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GROWTH OF EDUCATION SECTOR IN HIMACHAL PRADESH FROM 1991 TO 2010: A DISTRICT LEVEL ANALYSIS

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Abstract: Education is one of the most important component of social sector and the role of education in facilitating social and economic progress is well recognized. Himachal Pradesh has acquired the status of a highly literate state in the recent year. According to 2011 census data Himachal Pradesh with 83.8% observed 5th rank in term of literacy in India after Kerala (93.9%), Mizoram (91.6%) Tripura (87.8%) and Goa (87.4%). In present study an attempt has been made to analyze the growth of education sector in Himachal Pradesh and district constitutes the basic unit of study. The study is entirely based on secondary data collected from Directorate of Elementary Education, government of Himachal Pradesh. The study revealed that Himachal Pradesh experienced significant improvement in education sector and its various indicators such as Number of schools, Pupil teacher ratio in Primary, High and Senior secondary schools, and Dropout rate in primary and in High Schools.

Keywords: Education , literacy , Elementary Education , economic progress .

INTRODUCTION:

Education is one of the most important component of social sector and the role of education in facilitating social and economic progress is well recognized. It opens up opportunities leading to both individual and great entitlement. Education in its broadest sense is the development of youth by empowering them with skill and knowledge and giving them access to productive employment in future (Mier). Prof. Singer observed that “investment in education is not only highly productive but also yielding increasing returns in so far as cooperating team of skilled and educated people are worth more than sum of the individual of which they are composed whenever we look at the human capital we find increasing return of play”. The greater progress will occur in those countries where the education is wide spread and where it encourages experimental outlook. The educational development is pre-requisite for the technological changes. In fact, without an improvement in the quality of human sector no progress is possible. Schultz observed that, “it is as if we had a map of resources which did not include a mighty river and its tributaries (Mier, G.M.).

The pace of progress in literacy rate as revealed by decennial census is very slow in India. In the span of fifty years i. e. from 1951 (18.33%) to 2011 (74.4%), there has been only marginal increase of 56.07% literacy rate. As per population census 2011, out of 74.04% literates the corresponding figure for males and females are 82.14% and 65.14% respectively, which means four out of every five male and two out of every three females of the age seven and above are literate in India (Census of India, 2011).

The overall literacy in India has been improved from 18.33% in year 1951 to 74.04% as per provisional figure of population census 2011. The male and female literacy stood at 21.16% and 8.86% in 1951 which rose to 82.14% and 64.46% in 2011 (Provisional figure) respectively. As the female literacy rate picked up considerably, gender gap has also declined. In the year 1951, gender gap was 18.3% and observed highest 26.63% in 1981, since 1981 it showed continuous falling trend and in 2011 it was 16.88%.

Social and gender disparities, existing at both primary and upper primary education level in India continues to be an issue to be tackled with concerned efforts, especially in Bihar Uttar Pradesh, Madhya Pradesh and Rajasthan. The enrollment in 1.02 lakh secondary and 0.50 lakh higher school is 24.3 million and 12.7 million respectively in the year 2009-2010. The gender enrollment ratio for secondary education (IX and X) was 51.56% and that for higher secondary was 27.82% in the same year. The combined gender enrollment ratio (GER) for the both level was 39.91% in 2009-2010. But importantly the dropout rate at the secondary level was as high as 62% in same year (Eleventh Five Year Plan, 2007-12).

OBJECTIVES OF THE STUDY

The present study aims at realizing following twofold objectives:

1. To examine the growth of education sector in Himachal Pradesh from 1991 to 2010.
2. To examine the inter-district disparities in social sector development in Himachal Pradesh.

Database

The present study is entirely based on secondary data collected from Directorate of Elementary education Himachal Pradesh. The district constitutes the basic unit of study. A part of the required information is also collected from various population census conducted by government of India.

METHODS OF STUDY

In present study the following literacy based indicator used to examine the growth of education sector in Himachal Pradesh.

- a)Literacy rate in Himachal Pradesh
- b)Number of Primary School per 100 sq km.
- c)Number of high school per 100 sq. km.
- d)Number of senior secondary schools per 100 sq km.
- e)Number of primary schools per thousand of population (aged 5-9).
- f)Number of High schools per thousand of population (aged 10-15).
- g)Number of Senior secondary schools per thousand of population (aged 16-18)
- h)Pupil teacher ratio in Primary schools.
- i)Pupil teacher ratio in High Schools.
- j)Pupil teacher ratio in senior secondary schools: Pupil teacher ratio in number of pupil per teacher.
- k)Dropout rate in Primary and High Schools.

In order to find the growth of these literacy based indicators, compound growth rate is calculated by using this formula:

r = (An / Ao)^{1/n -1}

Where r is the rate of growth A_n is the value in the nth year and A₀ is the value in the base year and n is the number of years.

Further, to find out the extent of inter-district disparities, the technique of coefficient of variation is used.

