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South Asia Human Development Sector

A Review of Educational Progress and Reform in The District Primary Education Program (Phases I & II)

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A REVIEW OF EDUCATIONAL PROGRESS AND REFORM IN THE DISTRICT PRIMARY EDUCATION PROGRAM

(Phases I and II)

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Human Development Sector

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ACKNOWLEDGEMENTS

ABBREVIATIONS AND ACRONYMS

APPEP	-	Andhra Pradesh Primary Education Programme
AS	-	Alternative School
AWPB	-	Annual Work Plans and Budget
BAS	-	Baseline Achievement Survey
BEP	-	Bihar Education Program
BRC	-	Block Resource Center
CAG	-	Comptroller and Auditor General
CEO	-	Chief Executive Officer
CDR	-	Cohort Dropout Rate
CRC	-	Cluster Resource Center
DFID	-	Department for International Development
DIET	-	District Institute of Education and Training
DOE	-	Department of Education
DPEP	-	District Primary Education Program
EC	-	European Commission
ECE	-	Early Childhood Education
Ed. Cil	-	Education Consultants India Limited
EGS	-	Education Guarantee School
EMIS	-	Education Monitoring Information System
GER	-	Gross Enrolment Ratio
GOI	-	Government of India
GOUP	-	Government of Uttar Pradesh
ICDS	-	Integrated Child Development Scheme
IGE	-	Index of Gender Equity
IIM	-	Indian Institutes of Management
MAS	-	Midterm Assessment Survey
MHRD	-	Ministry of Human Resource Development
MLL	-	Minimum Levels of Learning

NCERT	-	National Council for Educational Research and Training
NER	-	Net Enrolment Ratio
NET	-	National Evaluation Team
NFE	-	Non Formal Education
NGO	-	Non Government Organisation
NPE	-	National Policy for Education
NSS	-	National Sample Survey
OBC	-	Other Backward Classes
POA	-	Programme of Action
PRI	-	Panchayati Raj Institutions
PTA/MTA	-	Parent/Mother Teacher Association
PTR	-	Pupil Teacher Ratio
SAR	-	South Asia Region
SC/ ST	-	Schedule Castes/ Schedule Tribes
SCERT	-	State Council of Education Research and Training
SDMC	-	School Development and Management Committee
SIEMAT	-	State Institution of Educational Management and Training
SIS	-	State Implementation Society
SMC	-	School Management Committee
SPO	-	State Project Office
TAS	-	Terminal Assessment Survey
TLM	-	Teaching Learning Material
TSG	-	Technical Support Group
UEE	-	Universalization of Elementary Education
UPBEP	-	Uttar Pradesh Basic Education Program
VEC	-	Village Education Committee

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EXECUTIVE SUMMARY

(i) The District Primary Education Program (DPEP) is a centrally sponsored scheme launched by the Government of India in partnership with the state governments and external donor agencies seeking to expand the opportunities for poor and disadvantaged children to receive quality primary education. The program interventions ranged from enrolment drives, community mobilization campaigns, establishing academic resource centers, to inservice teacher training, school and classroom construction, textbook and curriculum renewal, and decentralized planning and monitoring. This report assesses the progress made in terms of outcomes and processes in the first two DPEP programs: The District Primary Education Project I (DPEP I) and the Districts Primary Education Project II (DPEP II).

(ii) The salient objectives of both projects were to:

♦ Reduce differences in enrolment, dropout and learning achievement between boys and girls and between the 'general' category and SC/ST children to less than five percent[1]

♦ Reduce primary dropout rates to less than 10 percent

♦ Increase average learning achievement levels by over 25 percent above the baseline

♦ Provide access to all children for formal or equivalent non-formal primary schooling; and

♦ Establish capacity at the district, state and national level to plan, manage and monitor the program

(iii) For this report, a comprehensive literature review was undertaken to consolidate available evidence on both projects. The literature review is complemented by a limited quantitative study using available household data on the impact of DPEP I on select outcome variables i.e. enrolment and primary school completion.

(iv) The original intent of this report was to evaluate the impact of DPEP I and II based on an exhaustive literature review of the many studies conducted under the aegis of the program. Unfortunately, however, this review revealed that, with the exception of Jalan and Glinskaya, none of the studies could qualify as true impact evaluations. It has thus evolved to become an assessment of the progress made with regard to project outcomes and interventions. Future programs will need to be designed with a stronger monitoring and evaluation component so as to enable better evaluation studies to be done.

(v) Project data make universal access, defined as universal enrolment, difficult to measure. However, it is clear that universal access has not been achieved for DPEP I and II as a whole, although substantial progress has been made in terms of increasing enrolment, particularly in the states of Karnataka, Gujarat, Madhya Pradesh and Uttar Pradesh. Most districts achieved the DPEP goal of reducing gender differences in enrolment to less than five percent. However, many districts did not achieve the second goal of reducing social disparities, particularly in the case of scheduled tribe children.

(vi) In addition, a rigorous impact evaluation of DPEP I using household data done by Jalan and Glinskaya (2002) concluded that the project's net impact on enrolment using the propensity matching technique for impact evaluation was positive, but much smaller than its gross impact. While more impact evaluations of this kind need to be done to the extent possible ex-post, it must be kept in mind that it is difficult to isolate the impact of DPEP since the program was intended to act as a catalyst in introducing reforms in primary education and several of its interventions were introduced in non-project districts as well.

(vii) The DPEP goal of having a cohort dropout rate, which is less than 10 percent has been achieved in very few districts (except in Kerala where 5 of 6 districts have achieved this goal). Gender disparities in dropout rates have been successfully reduced in about three quarters of DPEP I and II districts. In addition, future programs will need to build much better data systems (cohort studies and household data based systems) in order to compute dropout rates and completion rates which are currently not available, for the most part. It will also be important for future programs to identify differential targets for the various Indian states. It is likely that some of the objectives of DPEP I and II, such as reducing the dropout rate to less than 10 percent across the board for all districts was too ambitious to begin with.

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[1] Differences in enrolment implies differences in enrolment rates but this was not clear in the original guidelines.

(viii)   The achievement surveys conducted in the project districts reveal that the DPEP goal of attaining a minimum of 40 percent score was achieved in Grade I in most DPEP I and II districts. However, less than five percent of the districts achieved this goal for grades III/IV. Only one half to three quarters of the districts achieved the second objective of raising achievement levels by at least 25 percent over baseline figures for Class I. A negligible proportion of districts achieved this goal for the higher classes. The third DPEP objective of reducing gender differences in achievement levels to less than five percent has been attained in most districts. The success has been more limited in reducing differences in achievement levels between the 'general' category of students and SC students and the gaps in achievement remain quite substantial in the case of ST children. Here again, the question of whether the original targets were achievable can be raised. For many of the districts, achieving a 25 percent increase in achievement levels was too ambitious.

(ix)   The project interventions in DPEP have been numerous and complex involving a variety of institutions and governments (center, state, district and local). While no analysis has been done linking specific interventions with outcomes, the connections are discernable between the performance on project outcomes described above and the unevenness in project implementation discussed below.

(x)   Community involvement in DPEP has had two dimensions. The first dimension, namely the mobilization of the community has been successful and could explain the increase in enrolment in the initial years of the project. The second dimension is the establishment of Village Education Committees or user groups. On the one hand, the involvement of these groups in school construction has been successful and on the other hand, their participation and effect on improving school quality limited..

(xi)   The quality component in DPEP consisted of several aspects. First, the textbooks were revised across DPEP states and this has been a fairly successful intervention putting in place a rigorous process and involving various levels of society. The elimination of gender stereotypes in textbooks is documented. However, it is not clear whether this is the case with stereotyping of SC and ST children. Evaluation of textbook content and its use in classrooms has only been done in a few states and these evaluations are positive.

(xii)   Second, a large number of teachers have been provided systematic inservice training in DPEP. The analyses of the training itself are unavailable. However, the several studies available on classroom process indicate the limited impact of training in classrooms – instruction in classrooms, by and large, remain traditional. However, changes are evident in two areas: in the limited use of activities to aid teaching and in the relationship between teachers and students becoming more nurturing and supportive.

(xiii)   State Implementation Societies and the councils and resource groups that support its activities have been crucial for implementation. The planning process has clearly improved through the process of conceptualizing AWPBs, though the role and effectiveness of the AWPBs in achieving project outcomes is unclear. States are now focusing on the development of institutions at the state level (SCERT and SIEMATs) to support the management and planning of education in the state. Sub-district level structures such as the District Institutes of Education and Training (DIETs), have been revitalized to some extent and Block Resource Centers (BRCs) and Cluster Resource Centers (CRCs) are in place. However, the future of BRCs and CRCs will depend upon understanding their impact on inservice training and improving classroom practice.

(xiv)   The financial performance of the projects has been fairly satisfactory though a more detailed analysis of budgets and expenditures are required. The introduction of the Education Monitoring and Information System (EMIS) certainly marks an important step towards building data systems for planning and monitoring, though it will be critical to strengthen this system which has many limitations and also incorporate household data in the future. Research and evaluation, has been weak in project districts and at the state levels, and relatively stronger at the national level. However, the literature review reveals that very little impact evaluation has been done.

(xv)   Based on the lessons learned from the DPEP I and II, five aspects critical to the implementation of future programs in elementary education are identified – better targeting, improved flexibility, focus on accountability, stronger linkages and evaluative research and monitoring.

INTRODUCTION

1.1 The District Primary Education Program (DPEP) is a centrally sponsored scheme launched by the Government of India in collaboration with external donor agencies seeking to expand the opportunities for poor and disadvantaged children to receive quality primary education.[2] The program was developed in the early 1990s in response to both global and national attention and concern for the country's level of literacy. The global compulsions converged at Jomtien's World Conference on Education for All held in March 1990. National pressure for the Government of India to raise literacy is represented at the policy level and in the numerous innovative programs in education across the country. The guidelines for the program were developed based on the National Policy of Education (NPE), 1986, and the accompanying Programme of Action (POA), 1992, focusing on India's commitment to the Universalization of Elementary Education (UEE). The experiences gained in small-scale initiatives within the country such as the Lok Jumbush and Shiksha Karmi programs in Rajasthan, the APPEP program in Andhra and the BEP program in Bihar coalesced in designing DPEP.

1.2 DPEP represents a partnership between the Government of India and several state governments, aided by external agencies. In fact, DPEP in India is one of the largest donor-supported programs in the world. Financing of the program was based on a 85:15 ratio with 85 percent passed on as grant to the states by the Central government and 15 percent provided by the state governments. Districts were chosen on the basis of low female literacy and participation in the Total Literacy Campaign. The program's interventions ranged from enrolment drives, community mobilization campaigns, activating Village Education Committees, establishing block and cluster academic resource centers, to inservice teacher training, school and classroom construction, textbook and curriculum renewal, and decentralized planning and monitoring. Ceilings were place on civil works funding (24 percent) and management costs (6 percent). The first pilot program was launched in 17 districts of Uttar Pradesh as a state project (UPBEP I).

1.3 This report assesses the progress made in terms of outcomes and processes in the first two DPEP programs: The District Primary Education Project I (DPEP I) and the District Primary Education Project II (DPEP II). The first phase of the program, DPEP I, was a multi-state project launched in 1994 and made effective in 1995. This included forty two selected districts in the states of Assam, Haryana, Karnataka, Kerala, Madhya Pradesh, Maharashtra, and Tamil Nadu. Twenty three of these districts were funded by the World Bank. Nineteen districts in Madhya Pradesh were funded by the EC. The second phase of the program, DPEP II, was also a multi-state project made effective in 1996. This included expansion districts in these states as well as selected districts in the states of Gujarat (funded by the Netherlands Government), Himachal Pradesh, Orissa, Uttar Pradesh, and West Bengal (funded by the DFID). The current program has seven projects including several single state ones in Bihar, Rajasthan and Uttar Pradesh that were initiated after DPEP I and II. DPEP is now operational in 272 districts in 18 states, serving over 30 million children. World Bank funds invested in the program (for all the different projects including the state specific credits) amount to US dollars 1.3 billion.

1.4 The salient objectives of both projects were to:

◆ Reduce differences in enrolment, dropout and learning achievement between boys and girls and between the 'general' category and SC/ST children to less than five percent[3]

◆ Reduce primary dropout rates to less than 10 percent

◆ Increase average learning achievement levels by over 25 percent above the baseline

◆ Provide access to all children for formal or equivalent non-formal primary schooling; and

◆ Establish capacity at the district, state and national level to plan, manage and monitor the program.

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[2] Donors supporting this program include the World Bank, the European Commission (EC), the U.K. Department for International Development (DFID), UNICEF, and the Royal Government of the Netherlands.
[3] Differences in enrolment implies differences in enrolment rates but this was not clear in the original guidelines.

1.5 The total project costs for DPEP I were US Dollars 310.5 million and for DPEP II were US dollars 534.4 million; both over a seven year period. DPEP I was subsequently extended by a year.

1.6 This report assesses, on the basis of available project data and studies conducted on DPEP I and II, the progress made by these projects in providing access and good quality primary education. A comprehensive literature review was undertaken to consolidate available evidence for this purpose. The literature review included studies done and commissioned by the Ministry of Human Resource Development (MHRD), studies conducted at the state level and commissioned by State project offices, and the few studies done by independent researchers and donor agencies. Later in this section a summary critique of the studies reviewed is provided and the basis for including evidence from select studies in this report is explained. The literature review is complemented by a quantitative study (Jalan and Glinskaya, 2002) using available household data evaluating the impact of DPEP I on select outcome variables i.e. enrolment and primary school completion, targeting which were among the key objectives of the program.

1.7 The original intent of this report was to evaluate the impact of DPEP I and II based on an exhaustive literature review of the many studies conducted under the aegis of the program. A genuine impact evaluation would assess the magnitude of the change in development objectives of the project that can be *clearly attributed* to the project itself, net of the effect of other programs and external factors. Such an evaluation study would attempt to construct a counterfactual to answer the question, "What would have happened if DPEP had not been implemented?" Typical impact evaluation studies, for programs such as DPEP, which are not nation wide but have partial coverage, and where certain pre-determined criteria were used to select the project districts (i.e. selection was non-random), use statistical methodologies (quasi-experimental or non-experimental designs) to compare project and non-project districts. These statistical techniques attempt to control for other factors that could affect project outcomes. This report is, however, limited to research already done as evident in the literature review. Unfortunately, however, this review

revealed that, with the exception of Jalan and Glinskaya, none of the studies could qualify as true impact evaluations. The literature review suggests that DPEP has certainly inculcated a spirit of doing research on primary education, which did not exist in the country prior to the program. However, most studies are limited to studying trends in processes and outcomes in DPEP districts. A few studies do compare DPEP and non-DPEP districts in terms of achievement against outcomes (for example, Agarwal, 2000). However, even these studies are not impact evaluations since they do not statistically control for non-project related factors when comparing outcomes across project and non-project districts. Thus, this report is unable to measure accurately the magnitude of the net impact of DPEP based on this literature review, except to a limited extent for DPEP I based on Jalan and Glinskaya. It has thus evolved to become an assessment of the progress made by DPEP I and II in achieving its objectives and understanding the successes and limitations of its program of interventions in order to inform future initiatives in educational reform.

1.8 Nevertheless, it must be kept in mind that the 1990s was a period of considerable progress in educational indicators for India. The net primary enrolment ratio, for example, rose from 72 percent in 1992-93 to 83 percent in 1998-99 (National Family Health Surveys). The primary school completion rate also rose from 55 percent in 1992-93 to 60 percent in 1998-99. DPEP was one of the few programs that undertook major non-recurrent expenditure on and a wide range of interventions in primary education. This allowed educational administrators to innovate and focus on improving education in a context where 95 percent of states' expenditures on education were and continue to be on salaries. The only other major centrally sponsored scheme for this sector was the Midday Meal Program, which in most states was a dry grains distribution scheme, and in a few states, was a cooked noon meal scheme which would probably have had some impact on enrolment as well. Given this context, and the progress made in educational indicators during the 1990s, DPEP did contribute to this progress. In addition, it has played an important role in changing processes such as community mobilization and textbook revision that would have longer term impact on educational indicators.

1.9 The concluding section of this report discusses a few possible impact evaluation studies that could be done to be able to get, ex-post, further evidence on the net impact of DPEP. However, it is clear from available project data and the literature review that a better monitoring and evaluation design of the projects ex-ante would have certainly enabled them to be evaluated more effectively. The major limitation in doing ex post evaluation studies when these were not kept in mind while designing the project are that they have to be based on available data. There are no comparable quantitative or qualitative data/studies, either baseline or end term, for example, across project and non-project districts on learning achievement, classroom practices, or planning and management systems, improving all of which were objectives of DPEP I and II. For the other objectives on improving and reducing gender and social disparities in enrolment and completion rates, household data may be used to compare across project and non-project districts as done for DPEP I in Jalan and Glinskaya. Even to be able to do systematic evaluations of the impact of specific components such as a study on the impact of teacher training on classroom processes *within* DPEP districts, baseline data on classroom processes would need to be available and these are not. Lessons learnt for designing the monitoring and evaluation component of future programs are also discussed in the concluding section of this report.

1.10 Since there is considerable variation in the quality of the studies and therefore the reliability of their conclusions, the report draws on those studies that the authors felt were to some extent rigorous. These studies are explicitly mentioned in the text of this report. Most of the studies that are not explicitly drawn upon and mentioned in the report were found to be methodologically unsound and therefore unreliable.[4] Most of the quantitative studies, for example, use descriptive statistics to report on findings, making their interpretation very limited. In other cases, findings and policy recommendations in some studies are not linked clearly to the analysis undertaken and seem to be based on the authors' personal biases. For most of the qualitative studies that have not been directly used in this report, the methodologies used are not clear. The report also tends to focus on the findings of more recent studies, indicative of the current performance of the project, rather than studies done earlier on during the project period. The way in which the studies

are used depends on the type of study. For instance, the results from national studies, particularly those that are quantitative and evaluative, are generalized for the projects. In the section on project interventions since most of the studies are qualitative, the cumulative evidence is used to indicate the impact of project interventions. Some state level studies, both quantitative and qualitative, are used to draw out inter-state differences.

1.11 The financial design of the program was that state governments were supposed to contribute 15 percent of the cost of the project for their state to the pool of resources allocated to the project. The remaining 85 percent has been funds from external funding agencies routed via the Government of India (as a centrally sponsored scheme). The total amount of funding under DPEP is on the order of two percent relative to the total elementary education spending by the central and state governments. However, DPEP is different from other centrally sponsored schemes in elementary education in that it has allowed far more flexible allocation of financial resources across the components of the projects, within the overall upper limit of Rs. 40 crores *at the district level* (Bashir, 2000). An important feature of the design of DPEP was that it attempted to enhance the financial allocations to elementary education by the government. DPEP project funds increased the allocation for elementary education by about 17.5 to 20 percent (Pandey, 2000). In addition, the legal agreements of the projects specified that the state governments had to maintain at least their existing levels of expenditure on elementary education. Bashir and Ayyar (2001) comment on whether this has occurred in reality. They conclude that, in general, state governments have fulfilled this condition. Real elementary expenditures have increased relative to the first year of the projects. However, they also find that plan expenditures on elementary education by state governments have fluctuated considerably over the project period. Thus, state governments continue, by and large, to depend on centrally sponsored schemes to fund investments in improving the quality of primary education. State governments' expenditures fund primarily teachers' salaries.

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[4] All studies that were reviewed are, however, mentioned in the references

1.12 This report first assesses progress made towards project outcomes in DPEP I and II, namely enrolment, retention and learning achievement. Next it discusses the inputs and processes in the program and the extent to which they were successfully implemented. The concluding section of the report brings together the outcomes, the inputs and the processes and summarizes important dimensions to be considered in future programs. In addition it outlines the areas, which require further analysis and research.

II. ASSESSMENT OF THE PROGRESS TOWARDS OUTCOMES

A. Progress in enrolment

2.1 A key objective of DPEP was to increase the enrolment of six to eleven year old children in primary school. While no specific targets were set for the increase in enrolment for DPEP I and II (besides stating that universal *access* would be provided), the guidelines and the Staff Appraisal Reports emphasized reducing gender and social disparities in enrolment rates and specified that these differences would be reduced to less than 5 percent in project districts. It is unclear what is meant by providing universal access. An Education Monitoring Information System (EMIS) was set in place in all project districts to enable states to collect fairly reliable data on enrolment and related parameters. These data are collected annually from schools in September. As mentioned earlier, a critical limitation of these data is that they were collected only for project districts making any comparison with non-DPEP districts based on these data not possible. For enrolment, available household data could be used to do such impact evaluations. However, while a few of the studies reviewed do draw interesting conclusions about reasons for increasing or declining enrolment, they do not compare and evaluate the changes in educational outcomes within DPEP districts to those in non-project districts. The analysis in this section is thus limited to assessing the progress made towards increasing enrolment and reducing gender and social differences in enrolment in project districts. Only one study by Jalan and Glinskaya (2002) uses household data for DPEP I districts to do a rigorous impact evaluation. Results from this study are discussed later in this section.

