Analytical Report 2007-08

सर्व शिक्षा अभियान

सब पढ़ें सब बढ़ें

Elementary Education in India

Progress towards UEE

Arun C. Mehta

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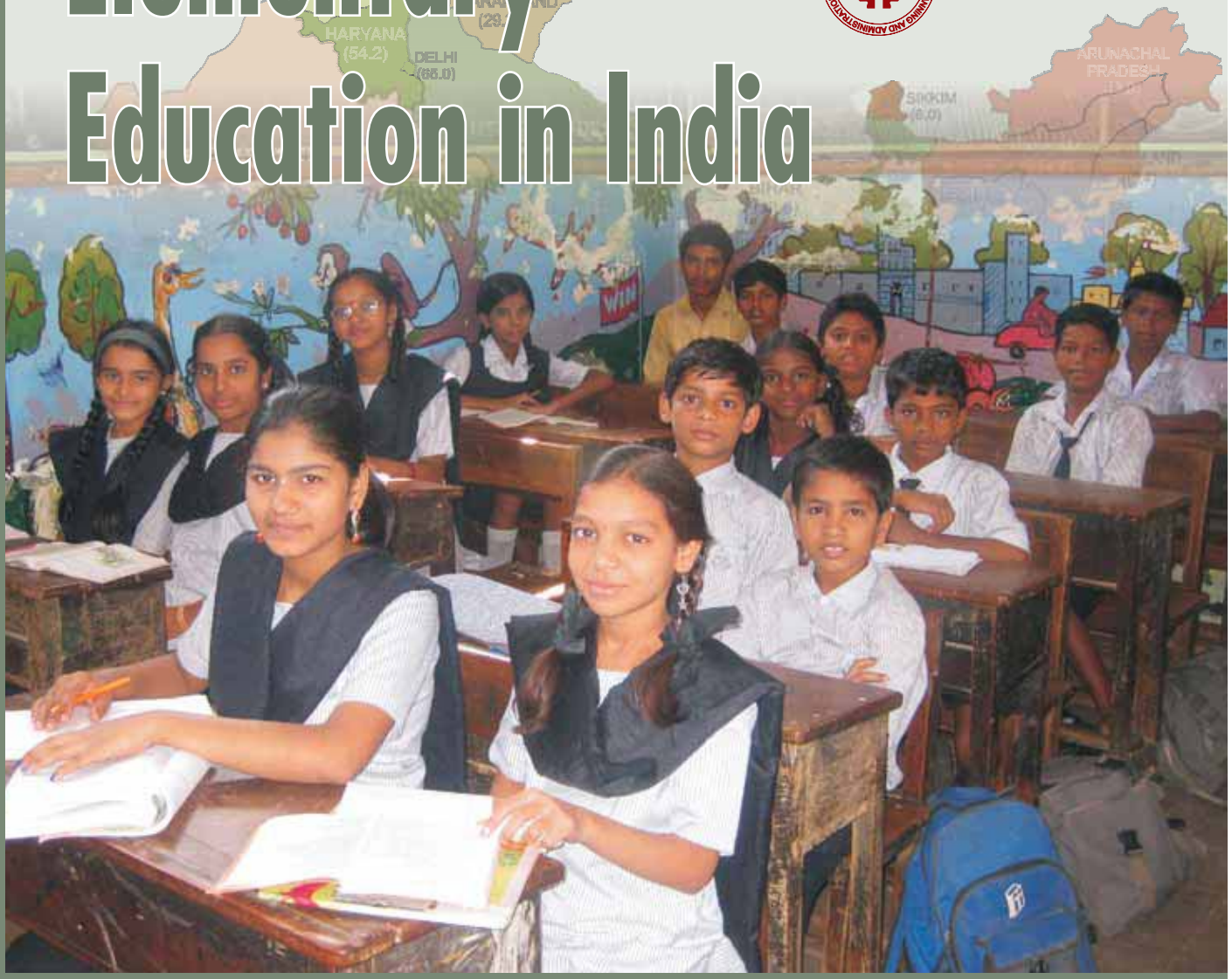

Progress towards UEE

Arun C. Mehta

The data presented and indicators constructed in the document are entirely based upon the data as received from the States & UTs as on 30th September, 2007. The views expressed and conclusions reached are that of the author and should not be attributed to the Goverment of India or to NUEPA.

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FOREWORD

Development of a sound information system is critical for successful monitoring and implementation of any programme, particularly in social sectors. Design of a school information system has, therefore, been accorded priority from the very beginning of the District Primary Education Programme (DPEP) in 1994, as a result of which the District Information System for Education (DISE) was developed by the National University of Educational Planning and Administration (NUEPA).

The importance of an Educational Management Information System (EMIS) was reiterated when *Sarva Shiksha Abhiyan* (SSA) was launched in 2001. SSA guidelines envisage development of a transparent EMIS, and preparatory activities of the programme included substantial strengthening of MIS infrastructure in the States and UTs of the country. I am happy to note that all the States & UTs of the country have adopted DISE and EMIS units have been established both at the state and district levels across the country.

District and State Elementary Education Report Cards as well as Elementary Education in Rural and Urban India have been made available to users. I am happy to present *Elementary Education in India: Analytical Report/Tables for the year 2007-08*. Information presented in the volume is particularly valuable for implementing educational programmes like SSA in the decentralized context. I am confident that this set of data will be used in planning for good quality elementary education, and that data users and researchers interested in the Indian education system will find the Analytical Report and Tables useful.

I take this opportunity to thank UNICEF, Delhi, for consistently supporting EMIS activities and NUEPA, especially Dr. Arun C. Mehta, Professor and Head, Department of EMIS and entire DISE team, for bringing out the present publication.

(Anshu Vaish)

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R. Govinda
Vice-Chancellor

From the Vice-Chancellor's Desk

In the early 1990s when the District Primary Education Programme (DPEP) was launched, a need was felt to develop a computerized Educational Management Information System for facilitating decentralized planning and management. Accordingly, the responsibility to develop the District Information System for Education (DISE) was assigned to NUEPA. I am happy to note that the process that was initiated in 42 districts across 7 DPEP Phase-I states in 1994-95 has now been expanded to all the 35 States and UTs of the country.

Under its flagship programme, namely DISE, the National University has been bringing out a series of publications based on DISE data. Each year NUEPA brings out *State and District Report Cards* as well as *Elementary Education in the Rural and Urban India* that attempt to asses and present key performance indicators of primary and upper primary education in the country. Besides School Report Cards *(www.schoolreportcards.in),* the University has also brought out another publication, namely *DISE Flash Statistics* which aims at assessing the level of development of elementary education in States and UTs by constructing Educational Development Index. Such publications not only facilitate monitoring of progress towards UEE but also provide a wider scope for participation of the civil society in matters relating to planning and management of education.

In continuation of our series of publications based on the DISE data, it pleases me to present yet another publication titled *Elementary Education in India: Progress towards UEE, Analytical Report/Tables* for the year 2007-08. I hope that the researchers, policy makers, administrators, planners and other stakeholders will find the publication both informative and useful.

I would like to place on record my appreciation for the hard work put in by the DISE team led by Prof. Arun C. Mehta, Department of Educational Management Information System (EMIS) in bringing out this publication. We would welcome any comments that users may care to make for the improvement of the publication.

(R. Govinda)

New Delhi
January, 2010

Acknowledgements

For the last several years, NUEPA has been actively involved in strengthening Educational Management Information System (EMIS) in the country. The *Analytical Report 2007-08* is based on the data received from all the 35 States and Union Territories of the country. The publication presents not only the data up to elementary level but also brings in many new dimensions of elementary education into focus. It incorporates data on children with disabilities, examination results, mediums of instruction, students' flow including transition and retention rates, teachers, utilization of school development and TLM grants, and many other parameters on which not much information is available from other sources.

The *Analytical Report/Tables* is based on the data received from as many as 1.25 million schools spread over 624 districts across 35 States & UTs. The study of this magnitude cannot be completed without the active involvement and participation of the EMIS professionals at the national and sub-national levels. I am thankful to all the State Project Directors, the state level EMIS coordinators and district level programmers and data entry operators for timely supply of data.

I take this opportunity to thank UNICEF, Delhi, especially Ms Urmila Sarkar, Chief (Education) for consistently supporting EMIS activities ever since the inception of DISE and Ms Anita Kaul, Joint Secretary, Department of School Education & Literacy, Government of India, who played a crucial role in facilitating the implementation of DISE in various states. The contribution of Ms Neelam Rao, Director (SE & L), is also gratefully acknowledged.

I am thankful to Prof R. Govinda, Vice-Chancellor, NUEPA, for guidance, encouragement and consistent support to DISE activities.

The contribution of Shri Naveen Bhatia, Computer Programmer and Shri Shalender Sharma, Chief Consultant, TSG (Ed. CIL), in database management, is gratefully acknowledged.

I am also thankful to Shri P. N. Tyagi for creating maps and Ms Alka Mishra, Ms Shakun Sethi and Ms Aseela M for efficient assistance and colleagues in the Publication Unit, especially Shri Pramod Rawat, Deputy Publication Officer and Ms Sheeja Biju, Project Publication Officer (DISE), for their keen interest in timely bringing out the publication.

We are encouraged by the enormous number of comments received from data users and hope that the present publication will also be received well by education planners, policy formulators and researchers. Any suggestion for improvement is most welcome.

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Disclaimer

Raw data presented in the document or used for calculating indicators are essentially based on data provided by the States and UTs through annual data collection (as on 30th September 2007) under SSA (DISE). NUEPA is committed to provide professional and software support to all States and UTs as well as for dissemination and analysis of data as it is provided by the individual States and UTs.

In no way, NUEPA is involved in data collection as such and therefore the accuracy and truthfulness of the data rest with the States/UTs. The State Project Directors have certified that data is free from errors and inconsistencies and hence may be merged into the national database maintained by NUEPA, New Delhi.

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Abbreviations

AS	:	Alternative Schooling
Avg	:	Average
BAS	:	Baseline Assessment Studies
BRC	:	Block Resource Center
CR	:	Completion Rate
CRC	:	Cluster Resource Center
DIET	:	District Institute of Education and Training
DISE	:	District Information System for Education
DoR	:	Dropout Rate
DPEP	:	District Primary Education Programme
DRC	:	District Report Cards
Ed. CIL	:	Educational Consultants India Limited
EGS	:	Education Guarantee Scheme
EMIS	:	Educational Management Information System
GoI	:	Government of India
Govt.	:	Government
GER	:	Gross Enrolment Ratio
GPI	:	Gender Parity Index
Hr.	:	Higher
M.A.	:	Master of Arts
M. Phil	:	Master of Philosophy
MHRD	:	Ministry of Human Resource Development
NCERT	:	National Council of Educational Research and Training
NER	:	Net Enrolment Ratio
NUEPA	:	National University of Educational Planning and Administration
No.	:	Number
NSSO	:	National Sample Survey Organisation
OBC	:	Other Backward Class
ORC	:	Other Reserved Class
PAB	:	Project Approval Board
Ph.D.	:	Doctor of Philosophy
P + Sec./Hs.	:	Primary with Upper Primary & Secondary/Higher Secondary

P + UP	:	Primary with Upper Primary
P. only	:	Primary only
PR	:	Promotion Rate
PTR	:	Pupil-Teacher Ratio
Pvt.	:	Private
RR	:	Repetition Rate
Recd	:	Received
SC	:	Scheduled Castes
SCR	:	Student-Classroom Ratio
SCERT	:	State Council of Educational Research and Training
SDG	:	School Development Grant
Sec.	:	Secondary
SRC	:	State Report Cards
SSA	:	Sarva Shiksha Abhiyan
ST	:	Scheduled Tribes
TLM	:	Teaching Learning Material
TR	:	Transition Rate
TSG	:	Technical Support Group
U. Prim./U.P	:	Upper Primary
U.P. Only	:	Upper Primary only
UEE	:	Universalisation of Elementary Education
UP + Sec/Hs.	:	Upper Primary with Secondary/Higher Secondary
UPE	:	Universalisation of Primary Education
KGBV	:	Kasturba Gandhi Balika Vidyalaya

Executive Summary

1. Introduction

1.1 The National University of Educational Planning and Administration has created a comprehensive database on elementary education in India, known as the District Information System for Education (DISE), under one of its most prestigious projects. The project covers both the 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 the DISE is that it has drastically reduced the time-lag in the availability of educational statistics. It 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. Similarly, the NUEPA has also been assigned the responsibility to strengthen the Secondary Education Management Information System for which it has developed a web-enabled software. Most of the states have collected data and a detailed report is expected soon. It would reveal new facets of secondary education in the country.

