International Journal of Advanced Research in Management and Social Sciences
ISSN: 2278-6236
Impact Factor: 5.313

GENDER GAP IN HIGHER EDUCATION AND THE CHALLENGES AHEAD: AN ANALYTICAL STUDY OF INDIAN STATES

Dr. Rajrupa Mitra*

Abstract: *Higher education has been portrayed as a great equalizer and a powerful tool of upward social mobility for reducing socio-economic disparities and accomplishing an inclusive society. It is expected that strengthening of the higher education system would increase access to education for women and enable them to pursue careers of their choice and contribute their full potential to the nation. As a matter of fact, education has the latent force in it which can demolish mental, social and economic barriers faced by women and usher in women empowerment in all realms of life. Hence, what is of utmost importance is to expand opportunities of higher education to all women who deserve and desire it. But unfortunately, one of the biggest challenges confronting India's higher education system is gender disparity. Large scale disparities still exist in respect of enrolment rates, access to education etc. India needs to bridge the gender gap in the educational sector, particularly in higher education, on an urgent basis in order to promote gender equity and also to usher in women empowerment. This paper makes an attempt to review the nature and extent of gender disparity in India's higher education system and to assess the performance of the different states and union territories with regard to enrolment rates and gender parity scores. The paper also ranks the top fifteen among the states and union territories according to their percentage of women enrolment, Gross Enrolment Ratio and Gender Parity Index scores and seeks to find out whether the states with high enrolment rates also have high degrees of gender parity. The study reveals that the statistics of enrolment rates and GER do not necessarily reveal the true picture with regard to gender disparities and often gender biases are deeply rooted within the educational systems of the states and union territories which are manifested through low GPI scores.*

Key Words: *Gender disparity, Enrolment, Gross Enrolment Ratio, Gender Parity Index, Women empowerment.*

*Assistant Professor, Department of Economics, Raja Peary Mohan College, Uttarpara, West Bengal

INTRODUCTION

"Educate one man, you educate one person, but educate a woman and you educate a whole civilization". --- Mahatma Gandhi

Needless to say, higher education has a very crucial role to play in improving the quality of life of women, who constitute the most vital resource for building a nation. It is expected that strengthening of the higher education system would increase access to education for women and enable them to pursue careers of their choice and contribute their full potential to the nation. Higher education, apart from enabling women in contributing towards national development, also equips them with critical abilities to face challenges. As a matter of fact, education has the latent force in it which can demolish mental, social and economic barriers faced by women and usher in women empowerment in all realms of life. Hence, what is of utmost importance is to expand opportunities of higher education to all women who deserve and desire it.

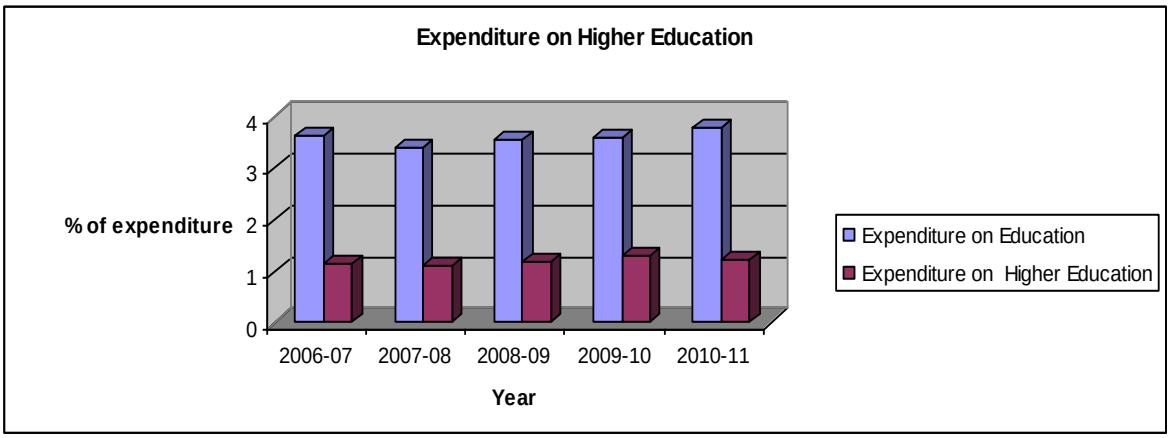
Expansion, inclusion and excellence are the three objectives of the higher education policy of the Government of India. In fact, higher education has been portrayed by the Indian government as a great equalizer and a powerful tool of upward social mobility for reducing socio-economic disparities and accomplishing an inclusive society. India has the 3rd largest higher education systems in the world next to China and USA. But as far as access to higher education is concerned, India's figure (19.4) is significantly less than other countries like US (89), Russia (76), UK (59), Malaysia (40), and China (24). A matter of particular concern in the Indian context is the steep drop-out rate after the elementary level which restricts the enrolment in higher education.

However, the biggest challenge confronting India's higher education system is gender disparity. This situation is distinctly prominent when reviewed through indicators like total enrolment, Gross Enrolment Ratio, enrolment at various levels of higher education, Gender Parity Index etc. Since women constitute 48.5% of the total population of the country, abolishing the gender gap in education is of utmost importance for overall development of the country as well as for empowerment of women. Another grueling problem pertaining to the Indian higher education system is that public sector expenditure has remained very low and amounts to a little over 1% of GDP. While the National Education Policy 1968 and 1986 (revised in 1992) recommends government expenditure on education at 6% of GDP, the expenditure on education was 3.8% and on higher education 1.22% in 2010-11 (BE).

This obviously acts as a deterrent factor in the spread of higher education in the country especially among women, who are still relegated to the background and denied equal status with men.

The figure below shows the percentages of expenditure incurred by the Government of India on higher education and on education as a whole.

Figure 1: Expenditure on Education and Higher Education (as % of GDP)



Source: UGC Higher Education at a Glance, June 2013

The Gender Gap Index (GGI)

The World Economic Forum (WEF) prepares the Gender Gap Index (GGI) which is a composite index comprising the sub-indices of economic participation and opportunities, educational attainment, health and survival and political empowerment. The WEF has stressed that although India is above average with regard to political empowerment, she lags behind in the context of health, education and economic opportunities. The WEF warned that this would turn out to be detrimental to India's growth in future.

The table below shows the ranks and scores of India in the GGI. Improvement in GGI score is marginal as is clearly evident.

