

# Government and Private Schools

## Trends in Enrolment and Retention

*This paper examines disparities across government and private schools in two cities of Uttar Pradesh – Firozabad and Deoria. The study considered varied parameters – enrolment rates, retention rates, gender differentials – in an attempt to estimate out-of-school children in these districts. While the proportion of students in private schools has been consistently rising, the study found that government schools still score over private ones in several aspects, for instance attendance rates and issues of gender sensitivity.*

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### Introduction and Motivation

In an attempt to universalise primary education in the country, the Government of India launched the District Primary Education Programme (DPEP) in 1993. The objectives of the programme were to: (i) increase enrolment and retention; (ii) raise the quality of primary education in the country through district-designed activities; and (iii) make performance-based resource allocation specially tailored to meet local needs.

DPEP objectives were thus consistent with the goals for primary education in the country of increasing access, raising learning achievement and reducing inequalities and gaps among states and various sub-sections of the population.

While the goal of educational inequality among states and groups is addressed by DPEP, there are growing differences in quality within the Indian states between government and private schools, which has not received attention. In reality, there are substantial disparities between private and government schools in various aspects. Inputs like teaching infrastructure, student-teacher ratio, and performance measures such as student attendance, graduation rates are substantially better in private than in government schools. Naturally, rationality forces better-educated parents to send their children to private rather than government schools. This is quite curious in light of the fact that teachers in private schools are paid substantially lower than those in government schools.

Thus the government-private dichotomy in primary education is a question of open debate especially in large Indian states like Uttar Pradesh (UP), which is a low literary

rate and by the poor quality of government schools.

### Objectives

In the light of this debate, this study proposes to examine the differences between government and private schools. The specific objectives of the study are as follows:

(1) Examination of disparities across government and private schools with regard to various performance aspects. This involves:

(i) Study of enrolment rates for the past three years in government and private schools;

(ii) Examination of retention rates in government and private schools and

(iii) To look at gender differentials in (i) and (ii) above.

(2) Estimation of out of school children in the selected districts, Deoria and Firozabad in UP.

In this study, we make a comparative analysis of government and private schools with respect to enrolment and retention by analysing the trends for three years, i.e., 1997-98, 1998-99 and 1999-2000. Within private schools we compare recognised and unrecognised schools. We compare attendance and drop out by type of school and examine why children drop out of school. This study is based on analyses and description of primary data.

### Literature Survey

The literature has looked at enrolment, retention and out-of-school children in various DPEP districts. The closest to this study in the literature is a comparative analysis of government and private schools

in Gorakhpur and Saharanpur districts in UP [Singh 1998]. This study found that the enrolment rate was higher in government (class I) than in private schools. However performance (measured by the pass rate) was found to be better in private schools. The study attributed this to the regular homework given to students in private schools which it found to be absent in government schools.

Others [DRS 1999] have examined enrolment of children in government and private (recognised and unrecognised) schools and out-of-school children in villages in two districts of UP – Hardoi and Moradabad. The study found that 86 per cent of villages in Hardoi and 63 per cent of villages in Moradabad had just one school, with most of the villages having only one government primary school. The net enrolment rate was more or less the same across the districts (80 and 73 per cent in Hardoi and Moradabad). But the study found an overwhelming majority (75-79 per cent) of children enrolled in primary schools to be in government schools. However, different social groups were found to participate in different ways. The participation of scheduled castes (a socially oppressed group) in government schools was higher compared to their participation in private schools. The attendance rates were also only marginally lower in government schools when compared to private schools.

Some studies in the literature [Agarwal 1998] have used similar indicators as we have, looking at access and retention under DPEP over 1995-98, focusing on enrolment, equity and internal efficiency of the school system, in the DPEP Phase I districts. He found large interstate and inter-district variations in the student-classroom

ratio, with serious problems in Assam. He found that net enrolment was 9.4 per cent between 1995-96 and 1996-97 and 6.5 per cent between 1996-97 and 1997-98, with the share of girls in 42 DPEP districts increasing from 45 per cent in 1995-96 to 46.3 per cent in 1997-98. Over the period, the study found a marginal decline in repetition rates from 8.39 per cent to 8.29 per cent, with Assam having the highest repetition rates even in class I, which was largely due to admission of underage children who could not be promoted to class II. He finally found that the gross enrolment ratio for all DPEP districts was 83.9 per cent in 1995-96 which increased to 91.6 per cent in 1996-97, varying from 75 per cent in Haryana to 110 per cent for Maharashtra.

An interesting study [Dreze and Gazdar 1996] reports the findings of an informal field investigation of the functioning of private and government primary schools in rural Uttar Pradesh, covering 16 villages in four different districts: Moradabad, Rae Bareilly, Pratapgarh and Banda. With respect to enrolment and attendance, Dreze and Gazdar noted only 50 per cent attendance in the sample schools. High level of absenteeism was found during periods of high activity in the agricultural cycle. Female enrolment and attendance was about one-third of all children. In contrast, private schools (only recognised) had high attendance and low dropout rates, characterised by significant dominance of male students.

As may be noted from the brief review, this study is a contribution to the literature. It proposes to examine enrolment and retention (taking into account attendance and dropout) for three consecutive years in two DPEP II districts in UP based on primary data and estimates out-of-school children in these two districts based on secondary data. We also examine differences across various schools in school and classroom infrastructure, teacher quality and their instructional methods, since these factors are explanations of enrolment and retention [Sridhar and Singh 1999].

