



EDUCATION AND INCLUSIVE GROWTH: A STUDY OF HIMACHAL PRADESH

Mr. Tanuj Sharma¹, Dr. Anil Kumar²

¹Assistant Professor, Deptt. of Economics, HPU Summer Hill, Shimla- 05

²Research Investigator, PRC, HPU, Summer Hill, Shimla- 05

ABSTRACT

The role of education in ensuring inclusive growth is very essential. The educational development is an important component for achieving inclusive growth for any state. Himachal Pradesh has progressed tremendously on the educational front, within Indian states Himachal Pradesh stands out as one of the educationally developed state. Due to constant, conscious efforts of political will, administrative involvement and the society by large, the educational status in Himachal Pradesh is improving with each passing year. In present research study an attempt has been made to examine the growth of education and gender parity in accessibility of education in Himachal Pradesh by using secondary data sources with the help of exponential growth function and gender parity index. The results show that during the study period viz; 2010-11 to 2019-20 colleges for general education show highest compound growth rate than of higher/higher secondary schools, while primary and middle schools show negative compound growth rate. Further it is also observed that gender parity is more in favor of female during the study period. Government should ensure adequate numbers of teachers, access of education, affordable education and quality education by appointing qualified and competent faculty in schools and colleges.

1. INTRODUCTION

The most common meaning of the term inclusive is not excluding any section of society but it is a new economic strategy which takes into account the betterment and development of every section of the society without any discrimination. Inclusive growth advances equitable opportunities for economic participants during economic growth with benefits incurred by every section of society. Inclusive Growth model include focus on the equity of health, human capital, environmental quality, social protection, and food security. It implies direct links between the macroeconomic and microeconomic determinants of the economy and economic growth. The microeconomic dimension captures the importance of structural transformation for economic diversification and competition, while the macro dimension refers to changes in economic aggregates. Sustainable economic growth requires inclusive growth. Maintaining this is sometimes difficult because economic growth may give rise to negative externalities, viz; rise in corruption, which is a major problem in underdeveloped economies. Nonetheless, an emphasis on inclusiveness; especially on equality of opportunity in terms of access to resources, and an unbiased regulatory environment is an essential component of successful growth.

Education as an important parameter for Inclusive Growth, it is the most critical element in empowering people with skills and knowledge and giving them access to productive employment in the Future. Availability of education includes the opportunity of education to all students at same Platform. The availability of it to all students is necessary to make students in

touch with current updated educational word. The availability of infrastructural and educational facility is not necessary at the same time they require accessibility to same to all students to benefit from it. All students should get access of those facilities without any bias of gender, religion and socio economic status of students. There is no use of infrastructural and educational facilities even though they are available and accessible if they are not affordable to all students. The affordability of it is also important for inclusive growth of education. The role of teacher who is responsible for delivery of education to students and thus the positive and right attitude of teachers is necessary. So this positivity will get spread in student's attitude and maximum students can take part in education. Education delivery should not include any discrimination. Adaptability includes responsiveness of education or students to social changes and it should be adoptable.

2. OBJECTIVES

- i. To examine the growth of education in Himachal Pradesh.
- ii. To study the gender parity in accessibility of education in Himachal Pradesh.

3. RESEARCH METHODOLOGY

The present study based upon secondary data. The data compiled from the statistical abstract of Directorate of Economics and Statistics Government of Himachal Pradesh. The growth in educational institutions, teacher availability and



students enrolment is worked out with the help of exponential growth function;

$$Y = AB^t$$

Where Y = dependent variable, t = time

By taking logarithms of both sides of the equations it takes the form: $\text{Log } Y = \text{Log } A + t \text{ Log } B$. If we put $\text{Log } A = a$ and $\text{Log } B = b$, then equation becomes $\text{Log } Y = a + bt$, which is linear function with independent variable t and dependent variable Log Y. The compound growth rate calculate as $(\text{antilog } b - 1) \times 100$ and represent uniform rate of change from year to year.

However, the gender parity in education accessibility has been worked out with help of Gender Parity Index (GPI). This index usually measures the relative access to education of males and females. This index is introduced and observed by UNESCO, and in its simplest form it is calculated as the quotient of the number of females by the number of males enrolled in a given stage of education.

$$\text{GPI} = \frac{\text{Value of Indicator for Females}}{\text{Value of Indicator for Males}}$$

A value of GPI equal to 1 indicates parity between both genders. A value lower than 1 will indicate differences in favour of

males, whereas a value near 1 means that gender parity is closer to be achieved.

