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## **Challenges of Education Sustainability in India: with Reference to School Education in Karnataka**

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### ***Abstract***

*There are various programmes have been initiated to achieve the goal of universalisation of elementary education in India. This paper attempts to examine the actions taken and status achieved relating to school education in India. The challenges also looked into and remedies offered. Admitting that providing resources for educating the masses is the biggest challenge, the study emphasizes the need for better access through improved quality and providing incentives and infrastructure for the enrollment and attendance. Besides creating environment for public awareness, training and human security, the appropriate strategy for introduction of value-education at school level also called for.*

**Key words:** Sustainable Development, School Education, Infrastructure, Challenges, Enrolments

### **1. Introduction**

Education has always been considered as the only key component of human development and greatest liberating force. Hence, traditionally, education has always held the most vulnerable position in our society. It is considered as fundamental to all round development of the individual both at material and spiritual levels. Education is intrinsically intertwined with the development process and constitutes the instrumentality of modernization of tradition (Raza, 1990). The role of education in economic development has been noted by the researchers (Sodhi, 1985 & Singh, 1974). At the micro level the direct and indirect role of education through value-orientation in economic development has already been established (Bhagat, 1989). Education is also vital to sustain competitive markets and viable democracy. Researchers have shown that increasing the average primary schooling of the labour force by one year can increase output substantially. Even at the macro level, social benefits of elementary education are immense. Educated parents send their children to school; elementary education leads to perpetuation of benefits from one generation to another (Sinha, 2004, P. 628).

The Universalisation of elementary education has been the main goal of all educational policy and planning. The present school education structure, evolved over the ages, comprises 5 years of primary education (class I – V), 3 years of upper primary (class VI – VIII), 2 years of secondary education (class IX – X) and 2 years of senior- secondary education (class XI-XII); primary and upper primary taken together comprise elementary education. Various attempts have been made during the post-independence period. Yet in spite of our assets and efforts our national educational scenario appears to be grim, particularly school education; about 12.5 crore children (including drop-out) of age 6-14 are out of schools. This calls for a detailed investigation on this issue.

The present study attempts to examine the student enrolment ratios and status relating to school education in India and also Karnataka. The school enrolment and dropout examined in great detail and challenges ahead also looked into. The Education Statistical At a Glance data available at various issues published by MHRD Government of India New Delhi.

Recognising the importance of education is for realising its goal of improved growth with equity. The Indian government lays emphasis on primary education up to the age of fourteen years, referred to as elementary education in India. The Indian government has also banned child labour in order to ensure that the children do not enter unsafe working conditions. However, both free education and the ban on child labour are difficult to enforce due to economic disparity and social conditions. 80% of all recognized schools at the elementary stage are government run or supported, making it the largest provider of education in the country.

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conditions. 80% of all recognized schools at the elementary stage are government run or supported, making it the largest provider of education in the country

Year	Primary	Upper primary	secondary level
2000-01	638.7 (9.68%)	206.3 (9.15%)	126 (10.56%)
2005-06	772.6 (11.71%)	288.5 (12.80%)	159.7 (13.38%)
2006-07	784.8 (11.89%)	305.6 (13.56%)	169.5 (14.20%)
2007-08	787.6 (11.93%)	325.5 (14.44%)	172.2 (14.43%)
2008-09	789.4 (11.96%)	336.6 (14.93%)	183.2 (15.35%)
2009-10	823.2 (12.47%)	367.7 (16.31%)	189.9 (15.91%)

*Table 1: Number of Recognised Educational Institutions in India ('000')*  
*Source: MHRD Bureau of Planning and Monitoring statistics New Delhi 2011*

There are various programs to development of school education in India because of fulfill the basic educations to every student in India. So above table shows the number of education institutions in India, the no of schools in 209.7(3.18%) thousands in primary schools, 13.6 (0.60%) in upper primary schools and 7.4 in secondary schools in 1950-51. It increases to 638.7 (8.50%) in primary schools, 206.3 (6.72%) in upper primary schools and 126(10.56%) thousands in secondary level schools in 2000-01. the number education institutes also increase day by day due reason of increased populations, in this regard Govt of India to establishes the schools i.e., 772.6 (11.71%) thousands in primary, 288.5 in upper primary schools and 159.7 (13.8%) thousands are established during 2005-06 in India and it also marginally increases to 832 (12.47%), 367.7 (16.31%) in upper primaries and 189.9 (15.91%) thousands in 2009-10.