Table 1: Gender Gap Index Rank and Score of India

Year	Rank	Score
2006	98 (115)*	0.601
2007	114 (128)	0.594
2008	113 (130)	0.606
2009	114 (134)	0.615
2010	112 (134)	0.615
2011	113 (135)	0.619
2012	105 (135)	0.644
2013	101 (136)	0.655

Source: The Global Gender Gap Report 2013, World Economic Forum

*figures in brackets indicate the total number of countries

Since the focus area of this paper is higher education we show the rank and score of India pertaining to the Educational Attainment Index, in the table below. The scores are very low here as well. As the WEF has already warned, urgent actions need to be taken towards improvement in these figures so as to bring the educational level of Indian women at par with the world standards---otherwise gender inequity in education might thwart developmental goals of the country.

Table 2: Educational Attainment Index Rank and Score of India

Year	Rank	Score
2006	102(115)*	0.819
2007	116 (128)	0.819
2008	116 (130)	0.845
2009	121 (134)	0.843
2010	120 (134)	0.837
2011	121 (135)	0.837
2012	121 (135)	0.852
2013	120 (136)	0.857

Source: The Global Gender Gap Report 2013, World Economic Forum

*figures in brackets indicate the total number of countries

The following table reveals the details of EAI of India in 2013 along with the ranks and scores in various categories. It may be noted from the table that female representation is less in all categories (except primary).

Table 3: Educational Attainment Index of India (2013): Details

Category	Rank	Score	Sample Average	Female	Male	Female to Male Ratio
Overall EAI	120	0.857	0.934			
Literacy rate	123	0.68	0.87	51	75	0.68
Enrolment in primary education	1	1.00	0.92	93	93	1.00
Enrolment in secondary education	111	0.79	0.60	-	-	0.79
Enrolment in Tertiary education	107	0.73	0.87	15	21	0.73

Source: The Global Gender Gap Report 2013, World Economic Forum

It is amply clear from the statistics provided by the WEF that India lags behind the international standards with regard to educational attainment. Therefore, India needs to

bridge the gender gap in the educational sector, particularly in higher education, on an urgent basis in order to promote gender equity and also to usher in women empowerment. Prior to assessing the Indian higher education system on the basis of gender- determined criteria, it is pertinent to review the status of literacy in the country.

Literacy Rates in India

The table below shows the literacy rates in India as computed by the different census.

Table 4: Male- Female Literacy Gap in India (in %)

Census Year	Literacy Rates			Male-Female Literacy Gap
	Male	Female	Total	
1951	27.16	8.86	18.33	18.30
1961	40.40	15.35	28.30	25.05
1971	45.96	21.97	34.45	23.98
1981	56.38	29.76	43.57	26.62
1991	64.13	39.29	52.21	24.84
2001	75.26	53.67	64.83	21.59
2011	82.14	65.46	74.04	16.68

Source: Census 2011

The literacy rate in India has increased from 64.8% in 2001 to 74.04% in 2011. What has been encouraging for the country is increase in female literacy rate (10.9%) has been much higher than the increase in male literacy rate (5.6%). Female literacy increased from 53.67% (Census 2001) to 65.46 % (Census 2011). Besides, out of the total of 217.70 million literates added during the period 2001 to 2011, the number of new women literates (110.07 million) exceeded that of men (107.63 million). The higher rate of increase in the literacy of women has been noted in both rural and urban areas. The increase in female literacy rate (between 2001 and 2011) has been 11.8 percentage points in rural areas and 6.2 points in urban areas. As far as the figures for male literacy are concerned, the increase has been 6.5 percentage points in rural areas and 2.5 points in urban areas. In spite of these encouraging facts, gender gap in education is still very much a cause of concern. Although the gap between male and female literacy rates has come down from 21.6 in 2001 to 16.3 in 2011, it is still quite pronounced. It is worth mentioning that the gap is more prominent in rural areas where it is 19.3% in 2011.

Enrolment in Higher Education

There has been a phenomenal growth in female enrolment in higher education since 2000-01 as may be seen from the table. However, the point that must be mentioned is percentage of female enrolment has always been lower than male enrolment.

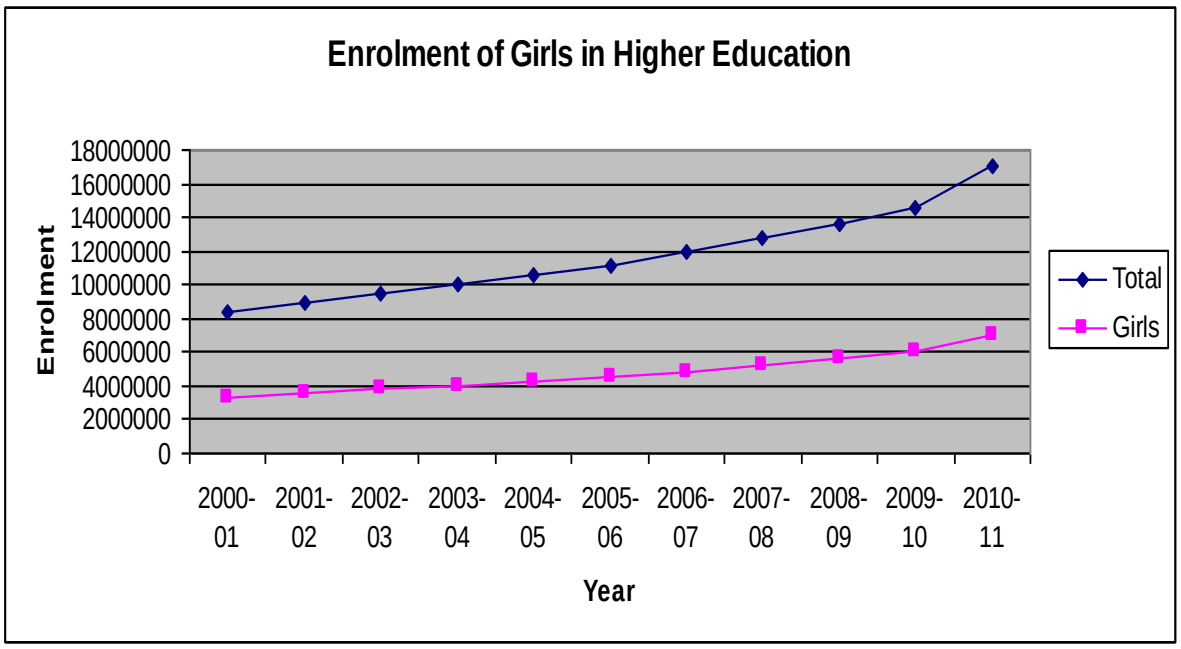
Table 5: Enrolment of students in higher education (%)

Year	% of females enrolled	% of males enrolled
2000-01	39.4	60.6
2001-02	39.8	60.2
2002-03	40.1	59.9
2003-04	40.2	59.8
2004-05	40.4	59.6
2005-06	40.5	59.5
2006-07	40.6	59.4
2007-08	40.6	59.4
2008-09	41.4	58.6
2009-10	41.6	58.4
2010-11	41.5	58.5

Source: UGC, New Delhi

As compared to the rise in total student enrolment, increase in girls' enrolment has been more or less modest. This is depicted in the diagram below.

