

ACCESS AND RETENTION UNDER DPEP

A NATIONAL OVERVIEW

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Abstract

The DPEP was initiated in 1994 in 42 districts covering seven states to support the state governments in their efforts to improve access and retention, increase learning achievement and decrease dropout rate in a manner that social and gender inequities are reduced to the minimum. The programme has since expanded to 16 states covering nearly 200 districts. Over the years, DPEP has developed into a major experiment of its kind in social development in India. While recognising the contextuality of the situation, the programme attaches priority to interventions aimed at improving access, retention and achievement especially of the girls, SC and ST students and children with special needs through targeting and special strategies with a focus on participatory processes of planning and management. The comparative analysis of DPEP and non-DPEP districts (Phase I) has shown a rapid increase in enrolment in the DPEP districts as compared to non-DPEP districts. The enrolment increased by about 9.4 percent between 1995/96 and 1996/97 and 6.5 percent between 1996/97 and 1997/98. Moreover, the girls' enrolment has improved considerably in the last few years and the Index of Gender Equity shows near absence of inequities. The improvements in access are also accompanied by a steep reduction in repeaters rate in various grades. The study shows a greater need to focus on areas with high concentration of tribal population and backward pockets of otherwise advanced districts. In a short span of three years period covered under the study, the innovative nature of DPEP activities has penetrated deep up to the grassroots with the active involvement of the stakeholders. What is needed is to translate the short-term gains into a sustainable system. This is not a small challenge for the future growth and development of sustainable strategies for universalisation of elementary education in the country.

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1. The context

Due to historical reasons, India is characterised by the persistence of regional and social disparities in general and that of educational development in particular. It is a country of contrasts as there are areas/groups of population that attained universal literacy long ago, the others are still striving to cross even the single digit threshold. The World Conference on Education for All reiterated the need for providing basic education to all children. The conference appropriately highlighted the need for improving the quality of learning outcomes. Thus, the goal of universalisation was not only related to universal access and retention but also included achievement of the identified competencies by all children. India is also committed to reduction of disparities and achieving universal literacy and primary education. To fulfil these objectives, a decentralised and participatory approach to planning and management of education has been identified as an essential pre-requisite. Although the emphasis of educational planning during the last fifty years was on removing the supply side constraints, little could be accomplished in terms of quality improvement. It is in this context that the DPEP was initiated in seven states covering 42 districts, mostly educationally backward. The programme has expanded over the years and now covers 16 states and nearly 200 districts. The DPEP strategy was drawn in tune with the national objectives of universal access, retention and achievement of minimum levels of educational attainment with a focus on girls and children belonging to socially deprived and economically backward sections of the society.

Besides the achievement of the quantitative and qualitative targets within the stipulated period, the major thrust of the DPEP is to promote the decentralised management with active involvement of stakeholders that will have a considerable impact on the sustainability of the project beyond its life cycle. The cascading effect of many processes like, community participation and revision of curriculum, improvements in classroom teaching learning practices and in-service training package for primary school teachers, in the long term, will have a positive effect on retention and quality improvement of the system of primary education. An educational management information system was also established in DPEP districts to provide feedback on a number of key performance indicators relating to school systems, fund flows and their utilisation; and monitoring of project achievements in terms of physical and financial targets.

¹ This paper is a revised and enlarged version of the study on Access and Retention prepared by the author for the Joint Supervision Mission (DPEP) in October, 1998. The author gratefully acknowledges the contribution and assistance of the DPEP Bureau and others in preparing this study.

2. Access and retention: some issues

Universal access to schooling facilities either within the habitation or at a reasonable walking distance is one of the important pre-requisite for achieving the goal of universal primary education. However, this may not be a sufficient condition, as the existence or the availability of educational facility does not imply that it will be used or is usable with optimal efficiency. The questions regarding the capacity, deployment of teaching and provision of other inputs commensurate with the demand are equally important concerns for achieving the desired results. With increasing emphasis on quality of education, it is also necessary that school conditions be such that all children acquire access to education of a comparable quality irrespective of their location, caste and gender considerations. While, it may be true that 98.5% of the population is served by a school within the walking distance of 1 km., the same is not true of the quality of school infrastructure, availability of teachers, teaching learning conditions and achievement levels of the learners. The educationally backward districts/areas suffer more on account of the latter than the former.

Important performance indicators like intake rate, GER and NER, proportion of underage and overage children in primary classes that can further be disaggregated by the gender, social and regional characteristics capture some important aspects of access. It is often observed that a large number of children stay away from primary schools due to social and economic factors. The problem of working children is well known. The strategies like double shift schools, evening schools, Non Formal Education Centres and Alternative Schools are aimed at overcoming many constraints in access to education. In order to promote girl's education, the states provide incentives for enrolment and retention. The provision of free textbooks, uniforms, meals, scholarships and day care centres reduce the direct and indirect cost of education and benefit the poor and socially backward families to send their children to school. The learning outcomes as measured through achievement tests conducted on Grade I and Grade III/IV students show large variations not only across the districts but also within the districts. These studies have also shown that considerable efforts are required to enhance the learning among primary school children. The development of competency based instructional materials and textbooks revision based on the identified competencies are some of initiatives taken under DPEP. While some of these efforts will have immediate impact, the effect of others will only be felt in the long term.

It is also observed that of all the children who enter grade I only 64 percent reach grade V². It is also estimated that the loss is maximum between grade I and grade II. The higher the dropout rate, the greater is the wastage and inefficiency of the system. Therefore, the state governments formulated no-detention policies, whereby the children are not detained, for the first few years of schooling, on grounds of academic performance. Despite, the no-detention policy, the repeaters and dropout rates continue to be high¹. The present paper examines various dimensions of access and retention in primary classes especially in the context of DPEP. More specifically, the following issues were examined:

² Based on the data provided in Selected Educational Statistics, 1996-97. The data on dropout pertains to 1994-95 and is indicated to be provisional.

