

RESEARCH NOTES AND STATISTICS

Statistics on Elementary School Education in Rural India

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INTRODUCTION

In this note, I critically evaluate and summarise official statistics on schooling infrastructure and on children's participation in elementary schooling in rural India. My focus of attention here is the data available on schooling facilities and on delivery of schooling (measured by school attendance or lack of it), and I separately discuss issues related to these data.

Schooling Infrastructure

There are two main sources of official data on schooling infrastructure in India.

1. The All India School Education Survey (AISES), conducted by the National Council of Educational Research and Training (NCERT). This survey has been conducted in 1957, 1965, 1973, 1978, 1986, 1998, 2002, and 2009.¹ Detailed data at the level of individual schools are available from the sixth (1998) and seventh (2002) surveys. The results of the eighth round of AISES, conducted in 2009, are not yet available.

2. The District Information System for Education (DISE), developed and maintained by the National University of Educational Planning and Administration (NUEPA). DISE was initiated in 1995–96 for monitoring evaluation of the District Primary Education Programme (DPEP) and was later integrated with the Sarva Shiksha Abhiyan (SSA) as a monitoring tool. It was implemented in 42 districts to begin with and then extended, in stages, to cover all the districts of the country. A large amount of information collected as a part of DISE is made available at the level of individual schools, as well as in aggregated form at the district, State and national levels.

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¹ Reports of the first seven surveys are available at http://aises.nic.in/archives;jsessionid=81EDB42677103CF23 A5D2F1F8415AEEC, viewed on June 25, 2011.

Year	Number of schools covered	Number of rural schools covered	Number of districts covered
1995-96	60,311		42
1998-99			139
1999-2000			130
2001-02			192
2002-03	8,53,601	7,42,633	461
2003-04	9,31,471	8,11,520	539
2004-05	10,37,813	9,01,824	581
2005-06	11,24,033	9,80,526	604
2006-07	11,96,663	10,42,929	609
2007-08	12,50,775	10,93,093	624
2008-09	12,85,576	11,22,334	633
2009-10	13,03,812		635

 Table 1 Coverage of District Information System for Education (DISE)

Note: All districts in India have been covered since 2005–06. The increase in the number of districts covered after 2005–06 merely reflects the increase in the total number of districts in the country. *Source:* Compiled from various reports of DISE.

Both the All India School Education Survey and the District Information System for Education provide detailed information on schooling facilities (physical infrastructure and human resources) and on school enrolment. In recent years, the data collection of AISES and DISE has become more systematic. Information is now available from these sources disaggregated all the way down to the level of individual schools. In particular, detailed and disaggregated data are provided on type of building, number of classrooms, availability of toilets, availability of drinking water facilities, and availability of electricity.

AISES and DISE aim at a census-type coverage of schools and their coverage has improved over the years. The seventh AISES, conducted in 2002, surveyed about 10 lakh schools. In 2002–03 DISE was implemented in 462 out of 486 districts in India, but it covered only 853,601 schools. The coverage expanded considerably after DISE was integrated with SSA and extended to States not covered under DPEP (Table 1). By 2008–09, DISE covered over 13 lakh schools. It may be pointed out that while the absolute number of schools covered by AISES and DISE is large, we do not have a measure of the extent of coverage as a proportion of all existing schools in the country.

The data presented in Table 2 can be used as a rough measure indicating the inadequacy of classrooms in elementary schools across different States. It should be pointed out that if one room per grade is taken to be the minimum norm for adequacy of classrooms, the estimates presented in Table 2 are likely to be an enormous underestimate of the inadequacy of classrooms because they include upper primary schools with students up to grades VII/VIII. The table shows that in

State	No classroom	Single classroom	Less than four classrooms
Andhra Pradesh	4.34	27.21	64.03
Arunachal Pradesh	2.68	34.98	67.38
Assam	0.03	49.03	81.27
Bihar	21.86	5.28	66.92
Chhattisgarh	4.06	3.20	78.37
Goa	0.54	18.00	65.85
Gujarat*	0.95	2.72	42.93
Haryana	0.77	1.50	33.18
Himachal Pradesh	0.00	5.82	65.33
Jammu and Kashmir	1.86	17.93	66.19
Jharkhand	21.90	1.29	72.59
Karnataka	0.24	9.08	51.80
Kerala*	0.67	1.07	5.82
Madhya Pradesh	1.05	3.68	70.48
Maharashtra*	3.64	6.75	52.49
Manipur	1.56	1.56	39.99
Meghalaya*	4.28	24.85	78.15
Mizoram*	0.80	2.34	39.15
Nagaland	0.00	0.18	2.50
Orissa*	5.64	5.06	59.60
Punjab	1.54	2.97	50.61
Rajasthan	2.21	3.21	50.96
Sikkim	1.19	1.37	19.52
Tamil Nadu	0.00	0.00	38.60
Tripura	0.05	0.66	22.48
Uttar Pradesh	0.92	0.29	40.02
Uttarakhand	2.24	1.92	72.24
West Bengal	11.82	5.75	54.39
India#	4.31	8.43	57.07

Table 2 Proportion of rural elementary schools (primary and upper primary) withinadequate number of classrooms, by State, 2008–09 in per cent

*Notes:** In these States, primary schools are up to grade IV and upper primary schools up to grade VII. In all other States, primary schools are up to grade V and upper primary schools up to grade VIII. The table includes secondary and higher secondary schools with primary/upper primary sections.

Including Union Territories.

Source: Based on DISE statistics, taken from NUEPA (2010).