Coefficient of Variation = SD / X x 100

SD: Standard Deviation
X : Mean

STUDY AREA:

Himachal Pradesh is a hilly and mountainous state with an area of 55673 sq km which is 1.69% of total area of India and has 0.57 % of the total population (Census 2011). Geographically, Himachal Pradesh is located between 30° 22' 44" N to 33° 12' 44" E longitude. Presently the study are comprises of 12 districts namely Bilaspur, Chamba, Hamirpur, Kangra, Kinnaur, Kullu, Mandi, Lahaul-Spiti, Shimla, Sirmaur, Solan and Una (Fig 1). The mainstay of the people of the Himachal Pradesh is agriculture on which 67.71% of the population depends for livelihood.

Human resource development is an essential input for providing the economic growth and development in this hilly state. Education and training by imparting knowledge

and skill can play dominant role in Himachal Pradesh to generate human capital. (Economic Survey 2009-2010 Himachal Pradesh, P, 125.)

RESULTS AND DISCUSSIONS

Literacy Rate in Himachal Pradesh

Himachal Pradesh has acquired the status of a highly literate state in the recent year. According to 2011 census data Himachal Pradesh with 83.8% observed 5th rank in term of literacy in India after Kerala (93.9%), Mizoram (91.6%) Tripura (87.8%) and Goa (87.4%).



Fig. 1

Table 1
District- wise Literacy rate in Himachal Pradesh

District	1991			2001			2011*			Compound Growth rate (%)		
	Total Literacy rate	Male	Female	Total Literacy Rate	Male	Female	Total literacy Rate	Male	Female	Total Literacy rate	Male	Female
Bilaspur	70.18	82.36	71.25	79.15	87.28	74.65	85.97	92.19	78.9	6.83	3.9	3.46
Chamba	61.45	73.24	53.26	68.32	78.12	58.45	73.19	84.19	62.14	6	4.75	5.27
Hamirpur	78.69	86.31	73.46	84.33	90.12	79.73	89.01	95.28	83.44	4.19	3.35	3.34
Kangra	72.12	82.39	71.35	79.85	87.39	76.97	86.49	92.55	80.62	6.24	3.95	4.16
Kinnaur	68.47	79.12	65.82	76.62	84.85	68.46	80.77	88.37	71.34	5.66	3.75	2.72
Kullu	70.46	78.89	63.05	76.24	84.95	67.2	80.14	88.80	71.01	4.38	4.62	4.04
Lahaul and Spiti	68.28	79.48	57.27	72.19	83.27	61.29	77.24	86.97	66.50	4.2	3.85	5.11
Mandi	71.36	84.96	66.26	75.31	89.46	69.75	82.81	91.51	74.33	5.09	2.51	3.91
Shimla	75.47	82.39	69.35	79.72	86.27	73.55	84.55	90.73	77.8	4.79	3.27	3.91
Sirmaur	71.29	78.70	66.78	76.86	82.73	69.2	79.98	86.76	72.55	3.91	3.3	2.8
Solan	68.34	79.24	69.34	77.26	86.94	72.45	85.02	91.19	78.02	7.55	4.79	4.01
Una	76.58	83.26	73.21	82.91	88.21	78.37	87.23	92.75	81.67	4.44	3.66	3.71
H. P.	70.89	75.89	61.45	77.48	82.34	69.38	83.78	90.83	76.60	5.73	3.9	7.62
C. V	6.17	4.33	9.41	5.73	3.87	9.23	5.53	3.49	5.55	-	-	-

Source: Population Census of India, 1991, 2001 and *Provisional Population Census 2011

Literacy rate in Himachal Pradesh increased from 70.99 5 in 1991 to 83.8% in 2011, recording a growth rate of

5.73% per annum during the study period. In 1991, Majority of the districts (i.e.8 districts) of the study area recorded literacy rate between 70% and 80%. However, in 2011 entirely different scenario emerged majority of the districts observed literacy rate between 80% and 90%.

At the district level highest growth of literacy recorded in Solan district (7.55%) followed by Bilaspur (6.24%) and Chamba (6.01%). On the other hand Hamirpur district observed highest literacy rate throughout study period, while the district Chamba placed at the bottom with respect to literacy rate in the state. The Table also revealed that in all the districts male literacy continued to be more than female literacy. Male literacy increased from 75.8% in 1991 to 90.83% in 2011, recording a growth rate of 6.17% per annum. In comparison to it, female literacy rate increased from 64.41% in 1991 to 76.69% in 2011, recording a growth rate of 4.91 % per annum.

The literacy gap between male and female was found to be the lowest in Solan (9.90%) followed by Una (10.04%) and Kangra (11.04%) in 1991, while in 2011 it was lowest in Una (11.12%) followed by Kangra (11.93%) and Hamirpur (12.84%). On the other extreme the literacy gap was highest in Lahaul &Spiti (22.21%) followed by Chamba (21.98%) and Mandi (18.70%) in 1991. But in the year 2011, it was highest in Chamba (22.05%) followed by Lahaul % Spiti (20.47%) and Kullu (17.79%) The value of Co-efficient of variation revealed that as compared to 1991 in the year 2011 the extent of disparities with respect to male literacy has marginally declined 3.48% to 3.15%). However, an inter-district disparity with respect to female literacy has marginally moved up from 6.24% to 6.41% during the period under study.

