

Who Have Access in Engineering Education

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ABSTRACT

Studies on gender disparities reflects that participation of women have increased at all level of education, hence they are still behind men at all level especially when it comes to Technical/Professional education and with private education providers the situation looks more vulnerable. In fact women are a major conventionally marginalized section in terms of accessing private professional education. Article analyses the participation pattern of engineering students in Uttar Pradesh in terms of gender and effect of their caste categories on their participation rate.

Key Words: Private Engineering Education, Access, Women, Uttar Pradesh

Introduction

In last two decades engineering education of Uttar Pradesh has increased its capacity and opportunities to study, and this phenomenal growth is mainly due to private sector. But with these increasing opportunities still there are gender disparities in participation pattern of students in higher education especially in professional/engineering education. Our Constitution provides provisions for upliftment of weaker sections, and also for protection of the marginalized sections from social injustice and social exploitation. But the question is- Do the private education providers follow the basic spirit and thrust of the Constitution? To know this, there is need to study what is the degree of equality of opportunity available to women in terms of actual access to engineering education. Article comparatively analyses the participation of women students in engineering education and their percent share in population of Uttar Pradesh to examine the degree of equality in access to engineering education.

Methodology

Study analyses the participation of women students in degree level engineering education i.e. B.Tech in Uttar Pradesh. To analyze the trend of women students participation in engineering education, enrollment data has been collected from Uttar Pradesh Technical University, Uttar Pradesh from year 2000 to 2012.

Gender Participation in Engineering Education

Table 1 reveals that women participation varied from about 11% to 18% in engineering education whereas men students has always been in overwhelming majority participation with more than 82% during various years.

Table1: Gender-wise Participation of Students in B.Tech Course during Various Years

Year	Men Students		Women Students		Total	
	Number	%	Number	%	Number	%
2000	9695	88.33	1281	11.67	10976	100
2001	13833	88.62	1776	11.38	15609	100
2002	18719	84.83	3348	15.17	22067	100
2003	16612	84.49	3049	15.51	19661	100
2006	27799	82.65	5837	17.35	33636	100
2007	36426	82.29	7837	17.71	44263	100
2008	49326	81.22	11407	18.78	60733	100
2009	54848	82.09	11968	17.91	66816	100
2010	58287	82.04	12758	17.96	71045	100
2011	28146	84.41	5200	15.59	33346	100
2012	32118	84.71	5797	15.29	37915	100

Source: UPTU (compiled from raw enrollment data).

Gender-wise Participation of Students based on Caste Categories

Women participation is highly affected by their caste category as participation of women from disadvantaged caste group i.e. from OBC, SC and ST caste category is not worth mentioning. Within women category (see Table 2) participation of General caste category women is highest followed by OBC and SC whereas ST women have lowest participation, almost negligible in total enrollment in engineering education in Uttar Pradesh. Caste category wise participation of students shows that students from backward castes have lower access to engineering education. Participation of OBC and SC is lower than General caste category. Percentage increase of women participation for all caste categories i.e. SC, ST, OBC and General caste category has been almost minimal as compared to the total enrollment over the years in the State.

Table 2: Gender-wise Participation of Students based on Caste categories in Degree Level Engineering Education (B.Tech) in Uttar Pradesh