2008–09 about 4.3 per cent of rural elementary schools in India had no classrooms at all, while another 8.4 per cent had only a single classroom. State-wise, about 22 per cent of rural elementary schools in Bihar and Jharkhand had no classrooms at all. More than 20 per cent of rural elementary schools in Assam, Arunachal Pradesh, Andhra Pradesh, and Meghalaya had only one classroom. About 57 per cent of rural elementary schools in India had less than four classrooms. In Uttarakhand, Madhya Pradesh, Chhattisgarh, Jharkhand, Assam, and Meghalaya, over 70 per cent of rural elementary schools had less than four classrooms.

State	Drinking water facilities	Toilet facilities	Separate toilets for girls	Electricity
Andhra Pradesh	15.9	15.4	58.5	71.0
Arunachal Pradesh	37.8	6.5	86.1	86.8
Assam	35.5	38.7	88.2	93.5
Bihar	14.8	34.5	74.2	97.1
Chhattisgarh	11.4	35.3	78.7	82.7
Goa	2.3	0.2	43.6	5.5
Gujarat*	11.0	8.4	34.9	14.5
Haryana	3.4	1.8	13.2	4.4
Himachal Pradesh	6.1	25.7	58.4	43.2
Jammu and Kashmir	23.0	54.5	83.7	86.6
Jharkhand	28.8	35.3	72.8	95.1
Karnataka	19.0	8.5	47.8	15.9
Kerala*	2.3	0.3	22.1	10.2
Madhya Pradesh	7.8	22.7	56.4	86.9
Maharashtra*	14.4	8.0	40.3	33.3
Manipur	24.5	0.9	85.4	83.1
Meghalaya*	50.9	47.0	90.5	88.5
Mizoram*	24.8	5.4	71.4	80.3
Nagaland	26.6	6.5	47.4	73.6
Orissa*	16.6	12.9	66.2	83.6
Punjab	2.9	0.0	17.3	15.6
Rajasthan	8.4	10.5	17.9	78.2
Sikkim	12.8	0.3	59.4	48.3
Tamil Nadu	0.0	6.3	39.7	22.0
Tripura	22.9	3.7	75.0	90.4
Uttar Pradesh	2.5	13.0	16.0	85.8
Uttarakhand	13.6	12.0	50.1	71.6
West Bengal	15.9	2.4	58.8	81.6
India#	13.0	16.5	49.0	70.0

Table 3 Proportion of rural elementary schools without drinking water facilities, separatetoilets for girls, and electricity, 2008–09 in per cent

Notes: * In these States, primary schools are up to grade IV and upper primary schools up to grade VII. In all other States, primary schools are up to grade V and upper primary schools up to grade VIII. The table includes secondary and higher secondary schools with primary/upper primary sections.

Including Union Territories.

Source: Based on DISE statistics, taken from NUEPA (2010).

Table 3 presents data for 2008–09 on the proportion of rural elementary schools that did not have drinking water facilities, toilet facilities, and electricity. About 13 per cent of rural elementary schools in India did not have drinking water facilities in that year. Drinking water facilities were not available in more than 25 per cent of rural elementary schools in Meghalaya, Arunachal Pradesh, Assam, Jharkhand, and Nagaland.

About 16 per cent of rural elementary schools in India did not have any toilet facilities, while about 49 per cent of these schools did not have separate toilets for girls. The proportion of schools without separate toilets for girls was more than 75 per cent in Meghalaya, Assam, Arunachal Pradesh, Manipur, Jammu and Kashmir, Chhattisgarh, and Tripura.

It is shocking to note that 70 per cent of rural elementary schools in India did not have electricity connections in 2008–09. The worst performing State on this parameter was Bihar where over 97 per cent of rural elementary schools did not have electricity. In Uttar Pradesh, Jammu and Kashmir, Arunachal Pradesh, Madhya Pradesh, Meghalaya, Tripura, Assam, and Jharkhand, over 85 per cent of these schools did not have electricity.

Teachers in Schools

The school-based statistics also provide information on the number of teachers in schools. In the DISE statistics, data on teachers are given disaggregated by sex, by the social group (SC, ST, and OBC) to which they belong, and by type of management of schools (government, government–aided, and private–unaided). Data are also provided on the number of teachers hired on regular contracts and on short-term contracts.

The adequacy of teachers in a school should be measured by comparing the number of teachers in the school with the number of grades in that school. A primary/upperprimary school must have at least one teacher per grade and at least one teacher for physical training, sport and extra-curricular activities. Published reports of DISE do not provide information that can be used to measure the adequacy of teachers in rural schools on the basis of such a norm.² They provide data on the proportion of rural schools under different categories that had only a single teacher. While these data provide a useful benchmark, they cannot be used satisfactorily to estimate the inadequacy of teachers in rural schools. Table 4 presents State-level data on this benchmark for 2008–09. The table shows that about 14 per cent of all primary schools in rural India had only one teacher. State-wise, this proportion was the highest in Arunachal Pradesh (65.2 per cent), followed by Goa (34.2 per cent), Assam (33.7 per cent) and Rajasthan (32 per cent).

Rates of School Attendance

The statistics on education in India may be divided into two groups: data collected from schools and data collected through household surveys.

Data on how many children are in school are available from school-based statistics as well as from household survey-based statistics. The data collected from schools on

 2 It is, however, possible to do a detailed analysis of adequacy of teachers in rural schools using school-level data from DISE or the AISES. See, for example, Government of Tripura (2007).