2.2 The analysis in this section is based on EMIS data received directly from the states. These data (upto 2001) have also been analyzed by Agarwal in his report, "Progress towards Universal Access and Retention". This section draws on his analysis as well as other studies done at the national and state level on enrolment. However, it was felt that it would be useful to get raw data from the states so as to directly compute updated enrolment trends as well as analyze the raw data directly in addition to reviewing existing analyses. This section first studies the trends in total enrolment as a whole and for the target groups in DPEP I and II. Next, the differences amongst states are highlighted drawing on data and a few existing studies that were reviewed. Finally, this section draws upon a study by Jalan and Glinskaya (2002) to illustrate the net impact of DPEP I on enrolment outcomes.

2.3 How successful were DPEP I and II in raising enrolments and reducing gender and social enrolment gaps? The data reveal that total enrolments have risen considerably in both DPEP I and II. The total enrolment in DPEP I states (for which EMIS data were available from states) rose by about 6 percent between 1996-97 and 2001-02 *excluding MP* since MP Phase I data were not available from the state. Agarwal (2002) finds an overall increase of almost 13 percent in total enrolment in DPEP I districts when Madhya Pradesh was included. The corresponding rise in DPEP II states (for which EMIS data were available from states) was higher at almost 19 percent between 1997-98 and 2001-02.[5] Figures 1.1 and 1.2 illustrate the rise in total enrolment in DPEP I and DPEP II over the project period using data obtained from the states. However, the rise has been concentrated heavily in a few states: Gujarat, Karnataka, Madhya Pradesh, and Uttar Pradesh.

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[5] *DPEP II does not include Bihar and Jharkhand which was a separate project. Agarwal's reports include districts from Bihar and Jharkhand in DPEP II. Thus he finds a lower increase in enrolment for DPEP II than what is reported here since enrolments in Bihar and Jharkhand actually fell during the project period.*

Table 1: DPEP I : Enrolment Trends (in thousands)							
	1996-97	1997-98	1998-99	1999-2000	2000-01	2001-02	Percentage increase
Total Enrolment	4882.4	5227.4	5408.8	5362.9	5253.4	5166.7	5.82
Boys' enrolment	2548.9	2715.1	2805.6	2779.4	2716.9	2679.4	5.12
Girls' enrolment	2333.5	2512.3	2603.2	2583.5	2536.5	2487.3	6.59
SC enrolment	1055.5	1127.1	1152.6	1149.3	1101.6	1117.1	5.83
ST enrolment	483.0	613.9	663.0	669.4	594.2	610.3	26.35

2.4   Total enrolment for all categories except Scheduled Tribes (ST) for DPEP I i.e. total, boys, girls and Scheduled Castes (SC) rose for the first three years of the project (i.e. until 1998-99), but then stagnated and declined. For the ST children in DPEP I enrolment rose until 1999-2000 and then declined. In DPEP II districts, as a whole, total overall enrolment, boys' enrolment, and girls' enrolment rose until 2000-01 but declined in the last year, 2001-02. For SC and ST children in DPEP II, total enrolment rose until 1999-2000 quite substantially, but declined after that. Also, the ST enrolment in many districts still remains low compared to their share of the population, particularly due to the stagnation/decline in enrolment over the last three years (Agarwal, 2001).

2.5   Absolute increases in enrolment do not, of course, capture the growth in enrolment relative to population growth. Unfortunately, age disaggregated population numbers are not available as yet from the 2001 census in order to compute updated gross and net enrolment figures. While the objectives of DPEP I and II had universal access as an objective, it is not clear what is meant by this term. A benchmark to judge against would be universal enrolment. From National Family Health Survey household data of 1998-99 (latest available education related household data), the net enrolment ratio was 83 percent. However, these numbers are not available for the DPEP I and II districts separately. Nevertheless, Aggarwal (2001) does compute GERs and NERs for DPEP districts

but asks the reader to treat these with extreme caution keeping the limitations of not having data on private unrecognized schools and updated population numbers in mind.

For DPEP I districts, the GER increased from 92.5 percent for recognized schools to 98.2 percent for recognized plus alternative schools over the project period. For DPEP II, however, except for Gujarat and Madhya Pradesh, the GER did not increase significantly over the project period and was about 85.5 percent in 2000-01 (In UP, the other state where enrolments rose considerably, however, only three districts reported these data).

2.6   There was higher growth in girls' enrolment on the order of 6.6 percent (*excluding MP for Phase I*) and as high as 25 percent in DPEP I and DPEP II respectively. Agarwal (2002) also demonstrates that the share of girls' enrolment to total enrolment increased from 45.6 percent in 1995-96 to 47.8 percent in 2001-02 for Phase I districts. For Phase II districts this increase was from 43.6 percent in 1996-97 to 46.1 percent in 2001-02. The trends for girls' enrolment in both DPEP I and II districts in the various states has followed the same pattern as overall enrolment described above. In states where enrolment increased, girl's enrolment increased faster (except in Phase I districts in Karnataka). Similarly in states where enrolment decreased, girl's enrolment decreased less (except in Phase I districts in Maharashtra and Phase II districts in Haryana and Kerala). Since girls were a

Table 2: DPEP II : Enrolment Trends (in thousands)						
	1997-98	1998-99	1999-2000	2000-01	2001-02	Percentage increase
Total Enrolment	11531.7	12493.5	13913.4	14272.8	13714.7	18.93
Boys' enrolment	6447.9	6932.1	7639.8	7843.8	7366.3	14.24
Girls' enrolment	5083.8	5561.4	6273.5	6429.1	6348.4	24.88
SC enrolment	2465.0	2713.6	3124.5	3086.8	2936.8	19.14
ST enrolment	1343.5	1449.3	1551.5	1512.1	1617.7	20.42

Figure 1 : Enrolment Trends: DPEP I
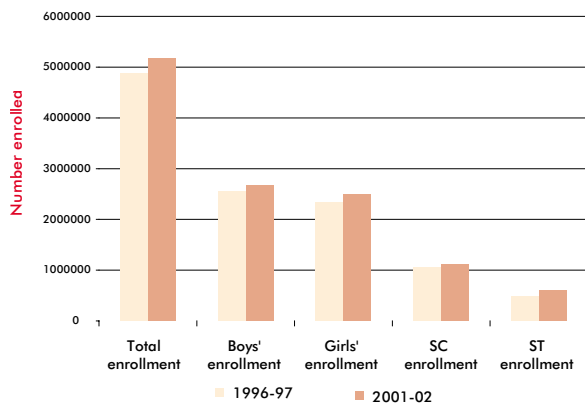
Source: EMIS data obtained from states.[7]

Figure II : Enrolment Trends: DPEP II
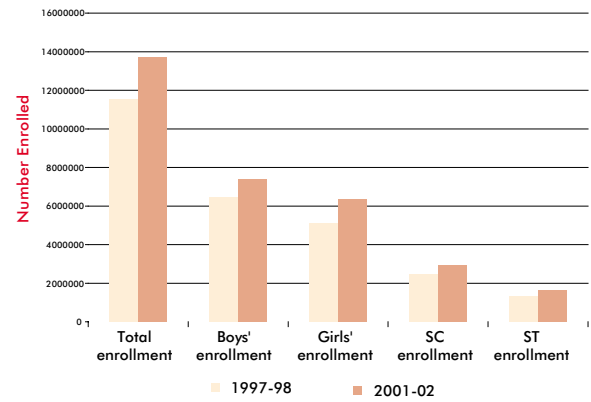
Source: EMIS data obtained from states.[8]

specific target group in both projects, it is encouraging that their enrolment, for the most part, increased by a greater percentage than that of boys. A study by Ed.Cil (2002) on strategies to increase girls' participation in primary school in DPEP I and II also concludes that DPEP has been, in general, successful in this regard as the numbers indicate. Pandey states that over 95 percent of Phase I districts have achieved an Index of Gender Equity of over 95 percent thus reaching the stated DPEP goal.[6]

2.7 Children with mild to moderate disabilities were also a target group in DPEP I and II. Guidelines for their integrated education were developed three years after DPEP I began and, initially, efforts were concentrated in one or two blocks in each district. Funds were available to hire and train three teachers per block in three different disabilities (Pandey, 2000). Some states, such as Haryana, have made better progress in this area but much still needs to be done. Disabled students currently constitute 1 percent of total enrolment in all DPEP projects put together. Of these almost half are orthopaedically disabled, another 14 percent are blind, about 13 percent are dumb, another 13 percent are mentally challenged, about 9 percent are deaf, and the remaining 7 percent have other kinds of disabilities (Agarwal, 2002). However, there is very little information and only a handful of studies that focus on disabled children in DPEP. Much more work needs to be done to gauge the success of the program in reaching out to disabled children and providing integrated education.

2.8 There were wide variations across states in enrolment trends during the project period (see

Figures III and IV below). Enrolments rose substantially in Karnataka in Phase I districts by as much as 24 percent and Phase II districts by 11.5 percent. The Indian Institute of Management (IIM) study on DPEP, Karnataka, concludes that the total 'non enrolled' population in DPEP I districts in Karnataka is below 5 percent indicating that universal access has almost been achieved here. (Sherry Chand, 2002). The slight decline in Class I enrolment after 1998 is attributed in the IIM study to falling child population. In DPEP II, Gujarat also had a significant increase in enrolments of almost 25 percent. Both Madhya Pradesh and Uttar Pradesh (DPEP II) had a sizeable surge in enrolments not only for the overall child population but also for all the target groups (boys, girls, SC and ST). The study on DPEP I in Madhya Pradesh conducted by IIM (Singh, Sridhar, and Bhargave, 2002) also concludes that "M.P. has done commendable work as far as access and enrolment is concerned". M.P. also launched the 'Education Guarantee Scheme' in 1997 where communities from habitations without schools within a one kilometer radius and with 40 children in the 6-11 year old age group have the right to demand a school and this demand has to be met in 90 days. This is the form that

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[6] *Index of Gender Equity (IGE) is the proportion of girls enrolled relative to the proportion of girls in the relevant population, expressed in percentage terms. The Index of Social Equity for SC and ST children is used. However the meaning of this index is questionable since this index represent the proportion of students enrolled rather than the proportion of students from these communities in the population. For example, the index could be very high for SC but this could indicate that most non-SC students are going to private schools rather than the enrolment of SC students in the population.*
[7] *EMIS data for Chattisgarh and Madhya Pradesh were not available at this time.*
[8] *EMIS data for Chattisgarh, Orissa, and West Bengal were not available at this time.*

16

alternative schooling has taken in M.P. and this has been a major success in terms of increasing enrolment and reaching out to the DPEP target groups.
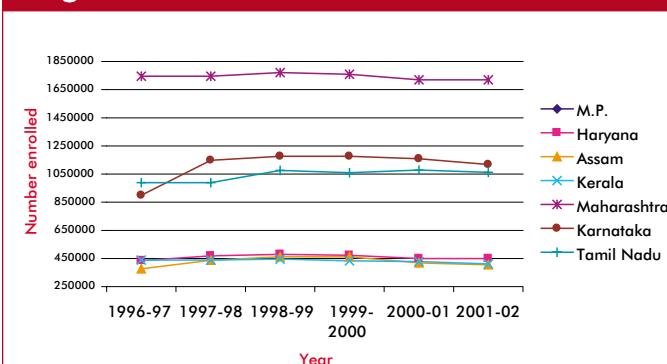
2.9 In contrast, total enrolments fell in Kerala (Phase I and II), Maharashtra (Phase I) and slightly in Haryana (Phase II). While in Kerala this decline is explained by declining child population, there were no available studies that correlated the child population decline with declining enrolment. Aggarwal (2001) does explain that "states like Kerala and Tamil Nadu have reported decline in age specific population". In Maharashtra, this decline is more puzzling though it may be explained partly by less successful implementation of some project components (discussed in more detail in Section III on project interventions). One study (Pillai, 1999) does record declining enrolments in DPEP I districts in a sample she studies. However, the study does not attempt to explain the reasons for the decline. In Haryana, a study by Aggarwal (2000) found that a key reason for the declining enrolment in government schools was the mushrooming of private unrecognized schools, data from which were not included in EMIS.

2.10 In Assam and Tamil Nadu, enrolments rose in Phase I districts but fell in Phase II districts. This is particularly surprising since Phase II districts, were, in general, more advanced districts. Once again in Tamil Nadu this may be explained by declining child population. One study by Ed.Cil (Ed.Cil, 2000) found that there was evidence of a declining child population in Tamil Nadu. However, a statistical analysis of the extent of population and enrolment decline and the correlation between these was not done. This

study also found that there was a spurt in enrolment in several districts in UP, Maharashtra and Tamil Nadu in 1997 which included a large number of underage children. The study asserts that this explained some of the decline in the following years in these states. Another study (Panneerselvam, 2002) in two districts of Tamil Nadu found that in the years that Class I enrolment fell in government and aided schools, enrolment rose in private unaided schools, indicating that this is the reason for declining enrolment in the EMIS data.

2.11 The 20 percent decline in Phase II districts of Assam, however, is not easily explained. A possible explanation is the movement from government to private schools since enrolment in private schools was not captured by EMIS data. An analysis of the data from individual districts reveals that the decline occurred in all of the Phase II districts in Assam. In addition, the decline was primarily in Class I i.e. in intake rather than due to falling number of repeaters or higher dropouts. In some districts in Assam, numbers of 'venture' schools (a type of alternative school) have increased rapidly. Since these data are not systematically included in EMIS, some studies (Meridian Consultancy, 1999) indicate that this is one of the reasons for apparently declining enrolment in Assam in EMIS data. Sarma (2001) finds that the declining enrolment is due to an increase in the number of private schools in DPEP II districts.

Figure IV: Trends In Total Enrolment: DPEP II

Source: EMIS data obtained from states. [10]

Figure III: Trends On Total Enrolment: DPEP I
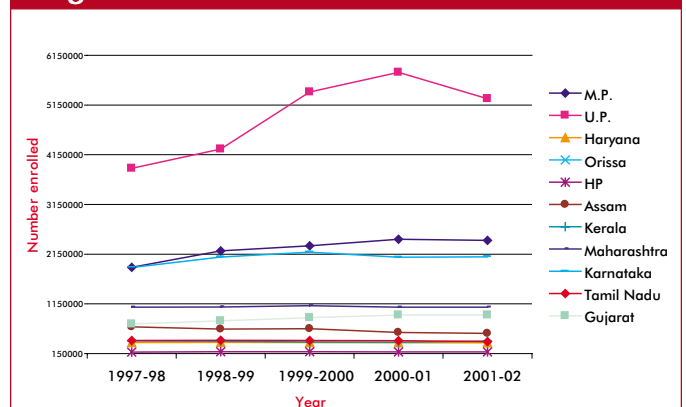
Source: EMIS data obtained from states. [9]

[9] *EMIS data for Chattisgarh and Madhya Pradesh were not available at this time.*
[10] *EMIS data for Chattisgarh, Orissa, and West Bengal were not available at this time*

2.12   In Himachal Pradesh (Phase II), total enrolment rose by 2.5 percent although it has remained almost stagnant for the last three years. Dev et al (2000) found that the declining enrolment in Class I in some districts was due to large numbers of underage children enrolled in the first few years of the project. In addition, there was a slight decline in the child population in the villages sampled.

2.13   The analysis above reveals that universal access, defined as universal enrolment, has not been achieved for DPEP I and II as a whole, although substantial progress has been made in terms of increasing enrolment, particularly in the states of Karnataka, Gujarat, Madhya Pradesh and Uttar Pradesh. Some anomalies remain unexplained in terms of declining enrolment in states like Assam (DPEP II districts). The DPEP goal of achieving less than five percent difference in enrolment rates between boys and girls was achieved for 95 percent of the districts. However, the goal of reducing the social differences to less than five percent was not achieved for most districts For measuring the latter, the Index of Social Equity for SC and ST children is used. However, as explained earlier, the meaning of this index is questionable since it represent the proportion of students enrolled rather than the proportion of students from these communities in the population. The analysis also raises the issue that it is not appropriate to set uniform national targets in a large country like India, with wide inter-state and inter-district variations in terms of baseline enrolment and baseline gender and social differences in enrolment. The concluding section of this report talks more about the need for differential targets which are more realistic for different Indian states.

2.14   All the studies reviewed above and project data used here focus the analysis on what has happened *within* the project districts. Jalan and Glinskaya (2002) use household data from the National Sample Survey (Round 50, 1993-94 and Round 55, 1999-2000) for DPEP I districts to evaluate the net impact of DPEP I on enrolment and completion. They find that average school enrolment for children aged 6-10 years increased from less than 75 percent to about 80 percent in DPEP I districts. They confirm Aggarwal's finding that the rate of change was higher in DPEP I versus non DPEP districts. They also find that, within DPEP districts, the rate of

increase of enrolment of the 6-10 year olds was higher amongst girls than amongst boys. In addition, NSS data reveal that the rate of enrolment increase for SC children was much higher in DPEP when compared with non-DPEP districts. For ST children, however, this was not the case. Some figures from their analysis are included in the annex to this report. These results change substantially, however, once they use statistical methods to control for the impact of other factors on outcomes.

2.15   It is important, however, to assess the marginal impact of DPEP i.e. the 'additional' impact on enrolment compared to the counterfactual hypothetical situation where the program was not implemented in the district. Jalan and Glinskaya (2002) attempt to measure the 'net' impact of DPEP I on several educational outcomes including enrolment – i.e. they attempt to answer the hypothetical question " What would have happened in a district in the absence of DPEP?" Obviously there might have been some improvement in enrolment and other educational indicators even in the absence of DPEP. However, as the authors explain, one cannot just compare the average outcomes in project and non-project districts. However, since districts were selected for DPEP in a non-random manner (based mainly on the criteria of them having below average female literacy rates), this methodology would not yield accurate results.

2.16   The methodology of the propensity score matching technique used by the authors allows them to attempt to estimate the "additional" impact of DPEP. This methodology matches districts within a state based on certain characteristics which would have made their probabilities of being selected for the program very similar. These include factors such as female literacy rate, population density, SC/ST concentration, village and household infrastructure characteristics and educational facilities available. "The propensity score matching estimator pairs each program participant with an observably equivalent non-participant and then interprets the difference in their outcomes as the mean effect of the program on the treated" (p.10, Jalan and Glinskaya). Further, they use a difference in difference (DID) matching estimator which computes the difference in outcomes before and after the program in project and non-project districts.

2.17 The authors conclude that DPEP I had a small positive *net impact* on enrolment (defined as enrolment rate) of 6-10 year old children, once other factors are controlled for. Thus they conclude that the *net impact* of the program is much smaller than the *gross* impact. In their analysis Madhya Pradesh stands out as the state where the program had the most dramatic impact. The net impact on all children's enrolment rate is estimated to be about 1.32 percent overall and 3.03 percent for Madhya Pradesh alone. They find a larger positive impact for SC children as well and substantial impact for ST children in MP (sample sizes for ST children in other states were too small) and almost negligible impact for 6-10 year old girl children. The study does conclude, however, that there was greater net impact of DPEP I on older girls and boys (11-13 year olds). This is interesting as it could indicate that there might be a higher proportion of overage children in DPEP I districts as compared with non-DPEP districts. This could be particularly relevant for the finding that DPEP has not had any net impact on younger girls. This could be either because girls start school late or there are higher repetition rates amongst girls in project districts as compared with non-project districts. This needs further investigation to understand the implications of DPEP's impact on girls' enrolment. The index of gender equity from project EMIS data, as described earlier, reveals that striking progress has been made with respect to increasing girls' enrolment in DPEP. Jalan and Glinskaya do not find this in terms of net impact for 6-10 year old girls. However, it is important to further investigate whether this is because the marginal impact has been mainly on older girls. Along the same lines, there are a large number of underage children who are enrolled in school (as we see from EMIS data) and the data used by Jalan and Glinskaya do not include five year olds. The authors conclude that while they do find positive net impacts of DPEP I on enrolment rates, these impacts are not as substantial as expected apriori. They also study the net impact of DPEP I on completion rates. This is discussed in the next section on dropout and completion.

2.18 It is difficult, of course, to isolate the impact of DPEP relative to other programs. To the extent that DPEP was supposed to act as a catalyst and complement other efforts to achieve its goals, the net impact of the program is not a true estimate of its contribution. Indeed in many states, DPEP interventions such as inservice teacher training and textbook revision have been undertaken in non-DPEP districts. In some states, institutional structures like village education committees and academic support structures such as block and cluster resource centers were also set up in non-DPEP districts in the later years of the projects. These state-wide interventions which were a result of states consciously adopting policies of initiating DPEP interventions in non-DPEP districts, make it difficult to compare project and non-project districts. While the authors acknowledge this limitation, the magnitude of the implication of this on their results cannot be assessed. In many ways, the catalytic effect it has had might be the most important contribution of DPEP to elementary education in the country.