- To compare enrolment trends between DPEP and non-DPEP districts.
- To examine the profile of DPEP-I districts in terms of:
 - Growth of enrolment by grades, gender, SC and ST.
 - Repetition rate for each class and by gender.
 - Gender and caste based differentials in enrolment rates (GER and NER).
- To examine the *implications* of the recent trends in enrolment and associated indicators for policy, planning and monitoring of primary education in general and that of DPEP in particular.

The study was confined to the districts covered under DPEP-I and 1993-94 was selected as a base year with 1996-97 as the terminal year for comparative analysis of enrolment indicators for DPEP and Non-DPEP districts. Detailed analysis of enrolment in terms of gender, social and regional stratification was also undertaken for the DPEP districts for the year 1995-96 to 1997-98.

3. Sources of data and framework of analysis

The educational structure varies within the DPEP states. The states of Assam, Kerala, Maharashtra and Karnataka follow four years of primary cycle, whereas Haryana, Madhya Pradesh and Tamil Nadu have five years of primary cycle. Whenever necessary, the data was adjusted according to the length of the cycle of primary education in the respective states. As mentioned above, the study used secondary data obtained from a number of sources. The main sources of data for the present study were:

DPEP: A specially designed software for computerisation of educational statistics was developed at NIEPA and implemented in all the DPEP districts. School level data on enrolment by grade, gender and caste; teachers and schools, repeaters by grade and transition rate, age–grade matrix by gender and caste group for 1995-96, 1996-97 and 1997-98 was analysed for all districts covered under DPEP.

DPI: In order to undertake the comparative analysis of recent trends in DPEP and non-DPEP districts, data was obtained for all the districts of the seven DPEP states from the DPI office/Directorate of Education of respective states. The data was used for 1993-94 to 1996-97.

Census of India: The district level data on age specific population (6-9 or 6-10 years, as the case may be) is generally not available with the State Directorates of Education/State Project Directors of DPEP. In order to make an assessment of the trends in the GER and NER, the district level aggregated data on age specific population for 1991 was obtained from the Registrar General of India's Office. The same was used for projecting the age specific population in the DPEP districts for the year 1995 and 1996. The population estimates derived by the Expert Committee on population projections were also used. Some states have also developed district estimates of 6-9/10 years age group population.

4. Framework of analysis

Besides, descriptive statistics, the following indices were developed to sharply focus on equity issues.

Index of Gender Equity was calculated as follows:

$$\text{Index of Gender Equity (IGE)} = 100 \times \frac{\text{Share of girls in enrolment (I-IV/V)}}{\text{Share of girls in population (6-9/10)}}$$

The above ratio adjusts the change in sex ratio in relation to the enrolment. A value of 100 for the index reflects a complete absence of gender based inequities. However for the purpose of the present study, a value of IGE above 95 is considered as near absence of gender based inequities. It may be noted that IGE reflects the level of inequities and does not tell anything about the achievement of universal access or retention.

The share of SC and ST students to total enrolment does not convey much except when it is compared with their corresponding share in the population. Therefore, an index of social equity was calculated in the following manner:

$$\text{Index of Social Equity (ISE)} = 100 \times \frac{\text{Share of SC in total enrolment (I-IV/V)}}{\text{Share of SC pop. in total population}}$$

Similarly the Index of Social Equity can be worked out for the participation of STs in primary education.

The cohort and students flow analysis provides an accurate estimate of the internal efficiency of an educational system. However, in India, data is generally not collected on school cohorts and consequently crude estimates of dropout and repetition rates are obtained by considering the grade-to-grade enrolment transition. In certain cases, this can lead to erroneous results/findings/conclusions. The problems become more serious when the students move from one system to another. For example, statistically significant proportion of lateral movement of the students from private unrecognised schools to government/ recognised schools or vice versa has also been reported in a study conducted by DPEP Bureau. Large scale migration from/to smaller states/UTs and late entry in various grades will further distort the structure of enrolment pyramid. These types of factors can introduce considerable margin of error in the estimation of dropout and repetition rates following the traditional method of calculation of these indicators based on the aggregated data.

In the present study, the grade to grade transition rates were calculated using the ratio of enrolment in grade (g+1) at time (t+1) to enrolment in grade (g) at time (t). These ratios also suffer from the inadequacies mentioned above and in the absence of any estimates, it is not possible to isolate the effect of lateral entry, drop-out rate and other factors affecting the flow of students over time and grades. The dropout rates have thus not been reported in the study.

5. Improved quality of infrastructure and additional school places

As a part of DPEP, a number of initiatives were taken to improve access and the quality and coverage of schooling facilities. These include:

- Construction of new school buildings out of DPEP funds as well as through the efforts of the state government.
- Rehabilitation of the dilapidated facilities through reconstruction and repairs to the existing classrooms.
- Provision of additional classrooms in areas of overcrowding or where the facilities were insufficient
- Provision of hand pumps for safe drinking water, construction of boundary walls and toilets.

Since the inception of DPEP, 6165 new schools were constructed and additional 6,859 classrooms were built up to December 1998. About 10,000 schools and 7,000 classrooms were under construction. When completed these will improve the quality of infrastructure and provide many additional school places. Similarly, the improvements in quality of infrastructure through the construction of additional toilets, provision of water facility and construction of boundary walls have improved the school environment. These measures alongwith improved classroom interaction will have a positive impact not only on access but also lead to improved retention in the long run, especially among the girl students. It is important to observe that the civil works programme is coming to close in most of the DPEP phase I districts. While there is an overall ceiling of 24 percent for civil works component, it was not sufficient to meet the requirements of infrastructure rehabilitation in some of the educationally backward districts. Additional funds for improving the infrastructure facilities will have to be mobilised from other sources on long term basis.

6. Enrolment trends at all India level

Over the years there has been considerable increase in the number of children enrolled in various grade of primary education. There were 110 million children enrolled in primary grades in India in 1996-97. The trend analysis of primary stage enrolment in India shows a declining growth rate. Nationally, the primary classes enrolment increased by 5% during seventies' and by 2.65% per annum during eighties'. The growth rate further declined to 0.67% between 1993-94 and 1996-97 (table 1). The decline is not only confined to boys enrolment, but is equally serious for girls enrolment, which declined from 9.3% in sixties to as low as 1% in the last three years.