year	Caste and Gender-wise Participation of Students								Total		Grand Total
	SC		ST		OBC		General		Men	Women	
	Men	Women	Men	Women	Men	Women	Men	Women			
2000	1026 (9.35)	101 (0.92)	68 (0.62)	8 (.07)	2190 (19.95)	196 (1.79)	6411 (58.40)	976 (8.89)	9695 (88.33)	1281 (11.67)	10976 (100)
2001	1343 (8.60)	107 (0.69)	66 (0.42)	17 (0.11)	3518 (22.53)	234 (1.5)	8906 (57.06)	1418 (9.08)	13833 (88.62)	1776 (11.38)	15609 (100)
2002	1586 (7.19)	193 (0.87)	49 (0.22)	11 (0.05)	4431 (20.08)	486 (2.20)	12653 (57.34)	2658 (12.05)	18719 (84.83)	3348 (15.17)	22067 (100)
2003	2636 (13.40)	270 (1.37)	74 (0.38)	11 (0.06)	4401 (22.38)	620 (3.15)	9501 (48.32)	2148 (10.93)	16612 (84.49)	3049 (15.51)	19661 (100)
2006	3855 (11.46)	548 (1.63)	123 (0.37)	16 (0.05)	8235 (24.48)	1216 (3.62)	15586 (46.34)	4057 (12.06)	27799 (82.65)	5837 (17.35)	33636 (100)
2007	5576 (12.6)	786 (1.78)	171 (0.39)	28 (0.06)	11172 (25.24)	1874 (4.23)	19507 (44.07)	5149 (11.63)	36426 (82.29)	7837 (17.71)	44263 (100)
2008	6692 (11.02)	1058 (1.74)	227 (0.37)	26 (0.04)	16665 (27.44)	2827 (4.65)	25742 (42.39)	7496 (12.34)	49326 (81.22)	11407 (18.78)	60733 (100)
2009	7647 (11.44)	1058 (1.58)	297 (0.44)	55 (0.08)	15641 (23.41)	2427 (3.63)	31263 (46.79)	8428 (12.61)	54848 (82.09)	11968 (17.91)	66816 (100)
2010	5852 (8.24)	1165 (1.64)	239 (0.34)	36 (0.05)	14084 (19.82)	2770 (3.9)	38112 (53.64)	8787 (12.37)	58287 (82.04)	12758 (17.96)	71045 (100)
2011*	7175 (21.52)	718 (2.15)	229 (0.69)	30 (0.09)	8694 (26.07)	1287 (3.86)	12048 (36.13)	3165 (9.49)	28146 (84.40)	5200 (15.59)	33346 (100)
2012*	8916 (23.52)	821 (2.17)	267 (0.70)	39 (0.10)	10708 (28.24)	1610 (4.25)	12227 (32.25)	3327 (8.77)	32118 (84.71)	5797 (15.29)	37915 (100)

Source: UPTU (compiled from raw enrollment data).

Note: a) Enrollment data of 2011 and 2012 is only of GBTU, as UPTU was bifurcated in to GBTU and MTU and MTU enrollment data was not available.

b) Figures in parenthesis indicate percentage.

Women Percentage Share in Population of Uttar Pradesh

Table 3: Gender-wise distribution of Population in Uttar Pradesh

Total population (in number)	Gender participation	
	Men	Women
199812341 (100)	104480510 (52.3)	95331831 (47.7)

Source: Uttar Pradesh at a Glance, Economics and Statistics Division, Uttar Pradesh.
Note: Figures in parentheses indicate percentages.

Table 3 indicates that percentage share of Women (47.7%) is about 48% in population of Uttar Pradesh but their percentage share in engineering education does not cover even 1/5th of the total enrollment, whereas besides having about half (52.3%) of the population by men, they cover more than 82% of enrollment. The comparative analysis reflects that women students do not have equitable access in engineering education.

Concluding Observations

Analysis of women participation in engineering education reveals that they do not have equitable access in engineering education. And caste factor plays an important role; their participation is less than men in all caste categories. And within women category also, participation is higher for General caste category whereas participation women students from OBC, SC is not significant, and women from ST caste category is almost negligible in engineering education.

The existing policies of State do not denied the access of professional education to any person, community or group based on gender, caste, class. There have been several policies including legislature of India which promote equitable access to education for all sections of society. Despite the legal equitable access in education to all sections of society, participation of women in professional education is far from satisfactory and it is worst when it comes to participation of women from double disadvantaged sections in terms of caste i.e. women from ST, SC, OBC.

In fact there are many government schemes of scholarship and free-ships available for scheduled castes, scheduled tribes, other backward classes, and women for higher education. In spite of a surfeit of schemes, the representation of women in engineering education is not satisfactory. Their lower participation indicates that policies of Government are inadequate to provide equitable access and financial support for women in private engineering education.

The participation pattern of women in engineering education shows that increasing private sector share in engineering education in Uttar Pradesh has contributed in a very limited way to the social equity and justice in the Indian society.

The recent dominant trend of rapid expansion of high fee charging privately-owned-and-managed professional educational institutions, the central problem which requires in-depth study is to empirically find out the nature and extent of access women to professional education. Also There is need to find out whether the increasing share of private sector in engineering education is widening the gender gap and promoting social inequality.

References

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