

Status of Indian Women in Higher Education

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Abstract

Women education and empowerment are the indicators of development. Women education ensures the holistic and long development. It includes equitable and increased access to technical and vocational education and training, higher education and research with due attention to quality assurance. This communication has taken a look on women participation through women higher education institutes, women enrolment as compared with population. The participation in terms of distribution of institutes and enrolment has been studied for the years 2011-2016. The trend has been found as increasing but slow. Correlations have also been studied.

Key Words: women population, women enrolment, women teachers, correlation coefficient, regression

1. Introduction

'To educate your women first and leave them to themselves, they will tell you what reforms are necessary'- Swami Vivekananda.

Higher education makes a vital contribution to sustainable development through the generation and dissemination of knowledge. The effective management of this domain merits top priority at a time when universities worldwide face critical challenges due to the unprecedented expansion yet drastically reduced resources of higher education. The numerous and complex issues facing society moreover demand that social investment in institutions of higher education is fully justified in terms of its return to the community.

The under-representation of women in higher education management is well documented and serves to demonstrate that the pool of managerial talent within each country is not optimally utilized. Current practices of recruitment and promotion require urgent investigation in order to understand the barriers to women's progress and to identify strategies to bring about a fairer gender balance based on professional equality.

Women managers working in diverse socio-cultural and geographical contexts analyse the obstacles which they have faced and overcome during their careers. Four principal themes emerge: the general participation of women in education; the extent of their involvement in higher education management, including impediments to their advancement; the development of strategies to surmount these career limitations; and the particular contribution of women to the management of higher education.

As the 21st century approaches, women graduates face exciting perspectives. Increasingly, they will be strongly urged to assume their rightful place in the decision-making process - both in the systems and institutions of higher education and also in the various professions for which they have studied. As this dual role is of the greatest importance for society, women merit strong encouragement in these endeavours.

In spite of advances, women have made in many areas of public life in the past two decades, in the area of higher education management they are still a long way from participating on the same footing as men. With hardly an exception the global picture is one of men outnumbering women at about five to one at middle management level and at about twenty or more to one at senior management level. Women deans and professors are a minority group and women vice-chancellors and presidents are still a rarity.

'The position of women in higher education management cannot be treated in isolation from the general status of women in society, and from the general aims of economic and social development'- writes Rafica Hammoud. Access to education' is a telling indicator of women's status in a given society. Cultural perceptions of the roles which women are expected to fill are reflected in the extent to which women participate in formal education and the type of education to which they have access. In seeking to explain the under-representation of women in higher education management we turn first to consider the equity in participation of girls or women in education, to reflect on the reasons for this phenomenon and to highlight its adverse consequences. Primary level education is now widely available in all of the countries studied and opportunities for secondary and higher education are increasing.

Increasing retention rates in India suggest that young people recognise that in the new technological era their job prospects will be bleak without some form of higher level education. The rising aspiration for further education is placing increasing pressure on governments to expand all forms of post-higher secondary education or higher education.

Even where economic and technological development has progressed beyond the agrarian model, these attitudes persist, informing expectations and behaviours. It is this narrow definition of the female role which limits girls' access to education, causes early attrition and restricts them to traditional female areas of study.

The higher education system in India is massive and structurally diverse with 4.3 million students in 196 university level institutions. At base a British colonial system, it has undergone a major expansion since independence, which has generally broadened access to education. Women's entry into higher education and employment came via the nurturing professions; nursing and teaching, towards the end of the last century, largely as a result of the efforts of social reformers to improve the lot of widows and other marginalised women. Gandhi affirmed the importance of education for women but this did little to change entrenched social attitudes. The barrier to education for women -in India was the persistent belief that women should not deign to take paid employment although voluntary work was acceptable. The «bold exceptions» who pursued a profession for personal fulfilment usually did not marry. Economic factors in more recent times have broken down the

resistance to women working to supplement family incomes and today women are well represented in many occupations. However access to higher education is often restricted for girls who live in rural areas or in towns without colleges or universities.

