalyst and the carrier for forging the needed perspectives of change in the pupils in particular and the community in general.It was, therefore, considered imperative to evaluate the overall impacts of the training programmes organized in the DPEP districts through the competencies and teaching styles acquired by the teachers. To appraise this a teacher assessment differential scale was designed to reflect the extent of influence and impact so evident. For designing this tool a detailed deliberation preceded. In all fifteen bipolar adjectives anchored in the five areas of competencies such as organized demeanor, dynamism, flexibility, warmth and acceptance and creativity were finalized.

The teacher competency assessment schedule prepared for the purpose was got filled in after the completion of the entire observation session.

3.1.4 Teacher attitude assessment schedule (OS-4)

For assessment of the **overall attitude** of the teachers in respect of the various aspects of DPEP interventions introduced in the shape of academic inputs, a teacher attitude assessment scale was prepared. This was used after required standardization. This tool consists of 28 different attitude statements, which cluster on the following ten attitudinal anchors formulated with particular reference to the DPEP inputs:

Attitude towards new curriculum, new textbooks introduced, continuous and comprehensive evaluation, innovative procedures, assignments & exercises, academic support, community participation, incentives, school environment and teaching-learning situation

The teacher attitude assessment schedule prepared for the purpose was got filled in after the completion of the observation sessions with the help of teacher concerned.

3.1.5 Study of classroom interaction (OS-5)

Reciprocal category systems (RCS) of ***Richard Ober*** (1967) which focuses on the study of the socio-emotional aspects of the class climate was adopted for studying classroom interaction. For this a 19-category system has been used with slight modifications in the original categories. The observation data collected through this tool was transformed into a 19X19 observation matrix for obtaining specific category percentages, comparative category ratios, cell loadings and behavior sequences. In the present impact study, the system comprised of verbal categories that can be applied to teacher as well as student-talk.

It may be pointed out that in the majority of observational systems attention is focussed essentially on teacher behaviour while student behaviour appears to be viewed only as incidental. In the present system a "reciprocity principal" has been followed. This implies that for every teacher verbal behaviour that can either be observed in the classroom or theoretically conceived there exists a corresponding student verbal behaviour.

3.2 Training of observers

An intensive training program of more than 20 hours was organized at the SCERT head quarter of Lucknow during the months of December, 2001 with an elapsed time of about 4-5 weeks allowed for practice purposes. The trainees were drawn from the teaching faculty of DIETs

and the Bureau of Psychology, Allahabad. Three training sessions of 4-5 hrs each were conducted. In the first session the RCS categories were introduced and explained orally. In the second session the RCS categories were got memorized. Subsequently the exemplifications for each category description were given to enable the trainees to exactly associate the code numbers with the verbal settings of class room interactions. In the third session 3-5 minutes of simulated interactional settings were presented by the trainer either in a tape-recorded voice or in live situations. After ensuring adequate practice a tape-recorded interactional episode of 5-7 minutes duration was used for being encoded. For encoding the observers were required to use a code number every three seconds. Thus, in one minute 20 codes were required to be produced. The agreement of the trainee's codes with that of the master trainer was ascertained. For each trainee the session concluded after he/she appeared to have reached a 0.75 to 0.80 level of reliability.

3.3 Sample frame

The broad sample frame of the study consisted of twenty-two DPEP-II districts. In the first level of the selection of sample for this study, the schools from each district were drawn using a systematic random sampling procedure. Thus, in all 220 schools were selected out of a total of 29172 ensuring a draw of 10 schools from each district.

3.4 Field Work

After the preparation of the specific tools as described earlier and after attempting a necessary standardization, a training programme was conducted in the manner delineated in the previous section. A comprehensive fieldwork was planned for the collection of data intended for this study. A period of about two to three weeks was allowed for this purpose. Each district was allotted to two observers. These observers were assigned to a supervisor who was a retired/working officer of the Department of Education and who had also undergone training along with the observers. On a day before the observation session began, the concerned observer was informed through the supervisor about the school to be visited by him/her for purposes of observation. The name of the school to be visited next was disclosed only in the evenings preceding the day of observation. This was done with a view to maintain confidentiality and naturalness in the process of observation.

4. Findings

4.1 Impact on School Practices

The appraisal of the UPDPEP support in terms of the impact on school practices was one of the central concerns of this study. The findings in this regard may be succinctly depicted now. The overall picture in respect of the schools of UPDPEP-II districts tends to emerge as

- ☆ The school schedules has been found to be commencing on right time in more than 96% of the schools. Remaining schools started their schedule bit late.
- ☆ The presence of teachers in the school is a necessary perquisite for improving the quality of teaching and academic ethos of the schools. It may be stated that in more than 2/3rd of DPEP schools, 100% teachers have been found to be present in the schools.
- ☆ One of the major concerns in evaluating the impacts on school practices related to assessing the influence perceived in the classroom teaching transactions.

Table 1: Method of classroom teaching

Method	Schools (%)
Question-answer	20
Activity based	44
Book Reading	21
Lecture	15

It is evident from the table 1 that 44% DPEP schools are adopting activity based teaching methods. The next two methods are question-answer method and reading from a book. The lecture method appears to be less popular now.

- ☆ The findings indicate that in at least 54% of DPEP schools more than 50% students have been observed to be participating actively in the classroom activities.
- ☆ It is observed that in 19 out of 22 DPEP districts, the teachers have been found to be encouraging and enlisting the initiative of SC category students. The percentages of schools for these districts ranges from 70-100. Similar findings have been noticed in case of girls students.
- ☆ It has also been observed that in more than 95% schools of UPDPEP districts- textbooks were available to the students and teachers.
- ☆ It was impressed upon the schools to promote

parental interest in the various activities and programmes organized by them. The analysis of the data reveals that in 77% schools parental interest by visiting the school premises and talking to the teachers about the progress made by their wards has been noticed in positive category.

- In an ideal educational arrangement, it is very often contended that the activities of teaching and testing have to move hand in hand. It was observed that in 20.42% schools evaluation are carried out daily, in 27.4% weekly and in 41% schools evaluations are carried out on monthly basis.
- It was also noticed that in 78% of schools, special attention is being paid by the teachers to the children of learning disability while only in 22% school the attention paid to children with learning disability needs more attention

4.2 Impact on Teacher Competencies

For the sake of conceptual clarity in the present study teacher competencies have been defined as manifest behavioural characteristics which enable the teacher to perform the crucial tasks pertaining to teaching at a desired level of effectiveness. These competencies were required to be rated by the trained observer on a siemantic differential scale consisting of 15- bipolar adjectival words. These belong to 5 different anchors as - **organized behaviour, dynamism, flexibility, warmth & acceptance and creative capability**. Table-2 embodies the percentage of teacher evincing the competencies under the five anchors in the scale of high, moderate and low.

Table 2: Teacher Competencies under five anchors

Anchors/ Competencies	High	Moderate	Low
Organized behaviour	77.59	8.64	13.82
Dynamism	77.14	9.95	12.91
Flexibility	71.14	9.36	19.59
Warmth & Acceptance	74.82	10.36	15.32
Creative Capability	70.95	11.59	17.45
Average (%)	74.32	9.98	15.81

It is a matter of fact that in most of the DPEP districts the teaching competencies under the five anchors of organized behaviour, dynamism, flexibility, warmth and acceptance and creative capability have been significantly impacted. More than 74 percent teachers were recorded in high category whereas in moderate category, the value ranges from 8.64 to 11.59% and more than 9 percent teachers were observed with moderate competency. Only 15.8 percent teachers were observed with low teaching competency.

4.3 Teacher Attitude

Teacher- attitude is a crucial determinant not only in matters of acquiring teaching transactional skills but also in deciding the needed will to undertake the process of implementation of the various programs and policies with the seriousness that they deserve. It was, therefore, decided to incorporate the component of teacher attitude also as an important domain of the study. A separate tool was prepared to assess the teacher attitude. It was a **Likert** scale with 28 attitude statements reflecting on the areas pertaining to new curriculum, new text books introduced, the scheme of continuous & comprehensive evaluation, the assignments and drills offered, various incentive measures adopted and the drive to adopting innovative procedures and improving school environment as a whole.

In terms of categorization as reflected in table 3 the total number of teachers in each of the 22 DPEP-II districts was ascertained for positive, negative and neutral categories. The same has been subsequently converted into percentages for purposes of ease in comparison. Table-3 summarizes the results so arrived at

Table 3: Percentage of teachers showing positive, negative and neutral attitude for all the 22 DPEP-II districts.

Attitude	Positive	Neutral
Range	65-100	0-35
Average (%)	90.8	9.15

It is apparent from the perusal of Table 3 that the percentages of teachers showing high positive attitude range from 65 percent to 100 percent for all the 22 DPEP-II districts. The teachers with negative attitude draw a blank while for those having neutral attitude they range from 0 to 35%. Even if for argument sake, it is taken to believe that teachers have wilfully opted for showing positive attitude, it lends support to the contention that the teachers of the DPEP schools, in general, have acquired a positive disposition syndrome towards the various interventions introduced over a stretch of five years now. In the light of this encouraging evidence it may be rightly surmised that the DPEP interventions are influencing the attitudinal beliefs and values of the teachers in a very significant way.

4.4 Academic Support System

The quality of academic support provided in the shape of strengthening of BRCs, CRCs, DIETs, DRU, Teacher Training, New textbooks and VEC have been compiled and analysed with a view to focus on the strengths and weaknesses of the academic support policy and the various structures created under the projected goals decided at the state level. Table 4 highlights these findings.

Table 4: Impact of academic support in % on primary schools of DPEP-II districts

Sl.No.	Support	Very Effective	Effective	In-effective
1.	In-service Training	70	30	0
2.	BRCs	30	60	10
3.	NPRC	40	48	12
4.	DIETs	49	45	6
5.	TLM	42	48	10
6.	New Textbooks	63	36	1
7.	VEC	25	48	27

A look at table 4 brings out the fact that in more than 70% of the schools of DPEP-II, in-service training programmes have been found very effective. The second one is new textbooks (63%) whereas the academic support provided in the shape of VEC is only 25% very effective category. In the ineffective category in-service training programmes have been found nil, but VEC impact has been witnessed 27% to be ineffective.

4.5 Classroom processes

The main findings of the classroom observation in respect of all the UPDPEP-II districts indicate the following trends for both the classes (class-II and class-V) and for math, science and language subjects.

- There is a definite trend visible in the classroom interactional behaviour of teachers and students. In addition to active give and take patterns of verbal behaviour, there is also evident a tendency to use, build on and amplify the response of others.
- The socio-emotional aspects of class climate are showing a gradual shift from use of negative elements such as threats, intimidations and punitive measures to adoption of praise, encouragement and acceptance moves during classroom instructions.
- The extent of "warmth" and informality" as viewed in relation to "Coldness" and "formality" in the classroom is observed to be more.
- The magnitude of sustained teacher-teacher talk (TT) and sustained students-students talk(SS) is found to be generally low in both the classes for all the four subjects studied, which again is indicative of interative patterns having an edge over monologue or non-interactive type of verbal behaviour.
- The magnitude of teacher-talk followed by student talk and vice versa is observed to be very high in respect of both the classses and in all the four subjects. This is definitely a pointer to those being an increasing teacher-student interactivity which is considered to be a necessary precondition for learning to take place.

5. Conclusion

In the light of our findings in respect of total impact visible or invisible, direct or indirect, manifest or latent as perceived through school and classroom transactions analysed at length here, some suggestions may be offered to continually improve the academic potentials and ethos of the various structures created under the UPDPEP umbrella. These are indicated as follows:

- The training programmes of teachers both at the pre-service and in-service level should include classroom interaction analysis procedures,brainstorming sessions, sensitivity camps and pedagogy courses based on competencies in classroom communications, creative capability and dynamism.
- Mere updating of subject knowledge of teachers is not enough. They should be subjected to orientation/induction courses in the begining of the academic session in respect of the new trends in communication technology in particular and use of educational technology approach in general.
- The programme of continuous and comprehensive evaluation (CCE) at the primary school level should be initiated at the earliest. Teachers should be given intensive training in designing reliable and valid tests of various types.
- The appraisal of school and classroom processes should be undertaken every alternative year in terms of their academic, social and other outputs.The appraisal of school and classroom processes should be undertaken every alternative year in terms of their academic, social and other outputs.

The school showing outstanding performance be awarded certificate of merit and be given other incentives as well. A specific incentive plan should be worked out in this regard at DIET level itself in consultation with district authorities.

Thus, it may be emphasized that a near complete face-lift of the primary schools in terms of extending their physical, academic and social potential further should be the goal. The teacher's expertise in handling the school and classroom processes should be continually enhanced by organizing meaningful teacher education courses and training programmes.

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23. Impact of Teachers and School Grants on Effectiveness of the Classroom Transactions

Prerana Mohite*

1. Introduction

The need to expand and upgrade elementary education in the country had been recognized as early as 1950 and India made its commitment for it in the constitution. While the goal of universalisation is still not within reach, it needs to be acknowledged that Government has been making consistent efforts towards it. The benefits from elementary education are not confined only to the individuals who get it but rest of the society also benefits by it.

One of the most recent and effective programmes of the Government towards strengthening and expanding primary education is the District Primary Education Programme (DPEP). It is an important step in a positive direction that facilitated better coordination among the three partners, viz. the government of India, the state government and the funding agencies. One of the most significant features of DPEP programme was to break the austerity of planning education and decentralizing it. For the first time the districts participating in the DPEP were given substantial funds for a stipulated period of time. District level planning in Primary Education has been accorded a respectable place under the DPEP.

1.1 DPEP in Gujarat

DPEP is functional in three educationally backward districts of Gujarat viz Banaskantha, Panchmahal and Dangs. Three basis objectives of the programme are;

a) Universal enrollment;

b) Retention of students in school;

c) Ensuring improvement in quality

Among various efforts and measures to meet these objectives, DPEP has provided Rs. 2000 school grant and Rs. 500 teacher grant per year under the provision of DPEP guidelines.

In the beginning of the year the teacher gets Rs. 500 for the whole year. The main objective of this grant is to create self-inspired, self-motivated equipments and aids that can be useful in enhancing children's educational capabilities. To summarize, the teacher's grant aims at:

- making teaching interesting and joyful
- making classroom transaction interesting and participatory
- improving the achievement level of students.
- preparing no cost or low cost indigenous teaching-learning materials relevant to and available in local environment.

Further, every school is provided Rs. 2000 grant per year through the Village Education Committee (VEC) which enables it to purchase blackboard, educational maps, science kit, maths kit, activity kit, music kit, drinking water facility, sport equipment, table-chairs, library cupboard, gardening equipments etc. Thus the schools grant aims to build basic infrastructure facilities of the school, thereby supporting improvement in overall school environment.

This grant to teachers and schools has been given since August 1996. It is important at this juncture to find out and assess the extent to which these objectives are met. This study has been undertaken mainly to review this.

2. Objectives

Broadly, the study has following major objectives.

1) To understand the process of disbursement of the teacher grant and the school grant.

2) To understand the extent and nature of utilization of the grants.

3) To examine the appropriateness of utilization.

4) To look for a possible effect of utilization of the grants on school/ classroom environment and processes.

5) To understand the manner in which the teacher and the community apply skills of decision-making and management while utilizing the grants.

3. Methodology

3.1 Location and Setting of the Study

DPEP is operational since August 1996 in Banaskantha, Panchmahal and Dang districts in Gujarat. The details of the schools and teachers are as under:

* *Project Director ECD-LRC, M.S. University of Baroada. The paper was presented at the seminar by Ms. Khyati Shah & Ms. Rutva Patel.*

Table 1: Profile of Districts

District	*No. of Schools*	*No. of teachers*
Banaskantha	2247	7697
Panchmahal	3697	11727
Dang	405	1246
Total	6349	20670

3.2 Sample

For the present study schools and teachers were selected through random sampling technique.

Table 2 shows the number of schools included in the sample and the number of teachers interviewed for the study.

Table 2: Sample of the Study

District	*No. of Schools*	*No. of teachers*
Banaskantha	102	356
Panchmahal	227	562
Dang	22	58
Total	351	976

3.3 Tools

A questionnaire cum interview schedule was developed to collect relevant information from schools and teachers.

The questionnaire had six sections viz.

1. Background information of teachers.
2. Process of disbursement of grant.
3. Availability and utilization of grant.
4. Utilization of teaching learning material.
5. Impact of grant on teaching learning process.
6. Autonomy to teachers.

3.4 Analysis

The responses of teachers on each question were recorded manually and coded. Data was then analyzed into frequencies and percentages, for each district separately so as to get a comparative profile in the three districts.

4. Results and Discussion

This section presents the findings of the study. The findings are presented under following subheads:

- Profile of the teachers
- Disbursement of the grant
- Utilization of grant
- Impact of grant on classroom interactions
- Autonomy to teachers

4.1 Profile of Teachers

A substantial percentage of teachers in the three districts fall within an age range of 26 to 35 years (46.1% in Banaskantha, 38.8 % in Panchmahal and 48.3% in Dang).

In all the three districts, percentage of male teachers is higher compared to female teachers. The difference is highest in Banaskantha where there are only 29.5% female teachers against 70.5% male teachers. In the other two districts the difference is much less and comparable (53% male and 47% female teachers in Panchmahal and 55.2% males and 44.8% females teachers in Dang). Thus one can say that there is more or less equal distribution of male and female teachers across districts except in Banaskantha where in the number of male teachers is significantly higher than females and on an average the teachers teaching in primary classes are young.

Majority of teachers, 75.3% in Banaskantha, 82.7% in Panchmahal and 84.5% in Dangs are (PTC- Primary Teacher Centre) trained. Few of them also have B.Ed/ M.Ed/ higher educational degrees.

Also a sizeable number of the teachers (57.6% Banaskantha, 39% Panchmahal and 51.7% Dang) have experience of 1 to 10 years and a few teachers also have experience of more than 10 years.

Almost all the teachers (Banaskantha 99.2%, Panchmahal 99.8% and Dang 100%) reported that they use educational aids while teaching.

Thus one can state that the teachers in primary sections of the three districts are young, trained and qualified. They demonstrate a high degree of awareness of educational programme. All of them do use different types of educational aids to make the teaching-learning transactions more effective. There is almost equal ratio of male and female teachers in Panchmahal and Dang. In Banaskantha the percentage of male teachers is substantially higher compared to female teachers.

4.2 Disbursement of the Grant

Having made the provision of grants to teachers and schools, it is also equally important to evolve appropriate mechanisms to disburse these grants.

Almost all the teachers of primary grade (99.2% in Banaskantha, 98.6% in Panchmahal and 98.9% in Dangs) are aware of the provision and purpose of the grant. Most of the teachers (91.9% in Banaskantha, 96.4% in Panchmahal and 96.3% in Dangs) reported that the grant of Rs. 500 and Rs. 2000, which is marked out for them, is regularly available.

Table 3: Source of the Teacher grant

Source	*Districts*		
(n=356)	*Banaskantha (n=562)*	*Panchmahal (n=58)*	*Dang*
Village Education Committee (VEC)	16	24.2	31
Principal	79.5	73.5	70.7
Gram panchayat	0.6	0.7	-
Others	0.6	-	-
CRC	0.6	1.1	12.1
No response	0.3	1.2	3.4
NA	3.9	0.7	1.7

(*Note*: Total > 100 due to multiple responses)

A large percentage of teachers reported that they receive this grant from the principals of the school. Thus it seems that VEC is routing the teacher grant through the principals. Some teachers also reported that VEC is the source of this grant (Table 3)

Table 4: Mode of getting the Teacher grant (%)

Mode	*Districts*		
	Banaskantha (n=356)	*Panchmahal (n=562)*	*Dang (n=58)*
Cash	87.9	89.9	53.4
Cheque	7.9	8.0	55.2
Others	0.3	0.4	1.7
No response	-	1.1	0
NA	4.2	1.1	1.7

(Note: Total>100 due to multiple responses)

Most of the teachers reported that they get the amount of grant in lumsum and not in installments. Generally in Banaskantha and Panchmahal, most of them received the grant in cash. In Dang, the grant is also given by cheque. Infact 53% teachers in Dang received cash where as 55% received the grant through cheque (Table 4).

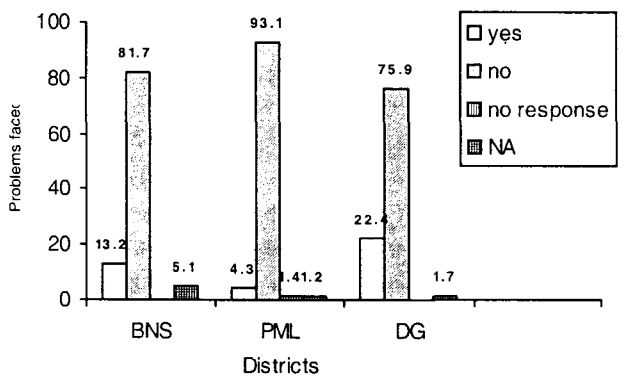

Figure 1: Problems faced in getting the Grant (%)

As seen in figure 1, a large percentage of teachers seem to face no difficulty in receiving this grant. However, some of them (Banaskantha 13%, Panchmahal 4%, and Dang 22%) did report having faced some kind of difficulty in receiving this grant. The most common problem reported is that the grant was available only in the first year and later on it stopped coming.

Thus based on the responses and findings one can state that the mechanism and system of grant disbursement has worked out well. All teachers and schools receive the full grant marked out for them; they receive it on time and quite regularly. Generally, most of the teachers do not face any problem in receiving the grant.

4.3 Utilization of Grant

As Table 5a shows, the teachers utilize the grant adequately. About 96% in Banaskantha, 98% in Panchmahal and 98% in Dang reported that they used Rs. 500 or more for various activities.

Table 5a: Amount of grant used every year (%)

Yearly used amount (in Rupees)	*Districts*		
	Banaskantha (n=356)	*Panchmahal (n=562)*	*Dang (n=58)*
500	87.6	94.3	77.6
500 and above	8.4	3.6	20.7
No response	-	1.1	-
NA	3.9	1.1	1.7
Total	100	100	100

Table 5b: Utilization of grant for different activities (%)

Activities		*Districts*	
	Banaskantha (n=356)	*Panchmahal (n=562)*	*Dang (n=58)*
Story books	7.0	5.0	5.2
Subject related books	16.0	6.6	12.1
Charts, maps	82.3	71.7	93.1
Renovation of school	4.5	4.3	12.1
Facilitate students	39.3	26.5	43.1
Raw material for educational activities	91.3	92.0	86.2
Others	2.0	4.6	-
Educational programs	0.6	-	-
Picnics	0.3	-	-
Class work for students	0.6	-	-
No response	-	1.4	-
NA	3.9	1.1	1.7

(*Note*: Total > 100 due to multiple responses)

Table 5b presents various activities for which the grant money is utilized. The pattern is quite similar across the three districts. Procuring raw materials for educational activities and getting charts and maps rank high followed by other resources to facilitate students (39%, 26% and 43% in Banskantha, Panchmahal and Dang respectively).

Other activities for which the grant is used are cultural activities, excursions and classroom activities for children. Remaining amount is very small which is used for getting storybooks, subject related books, school renovation etc. These facilities and equipments are used for girls and boys both as reported by a large number of teachers (95.8% in Banaskantha, 96.1% in Panchmahal, 98.3% in Dangs). The responses do not reflect any gender preference.

Table 5c: Help received from various sources (%)

Sources	*Districts*		
	Banaskantha (n=120)	*Panchmahal (n=52)*	*Dang (n=3)*
Village (cash)	5.3	0.9	-
Village (kind)	14.3	3.9	-
Organizations	4.5	1.1	1.7
Parents	7.3	2.3	-
UNICEF	2	-	-
No response	3.9	2.7	3.4
NA	66.3	89.7	94.8

(*Note*: Total > 100 due to multiple responses)

In DPEP there is emphasis on involvement of community in children's education. There are several places wherein community has played an active role and contributed substantially in cash or/ and kind for educational activities and programmes of schools.

Generally, other than the Government grants, schools receive assistance from village community, village level organizations, parents and international funding organizations like UNICEF. The amount of such grants is much less than the grants given by the Government (Table 5c).

Unfortunately, in all the three districts a large percentage of teachers reported that they did not receive any help from parents or other village level community organizations. However, the situation is more positive in Banaskantha where 33% of teachers reported to have received some assistance from the community. In Panchmahal and Dangs, very small percentages of teachers reported such help. Modest support from all these sources is received in cash and/or kind. Different kinds of support are received for different types of school activities. Some of these include; buying slates and pens, preparing play ground for children, procuring benches or infrastructure items such as furniture, fans etc, play equipments, celebration of Independence Day and Republic Day, and upgrading classroom decorations.

One can say that the ideology and trend of community involvement in children's education has certainly begun. With concerted efforts and community awareness, one can hope to enhance community participation in future.