Table 1: Annual compound growth rate of enrolment at primary stage: India

Period	Boys	Girls	Total
1950-51 to 1960-61	5.51	7.76	6.19
1960-61 to 1970-71	6.53	9.33	7.46
1970-71 to 1980-81	4.23	6.45	5.00
1980-81 to 1990-91	2.35	3.17	2.65
1990-91 to 1996-97	1.51	2.81	2.06
1993-94 to 1996-97	0.38	1.07	0.67

Source: Selected Educational Statistics, 1996-97, MHRD

The long-term decline in growth rate of enrolment requires serious introspection. This is particularly happening at a time when more than one third children admitted to grade I fail to reach grade V. It may be observed that some states like Kerala and Goa have shown a real decline in the number of eligible children due to declining birth rates. Similar trends are also observed in the state of Tamil Nadu in the recent years. Therefore, the growth rate of enrolment may even be negative in some of these areas. However, there are large areas which are still experiencing high population growth and have low intake rate and the number of out-of-school children is large. These areas should have recorded much higher growth rate of enrolment. Moreover, such districts are much larger in number than the number of districts where saturation in terms of access may have been nearly universalised. The period of stagnating enrolment also coincides with the phase of structural adjustment and opening up of the Indian economy. It is also a fact that despite economic constraints, the allocation of financial resources for educational in general and that of elementary education in particular has been stepped up considerably in the recent years. Is it that the poor and socially deprived families are in a relatively worse condition to afford the education of their children? Have we already reached the hard bottom and additional enrolment beyond this threshold is difficult? Do we need to search for alternative modes of improving access so that the out-of-school children can be brought to the fold of education? Can we afford stagnation in enrolment when only few states have actually achieved or are within the realm of achieving universal access to primary education? It is in this background of rapidly declining growth rate of enrolment that the progress in DPEP districts has shown a significant increase in enrolment. It is thus evident that there is a need to develop a more responsive system through a mission mode strategy to bring the out-of-school children to the fold of education by following non-conventional methods. The non-DPEP districts could follow some of the innovative methods of improving access developed in the DPEP districts.

7. Enrolment trends in DPEP and non-DPEP districts

The 42 DPEP districts are spread across seven states. With the exception of Madhya Pradesh, the numbers of districts covered in other states are 3-5 and form a small proportion of the total districts in each state. While it is true that the DPEP districts are educationally backward but so are many other districts in the selected states. Therefore, a comparison of the enrolment trends in DPEP and non-DPEP districts will provide an idea about the differential progress in one group of districts as compared to others provided the impact of other interventions remains the same. Since, the EMIS under DPEP is confined to DPEP districts only, the comparable data for non-DPEP districts was not available from DISE. In order to ensure comparability of the enrolment data, the educational data collected by the Directorate of Education in each state was used for comparing DPEP districts with those of non-DPEP districts.

Based on the data obtained from each state, the percentage increase in enrolment in 1996-97 over the base year of 1993-94 was calculated for the following groups of districts for each state covered under DPEP:

- DPEP districts
- Non DPEP districts

The following findings are based on the assumption that 1993-94 was a normal year as far as primary education was concerned. It is also assumed that the data provided by the DPI was collected through the normal process of data collection and there were no data gaps between the DPEP and non-DPEP districts. Other things being equal, the difference between the two sets of districts was that the former received DPEP inputs in addition to the normal funding and the latter was without DPEP inputs but received the usual departmental inputs³.

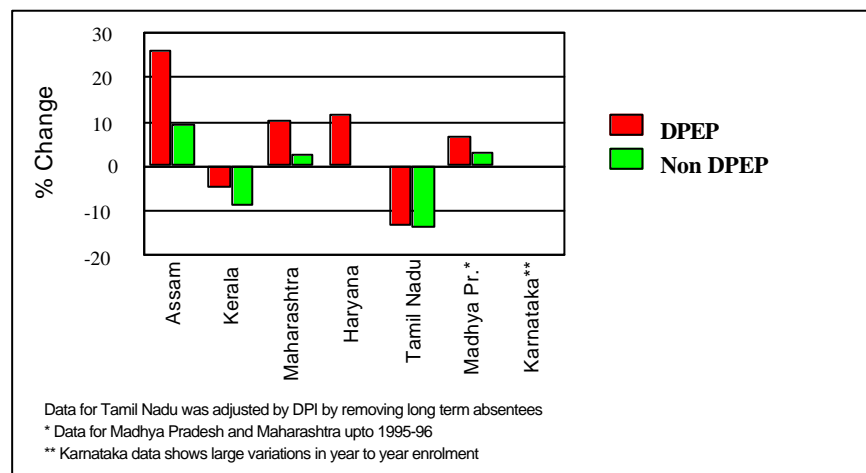
- i) Four of the seven DPEP states i.e. Haryana, Assam and Maharashtra showed a relatively higher enrolment increase in DPEP districts as compared to non-DPEP districts. The differential between the two was from 7.5 to 16.8 percentage points. There was no increase in enrolment in non-DPEP districts in Haryana.

Table 2: Percent Increase/decrease in Enrolment, 1993-94 to 1996-97

State	DPEP (% increase/decrease)	Non DPEP(% Increase/decrease)	Difference (DPEP – Non DPEP) in percentage points
Assam	26.3	9.5	16.8
Kerala	-4.9	-8.8	-3.9
Maharashtra*	10.1	2.6	7.5
Haryana	11.8	0.1	11.7
Tamil Nadu	-13.3	-13.7	0.4
Madhya Pradesh*	6.8	3.1	3.7

Notes: * Pertains to terminal year data for 1995-96 and not 1996-97

- ii) Kerala experienced a constant decline in the enrolment for the last ten years or so and this phenomenon is continuing both for the DPEP and non-DPEP districts. However, the decline in enrolment in DPEP districts is less as compared to the non-DPEP districts by 3.9 percentage points.