Year	Primary (Class I –V)			Middle/Upper Primary (Class VI–VIII)		
	Boys	Girls	Total	Boys	Girls	Total
2000-01	640	498	1,138	253	175	428
2001-02	636	503	1,139	261	187	448
2002-03	651	573	1,224	263	206	469
2003-04	684	599	1,283	272	215	487
2004-05	697	611	1,308	285	227	512
2005-06	705	616	1,321	289	233	522
2006-07	710	627	1337	298	246	544
2007-08	711	644	1355	310	262	572
2008-09	700	645	1345	294	260	554
2009-10	708	548	1356	318	276	594

*Table 2: Enrolment by Stages All Categories of Students (in Lakhs)*  
*Source: MHRD Bureau of Planning and Monitoring statistics New Delhi 2011*

Enrolment concern in India primary students 1,138 lakhs and middle schools are 438 Lakhs are enrolled in 2000-01 and it increased to 1,321 lakhs student in primary and 522 Lakhs in Middle/Upper Primary (Class VI-VIII) schools in india, again this enrolled trend rose by 1356 lakhs in Primary (Class I –V) and 594 lakhs in Middle/Upper Primary (Class VI-VIII) student in 2009-10.

Year	Primary (I-V)			Elementary (I-VIII)		
	Boys	Girls	Total	Boys	Girls	Total
2000-01	39.7	41.9	40.7	50.3	57.7	53.7
2001-02	38.4	39.9	39	52.9	56.9	54.6
2002-03	35.9	33.7	35	52.3	53.5	52.8
2003-04	33.7	28.6	32	51.9	52.9	52.3
2004-05	31.8	25.4	29	50.5	51.3	50.8
2005-06	28.7	21.8	26	48.7	49	48.8
2006-07	24.6	26.8	51.4	46.4	45.2	91.6
2007-08	25.7	24.4	50.1	43.7	41.3	85.0
2008-09	26.7	22.9	49.6	44.9	38.9	83.8
2009-10	30.3	27.3	57.6	40.6	44.4	85.0

Table 3: Drop-out Rates at Primary, Elementary & Secondary Stages All Categories Students (in percentage)  
Source: MHRD Bureau of Planning and Monitoring statistics New Delhi 2011

The dropout ratio was main causes of education sustainability in India and it also one of the defects of education index, so above table described the dropout rate in basic education in India. 40.7% primary student and 53.7% elementary student left the schools in 2000-01 in India, but in 2005-06 it percentage was reduced 14.7% in primary level and 4.9% in elementary level. However, it percentage was increased hyper way in 2009-10 i.e., 57.6% in primary level and 85.0% in elementary level in India. It conclude that majority of the students left the schools various reasons, such as poverty, unemployment, social evils etc., also impact on increasing dropouts and less educational sustainability in our nations.

Year	Primary (I-V)	Upper Primary (VI-VIII)	Elementary (I-VIII)
2000-01	0.82	0.75	0.80
2001-02	0.83	0.77	0.81
2002-03	0.95	0.86	0.93
2003-04	0.95	0.86	0.93
2004-05	0.95	0.88	0.93
2005-06	0.94	0.88	0.92
2006-07	0.94	0.90	0.93
2007-08	0.98	0.91	0.96
2008-09	1.00	0.96	0.99
2009-10	1.00	0.93	0.97

Table 4: Gender Parity Index (GPI) for the Elementary Stages: All Categories of Students (in Percentage)  
Source: MHRD Bureau of Planning and Monitoring statistics New Delhi 2011

GPI also one of indicator for educational sustainability in india. Above table 4 reflects that, all student categories. GPI increased to 0.82% in primary level, 0.75% in upper primary level and 0.80% in elementary school level in 2000-01 to 0.95 in 0.88 in upper primary level and 0.93% in elementary level in 2004-05. It was best sign of educational sustainability. Thus in 2009-10 it was increased in a highest manner i.e., 1.00% in primary level, 0.93 in upper primary level and 0.97% in elementary level in india.

