Educational Development Index

Introduction

Internationally, Human Development Index (HDI) and Education for All (EFA) Development Index (EFA-DI) have been used for cross-country comparisons in overall human development and universalising elementary education respectively. Both HDI and EFA-DI measures outcomes. The HDI measures development by combining indicators of life expectancy, educational attainment and income. It uses adult literacy rates and combined gross enrolment ratio for primary, secondary and tertiary schooling as indicators of educational development and gives adult literacy more significance in computing the index. On the other hand, EFA development index uses one indicator as a proxy measure for each of the four EDI components and each component is assigned equal weight in the overall index. The indicators used are: (i) total primary net enrolment ratio; (ii) adult literacy rate; (iii) survival rate to Grade V; and (iv) average of three gender parity index for primary education, secondary education and adult literacy, with each being weighted equally.

The provision and use of elementary education services in India has been improving quite fast during the last decade. However, the development has not been uniform across the states and districts in the country. The elementary education related interventions have been creating and improving access and infrastructure, investing in more teachers and their quality and several processes, aimed at improving educational outcomes related to not only enrolment and retention, but improving the learning levels. From the point of view of an education system that is transforming itself, it is important to look at not only the outcome indicators, but at the input and process indicators too. The purpose of an index that summarizes various aspects related to input, process and outcome indicators is to identify geographic areas that lag behind in overall education development. In India, DISE provides information on various school based inputs and processes as well some indicators related to outcomes. Based on the DISE data, an effort has been made by the National University of Educational Planning and Administration (NUEPA) and the Government of India (MHRD, Department of School Education and Literacy) to compute an Educational Development Index (EDI), separately for Primary and Upper Primary levels of education and also a composite index for the entire Elementary education[1] for which the Government of India constituted a *Multi-Disciplinary Expert and Core Group on EDI* in 2005-06 of which NUEPA was also a member[2]. It identified indicators and developed computation methodology. The basic purpose of computing an EDI is to know comparative status of a state vis-à-vis other states with regard to different aspects of universalisation.

> "Based on DISE data, an effort has been made by NUEPA to compute an Educational Development Index, separately for Primary and Upper Primary levels of education and also a composite index for the entire Elementary education"

Variables Used

The Working Group on EDI identified a number of indicators falling under different aspects of universalisation of education, covering input, process and outcome indicators. This set of indicators take note of all aspects and is expected to present the true picture of universalisation. The variables used to compute EDI in the present exercise are presented in Table E1. It may also be noted that EDI in India is still evolving and each

1 *Elementary Education in India: Progress towards UEE: DISE Flash Statistics: 2009-10;* NUEPA and Ministry of Human Resource Development, Government of India, New Delhi, 2011.
2 Contributions received from the members of the Multi-Disciplinary Expert and Core Group on EDI constituted by the MHRD, in particular Dr. Deepa Sankar, World Bank, Delhi in developing methodology and identification of indicators are gratefully acknowledged.

indicator used have a specific purpose. However, they are not fixed and hence a review is being undertaken periodically and new indicators are added to the existing set of indicators or a few of them may be dropped out or used in the modified form. From 2008-09 EDI computation, improved version of a few variables has been used. Percentage of schools with SCR > 60 and PTR > 60 are replaced with Percentage of schools with SCR > 40 and PTR > 40. Percentage of female teachers has been modified with percentage of schools with female teachers (in schools with 2 and more teachers). Similarly single-teacher schools are replaced with percentage of schools with less than 2 teachers (primary schools only). Percentage of schools with < 3 teachers is replaced with Percentage of schools with < 3 (upper primary only) teachers. One new variable is added in case of outcome indicators i.e. Transition rate from Primary to Upper Primary level (only for Upper Primary level). Average student-classroom ratio, pupil-teacher ratio and percentage of passed children to total enrolment are deleted. As many as 21 indicators have been used in computing EDI which are further re-grouped into the following four sub-groups:

- Access,
- Infrastructure,
- Teachers, and
- Outcome indicators.

DISE provides information in case of most of these indicators that have been used to compute the EDI at Primary and Upper Primary levels of education in 2009-10. Under the access indicators, two indicators namely, percentage of un-served habitations and availability of schools per thousand child population (6-11/11-14 year) have been used. The projected child population provided by the Office of the Registrar General of India has been used while the percentage of un-served habitations has been obtained from the All-India Education Survey: 2002-03. It may be noted that the information on un-served habitations is latest available for year 2002-03, though a

> *"Working Group on EDI identified four indicators under infrastructure set of indicators. Percentage of schools with student-classroom above 40, percentage of schools with drinking water facility and percentage of schools with common toilet and percentage of schools with girls' toilet are such indicators"*

number of Primary and Upper Primary schools have been opened across the county since then. Thus the same may not present the true picture with regard to availability of schooling facility in 2009-10. However, in view of the absence of other independent source of data on coverage of habitations, except state reports, EDI continues to use 2002-03 data, which will be updated as and when independent data becomes available. In the absence of which, the same has been corrected with reference to new schools (government) opened since 2002-03. In addition, ratio of Primary to Upper Primary schools/sections has also been used as an indicator of access at Upper Primary level of education. While computing the ratio, both Primary and Upper Primary schools as well as Primary and Upper Primary sections attached to Secondary and Higher Secondary schools have been considered.

The Working Group on EDI identified four indicators under infrastructure set of indicators. Percentage of schools with student-classroom above 40, percentage of schools with drinking water facility and percentage of schools with common toilet and percentage of schools with girls' toilet are such indicators. The third set of indicators, five in numbers, are teacher related indicators. Percentage of Schools with Female teachers, Schools with Pupil-Teacher Ratio > 40, Percentage of Schools with < 3 teachers, Percentage of schools with less than 2 teachers, Teachers without Professional Qualification are such indicators under this category. Out of which percentage of schools with less than 2 teachers is used at Primary level and percentage of schools with less than 3 teachers is used at Upper Primary level.

The last set of indicators is related to outcome indicators; this set contains a total of 9 indicators amongst which Gross Enrolment Ratio is the most important one. While computing GER, projected population provided by the Office of the Registrar General of India have been used to workout 6-11 and 11-14 year population. For assessing the participation of SC/ST children, percentage

difference of SC/ST population in 2001 Census and percentage of SC/ST enrolment to total enrolment at Primary and Upper Primary level of education has been used (*in case of negative difference, the same is treated* as zero; thus meaning that all children are enrolled). Gender Parity Index (enrolment) is another important indicator which shows the extent of participation of girls compared to their counterpart boys in educational
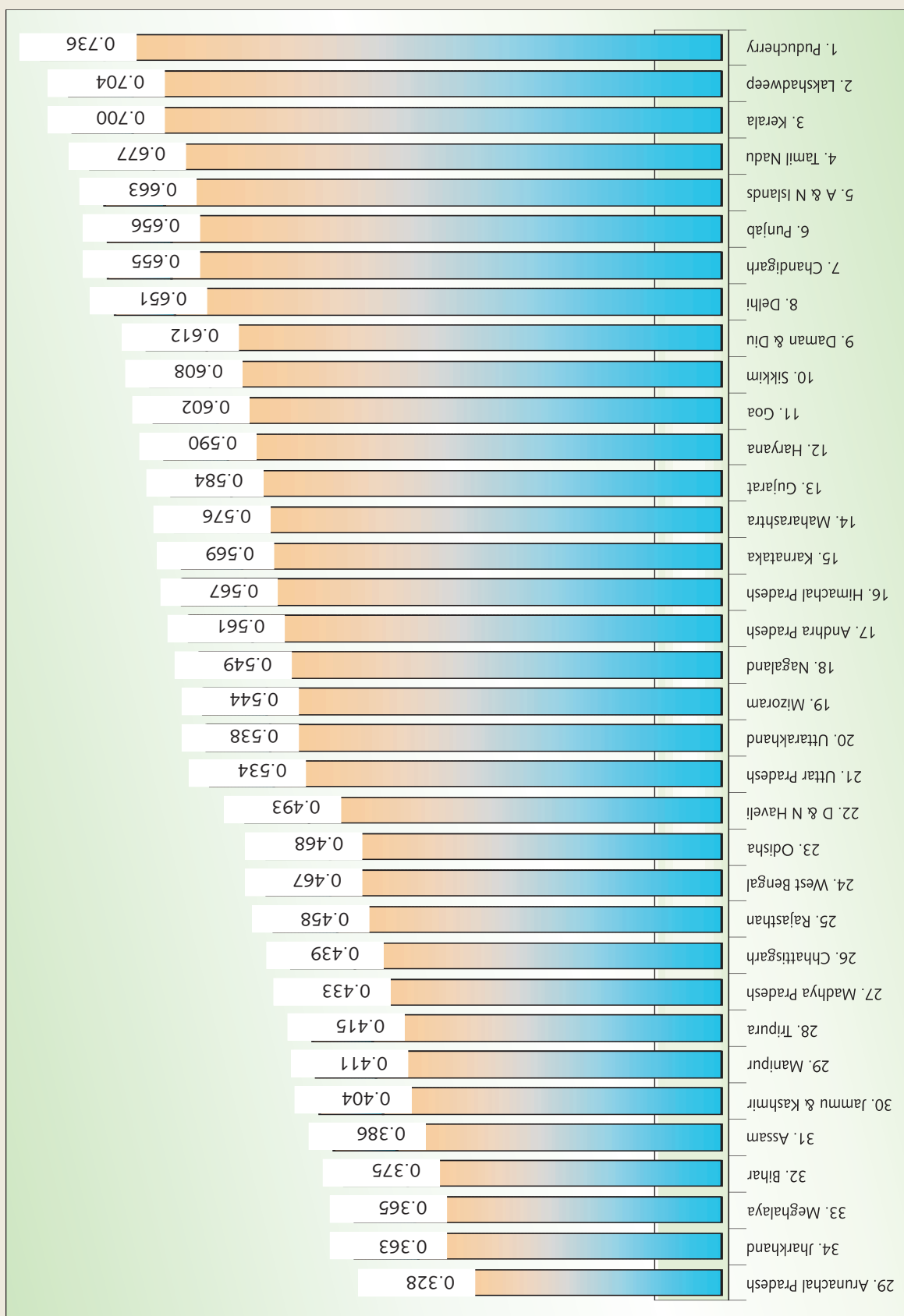
Table E1
Indicators Used in Computing EDI