State/UT			School ca	category					
	Primary only	Primary with	Primary with upper primary	Upper primary	Upper primary with	All schools			
	0)	upper	and secondary/	only	secondary/				
		primary	higher	-)	higher				
		1 2	secondary		secondary				
Andhra Pradesh	14.5	0.2	1.2	0.0	0.2	10.3			
Arunachal									
Pradesh	65.2	8.1	0.0	0.0	0.0	52.5			
Assam	33.7	0.4	12.0	0.1	0.6	25.4			
Bihar	6.1	1.4	16.2	5.1	12.1	4.8			
Chhattisgarh	15.6	4.2	0.0	6.6	0.0	12.9			
Delhi	0.1	0.0	0.0	0.0	0.0	0.1			
Goa	34.2	1.4	0.7	0.0	0.0	24.4			
Gujarat	5.8	0.7	0.8	3.5	3.3	2.3			
Haryana	4.4	5.5	1.0	4.2	0.3	3.4			
Himachal									
Pradesh	13.7	0.7	0.3	3.8	0.1	9.8			
Jammu and									
Kashmir	21.5	0.3	0.0	7.1	0.0	13.8			
Jharkhand	10.4	2.0	0.9	1.9	1.3	7.6			
Karnataka	17.2	0.7	2.5	13.2	4.9	9.2			
Kerala	0.6	0.0	0.7	0.3	1.7	0.6			
Madhya Pradesh	18.5	0.8	0.0	12.4	1.1	16.2			
Maharashtra	15.7	0.3	0.5	2.3	1.5	8.7			
Manipur	19.1	0.5	0.0	0.0	0.0	12.9			
Meghalaya	18.6	0.9	1.9	0.3	0.3	14.2			
Mizoram	1.2	0.0	0.0	5.0	0.0	2.4			
Nagaland	4.0	0.0	0.0	0.8	0.0	2.8			
Orissa	12.7	0.8	1.3	3.2	0.3	7.7			
Punjab	8.2	0.0	0.0	2.4	0.3	5.8			
Rajasthan	32.0	2.9	0.5	8.4	1.4	17.8			
Sikkim	0.5	0.0	0.0	0.0	0.0	0.4			
Tamil Nadu	3.3	0.4	1.1	0.2	1.9	2.4			
Tripura	1.2	1.1	0.0	0.0	0.0	1.0			
Uttarakhand	20.6	2.2	0.7	5.1	0.7	15.7			
Uttar Pradesh	3.5	3.1	4.2	20.4	1.1	7.9			
West Bengal	4.9	0.0	0.2	4.8	0.0	4.3			
India#	13.9	1.3	1.3	12.0	0.7	10.6			

Table 4 Proportion of single teacher schools in rural areas, by category of school, by State,2008-09 in per cent

Note: [#] Including Union Territories.

Source: Based on DISE statistics, taken from NUEPA (2010).

the number of children enrolled in schools, however, are grossly inaccurate. The main problem with these school-based statistics is that there is large-scale over-reporting of enrolment figures by the schools, in particular primary schools, covered by these surveys. The data collected from households provide a more accurate picture of how many children in different age groups are in school and how many are out of school.

The main official sources that collect data on school attendance are the Census of India, and the Surveys on Employment and Unemployment, and Surveys on Education by the National Sample Survey Organisation (NSSO). Of these, the most recent data are available from the NSSO's 64th round Survey on Education in India.

Another large-scale household survey, the National Family Health Survey (NFHS), also provides statistics on school attendance. Three rounds of NHFS, corresponding to 1992–93, 1998–99 and 2005–06, have been conducted so far. Although the analysis in this note is mainly based on statistics from the Census of India and the NSS Surveys on Employment and Unemployment., broadly comparable NFHS statistics on school attendance, from the 2005-06 survey, have been provided in Appendix Table A1 for reference.

Age-specific attendance rates are defined in terms of the proportion of children in a specified age group who are attending school (at any level). In Census of India, 2001, data on school attendance are given in Census Table C10 (Population attending educational institution by age, sex, and type of educational institution).³ These data can be used to calculate age-specific attendance rates.⁴ Age-specific attendance rates can also be calculated using the usual status activity status in the NSSO's Surveys on Employment and Unemployment, and Surveys on Education.

Table 5 gives age-specific attendance rates for the age groups 6–11 years and 6–14 years for 1991, 2001, 2004–05, 2007–08, and 2009–10, using Census and NSSO data. Although these estimates are based on different surveys, a broad comparison indicates the direction and relative levels of change. These data suggest that although a substantial rise in attendance rates, particularly among girl children, took place over the decade of the 2000s, a substantial task remains in ensuring that all children attend school. For reference, State-wise age-specific attendance rates for rural and urban children in the age group 6–14 years, calculated using data from the NSSO's Survey of Employment and Unemployment, 2009–10, are provided in Appendix Table A2.

Gross Attendance Ratio is defined as the number of children who attend school at a particular level of schooling (say, primary school) as a proportion of the population of children in the official age group for that level of schooling (say, primary school-going

 $^{^3}$ In Census of India, 1991, data on school attendance are given in Census Table C4 (Population, ages 5–19, by single years of age, school attendance and economic activity).

⁴ However, since Census of India does not provide cross-tabulation of attendance data by age and level of schooling, it is not possible to calculate Gross and Net Attendance Ratios.