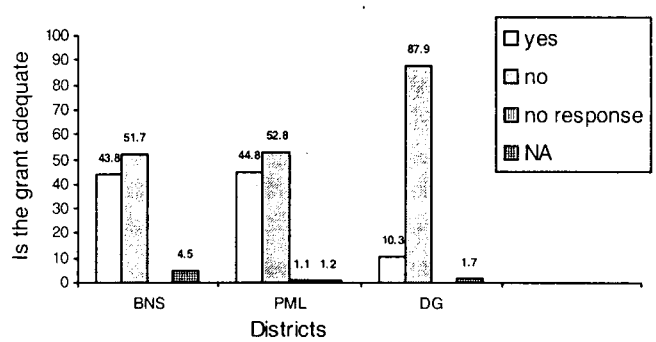

Figure 2: Adequacy of the grant (%)

Figure 2 shows teachers' perception on adequacy of grants. The pattern of responses in Banaskantha & Panchmahal is quite similar where in a little more than half of the teachers have reported that the grant amount is not adequate and little less than 50% have stated it to be adequate. However in Dangs, 87% of teachers said that the grant amount was inadequate.

Further teachers were asked, "how much grant would be enough" in their view. The teachers felt that (40%, 38.6% and 69% respectively in Banaskantha, Panchmahal and Dang) amounts ranging from Rs. 500 to 1000 should be adequate. A very small percentage of teachers articulated that Rs.1500 to 2000 should be considered adequate.

A large majority of teachers in all the three districts (96.1% in Banaskantha, 95.2% in Panchmahal and 93.1% in Dangs) expressed that they were capable of deciding about the needs for different types of educational equipments.

Field observation and discussion with the teachers revealed that teachers made decision about procuring different TLMs in consultation with their colleagues, the principals or at times through consultation with subject matter experts. Often, the staff of Early Child Development – Learning Resource Centre also provides necessary guidance. It is heartening to note that teachers make their decisions judiciously and carefully rather than on adhoc basis.

Table 5d: Purposes for which educational equipment is used (%)

Purpose	*Districts*		
	Banaskantha (n=356)	*Panchmahal (n=562)*	*Dang (n=58)*
Education	89	93.8	94.8
For a particular purpose	40.4	35.4	17.2
Especially for girls	2.2	0.9	5.2
Especially for boys	2.5	3.6	3.4
For boys and girls	87.4	82.6	84.5
For group activity	85.7	74.9	63.8
For individual teaching	68.8	65.3	22.4
No response	-	0.2	-
NA	3.7	0.5	1.7

(*Note*: Total > 100 due to multiple responses)

Teachers have started using TLMs and aids regularly in day-to-day teaching. Also some TLMs and aids are made and utilized to teach selected concepts to students. There are also materials that are used for teaching children individually (Table 5d).

4.4 Impact of Grant on Classroom Interactions

Availability of grant and its appropriate use has to improve classroom interaction. As depicted in Table 6, 96%, 98.8% & 98.3% of teachers in Banaskantha, Panchmahal, Dangs reported that the grant has brought about a positive change in teaching method and classroom transactions.

Table 6a: Change in teaching method due to the grant (%)

Change of Mathod	*Districts*		
	Banaskantha (n=356)	*Panchmahal (n=562)*	*Dang (n=58)*
Yes	96.1	98.8	98.3
No	-	0.2	-
No response	-	0.2	-
NA	3.9	0.9	1.7
Total	100	100	100

Table 6b: Improvement in students and classroom due to material (%)

	Districts		
	Banaskantha (n=356)	*Panchmahal (n=562)*	*Dang (n=58)*
Improvement in students			
Yes	96.3	99.1	98.3
No	-	0.2	-
No response	-	0.2	-
NA	3.7	0.5	1.7
Total	100	100	100
Improvement in classroom			
Yes	96.3	98.9	98.3
No	-	0.4	-
No response	-	0.2	-
NA	3.7	0.5	1.7
Total	100	100	100

Teachers have reported improvement in classroom activities and students performance due to the use of educational equipment (Table 6b).

Table 6c: Changes seen due to the use of material and equipment (%)

Changes Seen	*Districts*		
	Banaskantha (n=356)	*Panchmahal (n=562)*	*Dang (n=58)*
Yes	96.3	99.1	98.3
Teaching becomes more effective	55.9	61.4	55.2
Learning becomes easy	75.3	80.8	63.8
No changes seen	0.6	2.1	-
Others*	7.9	12.08	-
No response	-	0.2	-
NA	3.7	0.4	1.7

(Note: Total > 100 due to multiple responses)

Other improvement in children due to use of educational equipment and materials include;

- Children become curious
- Helps in mental development of children
- Children's ability to express increases
- Children become regular
- Educational process becomes interesting
- Teacher's effectiveness increases

Table 6c describes the changes/ improvements due to the use of teaching materials and equipment. Substantial changes have taken place in the teaching-learning process, in students and in teacher's performance as well.

The above tables show clear improvement in students learning and performance as well in learning environment of the classrooms. Students get encouraged and interested in learning and they understand the complex concepts better due to the use of specific teaching-learning materials. A large percentage of teachers reported that there is a "drastic change" in classrooms due to these grants.

Spreading education to remote tribal areas and especially to girls has been a major challenge of primary education throughout the country. Do improved teaching learning transactions and learning environment help education to reach out to tribal girls? Across the three districts teachers observed and reported that overall attendance of children has increased in classrooms. Also, it is heartening to note that in Panchmahal, Dang and Banaskantha districts, 74.9%, 82.2% and 24% teachers especially pointed out that attendance of girls has also improved which they attribute to improved teaching-learning environment. This implies that better teaching-learning transactions and better learning environment have made it possible to attract children to school and also sustain their interest.

The field observations also corroborated teachers reporting related to use and impact of TLM in classrooms.

4.5 Autonomy to Teachers

The teacher is the most important person in any programme that aims to improve primary school teaching. Efforts towards giving more autonomy and decision making to teachers are consistently needed, to meet this goal.

Table 7a: Decision making about use of grant (%)

Who Decides	*Districts*		
	Banaskantha (n=356)	*Panchmahal (n=562)*	*Dang (n=58)*
Village education committee	2.8	10.9	20.7
Principal & staff	23.0	24.0	41.4
Teachers	82.6	77.4	79.3
Parents	0.8	0.5	1.7
Expert	0.3	1.4	3.4
Others	-	0.5	1.7
No response	-	0.2	-
NA	3.9	1.1	1.7

(Note: Total > 100 due to multiple responses)

It is heartening to observe that the choice of how to use the grant money and what and from where to procure the required materials is left largely to teachers (Table 7a).

Table 7b: Criteria for purchase of educational material and equipment (%)

	Districts		
	Banaskantha (n=356)	*Panchmahal (n=562)*	*Dang (n=58)*
Basis			
Syllabus	39.0	23.7	8.6
Based on needs	85.7	84.7	89.7
No. of divisions	0.6	2.5	-
Depending on the budget	0.6	0.9	-
Others	61.5	56.9	63.8
No response	-	0.2	-
NA	3.7	0.7	3.4

(Note: Total > 100 due to multiple responses)

In some schools, the principal and teachers make decisions about purchase of educational material and equipment jointly. Also a substantial number of teachers make these decisions based on the needs of children. Some also make decisions based on the syllabus (Table 7b).

It is conceived that more community participation and involvement in school should be encouraged. Results show that such a trend has begun though it happens to a very limited extent. In Banskantha, 19% of teachers have reported help of village level organizations in preparing and purchasing educational materials. Fourteen percent teachers also acknowledged the support of other sources such as Panchayat members, skilled laborers from villages or organizations like UNICEF.

In Panchmahal the main help came from some other than village level organization. In Dang, 15% of teachers received help from parents and 12% from village organizations.

On the whole, teachers enjoy autonomy in use of grants and there is evidence of good decision-making and managerial skills in procuring appropriate and useful teaching – learning materials.

4.6 The specific results pertaining to disbursement, procurement and use of grants can be summarized as follow:

1. The teachers in the three DPEP districts are young, trained and qualified.
2. The mechanism and system of grant disbursement in the three districts has worked out well. All teachers and schools receive the full grant regularly and on time.

3. The grant is utilized fully and appropriately. By and large the grant money is spent in procuring teaching – learning materials and resources that enhance effectiveness of classroom transactions.
4. The schools and teachers have autonomy in making decisions about use of grants. The teachers are capable of deciding about the needs for different types of educational equipments. This reflects their managerial skills as well.
5. The availability and appropriate utilization of grant has served the purpose for which these were provided. The classroom transactions and interactions have improved. The impact is reflected in;

   a. Better teaching – learning methodology.

   b. Improvement in students' attendance, performance and classroom activities.

   c. Teacher effectiveness.

5. Findings in the context of Universalization of Elementary Education

India's goal of universal primary education of good quality points to three main challenges: expanding access, raising learning achievement and reducing gaps in educational outcomes among various groups. Four actions are suggested as key in meeting these challenges:

- Increasing the finance
- Improving the motivation, preparation and deployment of teachers
- Improving the quality of textbooks
- Building managerial and institutional capacity (World Bank Report, 1997).

Personal Observations

While the results of the study are encouraging, one must view them within certain limitations.

The data is mainly in the form of teacher's responses, cross checked and supported by field notes. The responses of teachers within a school as well across schools of Dangs, Panchmahal and Banaskantha are similar and consistent. Among other efforts towards effective primary education, provision of infrastructure facilities and resources ranks high. As reflected in findings of the present study, small grants to school and teachers have made a difference. The impact of this grant is visible in improved learning environment in the classroom. Teachers are able to utilize the grant appropriately and effectively across the three tribal districts. The decentralization of the system has facilitated easy disbursement and use of grant. Since the teachers in the three districts are qualified, young and motivated, it can be inferred that similar incentives and provisions will certainly lead to stimulating teaching learning transactions and better learning outcome in children. In-depth and more systematic observation of classroom transactions may provide valuable information on varied dimensions of interactions between teachers and children. This will add further insight and critical understanding of teaching learning process.

To sum up, this study has shown in a modest way how the provision of grants and allowing autonomy to teachers in using the grants makes an impact on classroom effectiveness. It has led to better learning environment, better teacher preparation and improved interest in learning. It implies that if better provision and inputs are made in important dimensions of classroom, the learning performance can certainly be improved. Good school facilities and stimulating learning environment are associated with higher learning achievements.

Finally, on the basis of this study, it is **recommended** that

1) Since a modest grant has shown a trend in positive direction, the state DPEP Directorate may consider raising the grant amount in Panchmahal, Banaskantha and Dang. Also in other districts such provision should be made.
2) There is a need for greater involvement and participation of village community in school activities. Better linkages between school and community will go a long way in strengthening children's learning. There is a need to think of different strategies to achieve this objective.

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24. A Study of the Impact of the Multigrade Teaching Project

*Hemlata Parasnis & Leena Deshpande**

1. Introduction

In the past, several efforts have been made at various levels to achieve the goal of Universalization of Primary education. Recently the emphasis has been not only on enrolment but on quality of education also. One problem we have faced is that in small schools with number of teachers less than the number of grades, the quality of teaching has been affected, since teachers have to teach students of two or more grades together in the same class,

Maharashtra Prathmik Shikshan Parishad, (MPSP) Mumbai made an endevour of improving quality of teaching and academic level of children in multi-grade schools. DPEP Maharashtra launched multi-grade teaching (MGT) project in the year 1998-99 by selecting 50 multi-grade schools from each of the nine DPEP districts (namely Aurangabad, Beed, Dhule,, Gadchiroli, Hingoli, Jalana, Latur, Nanded and Usmanabad) on experimental basis. Under the project, efforts were made to improve students' time on learning by adopting self-learning methods with the help of self learning cards, group learning and translating curriculum in to activities leading to understanding of concepts, revision and testing. As a part of this project, teachers were given one time training in some districts. In others, the training was a continuous process. For this purpose one UNESCO publication titled, ' Multi-class Teaching in Primary Schools' prepared for a similar project in the Pacific States was translated in regional language Marathi, and was made use of.

After the expiry of the project MPSP decided to undertake a study to judge the impact of the MGT project.

This was done under the consultancy of the Post Graduate Department of Education of the S.N.D.T. Women's University; Pune.

Most of the earlier studies and projects on multi-grade teaching were the **'status studies'.** They had tried to describe the extent of multi-grade practice and associated problems and how teachers organized teaching and learning in multi-grade primary schools. Some were connected with intervention in classrooms with teachers including organization and management of the schools; dissemination of the findings and making recommendations on multi-grade teaching policy and practice, and development of international network of colleagues working on multi-grade research, policy and practice.

2. Objectives

The objectives were –

(I) to evaluate the educational effects of MGT Project in schools under DPEP districts in relation to the objectives of DPEP.

(II) to compare the effectiveness of alternative strategies under MGT.

(III) to compare MGT and Non-MGT schools.

3. Methodology

'Survey' method was used to collect information from the teachers and the students. The **tools** for the data collection were-

(i) For Teachers –Interview Schedule & Questionnaire

(ii) For Students-Achievement Test & Observation

(iii) For Environment – Observation Schedule and

(iv) Documents.

The tools for data collection were designed by the Department and the data were collected with the help of a pair of District survey officer and a Jr. Field Investigator in each selected MGT district. The Director of the project visited MGT and Non-MGT schools in five districts and the coordinator visited MGT and Non-MGT schools in four districts.

The **sample** for data collection was as following -

(i) DPEP Maharashtra launched multi-grade teaching project in nine DPEP districts with 50 schools each making a total of 450 schools in 1998-99. The present study intended to compare these MGT schools with non - MGT schools.10% of the total MGT schools i.e.5 schools from each district were selected randomly, giving a total of 45 MGT schools. For the purpose of comparison another 5 Non-MGT schools were selected from each district in the vicinity of the selected MGT schools.

Thus in all 45 MGT schools and 45 non MGT schools comprised the sample.

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(ii) All the teachers from the selected schools were included in the sample for studying teachers profile.

(iii) In order to study student's profile, 5 students of Std. II and IV from each school were selected at random. All the students so selected were observed in each school. They were allowed to interact - freely with each other without being conscious. Thus, about 900 students were assessed for the purpose of evaluation of self -learning skill, achievement, skill in co-operation etc. in the overall Impact study.

4. Findings

The following are the findings of the study based on the data collected and the discussions with the teachers, concerned authorities and the villagers.

(i) General atmosphere

- Almost all the schools were situated in villages. The general atmosphere in the schools and outside was on the whole attractive and clean in MGT schools. School buildings though not modern were in good condition.

(ii)Teachers

- There were now two teachers in every MGT school. At least one of them was trained in MGT project and the other one informally got 'on the job training.' In one school where only the teacher was trained, the headmaster who was not trained under the MGT project used to get acquainted with the new teaching strategies and materials from the teacher without any complex.
- The teachers frankly admitted that before getting such training their teaching strategies were not at all cost effective in terms of time, allotted to each grade and in keeping the students engaged in constructive way. They expressed lot of faith in training. They are adopting different teaching strategies not as ritual but with lot of trust.
- In two-teacher school in the absence of one teacher, the other teacher has to look after four grades. This happens whenever one teacher is on leave or has to be away for official work. This situation is prevailing at most of the places with mutual understanding among the two teachers.
- The teachers can be classified into three categories. On one extreme is the young, enthusiastic group and at the other extreme are the old, senior and hard working teachers. The middle group of middle aged teachers who keep complaining and remain unnecessarily under stress. They know only the problems and not the solution.
- The Head teacher of multi-grade school is also usually a class-teacher and this places greater demands on his/her for time. Other teachers have to undertake a wider variety of duties than their counterparts in large schools, including pastoral care.
- Transferring teachers from one school to another is a routine part of the administration. The benefit is twofold. The teacher gets a place where he or she can live happily .The second benefit is that when a motivated teacher of MGT school goes to Non-MGT school there is a flow of good practices from MGT schools to Non-MGT schools.

(iii) Teaching - Learning Strategies

- The strategies that are seen as a key to improving the quality of teaching and learning in the multi-grade classroom include promotion of approaches that increase the level of student independence and co-operative group work. This involves a change in the role of the teacher from 'giver of information' to 'facilitator'.
- In order to ensure that time of the students are spent productively, when teacher is away, three important strategies are being practiced (a) peer instruction wherein students act as teachers for one other;(b) co-operative group-work which involves small groups engaged in collaborative tasks, and (c) individualized self learning programmes which engage the students in self - study.
- The grouping strategies are well understood and followed but there seems misconception regarding 'self-learning' and 'remedial teaching'. The misconception is that self -learning activity is planned for revision or practice which does not involve 'new learning'; and remedial teaching visualized as re-teaching (teaching again the same way).

(iv) Teaching Aids

- Number of sets of teaching aids are available in all the schools. A lot of variety in teaching aids was observed in MGT schools in Gadchiroli, Latur,

Dhule and Usmanabad. With overwhelming enthusiasm the teachers displayed the teaching aids. They really wanted someone to visit and appreciate their work.

- Since some teachers of MGT schools were transferred to Non- MGT schools and some of the Non-MGT school teachers had visited MGT schools it was found that similar teaching aids/self study material were available in Non-MGT schools as well.
- In all the MGT schools the teachers are very well acquainted with the use of teaching aids / educational self study material. They are using them frequently, properly and with care.
- The teachers expressed their fear regarding updating / upgrading of the material in future for want of sufficient financial provision.

(v) Students

- The students all over were found very cheerful; especially during Prayer (Paripath) session (zero hour).
- The students in MGT schools were observed to be more involved in independent work habits and self study skills.
- It was observed that students had developed positive attitudes about helping each other. Co-operation between different grade groups was observed to be more common resulting in collective ethics, concern and responsibility. These type of advantages have accrued to children in MGT schools.
- In addition to these non-cognitive effects in MGT schools, cognitive effects in terms of reading, writing, computational skills, map reading, self-study skills etc were developed to a greater extent as compared to the Mono-grade schools. However it was difficult for them to switch over from one task to another one e.g. from sums of additions to another one, say, sums of subtractions.
- Except in a few schools, in all other schools the students were using the number-cards, word-cards with utmost care and familiarity. It was also visible that self-initiative had developed only up to a certain limit.

(vi) Training of Teachers

- It was encouraging to see that multi-grade classes were not viewed as an unavoidable 'nuisance'. On the other hand, a need was felt to convince other teachers not trained for MGT and others in the field of education, of the merits of multi-grade pedagogy. It was reported to be happening by 'word of mouth', with those teachers who had participated in the programme, telling others about it.

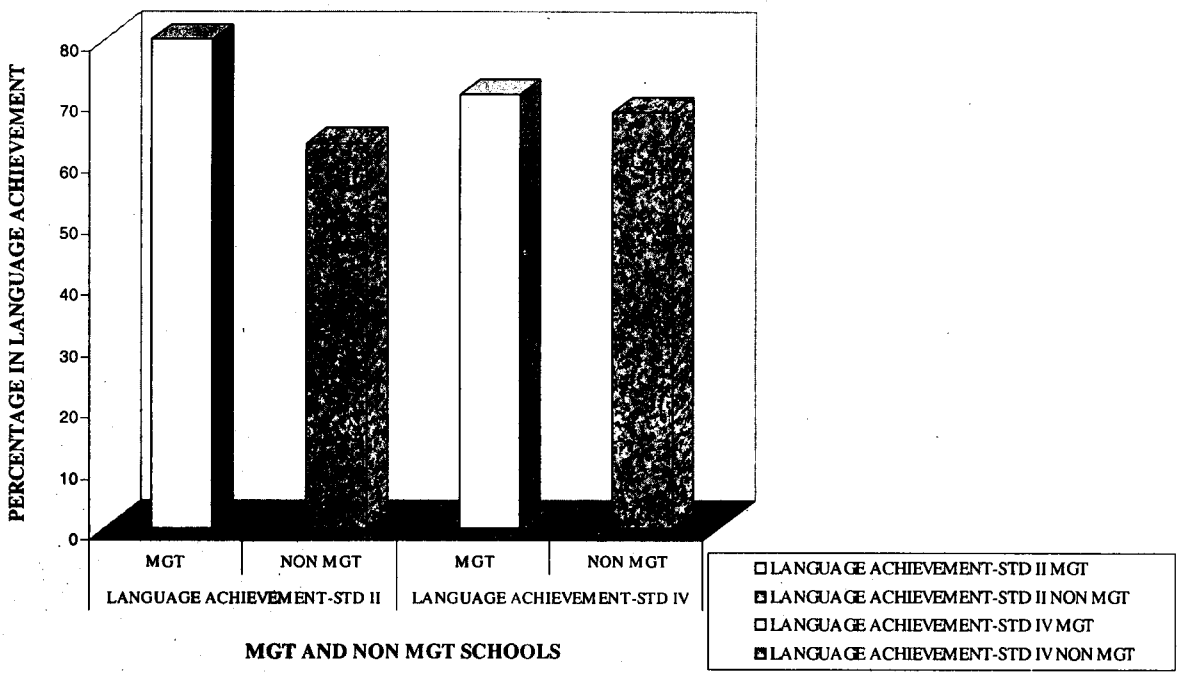
(vii) Planning

- There is no doubt that in a graded system of education, where the syllabus is given separately for each grade, multi-grade teaching is more demanding than mono-grade teaching. In certain areas planning was more difficult because of the way in which curriculum is structured.
- Classroom management is more complicated because of the necessity of having more than one group on task at the same time. Teachers are required to write multiple lesson plans to be implemented simultaneously.
- The daily timetable proforma is also the same which is utilized in the mono-grade system of teaching. That is why the timetable in the prescribed proforma and the actual working do not match.

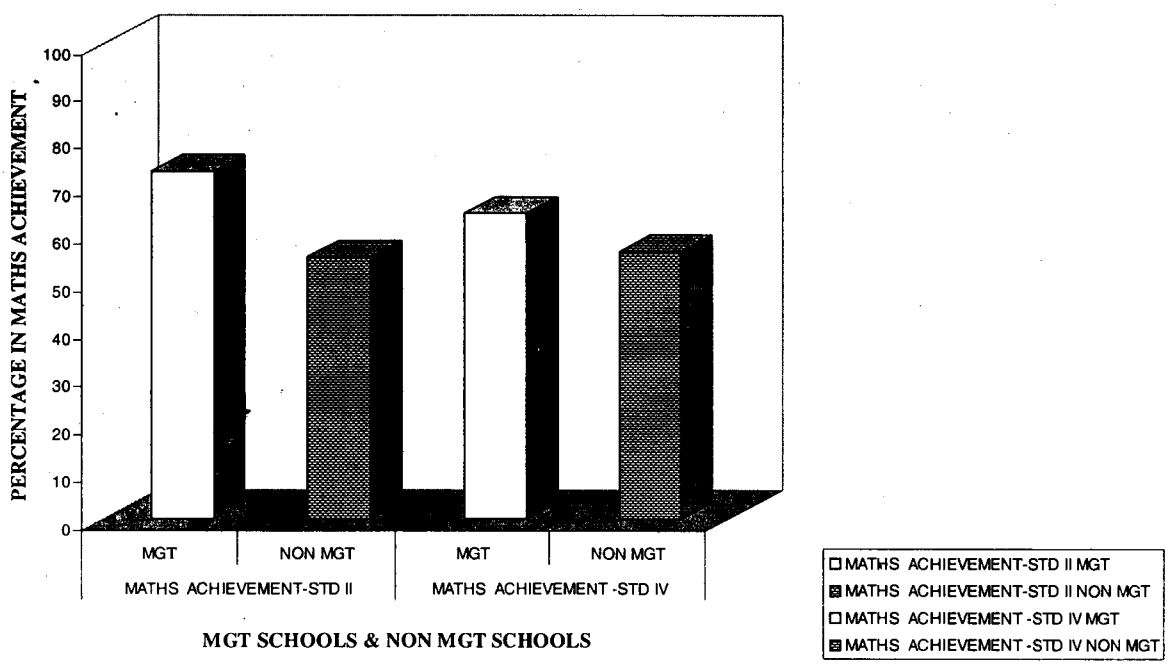
(viii) Achievement of students in MGT and Non-MGT schools

- Findings based on the data regarding achievement in mathematics and language in classes II and IV are presented in graphical form for MGT and Non-MGT schools. The graphs indicate better performance by students in MGT schools.

LANGUAGE ACHIEVEMENT -MGT & NON MGT SCHOOLS



MATHEMATICS ACHIEVEMENT - MGT AND NON MGT SCHOOLS



5. Conclusions

(i) School Environment

General ethos is better in MGT schools. Dullness is wiped out in every respect.

(ii) Teachers

Teachers in MGT schools are not resistant to multi-grade teaching, they are enthusiastic having faith training. They are instrumental in transfer of training.