This overview of the participation of women in higher education shows that women are benefitting from the expansion of educational opportunity and in some countries like the United States, Canada, the Caribbean, Finland and France have equaled or overtaken men in terms of their proportion of gross enrolments. Women offer immense potential to contribute to the skills base of their countries and in many places represent a sadly under-utilised resource. It may be that those governments who have been slow to respond to discrimination against women in education may be swayed by arguments which emphasise the benefits to the country as a whole in developing the human resource potential that women represent. Improving access to higher education requires the legislative back-up to support changes in cultural attitude. Formal requirements for gender balance in the provision of financial assistance and scholarships have proved effective in increasing the participation of women in higher education.

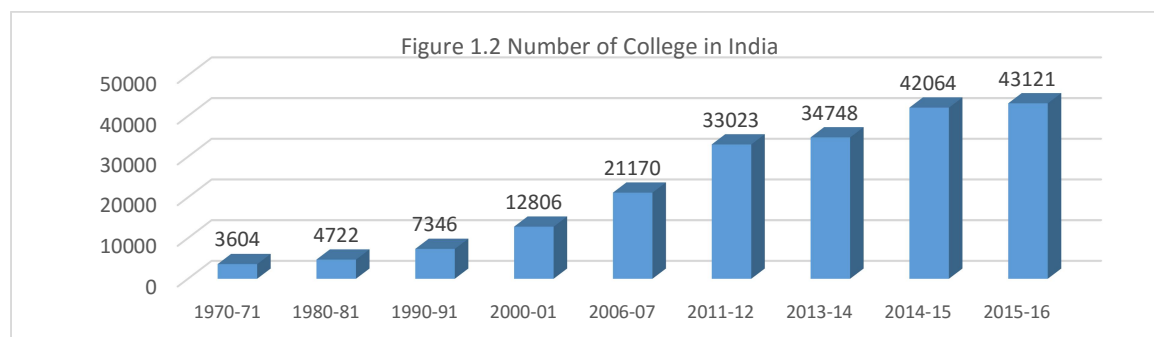
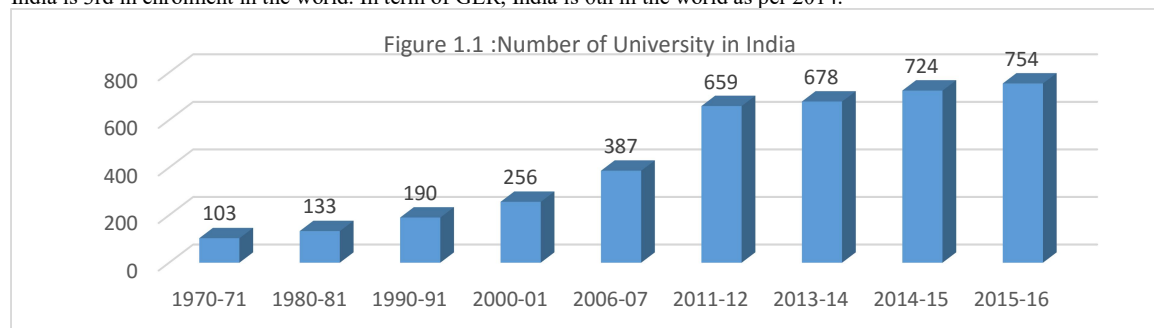
Women education in India has been a major preoccupation of both the government and civil society as educated women can play a very important role in the development of the country. One cannot neglect the importance of education in reference to women empowerment in India is poised to become a developed country by 2020. The growth of women's education in rural India is very slow. Education of women is the most powerful tool of change of position in society. In spite of EFA programme, the position of girl's education has not changed a lot according to determined parameters for women. It is observed that the rate of women education is increasing but not in proper manner (Kumar).