4. RESULTS AND DISCUSSION

4.1 Growth Trends in Availability of Educational Institutions in Himachal Pradesh

The growth trends in educational institutions in Himachal Pradesh are presented in Table 1. During the year 2010-11, there were 10767 primary schools in Himachal Pradesh, these numbers decreased to 10582 in 2019-20 with a compound growth rate of -0.16 per cent, per annum. During the year 2010-11 there were 2303 middle schools in Himachal Pradesh and same decreased to 1948 in 2019-20 with a compound growth rate of -2.18 per cent, per annum. In case of high/higher secondary schools there were 2094 high/higher secondary schools during the year 2010-11 in Himachal Pradesh and same increased to 2797 in 2019-20 with a compound growth rate of 3.88 per cent, per annum. In case of colleges only 67 colleges were for general education in Himachal Pradesh during the year 2010-11 and these numbers increased to 130 in 2019-20 with a compound growth rate of 3.88 per cent, per annum. At overall level the compound growth rate in educational institutions has been worked out 0.24 per cent, per annum during the study period viz; 2010-11 to 2019-20.

Table-1: Growth Trends in Availability of Educational Institutions in Himachal Pradesh

Sr. No.	Particulars	Primary School	Middle	High/Higher Secondary	Colleges of General education	Overall
1.	2010-11	10767	2303	2094	67	15231
2.	2011-12	10771	2269	2126	67	15233
3.	2012-13	10739	2317	2162	67	15285
4.	2013-14	10650	2321	2191	67	15229
5.	2014-15	10712	2201	2385	80	15378
6.	2015-16	10710	2130	2487	89	15416
7.	2016-17	10724	2064	2641	111	15540
8.	2017-18	10657	1996	2749	118	15520
9.	2018-19	10623	1969	2776	125	15493
10.	2019-20	10582	1948	2797	130	15457
11.	CGR	-0.16	-2.18	3.88	9.37	0.24

Source: Directorate of Economics and Statistics GoHP

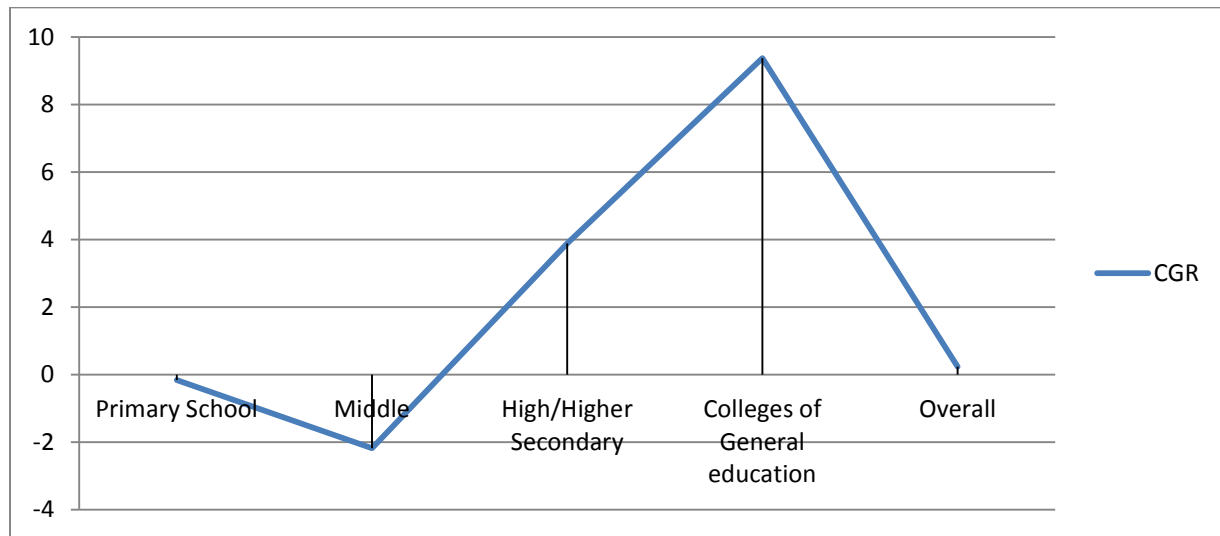


Figure-1: Growth Trends in Availability of Educational Institutions in Himachal Pradesh

Further it is observed that during that during the study period colleges for general education registered highest compound growth rate than of High/higher secondary schools, where as primary and middle schools show negative compound growth rate during the study period. It is also evident from figure 1.

