

Chapter-3

Educational Backwardness in India: An Inter-State Comparison

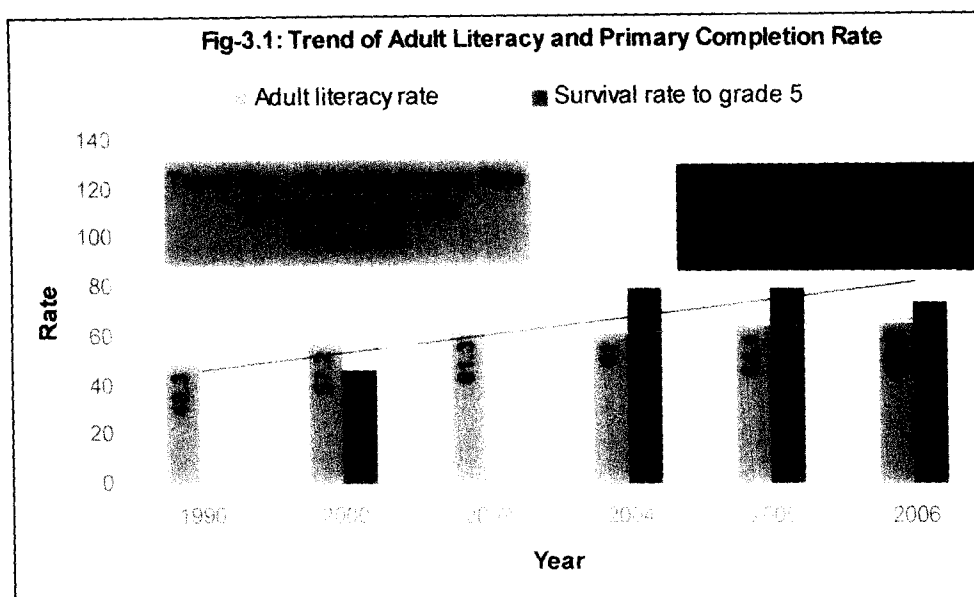
3. Introduction

India, with 28 States and 7 Union Territories and more than 100 crores of people (16% of the world's population), is a vast country with heterogenous population groups. Several socio-economic strata exist within each group adding to its multidimensional character. The regional pattern of educational status at State level is considered in this chapter for a disaggregated view of trends in educational development in the country. This chapter also explicates the issues related to the various manifestations of educational development at State level with a view to have a handle on the problem at more disaggregated level. This will also provide the degree to which the states differ in the process of educational development against a regional perspective. The analysis will enable the study to focus on a state or a region for an in-depth survey based study.

The previous chapter has delineated the historical background which has enabled education to spread in India and the status of elementary education and adult literacy rate in this whole process. The spread of elementary education and the adult literacy rate were found to be lagging far behind the Education for All goal. This is also evident from the Global Monitoring Report which is a regular publication of UNESCO since 2002 after the *United Nations Millennium Development Goals*. The report analyses mainly the development achieved by the different countries towards the fulfillment of global education targets that are affirmed and declared at different international conferences (especially *Jomtien Conference on Education for All, 1990*; *Dakar World Education Forum, 2000* and *United Nations Millennium Development Goals*).

Each year, the report constructs an index (Education for All Development Index) to assess the inter-country educational development throughout the world especially for the countries committed to achieve the MDGs by 2015. Education for All Development Index (EDI) is a composite using four of the six EFA goals, selected on the basis of data availability. The goals are: Universal primary education (UPE), Adult literacy, Quality of education and Gender (www.efareport.unesco.org). Primary Net Enrolment Ratio (NER), the survival rate up to Grade 5 and the simple average of the three gender parity indexes (GPI) for primary education, secondary education and adult literacy, with each being weighted equally are used as proxy of the Universal primary education (UPE), Quality of education and the respective Gender in constructing the EDI as per the methodology of UNESCO. As per the 2009 EFA Global Monitoring Report (UNESCO, 2008), India was ranked at 102nd position out of 129 countries for which complete set of indicators required to calculate the EDI were available (www.efareport.unesco.org). According to the value of the EDI the countries are ranked as "high", "medium" and "low" EDI. India with a value of EDI, 0.794, has been included in the low ranked EDI countries just merely above Bhutan, Bangladesh and Nepal among the Asian countries and some Sub-Saharan African countries. The data of the Report also shows that in India, NER at Primary level (0.961) is quite satisfactory and also the Gender related EFA Index (0.834) is up to the mark compared to the High EDI countries. But the Adult Literacy Rate (0.652) and the Survival rate to grade 5 or Primary Grade completion rate (0.730) are far behind the countries, even from the countries lying below India in respect of EDI as constructed by the UNESCO. On the basis of the above figures, it is apparent that universal enrolment or Literacy Rate of 7+ age group population as enumerated in the Indian Census are inadequate to reflect on educational development. It is the Primary Grade completion rate and Adult Literacy Rate (15 years and above) that are the two central criteria to foster educational development. Figure 3.1 depicts the year-wise value of adult literacy and primary completion rate since 1990. On the basis of the rates for different years, the trend equations for adult literacy and primary completion rate have been calculated. The trend lines along with the equations are shown in the fig-3.1. The equations project that the growth rates of both adult literacy rate and survival rates are positive. But the former increases at a slower rate than the latter. Thus it can be said that over time, it is possible to achieve the target of primary completion rate of Dakar Goal, while it will be difficult to reach the official target of adult literacy rate within the given period of time

unless the rate of growth in adult literacy rate picks up. Accordingly, in order to select the region/state, performance of these two indicators will be given special attention.



Source: Global Monitoring Report, UNESCO, different years

The prime objective of this chapter, as stated earlier, is to select a State among the major Indian States in terms of educational disadvantages especially in connection with the achievement of literacy rate and elementary education. Considering this, the present chapter has been designed and developed as follows-

- Section-3.1 represents State wise trend in literacy rate and their relative performance over the period 1951-2001 by using the UNDP methodology of Range Equalisation to assess the relative position of each State for a particular period of time.
- Section-3.2 analyses State-wise major literacy attainment in the last decade (1991-2001)
- Section-3.3 compares the decadal variation by constructing the district-wise Index of literacy development for the period 1991 and 2001 following the methodology of Principal Component Analysis.
- Section-3.4 reviews the present status of Elementary Education in India with a view to obtain a comparative ranking of the Indian States
- Section-3.5 analyses the Educational Development Index as prepared by the National University of Educational Planning and Administration (NUEPA) and finally,
- Section-3.6 briefly summaries the analysis and concludes the chapter

3.1 Performance of the Indian States: Literacy Trends in India - 1951-2001

Literacy grade as portrayed in decennial census data of India comprises the 7 + population age group and thus wraps both who have been in the formal education system along with those who have been remaining out of formal education system with or without having completed a certain grade of formal schooling. Considering this wide range of coverage, the literacy rate may therefore, be deemed to be a crucial index of educational development.

The first census in independent India was carried out in 1951 and thereafter it is being continued as decadal enumerations. In 1951, there were 14 States whose literacy rates were below the national average of 18.3% and in 2001, it has again been found 13 State and UTs who have been lagging

behind the national average literacy rate (64.8). The BIMARU States along with Assam and Orissa were below the national average in 1951 that have been still hovering around at the same status even in 2001. While, Sikkim, Himachal Pradesh, Punjab and Tripura are among some of the notable States which have been upgraded from below national average to above the national average literacy status during the same period, the North-East States (Himachal Pradesh, Sikkim, Manipur, Tripura) and the South Indian States have made satisfactory progress in literacy rate during the last fifty years. West Bengal with a literacy rate 24% was in third position after Kerala and Delhi among the other major States in 1951. In 2001, with a literacy rate of 68.6%, it has moved down the ladder to the 9th rank among the 21 major States in India. The State has barely managed to retain its position on and around the national average over the last decades.

Performance of a state in achieving the literacy rate can be better understood by calculating the Achievement Index for literacy performance of each state separately. The basic idea of the Achievement Index is to measure the literacy performance of each state using comparisons of how a particular state performed relative to other states. We have adopted here the UNDP Methodology of Range Equalization [UNDP, 1990] that considers the following formula in measuring the progress of relative achievement of literacy rate:

$$Z_i = [\text{Actual } X_i - \text{Min } X_i] / [\text{Max } X_i - \text{Min } X_i], \text{----- (1)}$$

Where X_i =Literacy Rate of the i -th State for a particular time point. Z_i is an index that measures the relative position of a particular State. It may be called an achievement index of that particular state. The value of the index lies between the values 0 and 1. The state with an index value closer to 1, its relative position is expected to be better than the other states.

By using the above methodology, the relative index of each State has been calculated for the periods 1951, 1961, 1971, 1981, 1991 and 2001. The result is depicted in table-3.1. The main theme that the table describes is that one can easily evaluate the performance of a particular State during any particular period of time and also over the last six decades.

For example, starting with almost bottom position in 1951 (just above Sikkim and D & N Haveli), Himachal Pradesh achieved the 11th rank as per the achievement index calculated for the year 2001. West Bengal with an index value of 0.545 and accordingly a rank of 4th in 1951 (out of 24 states ranked) is positioned at 17th rank (out of 35 states ranked) with an index value 0.492 as per the last census report. In this way, one can easily evaluate the performance of a particular State over the last six decades. A simple mathematical difference between the ranks of 1951 and 2001 may give us the relative development of achievement in literacy of a particular state.

For observing the state-wise relative progress in literacy achievement over a period of time (e.g. from 1951 to 2001) one cannot simply compare the value of the index or rank over a span of years. In order to tackle the problem, one needs to modify the formula in the following manner-

$$Z_{it} = \frac{[\text{Actual } X_{it} - \text{Min } X_{it}]}{[\text{Max } X_{it} - \text{Min } X_{it}]} = \text{----- (2)}$$

Where, X_{it} = Literacy Rate, i = States, t = time.