2.19 Nevertheless, it is important to understand the net impact to understand the additional direct impact of the program in the treatment districts. It would also be useful to study the impact of DPEP separately for the six DPEP I states since states such as Kerala, Tamil Nadu and Maharashtra where enrolment was already high (and where project data also indicate stagnating/ declining enrolments largely due to declining child population or very hard to reach children left out of school) should ideally be separated from Haryana, Karnataka, Assam and MP. However, due to limitations of sample size, the authors are unable to do this analysis. The concluding section of this report discusses possible extensions of this kind of impact evaluation.

B. Progress in reducing repetition/ dropout and improving retention/completion.

2.20 Another central objective of both DPEP I and II was to reduce dropout rates to less than 10 percent i.e. increase completion rates to over 90 percent of all children enrolled. Further, a second objective was to reduce gender and social disparities in the dropout rates to less than 5 percent. In recent years some studies have been done both at the national level using EMIS data (Shrivastava, 2001; 1999) and in various states such as Tamil Nadu, Maharashtra, Karnataka using household data, to compute the cohort dropout rate and the retention/completion rates

by using the "reconstructed cohort method". The retention rate is defined in these studies as the percentage of children who, after entering Grade 1, complete the full cycle of primary school (Grade 5 in most states and Grade 4 in some). The cohort dropout rate (CDR) is 100 minus the retention rate. The intake in Grade 1, grade-wise repetition and crude dropout rates from EMIS data are used to compute the CDR/retention rate.

2.21   Shrivastava (2001) concludes that in 1998-99, the DPEP goal of achieving a CDR less than 10 percent was achieved in very few districts (except in Kerala where five of the six districts had achieved this target). About 27 percent or 11 districts in Phase I had achieved this target by 1998-99. For Phase II districts, the study concludes that about 16 percent or 12 districts (of those for which data were available) achieved the target of a CDR below 10 percent. Of course in 1998-99 there were still four years left for DPEP II to close.

Table 3: Changes in CDR: 1997-98 To 1998-99			
No. of districts	CDR fell	CDR remained the same	CDR rose
DPEP I	16	10	14
DPEP II	46	12	21

2.22   Shrivastava also examines the trends in the CDR between 1997-98 and 1998-99 (see Table 3 below). It is a real matter of concern that the dropout rate actually *rose* between the two years in as many as 14 districts in DPEP I and 21 districts in DPEP II. The reasons for this are not well understood/documented.

2.23   The CDR was still very high in some districts, particularly in Assam and Uttar Pradesh. In these states, over fifty percent of the districts have CDR greater than 50 percent, indicating that more than half the children enrolled in Grade 1 in these districts do not complete primary school. Using latest available EMIS data from 2001-02, CDRs were calculated by Shrivastava for a few states. The CDRs seem to have risen even higher in several districts in UP and Assam. Overall, the number of districts that have achieved the 10 percent CDR goal of the program in both Phase I and II seems to have actually fallen relative to earlier years. Shrivastava proposes

some possible reasons why the dropout rate has not fallen in some states, particularly in Assam, UP and some districts of Orissa. One reason could be the enrolment of many underage children. Secondly, the EMIS data does not include data from private unrecognized and some alternate schools. It is possible that some of the 'dropouts' actually attend one of these schools. There have been a few studies investigating the reasons for persistently high dropout and repetition rates in some districts/ states and the improvement in dropout rates in others. The variation in implementation of various interventions, particularly the extent of community mobilization, explains some of the variations across states and districts. These studies are discussed in the next section on project interventions.

2.24   There have, however, been problems with measuring dropouts and completion rates using EMIS data. Repetition data, in particular, from the EMIS, has been of variable quality and some of these results may not be very credible. A few states have therefore undertaken cohort studies using the 'true cohort method' where the actual progression of students was followed in an attempt to develop alternative estimates of cohort dropout and completion rates. Agarwal (2001) summarizes the results from these studies in the states of Karnataka, Maharashtra and Tamil Nadu. In Maharashtra, the cohort study conducted in 1999-2000 found cohort dropout rates which were even higher than those calculated from the EMIS data (except in one district). The results from the cohort study in Karnataka conducted in the same year found more mixed results, where the cohort dropout rate was higher than that calculated from EMIS data for some of the districts but lower for others. The Tamil Nadu cohort studies in 1999-2000 also found cohort dropout rates higher than those calculated from the EMIS data.

2.25   Districts in both phases I and II performed better in terms of achieving the second goal of reducing gender differences in dropout rates to less than 5 percent. 76 percent of Phase I districts and 73 percent of Phase II districts had achieved this target by 1998-99 for the difference in the CDR between boys and girls (Phase I became effective

[11] These data will be updated with newer data once the report for 2001-02 is finalized.

in 1994-95 and Phase II in 1996). Similar information is not available in the studies on the difference in the CDR between the 'general' category of students and SC and ST students.

2.26 In some states, completion rates i.e. the percentage of children enrolled in Grade 1 who complete primary school in five years (where Grade 5 is the terminal primary grade) and four years (where Grade 4 is the terminal primary grade) were also analyzed. In Maharashtra, 35 percent of the schools had a completion rate of more than 75 percent. However about 15 percent of DPEP schools had less than 30 percent i.e. very poor completion rates. In Karnataka the completion rate for DPEP I and II was about 68 percent. In Tamil Nadu, the completion rate for Phase I districts was about 56 percent and for Phase 2 districts it was about 53 percent (Aggarwal, 2001). Thus there is considerable room for improvement in this area and repetition rates are generally still quite high in DPEP.

2.27 Continued effort is certainly needed, however, in computing more accurate cohort dropout rates and completion rates using household data and cohort studies and analyzing the reasons for persistently high dropout rates in many areas.

2.28 Despite project data and studies reporting persistent problems in reducing dropout rates and improving completion rates in some states/districts, Jalan and Glinskaya (2002) conclude that the net impact of DPEP I on retention has been higher than its impact on enrolment. While there are no studies rigorously analyzing the link between these activities/components of the project and outcomes such as reduced dropout rates, Jalan and Glinskaya's study reveals that the net impact of DPEP on these outcomes was visible. Their definition of retention is cohort progression i.e. the proportion of 6-7 year olds attending primary school in 1993-94 who progressed to middle school by 1999-00. In fact this estimate is probably a lower bound on the real impact of the program on retention since it does not include the children who may still be in primary school in 1999-00 i.e. repeaters who had not dropped out of the system but not progressed to middle school by 1999-00. Nevertheless, the project data still indicate that even DPEP districts have a long way to go before a reasonably low dropout rate is achieved.

2.29 In conclusion, the evidence reveals that the majority of districts have not been successful in attaining the DPEP goal of reducing the dropout rate from primary school to less than 10 percent whether EMIS data calculations are used or the few cohort studies that are available are used. A related question that arises is whether the objective of reducing dropout rates to less than 10 percent across all states and districts was a realistic one. As with other outcome targets, the differing results across states indicate that it would be more reasonable for future programs to set differential targets based on baselines. Over three quarters of the districts in both projects did achieve the second objective of reducing gender differences in dropout rates to less than 5 percent.

C. Progress in improving learning achievement

2.30 The focus of both DPEP I and II has been on quality improvement particularly in terms of textbook revision, teacher training, and academic support to teachers. The impact of the inputs and processes initiated under the program should ideally be reflected in improved learning achievement of the students. In order to measure learning achievements, baseline achievement surveys (BAS) were conducted for both DPEP I and II. Midterm assessment surveys (MAS) were conducted for both projects - in 1997 for DPEP I and 2000 for DPEP II. For DPEP I the terminal assessment survey (TAS) was also conducted in 2002. The surveys measure the average performance of students on competency based tests in mathematics and language at the end of Class I and in the penultimate grade of primary school (Grade IV in most states and Grade III in a few states).[12]

2.31 DPEP's objectives with respect to learning achievement were threefold:

1. All children should achieve a minimum average score of 40 percent

2. Average achievement levels should improve by 25 percent over the life of the projects

3. Gender and social differences in

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[12] The sample sizes for the mid-term and terminal assessments were about 42,000 students from Grade I and Grades III/IV. About 25 percent of the sample, corresponding to their share of population, were from the SC community and about 8 percent from the ST community. All states were included.
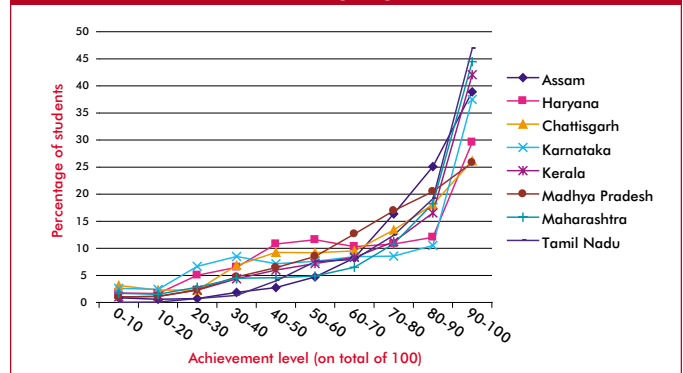
Figure V: Frequency Distribution Of Achievement Scores: Class I Mathematics: DPEP I (TAS)

Figure VI: Frequency Distribution Of Achievement Scores: Class I Language: DPEP I (TAS)
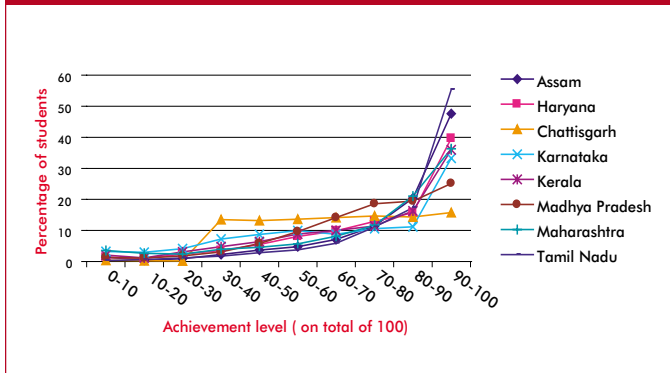
achievement levels should be reduced to less than 5 percent.

2.32 In DPEP I districts, the average score for all forty two districts in which the MAS was conducted reveals that all districts had achieved the minimum target score of 40 percent by 1998 for language and mathematics in Class I (except one district in Madhya Pradesh in mathematics). These results were sustained in 2002 in the TAS as well for all districts (NCERT, 2002). For the penultimate grade in primary school (Grade III for some states and Grade IV for others), much fewer districts achieved this minimum score, and alarmingly few districts achieved this in mathematics in particular. Sixteen of forty two districts did not achieve the 40 percent target in language while thirty one of forty two districts did not achieve the target in mathematics. In Madhya Pradesh and Kerala all districts in which the test was administered had an average score of less than 40 percent on mathematics in Class III/IV (NCERT, 1998). In 2002 when the TAS was administered, the number of districts which

still had not achieved the 40 percent target in language fell to only three for language and seventeen for mathematics (NCERT, 2002).

2.33 The figures V, VI, VII and VIII below illustrate the frequency distribution of students in terms of their achievement scores for Class I and Classes III/IV in language and mathematics on the terminal assessment survey for DPEP I. Unfortunately comparable figures are not available on student distribution from the baseline survey. The range of scores in most states was very wide. States which had only about a quarter or less of students in the 90 to 100 percent range in both language and mathematics for Class I were Chattisgarh and Madhya Pradesh. Karnataka had as many as 20.2 percent of its students in the less than 40 percent range for language and 20.5 percent of its students in this range for mathematics (Class I). These results are revealing since they reflect the performance of individual students rather than averages for the district. States which had about 60 percent of the students in approximately the 80 percent and above range in Class I were

Figure VII: Frequency Distribution Of Achievement Scores: Class III/IV Language: DPEP I (TAS)
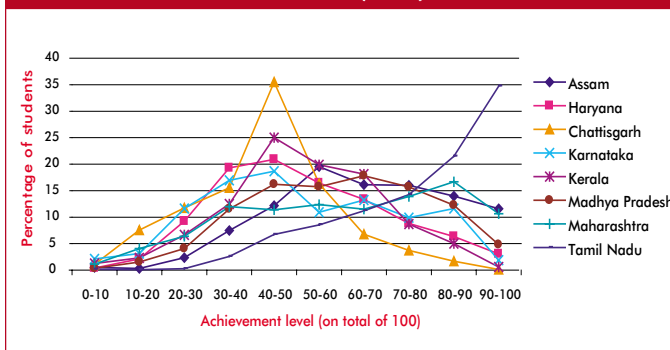
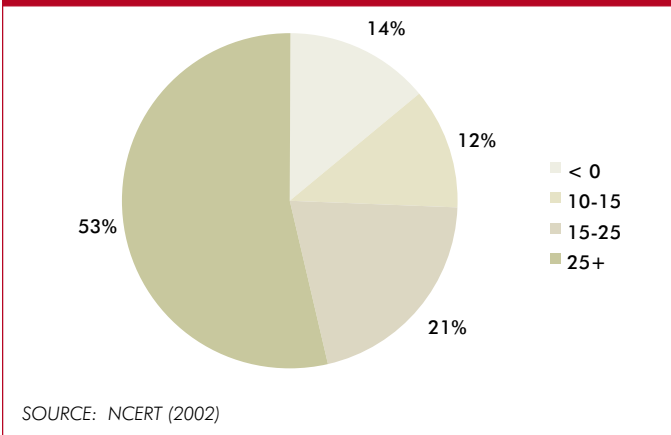Figure VIII: Frequency Distribution Of Achievement Scores: Class III/IV Mathematics: DPEP I (TAS)
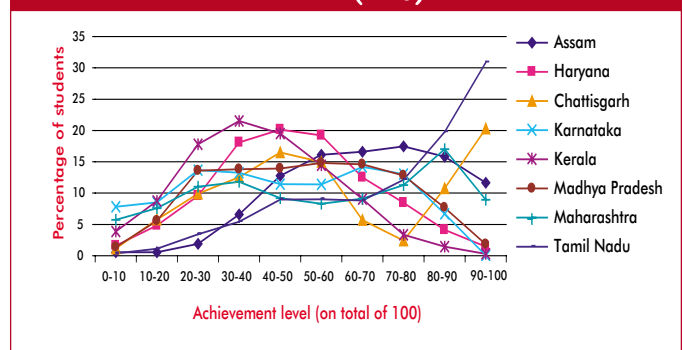
Figure IX: Percent Change In Achievement Scores: DPEP I: Class I Language (Proportion of Districts)

14%

12%

53%

21%

< 0
10-15
15-25
25+

SOURCE: NCERT (2002)

Figure X: Percent Change In Achievement Scores: DPEP I: Class I Mathematics (Percent of districts)

8%

10%

6%

< 0
5-15
15-25
25+

76

SOURCE: NCERT (2002)

Assam, Kerala, Maharashtra and Tamil Nadu for language and Assam, Maharashtra, and Tamil Nadu for mathematics. As can be seen from the figures, results are dramatically different for the higher grades. For most states, most students scored in the 30 to 70 percent range in Classes III or IV when compared to most students scoring in the above 70 percent range in Class I. Results were much poorer in the higher grades and this is revealed by the district averages as well. However, part of the reason why scores were high in Grade I is because Grade II students were tested on Grade I material.

2.34 It is difficult to assess the performance of DPEP I districts in terms of achieving the second objective regarding learning achievement i.e. raising average achievement levels by at least 25 percent over the baseline scores. This is because different instruments were used in the BAS and MAS and TAS since there was a change in the curriculum with new competency levels defined as the Minimum Levels of Learning. In order to be able to do some comparative analysis, the BAS was re-administered to a small sample of only five schools per district in DPEP I districts. While this is a very small sample, it is the only possible comparison that can be made between the BAS and MAS. Only about 14 percent or six districts achieved the targeted increase of 25 percent over baseline

achievement levels in Class I language (NCERT, 1998). However, TAS results reveal that twenty three of forty nine districts had achieved the target of raising achieving levels by 25 percent over the baseline by 2002 (NCERT, 2002).[13] The real cause for concern is that in fourteen or 34 percent of districts Class I language levels actually fell between the BAS and MAS. By the TAS in 2002, there were six districts in which achievement levels in Class I language had declined. For Class I Mathematics, the results were better with 21 percent of districts or nine districts achieving the target of levels increased by 25 percent over the baseline by 1998. By 2002 this number had increased to thirty eight of forty nine districts. In nine districts the achievement levels fell compared to the baseline in 1998 but by 2002 there were four districts where

Figure XI: Percent Change In Achievement Scores: DPEP I: Class III/IV Language (Percent of districts)

5%

26%

33%

< 0
5-15
15-25
25+

36%

SOURCE: NCERT (2002)

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[13] *Levels rose by between 10 and 25 percent in another ten districts (24 percent of total districts) by 1998 and between 15 and 25 percent in nine districts by 2002. In another twelve districts (29 percent of total districts), levels rose by between 0 and 10 percent by 1998 and in five districts between 0 and 15 percent by 2002.*

and 33 of 45 districts achieved the target with respect to ST children. For the higher classes, the results were better with 39 of 49 districts achieving the target for SC children in language and 43 of 45 districts in mathematics. Of course, due to the high dropout rates it is possible that children who might be academically weaker may have dropped out making it easier to achieve the target in higher classes. The results for ST children were somewhat worse. Thus the gender gaps were successfully reduced in most districts. For SC children substantial progress has been made in many districts. ST children, for the most part, fared a little lower in terms of achievement levels.

2.37 In DPEP II districts, the average score for all 56 districts in which the MAS was administered reveals that all had achieved the minimum target score of 40 percent by 2000 for language and mathematics in Class I. For the penultimate grade in primary school (Grade III for some states and Grade IV for others), as in DPEP I, much fewer districts achieved the minimum target score. Nine of fifty six or 16 percent of districts did not achieve the 40 percent target in language. In mathematics, twenty six of the fifty six or as high as 46 percent of districts where the test was administered did not even make the 40 percent target average score. In Madhya Pradesh as many as twelve of the fifteen districts did not make this minimum target for Class IV mathematics (NCERT, 2000). The results of the TAS for DPEP II districts are still awaited.

achievement levels fell compared to the baseline. See the pie charts below for changes in achievement levels over the project periods.

2.35 For Classes III and IV, very few districts achieved the intended 25 percent increase over the baseline in 1998. Only 2 districts for language and 1 for mathematics achieved the intended 25 percent increase by 1998 and achievement levels fell in 11 districts for language and 13 districts for mathematics. The situation had improved significantly by 2002 with 46 districts having achieved the 25 percent increase in language and 27 in mathematics. Achievement levels fell compared to the baseline in 4 districts in language and 5 districts in mathematics.

2.36 DPEP I was successful in reducing the differences in learning achievement (although in many districts, these differences were less than 5 percent even at the beginning of the project period) - between boys and girls; and between SC/ST and general category of students. For Class I language, 44 of 49 districts achieved the DPEP target of reducing gender differences in achievement levels to less than 5 percent by 2002. For Class I mathematics 40 of 49 districts achieved this target. For the higher grades, 45 of 49 districts for language and 46 of 49 districts for mathematics achieved the target. The results were slightly worse for social disparities. For Class I language, 38 of 49 districts achieved the target with respect to SC children and 29 of 45 districts achieved the target with respect to ST children. For Class I mathematics, 39 of 49 districts achieved the target with respect to SC children

2.38 As with DPEP I, assessing the performance of DPEP II districts in terms of achieving the second objective i.e. raising average achievement levels by at least 25 percent over the baseline scores, is difficult as different instruments were used in the BAS and MAS. In order to be able to do some comparative analysis, the BAS was re-administered to a small sample of ten schools per district in DPEP II districts. While this is a very small sample, it is the only valid comparison that can be made. About 18 percent or ten districts achieved the targeted increase of 25 percent over baseline achievement levels in Class I language (NCERT, 2000).[14] The real cause for concern is that in ten or 18 percent of districts Class I language levels actually fell. For Class I Mathematics, the results were better

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[14] Levels rose by between 10 and 25 percent in another twenty districts (36 percent of total districts). In another sixteen districts (29 percent of total districts), levels rose by between 0 and 10 percent.