1.2 The National University has successfully developed School Report Cards (*http://schoolreportcards.in*) of more than 1.25 million primary and upper primary schools/sections, and is available for 2005-06, 2006-07 and 2007-08. 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 with comprehensive information on all the vital parameters, be it on students, teachers or other school related variables, in concise, accurate and standard format. It is easy to understand and it allows meaningful comparisons to be made among schools. Users can also download raw data as per their requirement for further empirical studies. All the DISE publications, such as 'District and State report cards', 'Elementary education in rural and urban India', 'DISE flash statistics including educational development index', and 'Elementary education in India: progress towards the UEE, analytical report', are available at *http://dise.in*. Publications based on the DISE data brought out during the last five years have also been provided in a Compact Disk format.

1.3 Despite significant increase in the number of schools covered, a few schools, largely private un-aided ones, are yet to be covered under the DISE. 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. The states are advised to initiate corrective measures in the light of the findings of sample checking of the data. In addition, the NUEPA has also launched the Post-Enumeration Survey(PES) of the DISE data initially in three states, namely Andhra Pradesh, Himachal Pradesh and Maharashtra. This is likely to be extended to the remaining states. All these efforts would not only help in improving the quality of data but would also help in ensuring complete coverage.

1.4 The DISE software is now time-tested, user-friendly, menu-driven and error-free software and is being utilised throughout the country. Efforts are being made to further improve it especially in view of user's requirement for which NUEPA has recently undertaken review of the existing Data Capture Format.

2. The Present Publication

2.1 A variety of schools and school-related indicators by school categories along with the average of all states are covered under the DISE in 2007-08. The selected indicators for previous years are also presented in the present publication. The tables presented in the document contain information on hundreds of variables, mostly by school category and wherever necessary by rural and urban areas, and by school management. Practically, all such indicators on which information is required for formulating reliable elementary education plans are presented in *'ready-to-use form'*. The indicators analyzed and tables presented are divided into the following parts: School and Facility Indicators; Enrolment-Based Indicators; and Teacher-Related Indicators. In addition, a separate section, devoted to Educational Development Index is also presented. The major highlights of *Elementary Education in India: Progress towards UEE, Analytical Report 2007-08* are given in the following sections.

3. School-Based Indicators

3.1 With the improved coverage, the number of schools/sections imparting elementary education dealt with under the DISE has 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. Of the total schools, about 87.39 percent schools are located in rural areas. During the same period, the number of primary schools increased from 6,01,866 to 8,05,667. Category-wise distribution of schools reveals that majority of the schools (64.41 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 2007-08 is one upper primary school/section for every set of 2.42 primary schools/sections compared to 2.45 in 2006-07 and 2.57 schools/sections in 2005-06. It is noticed that in about 20 states, the ratio of primary to upper primary schools/sections is better than the national average of 2.42. Many 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 and West Bengal, where the ratio still needs to be improved significantly.

3.2 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 the DISE over a period of time. This is important in getting the true picture of universalisation of elementary education in the country. As many as 70,613 and 1,73,282 schools in 2007-08, respectively, were being managed by Private Aided and Private Unaided managements. The DISE data also suggests that the majority of the private schools are un-aided schools (71.05 percent). The percentage of Government and Government Aided schools is as high as 85.83. This shows that ninety out of every hundred schools imparting elementary education in the country are funded by the government.

3.3 A significant achievement of the education system in the country is that most of the new schools have a school building. As many as 1,89,249 new schools have been opened since 2002-03 and the majority of which are located in rural areas and 80 percent of these schools have been provided school buildings. During the period 2002-03 to 2007-08, as many as 1,27,984 primary schools have been opened which is 15.89 percent of the total primary schools in the country. About 92 percent of such schools have been provided school buildings.

3.4 Not only the number of schools and schools with buildings has increased but the average number of instructional rooms has also increased across the country. This is essential for smooth teaching-learning transaction. Irrespective of the type of school, schools imparting elementary education across 624 districts in 2007-08 had an average of 4.31 classrooms, compared to 3.7 in 2004-05. However, a significant difference is noticed in the average number of instructional rooms in primary schools located in rural areas (2.8 classrooms) and urban areas (4.6 classrooms)

and also in government (2.8 classrooms) and private (4.8 classrooms) managed schools. About 70 percent of classrooms in primary schools are in good condition and remaining 30 percent need either minor or major repairs.

3.5 Schools imparting elementary education across the country vary in size. There are about 7.83 and 16.57 percent schools which respectively have enrolment between 1-25 and 26-50. In view of there being a large number of small schools, there is a need to have separate programmes for these schools. In view of the large number of such schools (about 24 percent of 1.25 million 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 the NUEPA in developing planning methodology for small schools.

3.6 Some of the salient highlights with regard to other school-based indicators are as follows:

3.6.1 The distribution of schools by type of building shows that 71.73 percent primary schools have *pucca* (permanent) buildings as compared to 7.50 percent having partially *pucca* and another 3.51 percent having *kuchcha* (temporary) building. Efforts should be made to provide *pucca* building to all schools.

3.6.2 The percentage of single-classroom schools during 2004-05 to 2007-08 declined from 10.39 percent to 8.49 percent. Despite the decline in percentage of single-classroom schools, their number in absolute terms is significant, which needs intervention without delay.

3.6.3 Over a period of time, the student-classroom ratio has shown improvement. On an average about 37 students are sitting in one classroom in primary schools. However, in the case of primary schools, the student-classroom ratio in states of Bihar and Jharkhand is still very high.

4. Facility Indicators

4.1 Like the number of schools, instructional rooms and ratio of primary to upper primary sections/schools, facilities in schools have also improved significantly and this 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 the retention rate. About 87 percent of the schools had drinking water facility available in 2007-08 compared to 85 percent in 2006-07. A little less than 50 percent of the total schools had water hand pumps, and 24 percent of schools had tap water facility in school. Like drinking water facility, more schools now have common toilets and separate toilets for girls. About 63 percent schools had common toilets in schools in 2007-08, compared to 47 percent schools in 2004-05; and 51 percent schools in 2007-08 had separate toilets for girls compared to only 33 percent in 2004-05.

4.2 Some of the other major facilities available in schools are:

4.2.1 During the period 2004-05 to 2007-08, the number of schools with computers increased impressively. As many as 1,78,253 schools reported to have a computer, which is 14.25 percent of the total schools. In absolute terms, Maharashtra has the highest number of schools (31,845 schools, 36.49 percent) with computers. The percentage of primary schools with computers is 6.01 percent compared to 14.05 percent of independent upper primary schools.

4.2.2 The percentage of schools with ramps increased significantly from 11.49 percent in 2004-05 to 34.43 percent in 2007-08; this may help in attracting more physically challenged children to schools. Together with enrolment by nature of disability, the DISE is perhaps the only source that provides comprehensive information about physically challenged children in schools.

4.2.3 Providing nutritious food to all children under the mid-day meal scheme is one of the ambitious programmes of the government. For the first time, a variable on availability of kitchen-shed in school was added to the DISE during 2006-07. In 2007-08, it reveals that 36 percent of schools managed by the government and

aided schools have kitchen-shed in school. The percentage of such schools is 37 and 26 respectively in the rural and urban areas. The percentage of schools with kitchen-shed varies from 87 in Tamil Nadu to 2 in Jammu & Kashmir.

4.2.4 The percentage of primary schools having attached pre-primary section increased from 14.27 in 2002-03 to 28.06 in 2007-08. The number of such schools is more in urban areas than in rural areas.

4.2.5 Over a period of time, the number of schools receiving school development and TLM grants increased impressively (mostly government run schools). Compared to 7,24,682 schools that received school development grant in 2003-04, the corresponding figure in 2006-07 was as high as 8,62,385 schools (68.95 percent). The number of schools that received TLM grant has been as many as 8,32,934 (66.59 percent) of all types of schools. The majority of the states have utilised more than 90 percent of these funds.

5. Enrolment-Based Indicators

5.1 With the increased coverage of schools under the DISE, enrolment both at the primary and upper primary levels 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 134.13 million in 2007-08. The GER at primary level, based on the DISE data is estimated to be 113.94 percent, corresponding to 95.92 percent NER. A few states are near 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 50.91 million in 2007-08 (GER 69.88 percent).

5.2 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 624 districts in 2007-08 indicates a GPI of 0.93 in primary classes and 0.89 in case of upper primary classes. Meghalaya has the highest GPI (above one).

5.3 The improvement in girls' enrolment is also reflected in girls' share to total enrolment. In primary classes, the share of girls' enrolment in 2007-08 was 48.22 percent compared to 48.09 percent in the previous year. Girls' share in total enrolment at upper primary level is 46.99 percent; it was 46.51 percent in 2006-07 and 45.32 percent in 2004-05. 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.

5.4 At the primary level, the share of the SC and ST enrolment with respect to total enrolment works out to 20.08 and 11.60 percent, respectively. Notably, at all levels, government schools are the main providers of educational needs of both the SC and ST children. The SC and ST enrolment together had a share of 79.75 and 83.95 percent, respectively, in government run primary and upper primary schools. The share of the OBC enrolment in the primary and upper primary classes is 42.35 and 41.86 percent, respectively.

5.5 During 2006-07, the DISE made an attempt to collect information on enrolment of Muslim children, for the first time. In 2007-08, the percentage of Muslim enrolment at primary level is reported to be 10.49 against 8.54 at upper primary level. The percentage of girls' enrolment is as high as 48.67 (GPI, 0.95) and 49.40 (GPI, 0.97) at primary and upper primary levels. Preliminary analysis of data suggests that there are about 52 districts in the country which have 25 percent or more Muslim students in primary classes. Most of these districts are from the states of Assam, Bihar, Jammu & Kashmir, Karnataka, Uttar Pradesh and West Bengal.

5.6 Much emphasis is being given to inclusive education. The DISE is perhaps the only source that collects information on disabled children in elementary classes on a regular basis. In 2007-08, about 1.55 million disabled children were enrolled in elementary classes across the country, of which 1.15 million were in primary and 0.40 million in upper primary classes.

5.7 One of the essential requirements to achieve the UEE is to retain students in the education system. The apparent survival rate (to Grade V) improved to 72 percent in 2007-08. This is also reflected in retention rate at primary level which is estimated to be 74 percent. States like Haryana, Himachal Pradesh, Kerala, Madhya Pradesh, Maharashtra and Tamil Nadu reported above 90 percent retention rate at primary level.