- Regarding the skill of handling more classes simultaneously teachers in MGT and Non-MGT schools are at same level as far as their knowledge level is considered. However, in actual implementation, MGT teachers perform better.
- Perceptions of the teachers, irrespective of the type of school to which they belong, about the joyful teaching learning are of equal level.
- Multi-grade education mostly takes place in remote schools located in difficult to reach areas. Teachers not only face the difficulties of dealing with a multi-grade organized class, but also other constraints such as lack of resources, infrequent supervision and poor living conditions. These conditions make teachers somewhat resistant to the idea of multi-grade teaching and reduce their enthusiasm and motivation for the task. It also becomes difficult to retain teachers recruited for or transferred to such areas.

(iii) Planning

- There is discrepancy between the teacher's planning of lessons on paper and actual execution. The planning on paper is for mono-grade teaching but actual teaching includes multi-grade strategies.
- Planning for classroom interactions is more thoughtful in MGT schools.

(iv) Teaching - Learning

- Teaching learning material (TLM) are available in ample number in MGT as well as Non-MGT schools.
- However, in terms of variety, quality, storage and use of TLM, MGT schools are better.
- Registers of TLM are not maintained in both types of schools.

(v) Teaching learning strategies

- Different teaching-learning strategies such as peer instruction, co-operative group work, self-learning and remedial teaching are incorporated in day-to-day teaching learning process in MGT schools, Of these, 'Self Learning' and 'Remedial Teaching' are not taken in their right spirit.
- In most of the MGT schools adoption of differential direct teaching was observed where the lesson began with a common introduction followed by grade-wise group work in segregated groups. Teachers directed harder questions to more able students and more supportive questions to those with lower levels of knowledge and understanding. The problem with this approach in terms of multi-grade teaching is that syllabi are written grade by grade; rather than concept by concept. Most of the units are not written with the multi-grade teacher in mind and fail to give appropriate progression of concepts in a way that is easy to follow.

(vi) Classroom Management

- Sitting arrangement is done in different ways in MGT schools depending upon the nature of task. The teachers and the students switch over from one type of arrangement to another (e.g. from rows to circular) with ease. They are accustomed to such changes.
- Student -teacher interactions are more meaningful and effective in MGT schools.
- Student participation is more in MGT schools. Verbal participation is more than participation in activities.

(vii) Self Learning

- Encouragement to students for self-learning (means practice/revision as perceived by the teachers) is remarkable in both types of schools.
- Though self-learning skills are not developed to a satisfactory level in both types of schools, the situation is better in MGT schools.

(viii) Students

- Performance of the Std. II and Std. IV students in oral, written and practical work in Mathematics is better than that of their counterparts in Non-MGT schools.
- The performance of MGT school students was better in reading, listening and writing skills in language also.
- Self learning skill is better developed in MGT school students though it is mistakenly equated with practice items and revision.
- Observation skill is better developed in MGT school students but detailing and comparing was a rare occurrence.
- Ability to work co-operatively in group was found to be developed to a greater extent in MGT school students in seven out of nine districts, exception being Hingoli and Nanded districts.
- MGT schools tudents are provided opportunity and freedom to use and handle the educational material. Hence, their skill is developed in handling the material with care and without hesitation.
- In both types of school the attendance range is 70% to 100%.
- Peer group presentations in the form of drama, group songs etc. were very well enacted in both types of schools.

(ix) **Group leaders' recapitulation**

- Time spent by the monitors, group leaders during self-study or peer-tutoring is not a loss to the monitor / group-leader. Because it is a proven fact that a person learns more while teaching to others, it is in a way leading to recapitulation and fixation of already learnt things.

6. Recommendations

On the basis of these findings, some recommendations are being made for the authorities to consider.

(i) ***Curriculum Reform***

It is of paramount importance to give stress on flexibility and integration while organizing the curriculum for making it need-based. Supporting multi-grade teacher teaching can be achieved through curriculum reform. The graded curriculum model encourages teachers to view their class as homogenous entity, which is not the case for multi-grade situation. That is why it is recommended that other curriculum models be provided. One example is the modular approach adopted in Colombia, which involves dividing the curriculum into specific objectives and producing associated learning materials. Another approach is to develop curriculum framework based around themes rather than subjects. With such curriculum reforms, there is also a need for change in the types of instructional materials that are made available to teachers.

(ii) ***Teachers***

- To overcome the problem of low teacher-morale in remote MGT schools, it is recommended that there should be provision of specialized on going training of teachers in those schools and frequent visits be made by concerned authorities.
- Further, it is recommended that to encourage teachers to get transferred to remote school an incentive in some form can be introduced (like one additional increment) after completing the tenure of a fixed period of, say, 3 years.
- Teachers in the MGT schools should not be given duties other than those related to their schools.

(iii) Training the authorities

The concerned authorities, if charged with understanding of the need and importance of multi-grade teaching and inspired to graft innovative ideas to make multi-grade teaching more and more effective, can do wonders. It has been experienced in one (Usmanabad) of the nine project districts. Such an authority when transferred, no doubt, proves an asset in any given situation but what happens when his replacement is not a match, a ship without captain! Motivation, encouragement, inspiration are contagious in a downward way. Without guidance, supervision, monitoring and motivating the teachers in the stipulated direction, the situation may be back to square one.

Hence it is recommended that the concerned authorities also need to be given training in this area.

(iv) ***Teacher Education***

- Issues in multi-grade teaching have potential implications for teacher education. Clearly, there is a need to re-examine the content of existing pre-service teacher education courses (D. Ed, B. Ed) to ensure that they cater to the needs of multi-grade teachers and prepare teachers trained for both mono-grade and multi-grade teaching.
- In view of the many fold advantages of the Multi-grade Teaching Project it strongly recommended that this project be implemented in all the schools in the state where multi-grade teaching practice is prevalent.
- While accepting the suggestion to impart training to the teachers in all the primary schools, it is advocated that the earlier training content should be modified. Same inputs with difference in vigor and some additional inputs to improve the concepts of self-study, remedial teaching etc need to be incorporated in designing the training course.

7. Epilogue

In spite of the fact that there are less teachers than the grades, in many aspects MGT schools supercede the Non-MGT schools. The researchers are of the opinion that the two, namely, Hingoli and Nanded should have been excluded from the present impact study as the situation in MGT schools has got dismantled on account of creation of a new district and a new Taluka respectively, giving rise to disorder and disorganization.

It is now time to reiterate that the inputs given to the teachers in the schools involved in the MGT project are still vividly visible as the teachers are continuing with the strategies learnt during the training. Cognizable symptoms and symbols speak about the need and the faith teachers have in multi-grade teaching strategies. Non-cognitive objectives such as creating environment conducive to learning, total enrolment (no left-outs), full attendance, and complete retention are almost fully achieved. Cognitive objectives such as acquiring mastery over different competencies / skills are now within reach if prevailing situation with improvements / amendments persists.

25. Effectiveness of Self-learning Materials on Content Enrichment in Mathematics of Primary School Teachers in DPEP Districts of Orissa

M.M. Mohanty[*] &
M. Mishra[**]

1. Introduction

Concerns for enhancing quality of education at different levels have brought about a sea change in the thinking, approaches, method and materials in teaching-learning process. Yet teacher remains the most important human input for determining the functional implementation of the approach. Studies across the globe have confirmed the belief that pupils' achievement vis-à-vis school effectiveness clearly depends upon effective classroom teaching (Creemers, 1994; Mc Gilchirst, 1996, Scheerens, 1992). Knowledgeable teachers and a caring and supportive classroom environment are considered as hallmarks of improving pupil achievement (Darling-Ham mond, 1995). Sutton (1966) advocates that any effort to improve teaching should contain a liberal dose of advancing the knowledge competency of teachers and that educators have a professional obligation to keep 'abreast' of the knowledge base in order to be optimally effective.

The above findings as well as the learner-centered approach which stresses on optimization of pupils' learning put a heavy premium on teacher's efficiency which include his/her knowledge base, transactional abilities and operational skills. These roles of the teachers are getting more and more recognition, particularly at the elementary level in the countries which aim at achieving Universalisation of Elementary Education, as in case of India where District Primary Education Programme is acting as precurser for a massive programme of Sarva Shiksha Abhiyan.

1.1 DPEP and Teacher Empowerment

The District Primary Education Programme (DPEP) with its holistic approach of universalisation of quality primary education puts primacy on teacher development. Provisions like providing recurring training programmes for inservice teachers, sharing knowledge and good practices, support for procurement and development of necessary teaching-learning materials, supplementary readings, exposure visits have been introduced through DPEP in order to transform the prevailing teacher-centred classroom transactions to activity-based, joyful and interactive classrooms. This requires the teachers to be re-oriented on transactional and operational skills and at the same time strengthening and enlarging their knowledge base.

In DPEP, Orissa the general rounds of teacher training focussed on pedagogical aspects including transaction of subjects in activity approach both in mono and multi-grade situations. To reinforce the training inputs several other approaches like using self-instructional materials, tele-conferencing, short-term reorientation programmes were also arranged at the district and sub-district levels. One significant move by the DPEP Orissa was to develop three volumes of self-instructional materials for primary school teachers.

1.2 Self Instructional Materials (SIMs)

In 1998, in collaboration with Distance Education Programme (DEP-DPEP) of Indira Gandhi National Open University(IGNOU), New Delhi, three volumes of Self-Instructional Materials entitled 'EKALAVYA', one each on Language, Mathematics and EVS, were developed in DPEP Orissa.

The SIMs were developed following elaborate processes of

- assessment of content needs of primary schools teacher in the three areas i.e. Language, Mathematics and Environmental Studies (EVS)
- orientation of writers in developing SIMs.
- drafting, scripting and printing of SIMs.
- trying out SIMs in two districts.
- modification and development of final version
- distribution of SIMs (One set for each school in the eight DPEP districts of the State)

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1.2.1 SIM in Mathematics

Mathematics is considered as a difficult subject at the school stage. Particularly, the perception of primary school teachers regarding Mathematics as a tough subject to master is evident from the number of hard spots identified in the Need Assessment Test. Maximum number of hard spots were identified in Mathematics. Thirty competencies in 13 content areas were found difficult by the teachers at the Need Assessment stage as against 13 competencies in Language and 20 in EVS. The nature of difficulty in Mathematics hard spots related to the level of comprehension rather than factual information as in other areas. Further, since Mathematics is considered as one of the basic subjects at primary school level and all teachers engaged in these schools are expected to teach all subjects, their knowledge base Mathematics is crucial for curricular transaction.

Self-Instructional Materials (SIM) in Mathematics for primary school teachers were developed and compiled into a book entitled 'Ekalavya in Mathematics'. The identified hard spots in 13 areas were clubbed together in 9 broad areas i.e. Place Value, Four Arithmetical Processes, GCF and LCM, Fraction, Percentage, Decimal Numbers, Time, Measurements in Metric System, use of protractor. As such there were nine modules in the Mathematics SIM. Each module was developed as a self-contained unit with clearly stated objectives, learning materials with adequate examples, activities for the learners and self-evaluative exercises.

To facilitate the use of SIM two practices were emphasized (i) the content transactions in the third round of teacher training programme in DPEP Orissa which was imparted to all primary school teachers in all the DPEP districts were based on the study of SIM in Mathematics, and (ii) at the monthly sharing meetings at the cluster level, the transaction of content hard spots in Mathematics were discussed basing on the respective areas of contents on SIM. It was expected that after going through SIM on these two occasions, the teachers would be more and more interested to use them as and when they require the need for content clarification as it was made available in their schools.

Further, after two years of use of SIM in Mathematics it is legitimate to probe to what extent these materials have helped in enhancing the knowledge base of teachers, which is precisely the basic intent of this study.

2. Objectives

The major objectives of this study are to assess the

(i) degree of improvement of teachers' acquisition of mathematical concepts in primary school curriculum due to use of SIM in Mathematics included and

(ii) affective responses towards the SIM in Mathematics.

3. Methodology

3.1 Sample : The teachers for this study were chosen following a multistage random sampling method. Thus the sample contained teachers from both the sexes varying degrees of educational qualifications and experiences and also from schools at different locations. All the sampled teachers were supplied with the SIM in Mathematics at least 2 years back as a part of DPEP activity.

From among the six districts where the Need Assessment Test was administered, the subjects were drawn from three districts i.e. from Dhenkanal, Keonjhar and Sambalpur choosing randomly from schools of two blocks from each district. The details of the sample are given in Table 1.

Table -1 Distribution of Sampled Teachers

District	Block	No. of Teachers	Total
Dhenkanal	Gandia	47	96
	Odapada	49	
Keonjhar	Sadar	50	100
	Hatadihi	50	
Sambalpur	Rengali	41	70
	Maneswar	29	
		Total	266

3.2 Tools used : Two tools, namely, Mathematics Assessment Test (MAT) and Opinionnaire on SIM (OSIM) were employed in this study.

i) Mathematics Assessment Test (MAT): MAT is a diagnostic-cum-achievement test based on the Mathematical concepts included in the primary school curriculum which were considered as content hard spots for teachers. It contained 90 items in a multiple choice format (one item with

four possible response choices) in 13 concept areas. The average time of response was one hour and the maximum possible mark was 90. The same test was used during the Need Assessment Survey (pre-test).

ii) Opinionnaire on SIM (OSIM):

An opinionnaire with open ended questions was developed for teachers to respond on quality and utility of the Self-Instructional Material in Mathematics. It evoked responses from the participating teachers on the following aspects of SIM in Mathematics :

Comprehensibility of language used

- Comprehensibility of objectives of each content area
- Presentation style
- Adequacy of content elaboration in SIM
- Quality of illustrations
- Utility of SIM for content upgradation and transaction
- Suitability of SIM in content transaction in the classroom
- Utilisation of SIM in teacher training programmes

Since, the responses expected were subjective, they were subjected to descriptive analysis and interpretation.

3.3 Data Collection procedure

The sampled teachers of the identified blocks were called to the block headquarters where they were administered the Mathematics Assessment Test (MAT) and the opinionnaire on SIM. A section of the sampled teachers were personally interviewed to ascertain the justification of their response on quality and utility of the SIM in Mathematics vis-à-vis their performance in the classroom transactions in dealing with difficult mathematical competencies.

3.4 Analysis

The scores on MAT were subjected to two types of analyses. First, the means and standard deviations were calculated for both pre-test and post-test and the pre-test and post-test mean scores were compared using t-test. Second, the teachers were categorized in four groups as per their levels of performance i.e., (i) below 30% (ii) 30% to 50% (iii) 50-80% (iv) 80% and above. The last level could be considered as indicative of attainment of mastery level in the concept area concerned.

From these two analyses, the effectiveness of SIM in Mathematics could be judged in terms of significant pretest-post test differences in observed performances and the degrees of upward mobility in the levels of performance in Mathematics from pre-test and post-test situations particularly the change in proportion of teachers attaining mastery level.

The responses to the Opinionnaire on SIM in Mathematics were analysed in terms of numbers and percentages district-wise and conclusions were drawn on each category of items based on the percentages of response.

4. Results and Discussion

(a) Comparison of pre-test and post-test scores

The means and standard deviations of scores on MAT on both pre and post-test situations on each of the 13 content areas are presented in Table-2. The significant difference between pre & post-test scores for each district are shown in the remark column.

Table-2: Scores (Means and SDs) on Mathematics Assessment Test (Content Area Wise)

Competencies (Maxm. Mark)		*Dhenkanal(DKL)*		*Keonjhar (KJR)*		*Sambalpur (SBP)*		*Remarks*
		Pre-Test (N=51)	*Post-Test (N=96)*	*Pre-Test (N=34)*	*Post-Test (N= 100)*	*Pre-Test (N= 49)*	*Post-Test (N=70)*	
Place Value (Maxm = 09)	M	7.24	8.29	6.53	8.09	6.71	7.03	DKL **
	SD	1.57	2.47	1.99	1.31	2.21	1.87	KJR **
Subtraction (Maxm = 04)	M	2.92	3.5	2.88	3.53	3.12	3.02	DKL **
	SD	0.92	0.6	0.73	0.64	0.88	0.95	KJR **
Multiplication (Maxm = 05)	M	3.58	6.91	3.02	4.2	3.47	2.74	DKL **
	SD	1.07	3.06	1.25	0.77	1.04	2.07	KJR ** SBP *
Division (Maxm = 06)	M	4.76	4.31	5.12	5.49	5.67	5.34	—
	SD	1.06	2.77	1.13	0.85	2.06	1.09	
LCM & GCF (Maxm = 07)	M	4.70	5.82	4.49	6.13	4.8	4.91	DKL **
	SD	1.04	1.18	1.54	0.74	1.02	1.51	KJR **
Fraction (Maxm = 18)	M	13.38	40.42	11.67	15.41	13.59	13.6	DKL **
	SD	3.42	17.52	3.76	1.63	3.78	4.53	KJR **
Decimal (Maxm = 17)	M	9.26	12.09	7.37	9.07	9.86	10.44	DKL **
	SD	3.07	2.32	3.14	3.78	2.9	3.16	KJR **
Percentage (Maxm = 06)	M	4.06	5.5	3.37	8.91	3.96	4.69	DKL **
	SD	1.1	0.94	1.38	3.73	1.26	1.92	KJR ** SBP *
Length (Maxm = 02)	M	.5	1.81	1.39	1.76	1.45	1.51	DKL **
	SD	0.71	0.49	0.67	0.43	0.58	0.76	KJR **
Mass (Maxm = 03)	M	2.44	1.71	2.12	2.61	1.9	1.68	DKL **
	SD	0.76	0.66	0.75	5.27	0.85	0.64	
Capacity (Maxm = 02)	M	1.36	1.54	1.22	1.48	1.06	1.18	KJR *
	SD	0.56	0.62	0.59	0.64	0.77	0.76	
Time (Maxm = 07)	M	4.89	4.74	4.22	5.17	4.46	4.68	KJR **
	SD	1.43	0.97	1.36	0.96	1.35	1.25	
Geometrical Concept (Maxm = 04)	M	2.92	3.25	2.47	3.03	2.12	2.6	KJR **
	SD	1.05	0.81	0.98	0.12	1.03	1.17	SBP *

* Significant at 0.05 level; ** Significant at 0.01 level

The results demonstrate that there has been improvement in performance of teachers on nearly all concept areas of Mathematics across the districts except significant decline in the performance of teachers in Sambalpur in Multiplication and in Dhenkanal district on the concepts of Mass (both at $p < .05$)

The teachers of Dhenkanal and Keonjhar demonstrated significant higher performances ($p < .01$) over the pre-test situations in areas of Place Value, Subtraction, Multiplication, LCM & GCF, Fractions, Decimal, Length while the teachers in all three districts performed at higher levels in the areas of Percentage and Geometrical concepts.

In the area of measurements in Mass, Capacity and Time, the performance of teachers in Sambalpur(in all three areas), Dhenkanal(in Capacity and Time) and Keonjhar (in Mass) did not record significant increase. There was rather slight decrease in some of these districts.

There was no significant difference in the performances on both occasions in the area of Division in all three districts.

With respect to attaining levels of mastery (i.e., 80% marks), the results show that

(i) In Dhenkanal district, in the pre-test situation, the mean scores exceeded the mastery level in three content areas of Mathematics while in post-test situations the mean scores exceeded the mastery levels in 9 out of the total 13 content areas.

(ii) In Keonjhar the mean scores on pre-test exceeded the mastery level only in two content areas (i.e. in Division and Measurement of capacity). But in post-test situation in as many as six areas the mean scores were above mastery level.

(iii) In Sambalpur, the results were similar in both situations i.e. showing attainment of mastery level in two areas only (in Division and Fraction).

(b) Percentage of teachers attaining Mastery level

Table-3 shows the percentage of teachers attaining mastery level (i.e. over 80% marks) in each competency area at the pre-test and post-test stages.

From this table the following trends can be observed;

- Higher percentage of teachers have attained mastery level over the Pre test in all the three districts in areas of Place Value, Subtraction, LCM&GCF, Decimal, Length, Time and Geometrical Concepts.
- Higher Percentage of teacher have attained mastery level in the areas of Percentage & capacity (Dhenkanal and Keonjhar) Division (all three districts), Fraction (Keonjhar), Length (Dhenkanal), Mass (Sambalpur).
- Decreasing trends of attainment of mastery level were recorded in the areas of Multiplication (in all the three districts) ,Percentage Capacity and Fraction (Sambalpur), Mass (Dhenkanal and Keonjhar).
- The general trends that emerges from the study are that teachers across the districts demonstrated higher level of performance over the pre-test situations in nearly all areas of Mathematical competencies which indicates substantial support provided by the SIMs in combination with the inputs of teacher training and other capacity building measures taken in DPEP. This is amply supported by the opinions of the teachers. Overwhelming number (more than 90%) of the teachers support this conclusion while responding to the utility of the SIM.
- There is significant upward mobility in the levels of attainment in all competency areas except a few as recorded above demonstrating the willingness

Table-3. Percentage of teachers attaining Mastery level in Mathematics

Competencies	*Dhenkanal*		*Keonjhar*		*Sambalpur*	
	Pre-Test	*Post -Test*	*Pre-Test*	*Post-Test*	*Pre-Test*	*Post-Test*
Place Value	42.86%	60.04%	41.02%	76%	34.69%	44.28%
Subtraction	40.82%	55.12%	38.46%	61%	24.49%	37.14%
Multiplication	57.14%	41.60%	69.23%	35%	40.82%	37.14%
Division	85.71%	80.21%	89.74%	90%	75.59%	81.43%
LCM & GCF	12.45%	67.71%	41.02%	78%	18.37%	45.71%
Fraction	53.06%	76.04%	48.71%	91%	26.53%	25.71%
Decimal	4.08%	39.58%	0%	34%	4.08%	60%
Percentage	46.94%	80.21%	41.02%	93%	24.49%	8.57%
Length	51.62%	85.42%	64.1%	76%	46.94%	68.57%
Mass	28.57%	10.42%	46.15%	3%	34.69%	67.14%
Capacity	32.65%	60.04%	35.90%	60%	30.61%	7.14%
Time	38.78%	53.13%	30.77%	68%	16.33%	35.71%
Geometrical Concept	6.12%	68.75%	20.51%	33%	14.29%	60%

and concerted efforts made by the teachers once the inputs of SIM were available to them. This is very unambiguously stated by the teachers in their response to the comprehensibility, styles of presentation, simplicity of language used and usefulness of topics in content enrichment.

- the specific deficiencies of the SIM in Mathematics can be attributed to the poor performance of the teacher across the districts. Teachers expressed difficulty in following the content elaboration in the areas of Decimal, LCM & GCF, Geometrical concepts and measurements in Volume and Capacity in the SIM have and their performance was poor in these areas.

Discussion & Conclusion

The overall positive impact of SIM in the programme of content enrichment of teachers as demonstrated in this study encourages view that teachers when given right type of materials for self-learning can use those with the support of in-service training and recurrent sharing for their empowerment. The involvement of the teachers in developing these materials using those in training and sharing programmes and offering themselves freely to be evaluated also indicate their intense desire to improve their professional status.

On the other hand, the deficiencies and the declining trends in specific content areas pose as the areas of concern. Further, probing into the local specific needs of such teachers relating to the area concerned is required on a continuous basis and the alternative SIMs are needed to be developed at the block or cluster level to fulfil the needs of such teachers who are culturally widely diversed in a State like Orissa with large number of tribal habitations. The culture specificity of Mathematical competencies which is generally believed to be abstract and generalised in nature is suspected to be reason of poor performance of teacher in specific areas which need to be further investigated and likely to support the contextuality of learning Mathematics at the early stage of schooling.

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26. DPEP Experience in Tamil Nadu and Kerala: Some Lessons for SSA

*Dr. S. Nayana Tara**

1. Background

The quest for successful educational attainment of children has been an avowed goal worldwide. This is especially so with respect to primary education among various countries. In the Indian context, the National Education Policy clearly envisages universalization of primary education through provision of easy access to educational facilities, promotion of total enrolment, successful grade completion of children enrolled and learner achievement. Concerted efforts to accomplish these goals over time have seen several setbacks especially in a vast country as ours with diverse socio-cultural settings. Despite several attempts to bring down drop out rates and elevate retention levels, a considerable proportion of children are deprived of easy access to primary education. This is especially so with regard to girl children and those belonging to socio-economically backward sections of the population.

The District Primary Education Programme (DPEP) was launched at the national level in 1994 to address these inadequacies in an effective and efficient manner. The programme goals were to improve (i) access; (ii) enrollment; (iii) retention and, (iv) learner achievement. In accomplishing these goals the programme envisioned a clearly spelt out management structures and processes. The first phase of the programme was launched in 1994 covering 42 districts of seven states. As this phase has been concluded, it was found necessary to have a retrospective view of the effectiveness of the programme so that the lessons drawn could be utilised for SSA. In this context, a study was undertaken to assess the strengths and weaknesses of the programme, which would lead to realistic and sustainable policy interventions.

