

# Treading the Hallowed Halls

## Women in Higher Education in India

*Focusing on the disciplinary choices made by women in higher education and their representation at different levels of learning and teaching, this article goes beyond the issue of women's entry into higher education and raises questions such as: what happens to them after they enter the system? What are the chances of their staying on and progressing from one stage to another? What disciplinary choices do they make? The article also highlights the societal and institutional factors inhibiting women's access to higher education.*

KARUNA CHANANA

The focus on education during the present century has been because of its instrumentality in promoting values for a democratic polity and society along with inculcation of skills to meet the occupational demands of industrialising societies. However, functions of education have not been so simplistically viewed given the variety of ideological and political orientations and intellectual interpretations. Education, for example, has been simultaneously labelled as the panacea for social mobility and equality and as the only hope for the downtrodden, on the one hand, and as an instrument for reproducing social stratification and for maintaining the hegemony of the dominant classes and the elite, on the other. But what is common to both the viewpoints is the instrumentality of education as well as the role of the state in providing education. However, whether one takes the liberal-functionalist view or the radical-conflict view, the education-equality interface is central to both the discourses. While the former is premised on the assumption that education promotes equality, the latter questions this premise but goes onto emphasise the education-equality interface under certain conditions and structural changes in society. The issues of class, race and ethnicity have been central to educational discourse and the major concerns have been to promote equality through education among peoples of different classes, races and ethnic groups. Studies in the Indian context added the dimension of caste to this debate.

More recently, gender has been identified as a crucial category which divides people and which in addition to race, ethnicity, class and caste, deserves attention in the education-equality paradigm. Feminists have critiqued the mainstream social science theories and perspectives

for lack of attention to gender because of which women have lagged behind in education. Feminists, too, are divided along ideological lines although there is consensus that education is paramount for promoting equality between women and men and that lack of focus on women in educational policies and programmes has led to educational backwardness among girls and women in large parts of the world.

As we move towards the next century, the debate on social and human development has also begun to highlight the instrumentality of education, especially of female literacy and primary education. It has sought to establish macro level inter-connections between education and indicators of development such as basic education, health, income etc. It is being argued that equality among human beings across and within societies can be achieved by providing opportunities for better health, education and living standards especially to girls and women. Thus, education and gender equality are at the centre stage of contemporary discourse on development and education. While education at the primary level is the focus of debate for those concerned with social and human development, higher education is highlighted for social and occupational mobility, for elite formation and for intellectual and personal development. Thus, the instrumentality of education for promoting equality among women and men is receiving increasing attention.

### I Educational Policy and Women in Higher Education

The Indian Constitution provides for equality to Indians irrespective of caste, religion and sex. Further, the deprived

groups, namely, the scheduled castes and tribes are provided supports such as reservations in the state-run educational institutions for purposes of admission and for jobs in the employing organisations. Moreover, religious and linguistic minorities are permitted to establish educational institutions. Thus, education has been perceived as an important instrument for the advancement of the deprived and the minorities, on the one hand, while equality was guaranteed to everyone including women.

The development strategy in independent India in the 1950s depended heavily on planning. The first two Five Year Plans referred to the problems of women's education and sought to link higher professional education and occupations. The *Report of the Committee on the Education of Women, 1959*, made extensive recommendations which led to a more focused thrust in the subsequent plans. But disparities in the education of men and women continued. These were amply substantiated by the Report of the Committee on the Status of Women, 1974.<sup>1</sup> This led to a broader perspective and the Sixth Plan linked education to the participation of women in the development process.

The National Policy of Education 1986 took an even broader view in underscoring the role of education in empowering women in order to overcome inequalities and disparities. The National Perspective Plan, 1988-2000 AD reiterates this point of view. In other words, women themselves must overcome their handicaps. Thus, there has been a careful articulation of education for equality for women. It is amply reflected in the educational policy discourse in post-independent India. Has the ground reality changed due to this perspective? It may be worthwhile to look at

the representation of women vis-a-vis men in higher education.

This article presents a descriptive analysis of women's representation in higher education system in India. It seeks to demonstrate the latest trends in the enrolment of women in different faculties and disciplines.<sup>2</sup> Simultaneously, it also attempts to see if there are any shifts in the disciplinary choices of women during the last 45 years. The trends and shifts reflected in the choices of women are compared to those of men. In addition, the data on the marginal groups such as the dalits and tribals are also given. The regional disparities are as crucial as those of the general population and the marginal groups. Some attention is also given to this dimension mainly to reflect on trends in the different states of India. Thus, the article is embedded in a comparative framework and is focused on practical aspects of women's higher education and gender inequality.

The disciplinary choices of women have been the focus of debate in the feminist discourse on education and gender. Much has been written on the patriarchal imprint on the disciplinary choices of women in higher education and on the feminine and masculine dichotomy of disciplines.

While there are varied theoretical frameworks to explain gender inequality within education, there is general agreement that gender inequality is deep-rooted and universal. Although the article draws from these perspectives, it does not elaborate them. However, it also attempts to see the extent of the influence of the so-called economic liberalisation and the market demand on women's access to higher education because one sees a perceptible change in the choices of women at least in the metropolitan cities where they are flocking to the new 'professional' courses such as management, fashion designing, computers, human resource management etc. Therefore, the question: how far are these trends reflected at the macro-level and do we have sufficient data to demonstrate the trends?

While the disciplinary choices are the central focus the representation of women at different levels, namely, undergraduate, post-graduate and research levels has also been highlighted. Thus, the article goes beyond the issue of women's entry into the system of higher education and raises questions such as: what happens to them after they enter the system? What are the chances of their staying on and progress-

ing from one stage of higher education to another stage? What disciplinary choices do they make and how do they compare with men students?

Again, while looking at women as students within the higher education system, it also compares their representation as teachers and faculty members within the same system. It is possible to see whether their representation matches with that of their proportion as students. Implicitly, it tries to extend the issue of gender inequality from admissions and enrolment to the recruitment of women as teachers. The latter issue takes the discussion in the direction of the links between disciplinary orientations and career choices of women.

Lastly, there is a brief discussion of the macro and micro factors that inhibit women's access to higher education. On the one hand, gender and class simultaneously reinforce the impact of societal factors. On the other, the institutional barriers emanating from gender structures and organisations are highlighted. Not much research has been done on this aspect in India. It is imperative to focus on this in order to make higher educational institutions, i e, the delivery systems more gender sensitive and less resilient to change. This is likely to improve women's access and retention thereby increasing gender equality especially when women, however small their number, in the metropolitan cities and towns are ready to enlarge their disciplinary options.

## II Women in Higher Education

This section provides the data on enrolment (a) of women and men in higher education, (b) of women across faculties/disciplines or subjects, (c) across levels/stages, viz, undergraduate, graduate/post-graduate and doctoral/research level. It also highlights the difference in their enrolment in general and professional education. The period covered is 1950-51 to 1996-97. The enrolment statistics for the 1990s are the focus of discussion while the data for the preceding four decades is used to indicate trends and shifts.