Figure XIII: Percent Change In Achievement Scores: DPEP II: Class I Language (Percent of districts)

18%   18%
29%
35%
< 0
0-10
10-25
25+

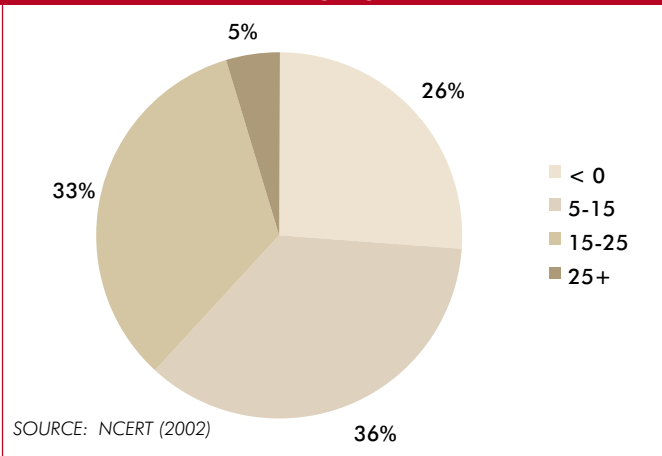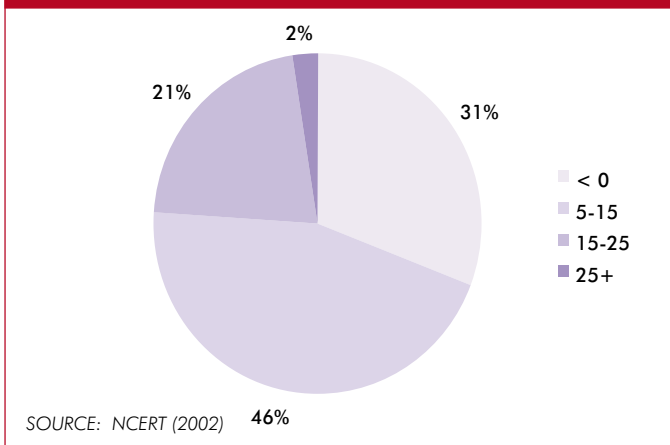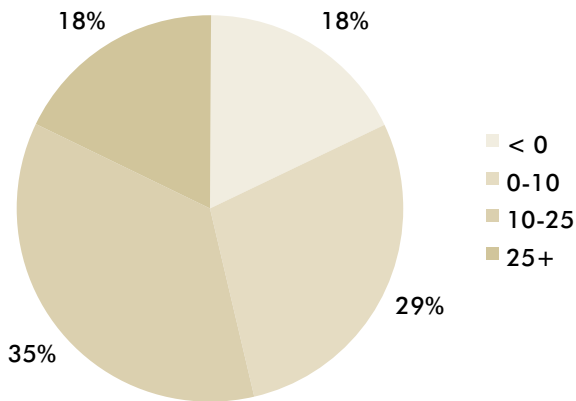*SOURCE: NCERT (2000)*

Figure XIV: Percent Change In Achievement Scores: DPEP II: Class I Mathematics (Percent of districts)

9%
34%   16%
41%
< 0
0-10
10-25
25+

SOURCE: NCERT (2000)

with 34 percent of districts of nineteen districts achieving the target of levels increased by 25 percent over the baseline. In five districts the achievement levels fell compared to the baseline. For Classes III and IV, the results were much poorer when compared with the baseline. Only five districts for language and four for mathematics achieved the intended 25 percent increase and achievement levels actually fell in fourteen districts for language and thirteen districts for mathematics.

2.39 DPEP II was quite successful in reducing the differences in learning achievement between boys and girls; and between SC/ST and general category of students. For Class I language, 50 of 56 districts achieved the DPEP target of reducing gender

differences in achievement levels to less than 5 percent. For Class I mathematics 43 of 56 districts achieved this target. For the higher grades, 53 of 56 districts for language and 55 of 56 districts for mathematics achieved the target. As in DPEP I, the results were slightly worse for social disparities. For Class I language, 41 of 56 districts achieved the target with respect to SC children and 40 of 56 districts achieved the target with respect to ST children. The results were slightly worse for mathematics. For the higher classes, the results were better with 49 of 56 districts achieving the target for SC children in language and 51 of 56 districts in mathematics. The results for ST children were lower. Thus the gender gaps were successfully reduced in most districts. For SC children, distinct

Figure XV: Percent Change In Achievement Scores: DPEP II: Class III/IV Language (Percent of districts)

9%   25%
18%
48%
< 0
0-10
10-25
25+
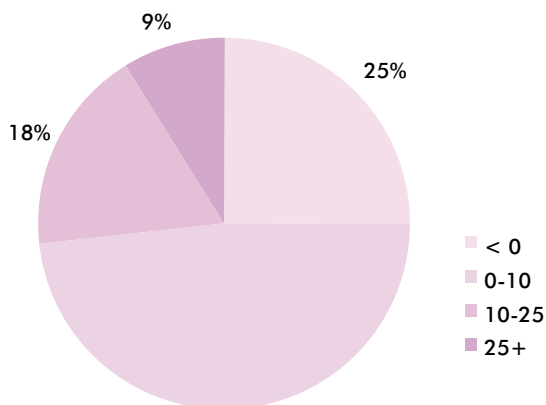
SOURCE: NCERT (2000)

Figure XVI: Percent Change In Achievement Scores: DPEP II: Class III/IV Mathematics (Percent of districts)

7%   23%
16%
54%
< 0
0-10
10-25
25+

SOURCE: NCERT (2000)

25
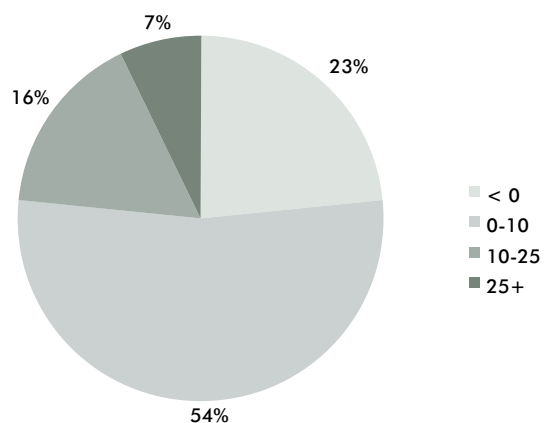
progress has been made in many districts. As in DPEP I districts, ST children, for the most part, fared a little lower in terms of achievement levels.

2.40   In conclusion, most districts in DPEP have achieved the first objective of a minimum average score of 40 percent in Class I but very few have achieved this in Classes III/IV. For the second objective on learning achievement, 50 to 75 percent of districts achieved the 25 percent increase in learning over baseline levels for Class I. However, less than 5 percent of districts achieved this increase in Classes III/IV. Thus, DPEP was certainly not successfully in reaching this second objective for either lower or higher grades. Both DPEP I and II have been successful in reducing gender gaps in learning achievement and moderately successful in reducing social disparities in achievement. A review of the results on learning achievement once again indicates that having fixed, nation-wide targets for raising learning levels is not appropriate in India. In fact, the 25 percent targeted increase in learning achievement over

baseline levels seems to be too ambitious in the limited time period of seven years.

2.41   There are very few studies, however, that attempt to understand the reasons why some districts/schools did better than others in raising learning achievement and reducing gender and social gaps. Rampal's study on 'Curriculum Change for Quality Education' (Rampal, 2001), is one of the few studies that undertakes classroom observation as well as administers some basic achievement tests to students in select DPEP and non-DPEP districts. The results of this study clearly demonstrated that students in Class IV in DPEP districts performed significantly better on all competencies on which they were tested relative to students in non-DPEP districts. While this study is not strictly an impact evaluation in the sense that it does not control for other factors that could account for the achievement level differences between project and non-project districts, it is *indicative* of the impact of the DPEP on learning.

III. THE STATUS AND EFFECTIVENESS OF DPEP INTERVENTIONS

3.1   While the impact of DPEP on development objectives is mixed, the breadth of outcomes can be attributed to a similar pattern of uneven implementation of interventions intended to achieve these objectives. The major interventions can be identified as those dealing with (i) community mobilization and participation; (ii) the provision of adequate space and appropriate class sizes; (iii) textbook recreation; (iv) the professional development of teachers; (v) improved classroom practice; and (v) reform in educational planning and management. Though variation characterizes the conceptualization and implementation of these interventions across states, all of these areas have received concerted and consistent attention over the project period in all DPEP I and II states.

A.   Community mobilization and participation

3.2   The mobilization of local communities for their support and participation in primary education has been central to DPEP. The project encouraged the participation of parents and communities in two ways. First, the project organized a set of

activities intended to communicate the importance of education and the role of parents and communities in this process. Across the states a variety of activities — rallies, campaigns, short programs, fairs or *melas* and puppet shows — have been conducted to motivate communities to send their wards to school. The media has also been extensively used in states to communicate the value of education and to encourage communities to get involved. In the print media, brochures, pamphlets, posters, comic books, guidebooks and magazines have been produced in addition to a variety of video and audio material. Communities and parents who were earlier considered irrelevant to the effectiveness of education provided by the government were through these activities drawn into becoming involved and to some extent responsible for the education of their wards. The effectiveness of this intervention could explain the increase in enrolment in the early years of the project.

3.3   Second, the mobilization of the community has taken on the form of revitalizing existing structures, if available, in addition to establishing formal

structures at the village level, directly concerned with education. DPEP was successful in formulating the Village Education Committees (VECs) to support school activities and organize a variety of programs to motivate and build the capacities of communities. Importance is given to communities as partners in providing education both in terms of resource mobilization and in the monitoring of educational quality. As Reddy and Chattopadhyay (2002) remark " the Village Education Committee has restored the community's confidence and involvement in the primary education system (p.xiii)". The VEC has been established in all project districts with the number of members constituting a VEC and the method by which they become members decided upon by each state. There is variation across states as to whether members in these committees were legislated, elected or nominated (Table 5). In all VECs, membership was assigned to representatives of major social groups in addition to parents of disabled students and women.

3.4 The program was also successful in imparting training (between one to three days) in all DPEP districts to VEC members on various aspects including the purpose of education, micro-planning, monitoring dropout and student attendance. However, studies on the impact of this training are inconclusive (Ed.Cil, 1999).[15] Based on the available literature this evaluation assesses the impact of VECs in three areas: impact on school construction, participation and empowerment, school processes, and the monitoring of VEC involvement by DPEP staff.

3.5 School construction is one of the areas in which VEC involvement has been fairly successful and this will be dealt with later in the report. The grant of Rs. 2000 is given once during the project period to VECs for the school. This grant has empowered communities to some extent. According to ED.CIL (1999) and Reddy and Chattopadhyay (2002), the VECs were able to, by and large, make use of this money appropriately, though often at the behest of the headmaster rather than through genuine community decision-making. The school environment, furniture and blackboards and so on are some of the common items supported by this fund. In a few cases, for instance in Kerala and Assam, the VECs are involved in fund raising in order to provide more facilities for the school.

3.6 The level of participation and empowerment of VEC members is an indication of whether this structure is effective and can perform according to expectations. VECs were supposed to meet once a month and discuss issues relevant to the functioning of the school. About half the VECs, according to the Indian Institutes of Management (IIM) studies done on DPEP I districts, would meet once a month, while the other half would meet once in two or three months or not at all. The teacher often takes the lead in organizing these meetings.[2] Reasons for the irregularity in meetings include lack of time, social segregations, cultural inhibitions, and political interferences. The irregularity in conducting meetings indicates the limited involvement of communities in educational affairs. The second area is the limited empowerment of its members especially those from SC/ST communities and women. Studies such as Vasuvi and Chamaraj's (2001) indicates that even micro planning identifying the status of non-enrolled students in the village is often not inclusive of the SC/ST communities.[3] Furthermore, though members from the SC/ST community and women might be present at meetings, they were often silent and passive. In Reddy and Chattopadhyay (2002), about a quarter of the SC/ST and women members participated satisfactorily. Often teachers rather than the community members appear to play an important role in the functioning of VECs and most often teachers make all the important decisions and communities support these decisions and act on them.

3.7 The VECs impact on school processes is not clear – the continued dropout and limited learning suggests need for further improvement in this area. A significant task for the VECs in this areas is to monitor school functioning especially teacher absenteeism. It is unclear as to whether VECs have been able to carry out this task. A possible reason for this could be, on the one hand, while VEC members may have considerable information on school functioning, the channels through

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[15] This study by ED.CIL uses quantitative analysis. This study examines community processes in 10 villages from two districts each in Assam, Bihar, Gujarat, Karnataka, HP and UP.
[16] The IIMs in preparation for the Implementation Completion Report for DPEP I have done evaluative studies on all the DPEP I states. The method included an analysis of secondary sources (household surveys) and primary data. The primary data is based on interviews and observations of 15 villages (stratified circular systematic sampling) in two districts in each state. [17] Vasuvi and Chamaraj's qualitative study of primary education in 22 villages in one district in DPEP I districts and four districts in DPEP II in Karnataka.

Community Mobilization and Participation Table 4: Status of VEC, SMC, MTA and PTA in the DPEP States									
State	VECs	SMC/SDMC	PTAs/MTAs	M	N	E	Reservation		
							W	SC	ST
Assam	9384	600	4050	13-17	5-7	8	1/3		
Chhattisgarh	20728	5720	12507	10	10		2		
Gujarat	3043		5699	9	9		2		
Haryana	3824		5599	12	12		3		
Himachal Pradesh	2944		5888	7-15	7-15		1/3	1	1
Karnataka	59681	28727		18+	9+	9	3	1	1
Kerala	209	325	3556						
Madhya Pradesh@	53460	26094	103546	12			1/3		
Maharashtra	15001		13430	5-7	5-7		1	1	1
Orissa	12683								
Tamil Nadu	10730		10670	12-15	12-15		2		
Uttar Pradesh*	40826		9711	5	5		1		
Total	232513	61466	174656						

@ Includes DPEP I; *Includes UP DPEP III. Source: 16th Progress Overview

SMC: School Management Committees; SDMC: School Development and Management Committees; PTA & MTA: Parent or Mother Teacher Associations
M: Number of members; N: Nominated members; E: Elected members.

which this information can be fed back into the system are limited. VECs are often only in contact with the teachers and have no systematic access to CRC (Cluster Resource Center) or BRC (Block Resource Center) coordinators to file complaints. On the other hand, the IIM studies on Assam and Karnataka indicate the regular participation of CRC and BRC coordinators in VEC meetings, however, it is not clear whether teacher absenteeism has improved through this process. Furthermore, the sharing of student performance with the VEC and parents, which would facilitate accountability in the system, does not appear to be widespread. Kerala and Assam provide some other examples of VEC involvement - parents substitute for teachers when they are absent or in instructing students in their own particular local skill and knowledge.

3.8   The VEC as an institution has been effected by the recent amendment to the constitution dealing with decentralization. The 73rd and 74th amendment to the Constitution of India established local governments called Panchayat Raj, which are elected institutions. In several states the Panchayati Raj elections have been completed but the relationship between the VECs and the PRI institutions are still to be defined.[18] In some cases, VECs were dissolved and reconstituted as one of the PRI institutions, while in other cases the role and responsibilities of VECs vis-a-vis PRIs have not been defined and VECs continue to exist as parallel organizations. In most states the limitations of the VEC in actually effecting improvement at the school level have precipitated the formation of user groups. For example, Assam, Karnataka, Gujarat, Madhya Pradesh and Chattisgarh have addressed the limited effectiveness of VECs by establishing school development committees. An evaluation of whether such user groups are more effective than VECs is yet to be done. In Himachal Pradesh, user groups are helping to improve quality and address teacher absenteeism. It is possible that the School Development and Management Committee in Karnataka and Parent Teacher Associations (PTAs) and Mother Teacher Associations (MTAs) in other states are more effective; however, the absence of political connections could affect the extent to which they are able to garner resources available at the Panchayat (local) level.

3.9   The VECs attached to Education Guarantee Schools (EGS) or Alternative Schools (AS) started in DPEP and described above are much more

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[18] *In Kerala (Mercer, 2001), effective school level planning is taking place. People's Planning campaign have trained Panchayats in planning, conceptualizing projects and strategies to address issues in the Panchayat.*

effective than VECs attached to regular primary schools. One of the reasons for this is that communities in which these schools are located are in general homogenous and smaller and, therefore, user groups formed for these schools are active and consistent in their participation in school activities. The process of establishing the EGS school also involves communities in a very significant way – communities must request a school, nominate the teacher and provide initially, the space for the school; the state then provides the remuneration for the teacher, which is handled by the community. This process has strengthened community participation and ownership by allocating roles and responsibilities unavailable in the regular primary schools.

3.10 To conclude, the community mobilization in DPEP has had two dimensions. The first dimension was the mobilization of communities to understand the importance of primary education and persuade them to send their children to school. The initial increase of enrolment in the DPEP states could be connected to the success of this component. The second dimension was to establish or revive existing community level structures. These structures, namely VECs, have been established across DPEP. School construction and use of grant money were fairly successful activities, though, except in the case of AS and EGS schools, consistent participation and empowerment, especially of the representatives from disadvantaged groups are weak. Thus, the impact of VECs on school activities and facilitation of student learning has been limited. The limited sustained involvement of VECs could also explain the decline in enrolment after the initial surge. There is now a move by states to establish user groups such as MTAs and SMCs whose effectiveness is not known. There is clearly a need to clarify VEC or user groups' roles and responsibilities in relation to the local government or Panchayats in the future and to consistently encourage participation and empowerment of these groups, perhaps through the use of non-government organizations.

B. Access and classroom space and size

3.11 School construction is an important contribution of DPEP. As the Ed.Cil study states, the civil works program in DPEP has transformed classrooms and schoolrooms with the traditional box design without verandahs with uneven and harsh flooring. The National Cross Sharing Workshops enabled a sharing of information and ideas on low cost and creative designs and construction, in addition to the availability of an innovation fund to facilitate the design of creative, child friendly classrooms. The civil works program in DPEP I and II can be considered from a variety of aspects including, planning, design and quality of implementation, involvement of beneficiaries in the process, pace of implementation, use of the new civil works and extent to which the overall need for new buildings has been met within the context of the project. Though there is variation across states, overall the involvement of the VECs in school construction has been one of the successes in the project. VECs were trained in construction and their activities monitored by a team of engineers employed by the state project office.

3.12 The National Evaluation Team's report (NET) is available in draft form for Assam and HP and final reports for Karnataka and Tamil Nadu (2002). Reports on Assam and HP suggest that community construction was very effective and construction quality good in these two states. However, in Karnataka and Tamil Nadu the process improved over the course of the project. According to the Tamil Nadu study, the planning was not too efficient in that classroom sizes often did not correspond with the number of students enrolled, similarly in Karnataka. The implications of this is that the standardization inherent in DPEP disallowed the construction of classrooms that were appropriate for the size of the school population. Initially, because villagers were not adequately trained and supported for the task, village level involvement in construction was not very satisfactory, for instance in Tamil Nadu, this has been refined over the project period. The study describes the dominance of the more wealthy in the community in the practice of allowing the VEC to construct the school till plinth level with their own funds and then releasing money to the VEC to construct the rest of the school. Most states used cost effective technology, Karnataka was one of the states that did not make use of such technology. There is little information on the impact of the new construction on facilitating the participation of students from the SC or OBC communities who live in separate habitations located in the outskirts of villages (Jha and Jhingran, 2002).

3.13 Taking both DPEP I and II together, only about 20 percent of these schools have separate toilets for girls and an additional 10 percent have toilet facilities shared by both boys and girls. Drinking water facilities have increased by about 20 percent in both DPEP I and II districts. Though these facilities represent a doubling of the facilities available since project commencement, the insufficiency in toilets (critical for girls' participation), drinking water, and general infrastructure in schools is clearly evident. The Gender and Social Equity study reports that 5 of the 10 schools observed in Maharashtra and Haryana had no drinking water, electricity, usable toilets and storage for instructional aids.[19] The study done by the Women Empowerment and Human Resource Development Center, based on a random sample five schools in six districts (2001) in Kerala, also suggests that schools lacked basic infrastructure such as toilets, furniture, and space and in two district (Kasergode and Waynad) playgrounds, water facilities and libraries were insufficient.[20] In Assam on the other hand (Kaur et al. 2000), infrastructure facilities were in place.[21] The NET study found that in Tamil Nadu with reference to new construction, the provision of water and toilets were not effectively distributed across schools.

3.14 The number of classrooms in good condition has increased by about 5 percent and the number requiring minor and major repairs reduced by about 3 percent over the project period for both projects. The ED.Cil study on classrooms (2001) however, describes the inadequacy of classrooms in several states. Classrooms were without partitions (thus noisy and distracting), adequate storage, mats to sit on and with leaky roof. Active schools in Maharashtra and Nalli Kali classrooms in Karnataka, and EGS schools, though, were more adequate. Nevertheless, the number of classrooms with minimum conditions for supporting teaching and learning with, for example, adequate space, usable blackboards, and so on is a crucial piece of information that is unavailable.

