Elementary Education in India: Progress towards UEE
DISE Flash Statistics: 2008-09
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NUEPA has created a comprehensive database on elementary education in India known as District Information System for Education (DISE), under one of its most prestigious projects. The project covers both primary and upper primary schools/sections of all the districts of the country. The MIS Units are now operational both at the district and state levels and are equipped with necessary hardware and software. The DISE software is also operational in all the districts of the country and is providing vital information for policy formulation and preparation of district elementary education plans. What is more remarkable about DISE is that it has drastically reduced the time-lag in the availability of educational statistics which is now down from 7-8 years to less than a year at the national level and only a few months at the district and state levels.

The National University has successfully developed School Report Cards (*http://schoolreportcards.in*) of more than 1.29 million primary and upper primary schools/sections, and is available for 2005-06, 2006-07, 2007-08 and 2008-09. In addition to quantitative information, the Report Cards also provide qualitative information and descriptive reports about individual schools. And, all this information can now be accessed on the click of a mouse. The Report Cards provide the users comprehensive information on all the vital parameters, be it student, teacher or school related variables, in concise, accurate and standard format which is easy to understand and allows meaningful comparisons to be made among schools. Users can also download raw data as per their requirement for further empirical studies.

To further improve the quality of data, it has now been made mandatory for all the states to check the data on five percent random sample basis through an independent agency each year. States are advised to initiate corrective measures in the light of the findings of sample checking of data. In addition, NUEPA has also launched PES of DISE data initially in three states, namely Andhra Pradesh, Himachal Pradesh and Maharashtra which is likely to be expanded to remaining

states subsequently. All these efforts would not only help in further improving the quality of data but would also help in ensuring complete coverage.

DISE 2008-09: School-Based Indicators

With the improved coverage, the number of schools/sections imparting elementary education dealt with under DISE increased many-fold. From 8,53,601 schools in 2002-03, their number has increased to 11,96,663 schools in 2006-07 and further to 12,50,775 schools in 2007-08. In the current year, 2008-09, as many as 12,85,576 schools imparting elementary education across 633 districts of the country are covered under DISE.

Of the total schools, about 87.30 percent schools are located in the rural areas. During the same period, the number of primary schools increased from 6,01,866 to 8,09,108. Category-wise distribution of schools reveals that majority of the schools (62.94 percent) are independent primary schools. The increase in the number of schools is also reflected in the ratio of primary to upper primary schools/sections which clearly shows the impact of *Sarva Shiksha Abhiyan* under which a large number of schools have been opened in the recent past. This ratio for the year 2008-09 is one upper primary school/section for every set of 2.27 primary schools/sections compared to 2.45 in 2006-07 and 2.42 schools/sections in 2007-08. Most of the states have the ratio equivalent to almost two, all of which suggests that by and large schooling facilities have been created and are available across the country. Despite significant improvement in the ratio, there are a few states, such as Arunachal Pradesh (4.16) and West Bengal (5.48), where the ratio still needs to be improved significantly.

Obtaining data from all the private schools is a challenging task. Concerted efforts made by the National University have resulted in a significant increase in the number of such schools covered under DISE over a period of time. This is important to assess the true picture of universalisation of elementary education in the country. As many as 72,886 and 1,77,034 schools covered in 2008-09 were respectively being managed by the Private Aided and Private Unaided managements. DISE data also suggests that majority of the private schools are un-aided schools (70.84 percent). The percentage of government and government aided schools is as high as 86.19 which show that about ninety out of every hundred schools imparting elementary education in the country are funded by the Government.

Schools imparting elementary education across the country vary in size. There are about 11.98 percent schools which respectively have enrolment between 1-25 and 35 percent schools up to an enrolment of 50 students. In view of there being a large number of small schools, there is a need to have separate programme for these schools. In view of the large number of such schools, the

National University has undertaken a research study, based on the DISE data. It is hoped that the outcome of the study will help NUEPA in developing planning methodology for small schools.