According to the latest statistics, the enrolment of women in 1996-97 was 2,303,161 out of 6,755,455 total enrolment in higher education [UGC 1996-97:159-202]. The number of women has increased from 1,685,926 in 1991-92. The rise in numbers is noticeable upto 1993-

94. Thereafter, it becomes very marginal (Table 2 in appendix).

Looking at the enrolment figures of the 1950s and up to the early 1980s (Table 3), the increase in the number and proportion of women seems remarkable. While the proportion of women to total enrolment was 10.9 per cent in 1950-51, it increased to 27.2 per cent in 1980-81. By 1988-89, it had gone up to 31.7 per cent [Chanana 1993]. Thereafter, the increase in the proportion of women in the total enrolment during the 1990s has been marginal. For instance, it was 32 per cent in 1991-92 (Table 4) and 34.1 per cent in 1996-97. Again, there were 52 women per 100 men in 1996-97 [GOI 1998] which increased from 46 women per 100 men in 1988-89. Yet the increase is remarkable in comparison to the 1950s when only 14 women per 100 men were enrolled in higher education [Chanana 1993].

It may be mentioned that the growth and expansion of education in the first three and a half decades was rapid and enrolment of men and women went up phenomenally. This implies that increase in women's enrolment was part of the increase in overall enrolment and expansion of higher education upto the mid-1980s. Their gains were a part of the general expansion from which both men and women gained [Ahmad 1979]. The stagnation and very slow expansion thereafter seems to be due to lack of specific policies and measures to give a fillip to women's education, which will be discussed later.

Enrolment by level/stage: While Indian women have entered the portals of higher education, it may be interesting to look at the extent of their enrolment in the undergraduate, graduate and doctoral level courses. In other words, do they leave after completing undergraduate courses or do they proceed further? Table 4 sets out details of enrolment for the latest three years. It may be noted that in 1991-92, a total of 14,79,231 women had enrolled for undergraduate, 1,69,267 for graduate courses and 19,894 for research programmes such as MPhil and PhD. In

**Table 1: Proportion of Levelwise Women Students in Higher Education**

Year	Undergraduate	Graduate	Research
1996-97	34.1	34.0	39.2
1995-96	34.1	34.0	39.2
1994-95	33.6	35.6	38.5

Sources: University Grants Commission, *Annual Report, 1996-97*, Table 13.2, p 160; *Annual Report, 1995-96*, Table 14.2, p 127; *Annual Report 1994-95*, p 109.

1993-94, their numbers had gone up, even though marginally, to 1,694,546, 193,907 and 22,788 respectively. In terms of percentages the undergraduate level enrolment of women increased from 31.8 per cent in 1991-92 to 33 per cent in 1993-94; from 34.7 per cent to 35.4 per cent at the graduate level while it decreased from 37.1 per cent to 36.5 per cent at the research level courses (see Table 4). This indicates that the increase in number of women at the research level was proportionately less than that of men. However, the latest figures for 1996-97 indicate that while women's proportion at the undergraduate and post-graduate levels remain almost unchanged, it has increased at the research level to 39.2 per cent as is seen in Table 1.

Until the 1960s, very few women (794 in 1960-61) were joining research programmes (see Table 5) but their enrolment increased substantially after the 1970s (8,780 in 1980-81) [Chanana 1993:127]. Thereafter, there was a rapid increase during the 1980s (15,018 in 1988-89). However, the proportion of women has now become uniform at all levels constituting almost

one-third of the enrolment. This uniformity indicates that proportionately the incidence of discontinuance is also equal among men and women in higher education. Second, the slightly higher proportion of women at the research level in comparison to undergraduate and graduate level also indicates that the chances of women who acquire the first degree and complete graduate education continuing in research increase. It is likely that the flexible time schedule and a longer time span of 6-7 years for doctoral can be adjusted with marriage and raising a family. It also provides an avenue for getting back into education and career after a break, again, due to marriage. Yet, the vast gender gap in enrolment continues to be reflected here too.

*Enrolment in general and professional education:* Discipline-wise break-up for men and women students is available for 1991-92, 1992-93, 1993-94. Tables 6 and 7 give the numbers and proportions respectively of men and women students in each discipline/faculty. As may be seen from Table 7, in 1993-94 women constituted 52 per cent of students who were

enrolled in faculties of education i.e. teacher training departments. This is the only discipline where their proportion is higher than that of men students. Even in 1950-51, their proportion was 32.4 per cent, the highest in any discipline in higher education. The other disciplines where they have a sizeable presence are arts (which includes language, literature, social sciences etc) where their proportion is 43.2 per cent, science 34.2 and medicine 34.6 per cent. Women have been present in these disciplines ever since the expansion of the higher education system since the 1960s [Chanana 1993]. For example, in arts, their proportion was about a quarter (24.6 per cent) in 1960-61 and had reached 37.7 per cent in 1980-81 (Table 8). In science, the major increase was registered during 1970-71 and 1980-81 (from 17.8 to 28.8 per cent).

In medicine, the proportion of women students was 16.3 per cent in 1950-51 which was the same in arts disciplines. It increased steadily to 1980-81 (24.4 per cent), thereafter registering a rapid increase to 31.7 per cent in 1988-89 [Chanana 1993]. Since then the proportion of women in

medical education has stabilised. It may be noted that medicine has always been a masculine as well as a feminine discipline in India. Here tradition has favoured women since in a society practising female medical seclusion, women patients had to be attended to by female doctors [Chanana 1990]. Therefore, enrolment of women students has been substantial in the departments of medicine.

The shift in discipline choices in professional education is visible. For example, commerce (23.1 per cent), law (11.3 per cent), engineering, agriculture and veterinary science (about 7-8 per cent in each discipline) are disciplines where more women are entering during the last few decades. In commerce, the trend started in the 1970s (15.9 per cent in 1980-81 in comparison to 3.7 per cent in 1970-71), and their numbers and proportions have been increasing steadily. Similarly, law is a discipline where women are enrolling in large numbers. For example, only 290 women students were enrolled in the law faculties in 1950-51. However, in 1980-81, 11,948 women (6.9 per cent) were enrolled in the law faculties. Now there are over 30,000 students forming nearly 11 per cent of total enrolment.

Looking at the 1990s, the increase in 1994-95 in comparison to 1991-92 and 1993-94 is marginal in terms of numbers and proportions. Even when there is a decrease in their proportions as in the faculties of agriculture and veterinary science from 7.32 and 8.26 per cent in 1992-93 to 7.09 and 7.79 per cent in 1993-94 respectively, there is an increase in the numbers. It implies that proportionately more men students joined these faculties. The enrolment of women in the undergraduate courses in engineering and technology increased marginally from 0.09 per cent in 1971 to 0.42 per cent in 1981. However, there was a significant increase during the next decade to 10.09 per cent in 1991 and 11.14 per cent in 1994 [IAMR 1995]. Discussions with experts suggest that by now enrolment of women in engineering/technology courses has gone up to 16 per cent in the polytechnics. A study on women in engineering courses undertaken by IIT, Mumbai, estimated that the proportion of women students in a few colleges in some states (such as Tamil Nadu) constitute 30 per cent of the enrolment in certain specialisations [Parikh and Sukhatme 1992].

*Percentage distribution by discipline/faculty:* The percentage distribution of

women students, i.e., the number of women per 100 women students in each discipline provides another dimension (Table 9). It reflects on the priorities of women students who enter higher education. For example, even though in 1993-94 women students constituted 52 per cent of enrolment in the faculty of education, only 3.7 per cent of women who entered higher education enrol in it. The highest percentage of women (54.2) joined arts in 1993-94 in comparison to 35.4 per cent of men students. The other faculties in order of priority are science and commerce where they are 19.8 per cent and 14.6 per cent, respectively.