Figure 2: Enrolment of Girls' in Higher Education



Source: UGC, New Delhi

We now focus on the performance of the states and union territories regarding women enrolment.

Table 6: State-wise enrolment of women in higher education

State	% of Women Enrolment		
	All	SC	ST
Andhra Pradesh	42.16	44.06	40.66
Arunachal Pradesh	40.22	23.21	40.99
Assam	50.36	48.11	49.59
Bihar	39.55	34.95	41.51
Chhattisgarh	44.67	42.26	46.14
Delhi	43.67	40.62	40.83
Goa	49.35	48.86	48.28
Gujarat	41.70	42.39	47.46
Haryana	44.72	42.78	32.28
Himachal Pradesh	47.38	46.73	48.90
Jammu & Kashmir	50.65	48.49	42.85
Jharkhand	43.95	37.74	51.54
Karnataka	45.94	43.57	42.16
Kerala	58.47	64.96	55.41
Madhya Pradesh	39.19	43.63	45.0
Maharashtra	42.38	42.97	36.07
Manipur	52.35	48.94	45.15
Meghalaya	56.84	30.49	62.26
Mizoram	47.82	42.63	48.20
Nagaland	37.57	29.60	38.13
Odisha	43.91	44.56	46.22
Punjab	39.10	39.55	23.90
Rajasthan	39.07	34.48	35.80
Sikkim	42.24	42.85	51.49
Tamil Nadu	46.17	47.73	46.24
Tripura	40.15	38.48	37.85
Uttar Pradesh	49.61	49.36	43.64
Uttarakhand	50.17	49.32	54.68
West Bengal	60.94	40,75	40.02
Andaman & Nicobar Islands	53.67	-	62.66
Chandigarh	43.24	45.0	51.93
Dadra & Nagar Haveli	39.74	36.0	39.71
Daman & Diu	47.62	64.57	33.69
Lakshadweep	-	-	-
Puducherry	48.97	47.32	31.89
All India	44.42	44.31	43.05

Source: AISHE 2011-12 (P)

As far as the overall figures of percentage of women enrolment are concerned, West Bengal, Kerala, Meghalaya, Andaman & Nicobar Islands and Manipur have high scores. On

the other hand, the states/UTs with below national average enrolment are Rajasthan, Madhya Pradesh, Bihar, Nagaland, Tripura, Dadra & Nagar Haveli etc.

Regarding SC enrolment, Kerala, Daman & Diu, Uttar Pradesh, Uttarakhand and Manipur top the list, while Arunachal Pradesh, Jharkhand, Bihar, Meghalaya, Nagaland, Rajasthan, Tripura and Dadra & Nagar Haveli are less than average levels. In the case of ST women, Andaman & Nicobar Islands, Meghalaya, Kerala, Uttarakhand and Chandigarh hold the top five positions. The states/UTs which are lagging behind in this respect are Rajasthan, Punjab, Haryana, Maharashtra, Nagaland, Tripura, Dadra & Nagar Haveli, Daman & Diu and Puducherry.

An important point in this context is that the states like Kerala, Goa, Tamil Nadu, Assam, Himachal Pradesh and Uttarakhand have fared well in case of each category whereas Rajasthan, Bihar, Nagaland, Tripura and Dadra & Nagar Haveli have turned out to be poor performers.

Enrolments at various levels of higher education (through regular mode) are 2.4 crores. The following table shows the breakup of higher education enrolment at various levels and split by gender.

Table 7: Enrolments at various levels of higher education (through regular mode)

Category	Ph.D	M.Phil	Post-graduate	Under-graduate	PG Diploma	Diploma	Certificate	Integrated
Male	47964	12579	1117764	10970156	47625	1206937	42651	34031
Female	29834	12522	986570	9080748	32542	483560	59174	20638

Source: ASHE 2013

It can be seen from the table that for the female the highest share of enrolment is at the under-graduate level followed by post-graduate and Diploma. But what is significant is male enrolment at each level of higher education exceeds that of female. The reverse picture is seen only in case of Certificate courses which, for obvious reasons, is of lesser importance than the other categories.

The stream-wise enrolment at under-graduate level is shown below for both male and female.

Table 8: Enrolment at under-graduate level by streams-India

Streams	Male	Female
Arts/Humanities/Social Sciences	3172697	3129519
Engineering & Technology	1518401	621090
Commerce	1068429	763135
Science	785058	682568
Electronic Engineering	349605	192873
Computer Engineering	280332	195538
Computer Science/ Computer Application	254262	147012
Medical Sciences	175250	201623
Mechanical Engineering	335360	20766

Source: ASHE 2013

The same scenario can be noted in this case as well. Lesser female participation is clearly evident in case of highly specialized and technical streams like different branches of engineering except medical sciences. Since majority of the women enroll in non-technical and/or general streams (which are less job-oriented), their possibility of securing a well-paid job and becoming financially independent gets severely restricted. This obviously negates women empowerment to a considerable extent.

Those who do not opt for general streams, opt for diploma courses. Here also percentage of women enrolment falls short of enrolment of men by a huge margin.

Table 9: Post School Diploma (Polytechnics etc)

Year	% of women enrolment	% of men enrolment
2005-06	21.88	78.12
2006-07	21.90	78.10
2007-08	24.05	75.95
2008-09	26.31	73.69
2009-10	22.26	77.74
2010-11	24.64	75.36

Source: All India Survey of Higher Education 2010-11

Since post-school diploma is often looked upon as a job-oriented course, meagre women enrolment in this course limits the scope of their entry into the job market directly.

Distance education has become one powerful medium of obtaining degrees for large number of students who are staying in far off and remote areas and for whom accessing universities on regular basis is still a dream. It constitutes around 12% of the total enrolment in higher education, of which around 40% are female students. It is often

preferred by women since it can be pursued from their homes and does not involve rigorous formalities as in the case of regular education. We now try to draw a comparative picture between male and female enrolment in regular and distance modes of education.

Table 10: Enrolment in Higher Education Regular and Distance Mode

Mode	Male	Female	Total
Regular	13479707	10705588	24185295
Distance	1986852	1327602	3314454

Source: Educational Statistics

Although regular education, by far, exceeds distance enrolment, both female and male enrolment in distance education is quite substantial.

It is imperative for us to understand the higher education system on various social parameters.