1.1 Need for the study

As mentioned earlier, the study seeks to find out the extent of achievement of the goals and objectives of DPEP in the Phase I states after a lapse of seven years since its launch. More specifically, the need for the study arose in addressing the following key questions:

- To what extent have the DPEP objectives been attained ?
- How effective are the management structures and processes instituted in the programme?
- What is the extent of preparedness of the programme in achieving its sustainability goals-financial, managerial, pedagogic, institutional and capacity building?

2. Study objectives

The broad objectives of the study were as follows:

(i) To assess the progress made in enrolment, retention and improving the quality of education in primary schools and the extent to which gender disparities and disparities between social groups such as SC, ST and others are addressed.

(ii) To examine the structures envisaged under DPEP including BRCs, CRCs and VECs and their styles of functioning;

(iii) To assess the nature and extent of community mobilization and participation strategies adopted under DPEP

(iv) To find out the contribution made by state level support systems such as SCERT, Text book Corporation and State Project Office for effective implementation of DPEP; and

(v) To make an overall assessment of the extent to which DPEP has influenced the primary education system in the states and to identify specific areas of strengths and weaknesses, which would form the guiding force for programme sustainability.

3. Methodology

3.1 Sampling

The study was carried out in two districts each of Tamil Nadu and Kerala States. These districts were chosen at random among the DPEP districts within the states.

In each of the districts so selected, a total of 15 schools were chosen for the study. The schools were selected from villages through a circular systematic random sampling procedure, which involved selection of villages in three subgroups of five villages each. In each of the villages so selected, one government/aided primary school, VECs and alternate schools were contacted and requisite information gathered with the help of structured questionnaire and interview schedules.

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Household survey: A household survey in the selected villages was carried out with the objective of obtaining a socio-economic profile of children in the age group of 5 to 13 years and to assess their educational attainment. In addition, the survey included collection of information regarding socio-economic background of selected households, family income and expenditure pattern, and current activity status of out-of-school children. A total of 100 households in each village were chosen by simple random sampling procedure after enumerating all the households. Adequate care was taken to provide representation to different socio-economic sections of the population through a proportionate random sampling method with the aid of a list of households belonging to different caste and religious groups residing in the village. In this process a total of 1300 households were contacted and requisite information collected.

3.2 Data Collection

In each of the villages visited, detailed personal interviews and discussions were held with the Head Teacher or teacher in charge of the school to gather school-related information. Information regarding cohort groups and attendance were collected from school records and registers.

Further, the status of school facilities including the condition of school building, facilities in class rooms, state of school environs including provision of drinking water, toilets for girl children, play ground facility and class room transactions were personally observed by the study team and recorded.

In each of the villages visited, consulting the school records identified two Village Education Committee members, and personal interviews were held with each of them with the aid of a structured interview schedule.

Visits were made by the study team to alternate schools functioning in the sample villages and requisite information were gathered through personal interviews with the concerned instructors with the aid of a structured interview schedule. Besides, observations were made regarding the facilities and condition of these schools.

It is important to mention that all the visits to the schools by the study team were made without any prior intimation to the project functionaries as well as teachers of the school. This was in order to get an unbiased knowledge of the state of affairs.

The field investigators carried out the household survey, first by conducting physical enumeration in the sample villages. Then a total of 100 households were identified in the manner as mentioned earlier. The investigators visited each of these households and interviews were held with the head of the household to gather the required information. In this regard, repeat visits were made by the investigators to most of the sample villages.

Personal interviews were held with District Project Coordinator, Principals of DIET, BRC and CRC coordinators. While all these functionaries were interviewed with the help of a structured interview schedule, special efforts were made by way of focus group discussions with BRC and CRC coordinators in order to assess the strengths and weaknesses of programme at the peripheral level.

At the state level, detailed discussions and interviews were held with the State Project Directors (SPD), senior officials of SCERT and Textbook Corporation, with the aid of structured interview schedules prepared for the purpose.

Besides carrying out personal interviews and observations, a large amount of secondary information was obtained by way of various reports, records and registers.

3.3 Data Analysis

After the data collection was completed the data sets obtained were thoroughly scrutinised and required consistency checks were instituted. The data analysis essentially includes district-wise comparison of variables by gender and caste. The analysis of data sets obtained is supplemented by qualitative information gathered by the team members during field visits.

4. Results

From the findings of the study an attempt was made to arrive at major strengths and weaknesses of the programme that have a bearing on policy as well as sustainability of SSA. They are presented below:

4.1 DPEP: Major Strengths

- Development of school infrastructure: DPEP schools are well designed and are of good construction quality.
- Reasonably adequate quantity of TLM materials, though their usage needs to be improved
- Pupil Attendance Rates have shown an upward trend though there are inter-state variations. Girls had a relatively higher mean attendance rate than boys
- In Kerala State, caste-wise, pupils belonging to SC and ST groups showed lower attendance rates and were found to be highly statistically significant. Where as, no significant differences were discernible in Tamil Nadu State. (Table 1)

Table 1. Comparision of mean attendance in Kerala and Tamil Nadu

CASTE	No.	MEAN	F-value	F-Sig	t-value	t-sig
SC\ST (K)	3173	86.42				
GENERAL (K)	11240	91.75	263.7	0.000	-19.81	0.000
SC\ST (TN)	6815	84.609				
GENERAL (TN)	18638	84.82	168.1	0.000	-0.84	0.401

Table 2. Dropout rates for the 3 cohorts by gender in Kerala and Tamil Nadu

STATE	1995		1996		1997	
	No.	% No.	%	No.	%	
KERALA	73	13.10%	142	13.50%	139	13.90%
TN	162	14.10%	112	10.10%	126	12.00%

- The dropout rate in Kerala state shows an increasing trend. In Tamil Nadu, the drop out rate is highest in 1995, declines during the next year and increases marginally (Table 2)
- 65.0 % of schools had pucca buildings while 33.3 % had semi-pucca structures. Further, the general condition of 70.0 % of the schools was either good or needed minor repairs. In addition, 81.7 % had TLM materials.
- By and large, BRC trainers/resource persons appear to make regular visits to schools under their respective jurisdiction. The purposes of these visits include work review, ensuring usage of TLM, testing of pupils to identify hard spots among others.
- CRCs appear to function as good support mechanisms.
- The community participation through VEC/PTAs appears to be good, though variations exist among and between sample districts. By and large, SC members and women take active roles in school activities.
- In both the states, a robust functional link appears to be in place between DPO and DIET, though there are exceptions.
- At the state level, staffing and fund flow appear to be satisfactory

4.2 DPEP: Major Weaknesses

- Enrollments show a declining trend in both the states which could be on account of declining school going age population / migration to private / English Medium schools.
- A major proportion of dropouts occur at Grade I and Grade II
- No significaznt improvements were found regarding the GCR, which has remained stagnant or even dezzable drinking water facilities
- Very few schools have functioning toilets with water facilities. Most of these toilets are used by teachers only leaving the pupils to fend for themselves
- Almost all schools utterly lack teaching aids such as materials supplied under Operation Black Board Scheme, science kits etc.
- None of the schools have adequate sport and musical equipment.
- More visits by BRC coordinator and other higher level functionaries is necessary.
- The level of community participation for most of the sample schools was found to be perceptibly sub-optimal. In the sample districts the VEC functioning leaves a lot to be desired.
- School development plans do not exist in almost all sample schools
- Though a good support mechanism, CRCs are not well attended by teachers. Further, CRCs are always strapped of funds.
- At the district level, there has been a high turnover of District Project Coordinators, affecting the programme considerably.
- Most of the functionaries at the district level do not have management training.

- While academic decisions are devolved at the district level, administrative and financial powers continue to be centralized. There were instances of financial irregularities.

In one of the states, there is no convergence between DPEP and Education department.

4.3 Policy Implications for Sustainability

In the light of the major strengths and weaknesses of the programme that emerged out of the study, the policy implications for sustainability of SSA are as follows:

- Provision of Basic Minimum Infrastructure to each school must be ensured. This includes:
  - *One room per class*
  - *Effective maintenance of infrastructure including prompt repairs*
  - *Regular maintenance of cleanliness in the school environs*
  - *Compulsory provision of potable drinking water facility*
- Effective training management procedures to be in place and a robust mechanism for Post Training Follow-up, is urgently needed.
- Concrete efforts are required in the area of Institutional Development of all schools and management structures.
- Maintenance of records and registers at the school level with uniform formats, with the provision of unique identification number for each pupil should be made compulsory.
- Strengthening Monitoring and Supervision mechanisms at all levels.
- Training in appropriate accounting procedures for functionaries at different levels is highly essential.
- Management training is essential for educational administrators at all levels and should be made mandatory.
- Provision of more autonomy to DIETs in the preparation of appropriate training- modules and training methodologies, is required.
- All efforts at convergence, as envisaged under DPEP, need to be intensified.
- Ensuring adequate supervision of Mid Day Meal activities.
- Instituting zero-based budgeting practices for effective financial management.
- Concerted effort to rejuvenate VECs, to enhance community participation.
- Instituting a vibrant mechanism for effective School Health programme by enlisting active community support and coordination with concerned departments.
- Concerted support for co-curricular activities at the school through adequate provision of equipment related to sport and cultural activities to enhance the joy of learning.
- Emphasizing the critical role of the head teacher as a bridge between school and the community.

5. Conclusions

The study findings can be very useful at this critical juncture wherein DPEP Phase I is coming to an end and SSA is being put in place. The policy framers and other education administrators must take cognizance of the important outcomes of the study and incorporate them into SSA plans. All efforts at plugging the loopholes must be undertaken swiftly in order to see that seven years from now, we do not see the same scenario. At the same time, efforts at strengthening the positive features that have emerged must also be made. Success stories must be documented and disseminated for the benefit of the programme.

27. External Evaluation of DPEP- I in Maharashtra

*Rajeev Sharma**

1. Background of the Study

DPEP I was launched in Maharashtra in 1994-95 in five of its districts: Aurangabad, Parbhani, Nanded, Latur and Osmanabad. The district of Parbhani was bifurcated into Parbhani and Hingoli in 1999 taking the number of DPEP I districts to six. But for the purposes of this study this administrative division has not been taken into account. The second phase of the DPEP began in 1997-98 with its introduction in the Beed, Jalna, Dhule and Gadchiroli districts.

Maharashtra Prathamik Shikshan Parishad (MPSP), a registered autonomous society, is implementing the DPEP in Maharashtra. It has a Governing Council with the Chief Minister as the President and the Minister for School Education as the Vice President, and an Executive Committee under the Chairmanship of the Secretary, School Education Department, Government of Maharashtra. The members of the two organs are drawn from different central and state departments. MPSP has four sub-committees: the NGO-Grant-in-Aid Committee headed by the Secretary, School Education (Government of Maharashtra), Programme Finance Sub-committee headed by the State Project Director, Mumbai, a Finance Committee headed by the State Project Director, MPSP, and a Quality Control and Evaluation Committee under the Chairmanship of the Deputy Director (F&A). The State Project Office (SPO) is located in Mumbai with a regional unit at Aurangabad.

At the district level, there is a District Project Office in each of the DPEP districts at the district headquarters. The Chief Executive Officer of the Zilla Parishad is the ex officio District Project Coordinator, and the Education Officer (Primary) of the Zilla Parishad is the ex officio District Project Officer.

At the block level, the Block Education Officer is the ex officio Director of the Block Resource Centre. He is assisted by two Block Coordinators, three Subject Experts, one Mahila Sanchalika and a Senior Accounts Clerk. The Phase II districts also have one Junior Engineer each. At the educational beat level, each of which consists of 3 to 4 clusters, the work is coordinated by an Extension Officer. Each of the clusters has 8 to 12 primary schools, and each Cluster Resource Centre has a Cluster Coordinator.

The DPEP Programme is supported by institutions such as the Maharashtra State Council of Educational Research and Training (MSCERT), the Maharashtra Institute of Educational Planning and Administration (MIEPA), and the Text Book Bureau (TBB), State and District Resource Groups (DRG) and several NGOs. Financial monitoring is done by the Audit Branch of the State Project Office and the district units.

2. Objectives

The completion of the District Primary Education Programme (DPEP) in the Phase I DPEP districts offered an opportunity to identify the strategic directions with respect to the thrust towards universalization of elementary education. The major changes that DPEP attempted were decentralised planning, quality improvement through teacher training and curriculum renewal, capacity building, and improving the 'demand' for basic education through closer school-community interactions and facilitating a greater say of people at the grassroots through village education committees.

Keeping this in view, the study aimed to assess the experiences of DPEP I in Maharashtra along three dimensions: impact of structures, impact of processes, and the interaction between educational impact and social impact. The impact of structures covered the influence of the decentralization of educational structures (through structures like the BRCs and CRCs) and of community management-oriented structures like the VECs. The process elements in the DPEP approach included demand for primary education, community control over education and the thinking about education in the larger primary education system. The internal processes were capacity building for planning, management and evaluation, building up pedagogical capacity among teachers, improvement of the curriculum and teaching-learning material, and processes of research. The social impact of DPEP I would be evident

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in its influence on out-of-school children, retention of children in school, disabled children and on social and gender disparities. The influence of these three dimensions considered together would offer insights into the sustainability of the approach and the constraints that need to be overcome in order to promote such sustainability.

3. Methodology

The methodological approach adopted in this study involved a close collaboration with the DPEP Bureau and the State Project Office. In addition, various documents were also provided by DPEP Bureau which constituted a valuable source of information. A second source of information was the set of interviews conducted at the State Project Office, the Department of State Educational Research and Training, two District Project Offices and the DIETs. A third aspect of the methodology was the selection of two districts, Aurangabad and Osmanabad, out of the five DPEP I districts in Maharashtra, in consultation with the SPO. Fifteen villages in each district (30 in all), and the CRCs and BRCs associated with them, were selected for surveys. The summary of these various sources and the types of information gathered is provided below:

1. Thirty villages, for household surveys of children in the age group 5-13 years (completed age), and field observations.
2. Government schools in these 30 villages, for information on infrastructure, school attendance and cohort progression, which was collected through three schedules.
3. BRC Coordinators and CRC Coordinators associated with the 30 villages, interviewed individually as well as in a group (one schedule for the BRC Coordinators and one set of group interview guidelines).
4. Village Education Committees associated with the selected schools and villages, for interviews with the Chairpersons or members (one schedule). After the representative was interviewed, a group discussion usually followed.
5. The State Project Office, the Maharashtra Council for Educational Research and Training, Maharashtra Institute of Educational Planning and Adminstration, and District Project Offices and DIETs in Aurangabad and Osmanabad, were visited for interviews. Four interview schedules were used. Discussions were held with staff members including programme officers, departmental heads, MIS in-charge, and activity heads.

3.1 Sampling Procedure for Village Selection

Fifteen villages in each of the two districts were selected using the Stratified Circular Systematic sampling design in the form of three independent sub-samples of size five each. Villages with population less than 100 were omitted before selecting the sample of villages. Villages with a population of greater than or equal to one hundred in each DPEP district were arranged in the increasing order of 1991 census population totals. After this arrangement, villages from each district were selected circular-systematically in the form of three independent sub-samples of five each, to make a total of 15 villages from each district. A random number between 1 and N (N representing the total number of villages in the district with population greater than or equal to 100) was first selected, and then this number and every k^{th} unit were selected (where k is the integer nearest to N/n; n =5). This was done in a cyclical manner until five villages were selected. The process was repeated independently two more times.

All resident households, each with at least one child in the age group 5 to 13 years (target group of households), and all Government Primary schools located within the boundaries of the sample villages at the time of survey, were surveyed. It was decided to undertake a census of all the target households since the village sizes were not large.

3.2 Data Collection

Data collection in the 30 villages was undertaken during December 2001 and January 2002. A team of one coordinator and three supervisors was in charge of data collection. For the administration of the household survey a team of 15 investigators (all graduates, some with postgraduate degrees, and all of them men) was constituted in each district. Each investigator was assigned one village. A one-day training programme, which included a mock data collection exercise, was held for each of the two district groups. The supervisors, with one member from the DPO, oversaw the data collection. This included visits to the villages during data collection, and a check of at least a third of the survey forms in the smaller villages and at least 10% in the larger villages.

The supervisor and the investigator together administered the school information schedule, the school attendance

schedule and the cohort progression schedule. For the cohort study, three batches, those entering Class I in 1995, 1996 and 1997 were chosen and followed up for the complete four-year primary cycle. That is, the outcome of the 1997 batch at the beginning of the year 2001-02 was the final set of data collected. The investigator also administered the VEC/SDMC schedule, and interviewed the committee members or the presidents. The total time taken for collection of data and its verification was 6 to 12 days per village. Checking of the forms took another one day per district.

The coordinator and the supervisors interviewed the BRC and CRC Coordinators, and collected data at the DPO and DIET levels.

3.3 Data Analysis

The answers to the open-ended questions and qualitative information gathered through the field observations were analyzed through a process of coding-up. The first step was translation of the information from Marathi to English. One professional (with a background in education) was assigned this job, and a second person was asked to check about 5% of the information for accuracy of translation. There were no problems in this regard. Translation back into Marathi for a comparison with the original was not adopted since the quality of translation appeared to be good.

The management of the quantitative data was done through SPSS®. Since the number of schedules from the schools, cohort outcomes, school attendance, BRC Coordinators interviews and VEC interviews was small, there were no problems of missing data or invalid collection. The household schedules had also gone through fairly rigorous checking (for instance, even after the field checks, one day was spent by the supervisor in checking all the forms before authorizing the payment due to the investigators). However, during data- screening data from a few household schedules had to be ignored because of invalid or missing data; out of the 9739 children in the age group 5-13 years, 61children (about 0.6 percent) had to be excluded from the analysis. This is a low percentage and may be considered an acceptable loss of data.

4. Findings and Discussion

In the following section, findings of the study are discussed. Intially issues related to children's enrollment in school, facilities and school infrastructure and mangement of school activities are presented. Thereafter nature and extent of community participation is described. Following this management structure of DPEP from block and sub - block level to district and state level is reviewed. In the end role of supportive agencies like MSCERT, MIEPA and TBB in DPEP I is examined.

4.1 Enrollment, Repetition and Grade Completion

4.1.1 Enrollment of children and measures to increase enrollment.

Overall enrollment of children in the five DPEP I districts has stabilised around 17 lakh though there are variations among districts. With the expansion of schools and recruitment of teachers, Pupil Teacher Ratio (PTR) has come down in all the districts and was found to be most favourable in Osmanabad (38.04) followed by Latur (40.14). However, when all the five Phase I districts are considered PTR is 42.14, slightly above the DPEP norm of 40. Over the years, since 1997-98, GER has come down to 98.72 in 2000-01 and NER has come down to 85.23. This increase in enrollment has been possible due to several efforts to reach out to the population in the areas which were either not covered by schools or were in areas not located away from general habitation. Between 1997-98 to 2000-01, a total of 317 new schools were added and 1599 existing primary schools, which previously had classes only up to grade IV, were upgraded to facilitate the process of enrollment.

i) Increasing access through Alternative Schools:

A significant effort in reaching out to children has been, the opening up of Alternatives Schools (AS) in habitations which were not being served according to the norm, bringing the drop-outs and un-enrolled children to school, and providing access to children of migratory families, particularly those working in sugar mills. The needs of these three types of groups have been addressed through Contract Schools/Vasatishala, Prerna Centres/Mahatma Phule Shikshan Hami Yojana and Sugar Schools, respectively. In Contract Schools, 2287 children were enrolled and mainstreamed in Class III. In Prerana Centres a total of 41592 children passed out between 1996-97 and 2000-01. Sugar schools have functional in 10 locations and catered to 1452 children. In addition to this, a local NGO in Parbhani is working with DPEP to provide education to children working in slaughterhouses. From 1994 to 2001, 1381 instructors, 15860 teachers, 594 Preraks and 774 RPs were trained to support the work of AS. In spite of all these efforts, according to a survey by MPSP in 2000-01, there were 62433 out of school children in all phase I districts. This highlight the efforts undertaken to reach out to children not covered under the norms for opening new schools. At the same time it

also suggests the need for having fresh approaches to educate children who are still not covered.

ii) Improving access for the disabled: Efforts to enroll disabled children have also been initiated since 1996-97, and out of the total population of 25950 disabled children 14896 (57.4%) have been enrolled. Among the five Phase I districts, the maximum number of enrolled disabled children are in Parbhani (88.4%), while the least enrolled are in Osmanabad (23%). Unavailability of trained persons has been the main reason for low enrollment of disabled children. Subsequently MPSP has decided to train three resource persons from each district who could then work with teachers to train them. A State Resource Group at SPO, and DRGs in all the districts have been formed for handling IED.

4.1.2 Repetition

Repetition in all Phase I districts varied from 4.33 to 4.66, and as such does notoffer show any general trend between 1997-98 and 1999-00. In Nanded the repetition rates have risen, while in Parbhani, Aurangabad and Latur it hasthey have come down marginally. In Osmanabad there is almost no difference. There are no differences in the repetition patterns of boys and girls in all any of the districts. One of the major reasons associated with this is the no- detention policy that was being followed by the state earlier. However, this policy has been discontinued since 2001 after an overall review based on experience in the field. and overall review this policy has been discontinued since 2001.

4.1.3 Dropout

According to a cohort study conducted by MPSP, the average dropout rate in a four -year cycle for all Phase I districts is close to 20%, which goes up to 34% in a five - year cycle. Among districts tThere areis considerable variations in dropout rates among the districts. In Nanded it is 13%, whereas it is above 26% in Parbhani and close to 21% in Latur. Dropout rates in the cohort study conducted as part of the review waswere found to be 7% in Aurangabad and 4% in Osmanabad, and indicate excellent holding power above 93% in the sampled schools. There were no substantial discrepancies between in the overall patterns of dropout between of boys and girls.

4.1.4 Completition Rate

Overall completition rate for children in Aurangabad is closed to 80% and in Osmanabad it is 74%. Holding power of the schools is close to 85% in both the districts. It may be noted that both these figures are much lower than the acceptable figure of 90%, and have leave considerable scope for improvement. There is no appreciable difference between boys and girls regarding this.

There have been multifaceted attempts for quality improvement in all DPEP I districts. Notable among them are multigrade teaching, introducing competency based teaching and learning, and development of question banks. All these efforts were aimed at building capacities of the village level teachers from village level with support provided from block, district and state levels.

4.2 Teachers' Training for Competency based teaching and learning

MPSP adopted the recommendation of NPE to adopt competency-based curriculum and started a statewide training programme for teachers, which is now known as Statewide Massive and Rigorous Teaching for Primary Teachers (SMARTPT). Alongside, competency-based textbooks were developed by TBB and both these efforts improved the quality of teaching and learning

4.2.1 Revamping Multigrade teaching

State level workshops were organised for envisioning and planning for multigrade teaching, which was mostly being handled in the manner of monograde teaching. DPEP functionaries were sent to MV Foundation, Andhra Pradesh, Bodh Shiksha Samiti, Rajasthan, Rishi Valley School, Andhra Pradesh and Loreto Day School in West Bengal to observe and learn about the various multigrade teaching approaches being practised in these places,. Which was followed by a ten -day workshop for developing material, and particularly self learning material, along with evaluation techniques. This was followed by teachers training at block level in all districts. In Bhum taluka in Osmanabad it was conducted very successfully and was upscaled to the district level.

4.2.2 Development of Question Banks

In order to bring student evaluation in accord with the competency framework, a need was felt to develop teachers' capacity to frame good test items. The objective was to discourage the prevalent practice of using ready-made question papers that only tend to encourage rote learning. The initiative of 'development of question banks' attempted to create a pool of subject-wise and class-wise questions for competency-based tests, and trained teachers in creating, evaluating and editing test items.

Workshops were held for the purpose at both the state and district levels. Experts edited the questions developed at the village/ taluka level and sent them to the districts. All the DPEP districts have compiled and printed Question Banks.

4.3 School Infrastructure and Facilities

The overall increase in the number of schools between 1997-98 and 2000-01 is 3.31% in DPEP I districts. The Ggrowth of the number of schools is the highest in Latur (4.7%) and the lowest in Aurangabad (1.46%). It may be noted that the EMIS set -up became operational only in 1996-97, though considerable expansion of schools and facilities took place during 1994-96. However, data for 1994-96 is not available. The data presented here should be viewed in this light. The number of students per school has also reduced from 182.3 to 173.9. Again there is considerable variation among dist' 'cts: Aurangabad has 193 children per school, the highest, and Osmanabad has 150 children per school, the lowest among all the districts.