While a majority of women students are confined to arts, in addition to science and commerce, men are more dispersed i.e., only about 35 per cent join arts, humanities and social sciences, 19 per cent are in science and a little more (24 per cent) in the faculty of commerce. They are also much more in the disciplines of engineering/technology (6.9 per cent in comparison to 1.2 per cent women) and law (6.8 per cent in comparison to 1.8 per cent women).

The data from the 1950s onwards (Table 10) reflects two trends. First, fewer women per 100 women in higher education are opting for courses in general education, namely, arts and science. For example, in comparison to nearly 70 per cent women students joining arts and 19 per cent enrolling for science, i.e., 89 per cent enrolling for general education in 1950-51, 74 per cent women joined these courses in 1993-94 (54.2 per cent arts; 19.8 per cent science) which implies that 15 per

cent have changed their options. Again, a major shift has occurred in favour of commerce where in comparison to 1.9 per cent women in 1970-71, nearly 15 per cent are enrolled in 1993-94. The other shifts are toward engineering/technology courses. So far as law is concerned, the increase in numbers is not reflected in percentage distribution. In medicine and education the percentage distribution of women has remained stagnant. Secondly, the latest statistics even while reflecting change reinforce the earlier trends, namely, clustering of women in some disciplines [Chanana 1993]. However, clustering and dispersal are simultaneous trends. It may be mentioned that these processes are common to men students as well; yet, women are affected more by clustering than are men.

The tendency for women to cluster in general disciplines which do not lead to specialisations and professional occupations is also reflected at the institutional level. For example, the National Commission on Teachers reported that as one proceeds from arts and humanities to natural sciences, from colleges of general education to that of professional education (except teachers' training), and to service on the faculties of institutions of higher education, one is likely to find fewer women. This is more applicable to specialisations within engineering and technology courses. Parikh and Sukhatme (1992) mention that there are fewer women students in IITs and regional engineering colleges. In addition, electronics is the most preferred specialisation followed by electrical and civil

**Table 2: Enrolment in Higher Education**

Year	Men	Women	Total
1996-97	4,452,294 (65.9)	2,303,161 (34.1)	6,755,455
1995-96	4,234,486 (65.9)	2,191,138 (34.1)	6,425,624
1994-95	4,048,947 (66.2)	2,064,982 (33.8)	6,113,929
1993-94	3,885,922 (66.8)	1,931,327 (33.2)	5,817,249
1992-93	3,723,851 (67.3)	1,811,115 (32.7)	5,534,966
1991-92	3,579,960 (68.9)	1,685,926 (32.0)	5,265,886

Source: i) UGC, *Annual Report 1996-97*, p 202.  
 ii) UGC, *Annual Report, 1995-96*, Appendix VI, p163.  
 iii) UGC, *Annual Report, 1994-95*, Appendix VI, p110, 135.  
 iv) UGC, *University Development in India: Consolidated Data Statewise 1988-89 to 1993-94*, Information and Statistics Bureau, New Delhi.

**Table 3: Enrolment of Men and Women in Higher Education 1950-51 to 1980-81**

Year	Men	Women	Total
1950-51	353,549 (89.1)	43,126 (10.9)	396,675
1960-61	879,409 (83.8)	170,455 (16.2)	1,049,864
1970-71	2,345,470 (78.1)	655,822 (21.9)	3,001,292
1980-81	1,968,734 (72.7)	738,589 (27.3)	2,707,323

Source: i) Chanana (1993).  
 ii) UGC (1998-99).

engineering. Computer science, chemical and mechanical engineering follow in that order.

*Scheduled castes and tribes in higher education:* A major concern of educational policy has been the fulfilment of Constitutional guarantees and the identification of groups who are eligible for the state-sponsored benefits. The major emphasis has been on the provision of reservations in higher education and its implementation in order to remove disparities between the scheduled castes/tribes and non-scheduled castes/tribes. The Report of the Committee for Review of National Policy of Education, 1986, which was submitted in December 1990 also pleads for enriched environment in the tribal regions.

The survey on higher education undertaken by the National Commission on Teachers compares the enrolment of scheduled caste students in general courses and professional courses from 1964-65 to 1977-78 [NIEPA nd:70-75]. It notes that the increase in enrolment of scheduled caste students has generally been in general courses. Their proportion in professional education decreased progressively from 32.63 per cent in 1964-65 to 28.5 in 1970-71, 25.38 in 1975-76 and 17.08 in 1977-78 [NIEPA nd:74].

Even now (1996-97) the all India proportion of SC/ST men students is very low (8.7 per cent SC, 3.02 per cent ST). The SC women students constitute only 2.4 per cent while the ST women students form 0.9 per cent of total enrolment [GOI 1998:154,156,158].<sup>3</sup> Thus, the situation has changed very marginally [Chanana 1993]. It affects their presence in professional courses and discipline choices to be discussed later.

Social and economic disparities as reflected through caste and tribe also affect disciplinary choices. Scheduled castes and tribes are less represented in higher levels of education and in professional courses and programmes because these require longer investment of resources in terms of time and finance and also socialisation support and role models at home. Their proportion in engineering/technology and medical courses will be discussed later.

### III Regional Disparities

The report of the Committee on Women's Education, 1959, mentions regional imbalance as the major problem in women's education. It noted that the four southern states had a better profile in terms of female literacy and education than the northern Hindi-speaking states. The Report of the Committee on the Status of Women in India (CSWI), 1974, also mentions that cities and regions with a high proportion of Muslims or scheduled castes and tribes are marked by low literacy rates.

These trends are continuing and are present in higher education. For instance, the enrolment of women in higher education varies from state to state and within a state from urban to rural areas. The variation is in absolute numbers as well as in their proportion to total enrolment. For instance in 1988-89, it was 52.1 per cent in Kerala, the state with the highest male and female literacy rates, and 16 per cent in Bihar, a state characterised by a very low female literacy rate (13.6 per cent in 1981).

In 1996-97, the states with the highest enrolment of women in higher education are Goa (51.1 per cent); Kerala (52.4 per

cent) and Punjab (51.1 per cent). Those with low enrolment are Bihar (18.6 per cent), Arunachal Pradesh (22.8 per cent), Uttar Pradesh (26.7 per cent) and Madhya Pradesh (30 per cent). In Delhi (44.6 per cent) and Manipur (42.8 per cent) women's enrolment is above 40 per cent of total enrolment in higher education. In most others, it is between 31-40 per cent [UGC 1996-97:206].