## Data Collection

We collect primary data through survey at the school-level from a sample of government and private schools in the chosen districts of the state, Deoria and Firozabad.<sup>1</sup> Consistent with the objectives of the study, we collect data regarding schools' enrolment, attendance, and dropout. In addition,

we also collect primary data on teacher quality (their academic and professional qualifications), teachers' classroom practices such as giving exercises, teaching time, maintenance of discipline, providing feedback, and supervision of students, and teachers' use of various instructional methods and processes. We collect these additional data because we believe that these are the explanations of enrolment and retention. In addition to these quantitative data, we collect qualitative information on the reasons for children to dropout of school.

## Sampling

We choose a sample of 54 government and 48 private (recognised and unrecognised) schools in random blocks of Deoria and Firozabad districts in the state (UP) for our study. We expect the schools to be varied within each group (government and private). This stratified random sampling strategy removes any bias that could arise from selection of just well-performing private schools or only poor-performing government schools. We expect such sampling to give us relatively realistic results. Within the blocks, the schools are chosen randomly either according to the alphabetical order in which they are listed with the state education department, or in order of their proximity to each other. Since we study schools within a single state (UP), we also effectively control for all factors like fiscal resources, social and political culture that determine the quality of education across states. Since government schools to be chosen in districts are under the DPEP II

programme they are somewhat comparable to private schools in terms of amenities.

In Deoria, schools are chosen in the following blocks: Baitalpur and Rampur Karkhana. The blocks chosen in Firozabad are: Shikohabad and Tundla. Table 1 provides information regarding the schools that participated in the study. As the table shows, there are 50 schools in the sample from Deoria, and 52 schools from Firozabad. Thus out of the total of 102 schools we survey, 54 are government, and 48 are private schools of which, 27 are recognised and 21 unrecognised.

## Findings from the Study

### Demographic Patterns of Enrolment in Class I

If we examine the change in class I enrolment over 1997-98/1998-99 and 1998-99/1999-2000 by type of school (Table 2), we observe declines for government schools whereas private recognised schools experienced growth over the period. If we observe the trend in the enrolment of class I for all types of schools, it has by and large decreased, suggesting that population of the age of six years could be decreasing or stagnating.

Based on the demographic pattern including gender differentials for class I enrolment over the years (Table 2), we find a clear trend that enrolment has consistently declined. This trend is consistent with earlier analysis in other states [Agarwal 1999]. The declining trend has been observed in DPEP I as well as DPEP II districts.

The decline in class I enrolment could be attributed to two reasons, one due to decline in the intake and another due to decline in the number of children in the age group 6-11 years. In terms of the proportion of female enrolment, we observe a slow but rising trend. The proportion of minority enrolment has also wit-

**Table 1: Sample of Schools by Type and District**

	Deoria	Firozabad	All
Government	26	28	54
Private	24	24	48
Private recognised	13	14	27
Private unrecognised	11	10	21
All schools	50	52	102

**Table 2: Trends in Class Enrolment for Government and Private Schools**

	All Classes: Percentage Change in Enrolment		Class I: Percentage Change in Enrolment	
	1997-98 to 1998-99	1998-99 to 1999-2000	1997-98 to 1998-99	1998-99 to 1999-2000
Government	0.51	-3.78	-12.23	-16.30
All private	10.68	10.00	14.98	-2.22
Private recognised	3.90	10.86	10.43	3.29
Private unrecognised	23.67	8.63	22.81	-10.76
All schools	4.30	1.66	-3.86	-11.11

nessed growth over the study period, which is consistent with social objectives.

### Enrolment in All Classes

When we studied enrolment in all primary classes by gender and caste for all the schools in our sample over the study period, we found that there was a greater increase in the total enrolment in over 1997-98/1998-99, compared to that over 1998-99/1999-2000 (Tables 3 and 4). The enrolment of OBC male students has seen a declining trend. The enrolment of SC/ST and minorities has increased over the period of our study. This could be due to many reasons. First, the trend could reflect an increase in the self-interest of these groups for upliftment. Secondly, incentives like scholarship have induced their enrolment. Female enrolment has witnessed an upward trend, but is lower than male enrolment in all the years of our study period. One explanation of the trend may be that parents of girls choose better schools that are not covered by the survey. Alternatively, due to higher literacy rate and the consequent low birth rate, female population in the school-going age could be declining.

When we examine enrolment trends by gender differentials and school type, it is encouraging to note that government schools are more responsive to gender equity issues than private schools. We have found that government schools have higher female enrolment than private schools for all the years in our study period. Private recognised schools have lower female enrolment as compared to unrecognised schools.

Table 3 reports trends in change in enrolments by gender differentials and by school type, over 1997-98/1998-99.<sup>2</sup> The total enrolment over 1997-98/1998-99 increased by a small amount in government schools. Particularly, enrolment of male SC/ST and minorities increased over the period. However we find that minority enrolment declined in private schools. This testifies to the fact that private schools do not provide incentives to their minority students. Alternatively, minority children may not find it easy to adjust with a large number of peers with diverse background. In some cases, practices in the school may be such that minority community students may feel repelled. OBC girls have shown large increase in enrolment in private schools. Private unrecognised schools are quite popular to children from all communities.

Table 4 presents enrolment change from 1998-99 to 1999-2000 by school type. In

government schools the total enrolment declined. OBC children consistently showed their preference for private unrecognised schools as compared to private recognised schools. The increase in enrolment in private schools explains why government schools are witnessing a declining trend in OBC enrolment. The reasons are simple. Now schools are run like companies. Parents and their children are customers who prefer high product quality and customer service. Private unrecognised schools equipped with better infrastructure/or using better classroom processes to teach children attract more students than their government counterparts.