Education is one of the most important component of social sector and the role of education in facilitating social and economic progress is well recognized. In present study various indicators of education are discussed under separate headings:

Number of Primary Schools per 100 sq. km in Himachal Pradesh

An important indicator to study the growth of literacy can be the number of Primary schools per hundred sq. km in the state. The number of primary schools per sq km stood at 18.51% in 1991and rose to 21.31% in the year 2010 (Table 4.1). However, these small averages are highly influenced by small number of primary school (in tern of geographical area) in Lahaul and Spiti and Kinnaur to some extent in Kullu and Chamba district also. Moreover, the analysis revealed that in district Bilaspur followed by Hamirpur and Mandi there are highest number of primary schools per 100 sq. km of the geographical area.

Analysis revealed that number of primary schools in term of geographical area increased at highest rate in district Kullu followed by Chamba and Sirmaur. On the other extreme, some of the district's observed the closure of primary school. Number of primary school per 100 q km on average declined at highest rate in Kangra (1.36%) followed by Hamirpur (1.91%) and Una (1.04%).

The value of the coefficient of variation revealed that there are very high inter-district disparities with respect

to this indicator. The value of coefficient of variation continued to hover around 57.09% during period under context. The high variations are mainly on account of very low value of this indicator in district Lahaul and Spiti and Kinnaur.

Table 2
Number of Primary School per 100 Sq Km in Himachal Pradesh

Distriets	1991	2001	2010	Compound Growth Rate (%)
Bilaspur	50.47	50.29	51.41	0.62
Chamba	16.54	16.45	17.40	1.7
Hamirpur	45.25	45.52	44.99	-0.19
Kangra	31.22	30.54	30.70	-5.6
Kinnaur	2.95	2.96	2.90	0.57
Kullu	12.64	13.19	13.46	2.12
Lahual and Spiti	1.51	1.53	1.50	0.22
Mandi	43.51	43.39	43.94	0.33
Shimla	31.49	31.45	31.41	-0.08
Sirmaur	34.01	34.79	34.79	0.77
Solan	38.99	39.35	39.35	0.31
Una	33.83	32.79	32.79	-1.04
H. P.	18.51	19.44	21.51	1.20
C. V	57.39	57.28	57.09	-

Source: Government of Himachal Pradesh, Elementary Education Statistical, 1991, 2001, 2010, Directorate of Elementary Education.

Number of High School per 100 sq. km in Himachal Pradesh

The number of High school per sq. km in Himachal Pradesh rose from 3.6 in 1991to 5.2 in the year 2010 (Table 2). Throughout the study period, the Hamirpur district has highest number of high school followed by Bilaspur district. In addition, Una, Solan and Mandi also had large number of high schools per sq km. On the contrary, the district Kinnaur followed by Lahaul & Spiti and Chamba on account of their difficult terrain and low density of population were placed low with respect to this indicator. However, in district Sirmaur 21.08% followed by Mandi (20.24%) and Bilaspur (18.13%) the number of high school in term of geographical area recorded highest compound growth rate during study period.

Table 3
Number of High Schools per Sq Km in Himachal Pradesh

Distriets	1991	2001	2010	Compound Growth Rate (%)
Bilaspur	6.34	9.42	10.45	18.13
Chamba	2.31	2.61	3.66	16.58
Hamirpur	7.87	12.34	12.40	16.36
Kangra	4.73	7.10	7.02	14.07
Kinnaur	0.46	0.59	0.59	8.65
Kullu	1.47	1.79	2.34	16.76
Lahual and Spiti	0.20	0.24	0.26	9.14
Mandi	5.24	8.55	9.11	20.24
Shimla	4.38	5.71	6.91	16.41
Sirmaur	4.21	5.55	7.46	21.01
Solan	5.68	7.64	8.72	15.36
Una	5.77	8.24	8.05	11.74
H. P.	3.6	3.7	5.2	12.26
C. V	59.88	65.35	60.3	-

Source: Government of Himachal Pradesh, Elementary Education Statistical, 1991, 2001, 2010, Directorate of Elementary Education.

Number of Senior Secondary Schools per 100 Sq km
It is clear from the table 3 that the number of senior secondary schools per 100 sq. km in Himachal Pradesh increased from 3.4 in 1991 to 4.5 in 2010. The Hamirpur district (11.98) followed by Bilaspur (10.45) recorded highest number of senior secondary schools per 100 sq. km. In addition, tribal districts of Kinnaur, Chamba and Lahaul and Spiti also have large number senior secondary schools per 100 sq. km vis -a-vis other districts of the state. It is also clear from the table 3 that during study period the district Bilaspur (17.09%), followed by Kangra (17.5%) and Solan (16.65%) observed highest growth rate in the number of senior secondary schools per annum. In contrast, in Lahaul & Spiti and Chamba some of the senior secondary school were reverted to high schools. There exits large inter-district disparities with respect to this indicator in the state. The value of Co-efficient of variation stood at 66.12% in the year 2010, this is especially on the account of tribal districts.