DISE 2008-09: Facility Indicators

Like number of schools, instructional rooms and ratio of primary to upper primary sections/schools, facilities in schools have also improved significantly which is true for physical, ancillary and teaching-learning facilities. Availability of basic facilities in schools not only attracts more children to schools but also help in improving retention rate.

The preliminary analysis of a select few indicators suggests significant improvement in all facility indicators which is true for both state as well as country as a whole. As of 30th September 2008, as many as 1,26,335 primary and 48,994 upper primary schools/sections have been opened under the Government managements since the inception of SSA. It is heartening to observe that all managements together, as many as 2,22,534 schools have been opened which is about 17.32 percent of the total schools in 2008-09 in the country and more than 90 percent of these new schools have school building. Jharkhand has opened as many as 16,102 primary schools/sections which is incidentally is the highest among all the 35 States and UTs of the country. On the other hand, Uttar Pradesh opened the highest number of Upper Primary schools/sections (21,042 schools/sections). Opening of new schools is also reflected in the ratio of Primary to Upper Primary schools/sections which stood at 2.27 in 2008-09 compared to 2.42 Primary schools/sections per Upper Primary school/section.

The average number of instructional rooms in Primary schools has also improved to 3.1 in 2008-09 from 3.0 in the previous year. Assam is the only state in the country which has less than 2 classrooms in its Primary schools. On the other hand, Chandigarh has an average of 13.3 classrooms compared to 11.5 in Delhi and 6.0 in Kerala. The improvement in average number of classrooms is also reflected in the improvement in student-classroom ratio which has improved to 33 students per classroom in 2008-09 from 35 students in the previous year.

It is heartening to note that about 88 percent of the 1.29 million schools that impart elementary education in the country now have **drinking water facility** in school. All the schools in Chandigarh, Daman and Diu, Delhi, Lakshadweep, and Tamil Nadu have been provided with the drinking water facility in the school. It may be observed that 86.75 percent schools had drinking water facility in 2007-08.

About 67 percent schools in the country now have access to **common toilets** in 2008-09 compared to only 62.67 percent in the previous year all which suggests that the facility was extended to a large number of additional schools during the intermediary years i.e. 2007-08 to 2008-09. More than 50 percent of total 1.29 million schools now have **girl's toilet** compared to 50.55 percent in the previous year i.e. 2007-08.

It is interesting to note that about 14 percent schools have **computer** in the schools with percentage of such schools as high as 85.88 percent in Chandigarh, 85.84 percent in Delhi, 79.93 percent in Kerala and 89.74 percent in Lakshadweep compared to only 0.68 percent in Bihar and 3.59 percent such schools in Uttar Pradesh. On the other hand, it has been observed that 40.39 percent schools in 2008-09 have **ramp** in school and 43.33 percent Government and Aided schools, a **kitchen-shed** in the school premises.

DISE 2008-09: Enrolment-Based Indicators

With the increased coverage of schools under DISE, **enrolment** both at the primary and upper primary level of education has also increased significantly. The enrolment increased from 101.16 million in 2002-03 to 131.85 million in 2006-07 and further to 134.38 million in 2008-09. The **GER** at primary level, based on the DISE data is estimated to be 115.31 percent, corresponding to 98.59 percent **NER**. A few states are near achieving the goal of universal primary enrolment. Over a period of time, **enrolment** in upper primary classes has also shown consistent increase. From a low of 37.72 million in 2004-05, it has increased to 53.35 million in 2008-09 (GER 73.74 percent).

Gender Parity Index (GPI) and percentage of girls' enrolment in primary and upper primary classes reveal that there is consistent improvement both in GPI and girls' share in enrolment. The average of 633 districts in 2008-09 indicates a GPI of 0.94 in primary classes and 0.91 in case of upper primary classes.