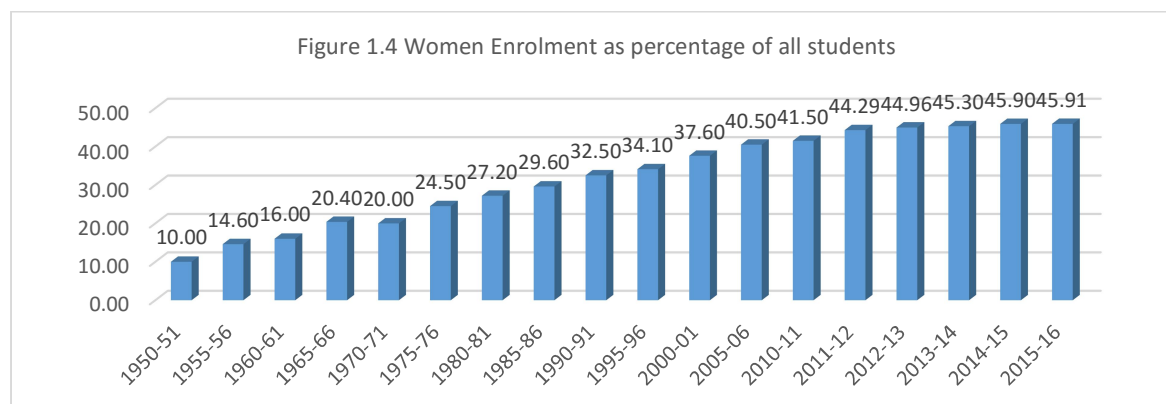
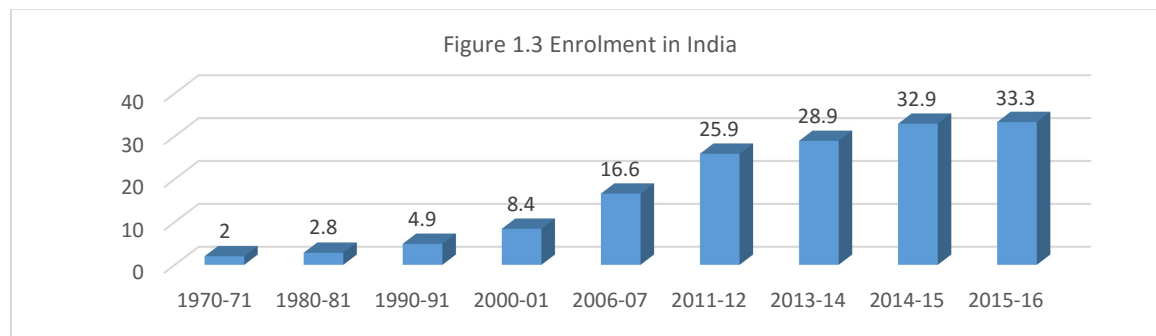
2. Data

All India Survey on Higher Education (AISHE) has been taken as main source of data. The population data have been shared from Census 2011 and reports of Ministry of Human Resource Development (MHRD). The following variables are being used for analysing the higher education growth for women considering AISHE survey data for the years 2011-2012, 2012-2013, 2013-2014, 2014-2015 and 2015-2016. The reports were available from the portal www.aishe.gov.in. The reports are considered and the following variables are being considered for analysis – Population in the age group 18-23 years for the year 20xx-yy (P_{xx}), Percentage of Institutes for women as per AISHE 20xx-yy (X_{xx}), Percentage of General Institutes for Women as per AISHE 20xx-yy (Y_{xx}), Percentage of Professional Institutes for Women as per AISHE 20xx-yy (Z_{xx}), Percentage of Other Institutes for Women as per AISHE 20xx-yy (W_{xx}), Percentage of women teachers in higher level as per AISHE 20xx-yy (TH_{xx}), Percentage of women teachers in middle level as per AISHE 20xx-yy (TM_{xx}), Percentage of women teachers in lower level as per AISHE 20xx-yy (TL_{xx}), Percentage of women teachers as per AISHE 20xx-yy (TW_{xx}), Percentage of female enrolment above PG level as per AISHE 20xx-yy (EH_{xx}), Percentage of female enrolment at PG level as per AISHE 20xx-yy (EP_{xx}), Percentage of female enrolment at UG level as per AISHE 20xx-yy (EU_{xx}), Percentage of female enrolment at Other level as per AISHE 20xx-yy (EO_{xx}), Percentage of female enrolment as per AISHE 20xx-yy (EW_{xx}). 26 states of India have been considered here due to the reason of availability of reliable data in the sources. The states considered are - Andhra Pradesh, Assam, Bihar, Chandigarh, Chhattisgarh, Delhi, Goa, Gujarat, Haryana, Himachal Pradesh, Jammu and Kashmir, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Odisha, Puducherry, Punjab, Rajasthan, Tamil Nadu, Telangana, Tripura, Uttar Pradesh, Uttaranchal and West Bengal.