³ The data obtained from the office of DPI Karnataka, showed wild fluctuations in enrolment during the period under review and consequently the trajectory of enrolment was not clearly discernable. Although, no clear trends were discernible, the data obtained from DPI indicated a real decline in GER in the last few years for both the DPEP and non-DPEP districts and was excluded from the comparative analysis of DPEP and non DPEP districts.

- iii) Demographic structure and trends in population growth in Tamil Nadu are also following a trajectory similar to that of Kerala. The population projections for 6-10 age group are reported to follow a declining trend⁴. The analysis indicated that the increase in enrolment in DPEP districts in Tamil Nadu was practically the same as that in non-DPEP districts (difference 0.4 percentage points). A major problem in the analysis of DPI data for Tamil Nadu was encountered as the state has revised its enrolment statistics by eliminating the long-term absentees. This adjustment resulted in a steep decline of about 18 percent in the over-all enrolment in 1996-97 as compared to 1995-96.

The above analysis therefore shows that in the initial years, the enrolment in DPEP districts increased rapidly and at a pace much higher than the corresponding increase in the non-DPEP districts.

8. Primary school infrastructure: student classroom ratio (SCR)

SCR is an important indicator of the availability of classrooms in primary schools. The experience of various development projects shows that as a result of increased enrolment, the demand for school places increases and often leads to overcrowding of classrooms and consequent lack of interest among students and teachers. Therefore, it is essential to increase the classroom space in relation to increased enrolment so that school environment remains attractive to the children who attend school for the first time. Since, DPEP was viewed as an effort to improve access and retention in educationally backward districts, it was rightly decided to launch a comprehensive programme for additional capacity creation through opening new schools and construction of additional classrooms in the first few years of project implementation. This strategy has proved to be successful as the increased availability of classrooms has generally kept pace with the increased enrolment in DPEP districts at the macro level. This is evident from the fact that at the national level, the average SCR has either remained almost stable or a little decline is observed. A sharp decline would have indicated an excess supply of school places and a sharp increase would have shown the opposite. A more detailed analysis at the cluster level needs to be undertaken to identify imbalances in the demand and supply of classrooms.

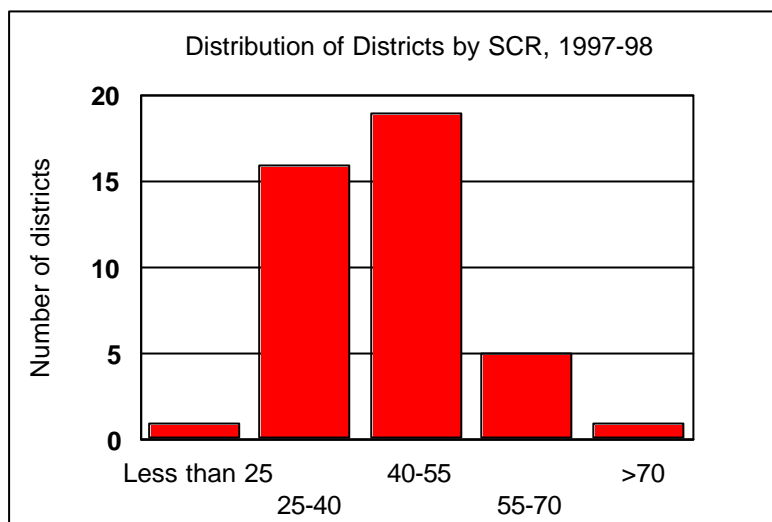
Table 3: Students classroom ratio by states

State	1995-96	1996-97	1997-98
Assam	82.7	83.8	78.7
Haryana	50.3	49.1	47.9
Karnataka	33.1	30.0	32.9
Kerala	30.9	31.2	31.2
Madhya Pradesh	40.7	40.8	38.8
Maharashtra	46.0	47.1	49.2
Tamil Nadu	46.4	43.7	41.7
All India	41.5	41.2	41.0

Source: computed from DISE data.

⁴ Selected Educational Statistics, 1996-97, MHRD, New Delhi

There are large inter-state and inter-district variations in SCR. A comparative distribution of districts according to the 1995-96 and 1997-98 is given in the following figure.



While, under the scheme of Operation Blackboard (OB), each primary school was to be provided with a minimum of two all weather classrooms, still there are many schools where only one classroom is available for instructional purposes. Either the other classroom has not been constructed or is not available for instructional purposes. Generally, one classroom for 40-50 children is justified. But when this ratio is higher than 50-55, it shows the inadequacy of classroom space for instructional purposes. The problem of the availability of instructional rooms seems to be more serious in Assam. The sixth All India Educational Survey data for Assam showed that in 1993-94, nearly 20 percent of the schools were without even a single instructional room⁵. Thus the overall SCR will tend to rise substantially. The recent efforts to provincialize primary schools will further aggravate the problems of classrooms for instructional purposes as most of the 'venture' schools are without adequate infrastructure facilities.

On the other extreme is the case of Kerala, where the average SCR was 31 in 1997. This is a relatively low value for the densely populated settlements having large schools. The shrinking population base and relatively better availability of classrooms is a major reason for the low SCR in Kerala. Therefore, many additional schools may not be required to be established in Kerala, the effective utilisation of instructional rooms could be an issue, especially in areas where the enrolment decline is significant. A more detailed analysis at cluster level may help in identification of the schools where there are imbalances in the SCR.

A review of the civil works programme under DPEP indicates that repairs and maintenance of classrooms needs to be given more attention. The regular upkeep of the classrooms is essential to ensure that all classrooms can be effectively used for instructional purposes for the whole duration of their life. Regular maintenance of the

⁵ NCERT (1998). Sixth All India educational Survey: Schools and Physical Facilities (Vol. 2), NCERT, New Delhi. Page 122.

school buildings either through the school contingency funds or from the support of the community will go a long way in ensuring the availability of classrooms for their life period. The DISE data can be used at the district and the cluster level to identify the schools where the need for rehabilitation of classrooms is the most.

9. Enrolment trends

DPEP aims to improve access to primary education through formal and non-formal modes of education. The DPEP strategy involved opening of new primary schools in unserved areas, NFE centres to enrol out of school children, alternative schools and other type of facilities in smaller and unserved habitations. The project also provides for additional teachers.