The improvement in **girls' enrolment** is also reflected in girls share to total enrolment. In primary classes, the share of girls' enrolment in 2008-09 was 48.38 percent compared to 48.22 percent in the previous year. Girls share in total enrolment at upper primary level is 47.80 percent; it was 46.99 percent in 2007-08 and 45.80 percent in 2005-06. The percentage of girls' enrolment in government managed schools was found to be higher than in private managed schools for both primary and upper primary enrolment.

At the primary level, the share of **SC and ST enrolment** with respect to total enrolment works out to 19.94 and 11.68 percent respectively. Notably, at all levels, government schools are the main providers of educational needs of both SC and ST children. The share of OBC enrolment in the elementary classes is 42.26 percent.

One of the essential requirements to achieve UEE is to retain students in the education system. The **apparent survival rate** (to Grade V) improved to 76 percent in 2008-09. This is also reflected in **retention rate** at primary level which is estimated to be 75 percent.

With improvement in the number of schools, facilities in schools and enrolment, the **dropout rate** for cohort 2007-08 indicates an average rate of 8.02 percent in primary grades. One of the other important indicators that are essential to achieve UEE is high **transition from primary level to upper primary level** of education. It has improved to 82.84 percent in 2008-09 from 81.13 percent in 2007-08.

Learner's achievement is considered as one of the important indicators of quality of education. Examination results at the terminal grades is a proxy indicator of learner's achievement. About 50 percent boys and 51 percent girls passed Grade IV/V with a score of 60 percent and above, compared to 43 percent boys and 44 percent girls scoring 60 percent and above marks in Grade VII/VIII; the same has shown improvement over the previous year.

DISE 2008-09: MUSLIM Enrolment

The analysis of data suggests improvement in participation of Muslim Minority children in elementary education programmes. The data which has been received from **1.29 million** recognised schools imparting elementary education from across **633 districts** spread over **35 States and Union Territories** of the country reveals a total enrolment of **14.83 million** Muslim children in Primary classes in 2008-09 which is **11.03 percent** of total **134.38 million** enrolment (Total) in Primary (I to V) classes. During the pervious year, the same was 10.49 percent and in 2006-07, it was 9.39 percent. Of the total Muslim enrolment in Primary classes, the percentage of Muslim girls is **48.93** which is quite similar to the share of girls in overall Primary enrolment (48.38 percent). The highest percentage of Muslim enrolment is observed in Lakshadweep UT (99.73 percent) which is because of the fact that the percentage of Muslim population to total population in the UT in 2001 was as high as 95.47 percent.

Like enrolment in Primary classes, percentage of Muslim enrolment in **Upper Primary classes** has also improved to **9.13 percent** in 2008-09 from 8.54 percent in 2007-08 and 7.52 percent in 2006-07. Of the total **53.35 million enrolment in Upper Primary classes** in the country in 2008-09, **Muslim enrolment is 4.87 million** and the percentage of Muslim girls to total Muslim enrolment in Upper Primary classes is **50.03 percent** which is above the national average of 47.58 percent girls enrolment in Upper Primary classes.

The data also reveals a share of 10.49 percent (Muslim enrolment) in Elementary classes (I to VIII) of which 49.20 percent are the Muslim girls (to total Muslim enrolment).

The enrolment data for the year 2008-09 also reveals that there are certain pockets in the country which has got high percentage of Muslim enrolment. There are about **87,690 schools** which has got more than **25 percent Muslim enrolment** (to total enrolment in elementary classes) which is 6.84 percent of the total schools that impart elementary education in the country. Similarly, **62,534 (4.88 percent) schools** have above 50 percent Muslim enrolment as compared to 48,946 schools (3.82 percent) having 75 percent and above and 41,300 schools (3.22 percent) even having a share of 90 and above Muslim enrolment to total enrolment.