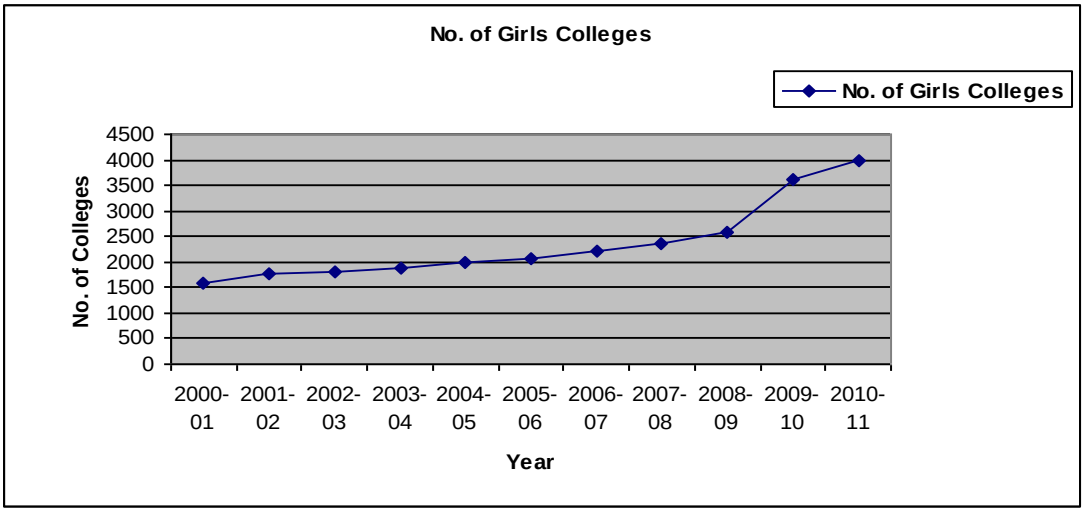
Table 11: Student, Faculty and Staff—Gender and Social Representation (%)

Indicator	Male	Female	SC	ST	OBC	Muslim	Other Minorities
Share of Population	51.5	48.5	19.9	8.6	42.3	12.9	4.7
Share of Enrolment	56.2	43.8	11.1	4.4	27.6	6.0	2.9
Share of Teaching Staff	62.7	37.3	6.9	2.2	21.3	2.9	3.2
Share of Non-Teaching Staff	75.1	24.9	12.1	3.7	23.7	2.4	2.5

Source: Census 2011, India Human Development Report 2011, AISHE, MHRD 2011.

In terms of representation of the various social groups and gender in teaching and non-teaching staff, the above table shows that the females are significantly under-represented among the faculty and staff in higher education institutes as compared to their male counterparts.

Figure 3: No. of Girls' Colleges in India



Source: Annual Report 2011-12

Existence of sufficient number of colleges and universities in the country is necessary for boosting up enrolment of women in higher education. It is also important that these educational institutions cater to the preferences and needs of all the women candidates unbiasedly. We take a look at the number of girls, colleges in the country, which is depicted in the figure below.

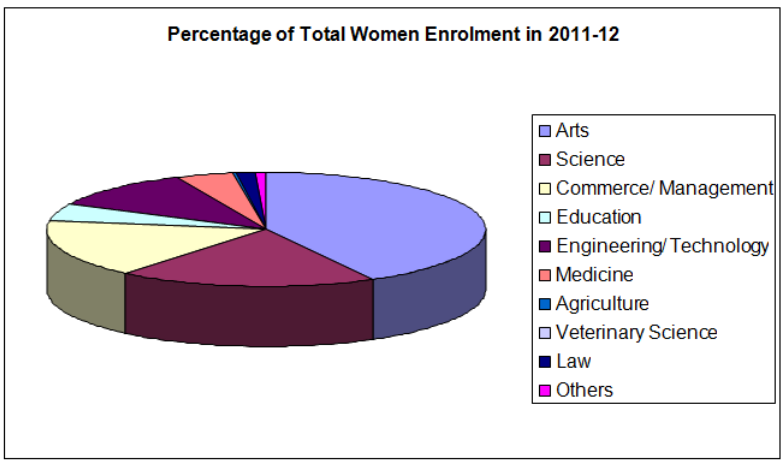
The number of girls' colleges in the country shows an increasing trend. However, even now-a-days exclusively women colleges constitute only 8.6% of all colleges and women universities constitute 1.10% of all universities in the country which is undoubtedly very low. This further restricts the scope of those women who wish to enrol in higher education. The percentage of women enrolment (faculty-wise) for the year 2011-12 is shown in the figure below.

Table 12: Women Enrolment Faculty-wise 2011-12

Faculty	Percentage of Total Women Enrolment
Arts	41.91
Science	19.17
Commerce/ Management	16.31
Education	4.94
Engineering/ Technology	11.06
Medicine	4.04
Agriculture	0.29
Veterinary Science	0.08
Law	1.24
Others	0.96
Total	100.0

Source: Annual Report 2011-12

Figure 4: Percentage of Total Women Enrolment Faculty-wise 2011-12



The table and figure show that women enrolment is the highest in Arts followed by Science and Commerce. Women enrolment in the faculties of Agriculture, Veterinary Science and Law is negligible.

Table 13: Enrolment in Major Programmes(%)

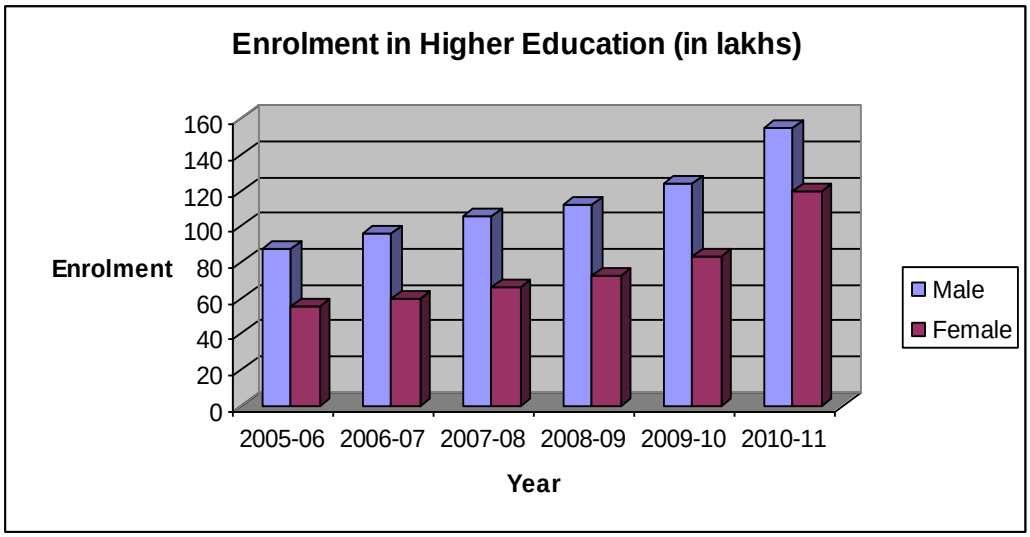
Name of Programme	Male	Female	Total
M. A. – Master of Arts	3.10	5.08	3.98
M.B.A. – Master of Business Administration	2.79	1.85	2.37
M. Sc.- Master of Science	1.71	2.46	2.04
M.C.A.- Master of Computer Application	1.02	0.88	.96
M.Com- Master of Commerce	0.73	1.05	0.87
M. Tech- Master of Technology	0.58	0.38	0.49
M.E. – Master of Engineering	0.26	0.23	0.25
M.S.W.- Master of Social Work	0.14	0.12	0.13
M. Pharm.- Master of Pharmacy	0.14	0.12	0.13
M.Ed. – Master of Education	0.12	0.15	0.14
B. A.- Bachelor of Arts	22.42	29.93	25.74
B.Com- Bachelor of Commerce	10.87	11.24	11.04
B. E.- Bachelor of Engineering	10.08	5.37	7.99
B. Tech.- Bachelor of Technology	9.28	5.17	7.46
B. Sc.- Bachelor of Science	8.16	10.85	9.35
B.C.A.- Bachelor of Computer Applications	2.14	1.47	1.84
B.B.A.- Bachelor of Business Administration	1.60	1.19	1.42
B.Ed.- Bachelor of Education	1.19	2.7	1.89