Year	Source		6–11 yea	rs		6-14 years		
		Male	Female	Person	Male	Female	Person	
1991	Census of India	58.9	47.3	53.3	62.1	47.9	55.3	
2001	Census of India	73.5	67.4	70.6	74.7	67.1	71.1	
2004-05	NSSO 61st round Employment							
	and Unemployment Survey	89.6	85.5	87.7	88.0	82.0	85.2	
2007-08	NSSO 64th round Survey on							
	Education	91.0	88.5	89.8	88.9	85.2	87.2	
2009-10	NSSO 66th round Employment							
	and Unemployment Survey	91.5	89.7	90.6	90.3	87.7	89.1	

Table 5Age-specific school attendance rates, by sex, India, 1991, 2001, 2004–05, 2007–08,and 2009–10

age). Table 6 provides State-level data on Gross Attendance Ratios for grades I to VIII. Net Attendance Ratio is defined as the number of children in the official school-going age who are enrolled in schools as a proportion of the population of children in the official school-going age. Table 7 provides State-wise data on Net Attendance Ratios for grades I to VIII. Data from the NSSO Survey on Education show that, at the all-India level, Gross Attendance Ratios for grades I-VIII were 99 per cent for boys and 95 per cent for girls (Table 6). Net Attendance Ratios for grades I-VIII were 87 per cent for boys and 84 per cent for girls (Table 7). Among all Indian States, Bihar had the lowest Gross (86 per cent) and Net (74 per cent) Attendance Ratios at the primary and upper primary levels (grades I-VIII) (Tables 6 and 7). Mizoram (97 per cent), Himachal Pradesh (96 per cent), and Kerala (94 per cent) had the highest Net Attendance Ratios (Table 7). The gap between male and female Gross Attendance Ratios was the highest (14 percentage points) in Rajasthan (Table 6). It is also worth noting that there was a substantial difference between overall Gross and Net Attendance Ratios. This was primarily on account of a substantial number of late starters and over-aged children who were enrolled at the primary and upper primary levels.

Rates of School Attendance among Rural Children

A major limitation of statistics collected from schools is that they cannot be used to separately study the access of rural and urban children to schools. Since many children from rural areas attend schools located in urban areas, separately measuring Gross Enrolment Rate (GER) and Net Enrolment Rate (NER) for rural and urban areas using school enrolment statistics is not meaningful. Similarly, measuring GER and NER for small geographical units – say, a village or (particularly for higher levels of schooling) even a block – using school-level data is not meaningful if many of the children are enrolled in schools outside these locations (or if children from outside come to study in that location). In contrast, household-based statistics can be used to separately measure Age-specific Attendance Ratio, Gross Attendance Ratio, and Net

State		Male			Female			Persons	5
	I–V	VI–VIII	I–VIII	I–V	VI–VIII	I–VIII	I–V	VI–VIII	I–VIII
Andhra Pradesh	102	90	97	100	80	93	101	85	95
Arunachal Pradesh	97	102	99	95	88	93	96	94	96
Assam	112	86	104	108	93	102	110	90	103
Bihar	95	75	89	88	61	81	92	69	86
Chhattisgarh	112	98	107	109	79	98	110	89	103
Goa	106	86	98	103	72	92	104	80	96
Gujarat	107	99	105	107	81	97	107	91	101
Haryana	102	90	98	94	92	94	99	91	97
Himachal Pradesh	108	119	112	106	115	109	107	117	111
Jammu and Kashmir	114	111	113	111	117	113	113	114	113
Jharkhand	101	79	94	105	74	96	103	77	95
Karnataka	105	95	101	103	83	95	104	89	98
Kerala	103	95	100	97	97	97	100	96	98
Madhya Pradesh	110	95	105	105	90	100	108	93	103
Maharashtra	107	87	99	106	87	99	106	87	99
Manipur	110	94	105	103	107	104	107	99	105
Meghalaya	118	71	101	114	104	110	116	87	106
Mizoram	108	104	107	103	111	105	106	107	106
Nagaland	106	118	109	102	101	102	104	109	106
Orissa	101	85	95	100	83	94	101	84	95
Punjab	104	95	101	101	95	99	103	95	100
Rajasthan	110	93	104	100	71	90	106	84	98
Sikkim	141	91	120	136	101	122	139	96	121
Tamil Nadu	98	103	100	100	105	102	99	104	101
Tripura	114	94	106	114	93	105	114	93	106
Uttar Pradesh	109	77	98	105	72	93	107	75	96
Uttarakhand	105	102	104	113	75	98	108	87	101
West Bengal	109	83	100	111	82	101	110	83	100
India#	106	87	99	103	81	95	104	84	97

 Table 6 Gross Attendance Ratios for grades I-VIII, State-wise, 2007–08

Note: # Including Union Territories.

Source: NSSO (2010).

Attendance Ratio for rural and urban children, as well as for children at any other level of disaggregation.

Table 8 gives data on age-specific school attendance rates separately for rural and urban children, using data from the Censuses of India and NSSO surveys. These data show that despite a large increase in school attendance rates among children over the last 20 years, a substantial gap remains in school attendance rates between urban and rural children, and, in particular, rural girls. The table shows that over 16 per cent of rural girls and 12 per cent of rural boys in the age group 6–14 years did not attend school.

State		Male			Female			Persons	6
	I–V	VI–VIII	I–VIII	I–V	VI–VIII	I–VIII	I–V	VI–VIII	I–VIII
Andhra Pradesh	87	73	88	85	63	83	86	68	86
Arunachal Pradesh	74	55	82	76	52	81	75	53	81
Assam	91	60	92	89	71	91	90	65	91
Bihar	75	46	78	69	35	70	72	41	74
Chhattisgarh	92	58	92	89	55	88	91	57	90
Goa	82	78	86	100	67	92	89	72	88
Gujarat	90	69	89	87	58	84	89	64	86
Haryana	88	68	90	84	56	85	86	63	88
Himachal Pradesh	88	84	96	93	78	95	91	81	96
Jammu and Kashmir	92	63	94	91	57	92	92	61	93
Jharkhand	79	50	81	80	41	82	79	46	81
Karnataka	92	77	93	91	70	89	92	74	91
Kerala	93	81	94	89	79	93	91	80	94
Madhya Pradesh	89	60	91	87	56	87	88	58	89
Maharashtra	91	67	91	90	67	91	91	67	91
Manipur	88	58	91	86	57	90	87	57	91
Meghalaya	74	29	81	76	39	81	75	34	81
Mizoram	98	79	98	95	82	96	97	80	97
Nagaland	89	64	92	82	60	87	86	62	90
Orissa	85	69	86	85	67	85	85	68	85
Punjab	83	67	87	80	62	85	82	65	86
Rajasthan	86	59	88	78	47	79	83	54	84
Sikkim	90	38	93	91	43	94	90	40	93
Tamil Nadu	84	79	91	85	78	93	84	78	92
Tripura	90	56	90	88	57	89	89	57	90
Uttar Pradesh	84	49	85	80	46	81	82	48	83
Uttarakhand	85	61	89	87	55	86	86	58	88
West Bengal	89	56	88	87	52	87	88	54	87
India#	86	61	87	83	56	84	84	59	86