Aggregate analysis for all 42 districts indicates that between 1995-96 and 1997-98, the net enrolment increase was 1.35 million of which 0.578 million additional children were enrolled during 1997-98 alone. Expressed in terms of percent change, the increase was 9.43 percent during 1995-96 and 1996-97 and 6.48 percent during 1996-97 and 1997-98. Nearly two-third increase during 1996-97 and 1997-98 is attributed to the success of Alternative Schools (AS) and an innovative Education Guarantee Scheme launched in Madhya Pradesh (EGS). The increased coverage through AS/EGS also shows the potential of extending access through innovative strategies, especially in the case of under-developed regions. The following table shows the comparative change in enrolment for the DPEP states.

Table 4: Enrolment trends in DPEP districts (formal primary schools)

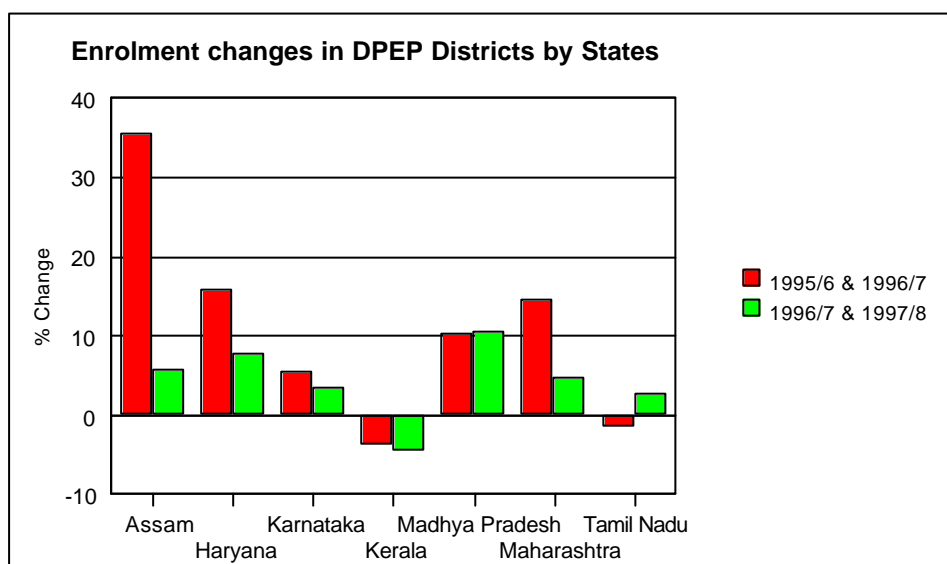
State	% change in enrolment	
	95/96 & 96/97	96/97 & 97/98
Assam	35.66	5.90
Haryana	15.90	7.92
Karnataka	5.56	3.40
Kerala	-3.82	-4.47
Madhya Pradesh	10.26	10.50
Maharashtra	14.57	4.86
Tamil Nadu	-1.57	2.63
All India	9.43	6.48

Note: Data for 1997/98 includes enrolment under AS/EGS.

The recent decline in growth of enrolment at primary stage consists of two components. First, the enrolment decline in Kerala is related to the demographic transition. In Kerala, the population size has almost stabilised due to low birth rate and the number of children in school going age group have shown an absolute decline. The second group consists of the states like Assam and Maharashtra, which experienced high growth rate in enrolment in the earlier years of DPEP. Since most of the out-of-school children were enrolled, these states did not maintain the same level of additional enrolment in class I. This phenomenon will produce a temporary peak in enrolment in each grade as the students progress from one grade to another. In Assam, the increase between 1995 and 1996 was 35.6 percent, which declined to 5.9 percent between 1996 and 1997. Third, with a greater push for the alternative modes of education, some shift in enrolment from government primary schools to these schools

was also reported. Madhya Pradesh is a typical example where the enrolment increase in formal primary schools between 1995 and 1996 was 10.3 percent, which declined to 1.1 percent between 1996 and 1997. However, the increase during the same period was 10.5 percent if the enrolment in AS/EGS is also included. The state is known for its pioneering efforts in AS/EGS and 343,000 children were enrolled under this scheme till September, 1997. While the coverage under AS/EGS is expanding rapidly, its implications for the sustainability for the resource provisions, teacher recruitment, training and deployment should be considered seriously at this stage. Strategies for sustaining educational standards in the AS/EGS schools need to be accorded high priority in the coming years.

As of now, no systematic database on the EGS/AS schools has been created. In view of the large coverage under the scheme, a regular database needs to be created so that access and quality related issues can be examined and addressed at the district and the cluster level.



9.1 Trends in class I enrolment

The formal education is going through a critical phase of development in DPEP districts. Various innovative models are being experimented and implemented to provide access and improve the quality of education. The recent data shows a significant decline in class I enrolment in some districts. There were 10 districts where more than 5 percent decline in class I enrolment was observed between 1996-97 and 1997-98. These were, Dhubri and Morigaon in Assam, Mallapuram in Kerala, and Rewa, Sidhi, Mandsaur, Raisen, Surguja, Bilaspur and Rajnandgaon in Madhya Pradesh. However, when the enrolment in the AS/EGS, wherever it exists, is added to the formal school enrolment, the increase becomes positive. However, a detailed study is needed to establish the extent of shift that is taking place from formal to AS/EGS. This is more important in Madhya Pradesh due to large coverage under AS/EGS.

9.2 Girls enrolment

The share of girls to total enrolment in 42 DPEP districts increased from 45.5 percent in 1995-96 to 46.3 percent in 1997-98. The position with respect to girls' enrolment in various grades has improved in practically all districts. The Index of Gender Equity was calculated.

A comparative analysis of the IGE for 1995-96 and 1996-97 shows a considerable improvement over the years. For 21 out of a total of 42 districts, conditions of nearly perfect equity have been attained. In another 16 districts, the enrolment distribution indicates that the gap between boys and girls participation is not much and is within the realm of attainment of a near absence of inequities. There were five districts namely, Guna, Tikamgarh, Sidhi, Dhar and Rajgarh where additional efforts are required to reduce the inequities between the enrolment of boys and girls. The data provided by the SPO, Madhya Pradesh on AS/EGS in these districts shows high participation of girls. It is therefore evident that gender related inequities may be overcome soon even in the most educationally backward districts having large concentration of tribal population by following a strategy of alternative schooling.