Source: AISHE 2011-12 (P)

Female enrolment is the highest in B.A., followed by B.Com and B.Sc. In the general streams (both in case of Bachelor Degree and Masters Degree) female enrolment is higher than male enrolment. This is true for Arts, Science, Commerce and also Education. However, in case of specialized and expertise oriented professional courses like M.B.A., M.C.A., M.Tech, M.E., B.E., B.Tech and B.B.A female enrolment is much less as compared to male enrolment. This points at the inadequacy of our higher education system to cater to the priorities of job-oriented programmes. It also becomes apparent that women still prefer to opt for conventional courses wherein opportunities are limited.

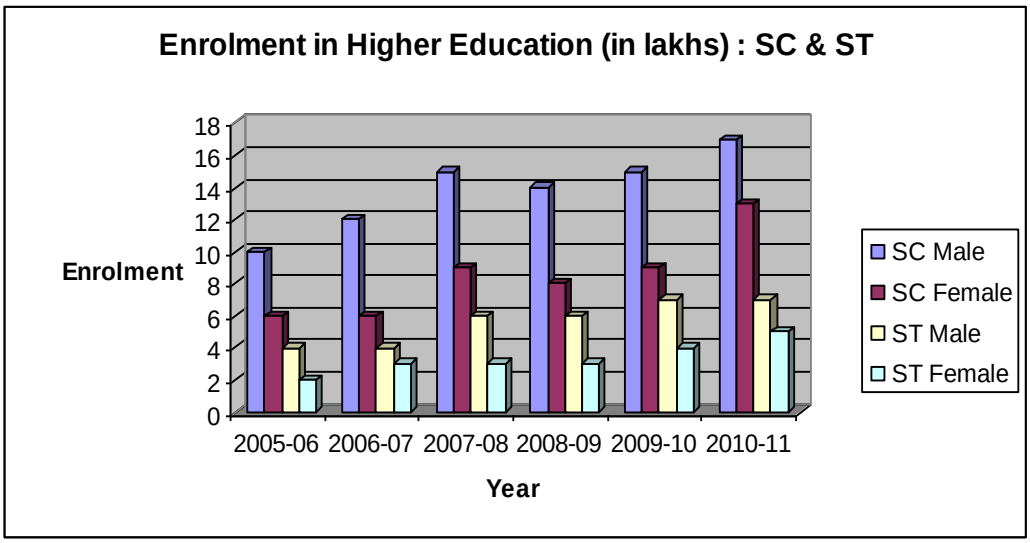
We show below the enrolment in higher education for all, SC and ST candidates.

Figure 5: Enrolment in Higher Education (in Lakhs): All



Source: Educational Statistics

Figure 6: Enrolment in Higher Education for SC & ST Students (in lakhs)



Source: Educational Statistics

In higher education the overall enrolment is highly skewed and is indicative of sufficient degree of gender disparity. In the year 2010-11, eg, total enrolment in higher education was 275 lakhs comprising 155 lakhs males (56.4% of total) and 120 lakhs females (43.6% of total). The scenario is also pathetic in case of backward classes with SC and ST enrolments being 43.3 % and 41.7 % of the total enrolments respectively in 2010-11.

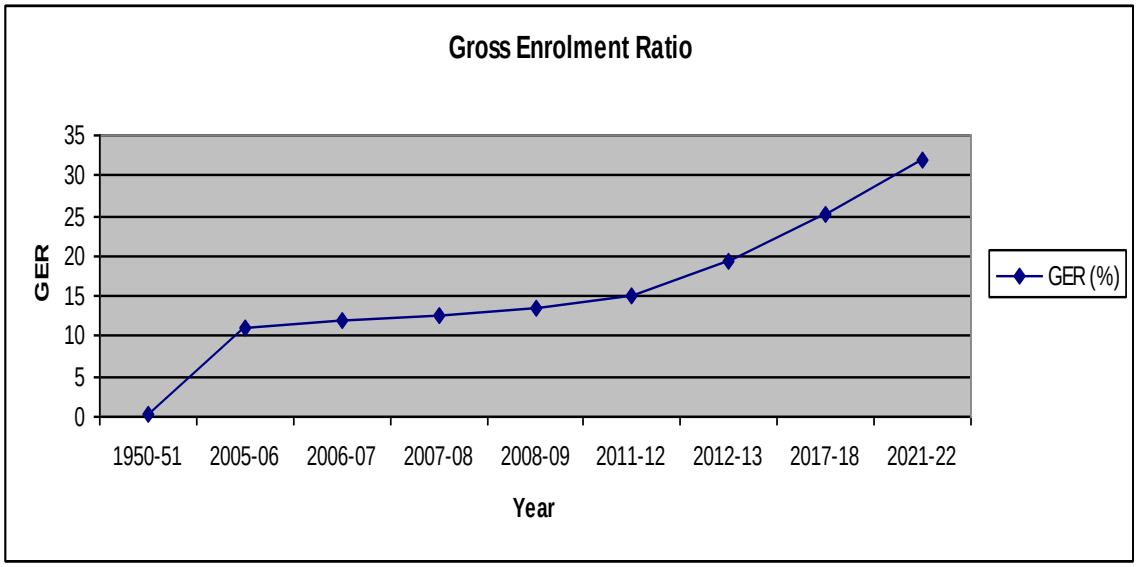
Gross Enrolment Ratio (GER) in Higher Education

After a review of the overall enrolment figures, we lay focus on the Gross Enrolment Ratio (GER). It is the ratio of the number of students enrolled in higher education to the total

population in that age group. GER is important because it determines accessibility to education. For female students and, in particular, for the students from disadvantaged backgrounds, the lack of financial resources and challenging social conditions limit access to higher education.