The survey of higher education by the National Commission on Teachers in Higher Education in India notes with concern that the regions with high enrolment in general (that is, of men and women together) have low enrolment of women, a majority of whom are in arts faculties. Moreover, in most regions, a lesser proportion of women are enrolled in universities than in the colleges. In addition, at the college level, their concentration in arts subjects rather than in commerce or science is high. For example, two-thirds of women enrolled in arts are concentrated in educationally backward states.<sup>4</sup>

At present, it is not possible to reflect on some of these dimensions because of lack of data. However, so far as engineering and technology courses are concerned there is enough data to demonstrate regional disparity in women's enrolment. The NTMIS<sup>5</sup> statistics reinforce the observation about regional disparities [Parikh and Sukhatme 1992]. The number of students admitted in degree level engineering courses as per IAMR data in 1983 was 1,420 out of a total of 36,530 students which increased to 4,419 (out of 70,481) in 1991 (see Table 11). A majority of the women engineers in 1991 were from the southern (1,989) and western (608) re-

**Table 4: Levelwise Distribution of Men and Women Students in Higher Education 1993-94 to 1991-92**

Year	Undergraduate/graduate				Graduate/postgraduate				Research MPhil/Doctoral			
	I	II	III	IV	I	II	III	IV	I	II	III	IV
1993-94	5,130,447	1,694,546	66.98	33.02	549,741	193,907	64.73	35.37	62,444	22,788	63.51	36.49
1992-93	4,900,537	1,589,071	67.57	32.43	510,317	181,837	64.37	35.63	55,679	21,370	61.62	38.38
1991-92	4,658,845	1,479,231	68.25	31.75	487,777	169,267	65.30	34.70	53,643	19,984	62.10	37.09

Note: I=Total Enrolment, II=Enrolment of Women, III=Men's Proportion to Total Enrolment, IV=Women's Proportion to Total Enrolment.  
Source: UGC, *University Development in India: Consolidated Data Statewise 1988-89 to 1993-94*, Information and Statistics Bureau.

**Table 5: Levelwise Distribution of Men and Women Students in Higher Education 1950-51 to 1980-81**

Year	Undergraduate				Graduate				Research M.Phil/Doctora			
	I	II	III	IV	I	II	III	IV	I	II	III	IV
1950-51	375,319	40,499	89.2	10.8	19,922	2,425	87.9	12.1	1,434	202	85.9	14.1
1960-61	985,872	159,491	83.8	16.2	58,909	10,170	82.7	17.3	5,083	794	84.4	15.6
1970-71	2,862,799	611,553	78.4	21.6	161,182	41,516	74.2	25.8	13,313	2,753	79.3	20.7
1980-81	2,340,1485	652,808	72.8	27.2	273,667	77,001	71.8	28.2	32,171	8,780	72.7	27.3

Note: I=Total Enrolment, II=Enrolment of Women, III=Men's Proportion to Total Enrolment, IV=Women's Proportion to Total Enrolment.  
Source: Same as in Table 3.

gions as compared to 224 from the eastern and 267 from the northern region respectively. The trends are the same throughout the period 1983-91. In fact, this trend may be a reflection of the attitude towards women's education in some parts of India and may also be intertwined with the early introduction of colonial education in southern and western India. It is also due to the establishment of a large number of engineering colleges in these regions even in contemporary India. It may also be related to the socio-cultural practices of the region which encourage engineering education among women. Further, disciplinary orientation also continues to be affected by the socio-economic context, e.g, the scheduled castes and tribes. They are very marginally present in professional courses such as engineering/technology as will be demonstrated below.

As per the MHRD statistics for 1995-96, the total number of students in BE/BSc (Engg) and B Architecture courses was 317,134 out of which 45,180 (14.25 per cent) were women students. Interestingly, the proportion (17.3 per cent) of scheduled caste women (3,592) to total scheduled caste men (21,084) is higher than that of women in the total enrolment. The scheduled tribe students are small in number (5,650) and the proportion of scheduled tribe women (575) is 10.18 per cent. Province-wise enrolment shows that the highest enrolment is in Kerala (23.8 per cent), Tamil Nadu (21 per cent), Andhra Pradesh (19.6 per cent) with Maharashtra (12.9 per cent), Madhya Pradesh (14.3 per cent) and Karnataka (13 per cent) following these states. In the other states, the number of women students is too small to be mentioned. Moreover, even if the enrolment of men is high as in Uttar Pradesh (14,229) and is comparable to Gujarat (15,833), the proportion of women

students is very low (3.6 per cent). The situation is almost similar in Bengal [calculated from GOI 1996:41].

In the same year so far as the scheduled caste and scheduled tribe women students are concerned, the trends are the same, i.e., their proportion is higher in states with high enrolment of engineering/technology students in general and of women in particular. For instance, scheduled caste women constitute 18 per cent of scheduled caste enrolment in Andhra Pradesh, 11.5 per cent in Gujarat, 14.9 per cent in Karnataka; 51 per cent in Kerala,<sup>6</sup> 12.4 per cent in Maharashtra and 26.6 per cent in Tamil Nadu. Similarly, the enrolment of scheduled tribe women is 16 per cent in Karnataka, 9.2 per cent in Gujarat, 6.2 per cent in Andhra Pradesh, 13 per cent in Maharashtra and 22.7 per cent in Tamil Nadu.<sup>7</sup> It may be mentioned that the scheduled tribe enrolment is very small in numbers and therefore the proportions have to be seen accordingly. For instance out of 18 Scheduled Tribe students in Kerala, 8 are women. Again, the enrolment of scheduled caste and scheduled tribe students has also to be seen in relation to their population in the state

in addition to the existing facilities such as colleges.

In 1995-96 in the faculty of medicine, too, there are regional disparities in enrolment of women. Maharashtra has the highest enrolment in medical science courses (26,415) and the number of women is also the highest (11,738) constituting 44.4 per cent of enrolment. In Tamil Nadu, their proportion is 42 per cent out of 11,316 students; in Delhi and Andhra Pradesh they are 45.2 and 44.9 per cent respectively. In Karnataka and Kerala women are 27 per cent and 37.4 per cent respectively. Thus, states with high enrolment of women in engineering and technology courses have also high enrolment of women in the medical science courses.<sup>8</sup> There are some exceptions too. For example, Bihar, which has the second highest enrolment (14,112) in medical faculties has only 11 per cent (1,547) women students while Uttar Pradesh with a low total enrolment (6,910) has 23 per cent (1,592) women students [GOI 1996:43].

These trends in regional variation are a very important aspect of the growth and expansion of women's education. Regional variation is also reflected in the spread of

**Table 7: Proportion of Men and Women Students to Total Enrolment: Disciplinewise 1993-94 to 1991-92**

Faculties	1993-94		1992-93		1991-92	
	Women	Men	Women	Men	Women	Men
Arts	43.22	56.78	42.67	57.33	41.85	58.25
Science	34.17	65.83	33.62	66.38	32.89	67.11
Commerce	23.14	76.86	22.59	77.41	22.17	77.83
Education	52.00	48.00	51.28	48.72	50.18	49.82
Engg/Tech	7.84	92.16	7.82	92.18	7.65	92.35
Medicine	34.56	65.44	33.86	66.14	33.18	66.82
Agriculture	7.09	92.91	7.32	92.68	7.09	92.91
Veterinary Science	7.79	92.21	8.26	91.74	7.79	92.04
Law	11.32	88.68	11.22	88.78	10.98	89.02
Others	38.90	61.1	39.35	60.65	38.28	61.72
Total	33.20	66.8	32.72	67.28	32.01	67.99

Source: University Grants Commission, *University Development in India: Consolidated Data Statewise 1988-89 to 1993-94*, Information and Statistics Bureau, New Delhi.