4.2 Growth trends in Availability of Teachers in Educational Institutions in Himachal Pradesh

The growth trends in availability of teacher in educational institutions are presented in Table 2. In Himachal Pradesh during the year 2010-11 26199 teachers were in primary schools and same increased to 22756 teachers in 2019-20 with a compound growth rate of -1.45 per cent, per annum. In middle

schools there were 21859 teachers during the year 2010-11 and in 2019-20 it decreased to 6429 with a compound growth rate of -12.89 per cent, per annum. Further in high/higher secondary schools 25375 teacher were available during the year 2010-11 and same increased to 38779 teachers in 2019-20 with a compound growth rate of 5.52 per cent, per annum. In colleges of general education during the year 2010-11, only 2008 teachers were available and in 2019-20 it increased to 2628 teachers with a compound growth rate of 3.88 per cent, per annum. Whereas by adjoining all the educational institutions together, the compound growth rate in teachers availability in educational institutions has been worked out -0.25 per cent, per annum.

Table-2: Growth trends in Availability of Teachers in Educational Institutions in Himachal Pradesh

Sr. No.	Particulars	Primary School	Middle	High/Higher Secondary	Colleges of General education	Overall
1.	2010-11	26199	21859	25375	2008	75441
2.	2011-12	25817	21003	23472	1938	72230
3.	2012-13	25239	9206*	28641\$	1545	64631
4.	2013-14	25234	9009*	29073\$	1570	64886
5.	2014-15	25827	8073*	30796\$	1681	66377
6.	2015-16	24976	7554*	32727\$	1656	66913
7.	2016-17	25087	6870*	34520\$	1840	68317
8.	2017-18	23909	6614*	36288\$	2039	68850
9.	2018-19	22955	6432*	37527\$	2416	69330
10.	2019-20	22756	6429*	38779\$	2628	70592
11.	CGR	-1.45	-12.89	5.52	3.59	-0.25

Source: Directorate of Economics and Statistics GoHP

*Teachers of Middle Schools only.

\$Teachers of middle classes functioning in High/Sr.Sec.schools are also included

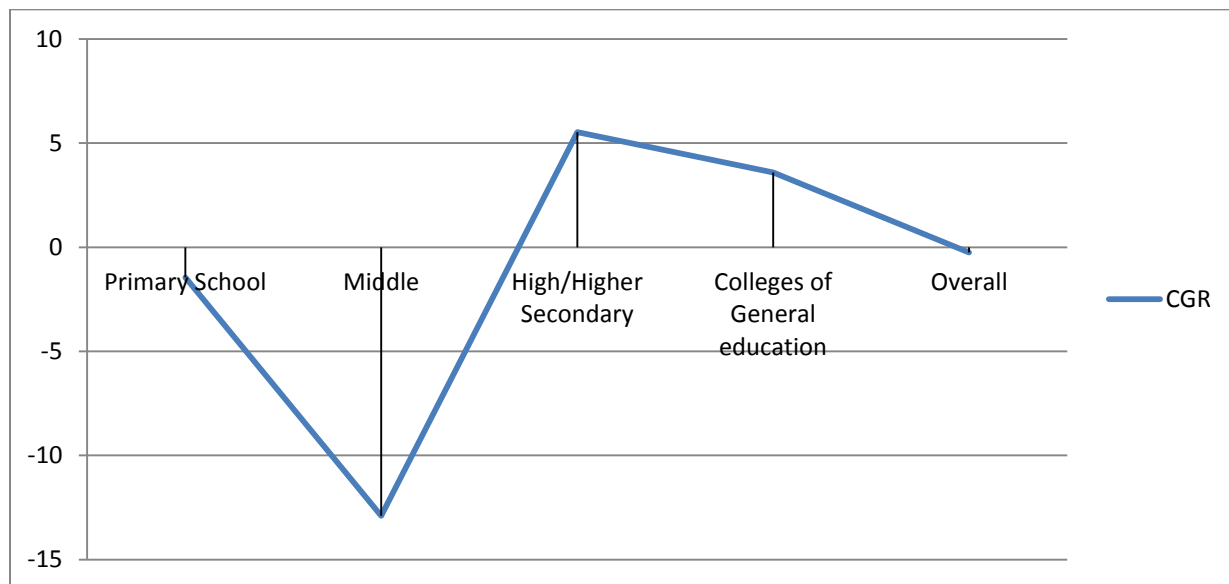


Table-2: Growth trends in Availability of Teachers in Educational Institutions in Himachal Pradesh