Because of the high percent share of Muslim population to total population in the state, **12 districts of Jammu and Kashmir** have got **above 90 percent Muslim enrolment** in 2008-09 in Primary classes which is also true for enrolment in Upper Primary classes. On the other hand, 25 districts in the country have more than 50 percent Muslim enrolment in Primary classes in 2008-09 compared to 20 such districts in case of Upper Primary enrolment. 15 districts of Jammu and Kashmir, 1 district each from Bihar, West Bengal, Andhra Pradesh, Lakshadweep and Kerala and 5 districts of Assam have more than 50 percent Muslim enrolment in Primary classes.

DISE 2008-09: Teacher-Related Indicators

Availability of teachers in schools is an important variable for quality education. The total number of teachers in 2008-09 suggests that about 5.79 million teachers are engaged in teaching in schools imparting elementary education in the country. The data also shows appointment of a large number of teachers across the country consequent to the SSA interventions. The all-India average reveals that, on an average, there were 4.5 teachers in a school in 2008-09 that imparts elementary education compared to an average of 3.0 teachers per primary school.

All schools together had 43.46 percent female teachers. Urban areas had higher percentage of female teachers than the rural areas; this is true for all school types.

Increase in the number of teachers is also reflected in the pupil-teacher ratio which has shown consistent improvement. **PTR**, both at primary and upper primary levels, is quite comfortable (primary, 34:1 and upper primary, 31:1).

There are about 538 thousand *para*-teachers, constituting 9.39 percent of the total number of teachers. About 54 percent *para*-teachers are Graduates and above.

DISE data reveals that government is the main employer of both **Scheduled Castes and Scheduled Tribes teachers**. The share of SC and ST teachers together in government schools is as high as 80 percent.

Education Development Index (EDI) : 2008-09

For the last four years, NUEPA has been computing Educational Development India (EDI) which is largely based on the data collected through the DISE. The following indicators have been used for computing EDI 2008-09:

ACCESS: Percentage of Habitations not Served (corrected with reference to new schools (Government) opened since 2002-03), Availability of Schools per 1000 Child Population, Ratio

of Primary to Upper Primary Schools/Sections (only at Upper Primary stage) and Schools with Student-Classroom Ratio > 40.

INFRASTRUCTURE: Schools with Drinking Water facility, Schools with Common toilet, Schools with Girl's toilet, Percentage of Schools with Female Teachers (in schools with 2 and more teachers) and Schools with Pupil-Teacher Ratio > 40.

TEACHERS: Percentage of schools with less than 2 teachers (in schools with more than 15 students) (Primary schools only), Percentage of Schools with < 3 teachers (Upper Primary schools/sections), Teachers without Professional Qualification, Gross Enrolment Ratio – Overall : Participation of Scheduled Castes Children: Percentage SC Population (2001 Census) - Percentage SC Enrolment Participation of Scheduled Tribes Children : Percentage ST Population (2001 Census) - Percentage ST Enrolment Gender Parity Index in Enrolment.

OUTCOMES: Repetition Rate Drop-out Rate Ratio of Exit Class over Class I Enrolment (only at Primary stage), Transition Rate from Primary to Upper Primary level (only for Upper Primary level) and Percentage of Appeared Children securing 60 per cent and more marks.

Assumptions used in Computing 2008-09 EDI

A set of 21 indicators have been used in computing EDI which are re-grouped into the four sub-groups, namely Access, Infrastructure, Teachers and Outcome indicators. The Indicators used for constructing EDI were pre-determined by a Working Group on EDI constituted by the MHRD during 2005-06 of which NUEPA was also one of the institutional members. In the present year, improved versions of a few variables were used. Percentage of access-less habitation was one such variable which is latest available for the year 2002-03. In view of a large number of schools that have been opened across the country in the recent past, the same was corrected with reference to new schools (Government) opened since 2002-03. Like in the previous year, in place of Gross Enrolment Ratio of SC/ST population, percentage of SC/ST population (to total population, 2001Census) *minus* percentage of SC/ST share of enrolment in Primary and Upper Primary classes has been used to assess participation of the SC/ST children. In 2008-09, Schools with Student-Classroom Ratio (SCR) above 40 and schools with Pupil-Teacher Ratio (PTR) above 40 have been used in place of schools having SCR and PTR above 60. Similarly, in place of single-teacher schools, percentage of Primary only schools with less than 2 teachers (in schools with more than 15 students) has been used in computing Teacher's Index at Primary level. In view of these changes, average SCR and PTR and percentage of passed children to total

enrolment have not been used in computing EDI in 2008-09 both in case of Primary and Upper Primary levels of education.