**Table 6: Student Enrolment in Higher Education: Disciplinewise 1993-94 to 1991-92**

Discipline	Total	1993-94		Total	1992-93		Total	1991-92	
		Women	Men		Women	Men		Women	Men
Arts	2,423,489	1,047,503	1,375,986	2,301,902	982,301	1,319,601	2,190,117	914,402	1,275,715
Science	1,118,177	382,050	736,127	1,065,515	358,270	707,245	1,013,902	333,505	680,397
Commerce	1,222,067	282,804	9,392,623	1,173,767	265,202	908,565	1,115,234	246,870	868,364
Education	138,580	72,058	66,522	131,783	67,575	64,208	125,345	62,904	62,441
Engg/Tech	291,271	22,857	268,414	273,919	21,431	252,488	260,905	19,950	240,955
Medicine	195,001	67,384	127,617	186,602	63,189	123,413	177,288	58,821	118,467
Agriculture	66,856	4,740	62,116	60,739	4,446	56,293	58,339	4,139	54,200
Veterinary Science	14,887	1,159	13,728	13,172	1,088	12,084	12,724	1,013	11,711
Law	305,343	34,595	270,748	289,011	32,441	256,570	275,138	30,199	244,939
Others	41,578	16,177	25,401	38,556	15,172	23,384	36,894	14,123	22,771
Total	5,817,249	1,931,327	3,885,922	5,534,966	1,811,115	3,723,851	5,265,886	1,685,926	3,579,960

Note: Engg = engineering; tech = technology.

Source: University Grants Commission, *University Development in India Consolidated Data Statewise 1988-89 to 1993-94*, Information and Statistics Bureau, New Delhi.

## IV Shifts in Disciplinary Orientations

### Gender and Class

However, the disciplinary orientation has enlarged since the mid-1970s and again in the mid-1990s. As indicated earlier, the first change is reflected in the choice of commerce and law, on the one hand, and engineering, on the other, though to a smaller extent. The entry of women students in commerce, which leads to chartered accountancy and management at the graduate level, and law is encouraging and implies that role stereotyping does not necessarily determine the choices of all women students. Same is the case for engineering. However, their number in the last discipline is still small for generalisation. These students belong to urban middle and upper strata of professional and salaried class in the metropolitan cities. They are also the ones who belong to small families where the norm of two children has meant that they may be the only daughters. These daughters are given the best of education by their parents. It has also been

professional courses. These trends are persistent during the last five decades. However, there is a shift too, of moving away from the general courses to the professional courses leading to careers and professions. Some of the new professional courses, which are not mentioned separately in the statistics, are the burgeoning management related courses,<sup>9</sup> advertising, media and mass communication and those relating to business studies and administration. The popularity of vocational courses at the undergraduate level is also notable. The high preference for commerce (BCom) at the undergraduate level is due to it being one of the conduits to the management courses at the graduate level. The specialisations offered in these courses are: systems, finance, sales, marketing and human resource management/development (HRM/HRD) etc.<sup>10</sup> Indications are that women graduates prefer the last two specialisations and that HRD is being viewed as a feminine area. Even in the job market and in the corporate sector, women are being preferred for jobs relating to public relations, personnel management, advertising, marketing especially telemarketing. This leads us to the question: do the aspirations of women students get transformed into careers, as for example in the case of teaching?

*Women teachers in higher education:* Even though women form 52 per cent of enrolment in departments of teacher education, which prepare secondary school teachers, their proportion is about 35 per cent in the teaching profession at the secondary level, i.e., those who teach classes IX-XII in the schools. At the university level, their representation goes down. The higher the level of education, fewer are the women teachers (see Table 12). UGC provides a break-up of teachers in the affiliated colleges and in the university teaching departments and their constituent colleges. In 1993-94, their proportion was 18 per cent in higher education, and there is no increase over the last three years. In fact, the decrease from 23.4 per cent to 18.8 is alarming. Is there something wrong with statistics? Is it likely that part time, ad hoc teachers were included in 1992-93? The source does not provide an explanation.

Their proportion in affiliated colleges is 21 per cent as compared to 11.6 per cent in university teaching departments and constituent colleges of universities. It can be recalled that a large majority of these will be in women's colleges. The decrease

in numbers and proportion of women teachers in 1992-93 in comparison to 1993-94 is reflected more at the university level than in the colleges.

Thus, there is a clear tendency for women, whether as students or as teachers, to be concentrated in a few faculties and specialisations. The processing of clustering and dispersal indicate restriction of choices for women. This restriction may be voluntary (because of socialisation) and self-imposed or imposed by societal expectations and norms. What is noteworthy is that this trend becomes accentuated as one moves from the undergraduate to the doctoral level and from the general population to the marginalised groups. Further, women and men tend to take up different disciplines or different specialisations within the same disciplines. 'The options exercised by the students are based on certain qualities that the subjects are seen to hold, and these qualities that are perceived to be connected to beliefs about masculinity and femininity' [Acker 1994: 1-10]. How far does this observation hold true in view of the shift in choices and options exercised by women?

**Table 8: Proportion of Men and Women Students to the Total Enrolment: Disciplinewise 1950-51 to 1980-81**

Faculties	1950-51		1960-61		1970-71		1980-81	
	Women	Men	Women	Men	Women	Men	Women	Men
Arts	16.0	84.0	24.6	75.4	31.7	68.3	37.7	62.3
Science	33.3	66.7	10.5	89.5	17.8	82.2	28.8	71.2
Commerce	0.5	99.5	0.9	99.1	03.7	96.3	15.9	84.1
Education	32.4	67.6	32.8	67.2	36.5	63.5	47.3	52.7
Engg /tech	0.2	99.8	0.9	99.1	1.0	99.0	3.8	96.2
Medicine	16.3	83.7	21.9	78.1	22.8	77.2	24.4	75.6
Law	2.1	97.9	3.0	97.0	3.7	96.3	6.9	93.1
Agriculture, veterinary science and others	5.8	94.2	7.0	93.0	9.5	90.5	13.6	86.4
All faculties	10.9	89.1	16.2	83.8	21.9	78.1	27.2	72.8

Sources: Same as in Table 3.

**Table 9: Percentage Distribution of Men and Women: Disciplinewise 1993-94 to 1991-92 (Per cent)**

Discipline	1993-94		1992-93		1991-92	
	Women	Men	Women	Men	Women	Men
Arts	54.24	35.41	54.24	35.44	54.24	35.63
Science	19.78	18.94	19.78	18.99	19.78	19.00
Commerce	14.64	24.17	14.64	24.40	14.64	24.26
Education	3.73	1.71	3.73	1.72	3.73	1.74
Engg/Tech	1.18	6.91	1.18	6.78	1.18	6.73
Medicine	3.49	3.28	3.49	3.31	3.49	3.31
Agriculture	0.25	1.60	0.25	1.51	0.25	1.51
Veterinary science	0.06	0.35	0.06	0.32	0.06	0.33
Laws	1.79	6.97	1.79	6.89	1.79	6.84
Others	0.84	0.66	0.84	0.64	0.84	0.65
Total	100	100	100	100	100	100

Note: The percentage for the three years are the same in arts, science and commerce.

Source: *University Development in India: Consolidated Data Statewise 1988-89 to 1993-94*, Information and Statistics Bureau, New Delhi.

found that the fathers of engineering students have been engineers [Parikh and Sukhatme 1992]. Thus, parental aspirations have been very crucial in the new orientations of women students in higher education.