5.8 With improvement in the number of schools, facilities in schools and enrolment, the dropout rate for cohort 2006-07 indicates an average rate of 9.40 percent in primary grades. Tamil Nadu with 1.70 percent and Himachal Pradesh with 2.60 percent have almost achieved the goal of universal retention at primary level. The cohort survival rate (to Grade V), estimated to be 72 percent, indicates that a good number of children dropping out in primary classes.

5.9 One of the other important indicators that are essential to achieve the UEE is high transition from primary level to upper primary level of education. It has improved significantly from 64.48 percent in 2002-03 to 83.72 percent in 2005-06 but declined slightly to 81.13 percent in 2006-07

5.10 Learner's achievement is considered as one of the important indicators of the quality of education. Examination result at the terminal grades is a proxy indicator of learner's achievement. About 48.67 percent boys and 48.80 percent girls passed Grade IV/V with a score of 60 percent and above, compared to 43.02 percent boys and 44.05 percent girls scoring 60 percent and above marks in Grade VII/VIII; thus showing impressive improvement over the previous year.

6. Teacher-Related Indicators

6.1 Availability of teachers in schools is an important variable for quality education. The total number of teachers in 2007-08 suggests that about 5.63 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. All the schools in the country now have an average of 2 and more teachers. The all-India average reveals that, on an average, there were 4.5 teachers in a school in 2007-08 that imparts elementary education compared to an average of 3.0 teachers per primary school.

6.2 All schools together had 42.72 percent female teachers. Urban areas had higher percentage of female teachers than the rural areas; this is true for all types of school. Irrespective of types of school, a significant difference is also noticed in the case of female teachers in schools under private and government managements.

6.3 Increase in the number of teachers is also reflected in the pupil-teacher ratio which has shown consistent improvement. The PTR, both at primary and upper primary levels, is quite comfortable (primary, 34:1 and upper primary, 31:1) and is below 40:1. However, there are 151 districts in the country which still have a PTR of above 40:1. Most of the districts of Bihar and Jharkhand fall under this category. At primary level, there are only four states which reported a PTR above 40. At upper primary level, Bihar reported a high PTR of 59:1, compared to 54:1 at primary level. In Bihar, it is not only the PTR that is high but its student-classroom ratio is also high at 96. With the appointment of a large number of teachers in the state, pupil-teacher ratio is expected to improve in the year that follows.

6.4 There are about 5,84,000 *para*-teachers, constituting 10.48 percent of the total number of teachers. About 68,186 schools have only *para*-teachers. The percentage of such schools is very high in Rajasthan, Jharkhand and Assam; these states having 12.68, 39.12 and 18.64 percent, respectively, of the total number of schools. About 54 percent male and 51 percent female *para*-teachers are Graduates and above. About 16.38 percent male and 14.00 percent female *para*-teachers in primary schools have B.Ed or equivalent degrees.

6.5 The average age of teachers across states suggests that the majority of teachers in primary schools are between 26 and 45 years, which is also true for other types of schools. The percentage of teachers in the age group of 18-25 years across types of school has been low but has shown improvement over the previous year; it indicates newly recruited teachers are joining the state education system.

6.6 The percentage of teachers involved in non-teaching assignments has been as low as 10.84 percent which shows that the majority of teachers were not involved in non-teaching assignments during the previous academic year. On an average, a teacher was involved in non-teaching assignments only for 16 days. In rural areas, teachers were involved in such assignments for 14 days compared to 17 days in urban areas.

6.7 The DISE data reveals that government is the main employer of both the Scheduled Castes and Scheduled Tribes teachers. The share of the SC and ST teachers together in government schools is as high as 80.23 percent. As many as 0.69 million SC and 0.51 million ST teachers are engaged in imparting elementary education, respectively representing 12.25 percent and 9.14 percent of the total teachers.

7. Educational Development Index

7.1 Based on the DISE data, an effort has been made to compute Educational Development Index separately for primary and upper primary levels of education as also the composite index for the entire elementary education. The EDI can play a significant role in assessing progress towards UEE as well as in deciding the future course of investment on elementary education. About 23 indicators were used which were further re-grouped into four sub-groups, namely access, infrastructure, teachers, and outcome indicators.

7.2 The EDI reveals that Mizoram out-performed the other six states in the north-eastern region which is true for primary and composite primary and upper primary levels of education. May be these states are small in size but a cursory look at the EDI values indicates that they are doing much better than a number of bigger states. It also indicates a marked improvement in the case of Lakshadweep and Puducherry in composite primary and upper primary levels of education. Puducherry not only ranked first within the set of smaller states but also ranked first with an EDI value of 0.808 among all the States and UTs of the country in composite primary and upper primary levels of education.

7.3 Among 21 major states, the top five ranking states are Kerala (EDI, 0.791), Delhi (EDI, 0.780), Tamil Nadu (EDI, 0.771), Haryana (EDI, 0.753) and Gujarat (EDI, 0.748). Kerala, Delhi and Tamil Nadu maintained their positions but Himachal Pradesh (EDI, 0.695) conceded its fourth position to Haryana (EDI, 0.755). The EDI value of Karnataka in 2007-08 (EDI, 0.743) was higher than the same in the previous year (EDI, 0.680). However, Kerala at primary level conceded its second position to Tamil Nadu and Himachal Pradesh its fourth position to Haryana. Kerala and Tamil Nadu are generally seen as educationally advanced states. Irrespective of an educational level, the difference in EDI values between the highest and lowest ranked states is significant, showing that states are at different levels of educational development.

7.4 Bihar, Arunachal Pradesh and Jharkhand are ranked 35, 34 and 33 in case of composite primary and upper primary levels of education with an EDI as low as 0.406, 0.485 and 0.488 respectively, It is much lower than that of the top ranked states. In the overall ranking, West Bengal and Jharkhand are placed 33rd and 32nd respectively in the composite EDI at primary and upper primary levels of education compared to their respective 33rd and 34th positions in 2006-07.

7.5 The analysis of the 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 the EDI. Even if a state is ranked first, it may need further improvement for

which individual EDI values should be critically analyzed. In addition, there is also a need to analyse each indicator separately and identify states that need improvement.

7.6 The states are advised to compute district-specific EDIs and analyse results separately of access, infrastructure, teachers and outcome indicators. Even the top ranking states are not perfect with regard to all the four sets of indicators that are reflected in individual EDI values. Variables found to have higher weightage than others should be accorded the top most priority while adopting strategies in the year that follows.

8. DISE: Marching Ahead

8.1 Through the DISE efforts, information on all aspects of universalisation of education is now available at disaggregated levels that can be used in different ways. The present document has highlighted a number of issues which can be tracked by using the DISE data at different levels. Up-to-date information is now available at all desired levels in ready-to-use form. Detailed information is available by school category, management, location, type of schools and wherever necessary, is separately available by gender. The same is also separately available for primary and upper primary levels of education. In view of the data now being available at school, cluster, block, district, state and national levels, evidence-based planning can be initiated at any desired level. The DISE data now being available over a period of time, trend analysis on areas of concern can be initiated. Studies on girls participation in educational programmes, enrolment, impact of infrastructure on learner's attainment, pupil-teacher ratio, *para*-teachers, impact of in-service training on classroom transaction, schools with high PTR and students-classroom ratio, etc., can be undertaken exclusively based on the DISE data. Individual schools lacking minimum facilities can be identified and tracked by using the DISE data. A few states (Himachal Pradesh, Karnataka, Jharkhand, Uttar Pradesh etc.) have computed district and block-specific EDI; the DISE data can be used extensively to track their progress. One of the other important variables available under the DISE is grade-wise enrolment and repeaters that can be of immense use in initiating internal efficiency of education system related studies. In a number of districts, since the DISE data is now available over more than five years, studies concerning retention and transition rates can be undertaken. Perhaps the DISE is the only source which disseminates age and grade matrix that can play an important role while planning for school places. Comprehensive profiles of more than 5.6 million teachers are also being maintained under the DISE, that can be used for developing meaningful in-service-training programmes.

8.2 Despite overall improvement, there are a few areas of concern which need to be accorded the top most priority in the following year.

8.2.1 A good number of schools are single-teacher schools despite an overall average of four teachers per school, all of which need serious intervention. Rationalization of teachers is the only solution. Percentage of female teachers has improved but in a few states their number is not satisfactory and hence need improvement. Process of filling-up of vacant positions of teachers across the country may be initiated immediately. Quite a good number of schools are left to *para*-teachers to manage them. Studies should be initiated on the functioning of all such schools.

8.2.2 States with high ratio of primary to upper primary schools/sections may like to expand upper primary schooling facilities. All schools imparting elementary education across the country should be provided with minimum essential physical, ancillary and teaching-learning facilities. There are still locations where the PTR is not satisfactory and a single-classroom has to accommodate a large number of pupils. Possibilities to provide additional classrooms to schools having high student-classroom ratio may be explored.

8.2.3 The average dropout rate at primary level is very high and it needs to be checked. Without this neither the goal of universal primary education nor elementary education can be achieved. This is also true for transition

from primary to upper primary level of education. Reason-specific child-centered strategies need to be adopted to check this.

8.2.4 The quality of education, in terms of examination results and learners' attainment across the country, is not satisfactory. It may be improved through active participation of teachers. Useful in-service programmes can be of great help in improving classroom transaction. Identification of training needs and review of existing in-service programmes may be helpful in making these programmes more effective.

8.2.5 States may be advised to compute district-specific EDIs and analyse EDI values separately for indicators like access, infrastructure, teachers and outcome. Rather, they may like to analyse all the 23 indicators used in the EDI computation district-wise, and within a district, block-wise. This may be followed by adopting appropriate strategies.

Educational Management Information System in India: A Case of DISE

Introduction

Free and compulsory education to all children up to the age of fourteen years is a constitutional commitment in India. The Government of India initiated a number of programmes to achieve the goal of Universalisation of Elementary Education (UEE), among which the *Sarva Shiksha Abhiyan* (SSA), launched in 2001, is the most recent one. It aimed at achieving universal elementary education of satisfactory quality by 2010. The SSA is expected to generate demand for secondary education in view of which the Government of India has recently launched the *Rashtriya Madhyamik Shiksha Abhiyan* (RMSA) to improve universal access and quality at the Secondary and Higher Secondary stages of education[1]. For successful implementation of any educational programme, effective monitoring and an efficient information system are essential. While the monitoring framework for the SSA is developed separately, concerted efforts have been made towards strengthening the Educational Management Information System (EMIS) for the elementary level of education. The District Elementary Education Plans (DEEP) across the country are being developed primarily based on the data generated though the information system developed for the SSA, i.e. the District Information System for Education (DISE). Similarly, the NUEPA has also been assigned the responsibility to strengthen the Secondary Education Management Information System (SEMIS) for which it has developed a web-enabled software. Most of the states have collected data and detailed state-specific reports, which would reveal new facets of secondary education in the country, is expected soon. This section deals with the efforts made under the DISE towards developing a school-based information system in case of elementary level of education covering management and organization of information collection, dissemination and utilization, as also limitations and major areas of concern. Efforts made to further improve the quality of data have also been briefly presented.

> "SSA is expected to generate demand for secondary education in view of which the Government of India has recently launched the *Rashtriya Madhyamik Shiksha Abhiyan* to improve universal access and quality at the Secondary and Higher Secondary stages of education"

A number of government and semi-government agencies are involved in the collection of information on educational variables[2]. Among them the Department of Higher Education of the Ministry of Human Resource Development (MHRD), Government of India, is the main agency responsible for the collection of numeric information on a regular basis through block, district and state-specific consolidated data sheets. The MHRD collects information about all the recognized institutions of the country annually with 30th September as the reference date. The MHRD publishes the state-specific information through its publication, *Education in India*. The latest available volumes of this publication covering various aspects are:

[1] *Rashtriya Madhyamik Shiksha Abhiyan:* A Scheme for Universalisation of Access to and Improvement of Quality at the Secondary and Higher Secondary Stage, Ministry of Human Resource Development, Government of India, New Delhi, 2008.