3.15 To maintain appropriate pupil-teacher ratios of 40:1 DPEP funding was used for hiring additional teachers for increased enrolment and for new schools and classrooms. The average Pupil Teacher Ratio (PTR) in the DPEP I states is 38:1 and this has not changed much over the project period. The average for the DPEP II states is 49:1 implying that the number of teachers in position and newly hired is not sufficient for the number of students in these districts. More serious is the number of schools in both DPEP I and II districts that have very high PTRs. Aggrawal (2002) identifies the average percent of schools with PTRs >90 as 3.4 percent in DPEP I and 13.6 in DPEP II. Except for Kerala, PTRs with over 60 students ranges between 10 to 20 percent in DPEP I and from 5 to 65 percent in DPEP II. PTRs are dependent on the number of teachers available. According to the 16th GOI Progress Overview, teacher vacancies in DPEP I districts are less that 7 percent. Gujarat, Karnataka and Madhya Pradesh hired a large number of teachers, keeping their pupil teacher ratios constant/declining. However, in the DPEP II, teacher vacancies are fairly substantial in Assam (30 percent), UP (26 percent), Gujarat (20 percent), and in Himachal Pradesh (13 percent). The increase in the share of female teachers is on average 5 percent across states. The

Table 5: Civil Works				
Civil Works	DPEP I		DPEP II	
	Target	*Completed*	*Target*	*Completed*
BRCs	223	200	771	619
CRCs	1032	979	5212	4591
Addl. Classrooms	5183	3976	13503	9848
School Bldgs (New & Bldg.less)	2183	1813	18173	13003
Toilets	10004	7968	28845	24875
Drinking Water	7368	5645	13325	11793
Repairs	4076	2073	9683	6342

Source: 16th Progress Overview

[19] This study was qualitative, based on one district with a high SC and ST population from each of the DPEP I districts and Andhra Pradesh. Similar criteria were used for choosing one block from each district. Demographic data on the district were collected, focus group discussions were held, four teachers (two regular, one alternative and one private school) were interviewed and classrooms observed. Cohort studies were done in one regular and one EGS school.
[20] This study, in addition to using descriptive statistics, is a qualitative evaluation covering six districts in DPEP I and II districts based on a random selection of 10 percent of the schools.
[21] Two DPEP-I districts of Assam were covered (Darrang and Morigaon) in this quantitative and qualitative study, based on data collected from 63 schools in 10 blocks.

share of SC has not increased while the share of ST teachers in states with large ST populations has increased.

3.16 The number of EGS and AS schools in some of the DPEP I and II states has increased dramatically over the project period (Table 7). Such schools were established in DPEP, first by the state of MP, in order to bring children from smaller pockets that were remote or extremely disadvantaged due to child labor and migration practices into the school system. Remote habitations were those that fell below the population norm of 300 or distance norm of 1 kilometer radius. EGS and AS schools employ para teachers, which are teachers without a teaching certificate and could be 12th or 10th grade graduates. Para teachers are paid by the local Panchayat and the salaries range from a fifth to half of the regular teacher's salary.

3.17 While the establishment of the EGS and AS scheme help address the provision of access and classroom space, these issues continue to require attention in the project districts. Though school construction was adequately taken care of by the VEC, many schools continue to lack toilets, and water supply. In addition, the extent to which classrooms and schools possess the minimum conditions for teaching and learning is unclear. High PTRs are evident in some states and there are not enough teachers in HP, Assam, Gujarat and UP in particular.

C. Textbook recreation

3.18 Textbooks are often considered to be the icon of the India classroom. Students and teachers treat the textbook with great respect and as other instructional material is generally unavailable it symbolizes the object of all learning. Several shortcomings with the content and appearance of textbooks were identified at the commencement of DPEP. Inappropriate and irrelevant content, gender stereotypes and social exclusions (for example, the exclusion of all references to the tribal community) characterized the content of textbooks. In addition, the quality of paper, the illustrations and the font size often made textbooks unusable and unattractive for students. In this context, the DPEP intervention of textbook renewal in all DPEP I and II was very important and beneficial.

3.19 DPEP revised the whole process of textbook production.[22] A series of national workshops attended by state officials, NGOs and others helped the states to set in place a process of textbook revision, first in project districts and then throughout the state. These workshops provided a forum for defining standards for textbook content, the quality of paper, font sizes and the type of illustrations to be used. The revision of textbooks was to be guided by the introduction of the new curriculum entitled the "Minimum Levels of Learning" (MLLs) and the concept of activity based learning. MLLs, while lacking a theoretical framework, defined a set of basic skills to be acquired by students in mathematics, language and environmental studies. States were encouraged to rid textbooks of gender stereotyping and include the life experiences of the different social groups of rural India. Checklists were developed to facilitate writers and illustrators avoid gender stereotyping and bias. Other aspects of textbook revision focused upon the integration of disciplines, the use of simpler language and the reduction of subject content. The importance of involving teachers, soliciting public opinion on textbook content, field trials of textbooks before the final revisions took place was also communicated during workshops. In

Table 6: Alternative Schools in the DPEP I and II states			
State	Centers	Enrolment	Percentage of total enrolment
Assam	3138	129622	13.5
Chhattisgarh	5720	304051	Not available
Gujarat	2282	49422	5.3
Haryana	1080	26318	3.2
Himachal Pradesh	50	690	Negligible
Karnataka	Bridge courses only	Not applicable	
Kerala	307	6514	Negligible
Madhya Pradesh@	26510	1230190	24.3
Maharashtra	4371	105426	3.8
Orissa	8033	113462	Not available
Tamil Nadu	0	0	0
Uttar Pradesh*	7074	252250	Not available
Total	58565	2217945	10.3 (approx)

@ Includes DPEP I; *Includes UP DPEP III. Source: 16th Progress Overview, Agarwal (2001) and EMIS enrolment total data received from states where available.

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[22] DPEP supported the cost of producing a camera reading copy of revised textbooks. The cost of producing textbooks for students was not underwritten by DPEP.

addition to textbooks, the usefulness of teacher handbooks and student workbooks was also highlighted.

3.20 States adapted this process discussed at national workshops in different ways. While the content, which had always been decided upon by academics disconnected with instruction in primary education, was now decided upon using a much more collaborative and consultative process, the extent to which states made use of government institutions, teachers, and NGOs in writing and producing textbooks differed across states (Table 8). The point here is that states realized the importance of having a cadre of people at the state level visualize and undergo training in textbook production. The sample trials of textbooks before final production is also now seen as important to the process of textbook creation. The MLL and activity based learning approach predominated in some states more than others, though, over the course of the projects, all states have revised the MLL approach. For example, textbooks in Karnataka, Maharashtra and Tamil Nadu were first based completely on MLL. Criticism regarding the inflexibility of MLL has persuaded states to rethink the MLL methodology. Emphasis is put in varying degrees across DPEP I and II states on more appropriate size, content, color and illustrations, clearer print, better quality paper and the correspondence between textbook content and age/grade level. The report will now discuss the evaluation of textbooks.[23]

3.21 Though the parameters used in the analysis are not similar, three states, Karnataka, Kerala and Madhya Pradesh, have undertaken evaluations of the content of the newly produced textbooks in DPEP. According to the study done by RV Educational Consortium (1997), Class III textbooks in Karnataka, full of color and humor, were appreciated by the majority of teachers and facilitated a more student-centered approach to instruction. However, the age-appropriateness, the print and layout could be further improved and, in addition, the textbook was not completely rid of mistakes.

3.22 Hussok (2000), Rampal (2000) and Manual (2001) comment on textbooks used in Kerala. The transformation of textbooks has indeed been revolutionary in its attempt to integrally move away from the spectra of rote learning.[24]

	Teachers	NGOs	Government Institutions
Assam	Low		✓
Gujarat	High		✓
Haryana	High		
Himachal Pradesh	Low		✓
Karnataka	Low		✓
Kerala	High		
Maharashtra	Low		✓
Madhya Pradesh	Low	✓	✓
Orissa	Moderate		
Tamilnadu	Low		✓
Uttar Pradesh	High		✓

Table 7: Participation in textbook renewal

Source: Shukla.2001

Mathematics textbooks highlight the importance given to conceptual learning, for example, recognizing patterns in learning multiplication rather than the rote learning of multiplication tables and the framing of more "practical and meaningful" problems (Rampal, p. 38). Similarly in science, the textbook focuses on the development of a variety of skills such as oral skills, hypothesis formation and creativity. An attempt has also been made in Kerala to displace the primacy of the textbook by encouraging teachers to only use textbooks a third of the time in the classroom. Discussion of textbooks in Madhya Pradesh (Kothari et al. 2000) suggests that although *Sikna Seekhana* textbooks used were more standardized than in Kerala, they still represented a major improvement to the textbooks existing prior to DPEP.[25] Based on this study the textbooks have been recently revised in MP, and the analysis of its effectiveness has not yet been done.

3.23 There is considerable information (Ed.Cil, 2000) on the process used by states to eliminate gender bias in textbooks and GOI has recently undertaken an analysis of the extent to which

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[23] There is little information on the physical characteristics of new textbooks except in Cohen's reflection paper. According to Cohen (EC 2001), offset printing and computerized typesetting facilitated this process of improving the quality of textbooks enormously. The binding of textbooks, however, requires further improvement.
[24] Hussok did a case study of DPEP in Kerala; Rampal's study was a comparison of DPEP and non-DPEP districts in the same state; and Manual's study focuses on Class I and II textbook content, in addition to the use of the textbook in classrooms.
[25] Kothari et al (2000) have compared three packages used in MP (AS, Eklavya and Seekhana Sikhana). Based on their review, MP has produced new textbooks integrating the three approaches and an evaluation has not yet been done.

textbooks across the states have succeeded in eliminating gender bias (the results are awaited). Though there has been an evaluation of gender stereotypes in textbook content, information is unavailable on the elimination of SC and ST bias in textbooks. Since this issue was not graphically apparent before textbook revisions took place and it is likely therefore, that the need to "eliminate" may not have been significant. In addition, it is possible the states have taken steps to ensure the absence of caste discrimination in textbooks. However due to lack of information, it is difficult for this report to capture this aspect. It will be important for states to examine textbooks in this regard since, similar to gender, the extent to which the experiences and lifestyles of SC and STs and other lower caste ostracized communities are validated in textbooks is critical to the inclusion and empowerment of these students in the educational system.

3.24 Most states have produced material to accompany the textbook for assisting teachers in everyday planning and instruction. This has taken different forms in the states. For example, in Assam "resource materials," in Maharashtra and Haryana, teachers' handbooks which contain material that is for teachers' use and in Karnataka, more elaborate teachers' guides have been developed. A few states such as Karnataka and Assam have also produced student workbooks. Information is unavailable as to the usefulness of the teachers' guides or the consistent use of workbooks by students and its support for learning. States with large populations of tribal students have produced additional material in tribal languages such as glossaries in tribal dialects and additional literature based on tribal myths and stories. Interestingly, in Kerala, handbooks for parents have also been produced to help parents understand and support the pedagogic experience of their children.

3.25 The textbooks produced for the EGS and AS schools are non-graded material appropriate for self-paced learning. The assessment of AS material used in MP done by Kothari et al (2000) affirms the effectiveness of this material for promoting learning for students in this group. To summarize this section on textbook recreation in DPEP, the analysis is limited by the lack of systematic analysis of issues related to this process. It can be said that the process has been considerably revitalized across the states, however, studies need to be conducted on its timely distribution, the extent to which standards regarding the content, quality of paper, printing and binding were maintained and how textbooks are used in classrooms. While the Kerala textbooks allude to the effectiveness of content, information on other aspects of the process are unavailable. Teacher handbooks and student workbooks also need to be examined.

D. The professional development of teachers

3.26 The importance of in-service training is consistently highlighted as critical for reform in teaching and learning. Except for para teachers most teachers in DPEP possessed a one-year pre-service teacher certification degree for instruction in elementary education. Government run inservice training in India, before DPEP, was in general, unsystematic and sporadic in nature.[26] DPEP introduced regular inservice training for large numbers of teachers. Again, a national workshop on teacher training set the trend for facilitating states to develop their own inservice training programs.[27] The workshop (Ed.Cil, 1995) discussed relevant issues such as the content to be included in training, the processes to be used, methods of instruction and the creation of appropriate support materials. Due to lack of any other model meant for training large numbers of teachers the "cascade" model was adopted by all states. The cascade model is top down with master trainers training block officers at BRCs and they in turn training teachers in the block. Uniformity across states ended here - when states conceptualized their own program of teacher training there was considerable variation in the emphasis and moreover, the amount of time given to the different aspects highlighted at the national workshop. As Table 8 illustrates, few states are alike in their focus, in the length of training, or spacing of training for teachers.

[26] The absence of any comprehensive and large-scale inservice training programs in India can also be attributed to the fact that large scale pedagogical reform has not been undertaken in India since the introduction of Gandhi's Basic Education in the mid 1900s (Clarke 2001)
[27] The workshop included the NGO Lok Jumbish, UNICEF supported projects, the Shikshak Samakhya in UP, the Basic Education Project in Bihar, national and state institutions and project officials.

Table 8: Teacher Training Provided

STATE	Total teachers	Available information on length, coverage and spacing of teacher training.
Assam	31936	◆ 4 days training given to all teachers; · ◆ 10537 teachers provided need based training; · ◆ 195621 teachers given 7-9 days training on the whole school approach.
Haryana	18000	◆ 17000 teachers trained for 7 days; ◆ 18000 teachers trained for 5 days; ◆ 14202 Class I&II teachers and 9000 Class III, IV &V teachers trained for 10 days; ◆ 20,000 for 8 days on competencies and skills.
Karnataka	58041	◆ 4152 in DPEP I and 6616 in DPEP II teachers trained in Nali Kali; ◆ 35700 in DPEP I and 59246 in DPEP II teachers undergo 6 days training; ◆ 12708 in DPEP I and 22402 in DPEP II teachers given 3 days training using films.
Kerala	14149	◆ 30,000 provided training for 6 days
Madhya Pradesh	59345	◆ 40459 teachers receive need based training; ◆ 162868 on integrated learning material; ◆ 23246 EGS teachers trained.
Maharashtra	51241	◆ 30631 teachers receive12 days SMART training
Tamil Nadu	31601	◆ 3 days Class I training for 3632 DPEP I and 672 DPEP II teachers; ◆ 5 days Class III, IV and V English training for 2806 DPEP I and 239 DPEP II teachers;
		◆ 5 days booster training for Class II given to 2378 DPEP I teachers; ◆ Activity based training given to 195 DPEP I and 802 DPEP II teachers
Orissa	28139	◆ 1st round of training 23602 teachers; ◆ 2nd round of training 28243 teachers; ◆ 3rd round of training 29530 teachers; ◆ 4th round of training 24530 teachers.
Himachal Pradesh	7430	◆ 1643 teachers trained on school readiness and use of library books; ◆ 7500 teachers have undergone 15 days training.
Uttar Pradesh	53203	◆ 51236 teachers given motivational training; ◆ 53160 teachers given training in pedagogy; ◆ 106324 teachers given training in various aspects; ◆ 35932 given a one day training.
Gujarat	19,800	◆ 248 teachers trained on subject content ◆ 120 teachers on multi-grade ◆ 4786 Class V teachers trained in English ◆ Para teachers trained for four months

Source: Agarwal (2002), 15th and 16th Progress Overview

3.27   Inservice training ranged from three to twenty days and included a range of topics. Developing teachers' motivation and competencies in MLL are central themes across training programs. Joyful learning, child centered instruction, the use of instructional aids, subject content training according to the textbook, gender sensitization, and multi-grade instruction are some of the other important themes nurtured during teacher training. Most training programs have separate modules on gender sensitization, which is rarely the case with developing sensitivity toward SC and ST students during instruction.[28] The primary objective of the gender sensitization modules was the "understanding (of the communities') mental resistance (Ed.Cil, 2000, p.73)" to sending girls to school and listing activities to be done in order to improve girls' participation in education. These activities included seating boys and girls

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[28] Karnataka has developed video material on developing teachers' sensitivity to students from SC and ST communities.

together, calling upon girls as often as boys in the classroom, the inclusion of both boys and girls equally in leadership activities and the allotment of tasks traditionally limited to girls to boys such as sweeping the classroom, and fetching water. In addition to training provided at a central location, regular teacher support was initiated at the Cluster Resource Centers and at the school site. CRCs were responsible for organizing training, usually one day each month, at the Center. CRC visits to school were supposed to involve observations of teachers to help them internalize and implement the new instructional model. The team that supports teachers in the classroom is much larger in Kerala and Assam (15 – 17 trainers, Ed.Cil 2001), than in the other states where there would be about 3 to 5 people including Block and Cluster personnel. In Karnataka the number of schools that cluster coordinators are responsible for is large and this curtails their effectiveness.

3.28 There are few impact evaluations of the usefulness of the cascade model of training for teachers. Two studies (Clarke, 1998; EC, 2002) indicate that most teachers in Karnataka seem to have undergone some form of inservice training and are verbally positive about the significance and impact of the new methodology. Rampal (2000) briefly refers to the success of the training in Kerala in DPEP districts, helping teachers internalize the new pedagogy through experiential learning and following this with "hands-on-training" at the school.[29] The experience in Tamil Nadu is not so positive. In the Tamil Nadu case study, in the Gender and Social Equity report (EC 2002), of the seven teachers interviewed, three teachers found inservice helpful while the remaining had never attended any program or had not found the programs particularly useful. In general, the positive effect of including gender issues in training are alluded to in the above studies.

3.29 Similar to the overall training, the support extended to teachers in the context of the Block Resource Centres (BRCs) and the Cluster Resource Centers (CRCs) has not been systematically evaluated until recently. The synthesis report entitled "Glimpses from the Grassroots (Ed.Cil, 2001)" describes best practices of 20 and 15 "active and functional (p. 2)" BRCs and CRCs respectively in five states.[30] Across states, activities taking place

when CRC coordinators visit include demonstration lessons, instructing students because their teacher is absent, checking on targets set by the teacher, and holding meetings between teachers and headmaster. The visits in Kerala appear to be most appropriate for developing teachers' skills — coordinators share the task of teaching with the teacher and this experience is deconstructed and discussed. Records of these visits are maintained at the school and cluster level. The IIM studies on Karnataka and Assam (2002) are more large scale and indicate that while it is not uniform the BRCs and CRCs do visit schools and classrooms regularly. Karnataka has a set of criteria by which the BRC rates the CRC functioning. According to this report about 50% of the CRC are functioning well, 10% are poor, and the remaining average.

3.30 The training of teachers is a very significant part of DPEP. Teachers that hitherto have had few professional development opportunities over the course of their whole teaching career were now undergoing at least one round of training per year (MHRD 2001).[31] Supported by State Resource Groups (discussed later), states appear to have had fairly comprehensive plans for teacher training. However, there are several issues related to coverage and content of the training program, which can be highlighted. Firstly, though most states appear to have given teachers some kind of training it is unclear whether all teachers in the state were provided the same training or whether the same teachers went through several rounds of training. For example, most teachers appear to have undergone similar training in Uttar Pradesh, Karnataka, Kerala and Orissa while in some of the other states such as Himachal Pradesh and Tamil Nadu, a smaller proportion of teachers appear to have been trained. The reason for the smaller proportion is not quite clear. Furthermore, the educational background and experience of teachers are rarely

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[29] Rampal also refers to the training in non-DPEP districts run by the SCERT as not having achieved its intention of helping teachers understand the new method.
[30] Bihar which is not a DPEP I or II state is included in this study. The other four states are Karnataka, Kerala, MP and Assam.
[31] This study was based on one pedagogically advanced district in the seven DPEP I states. One block, also functioning well pedagogically, from each district was selected and two schools each from good and average schools, respectively, would be selected. The 14 good schools were observed for 2-3 days and the 14 average schools for one day. Discussions were also held with officials at district, block and cluster levels.

considered when deciding which teachers would be trained first. For instance, in the study done by the Media Research Group in Haryana in 1996 the group of teachers trained came with a range of qualifications (from high school to post-graduates) and experience. It is not clear whether this variation in teacher backgrounds was considered when organizing training.

3.31 Secondly, earlier on in the program states' rationale for the inclusion or exclusion of particular content areas in training and the connections between inservice (one time and continuous) and onsite professional development were sketchy and lacked clarity. Most states adapted the existing NCERT's Special Orientation for Primary Teachers, which was mainly motivational to include activity preparation. As a result, for example, important areas, which should have received considerable attention early on in the program, namely, the development of teachers' conceptual understanding of subject content and multi-grade instruction, have become areas of focus towards the end of the program. Thirdly, another outcome of the inadequate framework for inservice is the oscillation between top down and need based training. When a centralized determination of training or the cascade model was found to be inadequate, the shift toward need based training left the full responsibility of identifying suitable training to district and block officials and teachers who lacked sufficient skills to frame their own professional development. In Kerala (Ed.Cil, 2001) the cascade model has been better adapted to meet local needs. BRC coordinators decide on the training based on their visits to schools and programs are organized with considerable expert assistance.