Table 5: Trends in IGE by districts

Range	1995	1996	1997
<75	1	1	0
75-85	5	4	5
85-95	21	19	16
>95	15	18	21

The minimisation of gender based inequities in primary enrolment will go a long way in improving the literacy in the DPEP districts, which were largely low female literacy districts.

While the above analysis suggests the near absence of gender inequities in most of the DPEP districts, it should not be concluded that nothing more needs to be done as far as girls' education is concerned. Participation and retention may still be an issue for girls in areas with low GER and especially in situations where both boys and girls lag behind in participation.

9.3 SC and ST enrolment trends

As mentioned earlier, most of the DPEP districts were educationally backward and low female literacy districts. Some of the DPEP districts had high concentration of SC and ST population. The literacy among the SC and ST female population was among the lowest in country. The SC and ST population is deprived not only due to social factors but also due to low economic status with low levels of earning. Seven out of 19 districts in Madhya Pradesh had more than 40 percent of its population belonging to SC and ST categories. These districts are, Shahdol, Sidhi, Dhar, Betul, Surguja, Bilaspur and Raigarh.

The analysis of enrolment data for the last three years shows considerable improvement in coverage and participation of SC and ST children in primary education. The Index of Social Equity was calculated. Ideally, the value of ISE_{SC} will be 100 or close to it. A value of ISE_{SC} greater than 95 is taken to reflect a near absence of social inequities. The lower the value from 100, the greater will be the extent of inequities in participation in primary education based on social factors. The latest enrolment data on SC enrolment shows that for all the districts, the ISE_{SC} was more than 95. This shows that the inequities in the participation pattern of SC and general caste groups are nearly absent. However, the position is different in the case of ST population groups. While the SCs represent a dispersed minority, the distribution of ST population show the characteristics of a concentrated minority. Therefore the SC and ST population faces different type of problems as far as their educational advancement is concerned.

The Index of Social Equity for the STs was also calculated in manner described above. The index of Social Equity was calculated for only 31 out of 42 districts. Haryana does not have any ST population and therefore all the four districts were excluded from the analysis. The state government of Maharashtra has recently added a few more castes to the category of STs with the result that ST enrolment has shown steep increase in 1997-98. This has also resulted in problems related to enumerating the students belonging to ST groups in Maharashtra. Moreover, districtwise estimates of the ST population according to the revised list are not available as yet. Therefore, all the five districts of Maharashtra were excluded from the calculation of ISE. Population data for ST population for two districts in Tamil Nadu was also not available.

Assam and Madhya Pradesh are the two states with large concentration of tribal population among the DPEP-I states. The ST enrolment data for 1996-97 was not available for Assam. The analysis for MP for which comparable data for 1996-97 and 1997-98 is available shows that there has been a significant improvement in the ISE_{ST} for all the districts. This was possible as relatively more ST children were brought to the fold of primary education both through the formal as well through AS and EGS schemes.

The following table shows the distribution of ISE for the ST population for 1997-98.

Table 6: Distribution of districts by ISE_{ST} , 1997-98

Sr.	Range of ISE_{ST}	No. of districts
1	Less than 75	1
2	75-85	5
3	85-95	5
4	>95	20
	Total	31

The above table shows that there were still some districts with low value of ISE_{ST} . This reflects a situation where relatively more children belonging to ST are out-of-school. The districts with proportionately low enrolment of ST are Mandsaur, Guna, Shahdol, Dhar, Satna in Madhya Pradesh and Dhubri in Assam. In 1996-97, there were nine districts where ISE_{ST} was less than 90. In 1997-98, the number of such

districts was reduced to six. With more concentrated efforts in improving the access and retention of ST children, it is expected that the position in the other districts will also improve for the better.

The above analysis is aggregative in nature. There may be large variations between the schools, clusters and the blocks. It is therefore, important that the states and districts should initiate efforts for cluster and block level comparative analysis and share the findings with educational administrators and decision-makers at these levels and take emulative measures as may be necessary.

10. Internal efficiency

The low internal efficiency of the educational system has always been an area of concern in many countries. India is no exception. Crude estimates indicate that it requires inputs for about 7.1 years to produce a successful primary school graduate with 5 years of educational attainment⁶. The corresponding value is higher in some of the educationally backward states. However, if the levels of achievement are also taken into account, then the efficiency of the system will reduce further as not all children qualifying grade 5 attain the masterly level of competencies as defined under MLL.

The internal efficiency of the school system depends upon two factors, namely the drop-out rate and the repetition rate. The analysis of repetition rates for 1995-96 and 1996-97 were calculated using the following formula:

$$\text{Repetition rate in grade } g = 100 \times \frac{\text{Enrolment in grade } g \text{ at time } t}{\text{Repeaters in grade } g \text{ at time } (t+1)}.$$

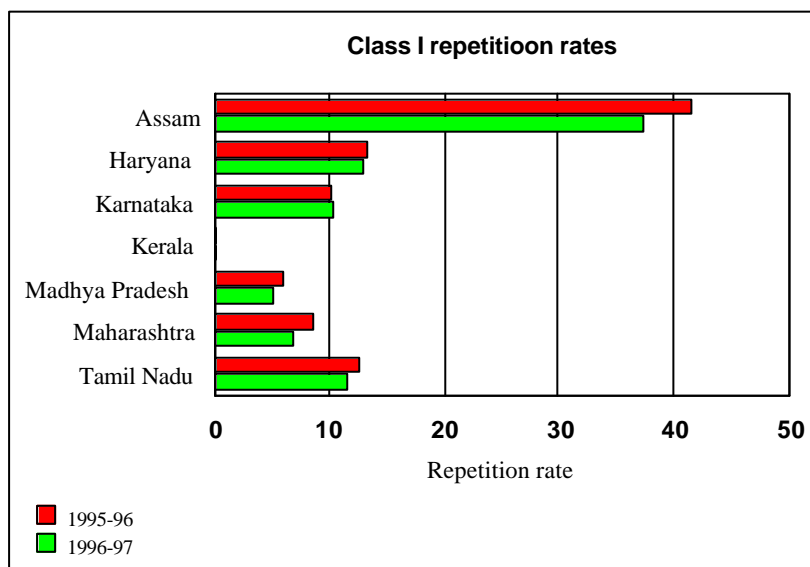
The repetition rate was calculated for all grades and for all 42 districts. Overall, there has been a marginal decline in the repetition rate from 8.39 percent in 1995-96 to 8.29 percent in 1996-97. Assam continues to have the highest repetition rates even in class I. This is largely due to admission of underage children who can not be promoted to grade II. The reasons for repetition at Grade I need further examination, as most of the states follow no detention policy. Under the policy, the students are not to be detailed on grounds of poor academic performance.