[2] Report of the Review Committee on Educational Statistics, Volume I, Ministry of Human Resource Development, Government of India, New Delhi, December 2008.

2000-01, Volume I: Numeric Information; 1997-98, Volume II: Financial Data; 1999-2000 and Volume III: Examination Results. However, another publication, though a provisional one, titled *Selected Educational Statistics*, is the latest available for the year 2006-07. On the other hand, the National Council of Educational Research and Training (NCERT) also collects information on special variables through its All India Educational Survey, once in every five to eight years with habitation as its unit of data collection. Full results of the Seventh Survey, with September 30, 2002 as its date of reference, were made available in 2008. The basic purpose of collecting information on special variables through the all-India school survey is to provide inputs for formulating the five-year plans. Neither the MHRD nor NCERT disseminates full set of district-specific data; hence time-series data on key indicators is not available.

"Sporadic attempts have been made in the past to develop a computerized educational management information system in India. Of these, efforts made under the District Primary Education Programme and the *Sarva Shiksha Abhiyan* are apparently among the most successful ones"

A number of semi-government agencies, like the National Sample Survey Organization (NSSO), Census of India, and the International Institute for Population Studies (National Family Health Survey), also from time to time collect information on a few educational variables as part of their regular household sample surveys. The NSS Organization also conducts a special survey on education through its *Participation in Education* series, 64th Round being the latest one. The Government of India through the Educational Consultants India Limited (Ed.CIL) and the Indian Market Research Bureau (IMRB), had recently commissioned the second nation-wide survey for estimating the out-of-school children of age group 6-14 years; the first being conducted (also by IMRB) in 2005-06. Similarly, a non-government organization, *Pratham*, also conducts a household survey (2008 being the latest one) to estimate the out-of-school children (6-13 years), the facilities in schools and the learning ability of children in the rural India[3]. It has decided to conduct such surveys till 2010. In addition, the Government of India through the Ed.CIL has also commissioned studies on student's attendance, drop-out rates and teacher's absence in primary and upper primary schools in a few select states. The NCERT also conducted learner's assessment studies, both in case of primary and upper primary levels of education. It intends to monitor quality of elementary education though a set of formats that it has specially designed for the SSA. Recently, the NCERT has also computed Systemic Quality Index (SQI) in Primary Education in India.

Indian education system is one of the largest in the world as it caters to the needs of more than 1,100 million people. In view of its size (193 million children of 6-14 years and 185 million enrolment in Classes 1 to 8), the information system has certain limitations, both administrative (35 States and Union Territories, 600-plus districts, more than 7,000 blocks and 70,000 clusters) and non-administrative[4]. Some of these limitations are: (i) multiple data collection agencies and directorates (primary/elementary, secondary) involved in data collection and lack of coordination among them; (ii) lack of understanding of the concept and definitions of educational statistics; (iii) lack of adequate, qualified and trained staff at different levels; (iv) problems in distribution and collection of data-capture formats; (v) lack of district-specific time-series data; (vi) time-lag in data; (vii) reliability of education data; (viii) data gaps; (ix) lack of computers at lower levels; (x) creation of new districts (593 during 2001 Census, presently 624 districts) and re-demarcation of boundaries of the existing districts; (xi) poor dissemination and utilization of data; and (xii) lack of accountability at different levels. Notwithstanding these limitations, the school statistics form the basis of planning, monitoring and evaluation of various aspects of education, in general, and primary

[3] Annual Status of Education Report (Rural): 2008, Pratham Resource Center, Mumbai, January 2009.

[4] Education Information System in India its Limitations: Suggestions for Improvement, Journal of Indian Education, Volume XXIII, No. 2, August, 1997, NCERT, New Delhi and A Note on Educational Statistics in India, Journal of Educational Planning and Administration, Vol. VII, No.1, January 1993, New Delhi.

and elementary education, in particular. The manual system of information collection under the MHRD even does not have a uniform school format. Rather, it has got consolidated sheets at different levels. In view of this, it is not possible to undertake validation of data at any level. The first consolidation of data takes place at the block level and in large blocks in view of a large number of schools; it is not an easy task to consolidate the data manually, especially when officers at this level are generally not properly trained to deal with huge amount of data. The Review Committee on Educational Statistics (2008) has taken note of most of these limitations and has made recommendations accordingly. It has recommended creation of a Central Bureau of Educational Statistics outside the Ministry of Human Resource Development.

> "What is more remarkable about the 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 about a year at the national level and only a few months at the district and state levels"

Sporadic attempts have been made in the past to develop a computerized educational management information system in India. Of these, efforts made under the District Primary Education Programme (DPEP) and the *Sarva Shiksha Abhiyan* (SSA) are apparently among the most successful ones. Most of the earlier attempts at the Central and State Governments level failed to sustain and as such the overall situation remained a matter of concern.

At the time of initiating the District Primary Education Programme (DPEP) in 1994-95, it was felt that a sound information system was essential for successful monitoring and implementation of the programme. It was also realized that to strengthen educational statistical database for planning and management in a decentralized framework, an innovative model was needed. It was expressed that the DPEP, with a focus on decentralized planning, required up-to-date and reliable school level information as soon as it was collected. It further reiterated, in the context of decentralization of primary education, the imperativeness of more efficient and effective school and community databases so that the signals relating to the trends in critical indicators could be tracked at various levels of decision-making. The MHRD in 1994-95, as part of the DPEP national endeavour, decided to design and develop a school-based computerized information system, and entrusted the main responsibility to the National Institute of Educational Planning and Administration (NIEPA), New Delhi, (now the National University of Educational Planning and Administration [NUEPA]).

In this background, a pilot project for revitalization of educational statistics in India was initiated at NUEPA in 1995 with financial assistance from the UNICEF[5]. The project aimed at examining issues related to identification of data needs, processes and procedures for data collection, developing a framework for data flows and computerization, and facilitating the use of educational indicators in planning, management, monitoring and evaluation. Such a comprehensive and integrated approach was necessitated by the fact that the then existing system could not provide the school level data in time and that it was highly limited in scope and coverage. Similarly, the use of educational statistics for planning and monitoring in the decentralized framework was also minimal. In the absence of school-specific data, there were no systematic checks on the internal consistency of data. Data on many critical variables was either not collected at all or was not processed to facilitate decision-making. In tune with the spirit of the DPEP, the district was selected as a nodal point for collection (school as a unit of data collection was assigned unique school identification code), computerization, analysis and use of school level data. The NUEPA designed and developed the core Data-Capture Formats in consultation with experts and the states (flexibility to add additional state-specific variables is also provided). Accordingly, the NUEPA designed the software for implementation at

[5] UNICEF is supporting (software development & technical support) DISE activities at NUEPA since 1995. However, publications based on DISE data are funded by the Ministry of HRD, Government of India, New Delhi.

the district level (in case of primary level) and provided necessary technical and professional support to all the DPEP districts and states.

improve the DISE software so as to make it complete user-friendly menu-driven software with emphasis on the report module.

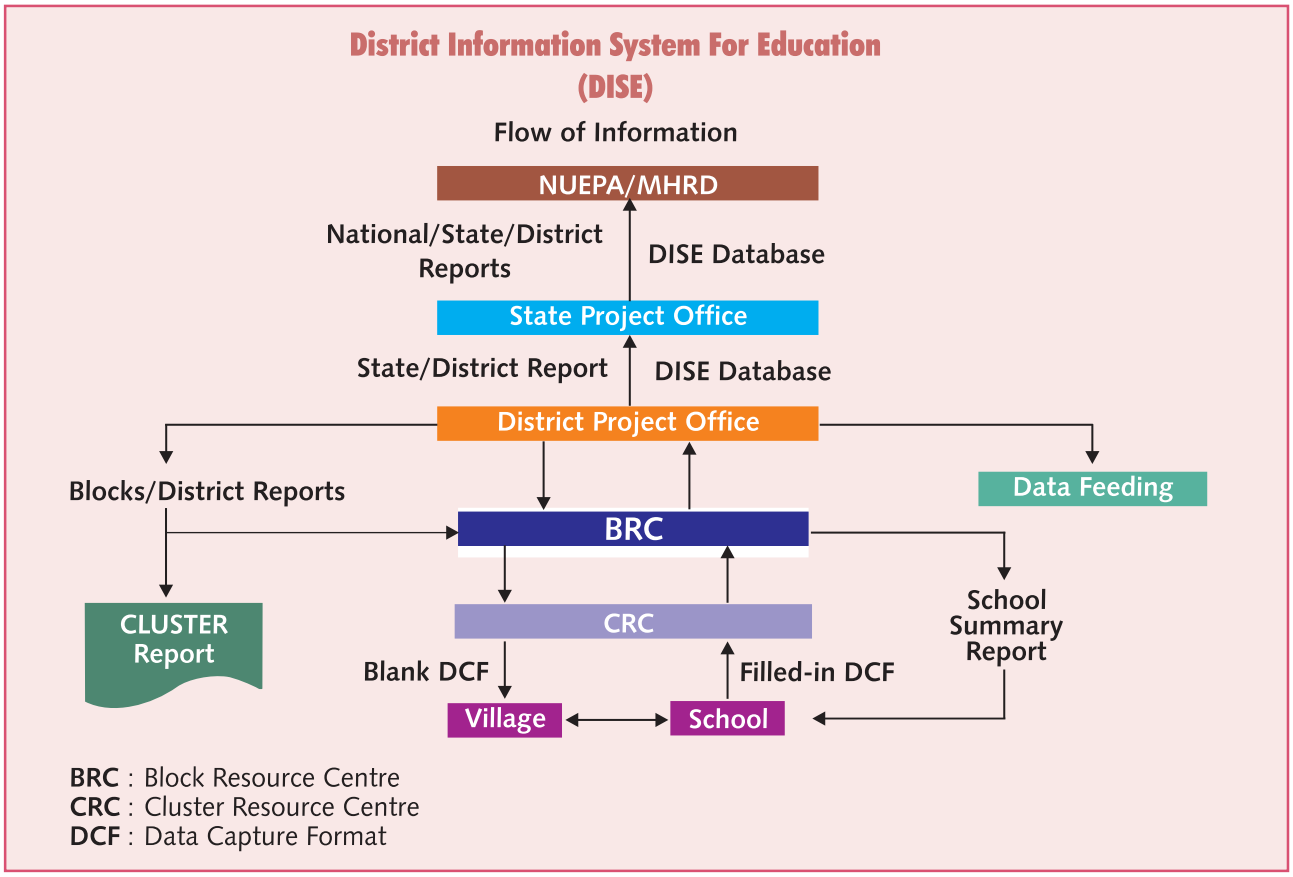

Figure 1.1 : Data Flow Diagram

The first version (dbase) of the software, named as 'District Information System for Education' (DISE), was released in the middle of 1995. The district level professionals were assisted and trained in the establishment of the EMIS units. The first major review of the DISE software was undertaken during 1997-98 (PowerBuilder/SQL Anywhere). The software was later re-designed in 2001 in the light of requirements of the SSA (PowerBuilder/Oracle). Not only was the coverage of the DISE extended to non-DPEP states but it was also expanded to cover the entire elementary level of education. In view of the state-specific requirements, the NUEPA conducted workshops in 2005 and 2006 and sought suggestions about the DISE format and software in the light of which the DISE format as well as software was modified and made available to all the DISE users across the country. Efforts are being made to further

The DISE 2001 Software: Main Features

The main features of the DISE 2001 Software are briefly presented below:

- The system covers eight years of schooling in all recognized primary, upper primary and primary/upper primary sections of the secondary and higher secondary schools.
- Manual aggregation of data at different levels is completely replaced by computerized data entry and report generation system.
- The concept and definitions of educational variables involved therein have been standardized at the national level and are uniformly followed by all districts and states.
- The system defines core data on school location, management, rural-urban, enrolment, buildings,

equipment, teachers, incentives, mediums of instruction, children with disabilities, examination results and student flows.