The main difference between the two formulas is to determine the value of maximum and minimum literacy rates. In formula-1 one has to find the maximum or minimum literacy rate within a certain period of time (e.g. for literacy index of 1951 only the literacy rates of the States during 1951 will have to be considered) and calculate the index for that particular period of time. But in the latter (i.e., for formula-2), the maximum and minimum values will have to be determined from the values within a range of time (e.g. literacy rates of the states for the six census periods - 1951, 1961, 1971, 1981, 1991 and 2001) irrespective of index calculating year. For example, in order to calculate the achievement index for the periods for 1951 or 2001, the maximum and minimum values of literacy rate will be the same (Halder, 2008).

Table-3.1: Relative Literacy Performance of the Indian States/Union Territories (1951-2001)

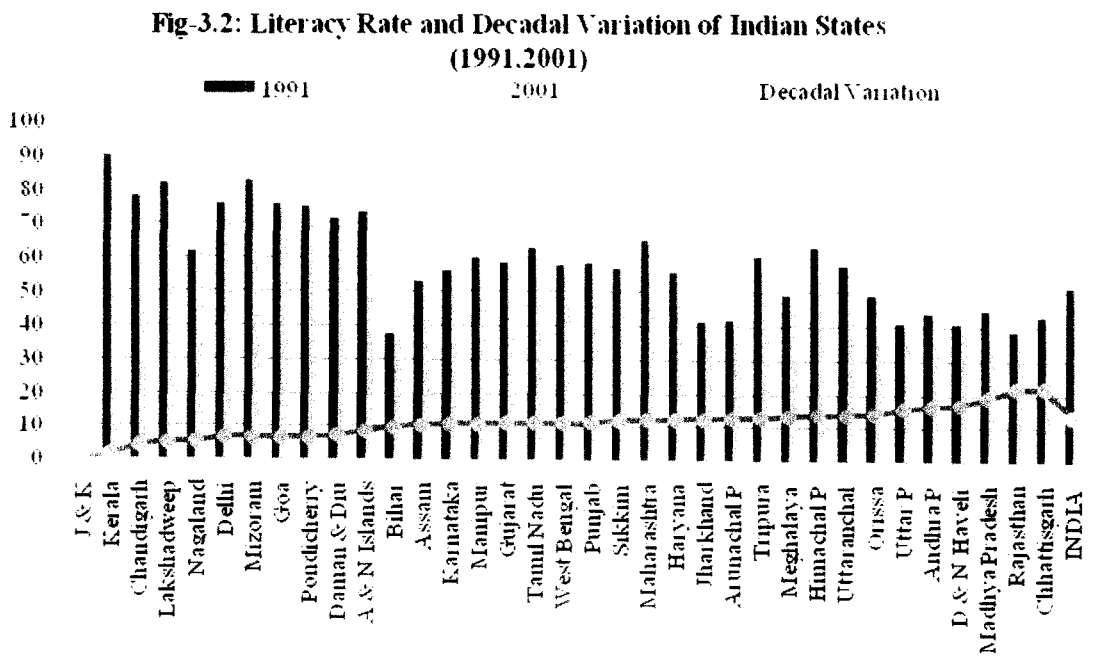
Area	1951		1961		1971		1981		1991		2001		Progress over (1951 - 2001)
	#	*	#	*	#	*	#	*	#	*	#	*	
J & K	-		0.028	28	0.145	27	0.119	27	-	-	0.194	32	
H. Pradesh	0.101	22	0.264	18	0.412	14	0.438	13	0.486	11	0.672	11	0.792
Punjab	0.305	13	0.395	14	0.445	11	0.405	16	0.402	16	0.517	16	0.627
Chandi garh	-		0.863	2	1.000	1	0.887	2	0.771	4	0.795	5	0.308
Uttaran chal	-		-	-	-	-	-	-	0.386	18	0.560	14	0.160
Haryana	-		0.248	21	0.310	20	0.308	19	0.350	22	0.476	20	0.504
Delhi	0.937	2	1.000	1	0.901	3	0.821	3	0.723	6	0.790	6	0.498
Rajasthan	0.134	21	0.129	26	0.155	26	0.073	29	0.021	33	0.305	29	0.593
U. Pradesh	0.185	18	0.181	23	0.207	24	0.129	25	0.061	31	0.212	31	0.524
Bihar	0.223	16	0.202	22	0.171	25	0.109	28	0.000	34	0.000	35	0.400
Sikkim	0.090	23	0.052	27	0.127	28	0.268	21	0.371	20	0.497	18	0.708
Andhra Pradesh	-		0.720	4	0.000	30	0.000	30	0.078	29	0.166	33	0.074
Nagaland	0.174	19	0.175	25	0.320	19	0.440	12	0.461	13	0.446	21	0.647
Manipur	0.202	17	0.484	9	0.429	13	0.415	15	0.428	15	0.535	15	0.680
Mizoram	-		-	-	-	-	0.788	4	0.857	2	0.952	2	0.333
Tripura	0.313	12	0.252	20	0.392	16	0.429	14	0.438	14	0.597	13	0.664
Meghalaya	-		-		0.362	17	0.268	22	0.222	24	0.355	27	0.381
Assam	0.390	10	0.425	13	0.346	18	-	-	0.294	23	0.371	25	0.518
West Bengal	0.545	4	0.454	12	0.435	12	0.405	17	0.386	19	0.492	19	0.513
Jharkhand	-		-						0.075	30	0.150	34	0.140
Orissa	0.322	11	0.270	17	0.296	21	0.270	20	0.222	25	0.367	26	0.544
Chhattis garh	-		-		-		-		0.103	28	0.403	23	0.251
Madhya Pradesh	0.158	20	0.177	24	0.215	23	0.143	24	0.138	26	0.380	24	0.620
Gujarat	-		-		0.487	10	0.462	11	0.398	17	0.503	17	0.383
Daman & Diu	0.515	6	0.462	11	0.656	5	0.724	5	0.644	9	0.711	9	0.636
D & N Haveli	0.000	24	0.000	29	0.074	29	0.119	26	0.061	32	0.241	30	0.617
Maha rashtra	0.460	7	0.466	10	0.555	9	0.532	9	0.524	10	0.681	10	0.644
Arunachal Pradesh	0.251	15	0.258	19	0.264	22	0.183	23	0.126	27	0.308	28	0.544
Karnataka	0.417	9	0.361	15	0.402	15	0.357	18	0.354	21	0.446	22	0.544
Goa	0.518	5	0.488	8					0.727	5	0.797	4	0.679
Laksha dweep	0.305	14	0.310	16	0.644	6	0.692	7	0.847	3	0.904	3	0.823
Kerala	1.000	1	0.863	3	0.976	2	1.000	1	1.000	1	1.000	1	0.578
Tamil Nadu	0.458	8	0.492	7	0.561	8	0.524	10	0.482	12	0.604	12	0.606
Pondi cherry	-		0.637	5	0.690	4	0.708	6	0.711	7	0.779	8	0.432
A & N Islands	0.594	3	0.565	6	0.642	7	0.621	8	0.679	8	0.781	7	0.639

Note: # value of Literacy Achievement Index, * Rank; Source: Calculated from Census of India different years

Following the above methodology the revised literacy achievement index has been calculated for two distinct time periods 1951 and 2001 for each State in order to review the growth pattern of the States. It may however be noted here that for some States the literacy rates were not available for the year 1951 and in that case the next available census year has been considered. The arithmetical difference between the index values of 1951 and 2001 has been tabulated in the last column of Table-3.1 which represents the Progress of Achievement over the period from 1951 to 2001. Among the major States (excluding the 7 smaller States and 7 north eastern states) Himachal Pradesh could accomplish the highest progress in respect of literacy achievement followed by Maharashtra, Punjab, Madhya Pradesh, Tamil Nadu, Rajasthan and Kerala. While Jharkhand remains at the bottom position in this respect along with Uttaranchal, Chattisgarh, Gujarat, Bihar and Jammu & Kashmir. *West Bengal is closer to the country's national average but lies below the average national achievement level.*

3.2 Major Achievements in Literacy Rate by States (1991-2001)

One of the targets for Education For All that was resolved at Dakar in 2000 by the world leaders was to reduce the levels of adult illiteracy by 50% within 2015. In this respect increase in the literacy of 7+ age group population during the last decade (1991-2001) was extremely encouraging. This decade has emerged as the fastest decade in raising the literacy rate (13.3%) in the country since its independence. It was the rural section of the country where decadal increase was higher than the urban section, both for male and female. The rural females recorded the highest literacy jump (15.9%) in this period. Another remarkable progress is that it is for the first time that the absolute number of illiterates declined by over 24 million. Gender disparity in literacy rate also declined from 24.5 percentage points in 1991 to 21.6 percentage points in 2001. Progress has also been reported for the literacy rate of schedule castes and schedule tribes. Figure-3.2 depicts the decadal variation in literacy rate vis-à-vis the literacy rate of 1991 and 2001 for the 35 Indian States and Union Territories.



Note- Census was not carried out in J & K in 1991. Source: Calculated from Census Data

The average literacy progress of the country has been occurred because of the better performance of some low literate states. Chattisgarh and Rajasthan have both registered the highest literacy jump at 21.8% during the last decade (1991-2001) followed by Madhya Pradesh, Andhra Pradesh, Uttar Pradesh, Orissa, Uttaranchal and Himachal Pradesh. It is found that the decadal variation (1991-2001) in literacy rate and literacy rate of 1991 is negatively correlated with a value of ‘-0.823’ being significant at the 1% level (2-tailed). *This implies that the states with lower literacy rate would show higher decadal increase and vice-versa.* However, aberrations to the rule exist.