Component	Indicator
ACCESS	Percentage of Habitations not Served* (corrected with reference to new schools (Government) opened since 2002-03)
	Availability of Schools per 1000 Child Population
	Ratio of Primary to Upper Primary Schools/Sections (only at Upper Primary stage)
INFRASTRUCTURE	Schools with Student-Classroom Ratio > 40
	Schools with Drinking Water facility
	Schools with Common toilet
	Schools with Girls' toilet
TEACHERS	Percentage of Schools with Female Teachers (in schools with 2 and more teachers)
	Schools with Pupil-Teacher Ratio > 40
	Percentage of schools with less than 2 teachers (in schools with more than 15 students) (Primary schools only)
	Percentage of Schools with < 3 teachers (Upper Primary schools/sections)
	Teachers without Professional Qualification
OUTCOME	Gross Enrolment Ratio - Overall
	Participation of Scheduled Castes Children: Percentage SC Population (2001 Census) - Percentage SC Enrolment
	Participation of Scheduled Tribes Children : Percentage ST Population (2001 Census) - Percentage ST Enrolment
	Gender Parity Index in Enrolment
	Repetition Rate
	Drop-out Rate*
	Ratio of Exit Class over Class I Enrolment (only at Primary stage)
	Transition Rate from Primary to Upper Primary level (only for Upper Primary level)
	Percentage of Appeared Children securing 60 per cent and more marks

Note:
● For methodological details, please refer:
  ❖ *Orienting Outlays Toward Needs: An Evidence-Based, Equity-Focused Approach for Sarva Shiksha Abhiyan by* Dhir Jhingran and Deepa Sankar, 2006.
  ❖ *Educational Development Index: A Suggestive Framework for Computation* by Arun C. Mehta and S. A. Siddiqui, NUEPA, New Delhi, Unpublished, 2009.
● Indicators used for constructing EDI were pre-determined by the MHRD, Government of India. Contributions received from the members of the Multi-Disciplinary Expert and Core Group on EDI constituted by the MHRD in 2005-06 is gratefully acknowledged.
● Indicators were normalized before the Principal Component Analysis was applied to decide the factor loadings and weights.
● Separate dimensional indices were constructed first before finalizing the EDI; and
* Number of access-less habitations has been obtained from the Seventh All India Education Survey and drop-out rate at Upper Primary level from the Selected Educational Statistics. Wherever necessary projected child population provided by the Office of the Registrar General of India has been used.

Figure 5.1

EDI (Index and Rank) at Primary Level : All Managements, 2009-10

State	EDI
1. Puducherry	0.736
2. Lakshadweep	0.704
3. Kerala	0.700
4. Tamil Nadu	0.677
5. A & N Islands	0.663
6. Punjab	0.656
7. Chandigarh	0.655
8. Delhi	0.651
9. Daman & Diu	0.612
10. Sikkim	0.608
11. Goa	0.602
12. Haryana	0.590
13. Gujarat	0.584
14. Maharashtra	0.576
15. Karnataka	0.569
16. Himachal Pradesh	0.567
17. Andhra Pradesh	0.561
18. Nagaland	0.549
19. Mizoram	0.544
20. Uttarakhand	0.538
21. Uttar Pradesh	0.534
22. D & N Haveli	0.493
23. Odisha	0.468
24. West Bengal	0.467
25. Rajasthan	0.458
26. Chhattisgarh	0.439
27. Madhya Pradesh	0.433
28. Tripura	0.415
29. Manipur	0.411
30. Jammu & Kashmir	0.404
31. Assam	0.386
32. Bihar	0.375
33. Meghalaya	0.365
34. Jharkhand	0.363
29. Arunachal Pradesh	0.328

programmes. One of the other important outcome indicators is ratio of exit class over Class I enrolment which has been used only at Primary level. At Upper Primary level, a new indicator, namely Transition Rate from Primary to Upper Primary Level of education has been used. This is a new indicator added from last year. A few states reported this to be above 100 percent which is treated as hundred in EDI computation. Average dropout and repetition rates are other important outcome indicators which have been computed by using DISE data based on common schools in 2008-09 and 2009-10. In case of states having negative dropout rate are considered as missing values. Percentage of appeared children passing with 60 percent and above marks in terminal Grades IV/V and VII/VIII, considered as proxy indicators of learners' attainment, are also used as outcome indicators in EDI. Needless to mention that while analysing EDI, data limitations presented above should be kept in mind.

Methodology

A cursory look at the set of 21 indicators (Table E1) reveals that they have either direct or inverse relationship. Some of these indicators are in ratio form and others in percentage form. In view of this, each indicator considered in EDI computation is first required to be normalised. Normalised values range between 0 and 1 and it indicates the relative position of states with reference to a selected indicator. Thus in case of each indicator, in view of its nature, the **best value** and the **worst value** are identified which are then used to transform by using the following formula:

$$NV_{ij} = 1 - \left[\frac{\{Best\ X_i - Observed\ X_{ij}\}}{\{Best\ X_i - Worst\ X_i\}} \right]$$

where NV_{ij} represents normalized index of ith indicator of jth state and X_i is the original value of the ith indicator. Unlike previous years, in case of a few variables, policy options were explored to identify the *best values* instead of based on the *observed values* (*normalized values in case of such variables, if obtained above one are treated as one*). Some of such variables are: access-less

> "*Principal Component Analysis is used to obtain factor loading and weights of indicators in each of the four sets of indicators, which is done first at the Primary level and then at the Upper Primary level of education*"

habitations (*best value, zero*), percentage of schools having PTR and SCR above 40 (*best value, zero*), and percentage of teachers without professional qualification (*best value, zero*).

Upon receiving *normalized values*, the next step was to assign *factor loadings* and *weights.* Weights to indicators can be assigned in a number of ways. One can judge the significance of an indicator and accordingly assign weight which is based up on the value judgment of an individual. On the other hand, one can assign equal weights to all the indicators or assign different weights to different indicators according to significance of an indicator. The weightage in the computation of an EDI in the present exercise are determined by using *Factor Loadings* and *Eigen Values* from the *Principal Component Analysis* (PCA). PCA helps in reducing large number of indicators in a few (indicators/categories) without losing their significance which also simplifies analysis. PCA helps in weighing each indicator according to their statistical significance (see *Orienting Outlays toward Needs: An Evidence-Based, Equity-Focused Approach for Sarva Shiksha Abhiyan by* Dhir Jhingran and Deepa Sankar). The components identified are known as *Principal Components* which explain maximum variance among a set of indicators. Therefore, the *Principal Component Analysis* is used to obtain factor loading and weights of the indicators in each of the four sets of indicators, which is done first at the Primary level and then at the Upper Primary level of education. Needless to mention that Primary stage/level of education consists of all Primary schools/sections irrespective of the type of schools; and Upper Primary stage/level of education consists of all the Upper Primary schools/sections irrespective of the type of schools. This means that all the schools imparting elementary education across the country irrespective of school type are considered in computing EDI which includes schools under the government as well as private managements. Thus, indices for all the four types of indicators have been first obtained separately for Primary and Upper Primary level of education which is then used to compute composite EDI for Primary and Upper Primary level of education

separately. Composite EDI for Primary and Upper Primary levels of education is used to obtain composite EDI for the Elementary level of education.

In this section outcome of the EDI based on the DISE 2009-10 data is presented.