3.32 In conclusion, the organization of training indicates that states unaccustomed to the notion of systematic inservice training have embarked on considerable experimentation and continue to wrestle with how long teacher training should be, what the content of the training should be and the practicalities of training thousands of teacher within a short period. Experimentation by states was not facilitated by the fact that few studies and surveys were undertaken to understand the relative emphasis given by different states to the areas outlined above (except with reference to gender: Ed.Cil, 2000); whether training programs were taking place and whether

training was in fact empowering teachers in their task in the classroom.[32] Information on evaluation of teacher training in the eleven DPEP I and II states is fragmented and imprecise. In sum, the cross state variation and within state and district variation has not been captured and therefore, experimentation remains uninformed by lack of information and analysis.

E.   Classroom processes

3.33 While the direct impact of training on teachers has not been systematically evaluated, there is a relatively large amount of data available on classroom processes. Since the classroom represents the location of the transfer of training to practice, an analysis of classroom practice provides, to some extent, information on the impact of training. Studies conducted on classroom processes in DPEP schools are largely qualitative and small sample based. Therefore, though variation is described, this variation may not be considered representative or indicative of the magnitude of the change in classroom practice. In other words, studies dealing with the magnitude of the impact in terms of whether 25 percent or 50 percent or 75 percent of the teaching force utilizes this new method of instruction are not available. Furthermore, the analysis of classroom practice can only allude to shortcomings in training and more direct impact analysis of training itself is needed to capture how training would need to be restructured so as to have higher impact on classroom practice.

3.34 In order to understand the changes brought about by DPEP in classrooms it will be useful to capture teaching and learning in classrooms before the program began. There is limited descriptive information on the state of classrooms at project commencement in the project documents. The dependence of teachers and the entire schooling system on textbooks and the importance of textual learning is well documented elsewhere. References are often made to the prevalence of rote and memorization as a tool for learning. Memorization and repetition were

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[32] *Three studies done in Haryana in 96 by Media Research Group, 97 by Chutani and Lal and 99 by Dang provide some information on the training, however, since they are fairly dated, the results have not been included in the main text of this report. These studies indicate the predominance of traditional methods, such as lecture and demonstration, used by teacher trainers during the training.*

in fact the hallmarks of Indian education. This is especially evident in the teachers' explanation of content using the lecture method for the most part, in the questioning of student knowledge and in the criteria used by teachers in correcting students' work. Explanation was confined to the textbook and students' power to memorize was tested. Integration of experience, conceptual understanding, meaning, interpretation and complexity were not valued, and even discouraged. Distance was maintained in the classroom between teachers and students.

3.35 According to the EC (2002) report: "DPEP has brought with it a sea change in the teaching patterns and classroom situation…Students across DPEP classrooms are clearly less fearful accompanied by a friendlier teacher-student relationship and a reduced use of corporal punishment by the teacher." …(p.100). According to the synthesis report of classroom practices in DPEP states[33] done by the Government of India, certain common elements representing dimensions of reform in teaching and learning characterize instruction in the DPEP classroom. These elements in the best case scenario include during instruction the use of a variety of aids in addition to the textbook, the use of local context as examples, organizing the class into groups, and increased students' verbal participation.

3.36 Having said this, however, the degree to which teachers use these "best practices" to bring about student learning varies across states and a continuum of sorts is evident. Teachers in Kerala (Hussock, 2000; Rampal, 2000; MHRD, 2001) happen to be the most sophisticated in the use of instructional aids, and teachers' and students' experiences in bringing about learning. They are creative and use activities skillfully, in a timely and appropriate fashion: "activity …forms the core of the learning process ….(MHRD 2001, p. 1)". In the Kerala classrooms, space and freedom is given to students to nurture their own learning. The study done by Women Empowerment and Human Resource Development Center (2001) is based on a random sample of five schools in six districts in Kerala. Of the 210 teachers in the study, 92 percent of the teachers used teaching tools such as manuals and instructional aids. Classes evidenced the consistent interaction of students engaging the teacher in discussion and

clarifications of doubts. In general, in classrooms in other DPEP states "traditional style learning and 'activity' coexist with an activity peeping in, off and on, to relieve the monotony of [what teachers feel is] 'real learning'" (MHRD 2001, p. 15). Clarke's finding in 1998 of the integration of the new methodology with rote and repetition in Karnataka is reiterated by more recent studies.[34] This integration is evident, for example, in a mathematics class when an activity would be repeated many times over, portraying the importance given to rote learning. And in the more widespread phenomenon of integration into traditional practice, student learning is regulated and defined – students rarely ask questions and interact extensively in the classroom.

3.37 Traditional pedagogy is also reflected in the use of the Rs.500 grant given to each teacher to prepare instructional aids to support activity based instruction. A few studies deal with the effective distribution and use of this grant such as Clarke's study (1998) and Vasuvi and Chamaraj's study (2001) found extensive use of teaching aids prepared with this money in classrooms in Karnataka. However, other studies indicate the limited use of the grant money and use of Teaching Learning Materials (TLMs) in classrooms. According to Guleria et al. (2001) the grant was not being used to make useful TLMs by the teachers in the 108 sample primary schools in Himachal Pradesh. Furthermore, TLMs created by teachers were used in Class I and II but in Class III and IV they were stored away and rarely used. This finding is reiterated by Swain's (2001) study of 40 teachers in Orissa. 95 percent of the teachers in this study had no interest in preparing TLMs and resorted to traditional methods of instruction. In Barik's and Mishra's studies (2001) of 30 teachers, 80 percent of the teachers perceived themselves as using instructional aids efficiently, however, during actual observation of classroom practice only 30 percent were using TLMs. Kaur et al's and Bhattacharjee's studies in Assam (2000) maintains that teachers rarely used instructional aids during instruction. Instead, the traditional

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[33] The study was focusing on teaching and learning in classrooms conducted in eight DPEP I states in addition to Andhra Pradesh. The research was based on observations, interviews and focus group discussions in two well performing and two average type schools in the state.

[34] This study of 220 classroom sessions in Kolar, Karnataka, was completed in 1998. It involved the qualitative analysis of teachers' perceptions of the new method of instruction, analysis of classroom practice and multivariate analysis of student achievement.

lecture method is used and the sole reliance on textbooks is clearly evident.

3.38 Across classrooms in the DPEP I and II states student evaluation and multi-grade instruction are very weak. Accounts of evaluation in Kerala, Maharashtra, MP, Karnataka and UP (Ed.Cil, 2002), though based on a qualitative analysis of a very small sample, suggest that evaluation, except in Kerala, cements traditional learning by confining test questions to recall and structured type answers.[35] Though textbooks have been revised, the content and structure of examinations has not changed. The focus appears to be on marks obtained and teachers keen to show results sometimes assist students in answering test questions. Evaluation in Kerala on the other hand, has begun to "promote skills of enquiry and critical analysis" (p.23). According to this report, most states continue to focus on formal summative evaluation rather than on formative evaluation, which can then inform the instructional process. Continuous evaluation in classroom appear to focus on better performing students and less on the others. The sharing of student performance with parents is now being practiced across states, though the questions of whether this is actually done systematically and extensively are not clear.

3.39 The removal of gender and social discrimination in classrooms is an important objective of DPEP to ensure adequate completion and learning for girls and children from SC and ST backgrounds. Gender bias from the available literature appears to be less stark and pervasive than the caste bias. A reason could be that as mentioned above, while there is a separate module to eliminate gender bias, similar training is not provided to address issues of caste discrimination. In some states where there is a larger or sometimes predominant population of children from lower caste communities, the inadequacy of resources is evident in the condition of these schools. The perception of teachers and administrators that children from these communities find it difficult to learn is widespread and more gravely, taken-for-granted (NCERT, 2000; EC, 2002; Jha and Jhingran, 2002). Teachers tend to provide preferential treatment to students from upper caste communities by praising them more and by paying attention to

their learning more. Occasionally, SC or dalit students receive more corporal punishment and are asked to run more errands for the teachers than other students (Jha and Jhingran, 2002). Separate seating for girls and SC and ST students are reported in some schools.

3.40 The picture of teaching and learning in EGS and AS schools across districts appear to be more aligned with the situation in Kerala's regular classroom (EC, 2002). Students learn in groups and there is considerable informality in the organization of and instructional pattern in classrooms (MHRD, 2001 p.45; EC, 2002). Instructional aids are fairly extensively used by AS teachers. To summarize, the impact of DPEP on classroom practice, across DPEP classrooms the relationship between teachers and students has clearly been transformed into one that is friendlier and less intimidating. However, the reform of traditional practice — in terms of nurturing student skills and creativity, the use of TLMs and evaluation of student learning — while varying across states is limited. Teachers appear to be more sensitive to girls in the classroom than students from SC and ST communities. Instructional practices in EGS and AS classrooms appear to be more effective.

F.   Early Childhood Education

3.41 Both DPEP I and II had early childhood education (ECE) as a component. The SAR for DPEP II states, "ECE is an important DPEP strategy to improve readiness to learn....ECE is also expected to contribute to enrolment and retention for girls by providing an alternative source of sibling care during school hours." The strategy adopted by DPEP I and II was one of convergence with the Integrated Child Development Scheme (ICDS) which is the major program used by the project states for early childhood development. A key limitation of the ICDS scheme is that its centers' ('anganwadi' centers) timings are not coordinated with school hours, making it difficult for girls who take care of younger siblings to attend school. DPEP provided funding to extend the hours at these centers so that the timings of these centers were better coordinated with school hours. In addition,

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[35] *Active schools in Maharashtra and Nalli Kalli schools in Karnataka represented innovative pedagogy, however, since there were no studies done by DPEP on the effectiveness of these methods in the states respectively, it is difficult to include them in this analysis.*

where ICDS did not reach a village, DPEP provides for setting up an ECE program.

3.42 This is an area within DPEP, which has not received much attention. There is little information and very few studies that focus on ECE and the impact of ECE within DPEP. One study in DPEP I districts in Haryana concluded that DPEP had provided useful teaching-learning material to 'anganwadi' centers. However, the study found that more training of the anganwadi workers in ECE was needed (Santek Consultants, 1997). The IIM study on Haryana suggests that CRCs and primary schools need to be provided training in order to be able to support 'anganwadi' workers. Kaul et al's (2002) study indicates that the ECE model under DPEP worked better than the ICDS model for 3-5 year old children. Das et al also found this for ECE in UPDPEP III (Das et al, 2002).

G. Management of the program

3.43 In both DPEP I and II, the "building of capacity" to plan and manage education was a specific objective of the project. The focus of building capacity according to the SAR was to make the project teams at the state and district level "fully functional" (p.17). In addition, the development of supporting institutions was very important. These institutions included those at both national and states levels. In the states, the project undertook improvements in the role and functioning of DIETs.

3.44 The entire focus of planning and management in DPEP according to the Progress Overview has been the adequate staffing of state project and district offices, the conceptualization of Annual Work Plans and Budgets and what is termed as "micro planning" (p.7) or school level planning. If one summarizes planning and management in the project more comprehensively, additional aspects include setting up and strengthening existing structures; setting up information monitoring systems; financial management; and research and evaluation. The following discussion will deal with the above areas and related issues.

i. Structures

3.45 Ed.Cil (1996) summarizes the objective of establishing structures in DPEP: "A central concern of the program is to introduce management reform through the creation of innovative management structures organically linked to, but autonomous from state education departments and the adoption of new management practices that combine…flexibility, …decentralization and …professional rigor" (p.9). Structures were set up at the national level to oversee the program being implemented in the states. The structures at the National level include the National Literacy and Elementary Education Mission; General Council, DPEP project board and the DPEP Bureau. The Bureau was to be the "financial-cum-technical intermediary and perform the functions of appraisal, supervision, monitoring and evaluation" (p.17, Ed.Cil, 1996), these functions in earlier projects lay with the donor agencies.[36]

3.46 State Implementation Societies (SIS), semi-autonomous registered societies established at the state level on the one hand, can be identified as one of the successes of DPEP. The SIS has allowed efficient decision-making and fund-flows to assist implementation. These societies were supported by a General Council (chaired by the Chief Minister) and an Executive Council (chaired by the Chief Secretary and Education Secretary). The State Project Director is the CEO of the Executive Council. Executive committees comprise of educators, school officials, teachers, NGOs and community members. Sub committees dealing mainly with financial areas and resource groups that are theme based and under the Executive council support the SPO and the implementation of the project. Resource Groups, which included academicians and civil society, have played an important role in DPEP, especially in the quality interventions described above. At the district level the District Project Office is supported by an advisory team and/or executive council (chaired by the Collector). However, on the other hand, a parallel structure has emerged, which many states are now concerned with reintegrating or redefining. The SIS coexists with state departments of education. DOE retains the power to recruit, transfer and pay teachers' salaries. The existence of a dual structure has affected the monitoring and evaluation, especially of teacher performance. The constant turnover of staff in state and district

[36] The role of the national level structure in implementing DPEP will not be dealt with in this report due to the lack of written information in the area. Perceptions are that the national level involvement was much stronger and more effective earlier on in the program and as states began to take control the involvement of the national level was never redefined.

project offices have been identified by the IIM studies as an issue effecting implementation of the project.

3.47 Though the establishment of sub-district structures were left to the decision of states, all DPEP I and II states have established both block and cluster level resource centers supported by Block level advisory groups for assisting pedagogical renewal in the project districts. Most of the Block and Cluster Resources centers across the states have coordinators and staff in place. Across the levels including the states, "resource groups" made up of a variety of individuals support the program on substantive issues. The functioning and involvement of DIETs has improved considerably over the project period. GOI recently entered into a Memorandum of Understanding with states to develop DIET institutions. SCERTs (State Council of Education Research and Training) and SIEMATs (State Institution of Educational Management and Training) development in DPEP is mixed. The role and function of SCERTs have been fairly systematized across states in that they have been directly involved with training and textbook revision. The role and function of SIEMATs, however, are less clear. SIEMAT has been conceptualized as an independent autonomous institution in Uttar Pradesh, as an institution under the government umbrella in Maharashtra, Haryana, Assam and Orissa, and a unit of planning and management in the SPO or SCERT in other states. Except in Uttar Pradesh where the GOUP has formally taken the responsibility of providing staff salaries, the staffing in the other SIEMATs is unsatisfactory. DIETs and SCERTs involvement in DPEP suggests that these institutions need to be strengthened. With reference to SIEMAT, the need for establishing this institution as a separate entity is not entirely clear. Though the need for some unit to support educational planning and management at the state levels seems crucial. The future of BRC and CRC needs to be considered based on further research on it role in training and monitoring at sub district levels.

ii   **Planning**

3.48 Planning in DPEP began with the perspective plan that covered the whole project period, seven years for DPEP I and six years for DPEP II. Such plans either for the year or for short periods of time were not commonplace in DPEP districts prior to the commencement of the project.

District and state level data and information informs these plans and according to Ed.Cil, 1996, perspective plans are reflective of the participatory process at both state and districts levels. Annual work plans and budgets (AWPBs) are prepared on the basis of these plans. The preparation of AWPBs is based also on household surveys, EMIS and local planning at village, cluster, block and district levels. Madhumita's study (Ed.Cil, 2000) of seven states explores local level planning. She argues that by establishing local level committees at various levels, the participatory process is in place in Maharashtra, Karnataka, Himachal Pradesh and Tamil Nadu but not as strong in Gujarat. The 15th Progress Overview of MHRD, GOI, identifies Kerala, Tamil Nadu and Himachal Pradesh as having particularly strong school development planning in place.

3.49 Though local level capacity to plan and manage has improved over the project period, the extent to which this planning is reflected in the AWPBs is unclear. Jha et al (2001) examine this process in MP and Karnataka and indicate that the process is not very participatory or reflective of ground realities. Two issues can be identified to suggest that these plans have not moved much beyond what was identified in 1996 as a "list of activities and associated budget (p.11)." Firstly, on the one hand, the committee or teams established do not appear to include beneficiaries at the school level such as parents and teachers. In fact, mother-teacher and parent-teacher associations at local levels in some schools are initiating change and ensuring that enrolment and attendance objectives are met, for example, in Himachal Pradesh. These activities do not seem to inform the planning process. Secondly, critical school level data, for example, crowded classrooms and teacher absenteeism graphically described in studies on classroom activity do not seem to be highlighted in the AWPB's planning and conceptualization. It is possible that the process followed in DPEP for producing AWPBs in addition to the lack of collated quantitative and qualitative data on schools preempts the AWPBs from becoming more than lists and budgets, already prescribed in the perspective plans.[37] It seems that the production

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[37] In fact, with reference to the former, the listing and budgeting prevents actual knowledge sharing and local construction of AWPBs "by imposing the demand that leadership of the incipient effort act as if it knew what it was doing before there was an opportunity for learning to occur (in Mercer, p. 61)."

of AWPBs, which should have represented the confluence of community/decentralization and official structures has not become what it was intended to become, thus making the program less effective.

iii   Financial Management and the impact of DPEP on Financing of Primary Education

3.50 Funds from the central government (external aid) and state governments' contribution of 15 percent are sent to the society on a regular basis. The contribution by state governments has been fairly on schedule. There are very few studies that comment on financial management and fund flow in DPEP. However, various joint review mission reports reveal that the experience with fund flows has been mixed. The IIM study on DPEP in Karnataka reports that the flow of funds to the project was "timely and adequate", particularly at the district level. In sharp contrast, however, the IIM study on DPEP in Assam finds that the flow of funds from the state to the district was "neither timely nor adequate".

3.51 One study (Ed.Cil, no date), examined trends in spending on various components of the program in DPEP I districts and states. It concluded that there were wide inter-state variations in the proportion of spending on civil works, management, and quality. In terms of expenditure other than that on civil works and management, the highest amounts were spent on the category entitled 'formal schools' followed by on academic resource support. While the study details some patterns of expenditure for the different states, it is not very revealing since the categories used are very broad.

3.52 There is no study, however, analyzing the spending on various components across different states and districts and linking this to outcomes/performance of the project. This is a crucial area for further research. Is it possible, for example, that the ceiling on civil works may be a reason for stagnating enrolments in states where overcrowding of classrooms occurred. These kinds of linkages need to be explored further to help design future projects/programs.

iv   Supervision, Monitoring, Research and Evaluation

3.53 The implementation of the AWPBs, the implementation of project interventions and the achievement of project outcomes have to be monitored and evaluated in order to sharpen and develop the project as a whole. Though no studies are available, the initial model of monitoring upheld the responsibilities and activities of state project offices. This model has evolved over the project period with district offices becoming more involved as the project progressed. The EMIS data on project outcomes formed an important part of the monitoring process, first at the state level and increasingly now at the district and sub-district levels as collation and analysis become more and more decentralized. The monitoring of implementation progress, however, has not been developed as much as monitoring the progress made on project outcomes. Even the monitoring of outcomes was based largely on EMIS data. The limitations of these data have been discussed earlier in the section on outcomes. The monitoring mechanisms used consisted mainly of visits and interactions with local communities and schools by project officials. There is no clear system of quality monitoring and ensuring that services are being provided at an optimum level. Processes such a teacher training, community participation, textbook renewal etc, which forms the critical part of DPEP are rarely examined. Most importantly, there is no performance monitoring structure in place for teachers or schools. While CRC coordinators and VECs informally monitor schools and teachers, a formal system and collated information are unavailable. Some states are in the process of conceptualizing and administering quality monitoring instruments, however, information is not yet available.

3.54 One important way in which to analyze the monitoring of project implementation are the number and quality of studies done in project states based on acceptable sample sizes and analysis. The volume of studies on primary education, a subject which was generally ignored by academics, and the fact that, in most states, studies have been done at the state, district as well as in some cases block level, indicates that a culture of research on primary education at all levels has certainly spread due to DPEP. Nevertheless, there is considerable variation across states as to the number of studies done over the project period. States such as Kerala,

Orissa and Assam have done a larger number of studies when compared to the other states. The largest number of studies seem to have been done on the most problematic areas namely classroom processes (43), followed by enrolment (27) and general studies on schools or schooling (23). Studies done by Kerala, Orissa and Assam are distributed across categories, while in the studies in the other states information is unavailable on most of the areas of implementation. In addition, except for a few studies, which have been referred to in this paper, the methodology used and the academic rigor of the analysis are questionable. The quantitative methodologies used rarely go beyond descriptive statistics and the qualitative methodologies used are often unclear. For this reason, the findings are often impressionistic and unreliable - most of the reasons postulated are educated guesses rather than proven evidence. Almost all studies do not analyze the linkages between components, inputs, and processes and outcomes. An evaluation of the reasons as to why outcomes have improved or declined and linking these reasons to inputs and existing processes is completely lacking. Further, in most studies, the policy recommendations, if any, do not stem directly from the analysis. As discussed earlier, none of the studies reviewed, except Jalan and Ginskaya, are rigorous impact evaluations of the projects or project interventions. It is also clear that contributions of accepted research institutions and researchers were not solicited to understand the impact and effectiveness of DPEP at the state level.