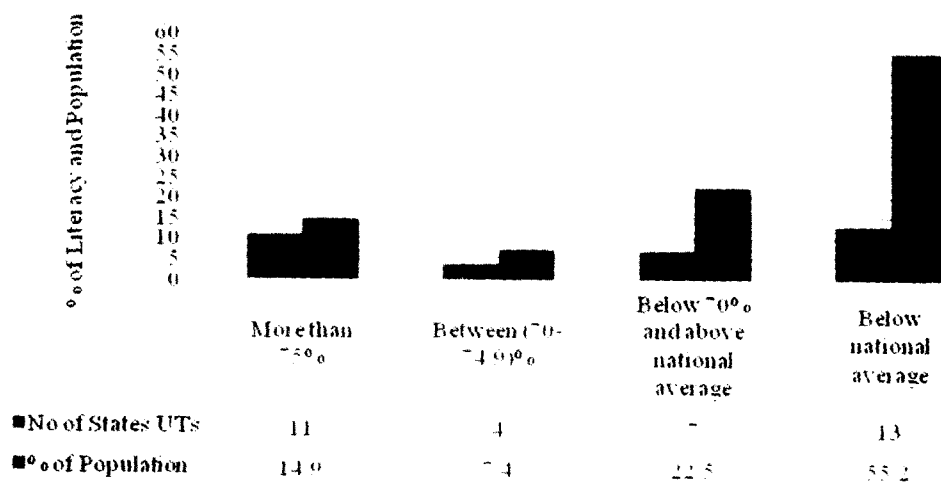
Notably, Tripura, Uttaranchal and Himachal Pradesh with a comparatively higher literacy rate show a literacy jump higher than the states like Assam, West Bengal, Karnataka and Punjab etc. (Fig-3.2). Thus it may be said that there might be other variables with socio-economic characteristics that have an impact on literacy development and our main task is to identify those variables and their explanatory power in enhancing the literacy rate especially in the disadvantaged areas of the country.

As has been stated earlier, West Bengal could not maintain its relative position in respect of literacy achievement since 1951 when compared to states (e.g. Punjab, Maharashtra, Tripura) with a literacy rate higher than West Bengal in 1991 and have acquired a higher decadal increase (figure 3.2). The trend in literacy development indicates a further decrease in the relative position of this particular state, West Bengal, as and when the Census 2011 will come into the picture. Thus an immediate intervention has to be made in this state to move the state from its dormant status.

In spite of the major achievements in literacy advancements by several states over the last decade, a sizeable proportion of the population (304,102,917) in the age group of 07 and above are still illiterate, out of which, 36.38% are males and 63.62% are females (Census 2001). Again out of total illiterates in India, 83.57% lives in rural areas and the remaining only 16.43 % are living in urban areas. Thus the critical interventions in literacy advancements need to be focused on the literacy of the females and that of rural India to obtain the desired results.

The literacy achievements across the states reveal a sorry picture. In India, there are 35 States and Union Territories of which 11 have arrived at the literacy target of 75 per cent (the official target to be reached by the year 2007). Among these 11 states, three are the major states and Union Territory (Delhi, Maharashtra and Kerala) and the remaining eight are either the north-eastern states or are the union territories having a small share of population. These 11 states altogether comprise only 14.9% of the country's population (Fig-3.3) thereby leaving around 85% of population whose average literacy level is below the desired level.

Fig-3.3: Coverage of Population and Level of Literacy in Indian States UTs, 2001



Source: Calculated from Census of India, 2001.

Among the remaining states, 13 states lie below the national average literacy rate (64.8%) of which only two are the so called small states, two are the newly formed states having comparatively lower population and remaining nine are the major states. These 13 states together comprise 55.2% of total population, i.e., more than half of the country's total population still remains below the national average. This shows a wide range of variation in literacy attainment in spite of tremendous jump in this respect. The regional pattern of literacy achievement is therefore very important to understand the critical gap in literacy in the country.

Gender deprivation and the consequent disparity between sexes are evident in nearly all spheres of social, economic and cultural aspects in India. In achieving the literacy skill, the proposition holds true, 21.59% males are more literate than the Indian females. It may be of special interest to find whether there exists any causality between male and female achievement in literacy skill. At State level, a strong positive correlation coefficient between male and female literacy rate (87 at rural level and 85 at urban) has been observed. This association can be given an interesting explanation that female achievement in literacy is not an independent attribute; rather, it is found that female achievement is positively dependent on the literacy achievement of males.

The correlation coefficient between male and female literacy rates for the states lying above and below the national average has been calculated separately. A significantly high positive association has been found for the states lying above the national average than for the states lying below the national average. *Thus it is apparent that the regions where male literacy has progressed substantially, it has led to a higher rate of increase in female literacy.*

Table-3.2 Inter-State Literacy Variation in India, 2001

Literacy Characters	Highest Literate States/UTs	Literacy Rate	Least Literate States/UTs	Literacy Rate	Literacy Variation
Total (Person)	Kerala	90.86	Bihar	47	43.86
Rural (Person)	Kerala	90.04	Bihar	43.92	46.12
Urban (Person)	Kerala	93.19	Uttar Pradesh	69.75	23.44
Total (Male)	Kerala	94.24	Bihar	59.68	34.56
Rural (Male)	Kerala	93.63	Bihar	57.09	36.54
Urban (Male)	Kerala	95.94	Uttar Pradesh	76.76	19.18
Total (Female)	Kerala	87.72	Bihar	33.12	54.60
Rural (Female)	Kerala	86.69	Bihar	29.61	57.08
Urban (Female)	Kerala	90.62	Uttar Pradesh	61.73	28.89

Source: Calculated from Census of India, 2001.

Regional variation in literacy achievement is also a common phenomenon in Indian literacy scenario (Table-3.2). Kerala has emerged as the highest literate state in every aspect of literacy characteristics, while the deprivation is concentrated in two Indian states namely Bihar and Uttar Pradesh. The highest literacy variation is found for the rural females as against a lowest for urban males. The literacy rate for the rural females is highest in Kerala (86.69%) and a lowest rate of 33.12% has been registered in Bihar. As such a state-wise gap of 57% has been found to exist in case of literacy achievements of Indian rural females followed by total females (54.60%) and rural person (46.12%). However, the gap is not so significant in the case Indian urban males. *This once again indicates that educational backwardness in India is more serious in the rural section and most in the case of rural females.*

3.3 Literacy Index

In order to capture the regional pattern of literacy development in the country, it is necessary to look at the literacy indicators at sub-state level. India has as many as 593 districts within the various states. To reflect upon the literacy variation in the country, the chapter will make an attempt to analyse the regional pattern at the district level by taking all the districts in the country.

The main objectives of this section is

- To construct the Educational Development Index for Literacy Parameters of the Indian districts on the basis of district level data for the period 1991 and 2001 as provided by the Census department
- To capture the regional pattern of literacy development across the country.

- To know the position of a district vis-à-vis the other districts.
- To compare the decadal variation on the basis of this index

It may be noted here that, Educational Development Index across the districts has recently been calculated and published by NUEPA where 22 school level indicators in 5 broad categories were incorporated. Institute of Applied Manpower Research under the sponsorship of Planning Commission, GOI had also published such an index based educational report (GOI, 2001) where literacy as well as school level indicators have been incorporated. But both the first and second report reflects only a particular time period. The present exercise captured two particular periods of time (1991, 2001) by which inter district comparison for the two referred period will be undertaken. Simultaneously, decadal variation of a particular district will also be evident by using the index of a particular district for the two referred periods of time.

Literacy is an indicator which contains several correlated sub-parameters (e.g. male literacy, female literacy, person literacy, gender gap etc). Analysis of such a socio-economic variable causes serious problem in the application of econometric methods. In order to avoid this co-linearity problem, the range of variables may be reduced to a fewer number by using Principal Component Analysis (PCA).

The method of PCA actually seeks to reduce a large number of variables into a new variable or some fewer new variables, called principal component/components, which is/are the linear combination of original set of variables (A_{xis}) as

$$P_i = a_{11}X_1 + a_{12}X_2 + \dots + a_{1k}X_k,$$

where, X's are the set of original set of variables and P's are the Principal components which reduce the dimensionality (number of indicators) of the data set but retain most of the original variability in the data. The a's are called factor loadings and these are constructed in such a way so that the PCs satisfy two condition-

- The components are uncorrelated
- The first component absorbs and accounts for the maximum possible proportion of the total variation in the set of all X's, the second one absorbs the maximum remaining variation in X's and so on.

As such the components are so determined that the properties of these constructed PCs remain almost same compared to the original data sets. It may be noted here that, the number of PCs must have to be less than the original number of variables and the components will represent most of the characteristics of the original variables.

In order to construct LDI, following sub-parameters associated with the literacy character have been incorporated in the analysis - male literacy rate, female literacy rate (both for 7+ age group population), gender gap in literacy rate, rural-urban gap in literacy rate for male and female separately. Thus in formulating the LDI, all the 5 literacy characters are first normalized.

There are certain limitations that are associated with the selection of the sub-parameters and time frame of the analysis. Firstly, in 1991, no census was carried out in Jammu & Kashmir and as such the LDI is not possible to construct for the districts of this state. Secondly, there are some districts in the country which are either purely rural or urban in nature and thus construction of EDI on the basis of rural-urban gap for these regions cannot be undertaken. Thirdly, data for 1991 is not separately available for some of the newly bifurcated districts.