⁶ Author's estimates based on the classwise enrolment data for 1971-72 to 1993-94.

Table 7: Repetition Rates

State	Class I		Primary grades	
	1995-96	1996-97	1995-96	1996-97
Assam	41.72	37.63	27.76	28.89
Haryana	13.60	13.17	13.58	12.71
Karnataka	10.51	10.56	8.22	9.36
Kerala	0.31	0.21	4.95	4.59
Madhya Pradesh	6.22	5.23	5.78	5.65
Maharashtra	8.89	7.03	7.37	5.99
Tamil Nadu	12.88	11.81	11.05	10.13
All India	10.80	10.66	8.39	8.29

An effort was also made to examine the dropout rate based on the DISE data. However, it was found that for many districts, the enrolment in year (t+1) in grade (g+1) was higher than the corresponding enrolment in grade g in year t. This shows a significant amount of lateral entry at grades other than 1. The existence of this phenomenon was reported last year also⁷. Consequently a research study has been taken up by TSG to examine the phenomenon of lateral entry in the state of Haryana. It is also suggested that another research study should be undertaken to estimate drop-out rate by analysis using the true cohort method. The study could be undertaken for a small sample of schools in the selected districts.



11. Gross Enrolment Rate (GER)

GER is an important indicator of participation in education. GER uses age specific population in the denominator. In the case of primary education, it corresponds to the population in 6-9 or 6-10 years depending upon whether the primary education cycle is of four or five years. The estimates of age specific population are not available in

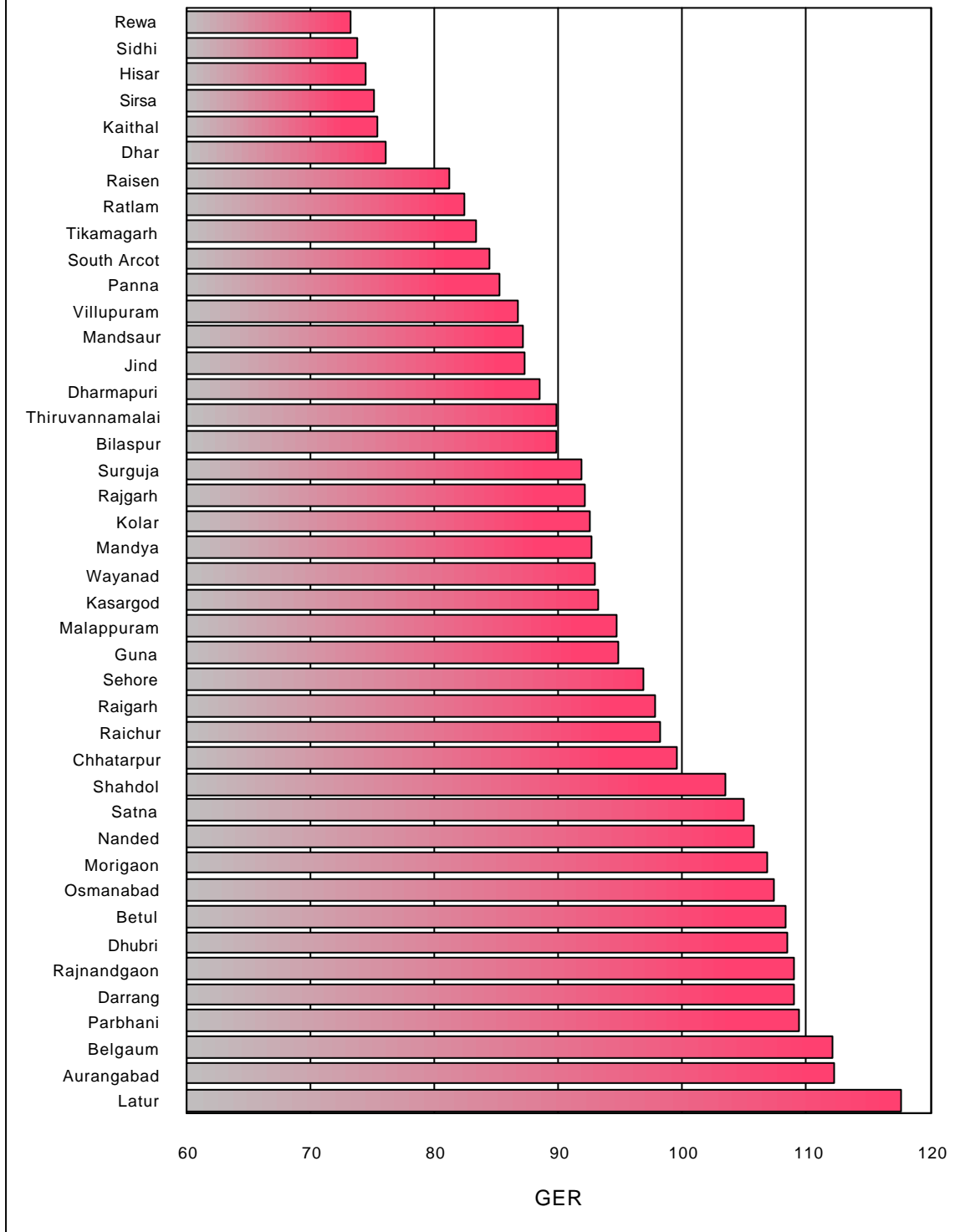
⁷ Aggarwal Yash (1997) *Access and retention: The Impact of DPEP, A National Overview*, Department of Education, MHRD, New Delhi.

consistent manner for all the districts. Moreover, no sound methodology has been established to undertake projection of population in various age groups at the district level. For the purpose of present study, we have used the growth rate method with 1991 population as the base population. The single year age distribution was used to estimate the districtwise population in 6-10/6-9 age group. The GER was calculated for the formal school enrolment (see table below).