Private schools witnessed a decline in minorities and SC/ST enrolment over 1998-99/1999-00, with this decline accounted for by recognised schools. In terms of quality of education these schools are probably like government schools but they may be charging higher fees. Related research [Singh and Sridhar 2000] has found that enrolment responds negatively to fees, as one would expect. The SC/ST enrolment has also declined marginally suggesting that the economic or social burden on the families of SC/ST children and families because of joining private schools may be high and so SC/ST prefer to enroll in the government schools where fees are nominal. Even in the year 1999-2000, enrolment of minorities in private unrecognised schools increased

considerably suggesting their continuing popularity.

Table 5 presents the trend of enrolment over the three years in the government and private schools. The table indicates a declining trend in enrolment in government schools. The proportion of enrolment in private schools is rising, with private recognised schools accounting for 10 per cent more enrolment than unrecognised schools. When we asked the teachers of government schools regarding children going to private schools, they were of the view that desire of English taught in private schools were making these children turn away from government schools.

### Retention: Attendance

The attendance rate is an indicator of retention in school. However, data on attendance suffer from inadequacy as quite often teachers have tendency to mark a large proportion of students present even if they have not actually attended the school. Certain incentives like scholarship and mid day meals are dependent on the proportion of attendance, thus there frequently exist parental pressures to mark children present, even if they are actually absent. Therefore we assumed the day of our visit to the school as a typical day and took the number of students present in class on that day as the number regularly attending school of those that were enrolled. This measure has

**Table 3: Trends in Class Enrolment by Gender Differentials and by School Type, 1997-98 to 1998-99**  
(Percentage)

	Government	Private	Private Recognised	Private Unrecognised	All Schools
Total enrolment	0.51	10.68	3.90	23.67	4.30
Male	-4.15	9.29	2.45	23.83	1.26
OBC	-5.78	10.24	5.57	20.99	0.42
SC/ST	4.21	13.84	4.48	27.21	8.00
Minorities	7.62	-06	-11.38	15.84	2.91
Female	5.92	12.85	6.39	23.45	8.23
OBC	3.87	19.02	22.22	13.42	8.34
SC/ST	78	16.78	3.68	33.41	9.66
Minorities	29.35	-2.59	-7.83	16.13	15.46

**Table 4: Trends in Class Enrolment by Gender Differentials and by School Type, 1998-99 to 1999-2000**  
(Percentage)

	Government	Private	Private Recognised	Private Unrecognised	All Schools
Total enrolment	-3.78	10.00	10.86	8.63	1.66
Male	-4.14	7.72	9.23	5.05	1.01
OBC	-14.62	6.57	0.89	17.98	-5.62
SC/ST	8.40	-0.56	1.51	-3.00	4.68
Minorities	9.48	-5.57	-18.24	26.50	4.32
Female	-3.41	13.46	13.53	13.36	2.45
OBC	-13.51	12.57	2.09	32.35	-5.07
SC/ST	11.34	4.54	4.91	4.17	8.78
Minorities	11.34	-24.88	-45.10	32.41	-1.95



the following advantages: first, given that our visit to schools was chosen randomly, this has the advantage that it represents any working day in the year and second, this measure overcame the problem of false reporting by teachers regarding attendance for reasons mentioned above.

Tables 6 and 7 present the summary of attendance data by gender differentials.<sup>3</sup> Out of the total enrolment of 22,433 students in our sample schools during 1999-2000, 17,384 (75 per cent) were attending classes on the day of our field visit. If we disaggregate the pattern of attendance for government and private schools separately, we find that greater number of students in government schools attended school when compared to their counterparts in private schools where only 73 per cent of those enrolled were found to be attending school. This finding is peculiar given that parents pay more in private schools.

If we compare gender differential by type of school on attendance data, we find that there is very low gender differential in government schools when compared to their private counterparts. In private recognised schools, this differential is very high. The low gender differential in government schools could be due to encouragement of female teachers in government schools.

Table 8 presents trends of change in attendance by school type. The percentage increase in attendance over 1997-98/1998-99 was 5.51 per cent for all schools. It increased by 1.89 per cent for government schools suggesting that the attendance pattern has more or less stabilised. In the private schools, attendance increased by 12 per cent over the same period with a major part of the increase being due to private unrecognised schools in the sample. This is consistent with the finding that enrolment in the private unrecognised schools has also been increasing compared to government and private recognised schools. This trend suggests that private unrecognised schools make their school environment more attractive for children to go to school. In our concluding section, we highlight what government schools can do to function more effectively.

### Retention: Dropout

Retention has two components to it – attendance and dropout. Long-run absenteeism frequently results in dropout. In this study, we have looked at dropout by school type and have examined the causes underlying dropouts.

Table 9 summarises drop out data for class I and other primary classes by school type for 1999-2000. In government schools drop out as per cent of enrolment in class I is 5.23 per cent. This means five students out of every 100 leave school in the first year of entry. Perhaps these children were not ready for a school environment and the load of curriculum. These children may not have developed even basic literacy and numeracy. Thus this part may be treated as a drain on the school system. If motivation is the problem, then preprimary schooling, which exposes children to a school environment without the burden of curricular load may be helpful to reduce this drop out.

When compared to government schools, the incidence of drop out in private schools is very low. It is a little more than half per cent in private schools showing that children studying in private schools persist longer, and are less likely to drop out. The cause for this may be that student socio-economic characteristics and family education systematically vary with the type of school they attend. Thus parental motivation may also be a reason for such a finding apart from children's own interest. In private unrecognised schools, the proportion of dropout is almost negligible reflecting these factors.

The extent of drop out in other primary classes is 7 per cent in government schools as of 1999-2000. Again as with class I, this is much higher compared to private schools. The finding, as expected, is that private schools are able to retain their children even when the fee structure is much higher when compared to government schools.