There has been an increase in the number of single teacher schools between 1997-98 and 2000-01. All the other infrastructure indicators show improvement but also suggest the scope for improvement, especially in case of toilets and blackboards. There are also variations among districts e.g. in Osmanabad and Parbhani there are no schools without blackboards in 2000-01, but in Nanded some schools have yet to acquire a blackboard. Similarly there are variations on other parameters like toilets, availability of drinking water and classrooms. This seems to have happened because of the expansion of schools at a faster pace and it takes some time for facilities to be in place.

4.3.1 Status of school buildings, facilities related to sports and cultural activities

Out of the 15 schools in Aurangabad, 9 schools were havinghad a pucca building while 6 were having semi-pucca. According to the estimates of the respective headmasters, 10 of the schools were in good condition while 4 were in need of minor repairs, whereas 1 needed major repair. The area of school buildings varied with the size of the school.Though While there was one school with only one classroom, while there was another one hadwith 9 classrooms as well. Rest of the oOther schools had betweenrooms between between 2 to 8 rooms. Out of the 84 rooms in 15 schools, teacher blackboards were there in 82 (97.6%) schools and student blackboards in (64%) schools. 79 (94%) rooms had table-chair/table for teachers and 66 (78.6%) rooms had benches for students. In Osmanabad, 8 schools were havinghad a pucca building, while 6 had semi-pucca and 1 had kachcha. There was considerable range with regard to the size of the school, beginning from two room schools to one having 20 rooms. In between were 5 schools with 6 or seven7 rooms and others with 8 to 19 rooms. A general observation seems to be that school buildings have been able keep pace with the expansion of the school, rooms have been added up as the need increased rooms have been added up. In Osmanabad, out of a total of 133 rooms in 15 schools, 124 (93.2%) were having had teachers' blackboards and 71 (53.4%) were havinghad students' blackboards. 113 (85%) had chairs and tables for teachers and 86 (64.7%) rooms had benches for students. On the whole, infrastructure condition appeared satisfactory.

Almost all the schools did have toilets but not in working order. Particularly water was not available in any of the toilets in Aurangabad, and was available in only 3 of the 15 schools of Osmanabad.. Separate toilets for girls waswere there in only 3 schools in Aurangabad and in 9 in Osmanabad. In schools which have upper primary classes, and do not have having separate toilets for girls may have implications for girlsthe attendance and retention .of girls. Availabilty of drinking water and to some extent provision for electricity was much better in all schools in both the districts. Education related facilities like TLM, library, OB kit and labs facility were available in most of the schools and was were also being used. Musical instruments were available in 8 schools in Aurangabad and in 10 schools in Osmanabad. Sports equipments were available in 5 schools in Aurangabad and 7 schools in Osmanabad.

4.4 Management of school activities

The average number of working days for Aurangabad was 230 and for Osmanabad was 235, which is are above the 220 -days norm for a year. In both the districts visits by BRC an and CRC coordinators, who are in direct and constant touch with schools, are much higher as compared to visits by DIET or DPO officials. The number of visits by BRC coordinators to schools in Osmanabad is much higher than in Aurangabad. Another difference is in the visits by SPO functionaries to Osmanabad which was as high as 13 in the year 1997-98, and this seems to be due to the projects that were going on in the district. Except for these, the pattern of visits in the two districts is similar. On the whole, the both the districts are well covered as per the DPEP guidelines. The Ppattern of support received by the school from the visits of various DPEP functionaries in Aurangabad and Osmanabad is generally similar. 11 teacher heads in Aurangabad and 13 in

Osmanabad mentioned having received training in school development planning, which was mostly organised by DPEP and implemented either through DIET or DPO. 8 schools in Aurangabad and 9 in Osmanabad mentioned having school development plans. Overall this does not seem to be an area of active interest.

4.4.1 Visits by CRC coordinators: CRC coordinators have maximum contact with the schools and are expected to visit once a month and about 10 times a year. In addition to this they also meet teachers at *Gat Sammelan* and other meetings at BRC. There is some shortfall in the number of visits in 1995-96 and 1996-97 in Aurangabad and it improved in subsequent years. On an average, CRC coordinators have been visiting schools close to 10 times a year and providing a whole range of supports which include cluster level training, assistance in classroom transaction, use of contingency and teacher grants, preparation of TLM, increasing community participation, monthly progress review, and conducting seminars and other programmes related to teacher development. Head teachers in both the districts were providing support to anganwadi centers and alternative schools in the neighbourhood.

4.5 Community Participation- Role of Village Education Committees (VEC)

Community participation and the process of sharing responsibilty for the development of villages has been there, with the implementation of Panchayati Raj act since 1962. As a part of POA on National Policy on Education (1986), the Government of Maharashtra, by a resolution in 1991, formed VECs in each village panchayat. In DPEP this has been operationalised through the formation of Village Education Committee (VEC), School Management Committee (SMC), Mother Teacher Committee, Parent Teacher Associations (PTA) and Mata Samitis. The Government of Maharashtra in a resolution dated 20th March, 2001, ordered that the Sarpanch of Village Panchayat would be the ex officio chairman of VEC. This was done to provide for greater involvement of the elected representative of the panchayat and also to provide better synergy between the panchayat, which looks after overall development of village, and the school. According to MPSP there were 6155 VECs in 1997, and according to the 13th JRM report 15001 VECs were formed in all DPEP I districts. Training modules for VEC members and panchayat members have also been developed, and five persons from each district were given training at the state level. Block and cluster level cascading was also initiated. As per the norms, a VEC contributes Rs. 500 to receive Rs 2000 as school improvement grant, and members are also consulted in utilisation of 4% salary contingencies to the teachers. According to the JRM report, local communities had contributed Rs. 7.5 crores up to May 2001.

Under DPEP, construction of a new school and additional classrooms has been entrusted to the Grampanchayat, while construction of toilets, electrification, school repairs and wire fencing has been entrusted to VECs. The plans for school buildings have been prepared by MPSP, and drawing specifications and estimates have been provided to Grampanchayats/VECs. Making land available for school, drawing up agreement for construction, updating the cashbooks and stock registers, communicating the progress of work to the village and block office from time to time, and ensuring transparency in the construction process is done by the Grampanchayat/VEC. According to discussions at SPO, this process has resulted in saving of resources also though definite figures are not available regarding the extent of participation and saving.

The survey conducted in the two districts indicated that Village Education Committees were composed as per the specified DPEP norms for inclusion of women and members of SC community, and were mostly functioning regularly, participating in cultural functions, helping in enrollment, monitoring retention in school and reaching out to the girl child. VEC members also helped in school repairs by mobilizing labour or making contributions, and monitored teacher attendance and other school activities. However, it was found that there was considerable scope for revamping of training of VEC members, a fact which was also reiterated by DIET.

4.6 Management Structure of DPEP

In Maharashtra, DPEP is managed by Maharashtra Prathmik Shikshan Parishad (MPSP) which was created for this purpose. MPSP also manages the UN supported primary education project 'Amchishala', which is operational in Nasik and Thane Districts. The Chief Minister of the state heads the Governing Council, whereas the Secretary, School Education, heads the Executive Committee. The State Project Director, who also functions as Director, Primary Education, manages the functioning of the project. At the district level, the Chief Executive Officer, Zilla Parishad functions as the District Project Coordinator and the District Education Officer is the District Project Officer (DPO). Both these positions are ex officio in nature, drawing their salary from the State Government. The Deputy Project Officer

(Dy PO), who functions under the guidance of DPO, handles the everyday functioning of the programme.

The DPEP society was registered on March 7, 1994 and the first meeting of the Governing Council was held in July 1994 for finalization of the MoU. This was followed by a second meeting in August 1998. The first meeting of the Executive Committee (EC) was held in February 1996, and thereafter, the EC has been meeting regularly three to four times a year with up to 28 meetings held till April 2002, 28.

4.6.1 Management Structure at the Block and Sub-Block Levels

BRCs have been established in all the blocks of DPEP I districts and are functional. As all the BRC coordinators were on deputation and towards the end of the project many of them went back to their previous posts, many positions were vacant. In March 2001, only 62 % posts of BRC and 59% posts of ADEI were filled.

All coordinators have a range of activities which include school monitoring, supervision of assets, monitoring attendance of teachers, teacher training, compilation and reporting of relevant information, and supervision of Balwadis wherever they are in existence. All BRCCs have a schedule of activities for the next 3 months. These schedules of activities are planned in consultation with the BEO. Directives from DPO, as and when they come, are also taken into account in planning the activities. All BRC coordinators have been visiting VECs fairly regularly and attending to a variety of issues. Some of the main issues which BRCCs have been involved in with VECs and community members include: environment building, activating VECs, health check-ups, attention to disabled, forming mothers' group, ensuring 100% enrollment of girls, organising melas, paying attention to weak students, finding reasons for absenteeism, VECs' duties and rights, and education of SC/STs. The pattern of BRCC meetings is similar in Aurangabad and Osmanabad. All BRC staff in the BEO office meet on the first day of each week to review the foregoing week and plan for the following week. BRC staff and all the Cluster Heads meet twice a month for review and planning. These meetings are used for passing on the school level information to BRCC who processes them further for the DPO. Important circulars and information which are received from DPO/BEO are also shared. This is also an occasion to plan for visits to schools in coordination with CHs. In addition to these meetings, *Gat Sammelan* also serves as an important mechanism for sharing of ideas and information.

Training of BRC functionaries for capacity building has been one of the major focuses of DPEP. All the BRCCs in Aurangabad and Osmanabad, except one who joined less than two years ago, have undergone atleast 4 training courses in different areas. Some of the areas of training relate to preparation of TLM, action research, SMARTPT, compiling data for EMIS, microplanning, IED, VEC training and MLL.

4.6.2 Management structure at the District level

In Aurangabad, between 1994 and 2002, six DPOs and eleven Dy POs have been posted. The fourth Dy PO had the longest tenure of four years, from 1996 to 2000. In 2000, five Dy PO were posted in Aurangabad. During the period when this study was in progress, for about three months three Dy POs were posted. The project office functions from the BRC building, in which part of the space has been set aside for the BRC, while rest of the space is used by Dy PO office. The space available to DPO office seemed inadequate. The office is equipped with a telephone, fax, computers and a vehicle. Internet connection had also been obtained but it was located at Zilla Parishad in the DPC office. In Osmanabad, six DPOs and four Dy POs have been posted from 1994 to 2002. The second and third Dy POs had tenures of two and three years respectively. The office functions from a rented building which is quite spacious and is owned by the Zilla Parishad. In one part of the sprawling campus, the local DIET is located and the building for the local BRC has also been constructed alongside. Due to physical proximity of these two institutions, considerable informal interaction takes place between DPO and DIET staff. The DPO has a vehicle, telefax, computers and internet. Most of the sanctioned positions in the DPO office were filled as per the provision, but particular difficulty was mentioned with respect to staff position. Training activities have been regularly organised for all the project functionaries at Osmanabad. These have been organised at MPSP, LBS Academy at Mussoorie, IIP Pune and other places. Details of training at DPO Aurangabad were not available.

Networking and collaboration with other Departments: In Aurangabad DPO, collaboration and networking did not appear to be their strong point. The main collaboration seemed to be with SCERT, State Education Department and DIET. Interactions with SCERT and Education Department have been found to be useful, though there were some reservations about collaboration with DIET which is located at a distance of 80 kms. Apart from its distance, the other concern

was regarding availability of personnel when required. Only when specific proposals come from SCERT or SPO or Education Department that some joint activities take place. What was also surprising was that MIEPA, a state level training institution, is located only few kilometers away from the DPO in Aurangabad, but not much interaction seems to be taking place between the two. In Osmanabad, collaboration and networking seems to be slightly more extensive than in Aurangabad. Apart from SCERT, State Education Department and DIET, there have been joint activities with local NGOs and other educational institutes like Indian Institute of Education, Pune. Collaboration with SCERT, State education Department was reported to have been very useful while with NGOs it was reported to be slightly less useful.

***District Resource Group*:** According to the provisions of the State DPEP, each district has been provided with a District Resource Group (DRG) which has a 15 member committee with DPC as its chairman and DPO as convener. Dy PO, Principal DIET and representative of BEO, Senior lecturer DIET, Principal of Govt. D. Ed college and other district level officers are members of this committee. The idea for setting up the DRG was to have a group that would function as an advisory and coordinating mechanism, bringing into focus education related local issues and needs, and to provide support whereever possible. Depending upon the local need, districts were provided flexibility to organise DRGs for Alternative Schools, IED and other areas. However, in both the districts DRG has not been fully functional. Meetings are held once a year and are not sufficient to provide the kind of support that was envisaged.

Development and use of MIS: In Osmanabad, the computer programmer has been working for the project for the last six years as MIS incharge and was aware of the databases and procedures followed for data collection, and was involved in training for data collection according to prescribed format. A data-operator functions under the guidance of the programmer. Training has been organized for BRC coordinators, CRC coordinators, RPs and BEOs on procedures for data collection regarding Data Capture Format (DCF) and on validity checks. CRC coordinators have explained the EMIS forms to teachers who are responsible for filling them up. All the data is punched at the district level. Cluster head checks all the forms that are compiled by teachers. Thereafter, 10% and 5% cross checking is done at the block and district levels respectively. DISE maintain several reports and contribute to various projects. Data about schools, retention and dropout, AWP&B and microplanning are prepared. Similar arrangements seem to be in place at Aurangabad.

***Financial Management*:** Flow of funds from state office in Mumbai to district offices in Aurangabad and Osmanabad has never been a problem either at the district level or at the block level. All the activities are planned in advance and funds are allocated accordingly. Once the grants are received at the district level, funds are transferred to the block through drafts or cheques. AWP&B are developed in consultation with block level functionaries, therefore requirements for funding are also discussed much in advance. Two concerns were expressed in this regard. One was about finalisation of the AWP&B which is done by March-April and sent to SPO. It takes almost four months for the sanction by which time almost two months of the academic session are already over. It was felt that if AWP&B were finalised by January or February and sanction available by April, then the activities could start at the beginning of the session. The second concern was regarding the lack of financial powers of Dy POs and very limited financial powers (only up to Rs. 5000) of the DPO. This results in many bottlenecks in the implementation of activities. Since DPEP has been conceived as a programme which would bring about devolution of power, some thought may be applied to devolution of financial powers.

4.6.3 Management Structure at the State level

DPEP was launched in Maharashtra in 1994. The present SPD who joined DPEP in June 2001 is the fourth Director to head the project. The third SPD had the longest tenure of more than four years. The SPO is housed in a rented building. Other non-DPEP offices related to primary education are also housed in the same building. The present office building has a convenient location but space available is perceived to be inadequate. The office is equipped with computers, photocopiers, LCD projector and has internet connectivity. There is space for holding small conferences and recently facility for teleconferencing has also been added.

***Staffing, training pattern, networking with other departments and agencies*:** Most of the positions at SPO were filled and staffing was considered to be adequate. The IED coordinator was not appointed due to non-availability of a suitable person. There has been regular training of staff in planning, monitoring and other relevant areas of the project. The SPO has collaborated with a number of government and non-governmental agencies. Among the government agencies the prominent ones are: SCERT for development of training modules

for Master Trainers, Text Book Corporation for development of competency based text books and trials, State Education Department for implementation of the programme with the help of Education Officer of Zilla Parishad who is under Directorate of Education, MIEPA, for training of departmental officers, and DIET for training at district level under the guidance of SCERT and for conducting BAS study. Prominent collaborators among NGOs are the Indian Institute of Education, Pune, for NFE programme and for evaluation studies, Jawaharlal Nehru Engineering College, Aurangabad, for the evaluation of civil works under DPEP–I, Nirmala Niketan, Mumbai, for social assessment study, Jnana Prabhodhini, Pune, for the study of migratory patterns of families, and Karve Institute of Social Service, Pune, for the study of enrollment, attendance and retention of primary school children.

Planning and Monitoring System: At SPO, planning and monitoring activities are organised in a variety of ways. One of them is the preparation and finalisation of AWP&B. Between the initiation and the finalisation of AWP&B reports, three to four meetings of district representatives are held at the state level. Similarly, fresh schemes prepared by districts are incorporated in the plan as per DPEP guidelines. Another channel of planning and monitoring is through an MIS which has been fully functional since 1996. The software provided by DPEP cell is being used to capture information related to NER, enrollment, age and sex wise distribution of children, profiles of teachers, and facilities available at school. Data pertaining to school information is collected each year with September 30 as the reference point. Project Monitoring and Information System keeps track of information by collecting data once in three months for the activities and the financial expenditure during the year. All the databases are utilised extensively in planning and monitoring.

Financial Management: On the basis of demand received from the districts, funds are made available to them, of course subject to their availability at the state level. Funds are released to districts on a quarterly basis. While releasing the amount, unspent balance of the previous quarter is taken into account. Under DPEP I the approved budget for 1994-95 to 2000-01 was Rs. 27118.598 lakhs and actual amount received by MPSP was Rs. 19740.37 lakhs leaving a balance of Rs. 7378.228 lakh. Discussion at SPO office indicated that when the funds from GOI are released late it also causes a delay in release of the 15% contribution from the State government. This results in considerable inconvenience to districts.

4.7 Decentralisation and devolution of powers

According to the current thinking in SPO, considerable decentralisation and devolution of power has been achieved in the project in the state. One of the most important components of decentralisation is in the preparation and finalisation of APW&B reports, which starts with the school and cluster levels and is completed in coordination with district and state offices. Similarly, financial powers have been given to districts and they have shown considerable maturity and innovativeness in managing this amount. Another significant aspect of devolution of powers is in the financial area in the form of grants to village education committee for school management. Similarly, participation of community in monitoring and supervision of civil works has also granted a sense of participation and ownership to the community members.

4.8 Academic support systems

Academic support systems for DPEP were mainly visualised at district and state levels. At the district level, the structure and functioning of DIETs in Aurangabad and Osmanabad has been reviewed here. At the state level, the role of support institutions like MSCERT, MIEPA and Text Book Bureau is discussed.

4.8.1 Role of DIET

DIETs were visualised as important district level academic support structures for DPEP. Vertically, they are linked to SCERT and MPSP at the top and the downward linkages are with the BRC and CRC. At the district level, DIET Principal and representative faculty along with representative BRC members are also part of the District Resource Group.

Staff position and structure of DIET at Aurangabad and Osmanabad: In the two DIETs, out of the 20 sanctioned positions of senior and junior lecturers, 7 are vacant. The post of Principal in both the DIETs is vacant and is being held by a lecturer incharge in official capacity. Discussions with DIET faculty members indicated that lecturers' posts not being filled in time affects the functioning of the academic programme, and more than that the absence of a full-time principal is a major hurdle in the functioning of the DIET. This situation has prevailed for quite some time and has proven to be a major handicap in terms of academic planning and coordination with district and state level agencies. The structure in both

the places and the major functions, as expected, follow the prescribed pattern.

Training profile of DIET faculty: Most of the staff at Aurangabad have participated in DPEP initiated programmes on SMARTPT, Action Research, Preparation of TLM and IED at MSCERT, Pune, and Teleconferences at MPSP, Mumbai. Two lecturers also participated in courses on non-formal education and adult education at IIE, Pune and at Adult Education Directorate at Aurangabad. At Osmanabad DIET, in the last three years, almost all the DIET faculty have received training under DPEP in a 12 day SMARTPT course conducted by MSCERT, Pune. Three others participated in a short-term course on Vastishala. Staff members have also participated in some other courses that include MLL, Early Childhood Education, and Evaluation of Training Programmes at RIE, Bhopal, and the Multi Grade Workshop at NCERT, New Delhi.

Planning and networking in relation to DPEP: Both the DIETs prepare and submit an annual work plan as well as a quarterly report of their activities to MSCERT. However, specific plans relating to DPEP are not prepared. Activities relating to DPEP are organised on the basis of directions from MSCERT or MPSP. DIET principals are also members of the DRG but they mentioned that the DRG does not function very effectively. In Osmanabad, physical proximity of the DIET to DPO office results in greater informal exchange and collaboration between the staff members of the two institutions, but in case of Auranagabad DIET, that does not happen because of its distant location. In both the places, there was a feeling that the academic strength of DIET has not been utilised sufficiently in the DPEP because of compartmentalization of the DIET and District Project Office. Sometimes it also results in duplication or overlapping of certain efforts. The perception of DIET faculty was that they are better equipped to handle many academic functions that are being undertaken by DPEP staff. The district office has direct linkages with MPSP in Mumbai on the one hand, and with BRC/CRC on the other. This administrative linkage facilitates their academic planning, whereas DIETs receive their funding and academic direction from MSCERT, which is generally confined to their regular activities. DPEP related activities are conducted in a sporadic manner 'as and when required' from activity to activity and not in a concerted planned way.

Training courses under DPEP: The courses are a combination of those conducted for DPEP as well as for others. Competency based teaching and learning courses have been conducted every year since 1997-98. Another popular course which has been conducted every year except in 2001-02 is the 'Preparation of teaching learning aids'. Since the introduction of English language in primary schools, training courses for English teaching has been conducted since last year. Similarly, courses in action research, Vastishala and 'Mahila Prabodhan' were conducted in 2001-02. Osmanabad DIET has also been involved in distance learning programmes through teleconferencing for CHs and BRCCs. Equipment for this programme such as TV, VCR and dish antenna have been provided by DPEP. Aurangabad DIET has been conducting courses on MLL and multi grade teaching, and a course for cluster heads. Other training courses relate to organising 'Gat Sammelan', 'SMARTPT' and 'Action Learning'. They have also participated in 'MAS' and 'TAS' survey in the district. The training programmes conducted for VEC funtionaries have not been very successful.

Monitoring, MIS and financial management at DIET: Osmanabad DIET has developed a specific format for evaluating their own courses. For specific competency or skill development courses, they conduct a pre and post-test to ascertain the changes due in the course. In all other courses, they take oral and written feedback from participants. Earlier, faculty members used to visit schools to find out about the usefulness of the acquired skills. In Aurangabad no such measures are in use. MSCERT, which is the monitoring agency for DIET, calls for quarterly reports to monitor its activities. Statements of expenses are sent monthly and at the end of the financial year. Funds from DPEP are received as per the planned activities. There is no MIS at either of the DIETs, though Osmanabad DIET has maintained lists of available resource persons in the district, the primary schools, Anganwadi centres, Vastishalas and MPHE centres as also a list of good schools and teachers in the district. DIET faculty at Osmanabad has made detailed teaching notes, aids and background material for classroom teaching. These notes are shared by all and are available even after a person is transferred, so that the person who handles the module thereafter can access and use it.

4.8.2 Role of Maharashtra State Council of Educational Research and Training

Maharashtra State Council of Educational Research and Training (MSCERT), is a state level organisation entrusted with the responsibility of developing curriculum for classes I to VIII, conducting training programmes and devising

assessment systems. In addition, it is also engaged in extensive services, evaluation and other programmes to facilitate the goal of Universalisation of Elementary Education in the state. The institute was initially established in 1964 as State Institute of Education. In 1984, it was launched as State Council for Educational Research and Training (SCERT). There are five state level institutes affiliated to it. MSCERT is headed by a Director assisted by two joint directors, one of whom looks after DPEP related activities. There are 16 departments, out of which one is the DPEP cell which coordinates all DPEP related activities. In the Institute, posts have been sanctioned for 24 Class I, 45 Class II and 95 Class III officers. Under DPEP I, a separate cell has been created at MSCERT which consists of the Head of the cell, one programme officer, one assistant programme officer and two support staff. The main function of the cell is to coordinate between MPSP and MSCERT. Many of the programmes that are organised are attended by functionaries from DPEP districts as well as non-DPEP districts.

***Training Programmes at MSCERT*:** MSCERT conducts close to 150 training programmes every year and has developed several training manuals for various functionaries involved in the project. One of the main programmes, 'Enriching teaching and learning at primary school level' was conducted during 1997-2000. The programme, which became known by the acronym SMARTPT, was conducted in all the districts of the state and received considerable support from DPEP.

***Statewide Massive and Rigorous Training for Primary Teachers* (SMARTPT):**

The curriculum of primary education was revised in 1988 in light of the National Policy on Education (1986), and a decision was taken to introduce competency-based curriculum. Accordingly, text books of Language, Mathematics and Science were revised and the new curriculum was introduced in a phased manner between 1997-98 to 1999-2000, and a statewide training programme to train primary teachers was conceived which came to be popularly known as SMARTPT. The objective of this programme was to train teachers for teaching competency-based textbooks, develop participative joyful learning methods and familiarise administrative functionaries so that this approach could be implemented. The training modules were developed for 10 to 12 days of training. Training was conducted in 1997-98 for 1,56,495 teachers and functionaries for Classes I & II, in 1998-99 for 1,56,222 of Classes II & IV, and in 1999-2000 for 91,623 of Class V. For training such large numbers, a cascading model was developed from council to state to district and finally to the block level. Several handbooks were developed to support the training for resource persons as well as for teachers. Review of SMARTPT was conducted through pre-test and post-test reviews to ascertain changes to be brought about in training, through feedback from participants, and the third through visits to the field by MSCERT officers and supervisors.