Table 4
Number of Senior Secondary Schools per 100 sq. km in Himachal Pradesh

Districts	1991	2001	2010	Compound Growth Rate (%)
Bilaspur	6.51	10.02	10.45	17.09
Chamba	2.87	2.11	2.55	-3.56
Hamirpur	9.48	16.01	11.98	8.11
Kangra	5.2	9.06	8.34	17.05
Kinnaur	0.05	0.64	0.68	138.7
Kullu	1.25	1.79	1.88	14.57
Lahual and Spiti	0.17	0.2	0.13	-8.55
Mandi	5.34	7.89	8.1	14.9
Shimla	4.30	5.94	5.96	11.5
Sirmaur	3.43	4.42	4.99	13.31
Solan	4.8	7.48	6.68	16.656
Una	6.1	8.5	8.76	5.7
H. P.	3.4	3.6	4.5	9.46
C. V	59.88	65.35	60.3	-

Source: Government of Himachal Pradesh, Elementary Education Statistical, 1991, 2001, 2010, Directorate of Elementary Education

Number of Primary Schools per thousand of Population (Age group 5-10)
As far as the number of primary schools per thousand of population concerned, the analysis revealed that on an average there were nearly 16 schools per one thousand of population in 1991 and increased to 21.66 in 2011 with an growth rate of 2.555 per annum (Table 4). The state averages are highly influenced through the high value of Lahaul & Spiti and Kinnaur on account of very low density of population in these districts. The government has started large number of primary institution in these districts, if these two districts are excluded, in the district Shimla, Mandi, and Chamba there are large number of primary Schools per thousand of population over period of time. On contrary, the district Kangra continued to be placed at the bottom with

respect to number of primary schools per thousand population in the state. The extent of inter-district disparities with respect to primary schools per thousand of population has declined over a period of time. The value of co-efficient of variation declined 31.31 percent in 1991 to 25.12 percent in the year 2010.

Table 5
Number of Primary Schools per Thousand of Population in Himachal Pradesh (Age Group 5-10)

Districts	1991	2001	2010	Compound Growth Rate (%)
Bilaspur	15	18	21	1.9
Chamba	16	20	23	3.2
Hamirpur	9	13	16	2.7
Kangra	11	13	15	1.9
Kinnaur	21	26	29	2.8
Kullu	14	18	21	2.8
Lahual and Spiti	27	31	34	7.9
Mandi	16	19	23	3.2
Shimla	19	23	26	2.1
Sirmaur	16	18	20	1.7
Solan	12	15	17	1.7
Una	12	14	19	2.1
H. P.	15.66	19	21.66	2.8
C. V	31.31	28.65	25.12	-

Source: Government of Himachal Pradesh, Elementary Education Statistical, 1991, 2001, 2010, Directorate of Elementary Education

Number of High Schools per thousand of Population (Age group 10-15)
As far as number of high schools per thousand of population (10-15 age group) is concerned, it increased from 2.16 in 1991 to 4.83 percent in the year 2010 recording an average growth rate of 1.2% per annum (Table 5). Again Lahaul & Spiti and Kinnaur continued to record highest number of schools per thousand populations. In all other rest of districts there was either 1 or 2 high school per thousand of population in 1991.However, in the year 2010, in the districts Solan and Shimla there were five high schools per thousand populations. Furthermore in the districts Kangra, Kullu, Hamirpur, Mandi, Una, Chamba, Sirmaur and Bilaspur there were four or less than four high schools per thousand of populations.

The analysis of the co-efficient of variation revealed that the extent of inter-district disparities has declined from 70.71% in 1991 to 58.14% in 2011.

Table 6
Number of High Schools per Thousand of Population in Himachal Pradesh (Age Group 10-15)

Districts	1991	2001	2010	Compound Growth Rate (%)
Bilaspur	2	3	4	.94
Chamba	2	3	4	.98
Hamirpur	1	2	3	.87
Kangra	1	2	3	.94
Kinnaur	3	5	7	1.8
Kullu	1	2	3	.96
Lahual and Spiti	6	10	13	2.8
Mandi	2	3	4	.91
Shimla	2	4	5	1.3
Sirmaur	2	3	4	1.2
Solan	1	3	5	1.9
Una	1	2	3	.99
H. P.	2.16	3.5	4.83	1.2
C. V	70.71	63.89	58.41	-

Source: Government of Himachal Pradesh, Elementary Education Statistical, 1991, 2001, 2010, Directorate of Elementary Education

Number of Senior Secondary Schools per Thousand of Population (Age Group 16-18)

There were about 3.66 senior secondary schools per thousand of population in the state in the year 1991 and this number rose to 7.5 in 2001 recoding a growth rate of 2.1 percent per annum (Table 5). As in case of primary and high schools with respect to senior secondary schools also Kinnaur and Lahaul & Spiti registered highest number of senior secondary schools per thousand of population. As far as the remaining districts are concerned in the year 1991, the district Shimla (%) followed by Bilaspur (4) had highest number of senior secondary schools per thousand of population. In the year 2011 it was Mandi (9) followed by Una (8) recorded the highest number of senior secondary schools per thousand of population. In the districts Bilaspur (2.9) followed by Una (2.8) the number of senior secondary schools increased at the fastest rate. On the contrary in the district Shimla number of senior secondary schools increased at lowest rate (.99%).