3. Analysis

India is 3rd in enrolment in the world. In term of GER, India is 6th in the world as per 2014.





The volume has been increased through the number of institutions (both university & college) and the enrolment. Percentage of women institutes in India is 10.17 in the year 2011-12. It increases to 10.72 in the year 2015-16. In the year 2015-16, states having percentage of women institutes below national value are Uttarakhand, Tripura, Orissa, Maharashtra, Madhya Pradesh, Kerala, Karnataka, Jammu & Kashmir, Himachal Pradesh, Goa, Chhattisgarh, Bihar, Assam & Andhra Pradesh. It is maximum in Chandigarh and then Rajasthan.

Table 1.1 showing the percentage of women Higher Education Institutes (HEIs) for the years 2011-2016

STATE	X ₁₁	X ₁₂	X ₁₃	X ₁₄	X ₁₅
Andhra Pradesh	8.94	8.99	8.15	7.84	7.84
Assam	8.40	7.58	6.94	6.91	6.90
Bihar	8.44	9.09	10.49	11.02	11.20
Chandigarh	31.82	29.17	30.43	25.00	25.00
Chhattisgarh	7.76	7.61	6.95	6.61	6.60
Delhi	16.15	16.13	16.89	14.65	14.57
Goa	2.17	2.04	1.96	3.51	3.51
Gujarat	8.33	8.31	8.17	7.89	7.89
Haryana	16.41	16.20	15.34	14.51	14.62
Himachal Pradesh	6.93	7.35	8.23	8.16	8.13
Jammu and Kashmir	6.47	6.53	5.30	5.28	5.26
Jharkhand	12.05	11.66	8.91	8.93	8.71
Karnataka	6.12	6.22	7.11	7.32	7.32
Kerala	7.01	6.93	6.51	6.25	6.24
Madhya Pradesh	8.30	7.60	7.39	5.76	5.74
Maharastra	6.81	6.11	6.17	7.10	7.10
Odisha	8.24	9.89	8.89	8.62	8.62
Puducherry	11.63	10.26	11.11	9.30	9.30
Punjab	18.50	19.65	21.45	20.48	20.56

Rajasthan	24.97	25.44	25.45	25.43	25.50
Tamil Nadu	15.57	15.70	15.76	15.57	15.57
Telangana	12.05	11.79	11.32	9.97	9.97
Tripura	4.76	4.17	4.44	3.77	3.77
Uttar Pradesh	11.18	12.36	12.61	13.08	13.11
Uttaranchal	8.24	7.92	6.76	6.96	6.96
West Bengal	10.40	10.04	9.49	8.52	8.52
INDIA	10.17	10.03	10.20	10.70	10.72

Percentage of women population susceptible (18-23 years of age) for higher education in 2011-12 was 47.74 which increases to 48.21 in 2015-16. Percentage of women enrolment in India was 44.29 in the year 2011-12 which increases to 45.91 in the year 2015-16. In 2015-16, the states having percentage of women enrolment less than national value are Andhra Pradesh, Bihar, Delhi, Gujarat, Haryana, Madhya Pradesh, Orissa, Rajasthan, Tripura and West Bengal. It is also to be mentioned that out of women HEIs about 5% are professional (medical, agriculture, law, technical and veterinary) and about 67% are general education in India for the year 2015-16.