The figure below depicts the evolution of the GER of India since 1950-51 till 2012-13 as well as the projected values for 2017-18 and 2021-22. Though there is a consistently increasing trend in the values of GER, India still lags behind the world average and other developing countries in this regard.

Figure 7: Gross Enrolment Ratio in India



Source: RUSA 2013

We now present the GER figures for different categories of population, males and females.

Table 14: Gross Enrolment Ratio in Higher Education (18-23 years)

Year	Male	Female	Total
2001-02	9.3	6.7	8.1
2002-03	10.3	7.5	9.0
2003-04	10.6	7.7	9.2
2004-05	11.6	8.2	10.0
2005-06	13.5	9.4	11.6
2006-07	14.5	10.0	12.4
2007-08	15.2	10.7	13.1
2008-09	15.8	11.4	13.7
2009-10	17.1	12.7	15.0
2010-11	20.8	17.9	19.4

Source: Educational Statistics

Table 15: Gross Enrolment Ratio in Higher Education (18-23 years): SC & ST Students

Year	SC			ST		
	Male	Female	Total	Male	Female	Total
2001-02	7.7	3.6	5.8	5.8	2.6	4.2
2002-03	8.0	3.7	6.0	5.6	2.4	4.0
2003-04	8.3	4.3	6.4	6.2	3.1	4.7
2004-05	8.1	5.2	6.7	6.3	3.5	4.9
2005-06	10.1	6.4	8.4	8.6	4.7	6.6
2006-07	11.5	6.9	9.4	9.5	5.5	7.5
2007-08	13.2	8.6	11.0	12.4	6.7	9.5
2008-09	12.5	8.3	10.5	11.6	6.7	9.2
2009-10	13.0	9.0	11.1	13.1	7.5	10.3
2010-11	**14.6**	**12.3**	**13.5**	**12.9**	**9.5**	**11.2**

Source: Educational Statistics

Due to specific strategies adopted by the 11th Plan, India experienced the transition from an 'elite' system of higher education to a 'mass' system with the GER crossing the 15% mark. But even now the GER in India is very low at 19.4. The GER of SCs is 13.5 and that of STs is 11.2, which are far below the national average. Besides, what is of much concern is there exists wide gender gap in the GER in the country which is clearly evident from the tables above. Lesser number of women enrol in higher education due to certain socio-cultural factors and furthermore, inadequate infrastructural support reduce their participation.

The government has set the target of a GER of 30% by 2020 which requires boosting up of enrolment from around 14 million to 40 million. Moreover, the Twelfth Plan also aims at creation of additional employment capacity of 10 million which has to raise the GER to 25.2% in 2017-18.

We now focus on the figures of GER across the different Indian states.

Table 16: Gross Enrolment Ratio in Higher Education in States and Union Territories

State	**All Categories**			**Scheduled Caste**			**Scheduled Tribe**		
	Male	**Female**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
Andaman & Nicobar Islands	11.6	14.9	13.1	-	-	-	14.4	25.9	20.0
Andhra Pradesh	31.8	23.4	27.6	25.9	20.4	23.1	25.6	16.6	21.0
Arunachal Pradesh	36.9	24.9	30.9	-	-	-	43.8	27.4	35.1
Assam	14.5	14.2	14.4	11.9	11.4	11.7	14.4	12.9	13.6
Bihar	14.7	11.2	13.1	10.5	6.0	8.3	12.2	9.3	10.8
Chandigarh	52.4	53.8	53.0	19.4	19.0	19.2	-	-	-
Chhatisgarh	12.1	9.9	11.0	10.0	7.5	8.8	5.6	4.6	5.1

Dadra & Nagar Haveli	6.2	7.1	6.5	6.7	5.2	6.1	1.6	1.0	1.3
Daman & Diu	3.0	7.6	4.2	10.7	22.7	16.2	18.1	9.2	13.6
Delhi	35.7	33.6	34.8	19.7	15.6	17.8	-	-	-
Goa	34.9	40.4	37.4	27.5	27.5	27.5	22.0	21.1	21.6
Gujarat	19.3	15.7	17.6	19.6	16.2	18.0	10.1	9.4	9.7
Haryana	28.4	27.3	27.9	18.8	16.9	17.9	-	-	-
Himachal Pradesh	25.7	24.2	25.0	14.3	12.8	13.5	21.0	19.7	20.4
Jammu and Kashmir	22.6	24.9	23.7	2.8	2.8	2.8	2.3	1.8	2.0
Jharkhand	9.1	7.6	8.4	6.5	4.2	5.4	3.9	3.9	3.9
Karnataka	25.2	22.8	24.0	17.1	13.7	15.4	14.4	11.0	12.7
Kerala	19.3	26.9	23.1	12.3	22.7	17.5	11.4	13.2	12.3
Lakshadweep	0.0	0.0	0.0	-	-	-	0.0	0.0	0.0
Madhya Pradesh	19.8	14.6	17.4	12.0	11.1	11.6	7.6	6.2	6.9
Maharashtra	29.7	24.8	27.4	27.1	22.5	24.9	15.9	9.1	12.5
Manipur	32.3	34.4	33.4	76.7	72.4	74.5	24.8	20.5	22.7
Meghalaya	14.3	18.3	16.4	48.6	24.0	37.0	8.6	13.4	11.1
Mizoram	21.6	19.6	20.6	98.2	128.6	109.2	21.8	19.5	20.6
Nagaland	22.0	13.7	17.9	-	-	-	21.3	13.1	17.2
Odisha	18.4	14.3	16.3	10.2	8.1	9.1	8.4	6.6	7.5
Puducherry	39.1	35.1	37.1	36.8	30.6	33.5	-	-	-
Punjab	22.6	17.1	20.0	9.3	7.0	8.2	-	-	-
Rajasthan	20.8	14.9	18.0	14.6	8.9	12.0	16.6	9.7	13.2
Sikkim	31.2	24.4	27.9	40.0	28.2	33.9	17.4	18.2	17.8
Tamil Nadu	41.1	35.2	38.2	28.7	25.6	27.1	34.2	27.9	31.0
Tripura	14.2	9.1	11.6	12.3	7.7	10.0	7.7	4.1	5.8
Uttar Pradesh	15.6	18.1	16.8	11.5	13.7	12.5	20.8	16.9	18.9
Uttarkhand	26.5	27.9	27.2	16.3	16.7	16.5	27.4	32.6	30.0
West Bengal	14.7	10.7	12.8	10.0	7.1	8.6	7.2	4.6	5.9

Source: AISHE 2011-12

We now try to compare the female GER across the Indian states. The states/UTs with above average female GER are Chandigarh, Goa, Tamil Nadu, Puducherry, Manipur and Delhi. These rates are far below the national average in West Bengal, Dadra & Nagar Haveli, Daman & Diu, Chhattisgarh, Bihar, Assam, Odisha, Jharkhand, Madhya Pradesh and Tripura. Needless to say, this is quite an alarming situation with majority of the states having nominal female GER values.