Year	Primary schools	Upper Primary Schools
2000-01	55	62
2001-02	59	59
2002-03	64	69
2003-04	66	69
2004-05	64	60
2005-06	65	67
2006-07	66	65
2007-08	80	67
2008-09	80	71
2009-10	86	72

*Table 5: Number of Female Teachers per 100 Male Teachers*  
*Source: MHRD Bureau of Planning and Monitoring statistics New Delhi 2011*

Female teacher's ratio is also one of the important elements of educational sustainability at a primary level in India. It was increased in 55 in primary schools and 62 in upper primary schools in 2000-01 and it increases to 86 in primary level and 72 in upper primary level in India.

Years	Primary Schools	Upper Primary Schools
2000-01	43	38
2001-02	43	34
2002-03	42	34
2003-04	45	35
2004-05	46	35
2005-06	46	34
2006-07	44	34
2007-08	47	35
2008-09	44	34
2009-10	42	32

*Table 6: Pupil Teacher Ratio (PTR)*  
*Source: MHRD Bureau of Planning and Monitoring statistics New Delhi 2011*

Educational sustainability concern pupil teacher ratios also impact on educational sustainability in primary level education in India. Pupil teacher ratio was in 43 in primary schools and 38 in upper primary schools level in 2000-01. It ratio was increased to 3 in primary schools and decreased to 3 in upper primary level in 2005-06, again it was also decreased to 42 in primary school level and 32 in upper primary level in India. These decreasing trends affect the educational sustainability at primary level in India.

## 2. Education Sustainability of Karnataka

State concern of educational sustainability is growing in a smaller way because above social factor also implying the state education sustainability at a basic stage in Karnataka. Below tables analysis also tells that educational sustainability in Karnataka.

SN	District	Education Index	Rank	HDI Index	Rank
1	Bagalkot	0.636	22	0.591	22
2	Bangalore Rural	0.662	20	0.653	6
3	Bangalore Urban	0.887	1	0.753	1
4	Belgaum	0.699	15	0.648	8
5	Bellary	0.618	23	0.617	18
6	Bidar	0.689	17	0.599	21
7	Bijapur	0.642	21	0.589	23
8	Chamarajnar	0.57	26	0.576	25
9	Chikmaglur	0.742	9	0.647	9
10	Chitradurga	0.704	14	0.627	16
11	Dakshina Kannda	0.823	4	0.722	2
12	Davangere	0.711	13	0.635	12
13	Dharwad	0.758	7	0.642	10
14	Gadag	0.75	8	0.634	13
15	Gulbarga	0.572	25	0.564	26
16	Hassan	0.729	10	0.639	11
17	Haveri	0.699	16	0.603	20
18	Kodagu	0.833	3	0.697	4
19	Kolar	0.713	12	0.625	17
20	Koppal	0.576	24	0.582	24
21	Mandya	0.682	18	0.609	19
22	Mysore	0.669	19	0.631	14
23	Raichur	0.524	27	0.547	27
24	Shimoga	0.766	6	0.673	5
25	Tumkur	0.714	11	0.63	15
26	Udupi	0.842	2	0.714	3
27	Uttara Kannada	0.781	5	0.653	7
	<b>Karnataka</b>	<b>0.712</b>		<b>0.65</b>	

Table 7: Composition of HDI and Education index in Karnataka in 2001

Source: Karnataka Human Development Report 2005, P.15

The HDI for districts is computed on the basis of the methodology used in UNDP HDR 1999, details of which are given in the Technical Note. Due to the non-availability of data on adult literacy rates for 2001, literacy rates for 7 years plus, the combined gross enrolment ratios of primary and secondary level education (class I-XII) have been substituted. Hence, there is an element of double counting in the age group 6-18 years for educational status. It may be noted that due to changes in methodology, i.e. adopting the logarithm method in computation. The state education index was 0.712, it was good estimate was development of education in Karnataka.