4.3 Growth trends in enrolment of student's in Educational Institutions in Himachal Pradesh

The growth trends in enrolment of students in educational institutions are presented in Table 3. This table shows that during the year 2010-10, 421910 students were enrolled in primary schools and these numbers decreased to 290158 students in 2019-20 with a compound growth rate of -4.21 per cent, per annum. In middle school's 311700 students were enrolled during the year 2010-11 and in 2019-20 it decreased to 197205 students with a compound growth rate of -4.56 per cent,

per annum. Further in high/higher secondary schools 400405 students were enrolled during the year 2010-11 and same decreased to 313408 students in 2019-20 with a compound growth rate of -5.35 per cent, per annum. In colleges of general education during the year 2010-11 only 86919 students were enrolled and in 2019-20 it increased to 131642 with a compound growth rate of 6.89 per cent, per annum. Whereas, among all the educational institutions together, the compound growth rate of students enrolment in educational institutions, has been worked out -3.51 per cent, per annum.

Table-3: Growth trends in enrolment of student's in Educational Institutions in Himachal Pradesh

Particulars		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	CGR
Primary School	M	210780	199911	188357	178303	166408	159079	153088	148906	146954	143467	-4.32
	F	211130	202458	192342	182743	171781	164308	157947	153907	151256	146691	-4.10
	T	421910	402369	380699	361046	338189	323387	311035	302813	298210	290158	-4.21
Middle	M	158910	142120	132418	126592	122949	119889	115276	106586	100520	97586	-4.85
	F	152790	138778	130360	126649	124506	122048	116736	108259	101863	99619	-4.27
	T	311700	280898	262778	253241	247455	241937	232012	214845	202383	197205	-4.56
High/Higher Secondary	M	204287	227135	206316	200682	191543	187525	177247	86347	162591	156590	-5.58
	F	196118	213143	200023	192227	181960	178338	169843	84925	160889	156818	-5.11
	T	400405	440278	406339	392909	373503	365863	347090	171272	323480	313408	-5.35
Colleges of General education	M	37837	38489	24385	29932	42220	39446	47041	50958	53322	53795	6.52
	F	49082	51950	43863	43806	46023	58805	67688	76907	79298	77847	7.20
	T	86919	90439	68248	73738	88243	98251	114729	127865	132620	131642	6.89
Overall	M	611814	607655	551476	535509	523120	505939	492652	392797	463387	451438	-3.93
	F	609120	606329	566588	545425	524270	523499	512214	423998	493306	480975	-3.11
	T	1220934	1213984	1118064	1080934	1047390	1029438	1004866	816795	956693	932413	-3.51