The situation is even worse in case of backward classes and most of the states depict large scale disparities with regard to access to education. In case of SC women, GER is highest for Mizoram, Manipur, Puducherry, Sikkim and Goa and very low for West Bengal, Punjab, Tripura, Odisha, Madhya Pradesh, Jharkhand, Jammu & Kashmir, Assam, Bihar and Dadra &

Nagar Haveli. The top performers in case of ST female GER are Uttarakhand, Tamil Nadu, Arunachal Pradesh, Andaman & Nicobar Islands, Goa and Manipur. The below average performers are West Bengal, Tripura, Odisha, Madhya Pradesh, Jharkhand, Jammu & Kashmir, Chhattisgarh and Dadra & Nagar Haveli.

Gender Parity Index (GPI) in Higher Education

Gender Parity Index (GPI) in enrolment at any level of education is the ratio of the number of female students enrolled to the number of male students enrolled at that level. A GPI of 1 indicates parity between the sexes or no gender disparity. A GPI that varies between 0 and 1 typically means a disparity in favour of males whereas a GPI greater than 1 indicates a disparity in favour of females. In general, at the national level the number of girls enrolled is lesser than the number of boys. However, the female-male ratio has been improving over the years. The importance of education for inclusive development has been acknowledged through the Millennium Development Goals (MDGs) as well. The third MDG is promotion of gender equality and empowerment of women. This involves elimination of gender disparity in all levels of education, no later than 2015.

The GPI values are shown in the table below for general students, SC and ST students. There have been significant increases in the values for each category. However, all the values are below unity which is indicative of the existence of gender disparity against women.

Table 17: Gender Parity Index in Higher Education

Year	General Students	SC Students	ST Students
2005-06	0.69	0.63	0.55
2006-07	0.69	0.60	0.58
2007-08	0.70	0.65	0.54
2008-09	0.72	0.66	0.58
2009-10	0.74	0.69	0.57
2010-11	0.86	0.84	0.74

Source: Educational Statistics

The GPI values in higher education for the Indian states are shown in the table for 2011-12. This enables us to form an idea about the performance of the states with regard to reduction of gender disparity.

Table 18: Gender Parity Index in Higher Education

State/UT	GPI
Andhra Pradesh	0.74
Arunachal Pradesh	0.67
Assam	0.98
Bihar	0.76
Chhattisgarh	0.82
Delhi	0.94
Goa	1.16
Gujarat	0.81
Haryana	0.96
Himachal Pradesh	0.94
Jammu & Kashmir	1.10
Jharkhand	0.84
Karnataka	0.90
Kerala	1.39
Madhya Pradesh	0.74
Maharashtra	0.84
Manipur	1.07
Meghalaya	1.28
Mizoram	0.91
Nagaland	0.62
Odisha	0.78
Punjab	0.76
Rajasthan	0.72
Sikkim	0.78
Tamil Nadu	0.86
Tripura	0.64
Uttar Pradesh	1.16
Uttarakhand	1.05
West Bengal	0.73
Andaman & Nicobar Islands	1.28
Chandigarh	1.03
Dadra & Nagar Haveli	1.15
Daman & Diu	2.53
Lakshadweep	0
Puducherry	0.90
All India	0.88

Source: Ministry of Human Resource Development, GOI

The states/UTs with GPI scores exceeding one are Daman & Diu, Kerala, Meghalaya, Andaman & Nicobar Islands, Goa, Uttar Pradesh, Dadra & Nagar Haveli, Jammu & Kashmir, Manipur, Uttarakhand and Chandigarh. This is quite a positive result because it indicates that the GPI is tilted towards the females. Interestingly, Dadra & Nagar Haveli is in this

category although its figures in many aspects of enrolment are quite low. States which are little short of complete parity are Assam, Haryana, Delhi, Himachal Pradesh, Mizoram, Puducherry and Karnataka. On the other hand those displaying high levels of gender disparity are Nagaland, Arunachal Pradesh, Rajasthan, West Bengal, Madhya Pradesh, Bihar, Punjab, Odisha and Sikkim.

Status of Gender disparity in the Indian states

We now rank the top 15 states and union territories of India on the basis of their scores of percentage of women enrolment, GER and finally GPI. Such a comparison will enable us to assess whether the states with high enrolment ratios have been able to reduce disparities in gender.

At first the ranking of the states and union territories on the basis of percentage of women enrolment is shown in the table below.

Table 19: Rank in percentage of women enrolment

Ranks	Rank in % of women enrolment (All)	Rank in % of women enrolment (SC)	Rank in % of women enrolment (ST)
1	West Bengal	Kerala	Andaman&Nicobar Islands
2	Kerala	Daman&Diu	Meghalaya
3	Meghalaya	Uttar Pradesh	Kerala
4	Andaman&Nicobar Islands	Uttarakhand	Uttarakhand
5	Manipur	Manipur	Chandigarh
6	Jammu& Kashmir	Goa	Jharkhand
7	Assam	Jammu& Kashmir	Sikkim
8	Uttarakhand	Assam	Assam
9	Uttar Pradesh	Tamil Nadu	Himachal Pradesh
10	Goa	Puducherry	Goa
11	Puducherry	Himachal Pradesh	Mizoram
12	Mizoram	Chandigarh	Gujarat
13	Daman&Diu	Odisha	Tamil Nadu
14	Himachal Pradesh	Andhra Pradesh	Odisha
15	Tamil Nadu	Madhya Pradesh	Chhattisgarh

As far as enrolment of women in higher education is concerned, the most consistent performers, i.e. high scorers in all categories are Kerala, Tamil Nadu, Goa, Assam, Himachal Pradesh and Uttarakhand. The other notable performers are Meghalaya, Andaman&Nicobar Islands, Manipur, Jammu& Kashmir, Uttar Pradesh, Puducherry, Mizoram, Odisha, Daman&Diu and Chandigarh. The states of West Bengal, Andhra Pradesh, Gujarat,

Chhattisgarh, Madhya Pradesh, Sikkim and Jharkhand have been erratic performers that is to say scoring well in only one category.

Next, we depict the ranks of the states and union territories in accordance with the values of the female Gross Enrolment Ratios.