3.3.1 Methodology of Principal Component Analysis (PCA)

The various literacy indicators used in the method have both positive and negative impact on literacy. For example, Gender gap in literacy rate (GGLR) and rural-urban gap (RUGLR) have negative impact on literacy development if they increase in value. On the other hand, both male and female literacy rate separately has a positive impact on overall literacy development.

Depending upon the nature of a particular indicator, the best and worst values of the indicator are identified (Mehta and Siddiqui, 2006).

Once the Best and Worst values are identified, the following formula is used to obtain normalized values-

$$NV_{ij} = 1 - \frac{\{\text{Best } X_i - \text{Observed } X_{ij}\}}{\text{Best } X_i - \text{Worst } X_i}$$

Normalized Values² always lies between 0 and 1.

With the help of this normalized value of the indicators, PCs are extracted along with their factor loadings and weights. Principal Component Analysis (PCA) is used to compute the Factor Loading and Weights of these indicators. Finally the development index is worked out using the following formula -

$$I = \frac{\sum_{i=1}^n V_i \left\{ \sum_{j=1}^n F_{ij} E_j \right\}}{\sum_{j=1}^n \left\{ \sum_{i=1}^n F_{ij} E_j \right\}}$$

Where 'I' is the Index³, V_i 's are the i^{th} Indicator; F_{ij} is the factor loading value of the i^{th} variable on the j^{th} factor; E_j is the Eigen value of the j^{th} factor.

3.3.2 Construction of Index:

The PCA primarily extracts 8 PCs among which those are retained for the analysis whose values are greater than 1 (Kaiser's Criterion). Accordingly, three PCs for both 1991 and 2001, have been retained. The extracted components altogether explain more than 95% variability in the data

Component Transformation Matrix

Principal	Eigen	1991		2001		
		Total	Cunulative	Eigen	Total	Cumulative
First	4.6368	57.96	57.96	4.6602	58.25	58.25
Second	1.8562	23.20	81.16	1.9261	24.08	82.33
Third	1.1110	13.89	95.05	1.0767	13.46	95.79

The first components for the year 1991 and 2001 explain allmost 58% variation with a high factor loading for the literacy indicators related with rural areas. At the same time the first component has also a high loading of Rural-Urban Gap both for male (0.97) and female (0.93). This component can, therefore, be named as the factor of rural literacy. The second component, on the other hand having around 24% explanatory power bears a high factor loading for the urban literacy indicators and finally the third component with around 14% explanatory power has a high factor loading for the gender related literacy indicators. Summarily, the first component stands for the rural literacy indicators and also for the regional (rural-urban) variation, the second for urban and the third is for the gender related literacy character thereby altogether reflecting the three major literacy indicators.

Factor Loadings for Literacy Indicators

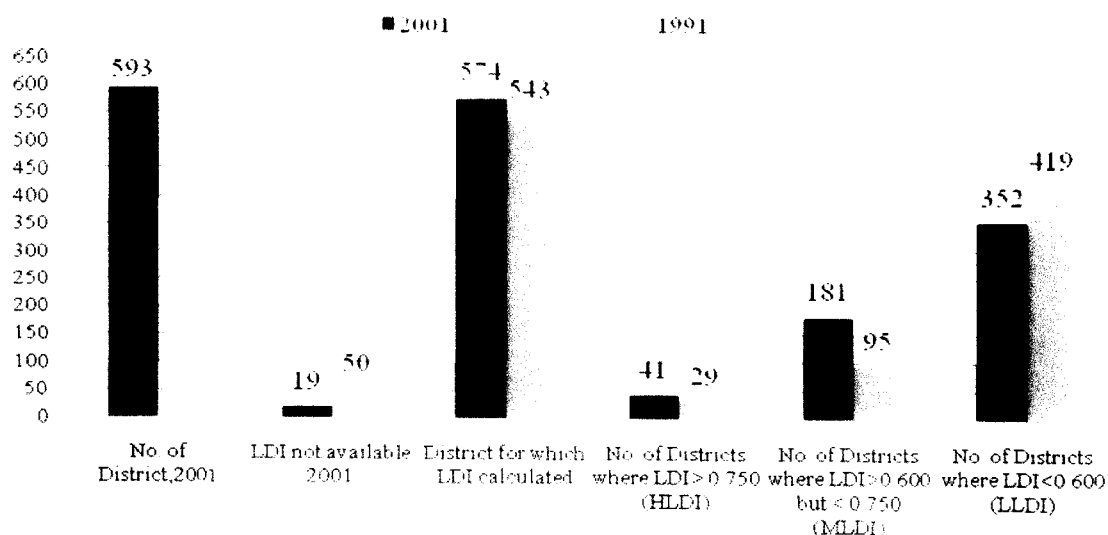
	1991			2001		
	Component 1	Component 2	Component 3	Component 1	Component 2	Component 3
UMLR	0.01531	0.96371	0.10666	0.06787	0.96675	0.13883
UFLR	0.10952	0.86925	0.47732	0.09712	0.82739	0.54826
UGGLR	0.18496	0.45587	0.76243	0.09961	0.37044	0.84384
RMLR	0.75909	0.64967	0.03580	0.81125	0.57892	0.06189
RFLR	0.64344	0.57307	0.49836	0.68954	0.48302	0.53291
RGGLR	0.04736	0.08318	0.97055	0.13750	0.08050	0.95743
RUGLRM	0.97113	0.11957	-0.03379	0.97667	0.05306	-0.02084
RUGLRF	0.93431	-0.10353	0.24757	0.94034	-0.08543	0.26470

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. Rotation converged in 5 iterations

3.3.3 Inferences on the PCA Results

Principal Component Analysis extracts and retains the PCs along with their Eigen values and calculates the loading of each factor for the variables. With the help of this, we then proceed to calculate the weights and finally the index for the districts followed by a series of steps as suggested by NUEPA. Each of the districts has then been assigned with an index that is called as literacy development index (LDI). According to the Census 2001, there are as many as 593 districts in India which are scattered in 28 States 07 Union Territories. Out of this, calculation of Literacy Development Index has been calculated for 543 districts in 1991⁴ and 574 districts in 2001⁵. The value of LDI ranges highest from 1 to a lowest of 0. According to the value of index, the districts have been categorised in to three groups- high literate districts having LDI value more than 0.750 (HLDI), medium literate districts with an index value between 0.600 to 0.744 and thrldy low literate districts having LDI value less than 0.60.

Fig-3.4: Literacy Development Index (LDI) in India: 1991, 2001



Source: Calculated from Census of India, 2001.

In 1991 there were only 29 districts in this country which could hardly manage the high literate category and the picture marginally increases in 2001 where 12 more districts get them entried in this group (fig-3.4). The number of medium literate districts in 2001 has increased from 95 in 1991 to 181. This increase seems to be quite satisfactory. It may be noted here that these 181 districts are very close or closer to reach the 75% literacy rate which is an official target of this country. Nevertheless, the country has as many as 352 districts which are lowly literate districts. Education as a social variable has received due importance across the world especially over the last decade (1991-2001). In India, during this decade a series of programmes and policies were undertaken (e.g. NLM, DPEP, SSA, Constitutional ammendment etc) inspite of which a lot remains to be achieved in terms of literacy development.

Fig-3.5: LDI: Distribution of the Districts in 1991

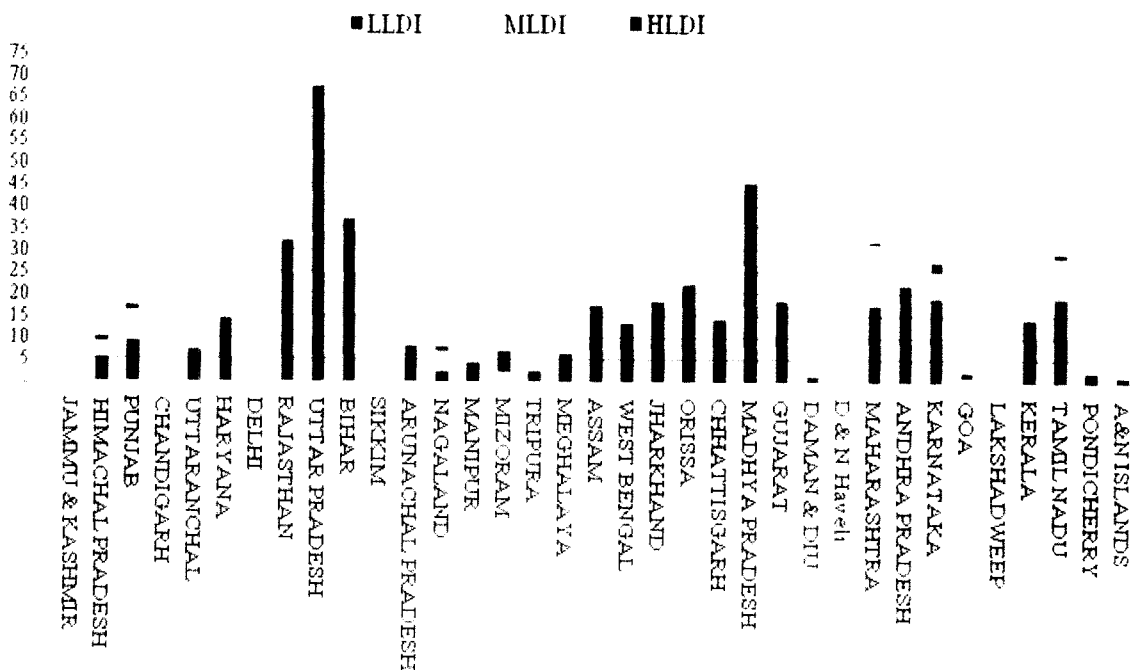
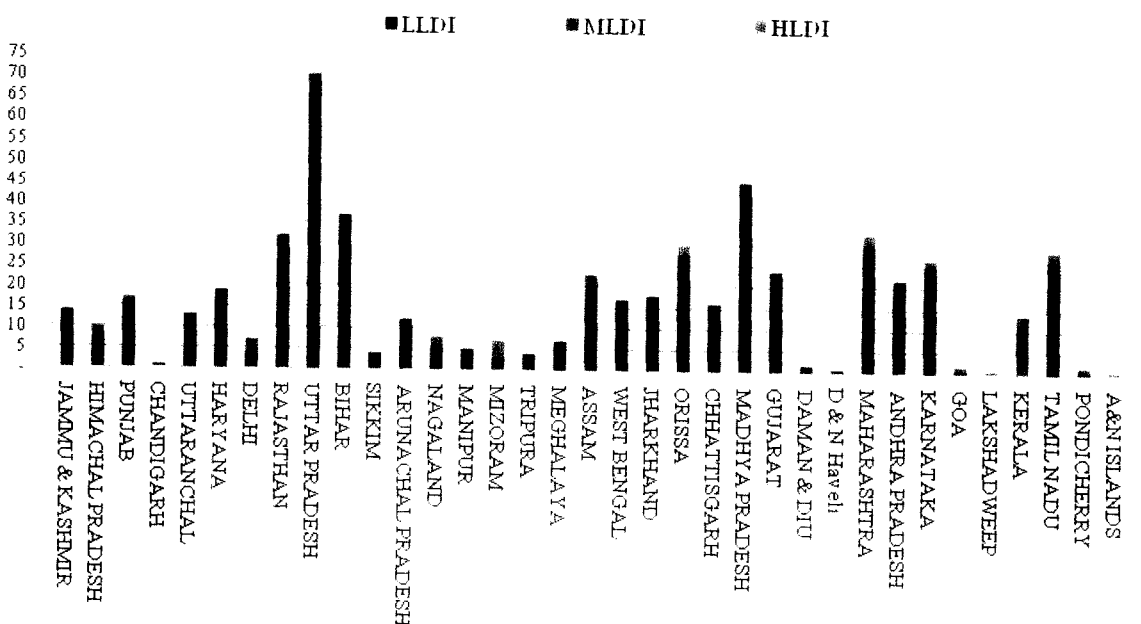