3.55 The 33 studies done at the national level are much more rigorous and the findings have lead to useful assessments of project interventions. However, the extent to which states are aware of the conclusions made by national reports and studies and the extent to which they are used are unclear.

3.56 To summarize this section on improving management and planning capacity in DPEP project districts, several areas in which the project has made substantial improvements can be identified. States are now focusing on the development of institutions at the state level to support the management and planning of education in the state. Sub-district level structures such as the DIETs, have been revitalized to some extent and BRCs and CRCs are in place. The planning process has clearly improved through

Table 9: Distribution of studies done by states across themes

State (years in which studies were conducted)		1	2	3	4	5	6	7	8	9	10	11	12
Assam (96-01)	40	1	15	8	1	5	2	6	1				
Gujarat (98-99)	2	1		1									
Haryana (96-98)	9			1		1	4	1	1	1			
Himachal Pradesh (99-01)	12		1	3		5	2	1					
Karnataka (97-01)	5	1	4				1						
Kerala (97-01)	22	2	12		2	3		1	1	1			
Madhya Pradesh (97-98)@	5								1			4	
Maharashtra (99-01)	3			1							1	1	
Orissa (98-01)	41		11	10	2	7	6	2	1	2			
Tamil Nadu (99-00)	5			3		1							1
Uttar Pradesh* (01-02)	3					1			1				1
Total	147	5	43	27	5	23	14	12	6	4	1	5	2
National	33		2	8		3	6	2	1	9			1

@Includes DPEP I; *Includes UPDPEP III.

Themes:

1-Textbooks	2-Classroom processes	3-Enrolment/dropout/repetition	4-Achievement
5-Schools	6-Teachers & Training	7-Community	8-Early childhood
9-Administration	10-Civil works	11-AS/NFE/EGS	12-Disabilties

the process of conceptualizing AWPBs. However, AWPBs do not appear to have gone beyond a mere list of activities to making connections with project interventions and outcomes. State Implementation Societies and the councils and resource groups that support its activities have been crucial for implementation. However, the limited outcomes achieved also suggest that this structure needs to be rethought especially in the area of teacher management. Counterpart funding has been fairly satisfactory while issues have been raised with the fund flow from the center to the state. In order to understand expenditure patterns, budget and expenditure analysis of the project still needs to be done. Research and evaluation, which has been weak in project districts and at the state levels, has not been able to support project staff in sharpening and fine-tuning implementation.

IV. CONCLUSION

4.1   The District Primary Education Program in India, as the discussion in the last two sections indicate, has been a comprehensive but complex program to implement. In response to the call to universalize primary education by the international community, the Indian leaders and the individual citizen, this project has been in place for eight years in some districts and seven years in other districts in eleven states in India. Dedicated teams and individuals across these states, districts and sub-districts working in the DPEP program have initiated and provided momentum to the efforts of the Government of India to provide five years of good quality education to all the country's young. In this concluding section we summarize the financial implications of the program and then assess the progress made in the first two phases of the program dealing first with project outcomes followed by project interventions. We also attempt to outline certain overarching aspects to be considered during the implementation of the successor of this program based on the strengths and weaknesses of DPEP.

4.2   Bashir and Ayyar (2000) reviewed DPEP by focusing more on the overall strategy of the program. They capture the essential contribution of the design and strategy of the program in the following quote: DPEP has ensured "that funds do reach teachers, schools and villages, that the isolation of the primary school teacher has been ended, that the periodic visits of state, national and external agencies to rural schools has imparted a new dignity to primary education and that changes are apparent in classrooms and in teaching-learning processes. DPEP has taken some steps towards promoting holistic planning for primary education. It has brought more financial and technical resources and new perspectives to primary education. Above all, it has ensured that the attention of policy makers has shifted away from a brick and mortar approach to primary education, from merely providing a school building and teachers to the questions of what children learn and how they learn" (p. 5).

4.3   It is clear from the discussion above that DPEP was successful in implementing some key project interventions, particularly revising textbooks, spread of inservice teacher training and mobilizing communities. In fact, in any states, these interventions were catalytic in nature and spread to non-project districts as well. To the extent that many educational processes have changed, DPEP has been a harbinger of change in primary education in the country. Both projects were also partially successful in increasing enrolments, reducing gender gaps in enrolment, dropout rates and achievement levels, and ensuring minimum 40 percent achievement scores in Class I. However, many of the key objectives of the program of providing universal access/enrolment, reducing social disparities to less than 5 percent and increasing achievement levels by 25 percent were not achieved. In addition, there was limited scope in the design of the projects to address systemic issues such as teacher management. Monitoring and evaluation, though improved from before the project period, continued to be weak. Table 10 below summarizes the progress made on the various objectives and components of the projects. This raises the question of how realistic were the quantitative targets that were set. In particular, reducing dropout rates to less than 10 percent and increasing achievement levels by at least 25 percent for all project districts seem particularly ambitious in retrospect. Future programs would need to provide more realistic targets, differentiated across states (if not districts) to make them achievable as DPEP success was very uneven across states.

Table 10: Summary of progress: Project Outcomes and Interventions			
Objectives (Outcomes and components)	*Progress made*	*Future challenges*	*Nature and quality of evidence reviewed*
Provide primary school access to all children.	Enrolment increases and progress towards EFA but concentrated in few states. Universal enrolment not achieved.	Will need to reach out to harder to reach population groups, particularly in the lagging states, to achieve universal enrolment.	Household data; project EMIS data; national and state level studies. Difficult to judge outcome based on project data. Only impact evaluation (Jalan and Glinskaya, 2002) – found small positive net impact but difficult to isolate impact due to several DPEP interventions undertaken in non-project districts.
Reduce gender disparity in enrolment rates to less than 5 percent.	Target achieved in 95 percent of DPEP I and II districts.	Reaching 100 percent gender equity at the village and school level.	Same as above. However, Jalan and Glinskaya found no positive net impact of DPEP for 6-10 year olds; found greater net impact for older girls.
Reduce social disparity in enrolment rates to less than 5 percent.	Not achieved for most districts, particularly for ST children. Moderate to substantial increases in SC enrolment in different states.	Focus particularly on ST children and targeted strategies to reach them.	Project data and studies reviewed. Social equity indices constructed in studies from project data not very useful.
Reduce cohort dropout rates to less than 10 percent.	Target not achieved in most districts, except in Kerala.	Fixed target across the country not appropriate and probably too ambitious. Much effort will be needed to target strategies to improve completion.	Studies mainly by Shrivastava and a few others; some cohort dropout studies. Effort needed to compute more accurate cohort dropout rates based on household data in future programs. Nevertheless, Jalan and Glinskaya find positive net impact
Reduce gender disparity in dropout rates to less than 5 percent.	Target achieved in over 75 percent of districts	Move towards 100 percent equity.	Same as above
Reduce social disparity in dropout rates to less than 5 percent.	No information available from project data/studies.	Need to compute disaggregated dropout and completion rates from household data.	
Achieve minimum 40 percent average achievement scores in all districts.	Target achieved by all districts for Class I but fewer districts for Classes III/IV.	Focus on improving learning in higher grades.	Baseline and midterm assessment surveys for DPEP I and II and terminal assessment survey for DPEP I. More analysis is required looking at distribution of scores by students rather than district averages.

Increase achievement levels by 25 percent over baseline.	Target achieved by only 50 to 75 percent of districts in Class I but less than 5 percent districts in Classes III/IV.	Target was probably too ambitious and not appropriate to have all India target. Improving learning achievement will have to be the focus of future programs.	Baseline and midterm assessment surveys for DPEP I and II and terminal assessment survey for DPEP I. More analysis is required looking at distribution of scores by students rather than district averages.
Reduce gender disparity in achievement levels to less than 5 percent.	Target achieved by most districts (though differences were less than 5 percent in many districts at baseline).		Same as above.
Reduce social disparity in achievement levels to less than 5 percent.	Not achieved by some districts.	Focus on ST children.	Same as above.
Community mobilization.	VECs formulated and trained in all districts. Successful in community construction, micro planning and use of school grant.	Empowering members from disadvantaged communities; fuller involvement in school functioning; evaluating effectiveness of VECs vis-à-vis user groups.	Progress overview documents by GOI; few studies done at national and state levels; few donor sponsored studies.
Textbook recreation.	Successful intervention using participatory approach.	Removal of caste bias.	Same as above
Teacher professional development and classroom processes.	Large numbers of teachers received inservice training compared with earlier; Success in setting up BRCs/CRCs/State resource groups; In the classroom – some teachers use instructional aids and supportive relationship between teacher and student	Systematic evaluation of impact of training and formulating long term strategic plans for professional development; Focus on improving teaching and learning using a variety of learning methods rather than lecture and rote; Improvement in instruction in higher grades; Removal of caste bias.	Progress overview documents by GOI; Very few studies on teachers' professional development and a large number of studies on classroom processes done at national, state levels and by donors - mostly qualitative and since only few of reasonable quality they are not easy to generalize.
Early childhood education.	Limited success where ECE centers set up.	Scaling up and convergence with ICDS.	Very few studies in this area.
Planning and management.	Success of state implementation societies; limited success in involving SIEMAT/SCERT.	More strategic planning based on systematic use of data and information; Setting in place accountabliity systems; Effecting systemic reforms in teacher management and other areas.	Few studies done at national and state levels; few donor sponsored studies.
Monitoring and evaluation	Improved as compared with pre-project period; more research on primary education than before.Overall, continues to be a weak area.	Effectively using household and school data bases for monitoring and evaluation; building research capacity; doing impact evaluations	Project data; learning assessment surveys; studies done at all levels. Variable quality and most studies not methodologically rigorous.

4.4 Since the literature review has revealed only one impact evaluation study (Jalan and Glinskaya), it is important to identify some further evaluations that can be done for DPEP, ex-post. First, a similar study could be done for DPEP II districts. Second, the same methodology could be employed using 2001 census data when they are available. The advantage of these data, unlike household data, are that they cover the whole population and are not based on a sample. Further, they are representative at the district level. Another evaluative study that could be undertaken would be to link financing of certain components with outcomes at the district level. This could be done only for project districts but would enable some linking of project interventions (with spending as a proxy indicator) to outcomes. Financial data are available for most project districts. However, their reliability would need to be validated since they have not been used for much analysis thus far. Since baseline studies on the status of teacher training, community mobilization, teacher training, or other such interventions were not done systematically in project and non-project districts, it is not possible to compare, ex-post, the impact of changes in these components to outcomes across project and non-project districts. However, it would be useful to undertake some comparative studies across states on the different models adopted for community mobilization (VECs versus school management committees or other user groups). It would similarly be useful to do such comparative studies of the relative success of various models adopted by different states for bridge courses and alternative schooling.

A. Project Outcomes

4.5 Project EMIS data reveal that enrolments rose substantially in DPEP I and II. However, universal access/enrolment was not achieved in most project districts since household data do not reveal 100 percent NERs and even project data reveal that the enrolment rise was concentrated in a few states. An impact evaluation study done by Jalan and Glinskaya (2002) reveals only a small positive net impact of DPEP I on enrolment when other factors are controlled for.

4.6 Nevertheless, substantial progress was made during the decade in terms of increasing enrolment due to DPEP, and possibly other interventions. Several studies reveal that interventions such as enrolment drives/ campaigns, promotion of primary education via the media, and micro-planning by Village Education Committees to locate out of school children were successful in raising enrolments. A few studies indicate the reasons for particular success in the states cited above – the location of schools in tribal areas and successful bridge course programs in Karnataka; the success of alternative schools in MP and UP; and greater community participation in these states. The IIM study on DPEP I, Karnataka (Sherry Chand, 2002) cites setting up of new schools, particularly in tribal areas or exclusive schools for girls, and the successful bridge course program (*Chinnara Angala)*, as key reasons for the success in improving enrolment substantially. Studies on alternative schooling in M.P. (Rajiv Gandhi Prathmic Shiksha Mission, 1997a; 1997b) found that the availability of these schools increased enrolment and reduced dropout in the districts studied. They also concluded that the community, and especially VEC members, were actively involved in the schools. Pandey (2000) cites the contribution of EGS schools in reaching out to marginalized children in MP. Shrivastava et al (2002) came to similar conclusions about alternative schools in UP DPEP II districts.

4.7 On the second objective of reducing gender differences in enrolment rates to less than five percent, 95 percent of DPEP I and II districts achieved this goal. Participation of SC children also increased but information on the disparity between SC enrolment ratios as compared to overall enrolment ratios was not available for project states and districts. While enrolments of ST children also grew, there were still many districts in which their share in enrolments was small relative to their share of the population. While the information on increasing the participation of disabled children in school is limited, only about one percent of the total students enrolled in DPEP districts are disabled. A few states such as Haryana have made more progress in this area and lessons need to be learned from the strategies adopted there for future programs.

4.8 The DPEP goal of having a cohort dropout rate, which is less than 10 percent has been achieved in very few districts (except in Kerala where five of six districts have achieved this goal). The

dropout rates are still very high in Assam and Uttar Pradesh in particular. In contrast, the goal of reducing the gender gap in the dropout rate to less than five percent has been achieved in about three quarters of districts in both DPEP I and II. Some studies indicate that in areas where VECs, mother and parent teacher associations were more active, dropout rates were lower. Similarly, the impact of coordinating timings of the early childhood education centers with schools on reducing the likelihood that girls' will drop out of school has been acknowledged in a few studies. Jalan and Glinskaya (2002) still find that the net impact of DPEP I on primary school completion was higher relative to DPEP's impact on enrolment, suggesting that dropout rates have improved less in non-project districts. Since the focus on the project has been on quality improvement (via improving the teaching learning process, textbook and pedagogical renewal and provision of academic support to teachers), and on community mobilization (via the village education committees and other community mobilization activities), the impact on retention *relative to non-project districts* is encouraging.

4.9   The achievement surveys conducted in the project districts reveal that the DPEP goal of attaining a minimum of 40 percent score was achieved in Grade I in most DPEP I and II districts. However, many districts did not achieve this minimum score in Grade III/IV. The target of increasing achievement levels over the baseline by 25 percent was achieved for half to three quarters of the districts in Grade I but for less than 5 percent of districts in Grades III/IV. Various studies on classroom processes indicate that there have been major changes in the classroom teaching learning process in project districts, making classrooms more child friendly. These studies also reveal that activity based and creative teaching methods are used less extensively in higher grades, again pointing to a possible connection with poorer achievement levels in Grades III and IV. There are, however, no rigorous impact evaluations examining the effect of certain interventions such as teacher training on learning achievement. Studies doing this kind of analysis would be useful to the extent they are possible to do with available data. The third DPEP objective of reducing gender differences in achievement levels to less than five percent has been attained in most districts.

The success has been more limited in reducing differences in achievement levels between the 'general' category of students and SC students and the gaps in achievement remain quite substantial in the case of ST children. The lower impact on ST children could be potentially related to various findings in studies on DPEP interventions such as low levels of active participation by SC and ST population in VECs, little emphasis in removing biases against these castes/tribes during the process of textbook revision process and in inservice training (both of which had significant emphasis on gender sensitization). Some classroom process studies do indicate that teachers' perceptions regarding these communities continues to be biased and that in some schools children from these communities were seated separately. Once again, however, these connections between inputs/processes and achievement outcomes are speculative since studies have not been done to explore these linkages.

B.   Project Interventions

4.10   The project interventions in DPEP have been numerous and complex involving a variety of institutions and governments (center, state, district and local). Decentralization, educational quality improvement and institutional reform could be identified as the three main areas in which DPEP has tried to introduce change. The discussion below, dealing with the question of whether interventions should be continued, revised or discarded, is limited in that there are no definitive studies examining the impact of the interventions on project outcomes. In addition, the information as is evident from the previous sections is sketchy and does not capture the extent of the implementation of the interventions within a state or a district, either individually or holistically. In other words, based on the literature review, for example, it is impossible to fully understand, on the one hand, how teacher training was implemented in Kerala as opposed to Maharashtra and, on the other hand, whether all the DPEP interventions (decentralization, civil works etc) were equally successfully implemented in a single state or in all states. Furthermore, the impact of a set of interventions at varying levels of implementation on project outcomes is unavailable. Therefore, it is with caution and underlining the necessity for further research that

this report discusses the future directions for each component of the project.

4.11 *Decentralization:* DPEP is based on the premise that the role of community is integral to the success of this program. The program has as one of its goals, on the one hand, the understanding of parents and local communities of the importance of primary education, and on the other hand, it questions the assumption of parents and communities that governments can ensure, single handedly, the provision of good quality education without their assistance. The latter focused on the capacity building of communities to assist governments in the provision of education. Overall, the community mobilization component in DPEP has certainly begun to achieve both these goals. However, this report would like to emphasize that it has only begun to do so considering the partial success in achieving enrolment, completion and achievement outcomes outlined above. The study suggests the importance of the continued strengthening of user groups and/or VECs at the school level. One area that needs to be clarified first, before charting the direction of this component, is the Panchayati Raj system in many states and the interface of this institution with user groups or school management committees. When this set of arrangements are clarified, and the roles and responsibilities defined for each level with regard to education, the direction for this component will become clearer. In some states where this has been done such as MP, Jha et al (2001) indicate that the Panchayats have no real power with reference to education, which again becomes an issue. Clearly, the Panchayats and School Management Committees will have to play an important role in the monitoring of teacher absenteeism and the provision of good quality elementary education.

4.12 The second area is the attention given to processes of capacity building and empowerment. Again the project has completed several rounds of training. Nevertheless, while the capacity of communities to be involved in civil construction is indeed commendable, the involvement of communities, especially those that are illiterate and socially disadvantaged, in the functioning of the school and in learning activities will have to be nurtured and developed. In this regard, this report maintains that it is indeed

difficult for governments to sustain such activities and the involvement of NGOs in this area is critical. Furthermore, NGOs could be involved in developing the planning and management skills at the community level and especially of Panchayat personnel.

4.13 Third, it will be important to establish structured systems of local level planning and a system of quality monitoring. If schools are single teacher schools, perhaps this level of planning, management and monitoring could be located either at the cluster or Gram Panchayat level. If schools are large, especially those with upper primary sections, a system of school level planning and quality control will be important. Activities and plans at this level should inform the next level of planning. Fourth, to provide incentives to families, financial transfers to families to defray indirect costs and encourage regular attendance at school could also be explored.

4.14 *Quality interventions:* The structures and processes in place with regard to pedagogical renewal, considering the absolute dearth of such activities before DPEP, is indeed noteworthy. The process of textbook revision, undertaken across states, represents one of the early successes of this program. However, it is not clear from the studies available whether the content of textbooks is appropriate across states. In addition, the physical quality of the textbooks, especially binding, has been an issue raised in addition to the timely delivery of textbooks before the school year. The extent to which the process of textbook book revision and creation has been institutionalized and is informing the renewal of upper primary textbooks would be important to monitor. Libraries are important for improving student learning. This is an area that has not received much attention in DPEP.

4.15 DPEP has clearly been successful in introducing inservice training as the norm rather than the exception, in many cases in non-project districts as well. Though the impact of inservice training and reform in classroom practices is clearly less dramatic and robust. The high dropout, repetition and performance of students in the achievement tests conducted in DPEP indicate that inservice must continue and much thought needs to be given to this area in the future. The following aspects require attention. (i) The limited

reform in teaching and learning has clearly been impacted by the lack of physical infrastructure in classrooms. Classrooms did not have the prerequisites for effective learning to happen. For example, many classrooms lacked blackboards, notebooks, writing instruments and adequate space. In addition, the absence of an adequate number of teachers and appropriate class sizes have restricted student learning. (ii) Limitations in this area are a reflection, to some extent, of the dearth of academic discourse in this area within the country. Clearly, the MLL, the joyful and activity-centered approaches require rethinking, and instead a focus on developing the articulation, creativity and reasoning skills among students will be important. In conceptualizing models of inservice in the future, it will be important to ensure the involvement of the academic community and possibly the participation of Indian nationals in the international discourse on inservice training. In this respect it will also be critical to ensure parallel reform of preservice training (which was outside the purview of DPEP) to support reform in inservice. (iii) One of the main reasons for the limited impact of inservice training is that the objectives of training in terms of classroom processes and student behaviors were never articulated. This made it difficult to measure the effectiveness of training and classroom processes. Thus in the future generation of programs, it will be important to describe the objectives of training in terms of desirable behaviors in class, quality of written work, class participation and use of materials over the course of the school year. (iv) The content and the "how" of training, which are at present diffuse and unclear need to be clarified. Three dimensions need attention when planning inservice for primary and upper primary teachers. Firstly, the question of how much of the content of inservice programs will be centrally defined and how much will be need based will need to be decided upon. Technical assistance from the state and national levels in terms of curricular material, guides and manuals and monitoring systems would be critical. Secondly, the areas of multi-grade, subject content knowledge, evaluation and equity are important and judgments on the proportion of time spent on each of these will have to be made. Alexander (2001) discusses the importance of training teachers in DPEP to be able to use a variety of instructional methods appropriate for the learning

intended. Thirdly, when planning for the coverage of all teachers in the district, a particular teacher's academic background and experience will need to be considered. Long term strategies of teachers' professional development would need to be articulated to enable all these objectives to be achieved.