Table 20: Ranks in Female GER

Ranks	Rank in Female GER (All)	Rank in Female GER (SC)	Rank in Female GER (ST)
1	Chandigarh	Mizoram	Uttarakhand
2	Goa	Manipur	Tamil Nadu
3	Tamil Nadu	Puducherry	Arunachal Pradesh
4	Puducherry	Sikkim	Andaman&Nicobar Islands
5	Manipur	Goa	Goa
6	Delhi	Tamil Nadu	Manipur
7	Uttarakhand	Meghalaya	Himachal Pradesh
8	Haryana	Daman&Diu & Kerala	Mizoram
9	Kerala	Maharashtra	Sikkim
10	Arunachal Pradesh & Jammu & Kashmir	Andhra Pradesh	Uttar Pradesh
11	Maharashtra	Chandigarh	Andhra Pradesh
12	Sikkim	Haryana	Meghalaya
13	Himachal Pradesh	Uttarakhand	Kerala
14	Andhra Pradesh	Gujarat	Nagaland
15	Karnataka	Delhi	Assam

GER of females is a very important determinant of gender parity in education. Goa, Tamil Nadu, Manipur, Kerala, Uttarakhand, Sikkim, Andhra Pradesh are very consistent in this regard featuring within the top 15 in each category. The rank holders featuring in either of the two categories are Chandigarh, Puducherry, Delhi, Haryana, Arunachal Pradesh, Himachal Pradesh, Mizoram, Meghalaya and Maharashtra.

Finally, in the table below we show the rankings on the basis of the Gender Parity Index.

Table 21: Rank in Gender Parity Index

Rank in GPI	State/ UT
1	Daman&Diu
2	Kerala
3	Meghalaya & Andaman&Nicobar Islands
4	Goa & Uttar Pradesh
5	Dadra & Nagar Haveli
6	Jammu&Kashmir
7	Manipur

8	Uttarakhand
9	Chandigarh
10	Assam
11	Haryana
12	Delhi & Himachal Pradesh
13	Mizoram
14	Karnataka & Puducherry
15	Tamil Nadu

The top 15 states/UTs in the context of GPI scores have not stayed within the top 15 in the cases of the educational indicators studied viz. percentage of women enrolment (for all, SC and ST categories) and GER of females (also for all, SC and ST categories). The states which have ranked in case of each of the indicators are Kerala, Tamil Nadu, Goa and Uttarakhand. They have also succeeded in reducing disparities in education to a significant extent. Himachal Pradesh, Meghalaya, Manipur, Puducherry, Mizoram and Chandigarh have also performed fairly well in the context of enrolment ratios and reduction in disparities. Although West Bengal ranks first in all over women enrolment, its scores are very low in case of other indicators. Thus an obvious conclusion which may be deduced is mere high enrolment figures do not necessarily imply high GER and GPI. This may be due to high drop out rates in higher education i.e. those who enroll in the courses drop out before completion.

The north-eastern states of Manipur, Meghalaya, Mizoram and Assam have succeeded in bridging the gender gap in education and have GPI scores favouring women. This result is quite significant since these states are quite backward economically and gender parity in education can go a long way in initiating women empowerment. Sikkim and Arunachal Pradesh, in spite of having high female GER, have failed to reduce disparities in education while Tripura lags behind in all the indicators and also has high gender disparity. Besides, the states and union territories like Rajasthan, Bihar, Nagaland, Jharkhand, Madhya Pradesh, Chhattisgarh, Odisha and Dadra & Nagar Haveli have low enrolment rates and do not feature among the top-rankers in the GPI.

CONCLUSION

The indispensability of higher education among women has been well recognized. Higher education is the most vital instrument for social and economic transformation in the society

as well as for horizontal and vertical mobility. Consequently, it must be designed so as to address the issues of access, equity and excellence in a coordinated manner. An analysis of the Indian states on the basis of certain indicators of higher education reveals that large scale divergences still exist with regard to enrolment figures. It is imperative for us to note that statistics of enrolment rates and GER do not necessarily reveal the true picture with regard to gender disparities. As has been noted in the case of many states and union territories, gender biases are deeply rooted within the educational systems which are manifested through low GPI scores.

The Rashtriya Uchchatar Shiksha Abhiyan (RUSA), which is the landmark scheme of Ministry of Human Resource Development, Government of India, highlights wide disparities in the higher education system. It is a centrally sponsored scheme for higher education which will be spread over the 12th and 13th Plan periods and will focus on improving the access, equity and quality in higher education through planned development of higher education at the state level. The 12th Plan aims at increasing enrolments in higher education and reducing the gender gap in literacy to less than 10% .These are quite ambitious targets and difficult to achieve in a country like India, where high levels of gender disparities are still predominant and the sex ratio (940 women : 1000 men) indicate stronger preference for the male child. Although gender gap in literacy has come down over the years, yet, a lot still remains to be done in transforming this into a fruitful demographic dividend. Higher education, perhaps, is the most crucial factor which leads to the accomplishment of human development and this, in turn, leads to gender equity and women empowerment.

Accessibility of higher education by women is not sufficient, alone, to curb the problems plaguing India's higher education sector. Hence, what is of utmost importance is attainment of gender based equity and parity coupled with increased accessibility. It is only then that the true benefits of education may be reaped and empowerment of all sections of women, irrespective of class, caste and creed, may be accomplished. This will undoubtedly accelerate the pace of development in the country. Indeed, Pt. Jawaharlal Nehru had aptly remarked "In order to awaken people, it is the woman who has to be awakened. Once she moves, the country moves and thus we build the India of tomorrow".

REFERENCES

1. Rashtriya Uchchatar Shiksha Abhiyan (RUSA), National Higher Education Mission, September 2013, Ministry of Human Resource Development, Government of India, in association with the Tata Institute of Social Sciences .
2. Higher Education in India at a Glance, University Grants Commission, New Delhi, June 2013.
3. The Global Gender Gap Report 2013, World Economic Forum, October 2013.
4. Educational Statistics at a Glance, Government of India, Ministry of Human Resource Development, Bureau of Planning, Monitoring and Statistics, New Delhi, November 2013.
5. Annual Report 2011-12, Ministry of Human Resource Development, Government of India.
6. Twelfth Five Year Plan (2012-2017), Economic Sectors, volume II, Planning Commission, Government of India.
7. India Human Development Report 2011, Towards Social Inclusion, Institute of Applied Manpower Research, Planning Commission Government of India.
8. Annual Status of Higher Education in States and Union Territories 2013, Deloitte.
9. All India Survey on Higher Education 2011-12, Ministry of Human Resource Development, Government of India.
10. Millennium Development Goals, India Country Report 2014, Social Statistics Division, Ministry of Statistics and Programme Implementation, Government of India.