Year	Education	Total
2000-01	49861 (6.78)	735395 (100)
2001-02	59797 (7.16)	834755 (100)
2002-03	34108.42 (4.18)	916391 (100)
2003-04	58107.7 (6.74)	861945 (100)
2004-05	95546.23 (8.14)	1174117 (100)
2005-06	101201.4 (7.47)	1355500 (100)

Table 8: Plan expenditure of education in Karnataka

Source: Karnataka Human Development Report 2005, P.39

### 3. School Education

School education in Karnataka is imparted through Lower Primary Schools (LPS, class I to V), Higher Primary Schools (HPS, class I to VII/ VIII) and High Schools (VIII to X). These schools fall under three categories based on type of management, namely (i) Government schools managed by the Departments of Education, Social Welfare and local self-governments (ii) Government aided schools and (iii) Private unaided schools. There are also a few 'other' schools, consisting of assorted categories. There are 25,951 Lower Primary, 33,604 Higher Primary and 13,862 High Schools (2011-12) in the State (Table 10.2). The State participation in elementary education is significant as 75.90 per cent of the lower and higher primary schools are managed by the Department of Education. But State participation is low in secondary education as only 32.01 per cent of the high schools are managed by Government. Government schools are mainly located in rural areas, but private schools are largely urban based. Further, it is significant to note that 84 per cent SC / ST children in the State are in Government schools, and their share in total enrolments is 27.33 percent. Likewise, it is noted that nearly 83.19 percent of children in schools in rural areas are in the government sector.

### 4. Elementary Education

Article 21 A of the Constitution of India and the Right of Children to Free and Compulsory Elementary Education (RTE) Act 2009 became operative in April 2010. The State Rules under the RTE Act were notified in 2011. These developments have thrown open fresh opportunities for quality schooling for children.

#### 4.1. Access

Significant progress has been achieved in improving access to schools in terms of both population and habitations. All the habitations in the State with a population of 100 and above have been provided with access to primary schools within a distance of one kilometer and the access ratio for even higher primary schools has been universalized. The State has the policy to start a new primary school within 1 kilometer in habitations where the population is more than 100 and child population of school going children is more than 10. In such habitations, the school will be provided within a distance of 1 Km. Feeder schools will be started in small and sparsely populated habitations or transportation facilities will be provided to nearby primary or upper primary schools. The State's policy is that a LPS is provided in an area of 1 Km radius, HPS within every 3 Km radius and High schools in 5 Km radius. Up gradation of HPS by adding 8th standard is taken up wherever there are no High Schools within 3 Km. A total of 4146 HPS out of a target figure of 5545 HPS has been upgraded so far. The increase in access facilities over the years is shown in Figure above table

Year	LPS	HPS
2001-02	93.70	89.39
2002-03	94.26	90.48
2003-04	94.58	96.25
2004-05	98.98	99.61
2005-06	99.13	99.61
2006-07	99.13	99.61
2007-08	99.29	99.07
2008-09	100	100
2009-10	100	100
2010-11	100	100
2011-12	100	100

Table 9: Increase in Access over the years

Source: MHRD Bureau of Planning and Monitoring statistics New Delhi 2011

#### 4.2. Institutions

There are 59,555 Elementary schools in the State, of which 25951 are LPS, 33,604 are HPS during 2011-12. In 2010-11, the State had 26,302 lower primary, 33,126 higher primary. Between 2010-11 and 2011-12, the number of LPS decreased by 351 due to their up gradation to HPS. The number of HPS increased by 478 between 2010-11 and 2011-12. It is noted that there is a decrease of 693 schools in the number of lower primary schools during the period 2008-09 to 2011-12. This decrease is not a natural but a notional decrease, as the lower primary schools get upgraded as higher primary schools every year. In contrast, there is an observed increase of 2728 higher primary and 2478 high schools in the State.