EDI Analysis

In view of different sizes and geographical locations of different States and UTs, they are further re-grouped under major states (21 states), states from the north-eastern region (7 states, excluding Assam, which has been considered as a major state because of its size), and smaller states (7 states). All the three groups and states in each group are at different level of education development. In view of spatial dimension, their need and requirement vary from state to state. For example, north-eastern states may need more new schools than in the states from the southern region. Similarly smaller States/UTs such as Andaman and Nicobar Islands because of their location, need to be analysed separately. Most of the major states have experience of implementing large scale programmes, such as DPEP, but the same is not true in case of states in the other two groups, which practically did not experience any such programme in the past. SSA is the first major programme which has been initiated in these smaller states besides the major states. Within each state group, EDI in case of each state has been used to assign fresh rankings based on each set of indicators as well as separately for Primary, Upper Primary and composite Elementary levels of education. The EDI reveals a lot about the regional variations that exist in the country which is true both for Primary and Upper Primary levels of education.

North-Eastern States

The seven states grouped under north-eastern region are Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, and Tripura. The EDI presented in Table E2 reveals that Sikkim outperformed the other six states in the region which is true for Primary, Upper Primary

> "Sikkim outperformed the other six states in the region which is true for Primary, Upper Primary and composite Primary and Upper Primary (Elementary) levels of education"

and composite Primary and Upper Primary (Elementary) levels of education. In the previous year Mizoram was ranked first in case of Primary and composite Primary and Upper Primary levels of education. Incidentally, Sikkim is placed 12th among all the 35 States and UTs of the country in case of composite Primary and Upper Primary levels of education. The state attains an overall EDI of 0.678 for Elementary, 0.608 for Primary (10th rank), and 0.748 (14th rank) for Upper Primary levels of education which is treated above average as an EDI ranges between 0.00 to 1.00. On the other hand, Nagaland with an EDI of 0.549 at Primary level and with Mizoram an EDI of 0.738 at Upper Primary is positioned second respectively in case of Primary and Upper Primary levels of Education. Instead of improving its EDI values Mizoram has gone down to 3rd posiotion in case of Primary, and to 2nd position in case of Upper Primary and composite Primary and Upper Primary levels of education. Last year Manipur was placed in 7th position in case of Primary level, but this year it has improved its position to 5th. In case of Upper Primary level Arunachal Pradesh was on the 7th and it also improved its rank to 5th. But Meghalaya remains at the 7th place in case of composite Primary and Upper Primafry levels of education. It is placed at 33 in all India ranking at Primary level, Upper Primary level and composite Primary and Upper Primary levels of education. Analysis of individual indicators across all four types reveals that it couldn't improve much over the previous year.

Individual EDIs in each set of indicators, however, reveal that Sikkim does not stand first in all the four sets of indicators which is true both for Primary and Upper Primary levels of education. So far as the access indicators at Primary level are concerned, it is found to be very high at 1.000 in case of Arunachal Pradesh, compared to 0.509 in case of Sikkim. The lowest EDI in case of access indicators is observed in case of Manipur, having an EDI of 0.397, followed by Tripura with an EDI of 0.505. On the other hand, Meghalaya is placed second with an EDI of 0.760 in case of access indicators, compared to an overall sixth rank at Primary level of education but the situation is not the same in other sets of indicators at

Primary level. Meghalaya is placed at 33 (EDI, 0.433) in overall ranking in case of composite Primary and Upper Primary levels of education.

So far as infrastructure set of indicators at Primary level is concerned, Sikkim has the highest EDI (0.882), which is also true for Upper Primary level of education (EDI, 0.943). It may be recalled that indicators, such as availability of drinking water and common toilets and girls' toilets, are considered under infrastructural

it improved its index of 0.149 in 2008-09 to 0.219 in 2009-10. Meghalaya also has the lowest infrastructure index (0.146) in case of Upper Primary level, indicating that by and large majority of its schools imparting Elementary education do not possess minimum facilities in schools. But the position of the state in case of other sets of indicators is slightly better than that of infrastructure index which is true both for Primary and Upper Primary levels of education. The schools in

Table E2(A)
Indices & Ranking at Primary/Upper Primary Level: North-Eastern States
All Managements: All Schools: 2009-10

State	Access Index				Infrastructure Index				Teachers Index			
	Primary Level	Rank	Upper Primary Level	Rank	Primary Level	Rank	Upper Primary Level	Rank	Primary Level	Rank	Upper Primary Level	Rank
Arunachal Pradesh	1.000	1	0.289	7	0.394	6	0.698	3	0.368	7	0.645	6
Manipur	0.397	7	0.528	5	0.421	5	0.561	6	0.510	5	0.703	3
Meghalaya	0.760	2	0.649	2	0.219	7	0.146	7	0.563	4	0.647	5
Mizoram	0.746	3	0.963	1	0.679	3	0.664	4	0.674	2	0.721	2
Nagaland	0.620	4	0.517	6	0.807	2	0.824	2	0.593	3	0.692	4
Sikkim	0.509	5	0.574	4	0.882	1	0.943	1	0.725	1	0.857	1
Tripura	0.505	6	0.622	3	0.436	4	0.565	5	0.467	6	0.563	7

State	Outcome Index				Composite EDI					
	Primary Level	Rank	Upper Primary Level	Rank	Primary Level	Rank	Upper Primary Level	Rank	Primary & Upper Primary Level	Rank
Arunachal Pradesh	0.465	7	0.686	2	0.328	7	0.620	5	0.474	6
Manipur	0.647	5	0.659	4	0.411	5	0.627	4	0.519	4
Meghalaya	0.615	6	0.631	5	0.365	6	0.501	7	0.433	7
Mizoram	0.714	2	0.716	1	0.544	3	0.738	2	0.641	2
Nagaland	0.677	3	0.671	3	0.549	2	0.699	3	0.624	3
Sikkim	0.672	4	0.483	7	0.608	1	0.748	1	0.678	1
Tripura	0.716	1	0.542	6	0.415	4	0.567	6	0.491	5

set of indicators. Sikkim is followed by Nagaland with EDI of 0.807 for Primary and 0.824 for Upper Primary level. The lowest EDI is observed in Meghalaya which is quite similar to the position in the last two years. But

Arunachal Pradesh also do not have minimum facilities as the EDIs obtained at the Primary and Upper Primary levels of education respectively are 0.394 and 0.698. It is also interesting to further note that barring

Meghalay and Mizoram, infrastructure facilities are much better in Upper Primary schools than the same

education; and with EDI 0.857 in case of Upper Primary level of education, its rank is 12th. Last year, Sikkim was
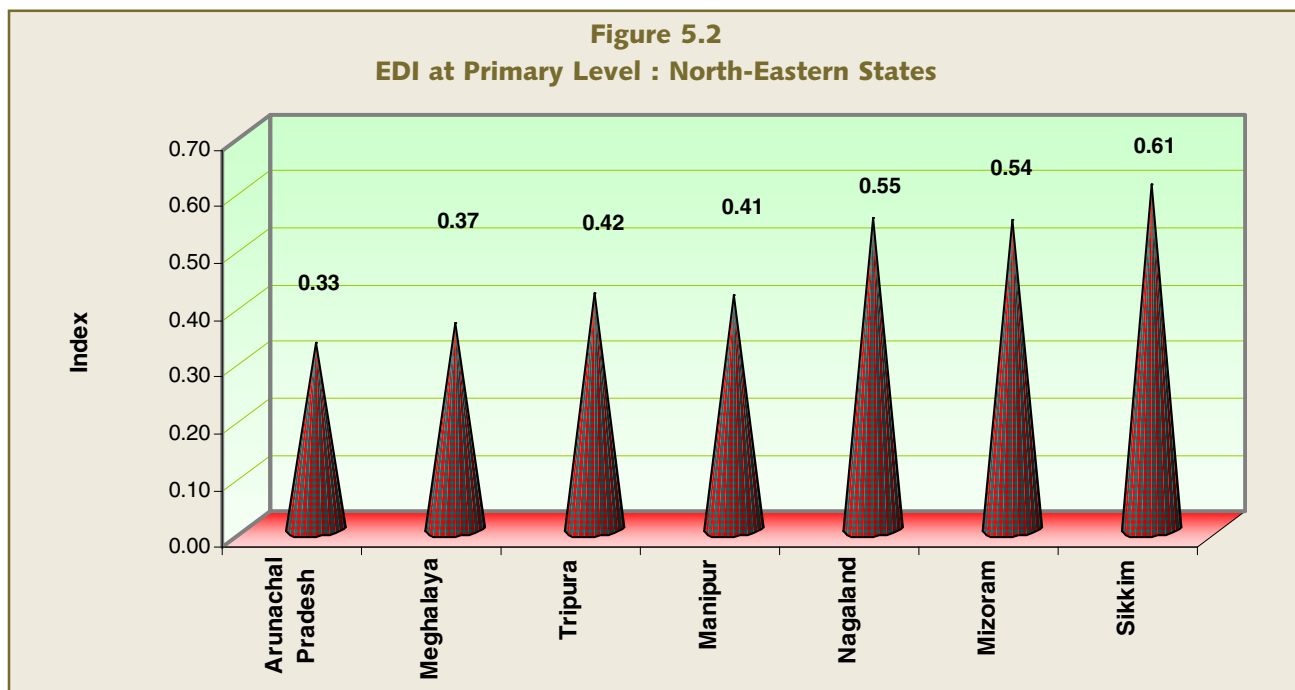

Figure 5.2
EDI at Primary Level : North-Eastern States

Table E2(B)
Composite Educational Development Index: North-Eastern States (Excluding Assam)
Primary and Upper Primary Levels: All Schools & All Managements

State/UT	EDI & Rank Primary Level				EDI & Rank Upper Primary Level				Composite EDI & Rank (Primary & Upper Primary)			
	2008-09		2009-10		2008-09		2009-10		2008-09		2009-10	
Arunachal Pradesh	0.512	4	0.328	7	0.519	7	0.620	5	0.516	6	0.474	6
Manipur	0.464	7	0.411	5	0.630	4	0.627	4	0.547	4	0.519	4
Meghalaya	0.498	6	0.365	6	0.522	6	0.501	7	0.510	7	0.433	7
Mizoram	0.686	1	0.544	3	0.741	1	0.738	2	0.714	1	0.641	2
Nagaland	0.633	3	0.549	2	0.675	3	0.699	3	0.654	3	0.624	3
Sikkim	0.657	2	0.608	1	0.683	2	0.748	1	0.670	2	0.678	1
Tripura	0.501	5	0.415	4	0.577	5	0.567	6	0.539	5	0.491	5

in the Primary schools across the seven states of the north-eastern region.