***Networking and collaboration*:** MSCERT does not have a formal arrangement, but over the years joint projects have been conducted with several institutions and individuals. The more prominent institutions that have collaborated include IIE, Pune, Gokhale Institute of Economics, Pune, Jan Prabodhini, Pune, Homi Bhabha Centre for Science Education, Mumbai, and SNDT university, Mumbai.

Financial management, planning, monitoring and evaluation: The DPEP cell in MSCERT has been receiving regular funds under DPEP. Funds are received based on the planned activities and have been released on time. A separate provision for Rs. 100 lakhs for construction of a women's hostel has been made, which is to start soon. Need assessment and planning for the programme at MSCERT is done in a variety of ways. It includes sending questionnaires to project districts and to field functionaries for understanding their needs, sharing experiences at review meetings, and conducting assessment surveys and workshops for the identification of needs. Findings from these are discussed at meetings with district functionaries to further understand and prioritise the needs. On the basis of all these inputs and discussions with MPSP, the annual plan is finalised.

4.8.3 Role of Maharashtra Institute of Educational Planning and Administration

Maharashtra Institute of Educational Planning and Administration (MIEPA) was established in May 1994 in Aurangabad, as per guidelines of MHRD under DPEP. The main objective of the institute is to provide training to education officers at all levels in planning and management of educational programmes. An initial grant of Rs. 3 crores was provided for this purpose. The Institute recently moved into a spacious building which was owned by the erstwhile Nizam's state. About one crore rupees of the three crore grant was spent in renovation of the building, which is still not complete. There are no bath and toilet facilities or hostels for

participants. Before moving into these premises, the Institute was functioning from a rented building.

***Staff position and structure of MIEPA*:** Since the time of establishment of MIEPA in 1994, 11 directors have been appointed until April 2002. Also the level of the Director's post has been lowered. New directors have been given a joint charge with some other posting in the department; as a result they are able to visit the Institute only on specified days for essential work. The posts of Deputy Director, Accounts Officer and Training Assistant are vacant. Apart from the administrative posts mentioned above, there is no provision for faculty in the structure of MIEPA. The plan was to invite visiting faculty and consultants as per requirements. At the time this visit was made, a retired faculty of a local college was functioning as a consultant and two academic coordinators, who were earlier working as Class II officers in MES, were responsible for coordinating academic programmes.

***Training and research at MIEPA*:** Between 1997 and 2001, MIEPA organised 89 training programmes attended by 2345 participants. These participants have been drawn from different levels of the education department. The theme of the programmes relates to educational management and personal development. The educational management module includes general administration and planning, school supervision, management of financial matters, and issues relating to gender in education. The personal development module includes topics related to motivation, health education and time management. MIEPA was instituted under DPEP but participants for the programme are drawn from all districts, irrespective of whether they are project districts or not. This approach has been adopted because government functionaries are transferred from one district to another. Therefore, even those officials who are functioning in non-project districts may at some point in time be required to work in project districts. In such cases, training provided to them earlier can be useful. MIEPA has conducted two research studies so far. One was related to renovation and reformation of primary education management system in Vaijapur block of Aurangabad, and the other study was on the impact of need based short-term training programmes on professional behaviour of trainees. In addition to these, the institute has also participated in social surveys conducted by MSCERT, BAS and MAS, and coordinated by MPSP.

Planning, monitoring and evaluation of activities at MIEPA: Annual planning for the training is done in the months of March and April through specially organized workshops. Education Officers (EO), Deputy Education Officers, DIET Principals, ADEI and others are invited to these workshops to provide their input. Based on these, the programme for the following year is decided. For evaluation of training, the institute contacts participants after three months of training through a postal questionnaire. Sometimes participants are also invited for workshops to obtain feedback on the effectiveness of training in the field. In addition to the funding provided initially, specific activity based funding is also provided by MPSP.

***Strengths and Weaknesses of MIEPA*:** Though the programmes are being conducted at MIEPA for many years, several concerns and apprehensions prevail. To begin with, infrastructure constraints have been resolved but hostel facility has yet to be established. This is a serious handicap while organizing training programmes. The second aspect is the absence of regular fulltime competent faculty who could handle the training and research on a sustained basis. Academic coordinators who are deputed from the government are of BEO level and are not sufficiently equipped to coordinate and organize training. To conduct research is even more challenging under these situations. The visiting faculty is drawn from a wide variety of institutions and may not have adequate understanding of education related issues. Added to these is the short tenure of directors at the institute which creates a situation where clear cut directions are not available. Another concern is regarding the flow of funds. The three crore rupees allocated have been spent in acquiring and renovating the building and organizing programmes and there is no provision for additional funding.

4.8.4 Text Book Bureau

The Text Book Bureau (TBB), Pune, was established in 1967 as per the recommendations of the Kothari Commission. It has been publishing text books for Standards I to VIII in Marathi, Hindi, English, Gujarati, Urdu, Kannada and Sindhi (Arabic and Dev Nagari scripts). In 1997, Telugu was also introduced raising the total number of languages in which books are published by the bureau to eight.

Support to Text Book Bureau under DPEP: Support to TBB from DPEP commenced in 1995 when preparation of competency based textbooks was started as per the syllabus prescribed by the government of Maharashtra. Under DPEP I, a grant of Rs. 184.29 lakhs, and under DPEP II, a grant of Rs. 44.92 has been provided.

Most of the grant has been spent in up-gradation of computers and DTP systems, on salaries and training of staff working on these assignments, and on overall preparation of competency based text books for Standards I to V.

SARAS 2001-A unique effort for text book preparation: The Dave Committee Recommendations of the Central Ministry of HRD served as the basis for the state's new Competency-based Primary Education Curriculum-1995. The Textbook Bureau was assigned the task of bringing out new textbooks that would help realise the objectives set forth in the new syllabus. A scheme, SARAS–2001, was introduced with this objective in mind. It involved not only pre-publication screening but also yearlong post-publication trials of the books. Textbooks have been published in all the eight media of instruction (Marathi, Hindi, English, Gujarati, Urdu, Kannada, Telugu, and Sindhi) after rigorous pre-publication screening, and adopted throughout the State. The aim of this project was to get a continuous statewide feedback throughout the academic year from multiple sources regarding the actual efficacy of the newly introduced texts, and to incorporate the suggestions of all the stakeholders in the revised editions. The project involved sensitizing the language and subject committees to the implications of the competency-based approach before the publication of the books, obtaining planned and continuous feedback from teachers and students of selected schools, and reviewing and incorporating the feedback into the final publication.

4.9 Research Activities under DPEP

Research studies carried out by SPO may be classified as those conducted at the initiative of national agencies like EdCIL, NIEPA or NCERT and those conducted at the initiative of SPO. Some of these researches have been conducted by external research agencies like IEE Pune, KISS Pune and Nirmala Niketan, Mumbai. Institutions like SCERT and MIEPA have also undertaken studies at the initiative of DPEP. In addition, SPO has also undertaken studies by itself. In 2002, a series of four action-research workshops were organised which helped initiate research assistants and training incharges from all the DPEP districts into research. Findings of all these research studies were shared at the district level and abstracts of all the studies were distributed to all schools in the district.

Research activities of MSCERT under DPEP cell are guided primarily by the needs of the project and are decided in consultation with the SPO. In the last several years, MSCERT staff have participated in several research projects in DPEP districts. Notable among them are the Gender Study for Phase I districts, Baseline Assessment Survey for DPEP Phase I districts, Midterm Assessment Survey for DPEP I & II districts, Terminal Assessment Survey for DPEP I districts, Tryout Learning Achievement Test, Baseline Assessment Survey for II blocks under ASHA Project, Pilot project on MLL based evaluation for Class I to IV pupils, and the Baseline for Planning of SSA in DPEP I districts. Under DPEP, action research has become an important activity and MSCERT has contributed significantly to the process since 1996-97. After a process of training and screening, 65 action researches have been completed.

4.10 Civil Works

Most of the civil works for Phase I districts have either been completed or are in the process of being completed. According to earlier plans, the construction of BRCs should have been completed much earlier. The contract for constructing all the 34 BRCs had been given to the Centre for Science, Wardha. After construction of a few BRCs faults in design were noticed and the contract was terminated. The whole process had to be started all over again resulting in delay.

5. Strengths and Weaknesses of the Programme

The DPEP in Maharashtra state has many positive aspects while certain aspects may need attention particularly from the point of view of improvement in future. Some of the notable positive features of the programme are :

- Empowerment of teachers, cluster heads and BRC officials in terms of planning, and their being able to participate and implement their ideas.
- Provision of contingency grant to teachers for development of TLM has provided a sense of autonomy and empowerment to teachers.
- Enhancement of capacities through training and support provided at various levels of the project, particularly through SMARTPT.
- Innovations in teaching and learning, conducting action research and sharing it with fellow teachers.
- Several teachers who have worked as Cluster Heads or BRC Coordinators have found a new role for themselves, and they have evolved methods and strategies appropriate to the position.
- Integration of information on all aspects of education through EMIS, and its application in planning and implementation.

Some of the aspects which need attention are:

- More active and close cooperation between DIET and DPO.
- Well-defined arrangements and mechanisms for active role of District Resource Group in district level programmes.
- More financial powers to DPO and Dy PO, and longer tenure in the project.

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28. Social Acceptability of Government Primary Schools in Comparison with other type of Schools functioning in the same area

*Nibedita Sahu**

1. Objectives

The following were the objectives of the study.

- To study the existing physical and educational facilities available in the school such as Infrastructure, Teacher pupil ratio, Use of TLM, Qualification of teachers etc.
- To study the perceptions of schools by parents, teachers, students, community members etc.
- To compare the social acceptability of primary schools with regard to other schools.

2. Scope and Geographical Coverage

The study has been designed to capture the educational status of the people, physical and educational facilities in the school, and the perception of various stakeholders and to compare the social acceptability of government primary schools with other schools. The study proceeds with a set of hypothesis in regard to the socio-economic parameters of the households and their bearing on the children's education and the acceptability of government run school as compared to non-government schools. The study covered 120 government and non-government primary schools from 9 talukas of three DPEP districts, namely, Banaskantha, Dangs, and Panchmahals.

3. Methodology

3.1 Selection of the sample

The District of Banaskantha has mainly 9 talukas. The talukas of Danta, Palanpur, Kankrej & Vadgam were taken up for the Study. Similarly the talukas of Dahod, Devgarh Baria, Jhalod, & Limkheda were selected in the undivided district of Panchamahals. In total 120 schools, 12 from each of 8 talukas of Banaskantha, Panchmahals, and 24 from the district of Dangs were selected on random basis. The talukas were selected on the basis of backwardness and literacy rate. Randomised stratified cluster sampling method was adopted for the selection of households and other stakeholders from each village.

3.2 Tools Used

(i) Information Data Sheet for Schools (IDSs)

(ii) Information Data Sheet for Classroom Observations (IDSclass)

(iii) Interview Schedule for Community Groups (ISp)

(iv) Interview Schedule for Teachers (ISt)

(v) Interview Schedule for CRCs/BRCs

(vi) Group Discussion of School going Children (GDsc)

The Data sheets aimed at collection of necessary data about the school, households etc. Questionnaires consisted of closed as well as open-ended questions. The study was conducted by personal, face-to-face interviews both in the villages and in the taluka offices. The interviews were conducted in Gujarati and there were always two people who conducted the interview. 3 respondents were taken from each village on random basis. Hence, in all, 360 respondents (338 valid ones) were taken up in this study. The respondents were chosen such that there was a representation of various groups. This was done in order to reflect the different social, economic and environmental conditions within the village itself and to ensure internal validity.

Questionnaires were also administered to 120 teachers, 120 community groups, 60 CRCs / BRCs. Interview schedule were administered to 120 groups of school going children. Classroom observations were also done in 120 schools and the school profiles in respect of 120 schools were also compiled.

3.3 Statistical techniques used for processing data

The data available from the administration of various tools was analyzed to have descriptive statistics, which include variance, standard deviation etc. The study has proposed new concept in the form of Primary Education Index (PEI), which will find immense utility in conducting objective analysis in Indian situations.

4. Main findings and conclusions

4.1 Drop out rate in Government Vs. Non-government Schools

The number of non-government schools covered in three districts is 27, the rest being government schools. The data has been analyzed after putting it under two cycles

N.M. Sadguru Water & Development Foundation, Dahod; Gujarat Council of Primary Education, Gandhi Nagar, Gujarat

namely Cycle I & Cycle II. Cycle I means the students of Std I of 1996-97, Std II of 1997-98 and so on till Std V of 2000-01. Cycle II captures students of Std I of year 1997-98, Std II of 1998-99 and so on till Std V of 2001-02. The basic reason for putting data into two cycles is to smoothen the bias, if any, in one set of data i.e. one cycle and hence the result is more reliable.

Cycle I

Total number of students in Standard I and Standard V of Government Primary Schools and Non-Government Schools of study area are given below:

Table: 1 Cycle: I for Std I & Std V

Type of School	Std I (1996-97)	Std V (2000-01)
Govt School	5587	3908
Non-Govt School	360	729

Government schools experience a dropout of 30.7% from Std I to Std V while non-government schools showed a very positive turn and it grew by 103%. It can be fairly assumed that in normal course, students of Std I of year 1996-97 should reach Std V in year 2001-02. Thus the difference in the number of students in Std V & Std I can be taken as dropout. One inference can be that the students from government schools shifted to non-government schools.

In case of movement from Std I to Std II, both types of schools showed downward trend. In government schools the dropout rate was 21.4% while in non-government schools, it was 7%.

Table: 2 Cycle: I for Std I & Std II

Type of School	Std I (1996-97)	Std II (1997-98)
Govt School	5587	4391
Non-govt School	360	335

Cycle II

Here again, non-government schools had 105% increase in number of students of Std V compared to Std I while the government schools showed dropout rate of 36.6%.

Table : 3 Cycle : II for Std I & Std V

Type of School	Std I (1997-98)	Std V (2001-02)
Govt School	6184	4165
Non-govt School	372	773

From Std I to Std II there is dropout rate of 23.3% for government school while for non-government school there is an increase of 8%.

Table: 4 Cycle: II for Std I & Std II

Type of School	Std I (1997-98)	Std II (2001-02)
Govt School	5587	4391
Non-govt School	360	335

It can be concluded that the drop rate on average is 25% from Std I to Std V and in case of girls it is 33% while for boys it is 20%. So far as government and non-government schools are concerned, in non-government schools there was an average increase of 100% while in government schools there is drop of 34%ent. Another interesting fact observed is the increase in number of students in Std V compared to Std I in the Dangs districts for both types of schools.

4.2. Primary Education Index (PEI)

Here the vision is to evolve Primary Education Index [PEI], which captures quantitative as well as qualitative data for the improvement of the existing primary education system. The objectives are

- *To compare Govt and Non-Govt schools on the basis of primary education status*
- *To get feedback of different stakeholders to improve primary education system*
- *To review primary education program / project implementation*

The analysis is based on the secondary data (qualitative & quantitative) and data sheets prepared from primary data (qualitative & quantitative) based on Observation, Group Discussion with different stakeholders, Semi-structured interview of parents & teachers, and Household survey. Five categories of variables have been given appropriate weightage in the development of PEI.

Table: 5 Variables with Weightage

Sr. No.	Variables	Weightage
1	School Profile	35
2	Quality of teachers	10
3	Social Acceptability	20
4	Satisfaction of different stakeholders	20
5	Critical ratios	15
	Total	**100**

The weights are assigned on the basis of the relative significance of each variable that represents a bundle of characteristics akin to the educational evaluative process. With the assignment of weights, the variable becomes quantitative and amenable to definitive comparisons across units. The purpose of the weightage system is also to validate the Primary Education Index (PEI) as a viable and operable approach in ranking the educational status across different spatial units, to develop mechanism for stakeholders' feedback and to effect reviews on implementation of programs and projects.

Each broad aspect as specified above is subjected to detailed scrutiny. The bundle of characteristics have been modified and treated as variables capable of signifying inter-relations in a given system. Therefore, each variable is assigned a score, not exceeding 1, and applied to the government and non-government primary schools. Summation of scores obtained will be used to rank in specific category of schools.

School Profile

The School Profile aspect has been disaggregated into a 21 variable (Table 6) analysis by assigning inter variable maximum score at unity. In other words, the analytical construct implies equal intensity of influence exerted by each variable in configuring the profile. These variables facilitate evaluation in terms of teaching environment, educational tools, physical infrastructure and utilities and services. Non-government primary schools have scored over government schools in the School Profile aspect.

Quality of Teachers

Quality of teachers is a critical element in ensuring quality education. This aspect is disaggregated into four variables of uniform weights at unity, thereby attaching equal significance. These variables investigate teachers' capability through experience, social concern toward the disadvantageous sections of the society, and responsibility stretching beyond the contact hours. The scores obtained by non-government schools indicate a slight edge over government schools.

Table: 6 Sub-variables of School Profile

Sub-variables	Max. Score	*Score	
		G	NG
Students sitting on ground	1	0.92	0.76
Teacher's Room	1	0.39	0.70
Painting Room	1	0.33	0.36
Library	1	0.76	0.70
Maps	1	0.94	0.92
Blackboard	1	0.98	0.95
Drinking water	1	0.84	0.92
School Register	1	0.98	0.98
Stationery	1	0.84	0.88
Health Tools	1	0.36	0.48
Playing Tools	1	0.97	1
Play ground	1	0.82	0.95
Pacca /Room	1	0.90	0.88
Toilet/Urinal	1	1	1
Room/ Std	1	1	0.96
Cleanliness of Classrooms	1	0.80	0.87
Cleanliness of Students	1	0.69	0.85
Density	1	0.78	0.69
Personality of students of disadvantaged group in class	1	0.69	0.78
Replies of disadvantaged group children in class	1	0.66	0.71
Class monitor is not from disadvantaged group	1	0.45	0.65
TOTAL	**21**	**16.1**	**16.99**

G=Government; NG= Non-government

* Score has been generated by calculating percentage of that type of schools having such facility and then converting percentage into decimal. For example: In drinking water variable, Govt School score is 0.84 while of Non-govt School is 0.92; It means 84 percent of the government schools have drinking facility while in case of non-government school this percentage is 92 percent.

This score has been derived from the data obtained from 93 Govt Schools and 27 Non-Govt Schools of the study area.

Table: 7 Sub-variables of Quality of teachers

Sub-variables	Max. Score	G	NG
Experience	1	0.74	0.72
Contact with parents of disadvantaged Group	1	0.99	0.88
Guidance after schools	1	0.77	0.93
In contact with Group	1	0.99	0.97
TOTAL	**4**	**3.49**	**3.5**

5.3 Social Acceptability

The Social Accessibility aspect constitutes eight variables with uniform weights and equal significance. The variables are specifically designed to evaluate the societal perspective and actions toward school children. The collective responsibility of community in effecting quality education has been emphasized in the analysis. The organizational type, regularity of meetings, information dissemination and awareness building on group activities are prime focus in the evaluation. Government schools have larger Social acceptability as is shown through the considerably higher score secured compared to non government schools.

Table: 8 Social Acceptability

Sub-variables	Max. Score	G	NG
Discussion with Parents			
Discussion of Children			
Education in the Group Meeting	1	0.91	0.91
Children Being Rewarded by Group for performance	1	0.66	0.67
Knowledge about Village Education Committee, PTA	1	0.98	0.76
Are the Girls getting Primary Education	1	0.99	0.97
Is there any practice of not sending girls to school [Reverse factor is taken [1-mn]	1	1	1
VEC meetings per year	1	0.51	0.63
PTAs per year	1	0.58	0.45
MTAs per year	1	0.58	0.42
TOTAL	**8**	**6.21**	**5.81**

5.4 Satisfaction of different stakeholders

Stakeholders satisfaction is evaluated in terms of students' attitude towards school environment including teachers attitude, parents response, community responsibility in terms of efforts for improved enrolment and retention, and motivation. Thus the analysis takes both internal and external environment in to consideration. The aspect consists of ten variables of uniform weights, therefore implying equal influence for each variable in the configuration. The stakeholders seem to be increasingly satisfied with performance of non-government schools as is evident from the higher score obtained over government schools.

Table: 9 Sub-variables of Satisfaction of different Stake-holders

Sub-variables	Max. Score	G	NG
Students are interest to go to School everyday	1	0.75	0.81
The quality of facilities in the school	1	0.72	0.79
Homely Environment in School	1	0.72	0.81
The behavior of the teachers	1	0.76	0.83
Sarpanch takes interest	1	0.73	0.63
CRC happy with education standards	1	0.75	0.75
Parents consider school as second home	1	0.71	0.78
Efforts in village for retention	1	0.76	0.74
Efforts in village for enrollment	1	0.77	0.76
Motivation by Panchayat 1	0.6	0.6	
TOTAL	**10**	**7.27**	**7.5**

5.5 Some critical ratios

Critical ratios are derived from the variables that have direct bearing on quality of educational system. Each variable in the evaluative procedure represent a series of phenomena with identifiable inter-relations with one another. In all, the aspect comprises seven variables of differing characteristics and significance, however, for analytical purpose, they have been treated at par. It is important that these ratios are treated with great care in the process of evaluation for they relate to the benchmarks evolved after continuous monitoring of educational systems, world over. Summation of the scores shows that non-government schools have better ratios as compared to government schools, which signify more conducive environment for students to learn.

Table: 10 Sub-variables of Critical Ratios

Variable	Max. Score	G	NG
Girl/Boys ratio1	(For > 1, it will be 1)	0.75	0.72
Female/Male teachers ratio	1(For > 1, it will be 1)	0.53	0.61
Pupil/Teacher ratio	15-25: 1 26-35: 0.6 >35: 0.3	0.3 (35)	1 (18.2)
Student/Class room ratio]	15-25: 1 26-35: 0.6 >35: 0.3	0.3 (59)	0.3 (54)
TOTAL	4	**1.88**	**2.63**

Aggregate Score

The analyses on the educational system focusing quantitative and qualitative aspects need to converge on to a common space for comparative purpose. All the five aspects have been brought together for a final evaluation. The total weights of 100 are assigned over the aspects in accordance with their relative significance. Although the intra-aspect variables were treated on equi-significance level, the inter-aspect distribution of weights is treated as a function of the extent of influence each aspect exerts on totality of the system and would vary across the aspects. The overall score table is presented with aspect specific scores obtained for each category of schools in order to facilitate comparisons and also identify areas needing improvement. Thus for a meaningful conclusion, the total score is presented along with disaggregated aspect level scores.

Table: 11 Score on each variable*

S.N.	Main Variables	Weightage	G	NG
1	School Profile	35	26.83	28.33
2	Quality of teachers	10	8.73	8.75
3	Social Acceptability	20	15.53	14.53
4	Satisfaction of different stakeholders	20	14.54	15
5	Critical ratios	15	7.05	9.87
	Total	**100**	**72.68**	**76.48**

In the present analysis, non-government category of schools secured the higher score of (76.48) compared to government category of schools (72.68). However, it needs to be mentioned that each category of schools has demonstrated strengths and weaknesses in certain areas. The ingenuity of the planners and policy makers lies in identifying the system flaws and innovating appropriate strategies to improving functioning of the system.

The micro level analysis suggest that out of the 50 parameters taken into consideration, the non-government schools have better or comparable acceptability in all parameters except 6 parameters i.e. availability of library, contact with parents of disadvantaged groups, knowledge about PTA/MTA, inadequate attention by Sarpanch etc.

The noteworthy feature is the favorable pupil/teacher ratio of 18.2 in non-government schools compared to 35 in case of government schools. The female/male teacher ratio is low in both the cases. The student/classroom ratio is high in both the cases. The parents felt that the education in non-government schools is more child-centered than in government schools. Parents were comfortable with the attitude and behavior of teachers. Parents feel that use of teaching methods; learners' evaluation and upkeep of workbooks are better in non-government schools.

Observation from other tools

- Availability of classrooms in both type of schools is by and large not adequate in number. Further there is no provision for separate rooms for teachers. The density of students in the classroom is on the higher side. These issues impose severe constraint on teaching environment.
- Although in every school there is a playground, however, the same are ill equipped. There is shortage/ non-availability of game items. Both these aspects point towards the need for setting up educational infrastructure as per the norms suggested by government.
- There is negligible availability of tools for prayer, health training equipment, visual/hearing aids and laboratory tools. The situation has been applicable to most of the schools in the study area. Shortage of these devices constrains support functions in education.
- Utilities and services like toilet facilities need

Aggregate score of different main variables like School Profile, Quality of teachers, etc was given different weightage according to the importance on total scale of 100.