The enlargement of educational choices in the mid-1990s in the post-liberalisation phase is related to market demand. It has spread a little more to engineering and law but also to management-oriented and computer-oriented courses. These courses are being initiated in a large number of private and hastily set up unrecognised institutes. As mentioned earlier, separate statistics data are not available for these courses. Informal discussions with experts in the universities have revealed that the courses on computer applications and (software) engineering in the universities are registering a higher enrolment of women. But computer courses are also of varying kinds.<sup>11</sup> It will have to be seen whether women are joining highly specialised courses leading to upper end jobs or only train as data entry operators.

Programmes in management studies and business administration are also quite popular among women especially in the metropolitan cities. The private sector has entered this area of higher education in a big way because there are immediate returns and profits from the exorbitant fees charged from the students over which most of the states have removed all restrictions. In the absence of any statistics or micro level qualitative studies, I would like to give the example of a college for women in Chennai. This is a self-financing college affiliated to Madras University. Here every student has to pay a substantial tuition fee in comparison to the fully aided colleges with charge such low fee that it amounts to tuition free education. In this college, about 60 women students are admitted every year to each of the undergraduate and graduate programmes. Therefore, there are about 250-300 students at one point of time who are enrolled in management courses. Informal discussions at the college revealed that only about 30 per cent students have career goals. Others join only to get a degree and now a 'management' degree enhances the marital value of a young woman. This is substantiated by the fact that the wedding invitation cards mention the qualifications of the bride if she has a professional (e.g., engineering) or management degree alongwith those of the groom.

Thus, the new disciplinary choices work both ways, namely, to reinforce tradition but also to allow new options to those who seek it. For example, the availability of new opportunities seems to match with the rising aspirations of a minority of parents and daughters in metropolitan cities to be independent, to earn and also for professional satisfaction. Alongwith this, the parents are also more willing to accept that their daughters may work before marriage even though for a short period. Therefore, gender and class are crucial in the disciplinary choices of women students.

## V Barriers to Access

There are several factors that inhibit access and disciplinary orientations of women in higher education. Factors that inhibit female access to higher education are quantitative, viz, non-availability of

colleges and inadequate delivery system, i.e., unsuitable infrastructure and absence of basic physical facilities. Other factors are qualitative and are rooted in the socio-cultural context. But sometimes it is difficult to separate the former from the latter. For example, in the north-western state of Rajasthan there may be a co-educational college. Yet, daughters may not be sent there because in this region women are secluded. Although, they may no longer observe parda in the cities and may move in public places, yet separate colleges for women are considered desirable because prolonged interaction with men (students and teachers) is not socially desirable. Thus, physical access also becomes social access and it has policy implications.

Similarly, the delivery system has a quantitative and a qualitative dimension. The former relates to gendered provision of facilities thereby rendering it unsuitable for women students. The gender implications of an unsuitable delivery sys-

**Table 10: Percentage Distribution of Men and Women Disciplinewise 1950-51 to 1980-81**

Discipline	1950-51		1960-61		1970-71		1980-81	
	Women	Men	Women	Men	Women	Men	Women	Men
Arts	67.9	43.2	70.2	41.7	64.3	38.7	56.2	34.6
Science	21.0	33.4	18.6	10.2	25.7	33.2	20.6	19.0
Commerce	0.4	9.6	0.5	10.2	1.9	14.1	11.8	23.3
Education	3.1	0.8	3.7	1.5	3.2	1.5	4.5	1.9
Engg/Tech	0.0	3.4	0.2	5.1	0.1	3.8	0.7	1.9
Medicine	5.8	3.6	4.5	3.1	3.4	3.2	3.6	4.2
Law	0.7	3.8	0.5	3.0	0.4	2.9	1.6	8.1
Agriculture, veterinary science and others	1.1	2.2	0.8	4.6	0.9	2.5	1.2	2.8
All faculties	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Sources: Same as in Table 3.

**Table 11: The Number and Percentage of Women Students Admitted (Intake) in Degree Level Engineering Courses between 1983 and 1991**

Year	Total Enrolment	Women	Percentage of Women to Total	Men
1983	36,530	1,420	3.9	35,110
1985	42,498	2,717	6.4	39,781
1987	55,508	1,998	4.0	53,510
1989	62,603	4,210	6.7	58,393
1991	70,481	4,419	6.3	66,062

Source: Institute of Manpower Applied Research, *Women Engineers in Education and Employment*, NTMIS, IAMR, (Unpublished).

**Table 12: Teachers in Universities and Colleges**

	UTD/UC			AC			Total		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
1993-94	59,712 (88.4)	7,828 (11.6)	67,540	176,557 (79.0)	46,951 (21.0)	223,508	236,269 (81.2)	54,779 (18.8)	291,048
1992-93	55,370 (84.1)	10,472 (15.9)	65,842	160,399 (76.9)	55,551 (23.1)	215,950	215,769 (76.6)	66,023 (23.4)	281,792
1991-92	56,746 (88.4)	7,439 (11.6)	64,185	164,685 (79.0)	43,794 (21.0)	208,479	221,431 (81.2)	51,233 (18.8)	272,664

Notes: Percentage in brackets.

Source: *University Grants Commission, University Development in India: Consolidated Data-Statewise 1988-89 to 1993-94*, New Delhi, Tables 4.20, 5.20, 6.20.



tem are immense. For example, it has an adverse impact on access (e.g., women not being sent to co-educational schools and colleges), curriculum (e.g., introduction of subjects and disciplines in the educational institutions based on the premise that only men will be the students); physical facilities, gender-stereotyping in sports facilities (e.g., girl students not allowed to or discouraged from playing cricket or other sports), and career options. This creates several problems such as lack of adequate facilities for women students, namely, toilets, common rooms, hostels; non-availability of scholarships/fellowships and disciplines of their choice, absence of women teachers, or separate schools and colleges for women; absence of counselling for discipline and career options; etc. The qualitative aspects will be dealt with later.

The socio-cultural factors may be divided into two sets viz those at the macro level and at the micro level. The macro level dimensions relate to caste, tribe, class and regional variations indicated earlier. The micro level factors may be further sub-divided into institutional and societal factors.

Institutional factors that emanate from gendered structures and facilities have been mentioned earlier under the rubric of unsuitable delivery system. Some of the notable social dimensions of institutional arrangements are: gender stereotyping in course content and subject choices, discriminatory attitudes of teachers and administrators, absence of role models for career options and academic leadership at the college and university etc. Even in a single sex institution the faculty may reinforce traditional social roles or not encourage women students to emulate the non-traditional role models. Sometimes, the rules and procedures may be too restrictive so as to stifle the development of young women. Such restrictive practices in the hostel may lead to the dropping out of women students.<sup>12</sup> In co-educational institutions, men may hold most of the leadership positions and the restrictive practices may be too inhibiting.<sup>13</sup>

These are some of the well known factors that operate within the educational institutions to provide constraints to women's entrance in and retention within the higher educational system. Thus, they have to do with the delivery systems and the way they are structured and designed apart from the attitudes and perceptions of those who run and manage them.

*Societal factors:* The push and pull

factors that emanate from cultural practices, behaviour patterns and social role expectations and the association of women with the private domain of household continue to affect access to higher education. Some of the notable and well-known barriers are: lack of economic resources in the family; the choice between dowry and educational expenses, education being perceived as consumption and being irrelevant for production and the absence of role models at home, etc. In all these factors there is a close connection between gender and class as will become evident when some of the barriers to women's education and gender inequality are discussed below. These have to be understood in a situation where some parents are allowing new and emerging options to their daughters in education and careers.