Table 1.2 showing the ranks of the percentage of women enrolment for the years 2011 to 2016

STATE	REW ₁₁	REW ₁₂	REW ₁₃	REW ₁₄	REW ₁₅
Andhra Pradesh	17	22	24	21	21
Assam	5	4	5	6	6
Bihar	24	24	23	25	24
Chandigarh	2	14	4	3	3
Chhattisgarh	8	11	13	8	8
Delhi	15	12	12	19	19
Goa	3	2	2	4	4
Gujarat	23	23	22	24	25
Haryana	16	19	21	16	16
Himachal Pradesh	6	5	7	2	2
Jammu and Kashmir	4	3	3	5	5
Jharkhand	13	6	15	14	14
Karnataka	11	10	8	7	7
Kerala	1	1	1	1	1
Madhya Pradesh	25	26	25	23	23
Maharashtra	22	21	19	22	22
Odisha	19	16	16	18	18
Puducherry	9	9	10	9	9
Punjab	20	17	9	12	11
Rajasthan	26	25	26	20	20
Tamil Nadu	12	13	11	11	12
Telangana	14	15	17	15	15
Tripura	21	20	20	26	26
Uttar Pradesh	10	7	6	10	10
Uttaranchal	7	8	14	13	13
West Bengal	18	18	18	17	17

REW₁₁ means rank corresponding to women enrolment in HEIs for the year 2011-12, etc.

Table 1.3 showing percentage of women population in the age group 18-23 years in India

STATE	P ₁₁	P ₁₂	P ₁₃	P ₁₄	P ₁₅
Andhra Pradesh	49.77	49.87	49.97	50.07	50.16
Assam	50.85	50.95	51.05	51.15	51.25
Bihar	46.34	46.65	46.96	47.28	47.59
Chandigarh	42.60	42.38	42.19	41.91	41.59
Chhattisgarh	49.81	49.90	49.98	50.07	50.16
Delhi	45.14	45.17	45.19	45.22	45.24
Goa	45.74	45.57	45.38	45.17	44.85
Gujarat	46.85	46.97	47.09	47.21	47.33
Haryana	45.66	45.67	45.68	45.68	45.69
Himachal Pradesh	48.92	48.78	48.64	48.51	48.37
Jammu and Kashmir	48.32	48.33	48.34	48.34	48.35
Jharkhand	48.55	48.75	48.95	49.14	49.34
Karnataka	48.47	48.55	48.62	48.70	48.77
Kerala	50.25	50.19	50.13	50.07	50.01
Madhya Pradesh	46.67	46.78	46.88	46.99	47.09
Maharashtra	46.83	46.94	47.05	47.16	47.26
Odisha	50.27	50.23	50.20	50.17	50.13
Puducherry	51.66	51.08	50.48	49.86	49.21
Punjab	45.94	45.81	45.69	45.57	45.44
Rajasthan	47.27	47.39	47.52	47.64	47.76
Tamil Nadu	50.03	50.01	49.99	49.97	49.95
Telangana	49.68	49.78	50.99	51.01	51.02
Tripura	50.96	50.98	49.87	49.97	50.07
Uttar Pradesh	45.89	46.13	46.36	46.60	46.83
Uttaranchal	48.87	48.84	48.80	48.77	48.73
West Bengal	49.49	49.74	49.99	50.24	50.48
INDIA	47.74	47.86	47.97	48.09	48.21

Source : MHRD report in www.mhrd.gov.in

Women education has two aspects – individual and social. 48.21% of the population in India are women ready to take higher education in 2015-2016. It was 47.74% in 2011-12. It is 50% or above in the states like West Bengal, Tripura, Odissa, Kerala, Chhattisgarh, Assam and Andhra Pradesh. The percentage of women enrolment is 50% or more only in the states of Kerala and Himachal Pradesh. It is lowest in Gujarat.

It is observed that the correlation between X.. and P.. are negative (significant) but the correlation between TW.. and EW.. are positive (significant) for all the years 2011-12 to 2015-16.