#### 4.3. Enrollments

(I) Trends : Enrolments during 2011-12 in primary (class I to V) and in upper primary (class VI to VIII) stage is estimated to be 54.14 lakh and 20.75 lakh respectively (Table 5.7). Over the years the enrollment has decreased marginally in the primary stage due to decline in the growth rate of population, and consequent decline in school going age group. The State is making continued efforts for successful completion of schooling at class V, and increasing retention at upper primary stage. Both gender parity and gender equity are nearing unity in the State. The proportion of SC / ST children in class I to VII in the State is 27.33 percent and nearly 84 percent of these children are enrolled in schools run by the State. The enrollment ratios between boys and girls at primary, upper primary and total elementary stages are 51.50 : 48.50, 51.85 : 48.15 and

51.83 : 48.16 respectively Gender Parity in enrollment at Primary and Upper Primary are 1.00 and 0.98 in Government + Aided schools. Gender Parity is counted as number of boys and number of girls in school for every 100 boys and girls in population of respective age-groups, taken as a ratio of each other .

Enrollments in the State in 1 to 10 standards have marginally increased from a figure of 100.92 lakh in 2008-09 to 100.97 lakh in 2011-12. This increase is due to gains at higher primary and high school stages. Decrease at LPS is due to fertility effects. This phenomenon is true in general as well as in case of boys and girls.

Enrollments (All types of Schools)	2008-09	2009-10	2010-11	2011-12
<b>Enrollments classes I to V</b>				
Total	55.42	54.6	54.15	54.14
Boys	28.6	28.2	28.02	28.06
Girls	26.82	26.4	26.13	26.07
<b>Enrolments classes VI to VII</b>				
Total	20.28	19.97	20.11	20.75
Boys	10.48	10.33	10.37	10.72
Girls	9.8	9.64	9.73.	10.03
<b>Enrolments VIII to X</b>				
Total	25.22	25.78	26.04	26.07
Boys	13.13	13.42	13.51	13.55
Girls	12.08	12.36	12.54	12.52
<b>Enrollment Total 1 to 10</b>				
Boys	52.2	51.95	51.9	52.34
Girls	48.71	48.4	48.4	48.63
<b>Total</b>	<b>69273</b>	<b>70748</b>	<b>72875</b>	<b>73417</b>

Table 10: Schools and Enrolments in Karnataka (in No's)

Source: Karnataka Economic Survey 2012-13.

#### 4.4. Gross Enrollment and Net Enrolment Ratios (GER & NER)

GER and NER lower primary are 107.46 and 105.16 respectively . At higher primary stage the GER and NER is 99.21 and 96.95 respectively . There are inter-district variations in these rates; Yadgir and Gadag need considerable attention. Changes in GER and NER across the years are marginal.

Year	Primary level		Upper primary level		Secondary Level	
	GER	NER	GER	NER	GER	NER
2004-05	109	97.81	117	98.11	-	-
2005-06	121.83	97.51	103.04	98.75	-	-
2006-07	108.28	98.43	107.25	98.52	62	-
2007-08	110.93	96.1	107.53	95.61	65	-
2008-09	107.15	97.33	107.48	98.09	69.77	39.03
2009-10	106.53	95.21	103.1	95.15	75.29	45.07
2010-11	107.53	98.86	103.92	93.57	81.42	58.47
2011-12	107.46	99.21	105.16	96.95	85.65	65.76

Table 11: GER and NER at Lower, Upper Primary and Secondary Stages (in %)

source: Karnataka Economic Survey 2011-12.

Although, the number of schools have increased local bodies, private Aided and Private Unaided also in Karnataka of 1998-99 to 2010-11. There are 8612 schools total schools in Karnataka of which 2684, 2541 and 3387 are Govt, Private Aided and Private Unaided in 2001-02 respectively. 31.17 percent of government schools in urban areas belong to the Department of Education while the proportion of aided schools is 29.51 percent. 39.33 percent of schools are constituted by Private un-aided and other category schools. In case of high schools, proportions of schools in urban areas that belong to Department of Education, Govt., Private Aided and Private Un-Aided and Local Bodies categories are 34.8, 25.0, 39.8 and 0.40 respectively in 2011-12. It is noted that while a high proportion of elementary schools are run in urban areas by the department of education, a high proportion of high

schools in urban areas are run by private un-aided managements. It indicates that in presently number of schools have increased in Karnataka. This trend shown in bellow table 12.