- The states/districts have flexibility of adding supplementary variables depending upon their specific requirements on an year-to-year basis. No additional software for computerization and analysis of state/district specific data is required.
- Detailed data on individual teachers, *para*-teachers, community teachers and their profile, including data on in-service training received, is collected and made available.
- The states/districts can develop their own large database using 'designer' module and integrate a variety of school/cluster/block level data with it. The software handles multiple databases at various levels and provides tools of data analysis and presentation.
- The DISE ensures two-way flow of information. A School Report Card for each school is generated for sharing with the school and members of the Village Education Committee.
- A large number of standardized reports on school-related variables and performance indicators aggregated at the cluster, block and district levels are generated by the software.
- The DISE presents multi-user and modular system of software design for better management and security of databases.
- Data can be exported to many other formats for statistical and other analyses by users.
- It responds to pre-defined queries on standard aspects, like school list, list of villages without primary and upper primary schools, single-teacher schools, schools with type of building, schools with high PTR, etc.

"The Review Committee on Educational Statistics has recommended expansion of the DISE from Elementary to Secondary and Higher Secondary levels of education. It has also recommended that the DISE should become the only source of statistics on school education in the country"

Major Outcome of the DISE Efforts

- ✓ The DISE software is now operational in all the districts of the country (35 States and UTs) and is providing vital information for preparation of district elementary education plans.
- ✓ Through the concerted efforts, the MIS Unit is now operational both at the district and state levels and is equipped with necessary hardware and software.
- ✓ The DISE has also eliminated data gaps as comprehensive information is now available on all aspects of universal elementary education at different levels.
- ✓ What is more remarkable about the 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 about a year at the national level and only a few months at the district and state levels.
- ✓ As part of the DISE activities, District Report Cards on elementary education is being released annually. These contain cross-sectional data on a number of variables at the district level. The State Report Cards are also being disseminated for the last six years. The Analytical Report containing detailed analysis of the DISE data is also being published annually (see Table A1).
- ✓ A few states have extended the coverage of the DISE to the unrecognized schools. A study based on the unrecognized schools of Punjab was recently brought out by the NUEPA.
- ✓ Every effort is made to promote the use of DISE data for planning, management and monitoring of the SSA through case studies, orientation and training workshops of educational planners and administrators. It has now become a regular feature to share the DISE data at different levels every year. At the national level, major findings of the DISE

data are being shared every year with planners, administrators, policy makers, educationists and other data users.

✓ As an online help to users, the DISE group of users is formed on the Internet, which is very active. Users post problems of common interest to the group for their solutions.

district covered under the DISE are uploaded along with other DISE publications. All the DISE publications are also available to users in a Compact Disk.

✓ The Government of India has recently constituted a committee to review educational statistics (including DISE activities), report of which was made available in December 2008 (see Table A1).

Review Committee on Educational Statistics

A Few Observations

- It must be conceded that the DISE does represent a significant advancement over the earlier systems of data collection, compilation, analyses and publication. In terms of reduction of time-lags and improvement of quality, it represents a phenomenal stride over all other systems.
- The DISE can be said to have emerged as a time-tested 'model' to serve educational statistics. The developments under the DISE can be cited as a 'best practice' in the school education segment. It must become the only system and shall be upgraded to cover Secondary and Senior Secondary stages also.

The DISE system can be seen to have the following advantages:

- The DISE observes *'DISE Fortnight'* which has become popular. Launching a campaign will certainly help to improve data collection.
- Adoption of modern technology is desirable and practicable. The DISE has demonstrated the utility of adopting technology. Some states have introduced computers at the block-level. The DISE software-support is available even at the cluster level.
- In view of the special requirement of the states, the software adopted by the DISE provides for a lot of flexibility; the DISE has plenty of scope for adding a number of supplementary variables and the states and UTs have been found to use the supplementary variables to generate reports.
- The DISE is a useful planning tool for providing educational facilities and infrastructure. It gives spatial information about education facilities and highlights gaps and under-served areas.
- Both raw and processed data are available to users. This promotes transparency and endorses fuller utilisation of data especially by the researchers.

Report of the Review Committee on Educational Statistics, Volume I, Ministry of Human Resource Development, Government of India, New Delhi, December 2008.

Box 1

DISE remains the one major source of information about the school system, and the indicators it captures do provide sufficient basis to infer the evolving status of the primary and elementary education system in India. Indeed, the quality of information available in DISE is so much more recent, comprehensive and reliable than all other sources.

Excerpts from Low-Cost Private Education: Impacts of Achieving Universal Primary Education, Edited by Bob Phillison, 2008, Commonwealth Secretariat U.K.

Box 2

✓ Official website of the DISE *(http://www.dise.in)* has been developed and is being updated frequently. District Report Cards and raw data in case of each

The Review Committee on Educational Statistics has recommended expansion of the DISE from elementary to secondary and higher secondary

levels of education. It has also recommended that the DISE should become the only source of statistics on school education in the country. In fact, a few states on their own have already expanded the coverage of the DISE in those states. And a few others have decided to have the DISE as the only source of information so far as elementary level of education is concerned.

In addition to the annual publications based on the DISE data (see Table A1), the Union Minister of Human Resource Development recently released School Report Cards of more than one million primary and upper primary schools/sections, based on the DISE data. Besides quantitative information, the Report Cards also provide qualitative information and a descriptive report about individual schools. All that can now be accessed with the click of a mouse *(http://www.schoolreportcards.in).* Option of downloading raw data in Excel format, of late has also been provided to users so that empirical studies based on the DISE data can be undertaken. A large number of users across the World have registered for downloading of the raw data.

Through the DISE Flash Statistics: 2007-08, an effort has been made to compute an Educational Development Index (EDI) based on the DISE data and states are ranked accordingly (see Box 3 & Part V). To facilitate computation of district-specific EDIs, the NUEPA recently conducted a National Workshop to orient state level officers towards computation of an EDI. It is hoped that the EDI will help in deciding the future course of investment on elementary education. A few states have computed district and block-specific EDIs in their states.

Though over time, data utilization has improved, which is reflected in the District Elementary Education Plans developed under the aegis of *Sarva Shiksha Abhiyan,* yet there is still scope for further improvement. Efforts have been made to create demand for the DISE data. All the DISE publications have been made available to a large number of university libraries, research and resource institutions, educationists, planners, administrators, policy makers and other data users across the country which has created awareness about the DISE data. Through concerted efforts, it is hoped that demand for the DISE data will increase in years that follow.

Table A1
DISE Annual Publications

- Elementary Education in India: Progress towards UEE: DISE Flash Statistics
- Elementary Education in India: Where do we stand?, District Report Cards, Volume I
- Elementary Education in India: Where do we stand?, District Report Cards, Volume II
- Elementary Education in Rural India: Analytical Tables
- Elementary Education in Urban India: Analytical Tables
- Elementary Education in India: Progress towards UEE, Analytical Tables
- Elementary Education in India: Where do we stand? State Report Cards
- Elementary Education in India: Progress towards UEE; Analytical Report
- Compact Disk containing DISE Publications
- Websites : www.dise.in
  www.schoolreportcards.in

DISE: Coverage

Initially, 42 districts across seven DPEP phase-one states, namely Assam, Haryana, Karnataka, Kerala, Madhya Pradesh, Maharashtra and Tamil Nadu, were covered under the DISE. The number of districts covered has gradually increased with the expansion of the DPEP as the districts included under phase-two and three have also been covered. At the end of 2001, more than 270 districts spread over 18 states of the country had adopted the DISE. With the launching of the *Sarva Shiksha Abhiyan* in 2001, the scope of DISE was enlarged to cover the entire elementary level of education, embracing all the districts of the country. Even prior to the SSA, a number of DPEP states expanded the

coverage of the DISE to their non-DPEP districts. In 2002-03, the coverage was further expanded to 461 districts across 18 states. However, the coverage was confined only to DPEP states. During 2003-04, the coverage was further widened to bring in its fold as many as 539 districts (including bifurcated districts) across 25 States and UTs of the country (Table A2). It was for the first time that seven non-DPEP states, i.e. Chandigarh, Manipur, Meghalaya, Mizoram, Nagaland, Punjab and Tripura adopted the DISE during 2003-04. During 2004-05, four more States and UTs, i.e. Arunachal Pradesh, Delhi, Jammu & Kashmir, and Puducherry were covered under the DISE. By the year 2005-06, all the districts of the country spread over all the 35 States and UTs, had been covered for the first time under the DISE (see Figure 1.2). During 2006-07, the number of districts covered under the DISE further increased to 609 compared to 604 in 2005-06. In 2007-08, as many as 624 districts reported the DISE data which was collected as on 30th September 2007.

District Report Cards 2006-07, Volume I & II; and *Elementary Education in India: Where do we stand - State Report Cards 2007-08*, NUEPA and the Government of India, New Delhi, 2009). In addition, DISE Flash Statistics: 2007-08 containing state-specific key indicators was also released recently. Thus, the state-wise DISE data is now available for six years and the district-wise data for more than eight years. The data is also available on the official website of the DISE, i.e. http://www.dise.in. State-wise number of blocks, villages, schools etc, from which data is received is presented in Table A3. The Analytical Report: 2007-08 is divided into two parts: first part *(Analytical Report)* presents analysis of data, whereas, the part two presents state-wise information on key indicators *(Analytical Tables)*. The indicators analyzed and tables presented are organised into School and Facility Indicators, Teacher-Related Indicators and Enrolment-Related Indicators. The Tables contain information on a large number of variables, mostly presented by school category and wherever necessary by rural and urban areas, and management category. Indicators required for formulating reliable elementary education plans are presented *in a ready-to-use form*; wherever necessary, time-series data is also presented.

Educational Development Index

The National University of Educational Planning & Administration has developed an **Educational Development Index (EDI)** to track progress of the States towards Universal Elementary Education (UEE), for Primary and Upper Primary levels as well as for a composite look at Elementary Education. The EDI ranking will encourage the states to improve their performance and have a closer look at both the inputs and outputs of the parameters that affect elementary education. It is expected that the EDI will also enable more effective targeting of the *Sarva Shiksha Abhiyan* (SSA) to the most backward districts. The EDI has been developed keeping in mind four broad parameters of access, infrastructure, teacher-related indicators and outcomes. The index takes into account 22 variables for calculating the EDI. These variables are for **Access** (Percentage of habitations not Served, Availability of Schools per 1000 Population), **Infrastructure** (Average Student-Classroom Ratio, School with Student-Classroom Ratio ≥ 60, School without Drinking Water Facilities, School with Common Toilet, School with Girl's Toilet), **Teachers** (Percentage of Female Teachers, Pupil-Teacher Ratio, School with Pupil Teacher Ratio ≥ 60, Single-Teacher Schools (in schools with more than 15 students), Percentage of Schools with 3 or less Teachers, Teachers without Professional Qualification), **Outcomes** (Gross Enrolment Ratio – Overall, Scheduled Castes : Gross Enrolment Ratio, Scheduled Tribes: Gross Enrolment Ratio, Gender Parity Index in Enrolment, Repetition Rate, Drop-out Rate, Ratio of Exit Class over Class 1 Enrolment (Primary stage only), Percentage of Passed Children to Total Enrolment, Percentage of Appeared Children passing with 60 per cent and above Marks).