Table 1.4 showing correlation coefficients

Variable 1	Variable 2	Year	Correlation Coefficient
Percentage of Women HEIs	Percentage of Women population in the age group 18-23 years	2011-12	-0.50
		2012-12	-0.51
		2013-14	-3.53
		2014-15	-0.53
		2015-16	-0.53
Percentage of Women Teachers	Percentage of Women enrolment	2011-12	0.59
		2012-12	0.45
		2013-14	0.64
		2014-15	0.59
		2015-16	0.60

The linear regression has been tried with the four variables X., P., TW.. and EW... The regression lines are as follows:

Table 1.5 showing regression lines (using Statistica)

Dependent Variable	Independent Variable	Year	Constant(a)	Regression Co-efficient(b)	t-value for a	t-value for b	significant level for a	significant level for b
Percentage of Women enrolment	Percentage of Women Teachers	2011-12	33.982	0.295	10.217	3.614	0.0000	0.0014
		2012-12	36.837	0.235	9.584	2.467	0.0000	0.0212
		2013-14	35.868	0.263	13.733	4.051	0.0000	0.0005
		2014-15	38.376	0.202	16.465	3.623	0.0000	0.0014
		2015-16	38.376	0.203	16.729	3.649	0.0000	0.0013

The other possible regression lines are not significant. Thus, this prediction model gives the idea that about 55% engagement of women teachers in HEIs may influence the women enrolment 50% or more.

Table 1.6 showing percentage of women in different positions of the higher education

State	Percentage of women in Higher Category out of Total Women	Percentage of women in Middle Category out of Total Women	Percentage of women in Lower Category out of Total Women	Percentage of women in Higher Education out of Total
Andhra Pradesh	12.72	70.74	16.53	33.64
Assam	23.81	55.95	20.18	37.83
Bihar	23.90	54.93	21.11	17.66
Chandigarh	32.06	44.80	23.14	58.94
Chhatisgarh	9.71	60.19	29.88	44.70
Delhi	32.95	47.39	19.63	53.05
Goa	18.25	38.27	43.48	56.17
Gujarat	16.97	57.58	25.29	36.54
Haryana	17.04	63.57	19.37	46.15
Himachal Pradesh	15.11	61.44	23.30	43.00
Jammu and Kashmir	16.34	53.58	29.85	38.95
Jharkhand	14.77	68.01	17.15	26.85
Karnataka	18.40	56.86	24.65	41.43
Kerala	14.47	67.37	18.09	57.87
Madhya Pradesh	17.07	64.50	18.43	38.95
Maharashtra	15.43	66.13	18.42	37.85
Odisha	7.65	68.79	23.51	33.15

Puducherry	19.20	62.80	17.92	38.26
Punjab	12.28	61.37	26.30	55.31
Rajasthan	12.92	81.88	5.19	33.24
Sikkim	11.13	45.27	43.60	42.44
Tamil Nadu	14.37	77.00	8.60	45.03
Telangana	13.04	76.11	10.85	35.85
Tripura	14.23	40.71	45.07	35.59
Uttar Pradesh	17.38	68.86	13.75	31.06
Uttarakhand	16.48	63.40	20.05	33.84
West Bengal	15.40	43.30	41.27	33.07
India	15.64	66.22	18.09	39.14

Note : Higher Category includes Vice-Chancellor, Director, Pro- Vice-Chancellor, Principal, Professor & Equivalent and Associate Professor; Middle Category includes Reader, Lecturer (Selection Grade), Assistant Professor, Lecturer (Senior Scale) and Lecturer; Lower Category includes Tutor, Demonstrator, Part-Time Teacher, Ad hoc Teacher, Temporary Teacher, Contract Teacher and Visiting Teacher.

Thus, in India 66.22% are in the middle working groups out of 39.15%. It is maximum in Rajasthan. Only 15.64% are in higher positions. It is maximum in Delhi.

4. Conclusions

The women participation in higher education is increasing in almost all states. The women enrolment in higher education is also increasing. The rate of increase is slow in almost all the states of India. The enrolment is dependent on women teachers. The expectation is still to achieve. Thus, establishment of higher educational institutes for women especially in rural areas are still in dearth and women enrolment is still low as compared men enrolment. The discipline-wise analysis may also be done.

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