For example, Score of School profile for Govt School was 16.1 out of 21. Thus while giving weightage, 21 was considered to be 35 and hence 16.1 became 26.83 on the scale of 35.

considerable improvement Lack of such facility is injurious to children's health. However, drinking water facilities are available in the schools. It is quite encouraging to note that the schools and the students have been giving adequate attention to cleanliness aspect, although there is scope for further improvement.

- The male-female teacher ratio is skewed in favor of males. It has been observed that there is absence of lady teachers in 45 % of the sample schools, which is a matter of serious concern, especially in the context of functioning of Mother-Teacher Association.
- Availability of basic infrastructure such as blackboards, maps, timetable and Mid Day Meal utensils etc has been assured. Thus there is considerable stock addition to the teaching aids and children's meal scheme. But in all places the students have to sit on the floor in the classrooms.
- There is no discrimination of any sort against the children of disadvantaged groups. Teachers are providing them extra attention. The children from the disadvantaged groups participate actively in academic as well as other activities. However there is scope for improvement.
- There are issues related to grade repetition, which is essentially a school related phenomenon. Although a 'no detention policy' has been advocated for class I & II, the ground reality is different. In actual practice, a number of students continue to be shown as repeaters for reasons of irregularity in the school, or the teachers are not aware of the detention policy.
- All villages have primary schools. Most of the teachers come from outside. The issue of migration is not visible and serious. There is a need to provide residential accommodation to the teachers coming from outside. There are instances of teachers' continued absence in schools owing to lack of facilities.
- Almost all children are taking advantage of the Mid Day Meal scheme without any discrimination. However there is need to link up the MDM scheme and attendance of the beneficiary students. Benefit should be extended to children who attend the school and need to be utilized as incentive for regular attendance.
- The government employees are providing guidance to villagers for promotion of enrollment in schools and girl education. They do participate in events for promoting education at the local village level. Such efforts need to be continued, as the participation has proved beneficial in inculcating awareness among the villagers.
- Parents have to care for enforcing regular attendance, provide required motivation and attend the Parents and Mothers meetings regularly. They should also help children in completing the homework. Although such activities are taking place in the villages, there is a need to intensify the efforts for attaining better results.
- The leaders of various groups are making positive efforts for promotion of enrollment, retention etc. they do discuss various educational issues in the group meetings. They do admit absence of adequate incentives in their group for enhancing the spread of education. While they advocate for residential schools, they don't favour separate arrangement for girls.
- Village Panchayats are not providing adequate incentive for promoting education. However the lady members of the panchayat are taking keen interest in the promotion by discussing the same in panchayats, canvassing in the village, discussion with the parents and also by participating in various events to promote education. Active participation of the village panchayat is crucial for improving the functioning of the educational system.
- The teachers are by and large experienced. Their attitude towards children of disadvantaged groups is quite positive. They do give more attention for girl education and are against separate arrangements for them. They are making sincere efforts to keep the dropout to bare minimum. They realize the importance of lady teachers and participate in major events meant for promoting education.
- Parents expect their children to be good citizens and help them in income generation. They are interested to ensure regular attendance of their wards, motivate them and attend PTA/MTA meetings regularly. They do advocate for better facilities in the schools and availability of better teachers.
- Almost all children enjoy going to the school. They enjoy activities such as singing, sports, cultural, community safai, prayer etc. They prefer to be

good income earning workers in future. They have mixed reaction to the environment in the schools.

- A few children are not going to school because of pressure on them to do domestic work/ agricultural labor/ take care of the young ones in the house etc. They would prefer to go back to the schools. They would like to be good citizens and earn money for them

Way Forward

- The school profile parameters operate on 78 % efficiency with large-scale variation for scores across the variables. Some of the areas lagging behind include health equipments, teachers' room, and community identity of class monitor, which require immediate attention and corrective measures. However, it should be mentioned that these issues need case specific strategies and implementation mechanisms.
- The Quality of Teachers parameters demonstrate high degree of efficiency at 87 percent. Although the number of variables is less in this aspect, they represent the exogenous factors responsible for providing the much-needed inputs for a conducive educational environment. It is important that efforts are continued to sustain the present level of system efficiency and also improve it to the extent possible.
- The Social Acceptability parameters registered moderate efficiency at 71 percent. The lagging variables pertain to Village Education Committee meetings, Parent Teacher Committee meetings, and Mother Teacher Meetings. Performance of these variables is a critical area of concern in the education quality assurance and evaluative process as community participation plays a crucial role in triggering motivation. Efforts should be made to improve efficiency in this respect.
- The Stakeholders' Satisfaction has been operating on a better efficiency rate as compared to the previous aspect, at 73 percent. An important feature of this aspect is the fair distribution of scores secured across the variables, demonstrating minimal deviation from the average. Motivation by Panchayat seems to be the comparatively weak variable needing immediate attention. It also corroborates the findings of the social acceptability aspect variables that efforts should be made to step up community participation.
- The Critical ratios represent combination of variables and operate at relatively low efficiency rate of 52 percent. The lagging areas of concern include student/classroom ratio, enrolled girls/total girls ratio, and enrolled students/total girls & boys ratio. The student-classroom ratio is on very low ebb of efficiency, which requires correction from within the system. The other two lower ratios need active participation of the community to motivate and canvas at the level of parents and children. Awareness building campaign at community level, involving the probable target groups should be undertaken by the government agencies in collaboration with Non-governmental agencies.
- The composite efficiency of the system is calculated at 72.49 %. It is important that this evaluative procedure and the conclusions are immediately incorporated in to the education system planning and management and issue specific strategies and action plans are formulated for effecting improvements in the system.
- Sanitation issue needs to be addressed with immediate effect since the percentage of schools without toilets seem to be very high by any standards. It has been proved that lack of sanitary facilities results in high incidence of urinary and kidney infections among school children and even leads to epidemics.
- The efforts such as provision of adequate educational materials, incentives for girls, close interaction with teachers, separate meeting fathers, separate meeting of mothers, school uniform, incentive to prevent child labor and individual attention for weak students are required to avoid perceived educational problems such as irregular attendance, child labor, domestic work etc.
- Parents need to contribute for enforcing regular attendance, provide required motivation, and attend PTA & MTA meetings regularly, help in completing homework. The process underlines social responsibility of parents and also the significance of collective efforts that constitute the basis of a planned approach to education process.
- Providing better facility in schools and experienced teachers including lady teachers will go a long way in enhancing the quality of education. The provision will help improve stakeholders' interaction. This is especially true in the study districts where the

distribution of teachers has been skewed in favor of males.

• Regular contact with the parents of the disadvantaged group and guidance after school hours will be of considerable help for improving the educational process. The students who have recently dropped out can be motivated directly and through parents and peer groups to rejoin.

- There is a need for frequent supervisions to sensitize teachers towards home work/class work. The teachers need to maintain daily diary of students and communicate to parents on regular basis.
- There is need to focus on multifarious activities including singing, prayer, sports, decoration, safai, matikam, gardening, cultural activities etc. Such extra curricular activities are essentially promotional to developing students' personality and imbibing positive attitudes and collective work culture.
- The village functionaries including those of the teachers need to stay and spend more time in the villages. This includes interaction with the students as well as consultations with village leaders and institutions on educational issues. It will also provide a forum for initiation and follow up of issues in the realm of education.
- It has been a well-known fact that the schooling of children requires serious attention from the very formative years. Strengthening the primary education at the very 1st grade should get top priority in any programme of primary education. For that, one of the essential steps should be of getting local teachers for handling the responsibilities of imparting education to the 1st graders. Again, such teachers being members of the same community to which the parents belonged could easily win the confidence of the parents and thus could successfully persuade them to let the children remain at school. Full responsibility of looking after 1st graders should be entrusted to one separate teacher, so that she might pay her entire attention towards them without having any botheration about students of other grades.
- A programme of providing housing accommodation, along with the school building, for the teachers should also be undertaken. On account of the most difficult problem of getting residence quarters in difficult areas, many teachers do not stay in a school for a longer period. Provision of proper housing facilities would induce them to stay at a particular place for a longer period.
- The enrolment drive can be linked with sanction of varied development programmes for the villages. An integrated development approach coordinating related programmes could be followed. In that way there will be increased participation of the community and overall development of the school on all fronts.
- The Mid-Day Meal scheme in its present form or earlier form (when food grains were being given) probably can be linked with attendance. This will act as a check in mechanism for the system to ensure regular functioning of classes.
- Teaching-learning process in schools should be made really interesting with the innovative ideas flowing from DPEP programme which has been successful in obtaining appreciable community participation.
- Teacher training facilities for women should be augmented so that more women teachers can be recruited to increase their representation in the teaching workforce. It has been observed that the female- male teacher ratio is skewed in favor of male, in the study area. Correction of such imbalance can be of great help in improving interaction among teachers, school children and parents.
- Provision for special coaching and remedial classes for the girls, SC and ST students and strengthening of science and mathematics teaching in all schools should be taken up. Wherever necessary, quality improvement programme needs to be initiated for the teachers. The local Panchayat Raj institutions should get involved in enhancing quality of primary education.
- Reduction in gender disparities should be the key concern for educational planning particularly at the micro-planning stage. Considerable disparity persists in the literacy and educational status of the genders in the study area. Such trend has been observed in enrollment and retention rates also.

29. Monitoring, Research & Evaluation for Sarva Shiksha Abhiyan- Lessons from DPEP

*Shanti Jagannathan**

DPEP experience has a lot to contribute in the development of strategy for monitoring, research and evaluation for SSA. The following are some of the points to be taken note of .

- The value of large scale data systems like the EMIS in tracking progress against goals came to the fore with DPEP. This helped to prepare national reports on access and retention across the programme. Large scale participatory data collection was also undertaken (eg, Lok Sampark Abhiyan in Madhya Pradesh and household surveys in all states). With the solid initial framework, the SSA now needs to take on the task of making this system more reliable, with possibilities for validation and triangulation of data.
- The importance of capturing and analyzing data at both micro and macro levels emerged during the course of DPEP. It has become evident that while some aspects of the programme can be aggregated, there is a range of issues that can only be studied meaningfully at micro level.
- DPEP has shown that there is great value in the ownership by practitioners in adopting/adapting suitable M&E systems. As India is a picture of diversity and programmes seek to capture diverse problems in different contexts, the M&E system needs to take it into consideration and provide the latitude necessary to states to develop their own context specific M&E. National monitoring could concentrate on the major (core) indicators, while a detailed set of performance and outcome indicators could be taken up at state level.
- Although DPEP put in place fairly complex and elaborate monitoring arrangements, the goals and targets were not broken down into milestones to be reached during the course of implementation. Ideally, an M&E system should be able to track gradual performance against goals, performance against schedule, performance against quality and performance against budgets. It has also not been possible to assess the relative success of a full range of interventions introduced through DPEP in contributing to specific goals. A fair degree of focus was put on process or activity monitoring (eg, training of teachers, building of schools, construction of BRCs, appointment of teachers/ para teachers, training of VECs, production of textbooks and TLMs etc) without there being a clear link to outcomes. This is where research and sample studies would bring value. Processes of social change and in-depth analysis of causal links can only be understood on a small scale and sample basis.
- Monitoring quality has been difficult in DPEP, while DPEP introduced a range of quality enhancing interventions. Expectations on quality related aspects have grown. Pedagogical concepts have evolved significantly but evaluation is still more or less linked to student learning achievement levels. Although there are difficulties in measuring on a large-scale student achievement and other aspects of quality improvement, this is an area which requires added attention through SSA.
- DPEP made major inroads in community participation in education. There is evidence of growing community stakeholding in increasing the participation of out-of-school children in the schooling process. So far, community monitoring has been at a relatively simple level, dealing with enrolments, attendance, out of school children, managing school development fund, school construction etc. However, there is also the growing ambition of communities participating in the monitoring of 'quality'. For this to be effective, specific capacity building as well as a clear framework for monitoring is required. As SSA provides for explicit community monitoring, the role of the same in programme reviews needs to be clarified.
- Monitoring needs to be planned as a dynamic tool and process. The effectiveness with which monitoring information is used by practitioners and policy makers is itself a monitorable entity.

Programme-wide monitoring needs to be complemented with qualitative small scale studies and research. While some body of in-house research is needed, it is also important to open up research to national and international academic community. Some key themes could be pre-

determined, but an open call for proposals would also elicit enquiry into important issues that may not be directly linked to programme implementation. Strengthening capacities of practitioners in select places to undertake action research should be taken up. Research could be designated as an important capacity to be built at key state and district institutions. International comparative studies undertaken by Indian institutions either by themselves or in collaboration with institutions in other parts of the world will bring a different perspective and also the lessons of best practice.

Some areas in which small scale studies and research would be useful are as follows:

1. Understanding relative effectiveness of different interventions in a sample area. This would help to identify which interventions were successful (or more successful) in contributing to the goals. By establishing some causal links, practitioners and policy makers can fine-tune their strategies in order to reach the ultimate goals by the end of the programme period.
2. Validation of experimental projects and innovative approaches for possible scaling up and mainstreaming.
3. Understanding the process of change in learning environment and learning, particularly school effectiveness, by addressing impact on schools and classrooms.
4. State specific sectoral research which links developments across different sub-sectors in education, such as between elementary, secondary, tertiary and vocational education and education for life long learning etc.
5. Capturing change processes through increased community participation and the role and strength of different community bodies (VEC, PTA, MTA, SMC, PRI, etc) in pushing the agenda for education.
6. Cost effectiveness and efficiency of programmes and interventions. There is a clear need to understand issues of financial engineering whereby education access and quality can be enhanced with greater financial effectiveness.
7. Finally capturing the impact on children in a number of ways, other than merely learning. The impact on children and their communities could be captured through inter-disciplinary methods such as sociological, anthropological and ethnographic studies and research.

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WHAT LESSONS CAN DPEP OFFER?

*Dr. R.V. Vaidyanatha Ayyar***

I

The objective of this seminar is avowedly to draw lessons from the District Primary Education Program (DPEP) experience and to apply these lessons to Sarva Siksha Abhiyan (SSA). No other education program in India had triggered so much documentation and study as DPEP. The Technical Support Group for DPEP (DPEP TSG) had brought out two volumes of abstracts of studies supported by DPEP. Of these 491 abstracts 152 pertain to evaluation studies. In addition, the background papers circulated for this seminar include reports of five evaluations. These include two evaluations, one by a consortium of IIMs and another by Jyotsana Jha based on a study sponsored by the European Commission on the managerial processes on elementary education. A World Bank report lists as many as 224 references of which 45 are national or multi-state studies and almost all others are state-specific studies. Given the wealth of studies, one expects inferences and lessons from the DPEP experience to be abundant.

II

Let me begin by posing the question: What type of lessons can DPEP offer? Given that "DPEP is perhaps the most ambitious primary education initiative in Independent India", characterized by holism and a well-defined strategy, DPEP should be capable of offering many lessons spanning a vast range. It could offer lessons on the overarching strategic objective of accelerating the universalization of elementary education (UEE); also lessons for improving effectiveness in achieving intermediary goals in different segments of UEE such as access, participation, equity, pedagogic renewal and quality; and further, lessons for discrete tactical interventions in each of the segments of UEE. No other elementary education program can offer strategic lessons for achieving the strategic objective of UEE and few can match DPEP in the variety of strategic and tactical lessons it can offer for achieving the intermediary objectives.

SSA has a larger scope than DPEP in that it covers the upper primary stage also; further, unlike DPEP, it covers all the districts in the country. SSA builds upon DPEP strategy and experience. All the elements of the DPEP strategy are discernible in SSA. To wit, the district plan is central to SSA; so are critical appraisal of the perspective and annual plans as well as periodic supervision of implementation of the plans; so is holism, that is simultaneous addressing of all aspects of universalization; so also is the equal emphasis on processes, community mobilization and outcomes; so too is the implementation in a mission mode through a state level society and core groups in the districts and blocks; and so is capacity building at all levels to plan, manage and monitor the program. Goal setting is also similar, with the singular exception that SSA sets no quantitative goals for learning achievement. It is, therefore, self-evident that the lessons that can be drawn from the studies and evaluation of DPEP would be of great value for the SSA.

It is axiomatic that one can draw lessons from DPEP, or for that matter from any experience or life itself, only if one knows what the outcomes are, relates the outcomes with the expectations and try to explain the variance between the expectations and outcomes. For an evaluation to be comprehensive and rigorous, it should assess *what* happened and *what* did not; also assess, if not measure, *how* much of what was expected had happened; and further explain *why* what and how much that happened did happen and conversely, also explain *why* what did not happen did not and why the shortfalls occurred. Or, in other words only comprehensive impact evaluations, which blend *that, how and why,* can offer robust lessons. A comprehensive evaluation has to answer a host of questions. Has there been a DPEP effect? that is to say, did DPEP make a difference to the progress towards UEE in the districts where it was implemented? What would have happened in these districts if DPEP had not come into being? How strong was the DPEP effect? Was it as much as expected? Answering these questions would entail measurement in

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An elaboration and refinement of the valedictory address and presentation given by the author at the valedictory session of the research seminar

respect of quantifiable objectives and qualitative assessment in respect of other non-quantifiable objectives. And then, what explains the magnitude of the DPEP effect? Two methodological approaches suggest themselves. First, comparison of *ex-ante* and *ex-post*; and second, comparison with control districts where DPEP was not implemented. The plethora of evaluations notwithstanding, there has been hardly an impact evaluation, which isolates the DPEP effect in the *stricto senso*. The World Bank report earlier cited concludes that, with the exception of a study by Jalan and Glinskoya none of the studies could qualify as true impact evaluations. This is because most studies are limited to studying the trends in processes and outcomes in the DPEP districts; the few that compare outcomes across project and non-project districts do not adequately control non-DPEP related factors. Thus, according to this report, what we are left with is a broad assessment of the progress made by DPEP in achieving its objectives, and, further observations on the successes and limitations of the various processes and interventions. Suffice to say, it is worthwhile to mount more rigorous impact evaluations that would also be informed by an understanding of the larger social reality and the true essence of DPEP viz., that there is more to DPEP than quantitative goals and that it was concaved as a beachhead to transform the entire primary education system, to arouse the leviathan and set him on UEE. Further for eliciting strategic lessons, the evaluator should look at the wood as well as trees, the macro and the micro picture.

With all their limitations, what have the evaluations to say for the progress made by DPEP in achieving its objectives? While progress has been remarkable, the quantified goals have not been fully achieved. To summarize the conclusions of the World Bank study cited, in spite of the substantial growth in enrolment, universal enrolment has nowhere been achieved; further, the increase in enrolment is concentrated in a few States. The objective of reducing cohort dropout rates to less than 10 per cent was not achieved in most districts. For Class-I, all districts achieved minimum 40 average achievement scores while only 50 to 75% of the districts achieved the objective of increasing achievement levels by 25% over baseline. In contrast, for Classes III and V, the progress has been far more limited. Thus, the achievement levels in Classes-III and V increased by 25 per cent over baseline in less than five districts. There was more progress in reduction of gender disparity than in social disparity (SC/ST). In 95% of the districts, gender disparity in enrolment rates was reduced to less than 5%; however, few districts achieved a similar reduction in social disparity. Educational advancement of ST children continues to be a problematic. In 75% of the districts, the gender disparity in dropouts was reduced to less than 5 per cent; however, in the absence of data, a similar inference cannot be drawn in regard to social disparity. These shortfalls are a pointer to the awesome challenge that SSA faces. SSA goes far beyond DPEP in its scope, coverage and goal setting. It sets out to achieve by 2010, that is within a time span almost similar to that of DPEP, universal enrolment and retention all over the country, not only at the primary stage but also at the upper primary stage. Needless to say, concerted action based on deep strategic thinking is called for if the SSA objectives are to be realized. There are two aspects of this strategic thinking. First, to critically evaluate the DPEP strategy, processes and interventions and thereafter weed out those which are proven failures and reinforce those, which are successful or promising. Secondly, to introduce new strategic elements as well as tactical processes and interventions. The question that arises in this context is: are the studies and evaluations adequate to provide sufficient inputs for the strategic thinking? In a sense, akin to zero-based budgeting, the strategy needs to be validated *de novo*.

There are two other aspects of the DPEP factor which have a bearing on the strategic thinking on DPEP. The first aspect consists of assessing the inter-State and inter-district variations in the impact of DPEP and relating these variations with explanatory variables. The second aspect deals with the impress of DPEP on the State and district primary education systems. The key strategic element of DPEP is contextuality. DPEP proceeds from the premise that planning of and implementation for UEE cannot be organized from Delhi or from any State capital, and that only through local level planning and implementation can UEE be realized. The DPEP objectives for enrolment, retention and reduction of disparities are uniform across the board; only the objectives for enhanced learning achievement were set in relative terms. That being so, the context-rooted process of district planning and implementation was expected to set off the disparities in the inter-district levels of educational development and administrative capability. To use an imagery, in the race to the universal primary education, the starting points vary though the winning post is the same. The backward districts have a longer distance to traverse in the race. District planning was expected to help the backward districts to overcome their

handicap and reach the winning post along with others. This is an implicit objective which was lost sight off by all studies. It would be interesting to know how far this objective was achieved? A host of questions arise. How significant are the inter-district variations in outcomes? What explain these variations? Did DPEP succeed in reducing, if not equalizing, the educational disparities among the districts in which it was implemented? Even if equalization was not accomplished, were the disparities reduced? Have conditions been created for the less-developed districts to join the race towards UEE, under the aegis of SSA, without much of a handicap? Are they ready for "the forced march in seven league boots"?

Answers to these questions in turn are dependent on the degree of success attached to the key managerial interventions of DPEP. DPEP envisaged that individual district "perspective" and annual plans are developed with popular participation to reflect local needs and with conformity to the eligibility norms and operational parameters of DPEP. The preparation of these annual plans, their scrutiny and appraisal at the State and national levels, their final approval by the DPEP Bureau, the periodic review of implementation and incorporating the lessons of the review in the next annual planning cycle, all these constitute the fundamental process of management planning and control. The iterative process of planning and review was intended to be the key instrument for ensuring flexibility, responsiveness to local needs and learning from implementation experience. The questions that arise in a rigorous managerial evaluation are: how robust was the planning and implementation process across the districts? Were the district plans just facsimiles of templates or did they reflect the area-specific variations in the levels of developmental aid needs? How adequate were the workplans? Over the years, was there qualitative improvement in the workplans? Was learning by doing at work? Was the experience in implementation reflected in subsequent workplans? How effective were the implementation of the workplans? Can one correlate the variation in the achievement of quantitative goals by districts with variations in the quality of the district planning and implementation? Were the financial and other operational parameters mechanically applied? Did the ceiling of Rs. 40 crores on the outlay in a district come to be viewed as an entitlement? Was the ceiling low for more populous and educationally disadvantaged districts? Is it right and proper to set uniform goals for access, enrolment and retention for all districts? Should districts with lower levels of educational development and more difficult environment be permitted to set realistic and credible targets rather than be doomed to frustration and failure by being compelled to strive for all India goals? These are very vital questions whose answers would be of great value to the strategic thinking on SSA, for SSA relies on the very same planning process as DPEP. What have the studies and evaluations to say on these questions? Not much. There is not even a rigorous comparative descriptive account of the performance of different districts, much less an analytical study which correlates the disparities in performance with those in the planning and implementation process. Suffice to say, robust and meaningful lessons are inconceivable without rigorous cross-sectional managerial evaluation studies.

The managerial evaluations should also critically examine the key structural innovation introduced by DPEP. The society model of implementation was more than creating a conduit for free flow of funds from the Government of India to the project implementing entity in the field. Far from being a valve, a graft to bypass the choked arteries of financial flows, it was designed to usher a new form of managing primary education. If I may walk down on the memory lane, this was not an idea which was readily acceptable to some in the World Bank and also to academics who were derisive of the conventional enclave-type project implementing units and who therefore advocated that educational reform should be done through the system itself. Or to use the imagery of Kenneth King, the reformer should use the front door leading to the system and not the back door. Our stand was that a frontal assault is not always expedient. *The Challenge of Education*, the National Policy on Education, 1986 and its Programmes of Action had eloquently articulated the widely prevalent view that the education departments are in a state of utter disarray. They need to be professionalized. They need to be more open and inclusive by being willing to accept good advice and practices even from outside and to work in partnerships with NGOs, local communities and others interested in the achievement of UEE in letter and spirit. They also need to be outcome-oriented. In effect, the reform that is needed is far-reaching, a veritable Cultural Revolution. Even while recognizing the need for comprehensive reform, it was considered strategically more expedient to adopt an incremental, staggered approach. The changes that are needed in the system at large were to be developed and tried out in a parastaatal structure like the State society which was part of the system but could function autonomously and be more professional, inclusive and outcome oriented. Over course of time, the new managerial practices would percolate to the main

education departments. That was the strategy. To use an imagery of those years, the society was separated from the department and not by a Great China Wall, but by a permeable membrane. This membrane facilitates osmosis of the good practices and thereby transformation of the department, the system itself. It was not a question of implementation *either* through a separate project implementation unit *or* by the department. The mode selected was expected to be part of the department but yet not be different – a lotus in the pond.