Annual Report: 2006-07, Department of School Education and Literacy, MHRD, Government of India.

Box 3

The Present Publication

The District Report Cards: 2007-08 and the State Report Cards: 2007-08 are being published separately (*Elementary Education in India: Where do we stand -*

Table A2
DISE 2007-08: Coverage

Sl. No.	State & UT	School Structure		Number of Districts Reported Data				
		Primary	Upper Primary	2001 Census	DISE			
					2004-05	2005-06	2006-07	2007-08
1	Andaman & Nicobar Islands	I-V	VI-VIII	2	–	2	3	3
2	Andhra Pradesh	I-V	VI-VIII	23	23	23	23	23
3	Arunachal Pradesh	I-V	VI-VIII	13	15*	15*	16*	16*
4	Assam	I-IV	V-VII	23	23	23	23	23
5	Bihar	I-V	VI-VIII	37	37	37	37	37
6	Chandigarh	I-V	VI-VIII	1	1	1	1	1
7	Chhattisgarh	I-V	VI-VIII	16	16	16	16	16
8	Dadra & Nagar Haveli	I-IV	V-VII	1	–	1	1	1
9	Daman & Diu	I-IV	V-VII	2	–	2	2	2
10	Delhi	I-V	VI-VIII	9	9	9	9	9
11	Goa	I-IV	V-VII	2	–	2	2	2
12	Gujarat	I-IV	V-VII	25	25	25	25	25
13	Haryana	I-V	VI-VIII	19	19	19	20	20
14	Himachal Pradesh	I-V	VI-VIII	12	12	12	12	12
15	Jammu & Kashmir	I-V	VI-VIII	14	12+	14	14	22
16	Jharkhand	I-V	VI-VIII	18	22*	22*	22*	22
17	Karnataka	I-IV	V-VII	27	27	27	27	33
18	Kerala	I-IV	V-VII	14	14	14	14	14
19	Lakshadweep	I-IV	V-VII	1	–	1	1	1
20	Madhya Pradesh	I-V	VI-VIII	45	45	48*	48*	48
21	Maharashtra	I-IV	V-VII	35	35	35	35	35
22	Manipur	I-V	VI-VIII	9	–	9	9	9
23	Meghalaya	I-IV	V-VII	7	7	7	7	7
24	Mizoram	I-IV	V-VII	8	8	8	8	8
25	Nagaland	I-V	VI-VIII	8	8	8	8	8
26	Orissa	I-V	VI-VII	30	30	30	30	30
27	Puducherry	I-V	VI-VIII	4	4	4	4	4
28	Punjab	I-V	VI-VIII	17	17	17	19	20
29	Rajasthan	I-V	VI-VIII	32	32	32	32	32
30	Sikkim	I-V	VI-VIII	4	4	4	4	4
31	Tamil Nadu	I-V	VI-VIII	30	29	30	30	30
32	Tripura	I-V	VI-VIII	4	4	4	4	4
33	Uttar Pradesh	I-V	VI-VIII	70	70	70	70	70
34	Uttarakhand	I-V	VI-VIII	13	13	13	13	13
35	West Bengal	I-IV	V-VIII	18	20*	20*	20*	20
	Number of Districts	**–**	**–**	**593**	**581***	**604***	**609***	**624***

* Including bifurcated districts.
+ Data for all districts not reported.

Except on quality of education, comprehensive information is presented on all the aspects of universalisation of primary and elementary education. Examination results in the terminal Grades IV/V and VII/ VIII are considered as proxy indicator of achievement levels and the same is presented separately in the case of boys and girls. More specifically, the analysis covers the following important areas of elementary education:

a) Number of schools, enrolment, and teachers, classified by school category and school management

b) Examination results for the previous academic session for the terminal classes at primary and upper primary levels of education

c) Classrooms, categorized into good condition, requiring minor repair, and requiring major repair by school category

d) Number of schools by category and by type of buildings

e) Sex-wise enrolment of children with disabilities at primary and upper primary levels

f) Gender and caste distribution of regular and *para-teachers* and the proportion of teachers undergoing in-service teacher training during the pervious year

g) Distribution of regular and *para-teachers* by educational and professional qualifications and by school category

h) Enrolment by school category

i) Performance indicators in terms of school category; ratio of primary to upper primary schools/sections; enrolment distribution: total, Scheduled Castes, Scheduled Tribes and Other Backward Class and Muslim minority, percentage of female enrolment; gender-parity index; schools with attached pre-primary classes; percentage of under-age and over-age children in primary and upper primary classes; apparent survival rate at primary level, dropout and retention rates, and transition rate from primary to upper primary level; and

j) Quality indicators according to category of schools; teacher-pupil ratio; students-classroom ratio; availability of drinking water, common toilet, and girl's toilet in school.

DISE: A Complete Transparent System

School Report Cards

(www.schoolreportcards.in)

The National University of Educational Planning and Administration (NUEPA) has created a comprehensive database on elementary education known as, District Information System for Education **(DISE).** The project covers both Primary and Upper Primary schools of all the districts of the country. The DISE has completely eliminated the time lag in availability of educational statistics which has come down drastically from 7-8 years to less than a year at the national and only a few months at the district and state levels. The NUEPA has developed School Report Cards of more than 1.25 million Primary and Upper Primary schools. The purpose of the School Report Cards is to disseminate information to students, parents and interested community members. The School Report Cards provide users comprehensive information on the vital parameters of student, teacher or school on 26 different variables. It enables to extract concise and accurate information on the above variables, about each school in a standard format. The format is easy to understand and allows meaningful comparisons to be made among schools. In addition to quantitative information, the School Report Cards also provide qualitative information and a descriptive report about individual schools. These report cards can be accessed on the URL www.ssa.nic.in. Basic users can search schools by unique school Identification Code and also by State, District, Block Cluster and Village name. Advanced users can search by 21 different categories like school management, enrolment, building status etc. and extract the information.

Annual Report : 2006-07, Department of School Education and Literacy, MHRD, Government of India.

Box 4

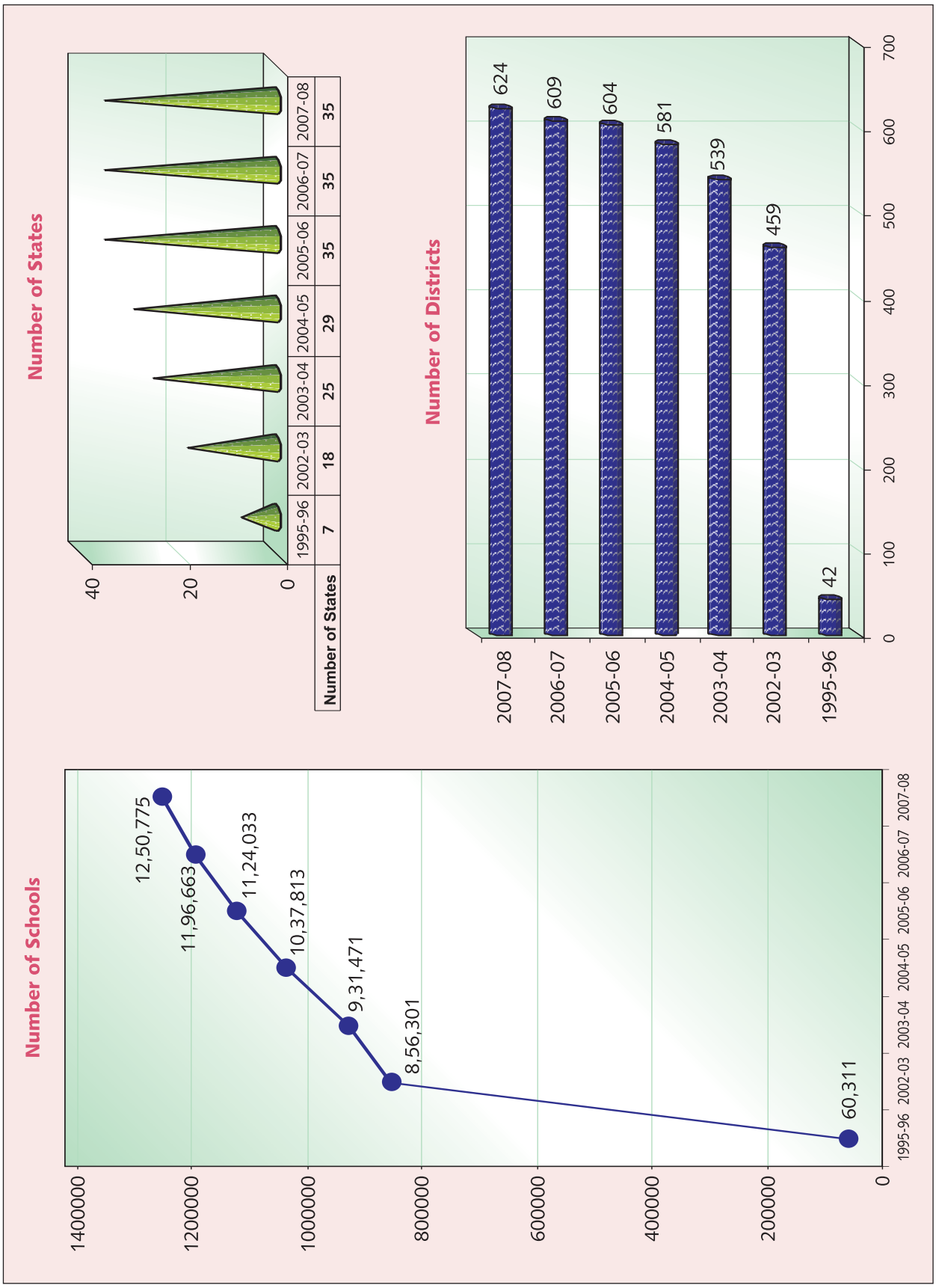

Figure 1.2 : DISE Coverage

Table A3
DISE 2007-08: State Summary

Sl. No.	State/UT	Data Reported From					
		Districts*	Blocks	Villages	Schools	Enrolment**	Teachers
1	A & N Islands	3	9	199	359	57503	3715
2	Andhra Pradesh	23	1128	25721	100449	11038386	518881
3	Arunachal Pradesh	16	78	3190	4547	309471	15590
4	Assam	23	145	21696	66727	5702435	242203
5	Bihar	37	532	39118	67874	17662805	328581
6	Chandigarh	1	20	78	176	134711	5519
7	Chhattisgarh	16	146	21977	49708	4408022	154928
8	D & N Haveli	1	1	70	304	50027	1379
9	Daman & Diu	2	2	40	98	20596	696
10	Delhi	9	28	413	4742	2441246	101895
11	Goa	2	11	628	1503	151654	7782
12	Gujarat	25	230	19621	39039	7662493	234507
13	Haryana	20	119	7476	17743	2947287	105846
14	Himachal Pradesh	12	118	10036	17197	1084040	63531
15	Jammu & Kashmir	22	200	7005	20789	1660875	107141
16	Jharkhand	22	212	28507	41944	6719672	148322
17	Karnataka	33	202	27513	56441	7922268	259940
18	Kerala	14	165	1940	12426	3525710	162270
19	Lakshadweep	1	3	10	37	10950	552
20	Madhya Pradesh	48	318	53767	129000	15410700	430548
21	Maharashtra	35	378	42755	87280	15658097	575519
22	Manipur	9	35	2135	4011	476681	24799
23	Meghalaya	7	44	5987	10572	576098	34652
24	Mizoram	8	36	799	2783	235118	16357
25	Nagaland	8	48	1278	2523	387037	20367
26	Orissa	30	419	35905	59435	6340862	222375
27	Puducherry	4	6	366	703	174506	9498
28	Punjab	20	142	12441	20026	2558958	79754
29	Rajasthan	32	248	38201	103303	12196635	422330
30	Sikkim	4	9	779	1150	121238	8396
31	Tamil Nadu	30	413	19303	53307	9842753	316721
32	Tripura	4	45	976	3901	674073	31090
33	Uttar Pradesh	70	967	92576	180058	32076383	644426
34	Uttarakhand	13	102	11863	20610	1533012	60427
35	West Bengal	20	483	38983	70010	13270991	274052
	All States	**624**	**7042**	**573352**	**1250775**	**185043293**	**5634589**

* Including bifurcated districts.
**Enrolment as per school structure.