As per the socialisation norms, parents may not use the earnings of their daughters. Therefore, either they do not want them to take up jobs or when they do, it is viewed as a short-term goal. This is because the traditional role expectations are such that the future parents-in-law and the husband would decide future career options of the young women. Thus, even if daughters start working, the reluctance to use daughter's income is quite common except among the very poor. Thus, for a large majority, higher education is not linked to careers. These social role expectations and self expectations affect the aspirations of a large number of women students who go to college 'to enjoy themselves', 'to pass the time' and to earn a degree which raises their marital prospects of getting a qualified and well placed husband. This may be the reason why a large majority are sent to arts and humanities courses which are cheaper and softer and do not require very long-term educational career.

While higher education is socially accepted and taken for granted among the upper and middle strata in urban India, it is also viewed more as an investment in the daughters' distant future rather than as an immediate goal. In other words, daughters are equipped with qualifications which are necessary for employment or work and which may also be needed if they are deserted or widowed after marriage. This perception of education as deferred investment is quite strong [Chanana 1998a].

While it is true that among the middle and upper strata the daughter's reproduc-

tive role receives pre-eminence, lower class or poor parents, on the other hand, have another problem. Those, who can afford to, would like their daughters to receive an education that brings immediate returns, i.e., an income. Not that they do not perceive the feminine role to be reproductive but in addition, women in these families work and earn. Therefore, they perform productive and reproductive functions. However, general education which is not professional or skill and vocation-oriented promises no income and also requires several years of full time studentship. Therefore, general education is viewed as useless since it provides no immediate returns while professional education is unaffordable. Here gender and class operate against young women. If one adds the expenses to be incurred on dowry,<sup>14</sup> the situation becomes more complex.

Entry into higher education occurs at a transitional stage of young women's lives. Therefore, since there are no immediate returns from schooling coupled with the heavy expenditure on marriage and dowry, daughters are less likely than sons to be sent to college.

Even if they take up jobs after higher education, dowry demand does not seem to reduce corresponding to her monthly income or salary. The groom has to be more or equally educated than the bride. The dowry demand goes up as the groom's education goes up because his occupation and income are generally dependent on his education among the salaried class. Although among the business class and self-employed, the family income and assets etc., are more important, yet generally the expectation is that there should be congruence in the education of the bride and groom. Thus, if a daughter is highly educated, the groom has to be highly educated and the occupation and income of such a groom will attract higher dowry. This depresses the education of girls among those strata who cannot pay huge dowries.

Absence of role models for career options and academic leadership at home is also an inhibiting factor. In addition, counselling for subject choice and career options is not available in the colleges and universities. This lack of awareness also leads to limited choices. It may be mentioned that several of the women students are first generation of women in the families who are receiving higher education. Therefore, there is absence of role models at home. Parents may also discourage

daughters from active participation in extra and co-curricular activities in co-educational institutions because they are generally scheduled beyond the teaching and classroom activities. Since it entails staying late in the afternoon and in the evening at college/university and travelling home later and may be alone, women students are discouraged from participation in these activities. This restriction is extended to laboratory work and therefore to science subjects.

As mentioned earlier teaching is considered the best career option for women. Yet, the proportion of women teachers to men teachers is very small. Again, so far as academic leadership in the higher educational institutions (HEIs) is concerned, women still lag behind. Very few women occupy positions of authority and decision-making in the universities and colleges. However, rotation of headship of departments has helped bring women in the forefront as academic leaders. Much needs to be done in this context [Chanana 1998].

Among the push factors the rising cost of living is crucial because every member of the family especially in the urban areas is under pressure to earn. While the middle strata women may work to improve the standard of living, the lower and working class women have to work for survival. Thus, aspirations for social mobility as well as a pragmatic response to the changed situation are forcing families to allow women to work. Since education is considered as an instrument in getting jobs, more and more women are seeking higher education. In addition, some parents want their daughters to avail the new openings and be independent and professionally competent.

## VI Concluding Observations

This paper has relied mainly on enrolment statistics which is inadequate<sup>15</sup> to reflect upon trends and shifts. Therefore, it is imperative that a database be developed in higher education. It involves collection of reliable quantitative and qualitative data and information, its co-ordination, communication to various actors in the field and management of this information. This will help in highlighting all-India trends, regional differences and institutional variations. It will allow for identification of issues and their prioritisation. Alongwith this, a qualitative understanding of the situation will go a long way

in identifying push and pull factors, the social groups and regions where women are backward in higher education, and suggest strategies for improving women's access to higher education. India is a plural society and generalisations about women have to be made with caution. Therefore, micro-studies may be encouraged to provide an input into policy formulation and implementation.

The marginalisation of educated women in research continues, though to a lesser extent. This bias has to be removed and funding agencies may identify this as a priority area within higher education.<sup>16</sup> While state policies and strategies are important in neutralising the social role expectations, the latter have also to be understood to formulate policy, implement it and to put strategies in place. The higher educational institutions have to become pro-women in their structure, culture and functioning.

Apart from infrastructure, behavioural and attitudinal changes among the teachers and staff members of HEIs are imperative. The co-educational institutions may ensure that women get a fair share of responsibility and leadership opportunities in sports, games, laboratories etc. They may provide counselling for subject choices and post-higher education career options. Women's study centres may play a strategic role in monitoring the policies and practices of universities apart from playing a crucial role in gender sensitisation, counselling and in providing role models.

The goal of full equality of opportunity for women in higher education is unlikely to be fulfilled without special supports designed to encourage their entry into institutions of higher education as students and as teachers. Unless this is done, one would not be wholly unjustified in assuming that women's position in higher education may even receive a setback. Thus, admission, recruitment and promotion policies of HEIs may need to be monitored.

In the post-liberalisation phase, the government has been reducing support to higher education. Moreover, higher educational institutions are being encouraged in the private sector and most of these offer non-traditional disciplines such as engineering, medicine, management, computer science etc. The cost of education is very high in these private institutions. If the enrolment statistics presented above are an indication, the proportion of women students has remained stagnant in spite of

higher education being highly subsidised in the public institutions. Therefore, it is anticipated that women's share in higher education in general and in professional education in particular is likely to receive a setback as the state withdraws from higher education and the private cost of education goes up. Thus, unless a clear policy is enunciated vis-a-vis the role of private sector in higher education in general and in favour of encouraging women students in the private professional institutions through supportive measures women's representation is unlikely to increase. It may even suffer a setback.

The question of subject choice and disciplinary orientation has been a matter of concern among feminists. This has been more so at the school level than at the higher level. Acker has discussed this issue taking Physics and English as representative of masculine and feminine subjects in the universities. She argues that 'most students develop a subject loyalty, reinforced by studying the discipline in higher education...' (1994:7). Again, disciplinary orientation is a matter of perception of students as well as the way disciplines are constructed by teachers. While the discipline boundaries limit choices and are socially constructed they are determined also by the future options of 'life-chances' of women and men. If women's participation in non-traditional disciplines has to be improved, the first imperative is to offer these disciplines in HEIs.<sup>17</sup> The second step is to provide counselling for discipline and career options.