So far as the teachers' set of indicators at Primary level are concerned, it is Sikkim that is on top of the list with an EDI of 0.725, compared to an EDI of 0.728 in the previous year. Mizoram is placed second with an EDI value of 0.674 and Arunachal Pradesh, the last with EDI 0.368. In case of teachers' indicators, Sikkim, with EDI 0.725, stands 14th amongst all the 35 states in case of Primary

ranked 10th in case of teachers index at Upper Primary level. Like infrastructure, states in the north-eastern region are also better placed at Upper Primary level with regard to teachers' indicators compared to Primary level. The lowest ranked state in the north-eastern region with regard to teachers' indicators is Arunachal Pradesh with an EDI of 0.368 at Primary and 0.563 at Upper Primary level in case of Tripura. The corresponding position of Arunachal Pradesh, amongst all the 35 states, is 35th at

Primary (EDI, 0.375) and that of Tripura is 27ᵗʰ at Upper Primary level of education (EDI, 0.582)..

The last set of indicators used is the outcome indicators. As many as 9 indicators are used to review the position of all the 35 states, including seven states from the north-eastern region. The list of indicators used is quite comprehensive through which true picture of universalisation can be obtained. Barring Nagaland, Sikkim and Tripura, all the other states in the north-eastern region reported a higher EDI for Upper Primary level compared to Primary level of education. In case of outcome indicators at Primary level, Tripura stands first and Arunachal stands, the last. Their respective EDIs at Upper Primary level in case of Tripura being lower than Primary level, is 0.542 which may be termed as far below the average EDI. However, Mizoram with an EDI of 0.716 ranked first in case of outcome index at Upper Primary level of education. Though Sikkim stands first with regard to its position at the Primary level, but the same is not true in case of outcome index where it is ranked 4ᵗʰ with an EDI value of 0.672. At the Upper Primary level, it is ranked 7ᵗʰ. It is observed that different states have different positions in different sets of indicators. A careful examination of all the four sets of indicators as well as individual indicators, and also computation of district-specific EDIs in each state, will help states to identify limitations without which no improvement is expected. The provisions made under SSA can also be best used if such an analysis is carried out district-wise and within the district, block-wise.

> *"A careful examination of all the four sets of indicators as well as individual indicators, and also computation of district-specific EDIs in each state, will help states to identify limitations without which no improvement is expected"*

Smaller States

States/UTs, such as Andaman and Nicobar Islands, Chandigarh, Dadra and Nagar Haveli, Daman and Diu, Goa, Lakshadweep, and Puducherry, are the seven states which have been grouped under smaller states, based on the total number of schools and population they have (Table E3). May be these states are small in size but a cursory look at EDI values indicates that a few of them are doing much better than a number of major states,

both in Primary and Upper Primary levels of education. The EDI values during 2008-09 and 2009-10 indicate an improvement in case of Andaman & Nicobar Islands, Chandigarh and Goa in composite Primary and Upper Primary levels of education. Puducherry is not only ranked first within the set of smaller states but is also ranked 1ˢᵗ with an EDI value of 0.813 amongst all the States and UTs of the country in case of composite Primary and Upper Primary levels of education. The corresponding EDI value of Bihar which is ranked 35ᵗʰ is as low as 0.421; thus showing a significant regional deviation in EDI values revealing that states are a different pace of educational development in general and elementary education in particular. Amongst all states, Puducherry is ranked 1ˢᵗ in case of Primary (EDI, 0.736) and Upper Primary (EDI, 0.891) level of education. It could maintain its position in Primary, Upper Primary and composite Primary and Upper Primary level of education. Irrespective of an educational level, Puducherry is ranked first amongst the smaller set of states but the same is not true in case of all the four individual sets of indicators used in computing EDI both at the Primary and Upper Primary levels of education. The second amongst these states is Lakshadweep with an EDI of 0.704 at Primary and 0.795 in composite Primary and Upper Primary level of education. In case of Upper Primary level, Lakshadweep is ranked 2ⁿᵈ with an EDI of 0.887 followed by Andaman and Nicobar Islands (EDI, 0.829) and Chandigarh (EDI, 0.814). With an EDI value of 0.710, Dadra and Nagar Haveli is ranked 7ᵗʰ within the seven smaller states.

It may be of interest to note that Chandigarh's overall ranking is 7ᵗʰ (EDI, 0.655) at the Primary and 5ᵗʰ (EDI, 0.814) at Upper Primary level of education. The other smaller state doing better in overall all-India ranking is Lakshadweep which has only 44 schools under its administration. It stands 2ⁿᵈ at Primary level (EDI, 0.704) and Upper Primary level of education(EDI, 0.887). It is observed that except Dadra & Nagar Haveli, all smaller

states have rankings within the first 15 states at the Primary level. With regard to ranking at Upper Primary level, all of them except Dadra & Nagar Haveli (19th rank) stands within the first 15 states.

states included in the analysis. Even within a set of indicators, the states have not provided equal measure of Primary and Upper Primary schooling facilities. Further,

Table E3(A)
Indices & Ranking at Primary/Upper Primary Level: Smaller States/UTs
All Managements: All Schools, 2009-10

State/UT	Access Index				Infrastructure Index				Teachers Index			
	Primary Level	Rank	Upper Primary Level	Rank	Primary Level	Rank	Upper Primary Level	Rank	Primary Level	Rank	Upper Primary Level	Rank
A & N Islands	0.094	7	0.433	7	0.890	2	0.972	1	0.900	4	0.976	2
Chandigarh	0.500	4	0.756	3	0.865	3	0.891	4	0.949	2	0.952	3
D & N Haveli	0.623	1	0.682	5	0.568	7	0.742	7	0.585	7	0.774	7
Daman & Diu	0.378	6	0.775	1	0.820	5	0.787	6	0.810	6	0.864	6
Goa	0.435	5	0.520	6	0.726	6	0.865	5	0.852	5	0.951	4
Lakshadweep	0.542	2	0.763	2	0.854	4	0.900	3	0.917	3	0.924	5
Puducherry	0.523	3	0.684	4	0.927	1	0.907	2	0.966	1	0.981	1
State/UT	Outcome Index				EDI				Composite (Primary & Upper Primary) Level	Rank		
	Primary Level	Rank	Upper Primary Level	Rank	Primary Level	Rank	Upper Primary Level	Rank				
A & N Islands	0.675	4	0.699	7	0.663	3	0.829	3	0.746	3		
Chandigarh	0.593	7	0.579	6	0.655	4	0.814	4	0.735	4		
D & N Haveli	0.748	3	0.608	5	0.493	7	0.710	7	0.602	7		
Daman & Diu	0.651	6	0.672	4	0.612	5	0.782	6	0.697	5		
Goa	0.668	5	0.621	3	0.602	6	0.783	5	0.692	6		
Lakshadweep	0.923	1	0.892	2	0.704	2	0.887	2	0.795	2		
Puducherry	0.908	2	0.872	1	0.736	1	0.891	1	0.813	1		