Further analysis suggests that a large proportion of drop out in private schools is accounted for by private recognised schools, suggesting that retention rate of private unrecognised schools are better than private recognised and government schools. The proportion of drop out in

**Table 7: Attendance as a Proportion of Enrolment by School Type, 1999-2000**

School Type	Attendance as Percentage of Enrolment
Government	80.82
All private	73.04
Private recognised	72.35
Private unrecognised	74.16
All schools	77.49

**Table 8: Trends in Attendance by School Type**

	All Classes: Percentage Change in Attendance	
	1997-98 to 1998-99	1998-99 to 1999-2000
Government	1.89	-0.86
All private	11.98	8.07
Private recognised	3.40	5.98
Private unrecognised	30.23	11.61
All schools	5.51	3.54

**Table 9: Dropout as a Proportion of Enrolment by School Type, 1999-2000**

	Dropout Percentage of Enrolment	
	Class I	Other Primary Classes
Government	5.23	7.22
All private	0.59	2.26
Private recognised	0.85	3.65
Private unrecognised	0.13	0.04
All schools	3.35	5.05

**Table 5: Total Enrolment in Government and Private Schools by Year**

	1997-98	Percentage	1998-99	Percentage	1999-00	Percentage
Government	13280	62.77	13348	60.49	12843	57.25
All private (recognised and unrecognised)	7877	37.23	8718	39.51	9590	42.75
Private recognised	5177	24.47	5379	24.38	5963	26.58
Private unrecognised	2700	12.76	3339	15.13	3627	16.17
All schools	21157		22066		22433	

**Table 6: Attendance by School Type and Gender Differentials, 1999-2000**

	Government	Private	Private Recognised	Private Unrecognised	All
Total attendance	10380	7004	4314	2690	17384
Male (per cent)	51.55	58.79	61.48	54.47	54.47
OBC (per cent)	22.28	26.98	29.04	23.66	24.17
SC/ST (per cent)	18.17	17.20	102	20.70	17.78
Minorities (per cent)	7.17	4.50	4.66	4.24	6.09
Female (per cent)	48.45	41.21	38.52	45.53	45.53
OBC (per cent)	22.39	19.19	20.04	17.82	21.10
SC/ST (per cent)	16.45	14.32	11.78	18.40	15.60
Minorities (per cent)	7.09	3.43	3.47	3.36	5.61

private unrecognised schools is almost negligible.

Table 10 presents drop out by gender and demographic categories for 1999-2000. The biggest group dropping out of all schools is OBC (both male and female) followed by SC/ST and minorities. It is somewhat curious that in private schools male drop out is significantly higher than female dropout. Again, as we expect, the distribution of dropout is concentrated only in recognised private schools, indicating higher retention in private unrecognised schools.

Percentage changes in drop out over the study period are summarised in Table 11. The table suggests that the rate of drop out reduced in government schools by 2.5 per cent over 1997-98/1998-99. However, dropout is particularly very high in private recognised schools over this period,<sup>4</sup> thus overall drop out for all schools in the sample is 11.46 per cent. In 1999-2000, the overall trend of dropout for all schools is negative (with the largest decline in dropout being in private unrecognised schools) suggesting an increase in retention over this period. Private unrecognised schools are running their schools as a business thus they are trying to serve the students well in order to retain them till the completion of their primary school life cycle.

### Reasons for Drop Out

We explored reasons for drop out from schools through a structured survey. Respondents were primarily parents or close relatives of dropped out students. When parents and close relatives were not available, information was collected from teachers of dropped out students or from public representatives (pradhan, BDC member, or village education committee (VEC) member). In many cases we were unable to find responses, because of lack of adequate knowledge about the dropout and his/her background.

The data we obtained have been analysed by school type (Table 12). Our survey question related to why the child dropped out, with a series of reasons listed. A large proportion of children in government schools dropped out for doing household work. This is a major cause of drop out even in private schools. Other major reasons for dropping out from schools was the child's own motivation. That the children lacked motivation was cited as a cause of dropout by slightly less than half of the

respondents in government schools. Strangely, more than 55 per cent of respondents from private recognised schools reported low motivation as a cause of dropout.

Our findings suggest that while the child is not motivated to go to school, there could be more reasons for him/her to stay back home. The most important implication arising out of this is for schools to explore what motivates children to remain in school. Antecedents to child motivation could be lack of teaching in the schools, and the perceived need to work hard in the school, and irrelevant and boring curriculum. We need to acknowledge that children are not the best judges of what is good for them. But if the phenomenon seems to be occurring at an aggregate level for certain types of school, it is probably time we start taking these trends seriously.

The trend in government and private recognised schools are similar, but in private unrecognised schools, there are no reasons related to child motivation, that are attributed to dropout. In private unrecognised schools, reasons for drop out appear to be related to parental motivation and irrelevant curriculum. Factors relating to parental motivation reflect in parental interest in education, participation of children in household work, care of siblings or helping them in their work/vocation. This suggests that parents may be targeted through training/counselling for encouragement to send their children to school. Alternatively, government and private recognised schools need to make the pedagogy of teaching more appealing to the students. This need not mean dilution of the content or rigour of the curriculum, but more innovative ways of communication that do not pressure children at a young age. Additionally, other forms of remedy could be to institute some vocational forms of training after the basic needs of reading, writing and counting have been attained. This is also consistent

with findings from studies on informal training and entrepreneurship.

### Teachers

Teachers are the most critical resource in the education system. Thus understanding teacher requirements is critical to meeting increasing enrolment in government and private schools. In order to optimise the use of teachers for teaching learning process, state governments have fixed certain norms. Ideally, one teacher per class should be the norm. A pupil teacher ratio of 40:1, implying a teacher for every 40 students, is considered ideal. We report how these resources are available in our sample (Table 13).