 Table 7 Net Attendance Ratios for grades I-VIII, State-wise, 2007–08

Note: # Including Union Territories.

Source: NSSO (2010).

Tables 9 and 10 provide Gross and Net Attendance Ratios for grades I–V and grades VI–VIII for rural children. Rural Net Attendance Ratios for grades I–VIII were the lowest in the case of Bihar (74 per cent), and highest in the case of Mizoram (97 per cent) and Himachal Pradesh (96 per cent).

Estimates of Out-of-School Children

As a result of the inflated figures for school enrolment, the number of out-of-school children is hugely underestimated in official documents. According to the Census data for 2001, 6.5 crore children in the age group 6–14 years were out of school.

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Year	Source		Rural			Urban			Total	
		Male	Female	Person	Male	Female	Person	Male	Female	Person
Age group 6	i-11 years									
1991	Census of India	52.3	39.3	46.0	70.7	65.8	68.3	58.9	47.3	53.3
2001	Census of India	71.0	63.7	67.5	81.1	79.3	80.3	73.5	67.4	70.6
2004 - 05	NSSO 61st round Employment/ Unemployment									
	Survey	88.6	83.8	86.3	93.5	91.8	92.7	89.6	85.5	87.7
2007 - 08	NSSO 64th round Survey on Education	90.4	87.5	89.1	92.9	92.5	92.7	91.0	88.5	89.8
2009-10	NSSO 66th round Employment/ Unemployment									
	Survey	90.7	88.7	89.8	93.9	93.2	93.5	91.5	89.7	90.7
Age group 6	5–14 years									
1991	Census of India	55.4	40.6	48.2	73.1	67.7	70.5	62.1	47.9	55.3
2001	Census of India	72.4	63.0	67.9	81.8	7.9.7	80.8	74.7	67.1	71.1
2004 - 05	NSSO 61st round Employment/ Unemployment									
	Survey	88.6	83.8	86.3	93.5	91.8	92.7	89.6	85.5	87.7
2007-08	NSSO 64th round Survey on Education	88.3	83.8	86.2	91.0	90.2	90.6	88.9	85.2	87.2
2009 - 10	NSSO 66th round Employment/ Unemployment									
	Survey	89.7	86.4	88.2	92.3	92.2	92.3	90.3	87.7	89.1

Table 8 Age-specific school attendance rates, by sex, rural and urban, India, 1991, 2001, 2004-05, 2007-08

State		Male			Female			Person	
	I–V	VI–VIII	I–VIII	I–V	VI–VIII	I–VIII	I–V	VI–VIII	I–VIII
Andhra Pradesh	102	88	96	102	75	92	102	82	94
Arunachal Pradesh	95	91	95	91	82	89	93	86	92
Assam	112	87	104	108	93	102	110	90	103
Bihar	95	74	89	87	59	80	92	68	85
Chhattisgarh	114	99	109	110	76	98	112	88	104
Goa	79	115	91	125	96	110	96	104	99
Gujarat	106	81	97	106	62	89	106	72	93
Haryana	111	96	105	104	85	98	108	91	102
Himachal Pradesh	108	118	112	106	115	109	107	117	111
Jammu and Kashmir	114	113	114	110	120	113	112	116	114
Jharkhand	101	77	94	103	72	94	102	75	94
Karnataka	103	93	100	101	79	92	102	86	96
Kerala	106	90	100	97	96	97	102	93	98
Madhya Pradesh	112	93	105	105	84	98	108	89	102
Maharashtra	107	85	98	107	87	99	107	86	99
Manipur	112	91	105	101	107	102	107	98	104
Meghalaya	119	71	101	115	101	110	117	84	106
Mizoram	109	103	107	105	102	104	107	102	106
Nagaland	105	119	109	100	114	105	103	117	107
Orissa	101	83	94	100	83	94	101	83	94
Punjab	113	97	106	102	92	98	108	94	102
Rajasthan	108	95	103	100	67	88	105	82	97
Sikkim	140	95	121	137	102	122	138	98	122
Tamil Nadu	97	106	100	102	106	104	99	106	102
Tripura	116	90	106	114	93	105	115	91	105
Uttar Pradesh	110	79	100	107	73	95	108	76	98
Uttarakhand	109	97	105	109	81	99	109	89	102
West Bengal	110	82	100	111	80	100	111	81	100
India#	106	86	99	103	78	94	105	82	97

Table 9 Gross Attendance Ratios, grades I–V, VI–VIII, and I–VIII, rural children, by sex,State-wise, 2007–08

Note: # Including Union Territories.

Source: NSSO (2010).