Like states in the north-eastern region, separate analysis is also carried out in case of each of the four sets of indicators. It is observed that EDI value for access indicators is much lower than for the other sets of indicators, which is true for both Primary and Upper Primary levels. The highest EDI for access indicators at Primary level is observed in Dadra & Nagar Haveli (EDI, 0.623) and the lowest (EDI, 0.094) in Andaman and Nicobar Islands. At Upper Primary level, the lowest EDI is observed in Andaman and Nicobar Islands (EDI, 0.433) and the highest in Daman& Diu (EDI, 0.775). Lakshadweep stands 2nd for both Primary (EDI, 0.542) and Upper Primary levels (EDI, 0.763) of education amongst seven smaller
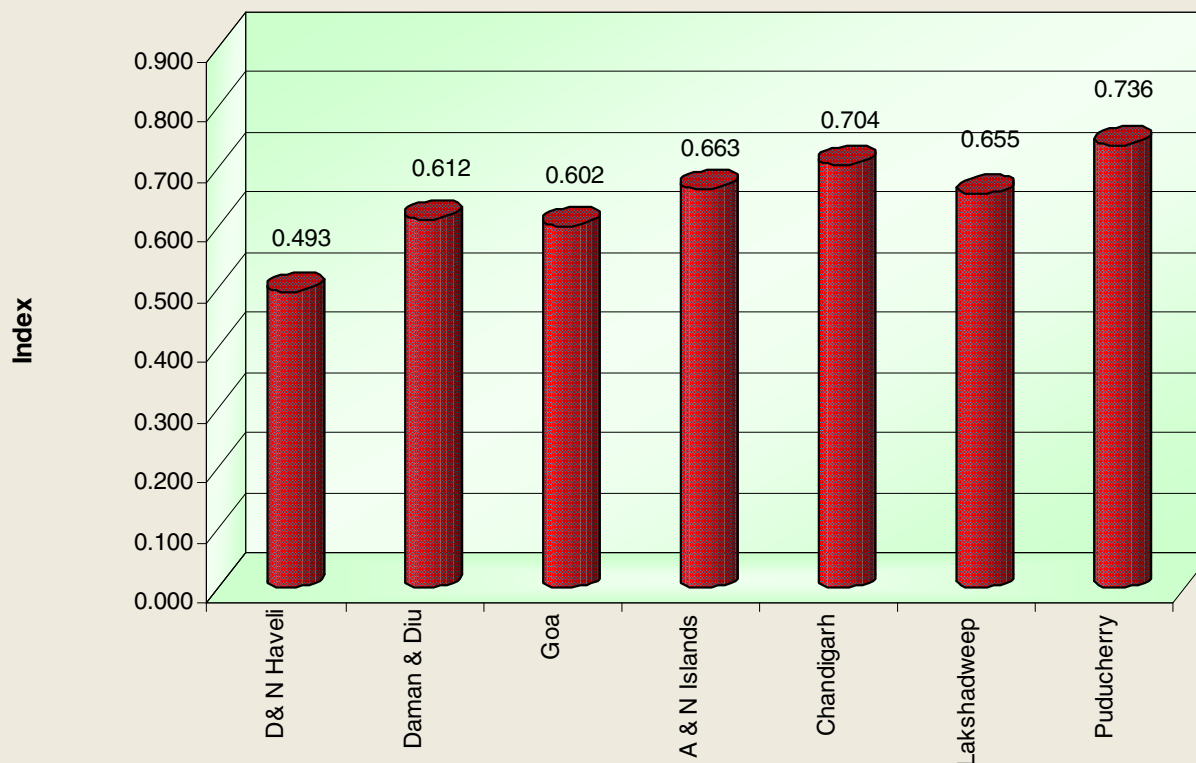
it is observed that by and large states have a higher EDI value at Upper Primary level than at Primary level.

It may be recalled that only two indicators, namely access-less habitations and number of schools per thousand population, were used under access indicators at Primary level. Since DISE does not collect information according to habitations, the number of access-less habitations in case of each state, as mentioned above, is taken from the All India School Education Survey (AISES). It is also true that a good number of habitations have been provided schooling facilities since 2002-03, the year for which AISES data is the latest available. This is also true in view of SSA under which activities in terms of

opening of new schools picked-up in 2002-03 onwards; this is not reflected in school-less habitations. In the light of these observations, percentage of access-less habitations has been corrected with reference to new schools opened since 2002-03. In addition, ratio of

(EDI 0.568; rank 25) other smaller states ranked high and are within the first 15 amongst all the 35 states in case of Primary level Infrastructure index. Almost similar positions are observed at Upper Primary level wherein the position of Dadra and Nagar Haveli is 25th and Chandigarh 17th ;

Figure 5.3
EDI at Primary Level : Smaller States/UTs, 2008-09

Primary to Upper Primary schools/sections has also been used as an indicator of access at the Upper Primary level of education to assess the availability of Upper Primary schooling facilities which, like other indicators, is computed based on the DISE data.

The next set of indicators analysed is infrastructure indicators. The highest EDI value at Primary level is observed in case of Puducherry (EDI, 0.927) and lowest (EDI, 0.568) in case of Dadra and Nagar Haveli. Puducherry attained 2nd position amongst 35 states in this respect and Dadra and Nagar Haveli, 25th. In case of Upper Primary level Andaman& Nicobar Islands stands on the top with an index of 0.972 and Dadra and Nagar Haveli with an index of 0.742 in the last. Except Dadra & Nagar Haveli

the rest of the six states are ranked amongst the first 15 states. It may be recalled that Dadra and Nagar Haveli is amongst the lowest ranked states having an overall rank of 20th at Primary level (EDI, 0.568). Further, it has also been observed that both at these levels, EDI values barring Dadra and Nagar Haveli are much high in case of the infrastructure indicators than the access indicators which is similar to the situation in 2008-09. The EDI also suggests that Upper Primary schools/sections are better placed with regard to infrastructure than in Primary schools/sections which is quite similar to the states (barring a few states) in the north-eastern region. It is good to have better infrastructure in Upper Primary schools but it is equally important to provide better infrastructure also in all

Primary schools for which provisions made under SSA can be best utilised.

The next set of indicators that have been analysed is indicators concerning teachers. In a good number of smaller states, EDI values for teacher's indicators are higher than for access and infrastructure indicators. Puducherry stands 1st with an EDI of 0.966 at Primary and Upper Primary level with an EDI of 0.981.

The highest EDI at Primary level is observed in Puducherry (EDI, 0.966) and the lowest (EDI, 0.585) in Dadra and Nagar Haveli. The second ranked state for this set of indicators at Primary level is Chandigarh with an EDI of 0.949, followed by Lakshadweep (EDI, 0.917) and Andaman and Nicobar Islands (EDI, 0.900). On the other hand, at Upper Primary level, Puducherry with an EDI of 0.981 is ranked first, followed by Andaman and Nicobar Islands (EDI, 0.976).

Further, it is observed that the ranking of smaller states, except Dadra and Nagar Haveli, both in case of Primary and Upper Primary levels, is very high with

> *"Infrastructure and teachers indicators are better placed in the Upper Primary level but the same is not true in case of outcome indicators which plays the most important role for achieving the goal of universalisation of elementary education"*

indicators. That is why the last set of indicators analysed is the set of outcome indicators. It is noticed to have much lower EDI values than the infrastructure and teachers indicators and it is true for both Primary and Upper Primary levels of education. The highest EDI is observed in case of Lakshadweep at Primary (EDI, 0.923) and Puducherry at Upper Primary (EDI, 0.872) levels of education. It is also of interest to note that in two out of seven states, EDI values are much lower at Upper Primary level than at Primary level, which is just the reverse when other sets of indicators are considered. Infrastructure and teachers indicators are better placed in the Upper Primary level but the same is not true in case of outcome indicators which plays the most important role for achieving the goal of universalisation of elementary education. Unlike in other sets of indicators, most of the smaller states (barring Puducherry and Lakhshadweep) are not placed within the first 10 states at Primary level so far as this set of indicators is concerned.

Major States

As mentioned above, that the seven states of the

Table E3(B)
Composite Educational Development Index: Smaller States/UTs
Primary and Upper Primary Levels: All Schools & All Managements

State/UT	EDI & Rank Primary Level				EDI & Rank Upper Primary Level				Composite EDI & Rank (Primary & Upper Primary)			
	2008-09		2009-10		2008-09		2009-10		2008-09		2009-10	
A & N Islands	0.664	4	0.663	3	0.809	3	0.829	3	0.736	3	0.746	3
Chandigarh	0.688	3	0.655	4	0.756	5	0.814	4	0.722	5	0.735	4
D & N Haveli	0.594	7	0.493	7	0.640	7	0.710	7	0.617	7	0.602	7
Daman & Diu	0.654	6	0.612	5	0.801	4	0.782	6	0.728	4	0.697	5
Goa	0.658	5	0.602	6	0.697	6	0.783	5	0.678	6	0.692	6
Lakshadweep	0.773	2	0.704	2	0.851	2	0.887	2	0.812	2	0.795	2
Puducherry	0.797	1	0.736	1	0.884	1	0.891	1	0.841	1	0.813	1

regard to teachers indicators analysed amongst 35 states.

Making available schooling facilities, infrastructure and teachers in schools should also be reflected in the outcome

north-eastern region and seven other smaller states have been clubbed in two separate groups, and the remaining 21 states, including the national capital of Delhi, have been grouped under major states. Except Delhi, all the

other states in the group had experience of initiating major programmes like the District Primary Education Programme (DPEP).

So far as the composite Primary and Upper Primary education EDI amongst 21 major states is concerned, the top five ranking states are Kerala (EDI, 0.772), Tamil Nadu (EDI, 0.744), Punjab (EDI, 0.730), Delhi (EDI, 0.720) and Haryana (EDI, 0.753). Kerala maintained its first position and improved its position from 7th to 1st in case of Primary level of education. Tamil Nadu, Punjab and Delhi improved its positions from 3rd to 2nd , 4th to 3rd and 5th to 4th respectively. But Haryana has gone down to 5th from 2nd. However, 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 but the EDI values show that they are improved over the pervious year. This is also true for all the four sets of indicators used in computing EDI.