Fig-3.6: LDI: Distribution of the Districts in 2001



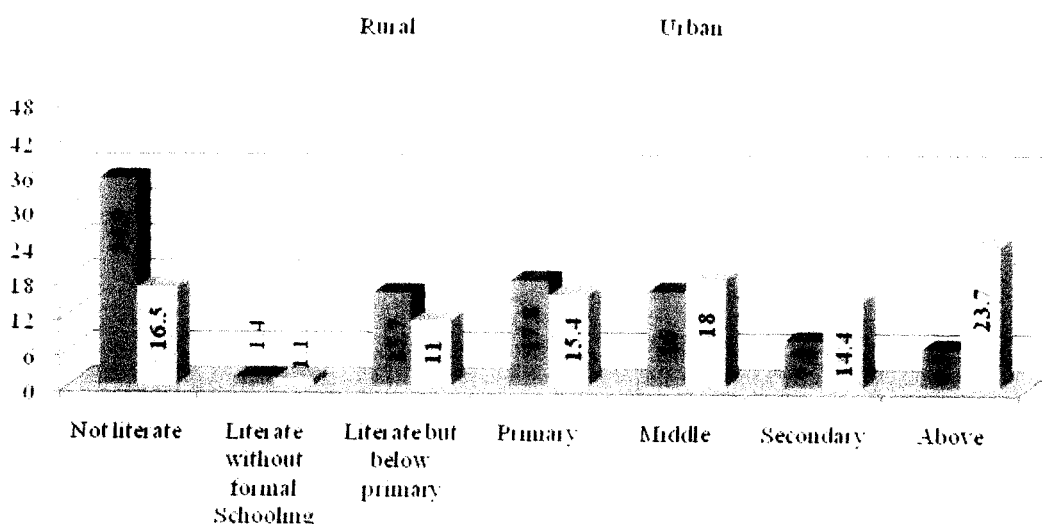
Source: Calculated from Census of India, 2001 (Fig-3.5 & 3.6)

State wise picture gives us a detailed and elaborate situation of the country. Excluding two UTs (DAMAN & DIU, Dadra & Nagar Haveli) 18 States (viz. Uttaranchal, Haryana, Rajasthan, Uttar Pradesh, Bihar, Sikkim, Arunachal Pradesh, Manipur, Tripura, Meghalaya, Assam, West Bengal, Jharkhand, Chhattisgarh, Madhya Pradesh, Gujarat, Andhra Pradesh) that had been remaining as the states where none of the districts have been ranked in the high LDI group both in 1991 and 2001 (fig-3.5 & 3.6). Again out of these 18 States, Bihar, Jharkhand and Arunachal Pradesh even did not have any of its districts to be ranked in the middle LDI group too. A state wise detail is shown in the following two diagrams. *West Bengal in this respect again shows quite an unsatisfactory result. Out of its 17 districts, 04 were found with middle LDI and 13 with low LDI in 1991.* The result in 2001 has become some thing to be better. 04 more districts were brought into the category of middle LDI forbidding all the districts to get entry into the highest quartile of the literacy category.

3.4 Review of Elementary Education in India: Schooling Status in India

Census of India defines a person literate if he or she can both read and write with understanding, in any language. Starting with this lower limit to be literate, a person with any higher level of education is also treated as a literate person as per the methodology adopted by the Census of India. The Ministry of Statistics & Programme Implementation, Government of India, through an organization, namely, National Sample Survey Organisation (NSSO) routinely publishes the detail educational data where a person is categorically identified by his or her educational level. Figure 3.7 depicts in brief the distribution of persons aged 7 years and above by level of education in India. It is being seen that in any level of education, there is a deprivation in the rural areas. Indian females, especially in the rural areas are lagging far behind. A little more than 50% of the rural Indian females are literate. Nearly 80% of the females in the age group 7 years and above in rural areas have not yet completed elementary level of education. The same picture is also seen between the males of urban and rural areas at all level education. Thus one can easily say that educational achievement is more problematic in rural areas of the country with a special reference to the rural females. This regional difference is very common in almost all the states of the country.

Fig-3.7: Percentage distribution of persons aged 7 years and above by level of education (2006-07)



Source: NSS Report No.527: Household Consumer Expenditure in India, 2006-07

3.4.1 Institutional Structure of Education in India

The District Primary Education Project (DPEP) was initiated in India in late 1994 and as a support agency National University of Educational Planning and Administration (NUEPA) developed a software 'District Information System for Education' (DISE) which is used for collection, computerization and analysis of various types of data related to schools. The DISE data is very much useful for analyzing all types of school related information and it has an ample coverage throughout the districts of India. The DISE 2004-05, has covered all the Indian States (except UTs) thereby covering almost all the areas of this country. A close look at the data as received from the survey is sketched below.

The total educational period in school in India mainly has 4 stages, namely primary, upper primary, secondary and higher secondary. The primary stage of education is generally meant for first 5 years of schooling although some States (Maharashtra, Meghalaya, Mizoram, West Bengal, Kerala, Karnataka, Assam and Gujarat) have 4 years of primary education cycle of their own. However, the primary and upper primary altogether comprises 8 years of schooling uniformly all over the country irrespective of State educational structure. The first eight years of schooling (primary and upper primary) are often called elementary education. The 9th and 10th grades are in secondary stage and 11th and 12th grades are in higher secondary stage. Accordingly, there are five categories of school that impart school level education in India, viz. primary only, primary with upper primary, primary with upper primary & secondary/higher secondary, upper primary only and upper primary with secondary/higher secondary. As per the DISE 2004-05, there are as many as 10, 37,813 such schools of which 87% are located in rural India. Regarding management, 84.8% are managed by government and the remaining 15.2% are privately managed schools.

State wise distribution of schools by area and management is depicted in table-3.3. Kerala has the highest share of Private schools (58.17%) in total schooling system in the State followed by Meghalaya (43.5%), Chandigarh (35.4%), Delhi (34.9%), Tamil Nadu (29.3), Pondicherry (27.7%), Maharashtra (25.2%). On the other hand, Jharkhand, Bihar, Tripura, Arunachal Pradesh, Haryana, Assam, Orissa are the States where private schools are not so prominent (less than 5%) in the total schooling scenario. In West Bengal the percentage is around 10% which appears to be substantially lower than the total average of all districts of 29 States.