In the schools in our sample, student-teacher ratio in government schools is 64:1 whereas private schools have a teacher for every 36 students. In private recognised schools, this ratio is 35:1 and in unrecognised private schools there is a teacher for every 38 students. Thus private schools meet requirements for the student-teacher ratio. If government schools have to meet the target of 40:1 they have to raise the existing teachers' strength by 50 per cent.

The student-classroom ratio is another indicator of school infrastructure. For government schools in our sample, this ratio is 87:1, and for private schools, it is 43:1. Private unrecognised schools have one classroom for every 47 students, but they need to augment the infrastructure.

The available teacher-classroom ratio in Table 13 also suggests that teachers are

**Table 11: Trends in Dropout by School Type**

	All Classes: Percentage Change in Dropout	
	1997-98 to 1998-99	1998-99 to 1999-2000
Government	-2.50	-7.80
All private	169.33	-10.89
Private recognised	180.88	-6.81
Private unrecognised	57.14	-81.82
All schools	11.46	-8.61

**Table 10: Dropout by School Type and Gender Differentials (All Classes), 1999-2000**

	Government	Private	Private Recognised	Private Unrecognised	All
Total dropout	863	180	178	2	1040
Male (per cent)	50.98	58.33	57.87	100.00	52.12
OBC (per cent)	29.90	21.67	21.35	50.00	28.56
SC/ST (per cent)	12.98	21.11	20.79	50.00	14.42
Minorities (per cent)	6.49	15.56	15.73	0.00	8.08
Female (per cent)	49.02	41.67	42.13	0.00	47.88
OBC (per cent)	29.32	16.11	16.29	0.00	27.12
SC/ST (per cent)	12.28	8.33	8.43	0.00	11.63
Minorities (per cent)	5.91	9.44	9.55	0.00	6.54

numerous relative to classrooms. The World Bank stipulates that there has to be a classroom available for every teacher. In our survey we did not collect information on class sections. But the evidence is that in a majority of UP schools, the section-teacher ratio is less than 1, suggesting that one teacher has to look after more than one section.

Thus while the differences between government and private schools are not significant for teacher-classroom resources, government schools lag behind private schools significantly in terms of their teachers and classroom infrastructure.

### School Infrastructure

The effort to enhance enrolment has stimulated parental interest in schooling, and enrolment resultantly increased so much so that school infrastructure has become inadequate. This can negatively impact learning achievement resulting in dropout. Because of their potential implications, we examined basic necessities like number of classrooms, blackboards, educational infrastructure, toilet, water supply and electricity in the sample schools of our study.

Table 14 presents summary of school infrastructure for 1999-2000 by type of school. Most (94 per cent) of the government schools in our sample had their own building when compared to private schools. Schools not having their own building were using rented premises. Government schools have poor library infrastructure, with only 9 per cent of them having libraries, whereas one-fourth of private schools have libraries. This is a finding that calls for earmarked funds for school libraries in government schools, so that their students are encouraged to read beyond the prescribed curriculum.

Open fields in front of the school are used for playing and other school activity. Sixty-three per cent of the government schools and 60 per cent of the private schools in our sample had playground with only 58 per cent of the private unrecognised schools having such an open field. Schools must be given incentives to obtain land at attractive leasing rates as play is an integral part of education. More government schools have hand pumps (89 per cent) in their premises than private schools (82 per cent). Private unrecognised schools could be using other sources of drinking water as only 74 per cent of the school have their own hand pumps.

It appeared that government schools in our sample faced acute shortage of electricity. This is one reason that explains the lack of use of aids such as overhead projector and video in government schools that facilitate effective learning. We also found that the government schools were highly inadequate in terms of health care services offered to students. Only 2 per cent of the government schools in the sample had access to a first-aid kit when compared to more than 30 per cent of private schools that had a first aid kit.

Thus government schools need to initiate action to augment their library resources, sports facility, electricity and

health care facilities. There is considerable scope for improvement in these areas in private schools also.

Classroom infrastructure includes blackboard, table, chairs for teachers and students, science kit, math kit, maps, among others. Table 15 presents a summary of this infrastructure for 1999-2000 by school type. Government schools, it seems, have better classroom infrastructure than private schools. The only area where private schools are better equipped is the proportion of classrooms with maps, globe, teaching chart, science kit and math kits. Compared to private recognised schools, private unrecognised schools need to augment

**Table 12: Reasons for Dropout by School Type, (Percentage)**

	Government	All Private	Private Recognised	Private Unrecognised	All Schools
Doing household work	49.38	42.11	50.00	20.00	48.00
Taking care of siblings	32.10	31.58	42.86	0.00	32.00
Parents not interested	32.10	36.84	50.00	0.00	33.00
Parents not educated	16.05	31.58	42.86	0.00	19.00
Has to be married	7.41	0.00	0.00	0.00	6.06
Help parents with their work	30.86	36.84	28.57	60.00	32.00
Cannot afford to send him/her to school	19.75	15.79	14.29	20.00	19.00
No female teachers in school	0.00	10.53	14.29	0.00	2.00
School timings not suitable	0.00	0.00	0.00	0.00	0.00
Irrelevant curriculum	8.64	5.26	0.00	20.00	8.00
No separate school for girls	1.23	0.00	0.00	0.00	1.00
Teachers' unethical practices	3.70	0.00	0.00	0.00	3.00
No teaching goes on in school	9.88	0.00	0.00	0.00	8.00
School located very far	6.17	0.00	0.00	0.00	5.00
Not safe	0.00	0.00	0.00	0.00	0.00
Other responsibilities at home	15.00	36.84	28.57	60.00	19.19
Child not keeping good health	1.23	0.00	0.00	0.00	1.00
Teachers get their personal work done by students	0.00	0.00	0.00	0.00	0.00
Has to work hard	7.41	31.58	37.1	20.00	12.00
Child not motivated	48.15	42.11	57.14	0.00	47.00