Source: Directorate of Economics and Statistics GoHP

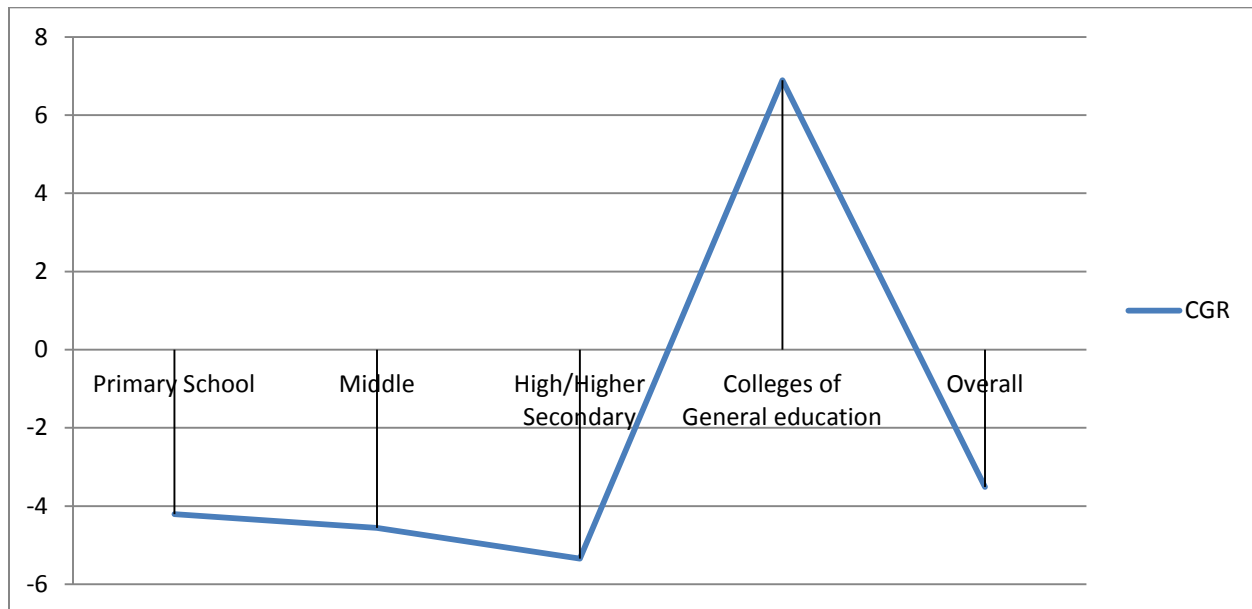


Figure-3: Growth trends in enrolment of student's in Educational Institutions in Himachal Pradesh

4.4 Per Institute Availability of Teacher

Per institute availability of teacher in schools and colleges is presented in Table 4. This table shows that during the year 2010-11, 2.43 teachers available in one primary school and in 2019-20 it decrease to 2.15 teachers in per primary school. In middle school 9.49 teachers available for one middle school during the year 2010-11 and same decreased to 3.30 teachers per

middle school in 2019-20. While in higher/secondary schools 11.02 teachers available for one school during the year 2010-11, and 2019-20 it increased to 19.91 teachers per school. In colleges during the year 2010-11 per college teacher availability was 29.97 teachers and in 2019-20 it decreased to 20.22 teachers per college.

Table-4: Per Institute Availability of Teacher

Sr. No.	Particulars	Primary	Middle	High/Higher Secondary	Colleges
1.	2010-11	2.43	9.49	11.02	29.97
2.	2011-12	2.40	9.26	10.34	28.93
3.	2012-13	2.35	3.97	12.36	23.06
4.	2013-14	2.37	3.88	12.53	23.43
5.	2014-15	2.41	3.67	13.99	21.01
6.	2015-16	2.33	3.55	15.36	18.61
7.	2016-17	2.34	3.33	16.72	16.58
8.	2017-18	2.24	3.31	18.18	17.28
9.	2018-19	2.16	3.27	19.06	19.33
10.	2019-20	2.15	3.30	19.91	20.22

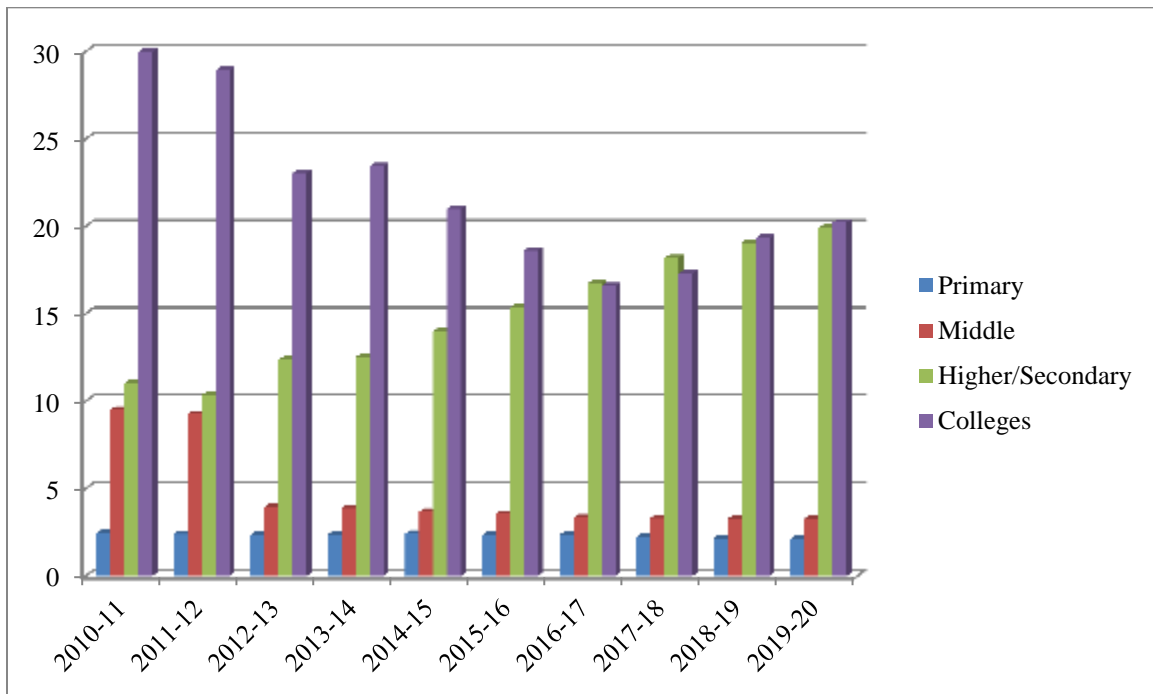


Figure-4: Per Institute Availability of Teacher

From the data it observed that in primary and middle school teacher availability shows decreasing tendency during the study period. In high/higher secondary schools after 2011-12 per school availability of teachers show increasing tendency and in colleges availability of teacher shows decreasing tendency upto 2016-17 and after that it shows increasing tendency.