On the other hand, Bihar, Jharkhand and Meghalaya are ranked 35, 34 and 33 in case of composite Primary and Upper Primary levels of education with an EDI as low as 0.421, 0.431 and 0.433 respectively which is much lower than that of the top ranked states. However, these states have a slightly lower EDI values in 2009-10 than the same in 2008-09 which is true for both Primary, Upper Primary and composite Primary and Upper Primary levels of education. In overall ranking West Bengal improved its position from 32nd to 26th. But Meghalaya has gone down from 31 to 33.

> "*Like smaller states and states from the north-eastern region, the top ranked five states have higher EDI values at Upper Primary than at Primary level of education*"

Like smaller states and states from the north-eastern region, the top ranked five states have higher EDI values at Upper Primary than at Primary level of education. For example, EDIs in case of Kerala are 0.700 at Primary and 0.844 at Upper Primary levels compared to 0.677 and 0.811 respectively in case of Tamil Nadu. This is also true for Punjab, Delhi and Haryana which are ranked 3rd, 4th and 5th in case of composite Primary and Upper Primary levels of education within the 21 major states. Maharashtra (0.663), Andhra Pradesh (0.662) and Gujarat (0.657) closely follow the first five ranked states (Table E4) in case of composite Primary and Upper Primary levels of education.

The individual EDI values in case of each of these states in four sets of indicators have also been analysed critically. First, index in case of access indicators is discussed which reveals that none of the top three ranked states maintained their respective positions at Primary level, which is also true for Upper Primary level of education. At Primary level, Jammu and Kashmir (EDI, 0.762), Chhattisgarh (EDI, 0.659) and Jharkhand (EDI, 0.628) are ranked 1st, 2nd and 3rd respectively in access set of indicators which is much better than their over-all position in case of the composite index.

The top ranked Kerala in case of composite Primary and Upper Primary level is at 21st rank in case of Primary and 14th rank in case of Upper Primary level access index. Despite Kerala having been doing well in other sets of indicators, the state is not well placed with regard to access indicators. May be the state has achieved the goal of universal access and does not need more schools to open. Access index in case of Tamil Nadu is also low (EDI, 0.473 and 0.566) and the state is ranked 19th and 17th respectively in case of Primary and Upper Primary levels of education. It is to be noted that Jharkhand has an EDI of 0.628 and positioned at 3rd place in case of Primary but it is placed at 20th with an EDI of 0.475 in case of Upper Primary level of education. Similarly West Bengal is positioned 7th with an EDI of 0.574 in case of Primary and 21st with an EDI of 0.281 in case of Upper Primary level of education. Andhra Pradesh is 4th in case of Primary and 15th in case of Upper Primary level. Himachal Prdesh is placed 20th with an EDI of 0.398 at Primary and 7th with an EDI of 0.732 in case of Upper Primary level. Further, it has been observed that like other groups of states, namely, north-eastern and smaller states, EDI values of major states in case of access indicators is far below than that of the other sets of indicators which is by and large true for both Primary as well as Upper Primary levels of education.

So far as infrastructure indicators are concerned, none of the first three ranked states have their respective positions. Punjab is positioned 1st in case of Primary and Upper Primary level with an EDI of 0.969 and 0.946 respectively. Delhi is ranked 2nd in case of composite (composite Primary and Upper Primary) is placed 1st (EDI, 0.969) at Primary level and Upper Primary level (EDI, 0.946) with regard to infrastructure index. It may be observed that infrastructure index in Assam and Jammu and Kashmir is too low. Assam is having an EDI of 0.365

Table E4(A)
Indices & Ranking at Primary/Upper Primary Levels: Major States
All Managements: All Schools, 2009-10

State	Access Index				Infrastructure Index				Teachers Index			
	Primary Level	Rank	Upper Primary Level	Rank	Primary Level	Rank	Upper Primary Level	Rank	Primary Level	Rank	Upper Primary Level	Rank
Andhra Pradesh	0.625	4	0.578	15	0.666	11	0.777	7	0.686	10	0.864	5
Assam	0.524	14	0.564	18	0.365	20	0.306	21	0.454	19	0.582	13
Bihar	0.552	11	0.515	19	0.375	19	0.424	19	0.463	17	0.510	15
Chhattisgarh	0.659	2	0.712	7	0.463	17	0.448	17	0.503	16	0.477	18
Delhi	0.515	16	0.694	10	0.817	4	0.819	4	0.913	2	0.894	2
Gujarat	0.569	8	0.798	1	0.684	10	0.684	12	0.816	5	0.848	7
Haryana	0.520	15	0.728	3	0.847	2	0.864	3	0.694	9	0.779	8
Himachal Pradesh	0.398	20	0.732	2	0.654	12	0.685	11	0.730	7	0.773	9
Jammu & Kashmir	0.762	1	0.713	6	0.318	21	0.422	20	0.507	15	0.708	11
Jharkhand	0.628	3	0.475	20	0.422	18	0.438	18	0.373	21	0.427	20
Karnataka	0.565	9	0.727	4	0.596	14	0.658	13	0.774	6	0.850	6
Kerala	0.225	21	0.620	14	0.846	3	0.866	2	0.981	1	0.941	1
Madhya Pradesh	0.577	6	0.664	11	0.535	16	0.577	15	0.462	18	0.428	19
Maharashtra	0.562	10	0.650	12	0.732	6	0.819	5	0.713	8	0.760	10
Odisha	0.528	13	0.576	16	0.570	15	0.569	16	0.525	13	0.483	17
Punjab	0.514	17	0.717	5	0.969	1	0.946	1	0.873	4	0.894	3
Rajasthan	0.592	5	0.700	8	0.691	8	0.757	8	0.449	20	0.589	12
Tamil Nadu	0.473	19	0.566	17	0.801	5	0.804	6	0.901	3	0.878	4
Uttar Pradesh	0.502	18	0.630	13	0.713	7	0.703	9	0.637	12	0.253	21
Uttarakhand	0.537	12	0.699	9	0.689	9	0.645	14	0.674	11	0.508	16
West Bengal	0.574	7	0.281	21	0.609	13	0.686	10	0.511	14	0.528	14

Continued...

Primary and Upper Primary index and 1st in case of Primary level. Delhi is ranked 2nd (EDI, 0.909) at Primary and 4th at Upper Primary level (EDI, 0.871) in the infrastructure index. Higher infrastructure index indicates that most of the schools in Delhi have got drinking water, common toilets and girls' toilet facility, which is also true for other top ranking states. Punjab with an overall rank of 7th at Primary and 0.306 at Upper Primary level. Jammu and Kashmir is having an EDI of 0.318 at Primary and 0.422 at Upper Primary Level. Further, infrastructure index reveals that by and large, it is higher in case of Upper Primary level compared to Primary level. The same was also observed in case of smaller states and states in the north-eastern region.

The next sets of indicators that have been discussed fall under the category of teachers and outcome indicators. By and large, Kerala, Punjab and Tamil Nadu maintained their high rankings with regard to teachers' index at Primary level which is also true for Upper Primary level of education. Delhi is ranked 2nd at Primary and Upper Primary level which is in line of its over all ranking in case of composite Primary and Upper Primary index. Kerala with EDI of 0.981 both at the Primary and 0.941 at Upper

repetition rates, etc. Tamil Nadu is ranked 1st with an EDI value 0.887 at Primary level and 0.873 at Upper Primary level of education. It may be noted that its ranking in access and infrastructure indices is much lower than that in case of outcome index. Next to Tamil Nadu is Karnataka at Primary (EDI, 0.815) level. However, at Upper Primary level, Kerala (EDI, 0.819) is ranked 2nd followed by Himachal Pradesh(EDI, 0.768) with regard to outcome index.

Figure 5.4
EDI at Primary Level : Major States

Primary levels is ranked 1st so far as teachers' index is concerned. Kerala is followed by Delhi (EDI 0.913; rank 2nd) and Tamil Nadu (EDI 0.901; rank 3rd) at the Primary level and Delhi and Punjab in case of Upper Primary level of education. On the other hand, with regard to teacher index, Jharkhand (EDI, 0.373), Rajasthan (EDI, 0.449 and Assam (EDI, 0.454) are respectively placed at 21st, 20th and 19th position. In view of low EDI values, they need significant improvement in case of most of their teacher related indictors.