Table 8: GER in DPEP districts

DPEP state	GER (formal schools)			GER Including AS
	1995-96	1996-97	1997-98	1997-98
Assam	79.1	105.2	108.4	108.4
Haryana	62.4	70.9	75.0	75.0
Karnataka	96.3	99.6	101.0	101.0
Kerala	90.5	97.9	94.2	94.2
Madhya Pradesh	80.1	86.6	85.8	91.0
Maharashtra	95.8	107.6	110.3	110.3
Tamil Nadu	82.5	85.7	85.0	85.0
All India	83.9	91.6	92.0	94.2

Ranking of DPEP Districts by GER, 1997-98



The average GER in the DPEP-I states varies from 75 percent in Haryana to 110.3 percent for Maharashtra. The average GER for all the DPEP districts was 83.9 percent in 1995-96, which increased to 91.6 percent in 1996-97. Because of the increased

emphasis on AS strategies, the GER for 1997-98 was 92 percent for the formal schools and 94.2 percent for enrolment including AS enrolment. It may be noted that still a group of the children learning through unrecognised private schools, non-formal education, night schools, voluntary efforts and other innovative efforts has not been included the above GER. If their number is included, the GER may be somewhat higher than what is projected here. As the DPEP progresses, the enrolment coverage may increase due to various efforts in formal, non-formal, Alternative Schools, EGS and private unrecognised schools. It may be worthwhile to study the share of each of these components in some selected districts on a sample basis.

Table 9 shows the distribution of district by GER (including AS enrolment). While there were as many as 17 districts for which GER was more than 95 percent, there were few districts for which GER were less than 75 percent. These were Sirsa in Haryana and Rewa and Sidhi in Madhya Pradesh.

Table 9: Distribution of Districts by GER

State	<75	75-85	85-95	>95	Total
Assam				3	3
Haryana	1	2	1		4
Karnataka			2	2	4
Kerala			3		3
Madhya Pradesh	2	1	9	7	19
Maharashtra				5	5
Tamil Nadu		4			4
All India	3	7	15	17	42

The above analysis of GER shows that while there have been improvements in enrolment and coverage over the years, there are large number of children who may still be out of school. In all probability, these are the children who are living in small habitations where access to school is poor and those children who are in difficult circumstances. Reaching these children requires innovative strategies like AS/EGS. Additionally, more needs to be done in terms of developing a locally relevant curriculum and training of teachers to handle first generation learners. It will also require still greater interaction between the school and community through frequent meeting of VECs and by strengthening women's groups and other community based agencies.

12. Concluding observations

The analysis of the data for the period 1995-96 to 1997-98 suggests consistent improvement in enrolment and retention including that of girls, SC and ST children and a steady progress towards achievement of DPEP goals in 42 districts covered under DPEP-I. It is also clear from the above analysis that a variety of innovative and cost-effective strategies will have to be evolved to reach the unreached in isolated and smaller habitations, habitations with large concentration of ST children and the areas having large concentration of working and disabled children. The traditional strategy

of providing formal school everywhere may not be a cost-effective way of improving access in certain areas. In this context, there are lessons to be learnt from the DPEP strategy of alternative models of providing access to children who had so far remained outside the reach of educational system. This should not mean that the formal schools will be neglected. As far as the formal schools are concerned, efforts should be continued to improve the resource utilisation, increase the internal efficiency to an optimal level and raise the quality of instruction so that the overall goals of DPEP can be realised.

The girls' participation and retention has improved considerably in the DPEP districts and significant progress has been made to reduce inequities in access and retention between boys and girls. The IGE is more than 95 for 21 of the 42 districts. In other districts, excepting five districts in Madhya Pradesh, the index shows near absence of inequities and is close to 95. The achievement in girls' enrolment as reflected in IGE is a positive step forward and need to be sustained.

The inequities in participation rates of SC, ST and others in primary education have tended to narrow down over the years. There are some geographical areas where the ST enrolment is below the desired level. The situation is improving as a result of the new innovative strategies like AS/EGS. The geographical pockets with specific problems of enrolment and retention for the ST children should be identified for possible interventions.

The study is confined to district level aggregates. It is necessary to undertake disaggregated analysis at the block and cluster level so that the regions with specific problems of enrolment and retention could also be identified. It is necessary that target group oriented and area specific approaches to educational planning should be strengthened.

While the AS/EGS has shown positive gains, especially for the children living in the smaller habitations, their sustainability needs to be ensured. Students to the extent of about 10 percent of the formal primary schools in the state of Madhya Pradesh have already been enrolled through AS/EGS. The initial gains have to be sustained and at the same time the quality of instruction has to be maintained so that the goals of MLL are realised. A systematic database for the AS/EGS also needs to be developed so that key performance indicators could be monitored over time.

The issues related to the quality and reliability of educational statistics collected through DISE are also being addressed. A sample survey has already been initiated in selected districts. The results are expected by the end of 1998 and will provide first hand estimate of reliability of data being collected through DISE.

Lateral entry has emerged as an issue for further research. A research study has already been initiated in Haryana. The study, when completed will throw insight into the magnitude and causes of lateral entry into various grades.

On the whole, the efforts to provide improved access in DPEP districts has succeeded but innovative and cost-effective strategies need to be pursued further so as to cover the marginalized, working children and children with disabilities. The retention is improving in most of the districts but more intensive efforts are required to accelerate the gains in the internal efficiency of educational system as a whole.