According to the NSSO data for 2004–05, the number of out-of-school children in the age group 6–14 years was over 3 crores. According to NSSO data from the 66th round Survey on Employment and Unemployment, in 2009–10, 2.2 crore children in the age group 6–14 years were not attending school. It is worth noting that both these estimates are substantially higher than other estimates, which vary between 76 lakhs (SSA) and 1.4 crores (SRI and EdCIL 2010).⁵

⁵ Minister of Human Resource Development, Government of India, on 29 April 2008, in answer to Lok Sabha Starred Question no. 516.

State		Male			Female			Person	
	I–V	VI–VIII	I–VIII	I–V	VI–VIII	I–VIII	I–V	VI–VIII	I–VIII
Andhra Pradesh	86	72	87	86	60	82	86	66	84
Arunachal Pradesh	72	47	79	72	47	78	72	47	79
Assam	91	59	92	89	70	90	90	65	91
Bihar	75	45	78	68	33	69	72	40	74
Chhattisgarh	94	57	93	89	51	88	92	54	90
Goa	73	89	82	100	78	100	83	82	90
Gujarat	90	64	88	87	54	81	88	59	85
Haryana	89	66	90	84	55	84	87	61	87
Himachal Pradesh	89	85	96	93	78	96	91	82	96
Jammu and Kashmir	92	63	94	91	55	92	92	59	93
Jharkhand	79	48	81	78	38	79	78	43	80
Karnataka	90	76	92	91	69	88	90	72	90
Kerala	95	79	94	89	78	92	92	79	93
Madhya Pradesh	90	58	91	87	54	86	88	56	89
Maharashtra	92	64	90	91	67	91	92	65	90
Manipur	86	51	89	83	55	88	85	53	89
Meghalaya	73	27	80	75	36	80	74	31	80
Mizoram	99	73	98	96	76	95	98	74	97
Nagaland	87	59	91	83	61	88	85	60	89
Orissa	85	68	85	86	67	85	85	68	85
Punjab	87	67	90	81	63	85	85	65	88
Rajasthan	86	61	88	77	45	77	82	53	83
Sikkim	90	40	93	90	43	94	90	41	94
Tamil Nadu	84	80	92	85	80	94	85	80	93
Tripura	91	54	90	87	57	88	89	55	89
Uttar Pradesh	84	49	86	82	46	82	83	48	84
Uttarakhand	89	64	91	86	59	86	87	61	89
West Bengal	90	53	88	87	50	86	88	51	87
India#	86	59	87	83	54	83	84	57	85

Table 10 Net Attendance Ratios, grades I–V, VI–VIII, and I–VIII, rural children, by sex,State-wise, 2007–08

Note: # Including Union Territories.

Source: NSSO (2010).

Recent policy initiatives for universalising elementary education and bringing down the number of out-of-school children have focused on containing the number of dropouts. Reduction of the drop-out rate in schools to 10 per cent was one of the most important objectives of DPEP when it was launched in 1994.⁶ In recent years, several State governments have launched initiatives under the Sarva Shiksha Abhiyan to improve retention at the primary school stage. However, as per the official estimates,

⁶ See Aggarwal (1997) and Jalan and Glinskaya (2005).

the drop-out rate in India at the level of primary schooling continues to be over 30 per cent.

It is fairly evident that drop-out rates are overestimated in school enrolment statistics through over-reporting of students enrolled at the primary level and under-counting of students at the upper primary level. Existing studies point out that one of the reasons for the high drop-out rate in India is "fictitious enrolment" of children in primary schools (Jayachandran 2007, Venkatanarayana 2009).

The NSSO surveys specifically ask whether children who are currently attending an educational institution had been to school at some time and then dropped out, or if they had never attended school. Data from the 64th round Survey on Education show that, of 2.6 crore out-of-school children, about 61 per cent had never been to school. Data from the 66th round Employment and Unemployment Survey (for 2009–10) show that, of 2.1 crore out-of-school children in the age group 6–14 years, about 70 per cent had never been to school, while the remaining had enrolled in school at some time but dropped out. This was also borne out by a household survey conducted under SSA, which showed that 68 per cent of out-of-school children in the age group 6–13 years had never attended school while 32 per cent had dropped out at some stage (SRI and EdCIL 2010).

Figure 1 shows that children who have never been to school constitute the majority of children who are out of school, particularly in States where attendance rates are low. Figure 2 shows a clear positive relationship between the proportion of drop-outs among children who are out of school and school attendance rates in different NSSO regions. Both the figures suggest that in States which lag the most in respect of school attendance, a large proportion of out-of-school children are those who have never been to school.

NSSO surveys as well as data from the Censuses of India can be used to examine the pattern of age-specific attendance rates. These data show that among rural children, age-specific attendance rates peak between ages 9 and 11 (see Figure 3). This also suggests that in the age group 6–14 years, a substantial part of the gap in universal school attendance is on account of late starters and those who have never gone to school. The NSSO data show that a large drop in age-specific attendance rates – reflecting an acceleration in drop-out rates – takes place after the age of 14 years (Figure 3).

Concluding Remarks

One of the gravest failures of development policy in post-independence India has been the inability to ensure that all children attend school. The gaps in respect of provision of adequate schooling facilities and in respect of the proportion of children who continue to be out of school are particularly high in rural India.



Figure 1 Proportion of children who never attended school and of children who dropped out among out-of-school children aged 6–14 years, State-wise, 2007–08 Source: Based on data from NSSO 64th round Survey on Education.

Official statistics on school education have been extremely misleading, and some of the agencies involved in the collection of these data have done great disservice to the cause of universalisation of school education by providing misleading statistics. Data on school education in India are collected at the school level and the household level. The data collected from schools, which form the basis for official estimates of school enrolment, provide hugely inflated estimates of the proportion of children regularly attending school. Such statistics have been used to underplay the problem and to underestimate the resources required to ensure free schooling for all children (Ramachandran, Rawal, and Swaminathan 1997). Over-reporting of school enrolment at initial levels of schooling results in overestimation of drop-outs, when most of the children recorded as drop-outs have actually never attended school. Such distortion of data results in inappropriate policy formulation with little focus on identifying out-of-school children and bringing them to school.