Further, it is observed that in most of the 21 major states, teachers' index is observed to be higher for Upper Primary level compared to Primary level. However, the same is not true for outcome index, consisting of examination results, GPI, dropout and

> "*A* few states with high EDI values are termed better than the rest of the states but still they may not be well placed with regard to all the four sets of indicators used in computation of EDI"

The analysis of EDI clearly reveals that different states are at different levels of educational development in general, and Primary and Upper Primary levels of education in particular. A few states with high EDI values are termed better than the rest of the states but still they may not be well placed with regard to all the four sets of indicators used in computation of EDI. Even if a state is ranked first, still it may need further improvement for which individual EDI value should be critically analyzed. In addition, there is also need to analyse each indicator separately and identify states that need improvement. For instance, Bihar (21), Jharkhand (20), Assam (19), Uttar Pradesh (18), Orissa (17) and West Bengal (16), are a few low ranking states on composite Primary and Upper Primary levels which is

also almost true separately for Primary and Upper Primary levels. Among the 35 States and UTs, overall ranking of Bihar, Jharkhand, and Assam is 35, 34 and 32 respectively, all of which are traditionally seen as educationally backward states. Irrespective of sets of indicators, rank of Bihar varies between 11 to 21 among the 21 major states considered in analysis under major group of states.

schools/sections. In many of the educationally backwards states, enrolment is noticed to be on rise but at the same time a good number of pupils drop out and those who continue do not reach terminal grade. In Jharkhand, average dropout rate as high as 15.79 percent compared to 13.44 percent drop out rate in Bihar. On the other hand, retention rate in Jharkhand is around 53 percent.

Table E4(A)
Indices & Ranking at Primary/Upper Primary Levels: Major States
All Managements: All Schools, 2009-10

State	Outcome Index				EDI					
	Primary Level	Rank	Upper Primary Level	Rank	Primary Level	Rank	Upper Primary Level	Rank	Composite (Primary & Upper Primary) Level	Rank
Andhra Pradesh	0.806	4	0.717	5	0.561	10	0.762	6	0.662	7
Assam	0.688	12	0.590	13	0.386	19	0.503	19	0.445	19
Bihar	0.597	19	0.430	21	0.375	20	0.466	21	0.421	21
Chhattisgarh	0.746	8	0.700	8	0.439	16	0.558	14	0.498	16
Delhi	0.699	10	0.673	12	0.651	4	0.790	4	0.720	4
Gujarat	0.692	11	0.588	14	0.584	6	0.730	10	0.657	8
Haryana	0.678	13	0.676	11	0.590	5	0.770	5	0.680	5
Himachal Pradesh	0.788	5	0.768	3	0.567	9	0.741	9	0.654	10
Jammu & Kashmir	0.769	6	0.679	9	0.404	18	0.621	13	0.512	14
Jharkhand	0.606	18	0.678	10	0.363	21	0.500	20	0.431	20
Karnataka	0.815	2	0.709	7	0.569	8	0.743	8	0.656	9
Kerala	0.812	3	0.819	2	0.700	1	0.844	1	0.772	1
Madhya Pradesh	0.670	15	0.575	15	0.433	17	0.540	15	0.486	18
Maharashtra	0.747	7	0.712	6	0.576	7	0.750	7	0.663	6
Odisha	0.704	9	0.495	20	0.468	13	0.524	17	0.496	17
Punjab	0.564	21	0.571	16	0.656	3	0.803	3	0.730	3
Rajasthan	0.594	20	0.496	19	0.458	15	0.629	12	0.544	12
Tamil Nadu	0.887	1	0.873	1	0.677	2	0.811	2	0.744	2
Uttar Pradesh	0.671	14	0.562	17	0.534	12	0.511	18	0.523	13
Uttarakhand	0.666	17	0.758	4	0.538	11	0.636	11	0.587	11
West Bengal	0.667	16	0.535	18	0.467	14	0.540	16	0.503	15

A careful analysis would reveal that in a state like West Bengal, the ratio of Primary to Upper Primary schools/sections is above 5; it is the only state in the county to have the ratio above 5, meaning availability of an Upper Primary school/section per set of 5 Primary

Over time, transition rate has improved but still a good number of pupils drop out from the system before the completion of an educational level and those who continue do not necessarily attain education that can be called satisfactory. All districts together reveal that only 56.04

percent boys and 55.76 percent girls pass with 60 percent and above marks in the terminal Grade IV/V, suggesting the need for careful identification of problems. DISE database can be used to identify all such locations and schools which need immediate attention.

states are Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh, Meghalaya, Orissa, Tripura. It is to be noted that the states are big in size (population) except Tripura and important for the country to achieve the goal of UEE. On the other hand, 6 states are placed in the second cluster having an EDI value between 0.51
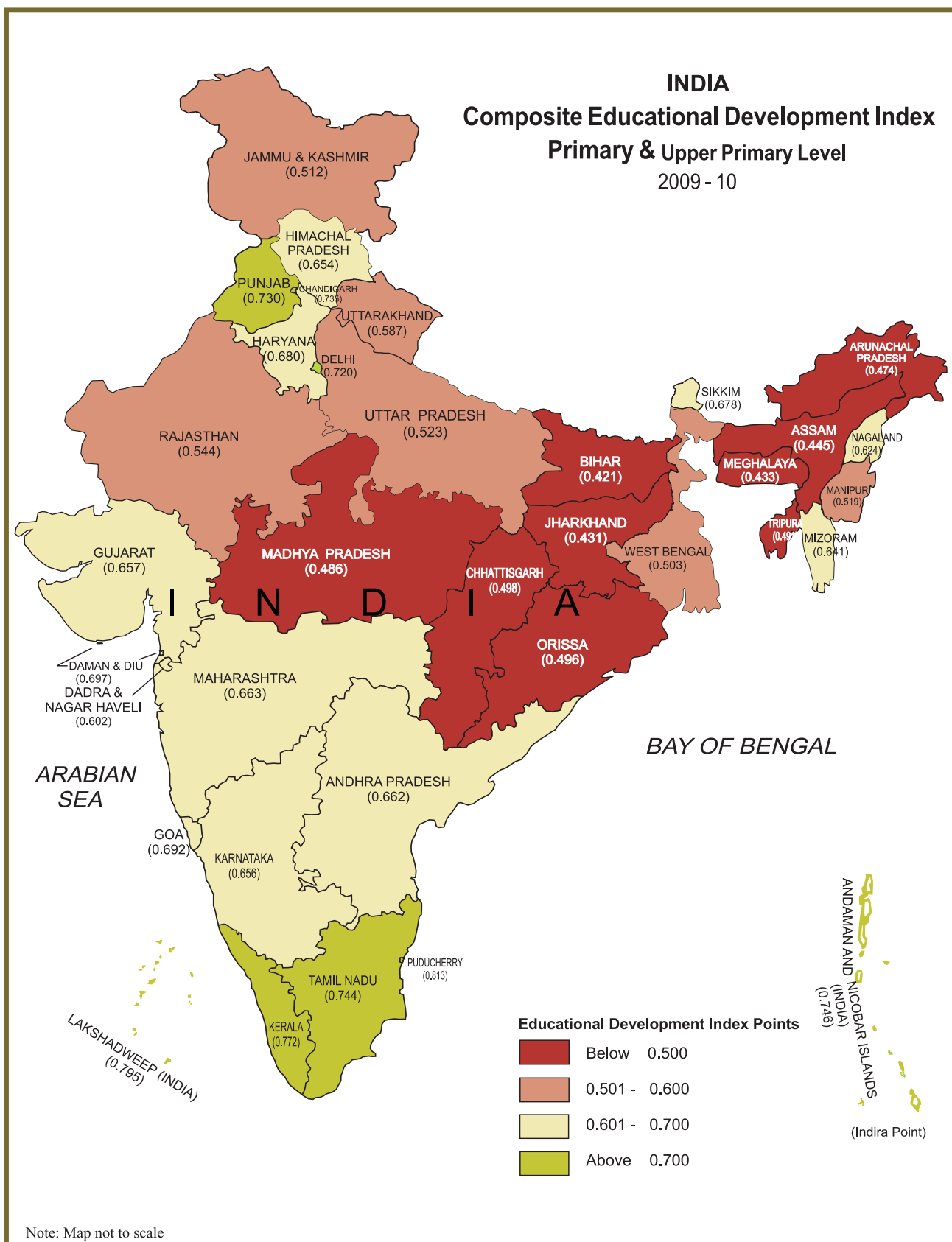
Table E4(B)
Composite Educational Development Index
Primary and Upper Primary Levels: Large States,
All Schools: All Managements