4.5 Teacher Student Ratio

The teacher student ratio during the year 2010-11 in primary, middle, higher/secondary schools and colleges has

been worked out 16.10, 14.26, 15.78 and 43.29 students per teacher respectively. While adjoining all the institutes together this ratio came out 16.18 students per teacher, whereas during the year 2019-20 teacher student ratio in primary, middle, high/secondary school and colleges has been worked out 12.75, 30.67, 8.08 and 50.09 students per teacher. Among all the institutes together this value came out 16.18 students per teacher.

Table-5: Teacher Student Ratio

Sr. No.	Particulars	Primary	Middle	Higher/Secondary	Colleges	Overall
1.	2010-11	16.10	14.26	15.78	43.29	16.18
2.	2011-12	15.59	13.37	18.76	46.67	16.81
3.	2012-13	15.08	28.54	14.19	44.17	17.30
4.	2013-14	14.31	28.11	13.51	46.97	16.66
5.	2014-15	13.09	30.65	12.13	52.49	15.78
6.	2015-16	12.95	32.03	11.18	59.33	15.38
7.	2016-17	12.40	33.77	10.05	62.35	14.71
8.	2017-18	12.67	32.48	4.72	62.71	11.86
9.	2018-19	12.99	31.47	8.62	54.89	13.80
10.	2019-20	12.75	30.67	8.08	50.09	13.21

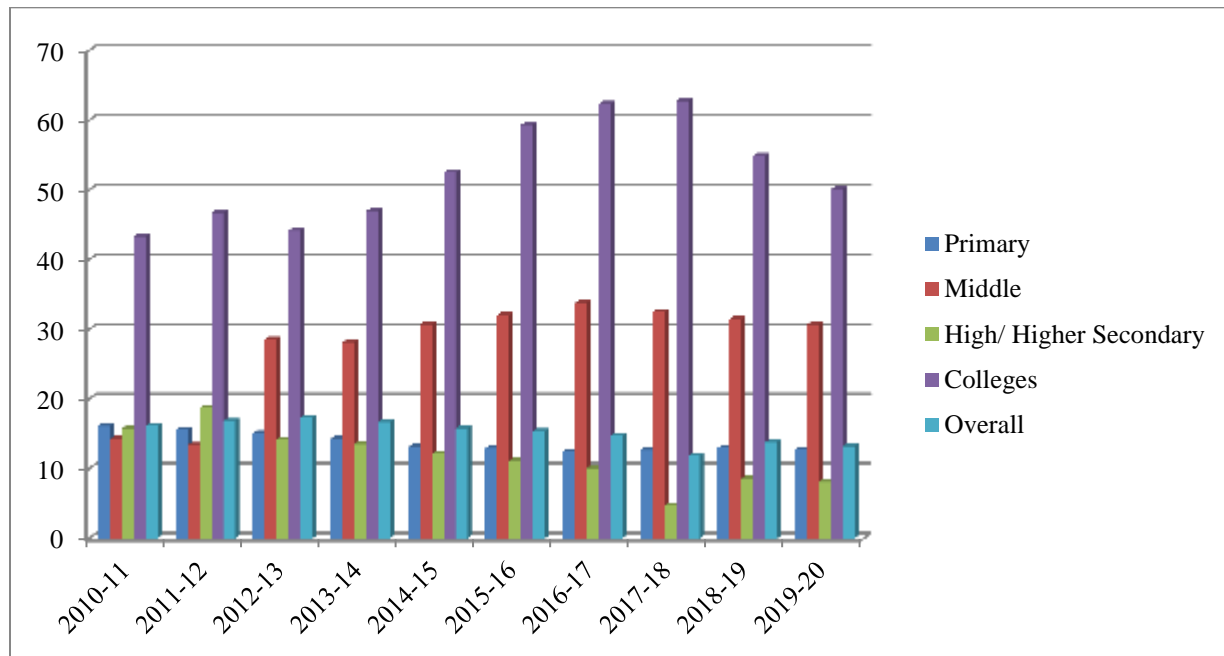


Figure-5: Teacher Student Ratio

4.6 Per Institute Enrolment of students

Per institute enrolment of students in primary, middle, high/ higher secondary school and colleges is presented in Table 6. During the year 2010-11, the per institute enrolment of students has been worked out 39.19, 135.35, 191.22 and 1297.30 students for primary, middle, high/higher secondary and