Another important limitation of the school-based statistics is that they cannot be used to separately study the access of rural children to schooling. Since a substantial number of rural children attend schools located in urban areas, rates of school attendance among them must be measured through household surveys and not through school-based statistics.



out-of-school children, NSSO regions, 2007–08

Note: Each dot represents an NSSO region.

Source: Estimates based on NSSO 64th round Survey on Education.

In view of the above, it is clear that household survey-based data from the Censuses of India and NSSO surveys should form the basis for official estimates of rates of school attendance and the number of out-of-school children.

A comparison of data on school attendance ratios for children aged 6–14 years from the Censuses of India and various rounds of NSSO surveys suggests that although there has been considerable improvement in school attendance rates, a very substantial lag remains among rural children. According to the 66th round NSSO Survey on Employment and Unemployment, about 2.2 crore children in this age group did not attend school. Of these out-of-school children, about 1.8 crores were rural children. It is worth noting that this estimate of the number of out-of-school children is about three times the estimate of out-of-school children under the Sarva Shiksha Abhiyan.

In terms of attendance rates, these data show that about 14 per cent of rural children aged 6-14 years were not attending school. The Gross Attendance Ratio among



Figure 3 Proportion of children attending school aged 6–16 years, by sex, rural and urban, 2007–08

Source: Based on data from NSSO 64th round Survey on Education.

rural children was 97 per cent and the Net Attendance Ratio, 85 per cent. In respect of the Net Attendance Ratio among rural children, the worst performing States in India were Bihar, Jharkhand, Rajasthan, Arunachal Pradesh, and Meghalaya. The gap between attendance ratios among rural boys and rural girls was highest in Rajasthan.

While the usefulness of school-based statistics for measurement of participation in schooling is limited, they are of great use in estimating gaps in availability of schooling facilities. It may be argued that collection of data on schooling facilities (including physical infrastructure, teaching aids, and human resources) should be the main focus of the District Information System on Education (DISE) and the All India School Education Survey (AISES). The annual coverage of DISE has expanded to over 13 lakh schools. This needs to be further expanded, particularly in some States, to ensure near-complete coverage. At the same time, to avoid duplication and wastage of resources, AISES needs to be restructured as a sample survey that will provide a useful check on the reliability of DISE statistics. The field operations for such a sample survey should be conducted by a competent agency like the National Sample Survey Organisation. In this note, I have provided the latest statistics on some selected indicators of gaps in schooling facilities in rural India. Some of the highlights of these data for 2008–09 are as follows.

- About 57 per cent of rural elementary (primary and upper primary) schools in India had less than four classrooms. The proportion of rural schools that do not have one classroom per grade is substantially higher.
- About 13 per cent of rural elementary schools in India did not have drinking water facilities.
- About 16 per cent of rural elementary schools in India did not have any toilet facilities.
- About 49 per cent of rural elementary schools in India did not have separate toilets for girls.
- About 70 per cent of rural elementary schools in India did not have electricity.
- About 14 per cent of all rural primary schools in India had only one teacher.

The data presented in this note show that there continue to be substantial gaps in schooling facilities and access of rural children to elementary schooling in India. The absolute levels of lack of adequate schooling facilities and the number of outof-school children are seriously underestimated in school-based statistics. However, school-based statistics provide useful proportional estimates of gaps in facilities. Household survey-based data provide a more accurate picture of school attendance rates than data collected from schools. Household survey-based data also provide useful disaggregated estimates of school attendance rates among rural and urban children.

Keywords: education; schooling infrastructure; India; educational statistics; school enrolment.

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Table A1	

		Rural			Urban			Total	
	Male	Female	Person	Male	Female	Person	Male	Female	Person
Andhra Pradesh	84.8	75.3	80.1	84.2	84.1	84.1	84.6	78.1	81.4
Arunachal Pradesh	75.3	67.5	71.6	77.6	73.5	75.5	75.8	69.0	72.5
Assam	84.8	83.4	84.1	87.3	84.4	85.9	85.1	83.6	84.4
Bihar	67.7	54.0	60.7	71.5	69.7	70.6	68.3	56.2	62.2
Chhattisgarh	83.0	73.8	78.4	91.0	92.5	91.8	84.6	77.6	81.1
Delhi	85.8	87.6	86.7	86.8	86.9	86.8	86.7	87.0	86.8
Goa	94.4	92.7	93.6	95.5	91.5	93.6	95.0	92.0	93.6
Gujarat	85.1	76.2	80.8	89.9	82.3	86.5	87.0	78.5	83.0
Himachal Pradesh	97.4	95.2	96.3	95.0	95.5	95.2	97.1	95.2	96.2
Haryana	86.7	79.5	83.3	85.9	87.0	86.4	86.5	81.2	84.1
Jammu and Kashmir	89.7	83.5	86.7	89.6	93.6	91.5	89.7	85.7	87.8
Jharkhand	75.2	61.7	68.4	83.2	81.8	82.5	77.2	66.1	71.7
Karnataka	84.5	78.5	81.5	88.2	89.0	88.6	85.9	82.0	84.0
Kerala	97.6	97.9	97.8	97.6	97.5	97.5	97.6	97.7	7.79
Madhya Pradesh	79.9	74.5	77.2	80.8	85.3	82.9	80.1	76.9	78.5
Maharashtra	86.1	81.5	83.8	91.7	90.5	91.1	88.7	85.5	87.2
Manipur	83.5	81.8	82.6	91.6	90.2	90.9	85.9	84.2	85.0
Meghalaya	58.2	62.8	60.5	88.6	90.0	89.3	64.3	68.5	66.4