**Table 13: Availability and Requirements of Classrooms, Students and Teachers by School Type, 1999-2000**

Indicator	Requirements	Availability				
		Government	Private	Private (R)	Private (U)	All
Student-teacher ratio	42:1 (Assumption)	64:1	36:1	35:1	38:1	48:1
Student-classroom ratio	40:1 (World Bank estimate)	87:1	43:1	41:1	47:1	61:1
Teacher-classroom ratio	1:1 (World Bank estimate)	1.4:1	1.2:1	1.2:1	1.2:1	1.3:1

**Table 14: Availability of Infrastructure by School Type, 1999-2000 (Percentage)**

Item	Government	Private	Private (R)	Private (U)	All
School have own building	94.44	80.00	88.46	68.42	87.88
Library	9.26	26.09	22.22	31.58	17.00
Playground	62.96	60.00	61.54	57.89	61.62
Facility for sports	11.11	33.33	38.46	26.32	21.21
Infrastructure for cultural activity (piano, tabla, etc)	9.26	20.00	26.92	10.53	14.14
Ringing bell	74.07	75.56	76.92	73.68	74.75
Own hand pump in premises	88.89	82.22	88.46	73.68	85.86
Electricity	1.85	40.00	46.15	31.58	19.19
Separate toilets for boys and girls	42.59	28.89	38.46	179	36.36
First-aid kit in school	1.85	33.33	34.62	31.58	16.16

their classroom infrastructure more, as they need to increase infrastructure for seating as well as for teaching in terms of varied teaching-learning material.

### Teacher Quality

Teacher quality and motivation have a significant impact on the learning achievement of students and hence on enrolment and retention. We examine the qualitative implications of teacher resources available by school type. For this, we examine the academic and professional qualifications and the salary of teachers across various types of schools.

Teachers of private schools have higher average educational qualifications as the proportion of graduates is higher among private schools (Table 16). The findings are consistent with those in Singh and Yadav (1995) suggesting that the average educational attainment has been increasing. This pattern may be due to older teachers in government schools as compared to younger ones in private schools. However, as far as teacher training is concerned, private schools lag behind drastically. Table 16 shows that only 36 per cent of the teachers are trained teachers, with the remaining 64 per cent not having any kind of professional training. Quite contrary to this, most of the teachers in government schools are given two years pre-service training and government schools insist on pre-service training. Consistent with this, 89 per cent of the government teachers in our sample have some kind of training to become a learned teacher. The most popular training is BTC, which is completed by 70 per cent of teachers, with 19 per cent of the government schools' teachers having other training. Thus the supply of trained teachers in government schools is much better than their private counter parts. Private school teachers are young and usually join schools as a temporary arrangement while they look for better alternatives and other careers. This probably explains the lack of training for many private school teachers.

Table 17 suggests a huge salary differential between government and private school teachers. Teachers of private schools are grossly under paid. On average, private school teachers get only 20 per cent of government teachers' salary. Even worse, the average salary of the teachers of private unrecognised schools is only 14 per cent the government teacher's average salary. This condition reflects unemployment

among educated youth and lack of sufficient employment opportunities in the two districts of the state. We may surmise then that private school teachers are more qualified educationally, but less trained for taking up primary school teaching job and grossly under paid.

There are no significant differences across government and private schools in the working days per year or teacher attendance per week suggesting no significant differences in teacher motivation levels.

### Classroom Practices

Apart from their academic and professional training, we also compared teachers' classroom practices and use of various instructional methods by school type, to examine their quality.

Classroom practices have been compared across school type (Table 18). Table 18 shows no major difference in government and private schools regarding time devoted to various activities and the number of exercises given to the students. This is surprising given the varied learning

achievement levels of government and private school students that we found in related research [Sridhar and Singh 2000].

### Instructional Methods

The teacher's preference/skill largely determine the method and pedagogy used by him/her. We examined in our study how often teachers used various instructional methods by school type.

We questioned teachers in various schools regarding the use of demonstration, field trips, game-type activity, peer teaching, self-evaluation, discussion, use of observation, discovering principles, and use of guest/outside speakers in their teaching. We found that demonstration, field trips, films, peer-teaching, discussion and game-type activities are rarely used by either type of school in our sample. This implies that classroom sessions in any of these schools are usually not interactive. We find only the use of questioning as an instructional process in both government and private schools (Table 19). Perhaps this is one of the most popular and widely

**Table 15: Availability of Classroom Infrastructure by School Type, 1999-2000**

Item	Government	Private	Private (R)	Private (U)	All
Total number of classrooms	148	221	144	77	369
Proportion of classrooms with blackboards (per cent)	93.24	84.62	88.89	76.62	88.08
Proportion of classrooms with table/chair for teachers (per cent)	89.19	85.97	94.44	70.13	87.26
Proportion of classrooms with table/chair/jute mat/carpet for students (per cent)	97.97	77.38	79.17	74.03	85.64
Proportion of classrooms with maps, globe, teaching chart, science, and maths kit (per cent)	381	48.42	57.64	31.17	43.36

**Table 16: Proportion of Teachers with Academic and Professional Qualification by School Type**

	Government	Private	Private Recognised	Private Unrecognised	All Schools
Total teachers, 1999-00	200	267	171	96	467
<b>Proportion of teachers with</b>					
Academic qualification (per cent)					
10th Standard	98.51	100.00	100.00	100.00	99.65
12th Standard	89.35	98.59	98.13	98.94	96.57
Bachelor's degree	51.92	60.24	57.21	68.08	56.99
Master's degree	29.17	22.95	23.70	24.66	23.28
Professional Qualification (per cent)					
BTC	70	9	12	4	35
BEEd	13	24	23	25	19
Other (JTC, HTC, CT, Min exam, Bped, IGD)(per cent)	6	3	5	1	4

**Table 17: Average Salary, Working Days and Teacher Attendance by School Type**

	Government	Private	Private Recognised	Private Unrecognised	All Schools
Average salary	5,529	1,123.9	1,394.2	772.5	3,480.5
Average working days per year	221.4	221.1	219.4	223.3	221.2
Average teacher attendance per week	3	3	3	4	3



used techniques to elicit the response of students and know what they have learned and retained. Both government and private school teachers use questioning with high frequency. Reading is the next most popular pedagogy used in more than 80 per cent government and private schools (Table 20).