Years	Govt.		Local Bodies		Private Aided		Private Unaided		Total
	Number	%	Number	%	Number	%	Number	%	
1998-99	-	-	-	-	-	-	-	-	7090
1999-00	-	-	-	-	-	-	-	-	7269
2000-01	2684				2915		2974		8573
2001-02	2684	31.17	0	0	2541	29.51	3387	39.33	8612
2003-04	3029	33.61	0	0.00	2621	29.08	3362	37.31	9012
2004-05	3055	32.29	2682	28.34	3725	39.37	-	0.00	9462
2005-06	3227	35.18	133	1.45	2612	28.47	3201	34.90	9173
2007-08	4256	35.96	116	0.98	2820	23.83	4643	39.23	11835
2008-09	4348	36.99	39	0.33	2997	25.50	4369	37.17	11753
2009-10	4462	35.83	42	0.34	3275	26.30	4674	37.53	12453
2010-11	4675	34.8	51	0.4	3367	25.0	5354	39.8	13447

Table 12: Number of Higher/Post Basic Schools for General Education in Karnataka

Source: Ministry of Human Resource Development, Govt. of India.2001-10

There are 57520 schools and 7570057 children who are studying in the primary stage of 1st to 5th standards. This stage included enrolments in 1st to 5th standards in 1st to 5th lower primary and 1st to 7th or 1st to 8<sup>th</sup> higher primary schools as well as 1st to 10th high schools. There are 11753 schools and 2522044 children's were studying in the high schools of 8<sup>th</sup> to 10<sup>th</sup> standards. Out of which, in north Karnataka 7164 schools and 1469770 students are studying in high schools in 2008-09. There are 58295 and 7457017 students enrolled in primary schools in 2009-10 and 12453 high schools and 2578076 students have studying at 8<sup>th</sup> to 10<sup>th</sup> standard in Karnataka, in which north Karnataka students enrolled high as compared to south Karnataka. These trends also continued in 2011-12. 59555 schools and 7490040 students are in 1st to 7th standards in the system of schooling in the State, as compare to high schools, significantly students enrolment increased. However, 13862 schools and 2607306 students are studying in 8<sup>th</sup> to 10<sup>th</sup> class in Karnataka state.

## 5. Infrastructure Facilities Schools Education in Karnataka

Education infrastructure is a comprehensive structure of public good and services that must to all people in nation. Recognizing the importance of education for realizing its goal of improved growth with equity, the government of Karnataka has initiated many studies/ schemes and initiatives for overall development of education in the state along with promotion of private of private sector in the development of education. Currently, the state (0.45) is slightly above national average (0.42) in respect of its human development index. Of course, a progress in respect of Human development index. Of course, a progress in respect of human development can be achieved through the provision of high quality education and health services with the given infrastructures. In this context, it may be useful to examine the initiatives taken so far by the government of Karnataka in the field of educational infrastructure and suggest policy measures for sustainable development in the education.

### 5.1. School Buildings and Classrooms

#### 5.1.1. Pancha Saulabhya and Other Basic Facilities under Sarva Shiksha Abhiyan

Under the national flagship programme of Sarva Shiksha Abhiyan for universalizing elementary education, the State has accorded special significance for the provision of infrastructure facilities such as school buildings, additional classrooms, maintenance and repairs of school buildings. The State has made efforts to comply with the basic infrastructure mandated under the RTE Act, comprising barrier free access to schools, adequate classrooms, separate toilets for boys and girls, playgrounds, library, compound walls/fencing, drinking water, kitchen sheds, etc. The State government has identified five facilities as most essential for schools. These are drinking water, toilets, playgrounds, compound wall and the school building (PanchaSoulabhya). The State has made significant progress in this regard as shown in Table. It is observed that there is considerable progress in regard to provision of girls' toilets.