4.16 *Institutional reform:* While the structures put in place in DPEP at the state and sub-state levels were necessary and integral to the implementation of the project, setting up these structures also entailed establishing a dual system and the associated disconnect with the mainline system. As mentioned earlier, the dual system has limited the extent to which teacher absenteeism and accountability are addressed in project districts. Clearly, this dual system and its effect on project implementation must be addressed expeditiously in order to ensure quality education.

4.17 The program involved setting up sub-district level structures including the BRCs and CRCs, which has been fairly successful. The question of whether the BRCs and CRCs should continue after the project period is difficult to address due to lack of information on its roles and functions across states. DIETs clearly are integral to the functioning of the education system at the district level. It is possible that, if the DIETs become fully functional, either BRC or CRC may be sufficient as sub-district level structures. Having one institution could also serve as the academic and administrative body that is parallel to the administrative structure at that level, the Janpad or Block Panchayat. Again, the model of inservice, quality monitoring and magnitude of the task responsibilities should be examined first before this decision can be made. In any case, whether it is both BRC and CRC or just one these structures, most critical is the systematic capacity building of CRC personnel (possibly a group of individuals) both in terms of planning, implementing and monitoring the program.

4.18 Revitalizing and ensuring the effectiveness of existing institutions such as the DIETs and the SCERTs has been much more difficult and it is unclear whether this has been achieved across states. The involvement of these institutions, especially the technical assistance provided to districts, is critical and will require concerted capacity building and development in future

programs. The increasing decentralization where states are assuming direct responsibility for the planning and management of education in the state suggests the need for a policy support and implementation analysis unit (such as the SIEMAT) located at the state level. Since, most governments are reluctant to take on the burden of providing additional posts etc and creating another institution, the establishment of smaller units with specific tasks defined to support policy implementation within the Ministry of Education could be useful to explore.

4.19 Planning in DPEP has become standardized and in order to reform this process it will be critical to consider project outcomes and to include beneficiaries in the process. The setting in place of a quality monitoring system that captures the effectiveness of processes is also imperative in any future program of educational reform. Monitoring, research and evaluation has been one of the weakest areas in DPEP as indicated by the number and quality of studies conducted within the project. And it would not be inaccurate to identify limitations in this area as directly effecting the restricted implementation of the quality components of the project. The use of institutions and individuals with technical knowledge of research methodology or the capacity building of individuals in this area at state level would be crucial. While the introduction of EMIS certainly marks an important step towards building data systems for planning and monitoring, the limitations of these data have already been discussed. Future programs will need to restructure this system as well as systemize household surveys and build capacity at all levels to use data for planning and monitoring where appropriate.

C. Critical aspects to be considered in Future Programs

4.20 Based on the lessons learned from the DPEP I and II, five aspects critical to the implementation of future programs in elementary education can be identified – better targeting, improved flexibility, focus on accountability, stronger linkages and evaluative research and monitoring.

4.21 *Better targeting:* While the program has been partially successful in meeting some of the development objectives regarding outcomes, there is a considerable distance to go before universalization of primary, and certainly elementary, education is achieved. Out of school children in many states now belong to the hardest to reach groups such as children from ST communities, disabled children and working children. More work needs to be done to understand the reasons for the limited impact of DPEP on children from ST communities and disabled children in particular to better target future interventions. The increased role of communities through user groups and VECs in helping better targeting would need to be thought through carefully. Improving completion rates will certainly need to be the focus of any future programs with appropriate, well thought out strategies designed to target particular groups. The limited success in raising achievement levels and, in particular, reducing the gaps in achievement between the 'general' category and ST students also deserve particular attention in teacher training modules and future textbook/curriculum revisions. The success of these initiatives in gender sensitization can perhaps be used as inspiration.

4.22 *Increased flexibility:* Flexibility relates to several areas including financial and programmatic. The program defined so clearly at the central level and then at the state and district levels limit the extent to which the reality and needs of the individual school, community, teacher and child are considered. Structures and procedures have been initiated and the extent to which these structures and procedures impact the life of each school is what will need to be monitored and measured. In order to monitor and measure each school, flexibility in financial planning and program implementation is necessary. For example, one school may need more physical infrastructure before qualitative transformation in teaching and learning can begin to happen. Another school in contrast might have all its physical infrastructure in place and will instead require teachers to be trained more effectively. Flexibility must accompany all aspects of the project such as financial allocation, teacher training, support programs such as bridge courses, community support and training. In addition, future programs will need to explore the links between spending on various components and the impact of that spending to enable better designs that allow more flexibility across states and districts.

4.23 *Focus on accountability:* Accompanying this flexibility has to be accountability at all levels. In

order to ensure accountability, what each level is accountable for has to be defined clearly. Management has to be made accountable for project outcomes as well as implementation of project interventions. The same is true for the academic institutions such as the SCERTs, SIEMATs and DIETs, whose involvement at the present time is at best peripheral to implementation. The BRC and CRC coordinator would need to be held responsible for vitalizing the teacher community; each individual teacher would be responsible for ensuring classrooms that are vibrant and active. The teacher must be held accountable for the learning of each of her students. Equity is an important part of accountability. For example, if an additional classroom is built in schools which does not need it as much as the school in a nearby tribal habitation bursting at its seams, this becomes an issue regarding accountability and equity. In addition, it involves setting in place a system of regular monitoring and sample monitoring and evaluation that has to be systematically built into the program. Finally, future programs will certainly have to address more systemic issues such as teacher vacancies, teacher absenteeism, and teacher deployment that DPEP has not been able to address to a large extent. This essentially would involve Departments of Education, which hitherto have not been held accountable, becoming part of the mission to achieve universal elementary education with clear standards for performance.

4.24 *Stronger linkages:* The linkages between the different components in the program on the one hand and project outcomes and financing on the other have received limited attention. For example, the financing of the list of activities in AWPBs are rarely linked to project impact and outcomes. Similarly, the changes in classroom and teaching and learning processes have not been studied in conjunction with achievement levels to understand the links between teacher training and textbook revision with student learning. The associations made between expenditure, project implementation and project outcomes should be expected of personnel at different levels of administration. This would enhance the effectiveness of future programs.

4.25 *Evaluative research and monitoring:* While DPEP has introduced a culture of research at all levels of the system, this culture needs to be further cultivated and strengthened. The lacuna in most research studies undertaken under DPEP has

been the lack of mutual feedback between research and program design and implementation. Similarly, research topics seem to have been chosen in an unsystematic manner without programmatic goals in mind. A few key areas of research such as an impact analysis linking inputs, financing and processes to outcomes of the projects and a comparative evaluation of the successes and failures of strategies used in various states need to be undertaken.

4.26 A few studies, particularly done by national institutions do compare DPEP with non DPEP districts. Nevertheless, as explained earlier in the report, these are not impact evaluations in the sense that counterfactuals are not controlled for as in Jalan and Glinskaya (2002). This indicates the need for research capacity to be further developed and strengthened, particularly at the state and district levels. In addition, future programs will need to be designed keeping in mind the need for impact evaluations. For instance, baseline data on outcomes and studies on the status of processes such as teacher training or community structures should be collected in future projects for project and non-project districts to facilitate future comparisons. For future programs that are nation-wide and not limited to specific districts (as planned in the Sarva Shiksha Abhiyan program for elementary education), impact evaluations could be done by undertaking reflexive comparisons i.e. comparing the status of outcomes and processes before and after the program. In this case, it would be critical to collect good baseline data on all outcomes and processes. Equally critical will be the collection of good quality end of project data on the same outcomes and processes which are comparable with the baseline data. As discussed earlier, better data systems will need to be developed which are based on household surveys to complement the EMIS. Different levels of aggregation could be used to facilitate monitoring and use of data for planning at the different levels of administration. It is critical that capacity for use of data and research be built at all levels. Again, as discussed earlier in the report, it will be important in future programs to set differentiated targets across Indian states to allow for differences in the baselines and allow for contextual planning and monitoring.

4.27 The use of EMIS and achievement data for planning, monitoring and management will only

improve once this capacity has been established. It also indicates the need to involve the larger research community such as universities on an interactive and continuous basis. The studies done by the Indian Institutes of Management are an example. It is unlikely, due to the magnitude of the task involved and the imperative to provide quality education in remote areas and hard to reach populations, that the dimensions discussed above can be nurtured and developed solely at the center. Therefore, it will be critical to provide an enabling environment for states to develop these capacities at the state level. The capacities for policy analysis and research and evaluation would have to be developed at the state level in order to support a theoretical and practically well thought through program of project implementation.

4.28 To conclude, DPEP has catalyzed a generation of reforms, which have brought primary education center stage. However, it seems that implementation is uneven, an inevitable part of reform in the human development sectors, which essentially deals with either introducing new "culture" or change in the existing culture of institutions including the school, community, district and states offices of education and institutions, which assist in the administration of education and do research in education. Because the different dimensions of this kind of change are often diffuse and lacking in clarity, the reform process requires continuous and deliberate rethinking in terms of strategies and interventions. This redefining and recreating must be based on technical evaluations of both micro-processes and institutional structures. It will be critical for the future generation of programs to continue to focus on quality improvement; to continuously evaluate the magnitude and depth of quality interventions; and to be able to discard interventions that have had little impact while fine tuning and sustaining interventions that have had some impact on development objectives.

ANNEXURE 1

Figure 1
1993-1999 : School Attendance Rate of 6-10 year old
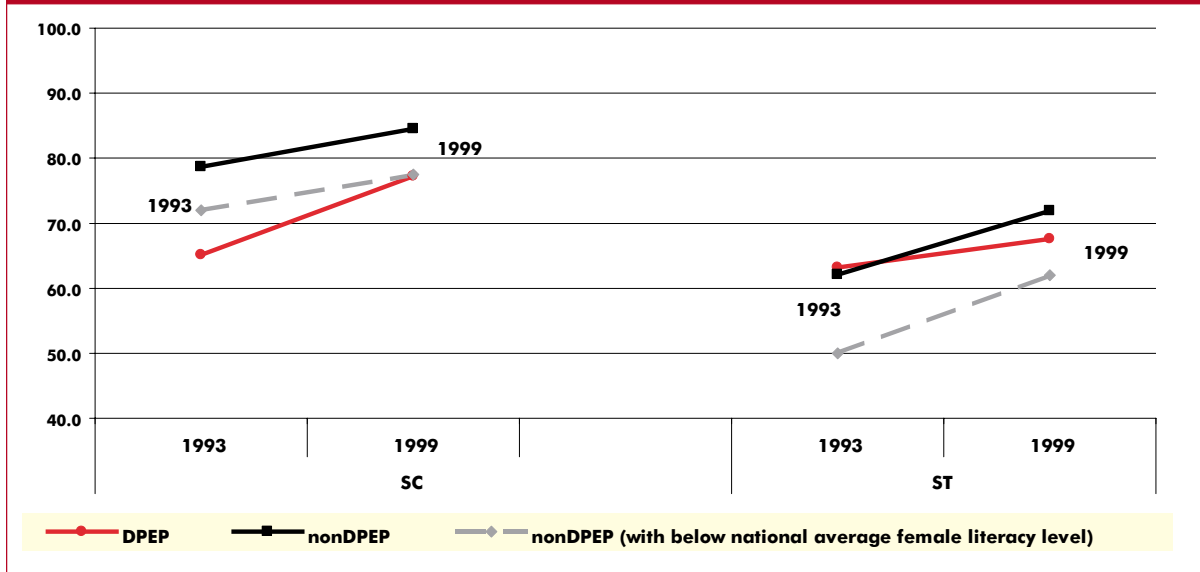**(percent of all children in 6-10 group) by DPEP status**
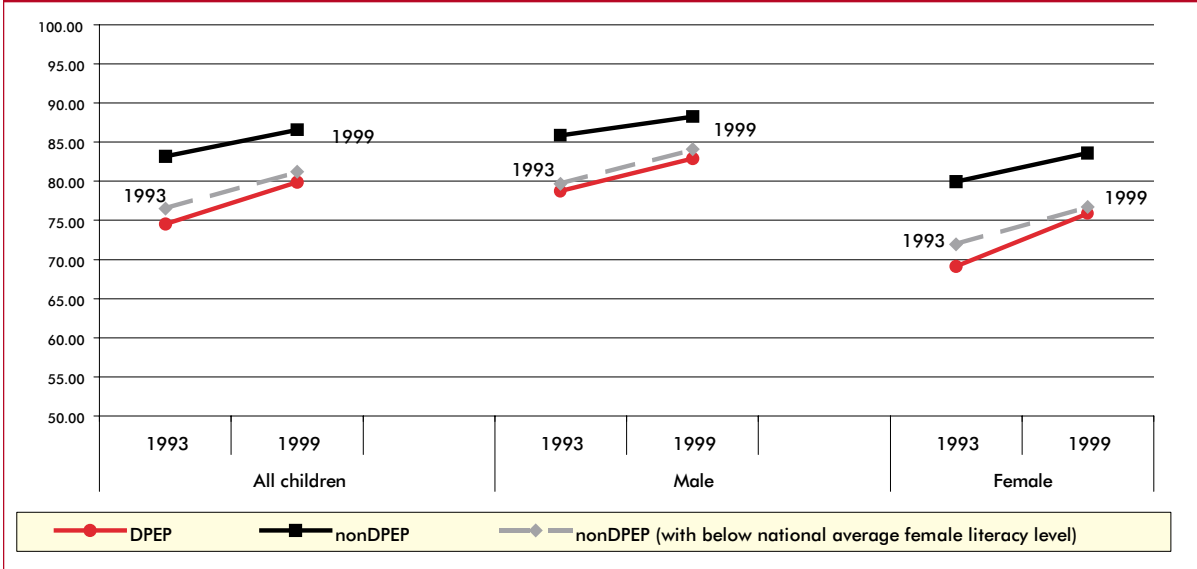
Figure 2
1993-1999 : Primary School Attendance Rate of 11-13 year old
(percent of all children in 11-13 group) by DPEP status
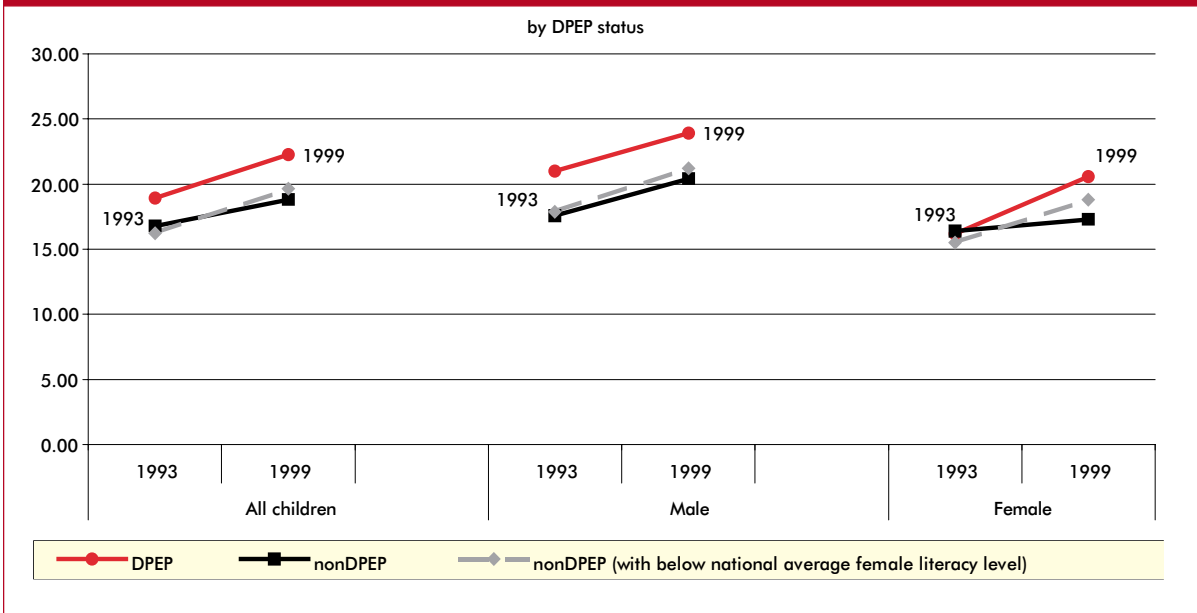
Source: Jalan and Glinskaya (2002) p.36

Figure 3
1993-1999 : School Attendance Rate of 6-10 year old
(percent of all children in 6-10 group) by DPEP status

Source: Jalan and Glinskaya (2002) p.37

ANNEXURE II

INDIA EDUCATION PORTFOLIO
DETAILED PROJECT SUMMARY (PORTFOLIO MANAGEMENT)
Projects under Supervision

Project	Cr./Ln. No.	Beneficiaries/ Cofinanciers	Districts Covered/ Expansion Districts	Amount	Board Date	Signing Date	Effecttiveness Date	Closin Date
DPEP 1	Cr.26610-IN	Beneficiaries: GOI and Govts. Of Assam, Haryana, Karnataka, Kerala,Maharashtra and Tamil Nadu Cofinanciers: EC, DFID	Assam:4; Chhatisgarh:9; Haryana:4; Karnataka:5, Kerala: 5; Madhya Pradesh: 17 (EC); Maharashtra: 6; Tamil Nadu: 3; Total:53	IDA: SDR 180M (US $ 260.3 M equivalent) GOI: US $ 50.2	11/22/1994	12/22/1994	3/28/1995	3/31/20 extended 6/30/2000
DPEPII	Cr.2876-IN	Govt. of India, Govts. Of Assam, Haryana, Karnataka, Kerala, MP, Maharashtra, TN, Up (Expansion Districts) Gujarat, Cofinanciers: AP (DFID); West Bengal (EC); Gujarat financed by Netherlands Govt.	Assam: 5; Chhatisgarh: 6; Haryana: 7 Karnataka: 15, Kerala: 3; Madhya Pradesh: 16; Maharashtra : 5 Tamil Nadu: 4; Andhra Pradesh 5 (DFID); UP: 22 Total: 88	IDA: SDR 291.7M (US $ 425.2 M eqivalent) GOI: US $ 83.4 M Netherlands: US $ 25.8 M	06/06/1996	07/17/1996	10/13/1996	06/30/2000
DPEP III	Cr. 3012-IN	Govt. of India, Govt. of Bihar and Govt. of jharkhand Cofinanviers: UNICEF	Bihar: 20 Jharkhand: 7 Total:27	IDA: SDR 111.8 M (US$ 1522.0 M(eauivalent) GOI:US$ 37.7M Unicef: US $ 10.0 M	12/4/1997	02/23/1998	3/30/1998	09/30/2000
APERP(Ed. Component	Cr.3012-IN Ln. 4360-IN	Govt.. of Andhra Pradesh (SIS) AP Prathmik Vidya Parishattu (APPVP)	14	IDA: SDR: 93.5 M (US$ 137.4 M equivalent) GOI: US$ 31. 1M	6/25/1998	2/4/1999	2/26/1999	3/31/2000
Uttar Pradesh Third DPEP	Cr. 3307-IN	Govt. of India and Government of UP	32	IDA: SDR: 132.3 M (US$ 182.4 M equivalent GOUP: US$ 32.3 M	12/17/1999	2/23/2000	4/25/2000	9/30/2000
Rajasthan DPEP	Interim Fund Credit N044-IN	Govt. of India and Govt. of Rajasthan	10	IDA : SDR : 63M (US$ 85.7 M equivalent) GOR: 15.6	6/8/1999	7/6/1999	9/30/1999	12/31/2000
Rajasthan Second DPEP	Cr. 3529-IN	Govt. of India and Govt. of Rajasthan	9	IDA: SDR : 58.5 M (US$ 74.4 M equivalent) GOR : 13,.10	6/21/2001	7/27/2001	9/5/2001	12/31/2002

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