Table 7
Number of High Schools per Thousand of Population in Himachal Pradesh (Age Group 16-18)

Districts	1991	2001	2010	Compound Growth Rate (%)
Bilaspur	4	6	8	2.9
Chamba	2	4	6	1.9
Hamirpur	2	5	7	2.1
Kangra	2	5	7	2.1
Kinnaur	7	10	12	2.5
Kullu	3	4	5	1.5
Lahual and Spiti	7	10	12	2.3
Mandi	3	6	9	2.2
Shimla	5	7	6	.99
Sirmaur	3	5	7	1.7
Solan	3	4	5	1.5
Una	3	5	6	2.8
H. P.	3.66	5.91	7.5	2.1
C. V	48.42	35.64	31.91	-

Source: Government of Himachal Pradesh, Elementary Education Statistical, 1991, 2001, 2010, Directorate of Elementary Education

Pupil-Teacher Ratio in Primary Schools

Pupil-teacher ratio is an important indicator of quality of education in a region. In Himachal Pradesh, in the year 1991 there was 1 teacher for 16 students. However, the number of students after the 1 teacher rose to 18 in the year 2010. Pupil-teacher ratio was highest in Kangra districts (24) followed by Hamirpur (23) and Kullu (22) in 1991 whereas in 2010 it was highest in Sirmaur (18) and Solan (18). Besides, Hamirpur (17), Kullu (16) and Chamba (16) also observed relatively high pupil-teacher ratio. In contrast, in 1991 Lahaul & Spiti (7) followed by Kinnaur (16) observed lowest pupil-teacher ratio, while in 2010 in Lahaul & Spiti after every 5 students there was 1 teacher, and in Kinnaur after every 13 students there was a teacher. Although, the pupil-teacher ratio declined in all the districts, yet it declined at highest rate in Lahaul & Spiti (14.97%) followed by Kangra (14.56%) and Kullu (19.56%). On the contrary, it recorded lowest decline in Hamirpur (0.22%) followed by Sirmaur (0.25%). Solan is the only districts where the Pupil-teacher ratio has increased over the period of time (2.08).

The value of coefficient of variation revealed that there were not much marked variations with respect to this indicator. However, the co-efficient of variation moved up marginally from 26.11% in the year 1991 to 27.91% in the year 2010.

Table 7
Pupil Teacher Ratio in Primary School

Districts	1991	2001	2010	Compound Growth Rate (%)
Bilaspur	15.62:1	20.58:1	14.89:1	-1.58
Chamba	18.35:1	22.71:1	16.43:1	-3.62
Hamirpur	23.26:1	20.80:1	17.40:1	-9.22
Kangra	24.27:1	23.77:1	15.41:1	-14.56
Kinnaur	16.01:1	18.13:1	12.71:1	-7.41
Kullu	22.58:1	24.32:1	16.96:1	-9.01
Lahual and Spiti	7.71:1	6.06:1	4.74:1	-14.97
Mandi	19.69:1	21.32:1	15.47:1	-7.37
Shimla	16.92:1	18.65:1	14.83:1	-4.3
Sirmaur	18.85:1	21.94:1	18.71:1	-0.25
Solan	17.59:1	21.81:1	18.71:1	2.08
Una	26.44:1	26.85:1	23.42:1	-3.96
H. P.	16	18	18	1.5
C. V	26.11	25.06	27.91	-

Source: Government of Himachal Pradesh, Elementary Education Statistical, 1991, 2001, 2010, Directorate of Elementary Education

Pupil-Teacher Ratio in High Schools

As far as Pupil-teacher ratio in high schools is concerned (Table 8) in the year 1991, the analysis revealed that on an average in the year for every 31 students there was 1 teacher. While due to increase in the number of teachers the number of students per teacher on an average decline to 23 in the year 2010.In the year 1991, the highest pupil teacher ratio observed in Kangra district (82) followed by Hamirpur (80) and Kullu (74), while Lahual & Spiti (15), Kinnaur (30) and

Chamba (43) recorded low pupil-teacher ratio during the same period. Whereas in 2010 highest pupil-teacher ratio experienced in Kullu (23) followed by Sirmaur 20 and Una (19). The pupil- teacher ratio declined drastically in all the districts of the state. However it declined at the highest rate in Kangra district (43.13%) followed by Hamirpur (43.11%) and Shimla (42.71%). On the contrary, this decline was lowest in Kinnaur (30.69%) followed by Sirmaur (24.54%) and Chamba (31.78%).