If women have to contribute as full members of society, their potential must be harnessed especially when they have demonstrated their capability to succeed in the educational system. It is up to the colleges and universities to build their self-confidence, to harness their capacities and provide the opportunities and choices that they deserve and contribute toward gender equality. **EW**

## Notes

[I am grateful to Maithreyi Krishnaraj and S Srinivasa Rao for comments on this paper. Their comments provided pertinent insights and information. I am grateful to my friend Mandakranta Bose, University of British Columbia, Vancouver, for suggesting the title.]

1 This report was entitled *Towards Equality* and is better known by that title. This committee was appointed by the government of India after the declaration of 1975 as the UN Year For Women. The committee

- submitted its report in December 1974 and covered all aspects of the status of women in post-independent India. The report was a landmark in that it substantiated a decline in the overall status of Indian women and shook the Indian intelligentsia, political leaders and women out of complacency. It would be no exaggeration to say that it set the agenda for contemporary women's movement in India.
- 2 It may be noted that the article published by the University Grants Commission and ministry of human resource development is based only on enrolment data (which is of uneven quality). For instance, the UGC annual report for 1996-97 merges the enrolment figures for women in agriculture with those of medicine and several other disciplines. I hope that this article will also highlight the paucity of statistics on higher education in general and on women in particular.
  - 3 Yet some universities are able to attract students from the marginal groups. For example, of the 394 SC students in JNU in September 1996, 69 were women. The ST women are better represented, i.e., 70 out of 185 students [JNU 1996-97]. But this is not an indicator of national trends. Again, the ST women students come mainly from the north-eastern states and not from the central regions where tribes are very backward [Chanana 1993].
  - 4 Op cit, p 68.
  - 5 NTMIS or National Technical Management Information System is a survey conducted by the Institute of Applied Manpower Research (IAMR), New Delhi.
  - 6 The total scheduled caste enrolment in Kerala is 651 of which 332 are women and 319 men students.
  - 7 The percentages are calculated from India, 1995-96.
  - 8 It would be worthwhile to find out the difference between enrolment and out-turn. But the information on the number of students taking examinations and succeeding in them is no longer available except for the NTMIS data on women engineers [Chanana 1998].
  - 9 These two years courses are known as MBA i.e., master in business administration when offered by a university or a deemed university such as the Indian Institutes of Management. Other institutes offer them as diploma courses and are referred to as post-graduate diploma in business administration/management/marketing/mass communication etc.
  - 10 Some institutes such as XLRI, Jamshedpur and TISS, Mumbai, offer full fledged courses in HRD/HRM.
  - 11 Computer courses seem to be becoming popular and women, according to informal discussions with experts, are enrolling in large number. The statistics on higher education do not provide separate information on these courses. However, as an example and without an attempt to generalise, information on enrolment in an elite university located in the capital city is provided. In 1996-97, of the 32 students in masters of computer applications in Jawaharlal Nehru University (JNU) only 3 were women. At the MTech/PhD level, there were no women among 24 students. On September 1, 1996, there were 97 students on the rolls in the

- School of Computer and Systems Sciences of which 11 were women students. Although JNU is a national university and its admission policy attracts SC/ST students (as is evident from their proportion mentioned elsewhere) yet very few women join the new professional courses. For example, of the 97 students in 1997 in the School of Computer and Systems Sciences, 28 were SC and 10 ST students. But there were only 3 SC women (of the total 11 women students) and not a single ST woman student is enrolled. In biotechnology, of the 70 students, 6 were SC (3 men and 3 women) and one ST student. Again, there is no ST woman student in biotechnology.
- 12 For example, some college hostels censor the letters received by women residents.
  - 13 For the connection between co-education and its impact on girls' access to education, see Chanana (1988).
  - 14 Dowry may consist of cash and in kind. The social practice varies in different parts of India. But two things are common. First, dowry involves a heavy investment and eats into the lifetime savings of parents and also results in indebtedness. Second, the dowry demand is increasing as educational level of men and women is going up instead of unleashing a wave of social reform and improving the status of women generally.
  - 15 There are several other aspects, e.g., how many finish schooling and enter higher education? What is the out-turn from each institution by discipline, by state/province?
  - 16 Funding bodies such as the ICSSR, UGC, or the various ministries identify priority areas for research from time to time. For example ICSSR sponsored two nationwide surveys of SC/ST students in higher education with a gap of ten years. Gender was a missing variable. In the same manner, women in higher education may be identified as a priority area.
  - 17 The UGC scheme of vocationalisation of the first degree is a major step in this direction.

## References

- Acker, Sandra (1994): *Gendered Education*, Open University Press, Buckingham.  
 Ahmad, K (1979): 'Equity and Women's Higher

- Education', *Journal of Higher Education*, 5,1, Monsoon, pp 231-49.  
 Chanana, K (1988): 'Social Change or Social Reform: The Education of Women in pre-Independence India', in K Chanana (ed) *Socialisation, Education and Women: Explorations in Gender Identity*, Orient Longman, New Delhi.  
 - (1990): 'The Dialectics Between Tradition and Modernity and Women's Education in India', *Sociological Bulletin*, 39 (182), March-September, pp 75-91.  
 - (1998): 'Women, Higher Education and Development: Strengthening the Role and Contribution of Women Graduates For The Development Process', UNESCO, Bangkok, (unpublished).  
 - (1998a): 'Family Strategies, Gender Ideology and Education: The Impact of Partition on Punjabi Women of New Delhi', in Carla Risseuw and Kamala Ganesh (eds), *Negotiation and Social Space: A Gendered Analysis of Changing Kin and Security Networks in South Asia and Sub-Saharan Africa*, Sage, New Delhi, pp 157-176.  
 Government of India (GOI) (1996): *Selected Educational Statistics 1995-96*, department of education, planning, statistics and monitoring division, MHRD, New Delhi.  
 - (1998): *Annual Report 1997-98*, department of education, MHRD, New Delhi.  
 Institute of Applied Manpower Research (1995): *Manpower Profile India*, New Delhi.  
 Jawaharlal Nehru University (1996-97): *27th Annual Report*, New Delhi.  
 National Institute of Educational Planning and Administration (nd): *Higher Education in India: A Survey*, NIEPA, New Delhi.  
 Parikh, P P and S P Sukhatme (1992): *Women Engineers in India: A Study on the Participation of Women in Engineering Courses and in the Engineering Profession*, Indian Institute of Technology, Mumbai.  
 University Grants Commission (1988-89): *Annual Report*, New Delhi.  
 Vasudevan, Jayshree (1979): 'Women in Medicine And Teaching: A Trend Analysis', MPhil dissertation, Zakir Husain Centre for Educational Studies, Jawaharlal Nehru University, New Delhi.

## REVIEW OF LABOUR September 25, 1999

- |  |                       |
|--|-----------------------|
| Employment in Smaller Indian Firms: Choices under Liberalisation | —Mark Holmstrom       |
| Social Security of Labour in New Industrial Towns                | —G Vijay              |
| Organising the Unorganised: Case of Hamal Panchayat              | —Rajeshwari Deshpande |
| Working Class Militancy in Endangered Sugar Industry             | —Gopal Guru           |
| Labour Legislation and Social Justice: Rhetoric and Reality      | —Debi Saini           |
| New Technology and Textile Workers                               | —R C Datta            |

For copies write to  
Circulation Manager

**Economic and Political Weekly**

Hitkari House, 284, Shahid Bhagatsingh Road, Mumbai 400 001