Finally, display and exhibition (Table 21) as a teaching method have not got the attention they deserve from primary school teachers. Despite the training given by DPEP, display and exhibition are rarely or are never used by more than 80 per cent of schools. Only a small proportion (less than 10 per cent) of government and private (13 per cent) schools used this method sometimes.

These findings imply that teachers in all the schools, primarily government schools in our sample, rely on primitive methods of teaching that do not display or demonstrate principles, with little peer-teaching or newspapers and/or magazines. The only exceptions are game-type activity, questioning and reading that testify to the traditional pedagogical methods of teaching that go on in these schools.

### Estimation of Out-of-School Children

Traditionally, statistics on enrolment and out-of-school children are required to assess need for resources like classrooms, teachers, textbooks and other instructional material. However, these statistics are fraught with underestimation because of several reasons:

- (1) It is based only on recognised government schools. A sizeable number of students enrolled in private schools is not recognised by their concerned state governments.
- (2) The other problem with government statistics is that under age children also get-enrolled, increasing enrolment.
- (3) PROBE (1999) observed additional problems in enrolment figures as teachers used the following means to inflate enrolments; (i) under-age enrolment; (ii) nominal enrolment; (iii) duplicate enrolment and (iv) fake enrolment.

Our field experience suggested that under-age enrolment and duplicate enrolment were prevalent. In some government schools, when we examined student attendance in the presence of teachers, the children themselves admitted that their friends registered in that particular school, were actually studying in montessori schools nearby. Similarly private unrecognised schools maintained relationship with

government schools so that their class V children could get school transfer certificates from a recognised school at the end of primary school education. Dreze and Sen (1997) also report similar findings based on their study of two other districts in UP.

Due to these difficulties, it is really problematic to make an accurate estimate of out-of-school children. Efforts to estimate out-of-school children have been made in the National Sample Survey and through household surveys quoted in Agarwal (1999) and by PROBE survey team. The Table 23 below summarises the various estimates that have been made regarding out-of-school children.

Study	Estimate (Per Cent)
Government of India (MHRD) (6-11 years)	39
42nd round of NSSO, 1986 (6-11 years)	55
52nd round of NSSO, 1995-96 (6-11 years)	26.3
PROBE report, 1995-96 (6-14 years)	19

We find from our secondary data that the 'School Chalo Abhiyan' in Firozabad district of the state was successful. They report 1,137 children as being out of school. But we think that this is underestimated. Thus we have decided to depend on EMIS data and our own primary data on estimates of school-going population and dropout, to arrive at the estimate of out-of-school children in the two districts of our study.

The net enrolment ratio has been taken as the base for calculating out of school children. We have used the following formula to arrive at our estimate of out-of-school children:

Out-of-school children (in percentage) = Estimated out-of-school children [(100 – Net enrolment ratio (secondary data for district)) + [percentage dropout based on primary data for government schools in districts] – [Estimated proportion of school-going children enrolled

**Table 18: Teachers' Classroom Practices by School Type**

	Government	Private	Private Recognised	Private Unrecognised	All Schools
Average time (in minutes) teacher spends in school everyday	198.9	195	197.0	193.6	197.3
Time/day spent in teaching (per cent)	65	64	63	65	64
Time/day spent in academic activity (Reading, Correction, Supervision) (per cent)	25	28	29	27	27
Time/day spent in administrative activity (Meetings) (per cent)	6	6	5	6	6
Time/day spent in other activity (per cent)	4	2	3	1	3
Average exercises/week given to students	3.4	3.2	3.1	3.3	3.3

**Table 19: Use of Questioning as an Instructional Process by School Type (in percentage)**

	Government	Private	Private Recognised	Private Unrecognised	All Schools
Never	12.96	6.25	11.11	5.00	9.80
Rare	3.70	10.42	11.11	9.52	6.86
Sometimes	31.48	10.42	14.81	4.76	21.57
Often	44.44	50.00	44.44	57.14	47.06
Very Often	7.41	22.92	18.52	28.57	14.71

**Table 20: Use of Reading as an Instructional Process by School Type (in percentage)**

	Government	Private	Private Recognised	Private Unrecognised	All
Never	9.26	6.25	7.41	4.76	7.84
Rare	9.26	6.25	7.41	4.76	7.84
Sometimes	18.52	8.33	11.11	4.76	13.73
Often	35.19	43.75	37.04	52.38	39.22
Very Often	27.78	35.42	37.04	33.33	31.37

**Table 21: Display and Exhibition as an Instructional Process by School Type (in percentage)**

	Government	Private	Private Recognised	Private Unrecognised	All
Never	81.48	79.17	77.78	80.95	80.39
Rare	5.56	4.17	3.70	4.76	4.90
Sometimes	9.26	12.50	11.11	14.29	10.78
Often	3.70	4.17	7.41	.00	3.92
Very Often	.00	.00	.00	.00	.00

in private schools (based on primary data for the districts)).