It was self-evident that the new structures and places would not fall in place on their own without encountering any resistance. And it was for that reason that a study of the managerial structures and processes was conducted in the first seven states. In the synthesis study which brought together the findings of these studies, Sajitha Bashir, who was then with the DPEP TSG, raised alarm bells. To quote:

> "The realization of the ambitious objectives and goals of DPEP rely quite heavily on the new management structures and processes that have been introduced as part of the program. Yet, these new structures and processes operate in an environment that is indifferent, if not hostile, to these innovations. Given the relative size of the new structures, there is every possibility that the larger environment and its inertia may overwhelm the nascent processes, or that the new processes may themselves become encased in petrified forms, which prevent invigoration of the content. Furthermore, while management reforms are seen as crucial to the success of DPEP, these reforms are being introduced only in a small part of the system and are expected to gradually diffuse through the system. At the same time, the objectives of universal enrolment and retention, raising achievement levels and reducing social gaps are to be attained within a relatively short time span."

It would be very interesting to know whether these structures and processes operated in the way they were expected to, and if they did not, why not, and to relate the managerial inadequacies with the shortfalls in the achievement of the quantitative goals. Some of the questions that a rigorous managerial evaluation of the structure should pose are:

- How did the DPEP societies work?
- Can one discern patterns on the functioning of these societies in different States?
- Were they just conduits for flow of funds?
- Was there any difference in the managerial practices of the society from that of the education department? Or to use the imagery of osmosis, did good practices develop in the smaller compartment of the society? If so, did the good practices permeate the department as a whole? In other words, were the society and the department separated by a membrane or by a Great China Wall? Can the variance in achievement of quantitative goals be related to the variance in the functioning of the DPEP societies?
- Is the society model relevant at all?
- How far did DPEP equip a state to manage UEE and educational transformation better?

III

As already set out, DPEP prided itself in being a beachhead to transform the primary education system. As rhetorically set out by its initial designer, "DPEP is not an enclave project, it seeks to restructure and improve system of primary education as a whole. Therefore, not achievement of quantitative targets or fund initialization but DPEP's impact in improving systems is the litmus test". It would be interesting to know particularly for the strategic thinking on SSA, whether the litmus test was applied, and if so, what is the result? The studies do throw some light on systemic improvement, particularly in the matter of pedagogy. But the illumination is rather limited. Anecdotal and impressionistic reporting about village education committees, community mobilization, capacity building notwithstanding, systematic examination of the improvement in the administrative systemic capacity is a dark area. Two factors account for this dark area. First, management of education is an orphan, not exactly a darling either of educational or of management specialists. Secondly, the supervision mechanism, though innovative in many respects, was more geared to assessing the quantitative objectives laid down in the DPEP guidelines and later incorporated in the agreement with European Commission as well as in the World Bank's Staff Appraisal Reports (SARs). It can even be said that the Standard Operating Procedures (SOPs) of the joint supervision mission were geared to meet the requirements of the World Bank. For the World Bank, DPEP is a project financed by specific investment loans; it was not sector program assistance. The SOPs of the World Bank for such loans provided for monitoring of three elements; (i) adequate provision of inputs, (ii) operation of the processes and interventions to the extent needed for achievement of the qualitative goals in the

SARs and (iii) physical and financial outcomes as set out in the SARs. Systemic reform is not in the remit of monitoring and supervision of project-specific lending.

Be that as it may, what does the limited illumination show? To borrow heavily from the article earlier cited of Sajitha Bashir and me, the systemic improvements in pedagogy are quite considerable. The financial parameters which set limits on construction and hiring of additional teachers compelled the states and districts to concentrate on quality improvement. Almost all DPEP States embarked on a process of pedagogic renewal that covered training content and delivery, updating curricula and revision of textbooks. As opportunity for exchanging information and disseminating innovations was offered, spread effects were noticeable with state and district teams learning from each other. There is a noticeable shift from the hitherto accepted paradigm of teacher-centered pedagogy to learner-centered pedagogy. There were signs of willingness to enlist technical resources and experience outside the government. However, the paradigm shift is reflected mainly in the processes for the development of new training packages and learning materials. However, evidence is not clear how far the shift percolated to classroom practice. Further, the impact of the pedagogical renewal factors was constrained by several factors. These include financial constraints for mainstreaming many of the innovations as well as institutional inadequacies of mainstream resource institutions like SCERTs and DIETs, and their peripheral involvement in some states in DPEP and consequently their succumbing to the NIH (Not Invented Here) syndrome.

Compared to the transforming effects on pedagogy, the transforming effects on management appear even more limited. There is little hard evidence on the effectiveness of the new management structures and processes introduced by DPEP; but what is clear is that while there has been considerable investment in training for preparing the "perspective" and annual plans at the district level, the efforts to build policy planning capacities at the state level and to locate district plans within an overall framework for the development of primary education within the state seem to be relatively limited. Even in regard to annual workplans, the planning process did not extend to non-DPEP districts and that even in DPEP districts, State and Centrally Sponsored Schemes (CSS) continued to operate within their own compartments. To the extent that it is universal in coverage and integrates all CSS like Operation Blackboard and Teacher Education, SSA does away with compartmentalization. However, the systemic dilemma that SSA faces is more acute than that faced by DPEP. Universal coverage that SSA strives for brings upfront the relationship between the traditional administrative structures and processes on the one hand and their counterparts that DPEP introduced and are being extended by SSA on the other. However, one happy augury is the indication that States like Uttar Pradesh and Madhya Pradesh, with a higher proportion of districts covered by DPEP, seem to have performed better than states with lower coverage. However, there is no clear evidence on the robustness of the indication and the factors responsible for the indication. A few questions spring to mind. Would it be enough for the State societies to play the bye-pass role? Is there a minimum threshold for systemic change? Does scale elicit more commitment to systemic change from the State? Consequently would the universal SSA elicit more commitment from the State Governments and the main education departments than the more selective and limited DPEP? Or, is there no scale factor at all? Is it that the better performance, one hears about in Madhya Pradesh and Uttar Pradesh, is related to the continuity in a top management and its leadership prowess? One does not know, but one needs to.

There is another strategic question that SSA needs to address now. Being anchored in incrementalism, DPEP did not address several areas of reforms. A few that come to mind are school supervision and effectiveness, professionalization of the different functionaries of the education departments, decentralization and devolution. It is time to consider whether it would be strategically more expedient to expand the reform agenda rather than just consolidating the gains of the last decade. This again calls for a very rigorous managerial stock-taking and evaluation.

Without any more ado, let me say, after having been an insider and then an outsider, I am convinced more than ever that UEE cannot be achieved in the foreseeable future just by pursuit of quantitative goals. To recall the saying of Gandhiji, if one takes care of the means, the ends would take care of themselves. If one takes care of the means, in this case the processes, capacity building, institutional strengthening and well-structured reforms, the quantitative goals would achieve themselves. Let me buttress my contention by extrapolating Gandhiji's saying. If, instead of taking care of the means, one is driven by the ends, what is achieved is not UEE but inflated and fudged statistics. I remember my mentor, Bordia, telling me not once but many a time, how after

the 20-point formula was introduced there was a remarkable spurt in enrolment. This spurt was more a statistical illusion, an unintended consequence of enrolment being one of the twenty points and of States being judged with reference to their achievement of the 20-points. In any matter involving human beings, the law of unintended consequences operates relentlessly. Human beings cannot be anything but all too human. No one, neither the decision maker nor the evaluator, can ever afford to ignore this law. To ignore would be to live in the cuckoo land, to lose relevance and credibility.

Suffice to say, the strategic thinking in SSA calls for a rigorous managerial evaluation of the management of change that DPEP attempted. We need to unravel the management of change rather than treat management as a black-box which is expected to function optimally and transform, with cent per cent efficiency, financial, technical and pedagogic inputs into educational outcomes.

IV

Let me now touch upon conceptual frames that underlie decision-making and evaluation of decisions. Every component of a program is a bundle of decisions and actions in pursuance of those decisions. Like myriads of discrete pixel images together giving rise to an image that appears on the computer monitor, myriads of discrete decisions and actions underlie program design or implementation. It is axiomatic that an analysis can be no better than the underlying theory. That being so, the logical question is: is the theory underlying the analysis and evaluation of decisions robust? I have to disappoint my academic friends by saying that almost always it is not so. Let me pose another question. With the best possible design implementation, can a programme which envisages system reform achieve the planned goals? Most would answer in the affirmative. At times the failure to achieve the goals is attributed to deficiencies in design. But most often, the story line is that planning is good but implementation is poor. The sophisticated would go further and invoke politicization, lobbying by interest groups and so on. All this may be true but I would like to assert that insistence on hundred percent achievement of quantitative goals by all programmes is a fallacy. The dictionary meaning of fallacies is that it is an idea which many believe to be true but which is in fact false because it is based on faulty reasoning. Of course, there have been, and would be some programmes which fully achieve cent percent of the goals set. But I would like to assert that such programmes are far and few between. They are usually simple in nature and are repeats in which the learning curve of design and implementation has been fully skimmed in the earlier trials. Excepting all other programmes, the full realization of goals is a mirage.

Why then is this mirage pursued again and again? The answer lies in the hegemony of the rational actor model in academic analysis, or to use the celebrated three-model schema of Allison, Model-I. In its pure form, this model assumes that government is a unitary actor as rational as Mr. Spok of *Star Trek*, ever analyzing a problem with the utmost rationality, coming up with the most efficient solutions and through command and control ensures that the right inputs are provided at the right time and are transformed wholly into predetermined outputs without any wastage. This model is ubiquitous and dominant in about every theoretical treatment of governance, be it foreign policy, economic reforms or programme design. It also informs the classical input-output models of evaluation. The model can nowhere be approximated in the real world of governance. That explains why "practical" men in Government scoff at academic policy and programme advice as being too academic. But then the model in its extreme rigorous form is impossible to justify even theoretically. The world indeed is not a clock. The second law of thermodynamics precludes the construction of an engine which wholly transforms energy into work without wastage. Information is never perfect; uncertainty is something which no decision-maker can escape from. Even if that were discounted, rationality is bounded. Even mathematics, the language of Gods and the ultimate in rigor and reasoning, is not free from limits. Gödel's theorem sets limits on the ability to prove or disprove. There is another aspect of the pure rational actor model that is an utter disconnect with the world as is. Apart from the omniscience of the Almighty, the model calls for the decision maker to have power and might exceeding that of the President of the United States. In his celebrated study of the Truman and Eisenhower White Houses, Neustadt cites a very interesting anecdote to explain the presidential condition, a condition arising from the division of powers in the American Constitution whereby the President is compelled to share power with many other power-centers such as the Congress. Truman, in the early summer of 1952 when the Presidential campaign had already begun, was contemplating the problems that Eisenhower would face when he is elected. *"He'll sit here" Truman would remark (tapping his desk for emphasis)" and he'll say, "Do this! Do that! And nothing will happen. Poor Ike. It won't be a bit like the army. He will find it very frustrating."* Through three case studies,

Neustadt established that the powers of the President are no guarantee of power, that despite his powers, the President does not obtain results by giving orders, that most often presidential power is the power to persuade, to bargain and that he gets no help if he does not pay for it.

Much water has flown down the Potomac since then. The Cold War has ended and the world is a unipolar world dominated by the sole hyper-power. For all this change, the position of our dear Dubaya, George Bush Jr. is not much different. He cannot command and control Musharraf; he needs to persuade and make side payments. He might have won the Battle of Baghdad but to manage post-war Iraq he has to strike a deal with the troika of Russia, Germany and France. Even for the President of the United States, command and control is more an exception than a norm. What about lesser mortals?

I am aware that in analytical praxis some of the conditions of the pure rational actor model are relaxed, thereby tempering the unrealistic nature of the model. The current praxis of project management does not treat government as a unitary actor. On a lighter vein, the World Bank insists on the participant states to be parties to an agreement, though it is the center that bears the loan liability. The extant commandments of development praxis do challenge the command-control mode and by insisting on project ownership by all stakeholders, mobilization, demand generation and capacity building. They also insist upon improvement of procedures and systems. So far so good; but still these commandments do not question the Enlightenment legacy of the supremacy of reason, of believing in the innate rationality of the human being and his acting in public interest. Listen to people, bring in the civil society, and base your design on focus group discussion and social assessments. With these the Kingdom of God would be here. Project *Nirvana* would be around. Amen. That seems to be the implicit belief, a belief that is inconsistent with the fact that reason and altruism are only two of the many characteristics of man, who by his very nature is a bundle of contradictions. One can never eschew self-interest and Adam Smith and neo-cons notwithstanding, the selfish pursuit of private interest does not necessarily lead epi-phenomenally to public good. One cannot defy the Impossibility Theorem of Arrow, one of the all time Greats of economics. It is impossible to use the preferences of individuals to construct a ranking to represent social preferences. Suffice to say, that even the more realistic forms of the rational actor model need to be complemented by other models for decision-making, analysis and evaluation. And it is here that the negotiation perspective adds value. If then command control does not work most of the time what else would? Charisma may sometimes but, as with miracles, one cannot live by charisma. Effective bargaining may complement the rational actor approach to provide better decisions and outcomes.

Let me briefly outline the key elements of negotiation theory that are relevant for the purpose of program management and evaluation. First, as Neustadt illustrated with the American president, the need to secure agreement is an ineluctable administrative condition, whatever the rank or level of the decision maker. Contrary to the general impression, negotiations are not limited to explicit bargaining situations, such as that between union and management, or between nations. Second, senior administrators and managers are engaged in "indirect management", that is their formal authority falls short of their responsibilities and their success is dependent on actions by individuals and agencies outside the chain command and over whom they have no direct control. Even in respect of agencies and individuals over whom one has *de jure* control, indirect management may often be the *de facto* reality. It is not unknown in administrative life to have a deputy who has direct access to and greater influence over one's supervisor and hence is not amenable to one's command and control. Hence, command-control would not always work even with line subordinates. Thirdly, a party to a negotiation, if it is an organization, is not a homogenous, monolithic entity. Hence, in parallel to the external negotiations, that is negotiations with parties external to the organization, there are internal negotiations within each of the organizations engaged in negotiations. The internal negotiations are likely to be more bitter and acrimonious than the external negotiations. Thus in the development of DPEP internal negotiations, that is negotiations within the central government or with states, were occasionally more tense than those with external agencies. The internal and external negotiations are not usually insulated from each other; together their interplay drives the negotiation process. Fourthly, the larger the number of parties to negotiations the greater is the complexity of the negotiation process and the greater the uncertainty of the outcome. Even the addition of a single party to a two-party negotiation introduces coalition dynamics. Fifthly, in every negotiation, there is tension between cooperation and conflict. The very rationale for a

negotiation is that, for the parties the agreement that could be secured is preferable to other alternatives. There is, therefore, a commonality of interest in trying to augment the size of the pie through cooperation and joint pursuit of gains. At the same time, there is a conflict of interest in that each party seeks to maximize his share of the pie. Where the parties to a negotiation have a long term relationship, as between the firm and its suppliers, or between divisions in any organizations, there is a greater willingness to concede to the other than in once in life time encounters. In a bazaar frequented by foreign tourists, both the merchant and the tourist are more likely to cheat. Recognition of interdependency, implicit in a long-term relationship, does affect negotiating behavior. Sixthly, give the very nature of the negotiation process, the outcomes are likely to be indeterminate and at variance from the expectations of parties or from the outcome that is rational for each one of them. Lastly, bargains tend to obsolesce. To give an example, once a MNC has invested in a country, the fixed assets so created are a hostage to the host country. The bargain struck for investment in the country begins to obsolesce. Or to give an example nearer home, once a decision is taken to implement DPEP in a state and the work plan is approved, there are limits to the ability of the national management unit to compel a State to implement strictly in accordance with the work plan. You cannot always invoke the *brahmaastra* of suspending or terminating the operations. Therefore, safeguards have to be built in to sustain the agreements arrived at and to prevent the erosion of their values.

To come back to Allison's models, Model-I takes government to be a monolithic unit, rationally defining the national interest, setting and prioritizing the goals, identifying and evaluating the options, and choosing the option, which maximizes value. In contrast to Model-I, Model-II does not treat government as a monolithic. A giant organization like government is a vast conglomerate of loosely allied organizations, each of which has a substantial life and mind of its own. A new organization may set new goals and new routines. However, in contrast, an old organization has a "received" notion of its mission, priorities, programs and culture. Over a course of time, it would have developed its standard operating procedures (SOPs) with a view to ensuring regular and coordinated action, achieve acceptable levels of performance and minimize uncertainty. SOPs do not embody the rationality of Model-I; but all the same they are rational indeed. Imagine flying in a commercial flight without any navigational plans or operational procedures and with the pilot flying by the seat of his pants!

Model II does open the black box of government but not sufficiently. Every organization in a government does have, as Model II posits, a mind, life and culture of its own. But it is still a composite comprising individuals. Yet, Model II assumes that the identity of particular individuals within an organization is irrelevant for explaining the organization's decisions or its stand within the government on any matter. The SOPs are, indeed, designed precisely to achieve that irrelevance. But no design, however ingenious and however meticulously acted upon, can iron out individuals. Hence individual behavior is an intractable explanatory variable. It is this variable that Model-III factors in. In every setting in which decision is taken, there are key players who together shape the decision. The players may bring to bear upon the decision making process the interests and perceptions of the organization and position they hold as well as their own personal perceptions and interests. Individuals are human, all too human. Therefore, it would not be surprising if they do like their views and interests to prevail and they would be less than human if they do not pursue personal agenda and aggrandizement. Thus, Kennedy's foreign policy was characterized by an insider-turned-chronicler, Roger Hilsman, as "a story of battles, battles over national policy". These are battles fought not with live ammunition but with bargaining chips. Even war has its rules; likewise bargaining within an organization is regulated by explicit or implicit rules. Hence, in reality, governmental decisions reflect not just a single rational choice or the resultant of competing organizational behaviors. They are also shaped by the pulling and hauling of the game of politics of which bargaining is the not-so-hidden hand.

All this does not mean rationality has no relevance at all and that decision-making or analysis or evaluation can or should be done without factoring it at all. The appropriate imagery of project management, or for that matter all governance itself, used the imagery of a sailing ship battling against a moderate wind and strong tide in narrow waters. Philip Woodruff used this imagery to describe the progress of India towards self-rule. To quote:

> Seen from six thousand feet above her, the tiny ship seemed to gain a little on almost every tack and slowly pass one marked reef or buoyed mud flat after another. But from the deck it was not so easy to discern the progress, and every time the ship came about there seemed to be hesitation and contradiction,

so that she would hang in the wind with sails flapping before she came around and filled on the new tack. It looked from close quarters as though the captain and the crew were thoroughly confused about the whole affair.

The word governance comes from the Greek word, *kybernān*, for steering. For a boat to be steered safely it needs a good captain and crew, plus reliable measures and instruments to gauge its progress. The instruments are the rationality of Model-I, which helps to set the goal and assess the progress towards the goal objectively, rather than by instinct and intuition. The measures are the standard operating procedures of Model II. Captaincy consists in managing the crew and the ship; adjust the presumptions of Model-I from time to time so as to suit the changing context, depart from the standard operating procedures where necessary and to negotiate with the crew so that they are in line. Negotiations correspond to Model III. Even with all the three models, the navigation that governance is, can never be a science. Sometimes it remains a mystery why a ship reached the port or did not.

How relevant are all this theory and models to DPEP? The answer is in the affirmative. To elaborate the recognition that UEE is a composite comprising universal enrollment, universal retention and universal achievement of at least of minimum levels of learning, the choice of a context-based strategy for achieving UEE through disaggregate target-setting and decentralized participatory planning and the choice of district as the unit of planning – all these fit in Model I. These choices emanated from iterative situation analyses. One can discern three streams in this analyses: first, policy analysis connected with NPE, 1986 and its updating; secondly, the planning process associated with POAs, 1986 and 1992, and the formulation of the Eighth Five Year Plan; and thirdly, the lessons learnt from programs like the Operation Blackboard, teacher education and the (Total Literacy Campaigns (TLCs). The incorporation in the district level planning of the best practices and the lessons from the earlier external funded projects also fits in Model I. To recapitulate, these included the society model and planning exercise from Bihar Education Project, and the teacher training and cluster level resource centers from Andhra Pradesh Primary Education Project (APPEP). Model II considerations explain the choice of a State society for implementation. Among the new SOPs that sought to be introduced for smooth functioning of DPEP were local area of planning, speedy approval process, smooth financial flows, induction of expertise from outside the government and community mobilization. As agreement had to be secured for the society model from within the government, from the states as well as with external agencies for financing DPEP, Model III processes were necessarily involved. To get everyone-the agencies, states and the central government organizations concerned – on board was like assembling the Noah's Ark. While the Bible itself does not describe the problems Noah had in getting on board the different species of living beings, Hollywood did. This necessarily meant working on and working against a few key players, as Model III posits.

In my view the best lessons that DPEP can offer to SSA is in the nitty-gritty of managing the march to UEE. To this end induction of Models II and III in the evaluation framework would add value. Following is a sampler of the questions that would arise in a managerial evaluation of DPEP which Models II and III give arise to:

- What has been the inter play between the department, SCERT and the DPEP society? In other words, what has been the nature and outcome of the negotiations amongst the DPEP society, SCERT and the State government?
- Similarly what has been the inter-play between the district level DPEP structure and the traditional structures like the district education office and DIET?
- In a given functional area which of the two sets of SOPs had a greater impress? - Those of the department or of the society?
- Was the managerial change dependent on key players? With turnover in the players did the agreement between the national management unit and the states obsolesce?
- Were the arrangements to secure the agreements and prevent obsolescence adequate?

These are not just academic questions relating to a programme on which the sun has set. The SSA adopts the DPEP strategy in its entirety. It seeks to plan and implement the programme at the State, District and Block levels exactly on the line of DPEP. Even if the society were done away with, effective implementation would entail designating functionaries for the program and introducing new SOPs. SSA cannot escape the tensions inherent in DPEP, or for that matter in any management of change, between the new and old, the chosen few and rest. To paraphrase Santayana, if the Past is not studied and remembered one is condemned to relive the Past

As already mentioned this is just a sampler and more work is needed for a robust evaluation framework that incorporates the Model II and III perspective.

Let me now address the question why in spite of the negotiation theories and Allison Models being around two decades these are still not mainstreamed? A few answers come to my mind. First, human inertia from which even academics are not exempt. In his seminal work, *The Structure of Scientific Revolutions,* Thomas Kuhn had outlined how a new paradigm comes to be the established version only after the earlier generation of scientists steeped in the old paradigm fades away. Secondly, Models II and III lack the elegance and tidiness of Model I. Even scientists do not cease to be aesthetes. There are enough examples to bring out that, other things being equal, an elegant theory is preferred to others. Thirdly, but most importantly, Models II and III are extremely demanding of information, of tit-bits, of history, with the lower case 'h', which is often unrecorded and fast flushed out in the drain-pipe of Time. Further, unless the analyst is extremely rigorous and parsimonious, the output of Model II and III analysis may be rambling and sketchy. The Past can at best be reconstructed but never recaptured. Therefore, the information that is necessary for Model II and Model III evaluation of DPEP is extremely difficult but still not impossible. An attempt can be made by screening and analyzing the reports of supervision missions, the proceedings, the orders, circulars of the national, state and district units dealing with DPEP and of media reports. These can be supplemented by eliciting from all the key players their story of what was happening and what happened. But there is a danger here. Unless a rigorous structure is imposed, the stories may be fairy tales laced with emboldened anecdotes and "I am the greatest" tone and tenor that renders most civil servant memoirs a unique genre of unreadable pulp biography. I may also add that should SSA seek to impart lessons for the other educational transformations, it would be necessary to make adequate arrangements to document as much as possible information that the Model II and III analysis would require. This means that any arrangement for documentation and monitoring have to go far beyond what DPEP attempted and what the studies and evaluations suggested.

Let me conclude by saying that what all DPEP did was to engage in exploratory skirmishes and what is now needed is a forced march in seven-league boots. If DPEP can offer worthwhile lessons for the long march ahead it has been worth its while in spite of all its limitations. I may be faulted for raising only questions and offering no answers at all. Paraphrasing Hamlet, one may even say Questions, Question, Questions. But then as Poincare, the celebrated French mathematician and philosopher, sagaciously put it, the question is not what the answer is but what the question is. Only by right questioning can right answers be elicited. You are the best suited to answer and assess the lessons of DPEP. Let me wish you God Speed in your endeavor.

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