The inter-district disparities with respect to this indicator as revealed b value of co-efficient of variation moved down from 36.20% in the year 1991 to 35.63% in the year 2010.

Table 8
Pupil Teacher Ratio in High School

Districts	1991	2001	2010	Compound Growth Rate (%)
Bilaspur	67.23:1	53.16:1	16.13:1	-37.86
Chamba	43.03:1	76.06:1	13.66:1	-31.78
Hamirpur	81.18:1	42.42:1	14.95:1	-43.11
Kangra	81.98:1	38.27:1	15.08:1	-43.13
Kinnaur	30.24:1	33.53:1	10.07:1	-30.69
Kullu	74.24:1	57.34:1	23.27:1	-30.32
Lahual and Spiti	15.00:1	20.58:1	3.41:1	-38.97
Mandi	66.79:1	54.45:1	14.40:1	-40.01
Shimla	54.20:1	34.38:1	10.19:1	-42.71
Sirmaur	47.45:1	56.97:1	20.40:1	-24.51
Solan	54.20:1	37.82:1	15.26:1	-34.46
Una	73.23:1	53.56:1	19.41:1	-35.76
H. P.	31.41	27.39	22.81	-15.10
C. V	36.02	31.77	35.63	-

Source: Government of Himachal Pradesh, Elementary Education Statistical, 1991, 2001, 2010, Directorate of Elementary Education

Pupil-Teacher Ratio in senior secondary Schools

As far as pupil-teacher ratio in senior secondary schools is concerned, it is observed that in the year 1991 for nearly 16 students, there was 1teacher. Throughout the period under study, in Lahual & Spiti district pupil-teacher ratio continued to be exceptionally favourable and for every 7 students there was 1 teacher. It was closely followed by Kinnaur. In Addition, Shimla and Solan in the year 1991 also recorded favourable (less than the state average) pupil-teacher ratio. In the year 2010, in addition to tribal districts Chamba (10) Solan (10) Shimla (10) also recorded favourable (less than the state average) pupil-teacher ratio. In contrast, in the year 1991 Kangra, Chamba and Mandi recorded relative low pupil-teacher ratio. In the year 2010, Una (32) followed by Kullu (28) and Sirmaur (27) the number of students per teacher stood highest. The pupil-teacher ratio declined in all the districts of the state. However, Una is exception to it. On contrary, pupil-teacher ratio declined at the highest rate in Shimla district (20%)

followed by Kullu (18%) and Chamba (17%) district. The extent of inter-district disparities with respect to this indicator as revealed by co-efficient of variation has moved up from 30.98% in 1991 to 55.05% in 2010.

Table 9
Pupil Teacher Ratio in Senior Secondary School

Districts	1991	2001	2010	Compound Growth Rate (%)
Bilaspur	16.38:1	13.37:1	11.69:1	-10.64
Chamba	18.30:1	18.52:1	10.40:1	-17.17
Hamirpur	15.87:1	11.18:1	15.83:1	-0.08
Kangra	18.09:1	11.98:1	13.17:1	-10.04
Kinnaur	10.00:1	8.34:1	08.05:1	-5.27
Kullu	17.26:1	17.33:1	28.51:1	18.21
Lahual and Spiti	6.99:1	5.19:1	6.83:1	7.6
Mandi	18.19:1	18.31:1	14.37:1	-3.69
Shimla	12.20:1	11.73:1	10.90:1	-20.88
Sirmaur	15.06:1	10.86:1	26.60:1	-4.47
Solan	11.70:1	17.93:1	10.20:1	-4.37
Una	16.24:1	16.38:1	32.45:1	14.95
H. P.	15.76	14.72	15.31	-0.76
C. V	30.98	34.01	55.05	-

Source: Government of Himachal Pradesh, Elementary Education Statistical, 1991, 2001, 2010, Directorate of Elementary Education

Dropout rate in Primary schools

The dropout rate (Primary schools) in Himachal Pradesh is very low. However, the dropout rate at primary level in Himachal Pradesh on an average increased from 0.01% in the year 2001 to 0.03% in the year 2010. In 2001, the highest dropout rate observed in Lahaul & Spiti (1.27%) followed by Kinnaur (0.58%), But in 2010 highest dropout rate experienced in Chamba (0.84%) followed by Kinnaur (0.51%). Whereas in 2001 in six districts dropout rate was zero (Chamba, Kangra, Hamirpur, Bilaspur, Solan and Sirmaur), in 2010 it was so only in two districts (Lahaul & Spiti and Bilaspur). The growing overall dropout rate in most of districts of the state is matter of a great concern for the policy makers, whereas in the year 2001 the boys dropout rate on an average stood more than girls (0.01 for girls and 0.007 for boys), while in the year 2010 it was vice-versa. The dropout rate of girls (0.37) stood more than boys (0.29)