colleges and whereas at overall level this value came out 80.16 students only. While in 2019-20 it is 27.42, 101.23, 112.05 and 1012.63 students for primary, middle, high/higher secondary and colleges. By adjoining all the institutes together this value came out 60.32 students only.

Table-6: Per Institute enrolment of Students

Sr. No.	Particulars	Primary	Middle	High/ Higher Secondary	Colleges	Overall
1.	2010-11	39.19	135.35	191.22	1297.30	80.16
2.	2011-12	37.36	123.80	207.09	1349.84	79.69
3.	2012-13	35.45	113.41	187.95	1018.63	73.15
4.	2013-14	33.90	109.11	179.33	1100.57	70.98
5.	2014-15	31.57	112.43	156.61	1103.04	68.11
6.	2015-16	30.19	113.59	147.11	1103.94	66.78
7.	2016-17	29.00	112.41	131.42	1033.59	64.66
8.	2017-18	28.41	107.64	62.30	1083.60	52.63
9.	2018-19	28.07	102.78	116.53	1060.96	61.75
10.	2019-20	27.42	101.23	112.05	1012.63	60.32

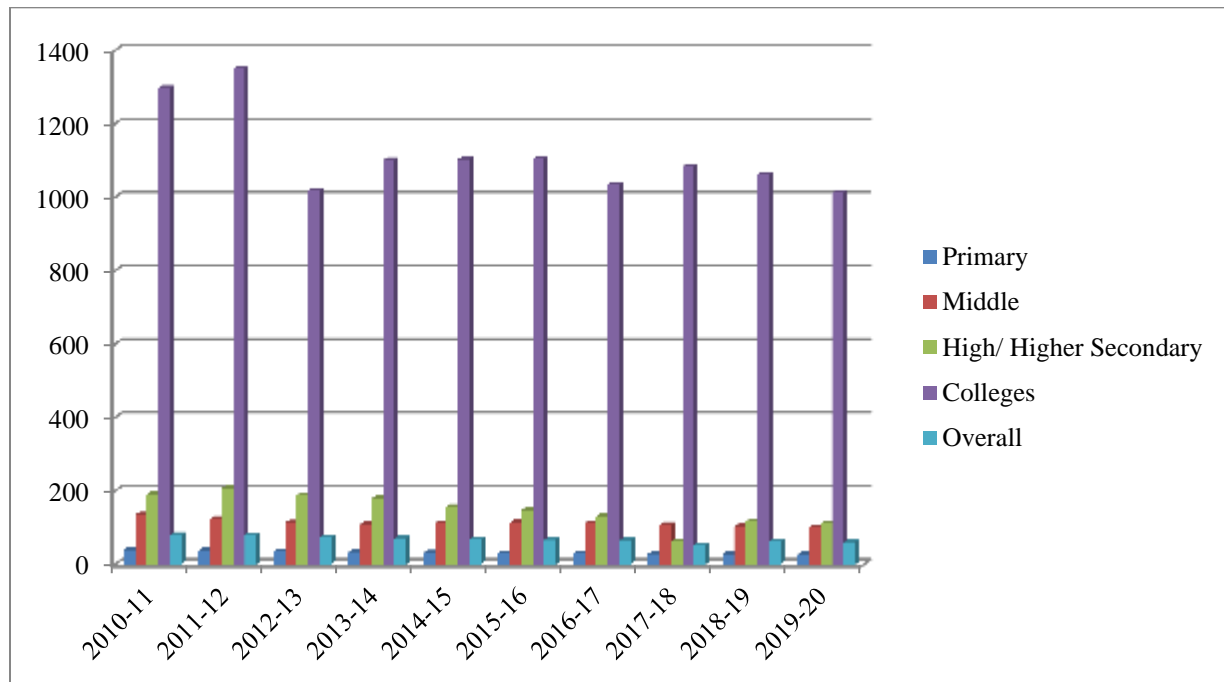


Figure-6: Per Institute enrolment of Students

It is also observed that during 2019-20 per institute enrolment of student is less as compared to 2010-11 enrolment.