Table-3.3: Distribution of Schools by Category (All Management)

Category	Total (All Management)	In % (All Management)
Primary only	693030	66.78
Primary with Upper Primary	179094	17.26
Primary with Upper Primary & Sec/H.Sec	23723	2.29
Upper Primary only	71880	6.93
Upper Primary with Sec/H.Sec	58970	5.68
No Response	11116	1.07
All	1037813	100.00

Source: Analytical Report 2005; NUEPA; TABLE- 2.1 & 2.2

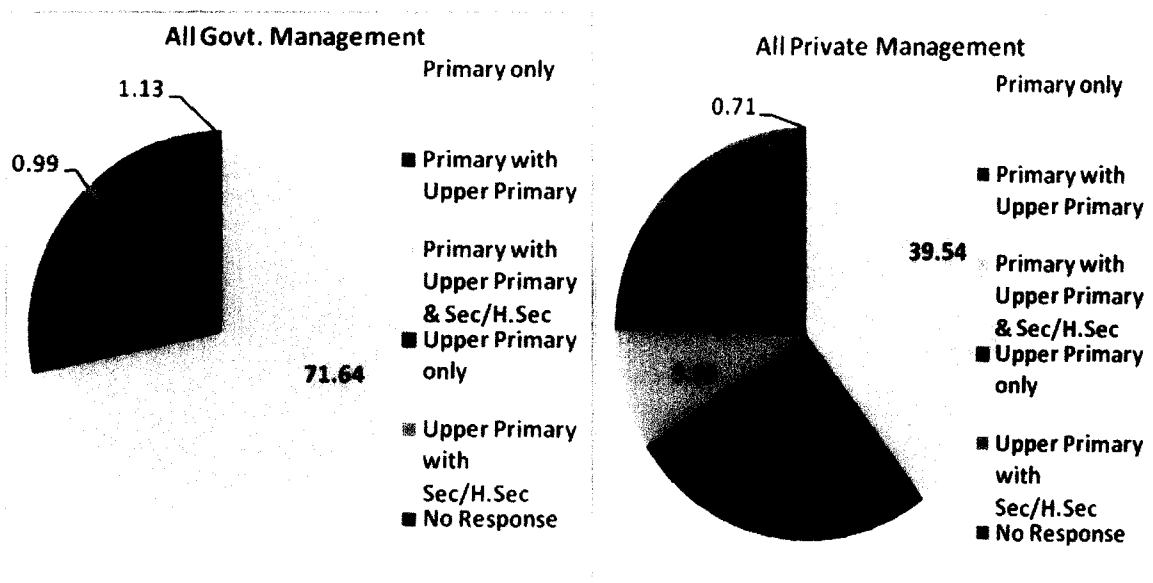
There is a specific distinction between the schools managed by government and private body. Following diagram (Fig-3.8) shows this difference clearly. *The institutional structure of government run schools has a larger share of primary schools (71.64%), where as the same is comparatively smaller (only 39.54%) for the schools managed by the private bodies.* This alternatively indicates that the ratio of primary to upper primary schools is much lower for the privately managed education system.

Distribution of schools by category (primary, upper primary etc.) throws light on an important point. Among the different category of schools, Primary with Upper Primary and Primary with

Upper Primary & Secondary/Higher Secondary type of schools have specific educational access of their own. Once the children get admitted at primary section in this type of school, they don't need to search alternative schools after completing the primary grade of education (e.g. 4/5 years of primary education/ 8 years of elementary education/ 10 years of secondary education). They can continue their education up to at least elementary level within the school. Proportionately, only 16.64 % of total government schools in the country are such stage-integrated schools that have the scope of continuing education up to at least elementary education, while around 36% of total private schools are stage-integrated schools that have this specific facility for the scholars (Figure-3.7.a).

State wise, Chandigarh, Gujarat, Karnataka, Pondicherry, Tripura, Delhi, Maharashtra, Kerala are the States that provides better facility in this respect. West Bengal in this respect remains at the bottom of the list. Only 1.2% of total schools in West Bengal have such stage-integrated schooling facility. Management wise, about 36% of total schools are stage integrated, while the same is only about 17% in case of rural areas (Table-3.4).

Fig-3.8: Distribution (in %) of Schools (All Govt. & Private Management) 2005



Source: Analytical Report 2005; NUEPA

The regional structure of Educational Institution in India has another important bias in favour of urban areas. The Ratio of Primary to Upper primary Schools/Section is much higher in the rural areas. It is 2.93 in rural areas, whereas the same is only 1.64 in case of urban areas. The Programme of Action (1992) envisaged an upper primary school/section for every two primary schools/sections. The difference is more prominent in case of the schools under government management. The privately managed schools have actually no such rural-urban bias at all. In rural India, out of 29 States/UTs for which DISE Data was collected, 17 States/UTs show this ratio to be more than 3 for the schools managed by the government. All the BIMARU States including Tamil Nadu, West Bengal and Assam are still in the queue. Interestingly, in rural West Bengal more than 13 primary schools/sections had been managed by an upper primary school/section. In case of all area all management, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Jharkhand, Meghalaya, Sikkim, Uttar Pradesh and West Bengal are the States where this ratio is found to be higher than 3 and it is the highest in West Bengal (5.3). So it appears that insufficient number of upper primary schools compared to primary schools especially in rural India is one of the major problems of school education.

Table-3.4: School System in India- 2005

Area	Total Rural	Total Urban	Total Govt.	Total Private	Total #	% Urban #	% Private #	% of Stage Integrated #	Primary / Upper Primary #
Andhra Pradesh	77,178	15,590	75,498	17,270	92768	16.8	18.6	18.27	2.53
Arunachal Pradesh	2,072	152	2,132	92	2224	6.8	4.1	26.26	3.57
Assam	37,972	2,203	38,034	2,141	40175	5.5	5.3	2.51	3.25
Bihar	49,654	3,621	52,654	621	53275	6.8	1.2	23.27	3.6
Chandigarh	30	148	115	63	178	83.1	35.4	82.58	1.17
Chhattisgarh	35,084	3,523	35,933	2,674	38607	9.1	6.9	7.44	3.2
Delhi	721	3,546	2,779	1,488	4267	83.1	34.9	34.45	1.67
Gujarat	31,141	5,174	32,646	3,669	36315	14.2	10.1	63.32	1.5
Haryana	11,981	1,218	12,548	651	13199	9.2	4.9	4.50	2.08
Him. Pradesh	15,071	605	14,294	1,382	15676	3.9	8.8	5.14	2.69
J & K	14,143	1,782	13,379	2,546	15925	11.2	16.0	34.66	2.69
Jharkhand	21,035	1,164	22,004	195	22199	5.2	0.9	24.05	3.78
Karnataka	43,559	9,902	43,887	9,574	53461	18.5	17.9	48.58	1.97
Kerala	9,709	1,975	4,887	6,797	11684	16.9	58.2	25.74	1.83
M. Pradesh	97,270	14,457	97,255	14,472	111727	12.9	13.0	17.09	2.77
Maharashtra	61,309	15,272	57,301	19,280	76581	19.9	25.2	32.44	1.84
Meghalaya	7,516	680	4,634	3,562	8196	8.3	43.5	5.77	3.91
Mizoram	1,625	721	1,930	416	2346	30.7	17.7	12.36	1.56
Nagaland	2,087	269	1,785	571	2356	11.4	24.2	24.32	2.52
Orissa	47,094	3,755	47,969	2,880	50849	7.4	5.7	21.43	2.88
Pondicherry	289	274	407	156	563	48.7	27.7	35.52	1.76
Punjab	18,708	3,232	19,075	2,865	21940	14.7	13.1	17.69	2.14
Rajasthan	75,773	11,918	74,233	13,458	87691	13.6	15.3	26.91	2.81
Sikkim	1,021	49	848	222	1070	4.6	20.7	30.75	3.18
Tamil Nadu	40,739	9,697	35,681	14,755	50436	19.2	29.3	21.65	2.66
Tripura	3,227	229	3,331	125	3456	6.6	3.6	46.12	2.02
Uttar Pradesh	129,321	13,535	116,347	26,509	142856	9.5	18.6	3.53	3.63
Uttaranchal	16,671	1,957	15,614	3,014	18628	10.5	16.2	3.70	2.94
West Bengal	49,824	9,341	53,345	5,820	59165	15.8	9.8	1.25	5.3
All Districts	901,824	135,989	880,545	157,268	1037813	13.1	15.2	19.54	2.68

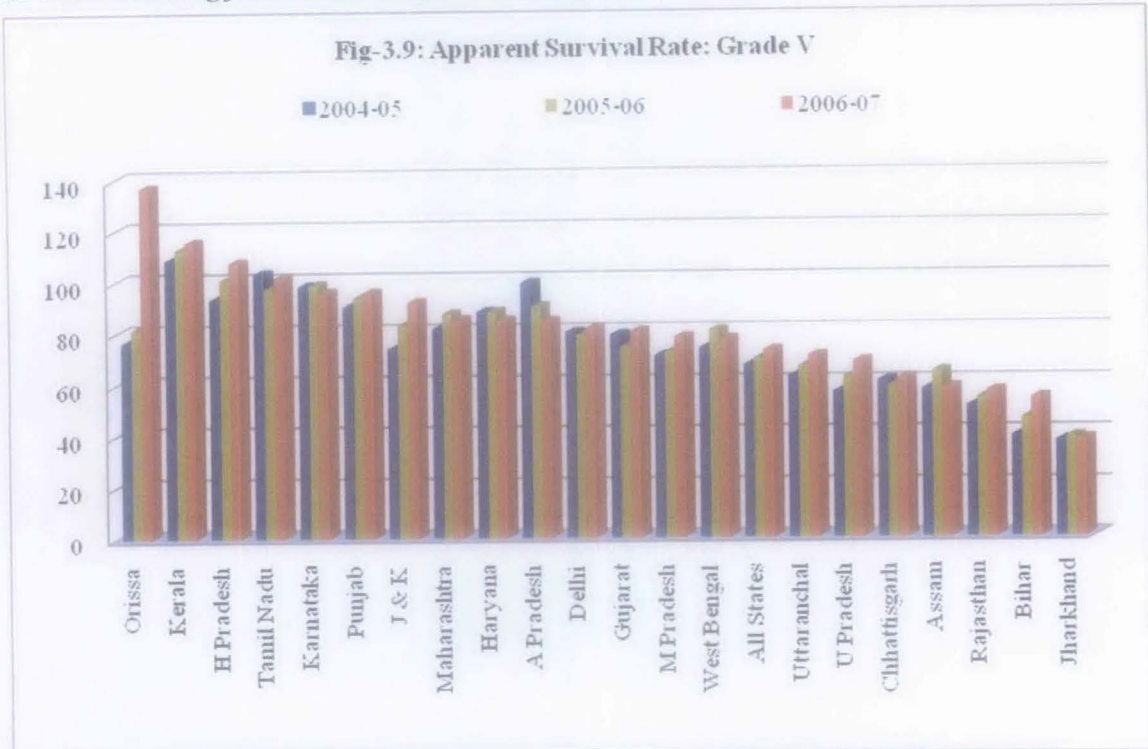
All area all management; Source: Calculated from Analytical Report 2005 (Table: 2.11 & 2.12); NUEPA