Out of a total of 59428 elementary schools in the State, 45677 belong to the DoE. About 98% of schools of the Department possess own buildings. The remaining 2% include those operating in rent free or rented building and schools without any building facility. There are 198415 classrooms (188941 in 2008-09) in 45677 elementary schools of the DoE indicating an increase of 9474 classrooms in about three years. 68.04% of classrooms are in good condition. 20.77% classrooms need minor repairs, while 11.18% of classrooms require major repairs.

45,648 out of a total of 58,295 elementary schools in the State belong to the Department of Education. About 98 percent of schools of the Department possess own buildings. The remaining 2.0 per cent include those operating in rent free or rented building and schools without any building facility. There are 1,94,838 classrooms in 45,648 elementary schools of the Department of Education. Number of classrooms at the elementary level of schools has increased from 188941 in 2008-09 to



194838 during 2009-10, indicating an increase of 5897 classrooms. 70.18 percent of classrooms are in good condition. 20.30 percent of classrooms need minor repairs, while 9.52 percent of classrooms require major repairs.

Year	Common toilets	Girls Toilets	Electricity	Play Grounds	Ramps	Compound	Drinking Water	Library	Total Schools
2008-09	82.95	50.23	84.44	49	52.1	68.2	80.54	86.44	45476
2009-10	88.01	64.66	87.55	52.05	64.62	59.59	88.12	86.97	45648
2010-11	91.96	74.26	91.89	54.42	72.95	66.61	93.6	91.86	45677
%2010-11Change Coverage	3.95	9.6	4.34	2.37	8.33	7.02	5.48	4.89	29
% increase /Decrease	4.5	14.85	4.96	4.53	12.89	11.78	6.21	5.62	-
2011-12	97.91	98.81	95.49	54.34	78.27	69.21	99.55	98.66	-
% increase /Decrease	6.46	33.06	3.92	-0.12	7.3	3.9	6.37	7.4	-

Table 13: Infrastructure Provision in Elementary Schools of the State (DoE) (As in %)

Year	Common toilets	Girls Toilets	Electricity	Play Grounds	Ramps	Compound	Drinking Water	Library
2008-09	60.28	55.34	67.12	67.12	21.73	68.95	82.79	79.55
2009-10	65.91	66.12	64.56	73.44	17.54	51.9	79.13	87.52
2010-11	69.47	68.09	73.49	74.75	24.99	58.16	86.77	92.94
%increase /Decrease	5.4	2.98	13.83	1.78	42.47	12.06	9.65	6.19
2011-12	88.87	93.01	82.69	75.01	38.18	62.02	97.86	94.05
%increase /Decrease	27.92	36.6	12.52	0.34	52.78	6.64	12.78	1.19

Table 14: Infrastructure Provision in High Schools of the State (in %)

### 5.2. Teachers

193216 teachers of the sanctioned 206788 teachers (93.47%) are working in the LPSs and HPSs of the DoE and other schools under the State Government (2010-11). In addition, 17229 of the sanctioned 21291 teachers are working in aided schools at the elementary stage. 49% of the teachers in Government schools at the elementary stage are female teachers. Teacher: Pupil ratio is satisfactory in Government schools. The average ratio is 1: 23.18 at the elementary stage.

### 5.3. School-based Initiatives

Provision of infrastructure facilities and adequate classrooms is the basic strategy for quality schooling. In addition, every school is given the following grants: School grant, School maintenance grant and, grants for major repairs. They are directly transferred from the district educational office to individual schools and jointly operated by the President of the School Development and Monitoring Committee (SDMC) and the Head teacher. School grant is used for procurement of charts, maps, specimens, newspapers, consumable chemicals, chalks and other sundry items. School maintenance grant is used for paying electricity, water bills, white-washing, hygienic maintenance of school and similar heads. Major repairs grants are given on the basis of evidence-based demands. An update of the grants given during 2010-11.