Table 10
Dropout Rate in Primary School

Districts	2001			2010			Compound Growth Rate (%)		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Bilaspur	0	0	0	0	0	0	0	0	0
Chamba	0	0	0	0.49	1.15	0.81	0	0	0
Hamirpur	0	0.006	0	0.44	0.27	0.37	0	370.82	380.88
Kangra	0	0	0	0.19	0.26	0.22	0	0	0
Kinnaur	0.553	0.615	0.584	0.59	0.43	0.51	3.29	174.3	16.38
Kullu	0.018	0.013	0.016	0.92	0.92	0.92	64.92	741.24	741.24
Lahaul and Spiti	1.265	1.328	1.297	0	0	0	0	0	0
Mandi	0.012	0.008	0.01	0.16	0.22	0.19	265.15	424.4	424.4
Shimla	0.001	0.009	0.005	0.14	0.16	0.15	1083.22	321.64	321.24
Sirmaur	0.002	0	0	0.19	0.33	0.26	874.68	0	0
Solan	0	0	0	0.52	0.44	0.48	0	0	0
Una	0.047	0.016	0.03	0.2	0.37	0.29	106.28	380.88	380.88
H. P.	0.01	0.007	0.009	0.29	0.37	0.33	438.52	627.03	627.03
C. V	241.77	244.05	243.65	87.7	90.05	82.57	-	-	-

Source: Government of Himachal Pradesh, Elementary Education Statistical, 1991, 2001, 2010, Directorate of Elementary Education

District-wise analysis revealed that in 2001, Lahaul & Spiti, Shimla and Kinnaur the dropout rate of girls was more than that of boys. In contrast, in Kullu, Mandi, Una dropout rate of boys stood marginally more than that of girls. As far as the year 2010 is concerned, it was observed that Mandi, Una and Sirmaur the girl's dropout rate stood more than that of boys, while in remaining districts (except Lahaul & Spiti and Bilaspur) reverse situation was observed. Since in some of the districts there was zero dropout rate, therefore, there is high inter-district variation with respect to this indicator both for boys and girls as revealed by the value of the co-efficient of variation. However, as compared to 1991 in 2010 inter-districts disparities with respect to this indicator both for boys and girls dropout rate has declined.

Dropout rate in High Schools

It is clear from the table 11 that Dropout rate in high schools on an average stood at 0.006% in 2001 and 0.32% in 2010 respectively. Thus as compared to primary institutions dropout rate is observed to be marginally less in high school in the both year under study. In 2001, Kinnaur district (0.2%) observed high dropout rate followed by Chamba (0.05%), while in 2010 dropout rate was highest in Chamba (1.41%) followed by Kullu (1.11%) and Kinnaur (0.591). furthermore in 1991, in 5 district i.e. Mandi, Kangra, Hamirpur, Solan and Shimla the dropout rate stood zero, and in the remaining district observed exceptionally low (less than 01%) dropout rate. In 2010 it was only in Lahaul & Spiti, Hamirpur and Bilaspur that it turned out to be zero. In Chamba, Una Kullu Solan Sirmaur dropout rate has marginally moved up in the year 2010 vis-a-vis 2001. However, in Lahaul and Spiti district the reverse situation was observed.

Table 11
Dropout Rate in High School

Districts	2001			2010			Compound Growth Rate (%)		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Bilaspur	0.002	0.009	0.005	0	0	0	98.21	0	0
Chamba	0.041	0.07	0.054	0.83	2.06	1.4	349.93	442.48	409.18
Hamirpur	0	0	0	0	0	0	0	0	0
Kangra	0	0	0	0.02	0.02	0.02	0	0	0
Kinnaur	0.194	0.284	0.24	0.44	0.73	0.59	50.6	60.33	56.74
Kullu	0.041	0.025	0.033	1.13	1.09	1.11	424.99	560.30	479.97
Lahaul and Spiti	0	0.33	0.027	0	0	0	0	0	0
Mandi	0	0	0	0.25	0.22	0.23	0	0	0
Shimla	0	0	0	0.12	0.13	0.11	0	0	0
Sirmaur	0.032	0.033	0.033	0.07	0.13	0.01	47.9	98.48	74.08
Solan	0	0	0	0.22	0.17	0.2	0	0	0
Una	0.056	0.021	0.039	0.22	0.17	0.2	0	184.52	126.46
H. P.	0.007	0.006	0.006	0.26	0.38	0.32	509.45	695.82	630.3
C. V	182.28	179.71	186.75	131.15	158.0	141.21	-	-	-

Source: Government of Himachal Pradesh, Elementary Education Statistical, 1991, 2001, 2010, Directorate of Elementary Education

Table 11, Further revealed that whereas in 2001 the boys dropout rate was marginally more than that of girls, while in the year 2010 it was vice versa. The district-wise analysis shows that in the year 2001 the Chamba district followed by Lahaul & Spiti, Bilaspur, Sirmaur and Kinnaur observed the girl's dropout rate was more than that of boys. In the year 2010 again in Chamba Sirmaur Shimla and Kinnaur the girl's dropout rate was experienced more than that of boys. There exit large inter-district variations with respect to boys and girls dropout rate in the high schools of Himachal Pradesh. However in 2010 the value of co-efficient of variation with respect to both boys and girls dropout rate has declined.