The main indicators presented in the Analytical Report have been derived by using the following illustrative formulae. The formulae are given for schools in the primary category only. The same method is applied for other categories and classification groups.

1. % Single classroom schools = $\frac{\text{Primary schools having single classroom}}{\text{Total primary schools}} \times 100$

2. % Single teacher schools = $\frac{\text{Primary schools with single teacher in position}}{\text{Total primary schools}} \times 100$

3. % Schools with SCR ≥ 60 = $\frac{\text{Primary schools having student classroom ratio} \geq 60}{\text{Total primary schools}} \times 100$

4. % Schools with pre-primary schools = $\frac{\text{Primary schools having pre-primary sections}}{\text{Total primary schools}} \times 100$

5. % Schools with common toilet = $\frac{\text{Primary schools having common toilet}}{\text{Total primary schools}} \times 100$

6. % Schools with girls' toilet = $\frac{\text{Primary schools having girls' toilet}}{\text{Total primary schools}} \times 100$

7. % Enrolment in government schools = $\frac{\text{Enrolment in primary schools having Education Department, Local Body, Tribal Welfare Department \& others as school management}}{\text{Total primary schools}} \times 100$

8. % Enrolment in private schools = $\frac{\text{Enrolment in primary schools having private aided and private unaided as school management}}{\text{Total enrolment in primary schools}} \times 100$

9. % Enrolment in single-teacher schools = $\frac{\text{Enrolment in primary schools having single teacher}}{\text{Enrolment in total number of schools having primary category}} \times 100$

10. % No-female teacher schools (teacher ≥ 2) = $\frac{\text{Primary schools having teacher} \geq 2 \text{ but no female teacher}}{\text{Total primary schools}} \times 100$

11. % Students in schools without building = $\frac{\text{Enrolment in primary schools having no building}}{\text{Enrolment in primary schools}} \times 100$

12. % Students in schools without blackboard = $\frac{\text{Enrolment in primary schools having no blackboard}}{\text{Enrolment in primary schools}}$ x 100

13. % Under-age & over-age children = $\frac{\text{Enrolment in Grades I-V below '6' \& above '11' years}}{\text{Total enrolment in Grades I-V}}$ x 100

14. % SC enrolment = $\frac{\text{Enrolment of SC in primary classes}}{\text{Total enrolment in primary classes}}$ x 100

15. % SC girls to SC enrolment = $\frac{\text{Enrolment of SC girls in primary classes}}{\text{SC enrolment in primary classes}}$ x 100

16. % ST enrolment = $\frac{\text{Enrolment of ST in primary classes}}{\text{Total enrolment in primary classes}}$ x 100

17. % Muslim enrolment = $\frac{\text{Enrolment of Muslim minority in primary classes}}{\text{Total enrolment in primary classes}}$ x 100

18. % ST girls to ST enrolment = $\frac{\text{Enrolment of ST girls in primary classes}}{\text{ST enrolment in primary classes}}$ x 100

19. Pupil-Teacher Ratio (PTR) = $\frac{\text{Total enrolment in schools of primary category}}{\text{Total teachers in schools of primary category}}$

(*Para*-teachers have been included while calculating PTR)

20. Student-Classroom Ratio (SCR) = $\frac{\text{Total enrolment in primary schools}}{\text{Total classrooms in primary schools}}$

21. % Schools with ≤ 50 students in Grades I – IV/V = $\frac{\text{Number of primary schools having enrolment} \leq 50 \text{ in Grades I – IV/V}}{\text{Total primary schools}}$ x 100

22. % Schools with PTR ≥ 100 = $\frac{\text{Total primary schools having PTR} \geq 100}{\text{Total primary schools}}$ x 100

23. % Female teachers = $\frac{\text{Total female teachers in primary schools}}{\text{Total teachers in primary schools}}$ x 100

(*Para* teachers have been included while calculating this indicator)

24. % of New Primary schools established $= \frac{\text{Total primary schools established since 2002}}{\text{Total primary schools}} \times 100$

(The denominator excludes those schools for which year of establishment is not given)

25. Flow Rates

(a) Promotion Rate

$$(P^t_g) = \frac{P_{g+1}^{t+1}}{E_g^t} \times 100$$

where

P_{g+1}^{t+1} = Number of students promoted to Grade 'g+1' in year 't+1', and

E^t_g = Total number of students in Grade 'g' in year 't'.

(b) Repetition Rate

$$(r^t_g) = \frac{R_g^{t+1}}{E_g^t} \times 100$$

where

R_g^{t+1} = Number of repeaters in Grade 'g' in year 't+1'

(c) Dropout Rate

$$(d^t_g) = \frac{D_g^t}{E_g^t} \times 100$$

where

d^t_g = Number of student's dropping out from Grade 'g' in year 't'

(The flow rates have been computed by using the enrolment and repeaters data in schools which are common in both the years, i.e. 2006-07 and 2007-08.)

(d) Transition Rate (TR)

$$TR = \frac{E_{g+1}^{t+1}}{E_g^t} \times 100$$

where

E_{g+1}^{t+1} = New entrants into Grade V/VI in year 't+1' and

E_g^t = Enrolment in Grade IV/V in year 't'

(e) Retention Rate (RR)

$$RR = \frac{\text{Enrolment in Grade IV/V in year 't' – Repeaters in Grade IV/V in year 't'}}{\text{Enrolment in Grade I in year 't – 3'/'t – 4'}} \times 100$$

26. Average promotion, repetition and dropout rates present average of these rates in primary classes and are calculated by using the standard methods.

27. Gender Parity Index (GPI) = $\frac{\text{Girl's enrolment in primary grades in year 't'}}{\text{Boy's enrolment in primary grades in year 't'}}$

28. Ratio of Primary to Upper Primary Schools/Sections = $\frac{\text{Total number of primary schools/sections in year 't'}}{\text{Total number of upper primary schools/sections in year 't'}}$

29. Gross Enrolment Ratio (GER) = $\frac{\text{Total enrolment in Grades I-V}}{\text{Population of age 6-11 years}} \times 100$

30. Net Enrolment Ratio (NER) = $\frac{\text{Enrolment, Grades I-V/6-11 age group}}{\text{Population of age 6-11 years}} \times 100$

31. In-service training, school & TLM grants received, examination results, etc., are presented for the previous academic year;

32. Percentage of teachers in different age groups is presented only for teachers under government managements; and

33. Average number of days teachers spent on non-teaching assignments is applicable to only those teachers who were assigned non-teaching assignments and not to all teachers.

Concerns about Quality of Data

Raw data presented in the document or used for calculating indicators are essentially based on data provided by the States and UTs through annual data collection (as on 30th September 2007) under the SSA, (DISE). The NUEPA is committed to provide professional and software support to all States and UTs as well as for dissemination and analysis of data as it is provided by the individual States and UTs. *In no way, NUEPA is involved in data collection as such and, therefore, the accuracy and truthfulness of the data rest with the States/UTs.* The State Project Directors have certified that data is free from errors and inconsistencies and hence may be merged into the national database maintained by the NUEPA, New Delhi.

"States like Andhra Pradesh and Punjab have extended the coverage of DISE to un-recognized schools in their states and collected information by using the DISE Data Capture Format"

The data is provided by the State Project/Mission Directors through the Technical Support Group of the Department of School Education and Literacy, MHRD. The data was supposed to be first cross-checked and validated at the district and then at the state level. Before that, the Cluster Resource Centre Coordinator is supposed to thoroughly check the filled-in formats received from the schools falling under his or her jurisdiction. The CRC coordinators are made accountable to ensure that the data is consistent and there are no missing values. However, it has been observed that in a number of states, positions of the CRC coordinators are lying vacant affecting the quality of data adversely. The CRC coordinators are also expected to impart training to the respondents, i.e., School Head Master/Teacher. The states are also advised to use the EDUSAT to impart training on filling-up of the DISE format. Perhaps, Haryana was the first state in the country to use the EDUSAT for imparting training across the state. The NUEPA is also exploring the possibility to use EDUSAT so that training is imparted across the country to help in further improving the quality of data.

Before the formats were passed on to the block level from the cluster level, they were also supposed to

ensure that the coverage was complete and to certify that the data was free from inconsistencies. Similarly, consistency module provided in the DISE software was required to run at the district level. After the state was satisfied with the quality and reporting of the data, the data was submitted for dissemination and analysis at the national level. From the national level, feedback on data quality was provided to all the States and UTs.

the classificatory variables like management, year of establishment, rural/urban classification, school category, building status, academic and professional qualifications of teachers, and caste and sex code for teachers. Wherever possible, efforts are made to analyse the data by excluding the no-response values. However, in some cases, the 'no-responses' are explicit from the tables and hence the totals may not match across various

Supplementary Variables used by the States & Union Territories

- School Category: EGS and AIE
- VEC bank account number
- VEC Chairman name
- Room for computer
- Area of school
- Land area for construction
- Whether on deputation in case of teachers
- Basic pay of teachers
- Whether the school is having Head Master's room
- Teacher is working in same school since when
- Has teacher received computer training?
- Number of additional classrooms sanctioned and completed
- Average daily attendance
- Whether cooking is done by self-help group
- State-specific incentives
- Address and phone number of school
- Whether the school is a model school etc.

Box 5

Procedures for the data validation and verification of sample data capture formats at the district level have been prescribed, and the districts reported the steps taken by them to ensure quality and reliability of data collection. The DISE software also checks for internal inconsistencies in the data and generates reports for verification by the District Project Office. The State Project Office while transferring the data from the district to the state database ensures that the data received from the district is complete and free from any inconsistency. Most of the states have engaged an independent agency for sample checking of data. At the national level, data from the State Project Office is received to ensure compliance with various quality control measures. Despite these efforts, some inconsistencies and missing data are observed at the national level. A few schools have not responded to all tables due to different number of no-responses. In cross-tabulation analysis, the no-responses are excluded.

Needless to mention that the percentages, rates and ratios presented in the report are based on the schools that have responded to a particular question and hence may not be applicable to the entire state. Thus, schools by management, their location in rural and urban areas, type of schools, schools by category, enrolment (General, SC, ST, OBC, Muslim and by Mediums of Instruction), pupil-teacher ratio, student-classroom ratio, percentage of girls in primary and upper primary classes and other such indicators should, therefore, be viewed in the light of these limitations.