After data was cleaned, each indicator was *normalized.* Upon receiving *normalised values*, *Principal Component Analysis* (PCA) was applied to decide the factor loading and weights. In case of a few variables, policy options were explored to identify the *best values* instead of based on the *observed values*. Some of these variables are: access-less habitations (best value, zero), percentage of schools with pupil-teacher and students-classroom ratio above 40 (best value, zero), percentage of teachers without professional qualification (best value, zero) etc. **Because of these changes, EDI in 2008-09 may not necessarily be comparable with the same in the previous year.**

EDI 2008-09

		Primary Level	Upper Primary Level	Composite Primary & Upper Primary
TOP SEVEN	1	PUDUCHERY (0.797) (Last Year , 1st)	PUDUCHERY (0.884) (Last Year, 3rd)	PUDUCHERRY (0.841) (Last year, 1st)
	2	LAKSHADEWEEP (0.773) (Last Year 3rd)	LAKSHADWEEP (0.851) (Last Year, 2nd)	LAKSHADEWEEP (0.812) (Last year, 3rd)
	3	TAMIL NADU (0.747) (Last Year, 4th)	KERALA (0.822) (Last year, 1st)	KERALA (0.756) (Last year, 2nd()
	4	HARYANA (0.714) (Last Year, 7th)	A & N (0.809) (Last Year, 13th)	HARYANA (0.752) (Last Year, 7th)
	5	PUNJAB (0.714) (Last Year, 9th)	D & D (0.801) (Last Year, 7th)	TMAIL NADU (0.750) (Last Year, 5th)
	6	DELHI (0.701) (Last Year, 2nd)	HARYANA (0.789) (Last Year, 10th)	PUNJAB (0.737) (Last Year, 12th)
	7	GUJARAT (0.698) (Last year, 8th)	DELHI (0.762) (Last Year, 5th)	A & N ISLANDS (0.736) (Last Year, 15th)

For details please see Flash Statistics: 2008-09.

EDI 2008-09		Primary Level	Upper Primary Level	Composite Primary & Upper Primary
BOTTOM FIVE	31	MEGHALAYA (0.498) (Last Year, 31st)	ARUNACHAL (0.519) (Last Year, 32nd)	MEGHALAYA (0.510) (Last Year, 30th)
	32	BIHAR (0.480) (Last Year, 35th)	ASSAM (0.519) (Last Year, 30th)	WEST BENGAL (0.494) (Last Year, 33rd)
	33	MANIPUR (0.464) (Last Year, 29th)	JHARKHAND (0.464) (Last Year, 33rd)	ASSAM (0.483) (Last Year, 34tth)
	34	JHARKHAND (0.449) (Last Year, 33rd)	WEST BENGAL (0.459) (Last Year, 34th)	BIHAR (0.463) (Last Year, 35th)
	35	ASSAM (0.446) (Last Year, 35st)	BIHAR (0.447) (Last Year, 35th)	JHARKHAND (0.456) (Last Year, 32nd)

For details please see Flash Statistics: 2008-09.

The analysis of EDI clearly reveals that different states are at different levels of educational development in general, and primary and upper primary levels of education in particular. A few states with high EDI values are termed better than the other states but still they may not be well placed with regard to all the four sets of indicators used in computation of EDI. Even if a state is ranked first, still it may need further improvement for which individual EDI values should be critically analyzed. The states are advised to compute district-specific EDIs and analyse results separately in case of access, infrastructure, teachers and outcome indicators.

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