3.4.2 Educational Performance: Primary Grade Completion and Dropout Rate

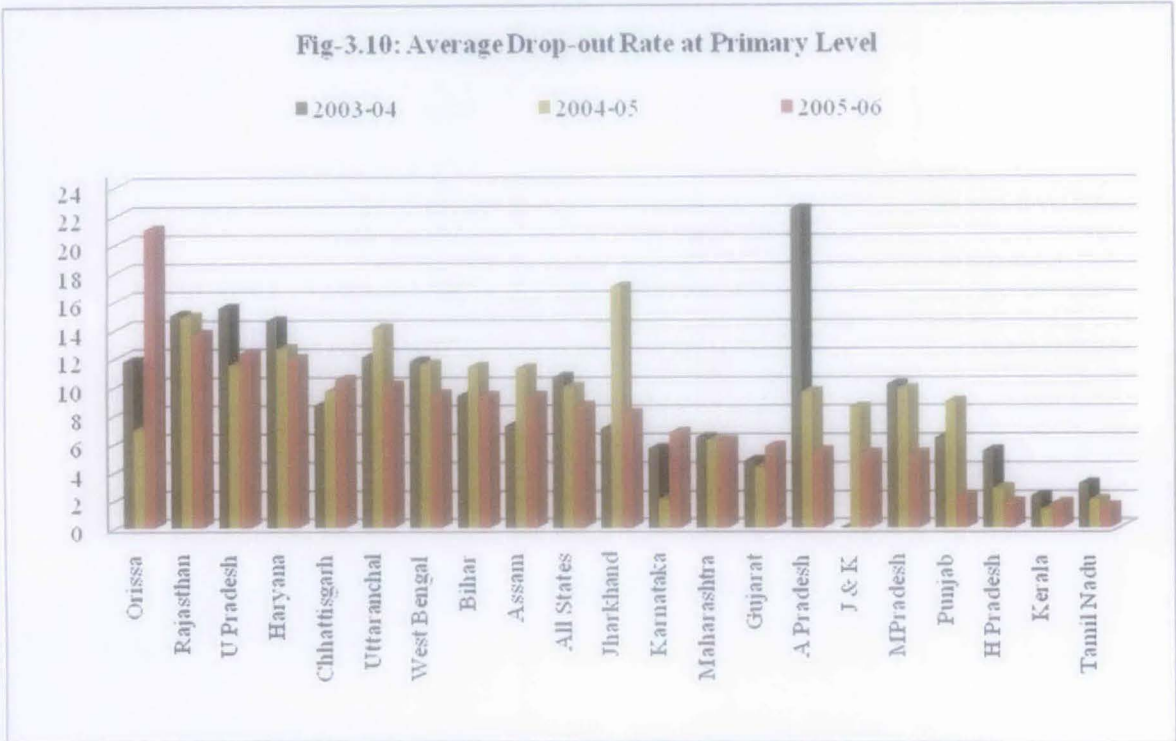
As has already been stated earlier in this chapter, India is on the verge to achieve the universalisation of primary education in the near future. However it is a gigantic task for a country with the largest schooling age children. Universalisation of Primary Education (UPE) needs universal enrolment along with 100% survival rate. Dropout at primary stages will dislocate the process in achieving the target. The net enrolment ratio is much higher and it is comparable with the educationally developed countries, discussion thus needs to concentrate on two main issues - *Primary Grade Completion Rate and Dropout Rate to identify the critical State in the country.* Three years (2004-05, 2005-06 and 2006-07) data has been used for the purpose. The data have been represented by the following two figures (Fig-3.9 & Fig-3.10) for major 21 states in India (excluding the 07 north eastern States and 07 small States/UTs).

Orissa, being a severely lagging State in respect of completion rate of primary level education, has overtaken many States in the year 2006-07 and thus has been placed at the top-most position. Otherwise, this particular performance indicator has been showing its expected value for the States. For example, *the BIMARU States except Andhra Pradesh are found to be the laggard States in this respect. Similarly, the relatively advanced States (Kerala, Himachal Pradesh,*

Tamilnadu, Maharastra, and Karnataka) also maintain a higher survival rate. West Bengal here has been remaining just above the national average and very much closer to the national rate.



Note: Survival Rate is calculated based upon one year enrolment data, Source: NUEPA & GOI, 2008.



Note: Average drop-out rates has been computed based on data of common schools Source: NUEPA & GOI, 2008.

Dropout Rate is the second important component which is enviable to be at the minimum level as far as possible for Universalisation of Primary Education. The Drop-out Rate represents the percentage of pupils who drops out from a given grade or cycle or level of education in a given school year (SES 2004-05). The estimate of MHRD states that the rates of drop out have decreased from 64.9% in 1960-61 to 29.00% in 2004-2005 in primary classes. The rate of dropouts which was 78.3% in 1960-61, has come down to 50.84% in 2004-2005 in the upper primary classes

(MHRD, 2007). The estimate is, however, provisional since 1999-00. The actual rate in this respect seems to be quite lower than the provisional data of MHRD. Here we have presented the data as published by the NUEPA in its Flash Statistics, 2006-07 (NUEPA, 2008). The recent trend of dropping out of children is also observed to be decreasing (Fig 3.10 All States). At primary level, the rate is calculated at 8.61%. Again Tamil Nadu, Kerala, Himachal Pradesh, Punjab are doing well in maintaining a lower rate of dropouts in consecutive years. *West Bengal occupies 13th position out of 20 major States and its performance is worse than Jharkhand, Assam, Bihar, Madhya Pradesh etc. Thus the State needs a special intervention for bringing it in line with the other better performing States in the country.*

3.4.3 Access to Public Education

In the literature on education, access to school is an important positive component for the development of school education. But various indicators are used to explore this aspect. In this respect, NUEPA has used Percentage of Habitations not Served and Number of Schools per 1000 Population as the two indicators to denote access to school in their Educational Development Index Report. But the intake capacity of a school varies from school to school. So it does not seem that Number of Schools per 1000 Population may be the best indicator of access. Actually, accessibility is the schooling facility available to the children. Naturally, a school with an intake capacity of 500 students and a school with 1000 cannot have the equal accessibility power. Intake capacity therefore, may be an indicator of access to school before the children. This intake capacity depends, among other things, on the number of teachers. There are also some other infrastructural conditions (e.g. building facility) on which intake capacity may depend. But, an additional post of teacher is generally sanctioned to a school depending upon its student roll strength. It is for this reason that Number of Teachers per 1000 child population (5-14 years) has been constructed and shown in Table 3.5 along with the NUEPA's access to Schools per 1000 Population.

All India School Education Survey provides information on access to education on the basis of availability of school within a rural habitation, Census data on the basis of revenue or census village. Both these sources help to identify geographical proximity. According to 7th All India School Education Survey (2002), 87.0% of the total habitations (1231391) in India were served by a primary school within a distance of 1km and 53% of the habitation within them, while the coverage was only 78.1% for upper primary schools within a distance of 3 km and 18.4% within the habitation. Punjab, Andhra Pradesh, Haryana and Gujarat are the States where more than 70% of the rural habitations have been served by primary schools within them. Himachal Pradesh, **West Bengal**, Tripura, Jharkhand, Arunachal Pradesh, Uttar Pradesh, Uttaranchal and Assam are States of India where more than 50% of the rural habitations were not served by any primary schools within them. Himachal Pradesh being a hilly district and owing to its geographical nature may be thinly covered by the access of schools, but the accessibility of other States is very poor.

The District Primary Education Programme (DPEP) was initiated in 1994 in India with a view to improve the access, infrastructure and quality of primary education in India. This was initiated as a programme rather than a promise. To promote the line up of DPEP, a flagship scheme was again launched in the name of Sarva Shiksha Abhiyan (SSA) in 2001. The main objective of SSA was to achieve universal primary education by 2007 and universal elementary education by 2010. Thus it covers the whole elementary system of education and also all the districts thereby reflecting to be a holistic one in the field of elementary education in India. Recently it has been renamed as Sarva Siksha Mission maintaining all its earlier objectives. Considering this two crucial policy measures taken by the government, it is important to review the development of elementary education since 1994 in India.

The DISE (2004-05) data shows that about 2.5 lakh new schools were added since 1994 which is a great achievement in the recent development scenario. The trend in growth as seen in the recent years also indicates further establishment of schools in the near future.