Over a period of time, the number of schools covered under the DISE increased significantly. During 2007-08, data has been collected from more than 1.25

million schools, with a comprehensive profile of more than 5.62 million teachers also being maintained by the DISE. Despite best efforts, it is still possible that the field agencies might have not covered all the recognised schools imparting elementary education supposed to be covered under DISE which is specifically true for schools under private managements. A few districts have collected data from these schools while others might not have covered all such schools. Despite significant increase in number of private schools covered under the DISE (244,000 in 2007-08), field level functionaries reported that data from a few private un-aided schools could not be obtained for various reasons. We are trying to reach all such schools and are hopeful that these efforts will be reflected in the following year. In addition, un-recognised (un-registered) schools are not supposed to be covered under DISE. However, states like Andhra Pradesh and Punjab have extended the coverage of the DISE to un-recognized schools in their states and collected information by using the DISE Data Capture Format. The NUEPA would be happy to provide assistance to states extending coverage of the DISE to un-recognized schools in their states (see Table A4).

It has also been observed that a few schools did not report age and grade matrix which is crucial in determining the status of elementary education. A few states even did not report enrolment of Grade VIII because of composition of school structure in the state. Therefore, enrolment in upper primary classes does not present the complete picture in Grades VI-VIII; thus GER and NER may not give correct portrayal of universalisation in such states and the same may be considered as percentage of children of an age-group enrolled in schools that reported data under the DISE. The remaining children may either be out-of-school or enrolled in unrecognized schools, Education Guarantee Schools (EGS), non-formal education centers and other learning centers not covered under the DISE. Irrespective of the school structure, enrolment ratio at the Primary level is based on Grades I-V and of the Upper Primary level, Grades VI-VIII. The single-age projected population provided by the office of the Registrar General of India has been used in estimating child population. An attempt has also been made to compute flow rates in case of States and UTs having the DISE data for more than two years. While analysing the flow rates, it

Table A4
Recognised and Un-recognised Schools: 2007-08

State	Total Unrecognized Schools	Ratio of Recognised to Unrecognized Schools	Total Enrolment in Unrecognized Schools	Percentage of Enrolment in Unrecognized to Recognized Schools
Andhra Pradesh	5984	1:17	5,83,080	5.28
Assam	2057	1:32	1,23,111	2.16
Haryana	497	1:36	62,610	2.12
Orissa	1941	1:31	1,81,358	2.86
Punjab*	7496	1:3	9,78,579	34.61
West Bengal	1347	1:53	86,052	0.63

* Data pertains to 2008-09. Number of unrecognized schools from which data is obtained doesn't necessarily mean complete coverage of all unrecognized schools in the state.

"It is heartening to note that as many as 23 states initiated random sample checking of data in its very first year, most of which are conducted by the monitoring institutions identified for the states. During 2007-08, as many as 21 states arranged Post Enumeration Survey of the DISE data"

Table A5
Sample Checking of DISE Data: 2007-08

Sl. No.	State/UT	Number of Districts	Number of Sample Districts	Number of Sample Blocks	Number of Sample Schools	Agency Conducted Post Enumeration Survey
1.	Andhra Pradesh	23	03	–	485	National Institute of Rural Development, Hyderabad
2.	Arunachal Pradesh	16	02	08	45	SSA Monitoring Institute, Rajiv Gandhi University, Itanagar
3.	Assam	27	05	30	391	SCORPION,Guwahati
4.	Chandigarh	01	01	01	20	State Institute of Education, Chandigarh
5	Chattisgarh	16	02	19	362	State Project Office, Rajiv Gandhi Shiksha Mission, Raipur
6.	Delhi	09	09	All Blocks	234	UEE Mission , Delhi
7	Gujarat	25	04	33	250	Gujarat Council of Primary Education, Gandhi Nagar and Centre of Advanced Study in Education, Baroda
8	Haryana	20	04	23	169	Department of Education, Kurukshetra University
9.	Himachal Pradesh	12	07	27	172	SGI Enterprises, Singrauli, Shimla
10.	Jammu and Kashmir	14	02	–	106	Directorate of Economics and Statistics, Srinagar
11.	Jharkhand	22	02	09	67	XLRI, Jamshedpur
12.	Karnataka	27	03	17	207	Centre for Multi-Disciplinary Development Research, Dharwad
13.	Mizoram 1	08	01	03	09	Education Department Mizoram University
	Mizoram 2		01	03	20	Education Department Mizoram University
14.	Manipur	09	02	07	48	Directorate of Economics and Statistics Government of Manipur, Imphal
15.	Orissa	30	03	11	370	Centre for Youth and Social Development Bhubhneshwar
16.	Punjab	19	03	33	275	Datamation Research Analyst, Delhi
17.	Sikkim	04	02	–	30	United Arithang Development Society Gangtok, Sikkim
18.	Tamil Nadu 1	30	01	10	85	Department of Education, Algappa University
	Tamil Nadu 2		01	08	75	Bharatiar University, Coimbatore
19.	Tripura	04	02	06	41	Office of the Nodal Officer (SSA), Tripura University
20.	Uttaranchal	13	13	39	442	Academy of Management Studies, Dehradun
21.	Uttar Pradesh 1	70	03	45	427	Giri Institute of Development Studies, Aliganj
	Uttar Pradesh 2		01	08	92	Govind Balabh Pant Social Science Institute, Jhusi
	Uttar Pradesh 3		02	31	203	Centre of Advanced Development Research, Lucknow
	Uttar Pradesh 4		01	23	193	Govind Balabh Pant Social Science, Institute Jhusi

is noticed that in some cases the data is inconsistent; which is also true for apparent survival, retention and transition rate. Indicators in case of such States and UTs have not been reported.

Random Checking of Data

With an aim to further improve the quality and reliability of data, it has been made mandatory for all the states and UTs to get the DISE data sample checked by an independent agency from the year 2006-07 onwards, for which the NUEPA suggested the sampling methodology and developed a special data capture format for post enumeration survey. It is heartening to note that as many as 23 states initiated random sample checking of data in its very first year, most of which are conducted by the monitoring institutions (ICSSR funded institutions) identified for the states. During 2007-08, as many as 21 states arranged Post Enumeration Survey of the DISE data (see Table A4). However, in a few states the task was entrusted to private agencies. It is hoped that more such institutions will be entrusted the task of sample checking of the DISE data in the year that follows and the quality of reports would also improve. In addition, the NUEPA has also launched the PES of the DISE data initially in three states, namely, Andhra Pradesh, Himachal Pradesh and Maharashtra. This is likely to be expanded to the remaining states. All these efforts would not only help in improving the quality of data but would also help in ensuring complete coverage.

> "A careful examination of reports reveals that only in the case of a few variables, such as enrolment and examination results, the deviation noticed in post-enumeration and the DISE data is found significant and in case of other variables, such as school particulars and infrastructure facilities, only a little deviation is noticed"

The main objectives of sample checking were to judge the accuracy of data and to identify the gaps and weaknesses and seek suggestions regarding remedial measures for strengthening the system and for further improving the quality of data. A sample of 10 percent of districts with a minimum of two districts in each state was suggested to be drawn. Depending upon the total number of blocks in a district, a sample of 3 to 4 blocks was recommended for selection. While selecting the sample blocks, due consideration was given to the present status of educational development in terms of literacy rate, rural/urban areas and proportion of SC and ST population; and within each sample block, a random sample of five percent of the total schools was selected.

A careful examination of reports reveals that only in the case of a few variables, such as enrolment and examination results, the deviation noticed in post-enumeration and the DISE data is found significant and in case of other variables, such as school particulars and infrastructure facilities, only a little deviation is noticed. The findings of the PES also indicate that the coverage of the DISE is nearly complete. Some of the suggestions provided by the institutions, who conducted the PES, are summarized below:

- The VEC and PTA members should be involved in the process of data collection, dissemination and utilization. The BRC and CRC Coordinators should visit the schools frequently.
- School particulars, posts sanctioned, budget release, etc., should be collected from the authorities at block and district levels.
- The DISE format may also include some qualitative variables concerning problems of students, teachers and parents, effectiveness of teaching, etc.
- Rigorous and quality training should be arranged for teachers. Teachers preferably with mathematics background be involved in data collection.
- There is a need for frequent monitoring and validation of information at the grassroots level. Nevertheless, scrutiny of the DISE formats, preferably at the cluster level, is needed to be made mandatory.
- All the schools covered under the DISE have been provided school report cards. The District Project

Coordinators should ensure sharing of report cards with the head teachers, CRC and village community.

- Time-lag between the DISE and PES should be minimized. The states should be requested to initiate corrective measures in the light of findings and recommendations of the PES.
- The MIS Unit at the district level should be strengthened and it be provided with sufficient staff. Queries about the MIS Unit and its operation at the district level may also be included in the PES schedule to assess the performance of MIS Units.
- The format of both the DISE and PES should be the same as it would help in getting proper assessment of the quality of data.
- In order to ensure complete coverage of all recognized schools, a directory of all such schools in the block should be prepared and cross-checked with the list provided by the office of the Block Education Officer.
- Largely, deviation in data is due to lack of awareness at the respondent's end. The variance would be much lesser if there is effective supervision at different levels. Therefore, there is a need for frequent monitoring and validation of information at the grassroots level. Scrutiny of filled-in DISE formats, preferably at the cluster level should be made mandatory as the same would improve the quality of data immensely.
- Teachers in single-teacher schools face difficulties in attending capacity building programme in filling-up of formats.

Annexure

A Few Select Definitions

Residential School: Residential schools are defined as those schools which have an attached hostel and where the lodging and boarding facilities for students are provided by the school.

Shift School: Where the same premises is used by two schools.

Number of Days School Functioned: Number of days during which the school was open for academic activity during the last academic year.

Number of Academic Inspections: Number of inspections undertaken in the last academic session by an officer of state government authorised for inspection of schools where a detailed report is written.

Number of Visits by CRC Coordinators: Number of times, the CRC coordinators visited school for academic support and other purposes during the last academic session.

Status of School Building

- **Private (Rent-free):** A school building is private, if it is owned by an individual, organisation and does not belong to the local body or the government.
- **Private Rented:** Individual, private organisation, the local body or the govenment running the school in a building for which rent is paid.
- **Government:** School building belonging to govenment department, local body or any such agency for education pur-pose.
- **Government school in a rent free building:** Government school work from a building/rooms provided by community and no rent is paid for the same.

Type of School Building

- ***Pucca:*** School building with baked brick walls/stone walls and roof top with slab or wooden/iron girders or tiles is classified as Pucca.
- **Partially *Pucca:*** School building with baked brick walls or stone walls with corrugated sheet or asbestos sheet or thatched roof top is classified as Par-tially Pucca.
- ***Kuchcha:*** School building with unbaked brick or mud walls with corrugated asbestos sheet or thatched roof top is classified as kuccha.
- **Tent:** School is running in a structure covered by canvas cloth and supported by pegs and ropes is considered as tent school.
- **Number of Building Blocks:** School premises consist of a number of independent blocks/structures normally constructed at different points of time.
- **Number of Classrooms used for Instructional Purposes:** Number of classrooms used for running classes in the school premises. In case a big hall has been partitioned with wooden/brick partitions, each partition should be treated as a separate classroom. If two or more classes are held in a room without wooden/brick partition, the room is treated as a single classroom.

Classification of Classrooms

- **Good:** Building which does not require any repairs.
- **Need minor repairs:** Mainly patch work or plastering of the floor or roof or in walls or replacement of broken door or window.
- **Need major repairs:** Major repairs including re-construction or structural change of a wall or a roof.

Playground: Whether a proper playground is maintained in school premises or not.

Teacher Category: The total number of teaching staff is classified into various categories as given below. Against this item option 1-7 are given. Possible options are Head teacher, Acting head teacher, Teacher, Para teacher, Part-time teacher, Community teacher, Language teacher, others.

Enrolment: The number of students in the school register as on 30th September.

Age in completed years: The age of the students is calculated as on 30th September on the basis of the date of birth as recorded in the school admission register.

Repeater: A repeater is one who has been enrolled in the same class for more than one year.