### 5.4. Nali-Kali (Joyful Learning)

All the 45,476 schools in the State have adopted Nali Kali method of learning-teaching. At a rate of two teachers per school, more than 90,000 teachers have been trained to engage Nali-Kali classes. Heads of all the schools have also been trained. Nali-Kali kits that include learning cards have been supplied to all schools. Nali-Kali toll-free helpline has been set up in all district offices. Other programmes which reach the schools are EDUSA T (in Chamarajanagar, Gulbarga, Bangalore Rural and Ramanagaram districts), as well as the Radio lessons programmes that are integrated with school syllabus and daily time-table. Classes 1 to 2, 3 to 5 and 6 to 8, receive ChinnaraChukki, ChukkiChinna and Keli-Kali programmes respectively. 921 higher primary schools are treated as nodal schools for organizing activities and providing leadership to neighboring HPS for the benefit of education of girls in 62 Educationally Backward Blocks (EBB). These schools are treated as Model Cluster Schools (MCS) under the National Programme for Education of Girls at Elementary level (NPEGEL).

### 5.5. Library

Library development in each school was a major initiative of 2010-11. Every LPS was provided Rs.3000 while every HPS was provided Rs. 10,000. Districts which had reached saturation in civil works were eligible. A total of 21,236 LPS and 17,847 HPS purchased books in book Meals organized at every district headquarter in the State. The State SSA Directorate facilitated this process through involvement of 240 publishers of children's literature and nearly 10000 books through systematic selection procedure

### 6. Challenges and Remedies

The goal of universalisation of elementary education has not yet been achieved. The problem of left-out and drop-out still remains to be solved. The most serious challenge is to educate these persons. The non-formal education schemes with emphasis on Vocational Training and, of course, with greater magnitude of incentives may be of some help in this direction. The local bodies and voluntary organizations may be of great help in solving this problem. Even the compulsory education legislation already in use in many countries may not be helpful in developing countries like India. In fact, it is often stated that "these laws were introduced in most countries in response to international convention and pressure and hence they had little impact on the actual enrolment of children in schools (Colclough, 1993, p.261)."

Providing sufficient number of teachers from another challenge. Besides increasing the number of schools and teachers including Headmasters wherever required, the number of female teacher should be increased to make it at least 50 percent of the total teacher. Gradually all schools should be converted into co-education school. This will have significant impact on the overall personality development of the girl student, which is the future need for the nation. Every schoolteacher should be assigned with the task of counseling a group of students who will take care of their studies, attendance and overall guidance for better future. This may help in increasing the retention rate and achieving excellence in school education.

Coping with the worldwide development of science and technology is yet another challenge. In fact, we don't have any systematic planning for mobilizing the talent from the Schools for use of national interest. We have scientist but are scientist by chance and not by choice. What is needed is to identify a group of talented students taken proportionately from rural and urban areas and educate them centrally through MHRD under fully subsidized residential programme for preparing them for higher education and research in the field of science and technology according to their intrinsic aptitude and interest. This will help in attaining the goal of better future and sustainable developments.

The restructuring of available school courses and designing new ones has also become inevitable to meet the challenge of today's requirement. The value-education is the need of the day for making our students sensitive, caring and develop in them the basic value of life. Strategic efforts in vocationalisation of education at the school level. Should immediately be initiated. Vocational courses should be incorporated in the syllabus of schools as a compulsory subject. The course curriculum for vocational education at school level may be developed for mechanic, fitter, electrical, food processing. Cocoon cultivation, flower cultivation, cultivation of medicinal plants, woodcrafts, Bamboo-craft, Leaf-crafts, fishery, piggery and poultry as per the local requirements. This will help the Students in equipping them with skills and make future stable and sustainable.

### 7. Conclusion

Various educational policies and programmes implemented after post-independence period have resulted in improved access of elementary education. The effort to attain equity and quality is also praise worthy. But universalisation of education at the elementary level has not yet been achieved. The study emphasises the need for providing more emphasis on demand-side interventions for better access. Besides creating environment for public awareness, training and human security, the appropriate strategy for the introduction of value-education and vocationalisation of education at the school level also called for, for sustainable development.

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