State/UT	EDI & Rank Primary Level				EDI & Rank Upper Primary Level				Composite EDI & Rank (Primary & Upper Primary)			
	2008-09		2009-10		2008-09		2009-10		2008-09		2009-10	
Andhra Pradesh	0.657	9	0.561	10	0.746	7	0.762	6	0.702	8	0.662	7
Assam	0.446	21	0.386	19	0.519	18	0.503	19	0.483	19	0.445	19
Bihar	0.480	19	0.375	20	0.447	21	0.466	21	0.463	20	0.421	21
Chhattisgarh	0.554	16	0.439	16	0.600	14	0.558	14	0.577	16	0.498	16
Delhi	0.701	4	0.651	4	0.762	3	0.790	4	0.732	5	0.720	4
Gujarat	0.698	5	0.584	6	0.706	10	0.730	10	0.702	7	0.657	8
Haryana	0.714	3	0.590	5	0.789	2	0.770	5	0.752	2	0.680	5
Himachal Pradesh	0.611	12	0.567	9	0.746	6	0.741	9	0.679	10	0.654	10
Jammu & Kashmir	0.586	14	0.404	18	0.661	12	0.621	13	0.623	18	0.512	14
Jharkhand	0.449	20	0.363	21	0.464	19	0.500	20	0.456	21	0.431	20
Karnataka	0.693	6	0.569	8	0.723	9	0.743	8	0.708	6	0.656	9
Kerala	0.689	7	0.700	1	0.822	1	0.844	1	0.756	1	0.772	1
Madhya Pradesh	0.571	15	0.433	17	0.585	15	0.540	15	0.578	15	0.486	18
Maharashtra	0.660	8	0.576	7	0.740	8	0.750	7	0.700	9	0.663	6
Odisha	0.553	17	0.468	13	0.537	17	0.524	17	0.545	17	0.496	17
Punjab	0.714	2	0.656	3	0.760	4	0.803	3	0.737	4	0.730	3
Rajasthan	0.587	13	0.458	15	0.636	13	0.629	12	0.612	14	0.544	12
Tamil Nadu	0.747	1	0.677	2	0.753	5	0.811	2	0.750	3	0.744	2
Uttar Pradesh	0.654	10	0.534	12	0.573	16	0.511	18	0.614	13	0.523	13
Uttarakhand	0.643	11	0.538	11	0.679	11	0.636	11	0.661	11	0.587	11
West Bengal	0.528	18	0.467	14	0.459	20	0.540	16	0.494	18	0.503	15

Concluding Observations

Based upon the composite EDI at primary level, states can be grouped into four clusters: Cluster I: EDI up to 0.50, Cluster II: 0.51 to 0.60, Cluster III: 0.61 to 0.70 and Cluster IV: 0.71 and above. Nine states have found place in the first cluster having EDI value up to 0.50; the
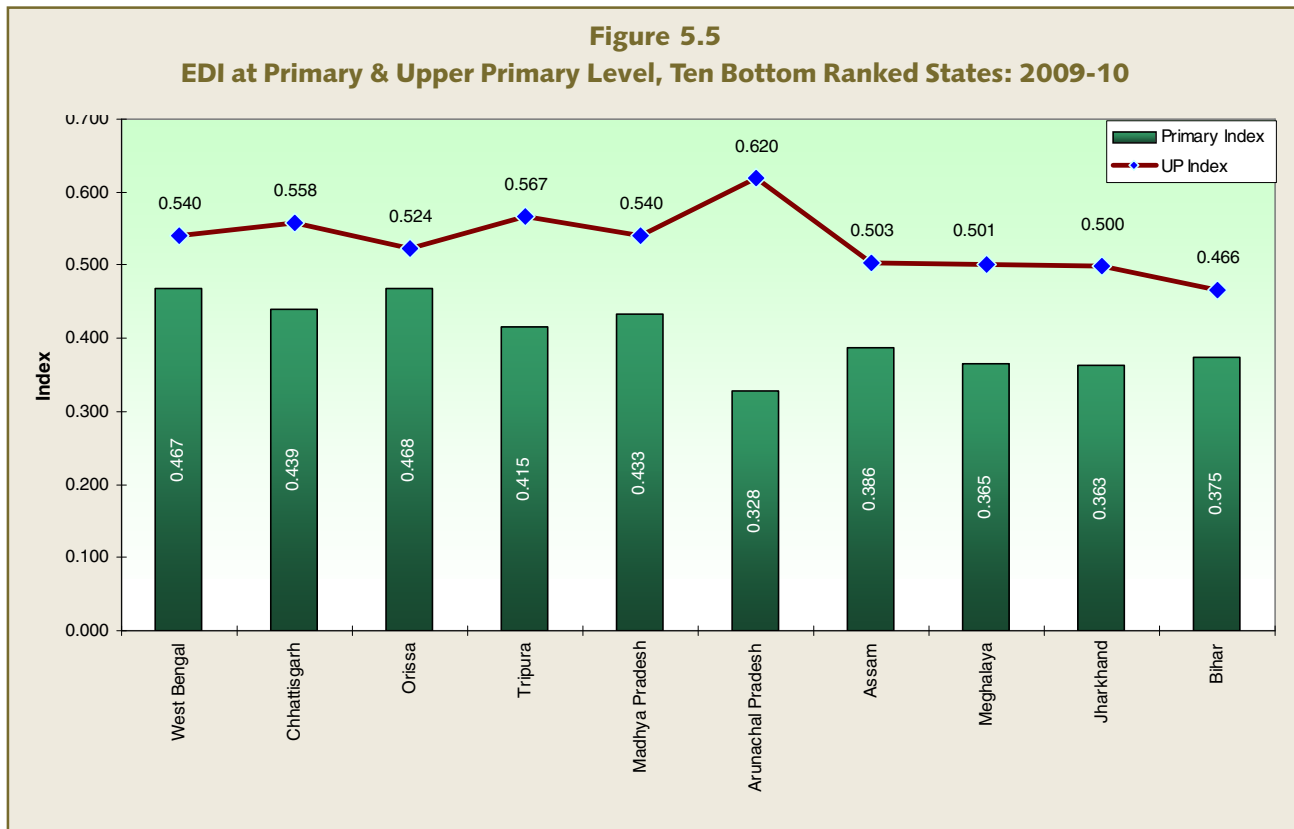
and 0.60. Small as well as big states are placed in this cluster. States like Jammu and Kashmir, Rajasthan, Uttar Pradesh and West Bengal are placed in this cluster. On the other hand, smaller state like Manipur is also placed in the second cluster with an EDI value between 0.51 to 0.60. All the 15 states from the first and second group need immediate attention. To improve their overall

INDIA
Composite Educational Development Index
Primary & Upper Primary Level
2009 - 10

JAMMU & KASHMIR
(0.512)

HIMACHAL
PRADESH
(0.654)

PUNJAB
(0.730)

CHANDIGARH
(0.738)

UTTARAKHAND
(0.587)

HARYANA
(0.680)

DELHI
(0.720)

UTTAR PRADESH
(0.523)

RAJASTHAN
(0.544)

ARUNACHAL
PRADESH
(0.474)

SIKKIM
(0.678)

ASSAM
(0.445)

NAGALAND
(0.624)

BIHAR
(0.421)

MEGHALAYA
(0.433)

MANIPUR
(0.519)

JHARKHAND
(0.431)

WEST BENGAL
(0.503)

TRIPURA
(0.49?)

MIZORAM
(0.641)

GUJARAT
(0.657)

MADHYA PRADESH
(0.486)

CHHATTISGARH
(0.498)

I N D I A

ORISSA
(0.496)

DAMAN & DIU
(0.697)
DADRA &
NAGAR HAVELI
(0.602)

MAHARASHTRA
(0.663)

BAY OF BENGAL

ARABIAN
SEA

ANDHRA PRADESH
(0.662)

GOA
(0.692)

KARNATAKA
(0.656)

PUDUCHERRY
(0.813)

TAMIL NADU
(0.744)

KERALA
(0.772)

LAKSHADWEEP (INDIA)
(0.795)

ANDAMAN AND NICOBAR ISLANDS
(INDIA)
(0.746)

(Indira Point)

Educational Development Index Points

■	Below 0.500
■	0.501 - 0.600
■	0.601 - 0.700
■	Above 0.700

Note: Map not to scale

Map 5.1

position, the states should compute district-specific EDIs and analyse EDI values separately in case of access, infrastructure, teachers and outcome indicators. On the other hand, twelve states are placed in the third cluster

others should be accorded the top most priority while adopting strategies in the year that follows. Some of such variables are:

Figure 5.5
EDI at Primary & Upper Primary Level, Ten Bottom Ranked States: 2009-10

with an EDI between 0.61 to 0.70 and 8 in the fourth cluster having an EDI between 0.71 to 0.77. Even the five top ranking states are not perfect in case of all the four sets of indicators as reflected in individual EDI values. EDI in this group varies from 0.813 in Puducherry to 0.720 in Delhi. All the states including the top ranking states should analyse all the indicators used in EDI computation district-wise, and within a district, block-wise which should be followed by adopting appropriate strategies without which neither their overall ranking nor status of universal elementary education in the state is expected to improve. Variables found to have higher weightage than

"All the states including the top ranking states should analyse all the indicators used in EDI computation district-wise, and within a district, block-wise which may be followed by adopting appropriate strategies without which neither their overall ranking nor status of universal elementary education in the state is expected to improve"

Primary Level : Percentage of schools with drinking water facility, percentage of schools with girls' toilet, percentage of schools with female teachers, percentage of schools with PTR & SCR above 40, GER & GPI, dropout rate, and students passing with 60 percent and above marks in Grade IV/V; and

Upper Primary Level : Schools with SCR & PTR 40 and above, percentage of schools with < 3 teachers, percentage of schools with girls' toilet, percentage of schools with drinking water facility, percentage of schools with female teachers, average repetition rate, GER and students passing with 60 percent and above marks in Grade VII/VIII.