In the above equation, one may note that we are adjusting the estimated out of school children published by the government, by taking into account the following:

- (1) The proportion dropping out of government schools (based on primary data collected by us and secondary data for the two districts);
- (2) Those enrolled in private schools, since private school enrolment does not get accounted in the net enrolment ratio published by the government.

Table 22 shows values substituted for the equation above. Thus we estimate that 8 per cent of children in the school-going age-group are out of school in Firozabad and 24 per cent of children in Deoria.

At the all India level, the estimated population in the school-going age group (6-14) as of March 1995 was 205 million out of which only 146 million (71 per cent) were attending school, with the remaining 59 million (29 per cent) being out of school. Thus we believe that Deoria is more representative of the nation.

### Implications

It is important for us to understand the magnitude of out-of-school children because this has implications for how much it would cost to educate all the children including those that do not currently go to school. It is estimated that about 2 million classrooms are required to educate these 59 million uneducated children. Table 23 from India Human Development Report/NCAER shows a synopsis of how much

**Table 22: Estimation of Out-of-School Children**

	Firozabad	Deoria
Net enrolment ratio	88.09	72.38
Estimated out of government school from secondary data	11.91	27.62
Percentage dropout from primary data	4.00	8.2
Percentage enrolment in private schools from primary data	7.54	11.00
Out of school children (for entire system)	8.37	24.82

**Table 23: Cost of Educating Out-of-School Children**

Item	Cost/Spending (in Rs)
Cost of educating a child	1,218/year
Current spending on education	17,782 crore/year
Cost of sending unenrolled children to school	7,186 crore/year
Cost of universal elementary education	24,969 crore/year
Additional cost of mid-day meals	Rs 6,150 crore/year

it would cost India to educate all the children who do not go to school.

Table 23 implies that we have to spend about 3.5 per cent of our GDP on primary education, which is a constitutional commitment. However, according to the India Human Development Report, the current expenditure is only 1.7 per cent of GDP which leaves a gap of 1.8 per cent of GDP that still needs to be spent on elementary education to meet our constitutional commitments. The spirit of economic liberalisation started a decade ago in the country can be retained only if the government reduces wasteful expenditure on the current account and increases expenditure on social infrastructure sectors like education. Otherwise we would only be sacrificing social freedom for the sake of economic freedom. [9]

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### Notes

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- 1 A copy of the survey questions is available from the authors upon request.
- 2 This ratio was calculated as follows:

$$\frac{\text{Enrolment}_{1998-99} - \text{Enrolment}_{1997-98}}{\text{Enrolment}_{1997-98}}$$

- 3 It may be noted that in this and other tables, the proportion of male and female attendance adds to hundred. But the break-up within the male and female categories may not add to hundred because we have not included the general category in the demographic categories.
- 4 This trend is due to the fact that in the previous years there is very low dropout, and any number in the current year translates as very high proportion of the original year.

### References

Agarwal, Yash (1999): *Trends in Access and Retention: A Study of Primary Schools in DPEP Districts*, National Institute of Educational Planning and Administration, New Delhi.

– (1998): *Access and Retention under DPEP, a Trend Analysis (1995-96 to 1997-98)*, National Institute of Educational Planning and Administration New Delhi.

Agarwal, R (1998): *A Study of Relationship between Available Resources, Availability of Teaching, Learning Aids and Learning Achievement of Students at Primary Level*, Department of Education, Lucknow University, UP.

Bhandari, Sudeshna (1998): *Mid-day Meal: Effect on Enrolment and Retention at Primary Level*, MODE Research, New Delhi.

Dreze, Jean and Haris Gazdar (1996): 'Uttar Pradesh: The Burden of Inertia' in Jean Dreze and Amartya Sen (eds) *Indian Development: Selected Regional Perspectives*, The United Nations University, Helsinki, Finland.

DRS (1999): *Study on Participation of Children in Primary Education in Two Districts of UP*, Development and Research Services (DRS), New Delhi.

Govinda, Rangachar and N V Varghese (1993): *Quality of Primary Schooling in India – A Case Study of Madhya Pradesh*, International Institute for Educational Planning, Paris, National Institute of Educational Planning and Administration, New Delhi.

Malhotra, Sudha (1998): *A Study of Enrolment Attendance and Retention in Primary Schools in Relation to Incentive Schemes*, Innovative Research Association, Allahabad, UP.

PROBE Team (1999): *Public Report on Basic Education in India*, Oxford University Press, Delhi.

Ramkumar, Vasantha (1998): *Study on the Present Status of Classroom practices in the Districts under DPEP II, Kerala State*, Kerala Department of Education, Trivandrum.

Saxena, R R, Satvir Singh, and J K Gupta (1995): *School Effectiveness and Learner's Achievement at Primary Stage*, Department of Measurement, Evaluation, Survey and Data Processing, National Council of Educational Research and Training, New Delhi.

Singh, Shailendra and Kala S Sridhar (1999): *A Survey of Private Schooling and Children in DPEP II Districts*, Indian Institute of Management, Lucknow.

Sridhar, Kala S and Shailendra Singh (2000): *Demand for Government and Private Schools: Evidence from Rural India*, Indian Institute of Management Working Paper Series 2001-05, Lucknow.

Singh, Suman K and Sunil Kumar (1999): *Private and Government Primary Schools: A Comparison in Rural Settings*, Bihar Education Project, Patna.

Singh, Y P (1998): *Parishad vs Private Schools: A Comparative Analysis*, Giri Institute of Development Studies, Lucknow.

Shukla, Snehalata, V P Garg, Sarla Rajput, V K Jain, and O P Arora (1994): *Attainments of Primary School Children in Various States*, National Council of Educational Research and Training, New Delhi.

World Bank (1997): *Primary Education in India*, Allied Publishers Limited, New Delhi.