4.7 Gender Parity in Education Attainment

The gender parity in education attainment is presented in Table 7. The gender parity during the year 2010-11 in primary,

middle, high/higher secondary and colleges has been worked out 1.00, 0.96, 0.96 and 1.30 respectively. Adjoining all institutes together this value came 1.30. While in 2019-20 it is 1.02, 1.02, 1.00 and 1.45 for primary, middle, high/higher secondary and colleges. At overall level this value came 1.07.

Table-7: Gender Parity in Education Attainment

Sr. No.	Particulars	Primary	Middle	High/Higher Secondary	Colleges	Overall
1.	2010-11	1.00	0.96	0.96	1.30	1.00
2.	2011-12	1.01	0.98	0.94	1.35	1.00
3.	2012-13	1.02	0.98	0.97	1.80	1.03
4.	2013-14	1.02	1.00	0.96	1.46	1.02
5.	2014-15	1.03	1.01	0.95	1.09	1.00
6.	2015-16	1.03	1.02	0.95	1.49	1.04
7.	2016-17	1.03	1.01	0.96	1.44	1.04
8.	2017-18	1.03	1.02	0.98	1.51	1.08
9.	2018-19	1.03	1.01	0.99	1.49	1.07
10.	2019-20	1.02	1.02	1.00	1.45	1.07

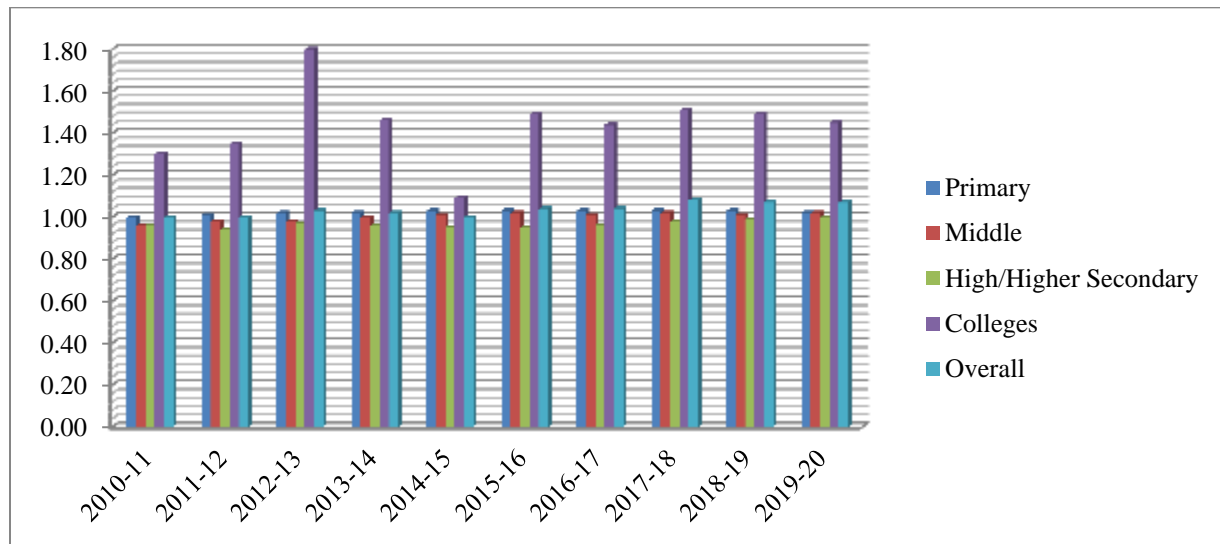


Figure-7: Gender Parity in Education Attainment

From the data it is observed that gender parity is more in favor of female during the year 2019-20 as compared to 2010-11. It is also evident from figure 7.

5. CONCLUSIONS

From the above analysis it can be concluded that there is negative growth rate in numbers of primary, and middle schools. The student enrolment and teacher available in these schools also registered negative growth rate during the study period. While high/higher secondary schools and colleges registered positive growth rate during the study period viz; 2010-11 to 2019-20. Further there is growth in access of education to male and female. The gender parity index shows parity in education in favour of female in Himachal Pradesh.

6. RECOMMENDATIONS

- i. Government should ensure adequate numbers of teachers at primary and middle school levels.
- ii. Efforts should be taken by Government institutions for greater and equal access of education to level of society. More facilities should be provided to females.
- iii. Availability of affordable education for all with equipped infrastructure and education facilities. The use of latest technology should be included in education to increase the access.
- iv. Efforts should be taken to provide quality education by appointing qualified and competent faculty.

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