Mizoram	87.4	84.8	86.1	95.6	92.0	93.9	91.5	88.2	89.9
Nagaland	72.4	76.4	74.4	81.7	83.0	82.4	74.9	78.1	76.5
Orissa	78.9	72.1	75.6	87.3	88.9	88.0	80.3	74.7	77.5
Punjab	87.1	84.0	85.7	83.4	86.1	84.5	85.8	84.7	85.3
Rajasthan	83.1	62.1	72.9	87.8	79.3	83.9	84.2	65.9	75.4
Sikkim	81.5	83.7	82.5	83.5	77.8	80.6	81.8	82.7	82.2
Tamil Nadu	94.5	97.9	96.2	93.2	92.8	93.0	94.2	96.8	95.5
Tripura	86.2	88.3	87.3	88.1	91.2	89.7	86.5	88.7	87.6
Uttarakhand	94.0	89.3	91.8	87.9	84.5	86.3	92.4	88.1	90.4
Uttar Pradesh	81.3	72.4	77.1	76.3	78.8	77.5	80.2	73.8	77.2
West Bengal	77.6	79.1	78.4	84.8	83.5	84.2	79.4	80.1	79.7
India	81.5	73.4	77.5	85.4	84.9	85.2	82.6	76.4	79.6
Source: Compiled from various	reports of the N	ational Family F	lealth Survey, 200	05-06.					

lable A2 Proportion of child	tren currenti	y attending sch	1001, aged 6–14	4 years, rura	, urban, and to	tal, by State, I	ndia, 2009–1	0 in per cent	
State		Rural			Urban			Total	
	Male	Female	Person	Male	Female	Person	Male	Female	Person
Andhra Pradesh	95.0	93.4	94.3	96.2	95.2	95.7	95.4	93.9	94.7
Arunachal Pradesh	71.9	70.9	71.4	81.3	79.4	80.4	74.2	72.6	73.4
Assam	87.8	88.1	88.0	94.6	94.3	94.4	88.4	88.7	88.5
Bihar	80.7	72.9	77.2	84.4	83.6	84.1	81.1	74.0	77.9
Chhattisgarh	93.9	89.1	91.5	89.2	93.4	91.1	93.1	89.7	91.4
Goa	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Gujarat	83.0	75.6	79.9	90.0	85.7	88.2	85.4	79.0	82.8
Haryana	95.4	91.2	93.6	90.1	92.8	91.4	93.9	91.7	92.9
Himachal Pradesh	97.0	97.5	97.2	94.1	98.4	96.2	96.8	97.5	97.1
Jammu and Kashmir	96.0	94.6	95.3	93.7	93.0	93.4	95.5	94.3	94.9
Jharkhand	76.7	76.6	76.6	86.7	89.5	88.1	78.3	78.7	78.5
Karnataka	95.6	93.8	94.7	95.5	99.5	97.4	95.6	95.6	95.6
Kerala	99.4	97.6	98.5	99.5	6.99	99.7	99.4	98.2	98.8
Madhya Pradesh	87.8	87.9	87.8	90.6	89.2	89.9	88.4	88.1	88.3
Maharashtra	96.6	95.4	96.1	95.9	97.6	96.7	96.3	96.2	96.3
Manipur	92.1	91.1	91.7	95.2	93.8	94.6	92.9	91.8	92.4
Meghalaya	95.5	93.8	94.7	89.5	80.2	84.3	94.5	90.9	92.7
Mizoram	96.5	96.1	96.3	97.7	97.5	97.6	97.0	96.8	96.9
Nagaland	97.7	99.4	98.6	95.1	96.0	95.5	97.0	98.5	97.7
Orissa	93.5	93.1	93.3	89.4	90.1	89.8	92.9	92.7	92.8
Punjab	93.6	91.9	92.9	93.0	88.2	90.9	93.4	90.6	92.2

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Rajasthan	88.9	78.7	84.2	85.7	82.2	84.1	88.2	79.4	84.1
Sikkim	98.1	98.8	98.4	100.0	100.0	100.0	98.3	98.9	98.6
Tamil Nadu	98.9	98.0	98.5	99.4	9.66	99.5	99.1	98.7	98.9
Tripura	96.9	91.9	94.5	95.2	96.4	95.9	96.7	92.6	94.7
Uttar Pradesh	90.2	85.3	88.0	88.0	88.1	88.0	89.8	85.8	88.0
Uttaranchal	95.4	92.6	94.0	88.9	87.5	88.2	93.8	91.4	92.6
West Bengal	87.8	88.7	88.2	95.8	95.4	95.7	89.4	90.1	89.7
Andaman and Nicobar	0.06	98.3	98.7	97.2	100.0	98.4	98.4	98.9	98.6
Chandigarh	97.6	78.9	86.7	91.4	89.2	90.3	92.8	86.3	89.3
Dadra and Nagar Haveli	64.5	55.1	60.8	91.7	80.6	87.8	70.2	59.8	66.3
Daman and Diu	96.9	71.6	87.0	99.1	95.9	97.7	98.1	85.6	93.0
Delhi	73.2	71.4	72.1	90.9	89.5	90.4	89.7	87.1	88.6
Lakshadweep	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Puducherry	100.0	98.5	0.06	97.9	100.0	98.9	98.6	99.3	0.06
India	89.7	86.4	88.2	92.3	92.2	92.3	90.3	87.7	89.1
Source: NSS 66th round Survey on F	Employment an	id Unemploymen	t.						