CONCLUDING REMARKS

On the basis of the analysis of the data at district level following conclusions can be drawn:

The number of primary school per sq. km in the state stood highest in Bilaspur district followed by Hamirpur and Mandi districts. The value of co-efficient of variation suggests that there are very high inter-district disparities with respect to this indicator. On the other side the number of high schools per sq km in Himachal Pradesh were highest in district Hamirpur followed by Bilaspur district. On the contrary, Lahaul & Spiti and Chamba district observed bottom place with respect to this indicator. The number of senior secondary schools per sq km in Himachal Pradesh recorded highest in Hamirpur districts followed by Bilaspur district. In addition the tribal districts of Himachal Pradesh also have large number of senior secondary school per sq km with respect to other districts of the state. There exit a large inter-district disparities with respect to this indicator in the state. The value of co-efficient of variation stood at 66.12 percent in 2001, this is especially on the account of tribal districts.

Literacy rate recorded highest rate of growth in district Solan followed by Bilaspur and Chamba. The Hamirpur district observed highest literacy rate throughout the study period. On the other extreme, district Chamba throughout was placed at the bottom with respect to literacy rate in the state. The analysis also revealed that in all the districts male literacy continued to be more than female

literacy. The literacy gap between male and female was found to be the lowest in Solan (9.90%) followed by Una (10.04%) and Kangra (11.04%) in 1991, while in 2011 it was lowest in Una (11.12%) followed by Kangra (11.93%) and Hamirpur (12.84%). On the other extreme the literacy gap was highest in Lahaul & Spiti (22.21%) followed by Chamba (21.98%) and Mandi (18.70%) in 1991. But in the year 2011, it was highest in Chamba (22.05%) followed by Lahaul % Spiti (20.47%) and Kullu (17.79%). The value of co-efficient of variation revealed that as compared to the year 1991, in 2011 the extent of disparities with respect to male literacy has marginally declined. However an inter-district disparity with respect to female literacy has marginally moved up.

In Himachal Pradesh, in the year 1991 there was 1 teacher for 16 students. However, the number of students after the 1 teacher rose to 18 in the year 2010. Pupil-teacher ratio was highest in Kangra districts (24) followed by Hamirpur (23) and Kullu (22) in 1991 whereas in 2010 it was highest in Sirmaur (18) and Solan (18). Besides, Hamirpur (17), Kullu (16) and Chamba (16) also observed relatively high pupil-teacher ratio. In contrast, in 1991 Lahaul & Spiti (7) followed by Kinnaur (16) observed lowest pupil-teacher ratio, while in 2010 in Lahaul & Spiti after every 5 students there was 1 teacher, and in Kinnaur after every 13 students there was a teacher. Although, the pupil-teacher ratio declined in all the districts, yet it declined at highest rate in Lahaul & Spiti (14.97%) followed by Kangra (14.56%) and Kullu (19.56%). On the contrary, it recorded lowest decline in Hamirpur

In 1991, pupil teacher ratio was recorded one teacher after 16 students in primary schools. While, in 2010 the number of students after the one teacher rose to 18 students. Pupil teacher ratio (primary schools) was highest in district Kangra district followed by Hamirpur and Kullu, while in 2010 pupil teacher ratio was highest in Sirmaur and Solan.

Pupil-teacher ratio in senior secondary schools is concerned; it is observed that in 1991 for nearly 16 students, there was 1 teacher. Throughout the period under study, in Lahual & Spiti district pupil-teacher ratio continued to be exceptionally favourable and for every 7 students there was 1 teacher. It was closely followed by Kinnaur. In the year 2010, in addition to tribal districts Chamba (10) Solan (10) Shimla (10) also recorded favourable (less than the state average) pupil-teacher ratio. The pupil-teacher ratio declined in all the districts of the state. However, Una is exception to it. On contrary, pupil-teacher ratio declined at the highest rate in Shimla district (20%) followed by Kullu (18%) and Chamba (17%) district. The extent of inter-district disparities with respect to this indicator as revealed by co-efficient of variation has moved up from 30.98% in 1991 to 55.05% in 2010.

The dropout rate (Primary schools) in Himachal Pradesh is very low. However, the dropout rate at primary level in Himachal Pradesh on an average increased from 0.01% in the year 2001 to 0.03% in the year 2010. In 2001, the highest dropout rate observed in Lahaul & Spiti (1.27%) followed by Kinnaur (0.58%), But in 2010 highest dropout rate experienced in Chamba (0.84%) followed by Kinnaur (0.51%). Whereas in 2001 in six districts dropout rate was

zero (Chamba, Kangra, Hamirpur, Bilaspur, Solan and Sirmaur), in 2010 it was so only in two districts (Lahaul & Spiti and Bilaspur).

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