Table-3.5: Access to School in India 2004-05

States/UTs/All Districts	School/1000 5-14 yrs Population*	Rank	Teacher/ 1000 5-14 yrs Population*	Rank	% of Habitations having Primary School within Km**	Rank	% of Habitations having Upper Primary School within 3 Km**	Rank
Andh Pradesh	5.24	13	26.35	9	93.91	3	74.73	22
Arnrhl Pradesh	7.29	7	28.43	7	51.62	30	31.17	30
Assam	5.79	11	0.02	30	84.34	20	82.04	10
Bihar	2.23	27	6.93	29	88.92	13	81.10	11
Chandigarh	0.98	30	24.68	11	86.96	18	100.00	1
Chhattisgarh	7.37	6	19.94	18	90.54	10	69.67	25
Delhi	1.37	29	20.83	17	100.00	1	100.00	2
Gujarat	3.20	21	16.82	22	93.62	4	95.52	3
Haryana	2.49	26	11.29	26	91.90	8	89.11	5
Him. Pradesh	11.84	2	39.74	3	74.98	29	77.60	19
Jam & Kashmir	6.00	9	26.83	8	78.60	25	75.91	21
Jharkhand	2.98	25	9.56	27	77.17	27	61.43	28
Karnataka	4.49	14	19.13	20	88.41	15	88.26	6
Kerala	2.11	28	21.50	15	79.46	24	84.12	9
M. Pradesh	7.03	8	23.76	13	89.20	12	79.56	13
Maharashtra	3.55	20	20.90	16	91.17	9	78.18	17
Meghalaya	12.49	1	38.64	5	85.46	19	59.46	29
Mizoram	11.02	3	59.09	1	90.35	11	65.95	26
Nagaland	4.36	16	33.85	6	94.59	2	61.64	27
Orissa	5.89	10	18.35	21	82.93	22	73.55	24
Pondicherry	3.16	22	26.11	10	91.98	7	87.70	7
Punjab	4.00	19	16.67	23	93.46	5	90.50	4
Rajasthan	5.73	12	19.34	19	79.84	23	78.26	16
Sikkim	7.83	5	56.22	2	77.91	26	76.26	20
Tamil Nadu	4.34	17	21.55	14	88.48	14	74.31	23
Tripura	4.42	15	38.97	4	75.86	28	79.91	12
Uttar Pradesh	3.03	24	8.49	28	87.96	16	78.43	15
Uttaranchal	8.60	4	24.45	12	84.08	21	85.34	8
West Bengal	3.11	23	12.21	25	92.28	6	79.44	14
All Districts	4.11		16.54		87		78.10	

Source: * Population figure from Census 2001, No. of Schools & Teacher from Analytical Report 2005 (Table: Table 2.2 & 5.1); NUEPA, 2007; **Seventh All-India Education Survey 2002 Note:

Again, if we analyse the growth of schools category wise, it is seen that up to 2004-05, out of total 2.5 lakh newly set up schools, 1.74 lakh (69.5%) are in the category of primary schools only. The remaining 0.76 lakh are either upper primary or primary integrated upper primary schools. This indicates that the deficiencies of upper primary schools/sections are diminishing rapidly after the introduction of DPEP. The building type of this newly set up schools is also better with 70% of the schools having pucca buildings and 10% are partially pucca. Negligible number of schools (0.11%) has been running under open sky/tent. With such a holistic schema it is the next task to compare the Indian States on the basis of school education scenario in a much broader concept

3.5 Educational Development Index

In India, National University of Educational Planning and Administration (NUEPA) is an apex body working over the country's educational scenario and supervising the different activities of Sarva Siksha Aviyan (SSA). It has estimated an Educational Development Index (EDI nuepa) for the 35 Indian States and Union Territories in order to review the progress of SSA towards Universal Education for primary and upper primary levels as well as for Elementary Education. The EDI, which is prepared by the NUEPA has been developed on four broad parameters of access to school, school infrastructure, teacher related indicators and elementary education outcomes. *The index takes into account 22 variables. Based on the data of District Information System of Education (DISE 2005-06) the value of the index ranked Kerala at the top and Bihar at the bottom*

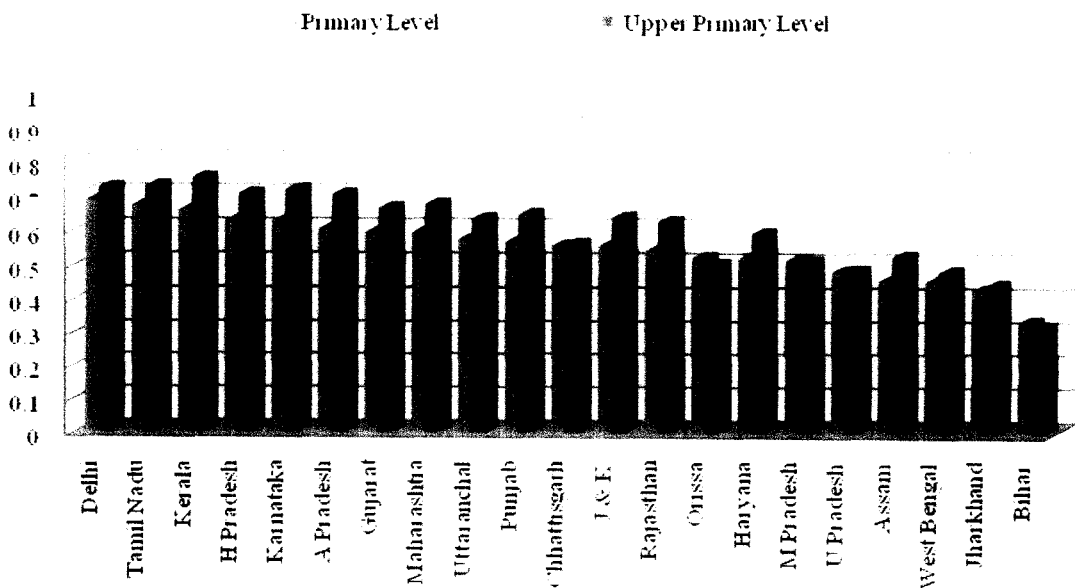
in respect of elementary education. Out of the top 8 states, 5 are southern states (Kerala, Tamil Nadu, Pondicherry, Karnataka and Andhra Pradesh) and the remaining 3 are northern states (Delhi, Chandigarh and Himachal Pradesh). West Bengal has been ranked 32nd in this respect. The value of the index for primary and upper primary level of education for the 21 major Indian States have been shown in figure 3.10 where it is seen that West Bengal ranks just above only two major States namely, Bihar and Jharkhand.

The DISE survey 2005-06 covered 604 districts of the country and collected data from 11, 24,033 schools that impart elementary education across the country. It has been found from the survey that the enrolment of students in classes I to VIII in the year 2005-06 increased considerably (12.28 million over the previous year). However, 180 of the 581 districts have reported a decline in primary enrolment. The Report was thus a blend of success and failure.

The basic principle underlying the computation of an EDI is to know position of a state vis-à-vis other states. The weights in the computation of an EDI are determined by using Factor Loadings and Eigen Values from Principal Component Analysis (PCA). Actually the EDI explains a lot about the regional variations that exist in the country which is true both for Primary and Upper Primary levels of education. As many as 22 school related indicators have been used into the following four sub-groups for constructing the EDI: Access, Infrastructure, Teachers'; and Outcome indicators.

While presenting the EDI for the year 2005-06 it has been stated that considering the different sizes of States and UTs with respect to the population and number of schools, they may be grouped under three categories (Elementary Education in India: Analytical Report 2005-06, NUEPA, New Delhi, 2007) - major states (21 states), states from the north-eastern region (7 states, excluding Assam) and smaller states (7 states). 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.

Fig-3.11: Educational Development Index 2005-06



NUEPA, 2008

Among the north eastern states Sikkim and Manipur are the two states performing much better than a number of bigger states both in Primary and Upper Primary levels of education. Among the smaller states Pondicherry, Lakshadweep and Chandigarh are maintaining their relative higher EDI values compare to all the Major States both at primary and upper primary level. It may be of interest to note that Chandigarh's overall ranking is 5th (EDI 0.64) at the Primary and 3rd (EDI

0.74) at Upper Primary level. It may be noted here that Arunachal Pradesh with having a substantial population, are lagging far behind among its surrounded states. As per the DISE Data 2006-07, it ranks 32nd position which was 33rd in 2005-06 (NUEPA, Flash Statistics 2006-07).

Among the major States, all the States in the group have the experience of undertaking major programmes, such as the District Primary Education Project, Sarva Siksha Mission etc. except Delhi. Among these, the states from southern part of the country (Kerala, Karnatak, Tamilnadu, Andhra Pradesh) including Delhi, Himachal Pradesh, Gujarat and Maharashtra are the States performing well in the field of elementary education (fig-3.11). Bihar and Jharkhand consistently have been remaining as the two bottom most states so far the EDI values at elementary level is concerned for the year 2005-06 and 2006-07 (NUEPA, Flash Statistics 2006-07). During the same period, West Bengal too, has ranked 19 just above its neighboring two most under developed states. It is a matter of conflict and also a question that, why West Bengal with a moderately higher literacy rate 68.64% (9th among the 21 states in 2001) has been remaining in such a hard reality in the field of elementary school education. This reason itself demands a separate study for this state. However, considering the value of the indices (Access, Infrastructure, Teacher and Outcome) used in constructing the EDI, it appears that in West Bengal, the value of access index is sufficiently higher at primary level. But at upper primary level it remains at the bottom most position (34th as per DISE 2006-07). The value of outcome index is 34 as per DISE 2006-07. Apart from this, the state has very poor infrastructural facilities both at primary and upper primary level (Rank is 29th & 31st as per DISE 2006-07). Again, the institutional factors are not only the reasons that may affect child schooling and their performances. Rather some socio-economic factors may be associated for such a dismal result of the State. Thus it is of special interest to study whether the institutional or supply side factors, i.e., the indicators of infrastructure, access to school or teacher related indicators do have any statistical significance with the indicators of school level performance in this very particular state, West Bengal. All these need a specific study within this State at more disaggregated level which is undertaken in the following chapter.

Note

1. Grade Completion Rate is defined as the proportion of students that complete nth Grade in n years.
2. The above methodology of normalization was recently used by NUEPA, New Delhi (<http://www.nuepa.org> for details- Mehta & A. Siddiqui).
3. For details- Mehta & A. Siddiqui: 'Educational Development Indexes- A Suggestive Framework For Computation', Department of Educational Management Information System, National University of Educational Planning and Administration, New Delhi, India.
4. In 1991 no census was carried out in J&K, some districts were bifurcated after 1991.
5. 19 districts in India are either pure urban or purely rural in character

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APPENDIX-3.I

Indian States as per Literacy Range

