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Women's University Enrolments

Trends by Level of Study and Discipline, 1992-2003

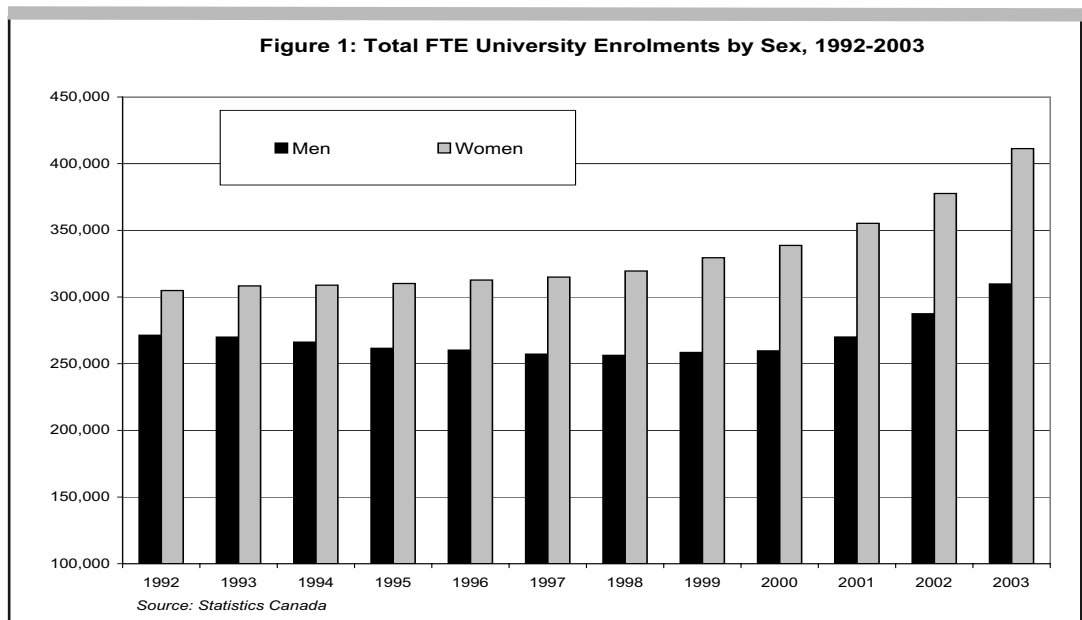
Women's participation in Baccalaureate, Master's and PhD programs increased sharply between 1992 and 2003, continuing a long-term trend. While overall enrolment rates have reached an all-time high for both men and women, women's participation has significantly outpaced that of men over the past two decades. Women accounted for about three quarters of the growth in enrolment during the 1980s and 1990s. Today, women make up more than 58 per cent of undergraduate students, a striking change from the 1970s when women represented just a third of all undergraduate students. Women have also made impressive gains at the graduate level. They now constitute a majority of Master's students across Canada. Although women remain modestly under-represented at the PhD level, their presence

has grown dramatically in recent years.

Nevertheless, there are important differences between disciplines. In the field of Mathematics, Computer and Information Sciences, for example, women's representation actually decreased at the Baccalaureate and Master's levels between 1992 and 2003. The growth in women's participation has also tended to be more concentrated in major discipline groups where they are already well represented, such as Education.

National Trends

Between 1992 and 2003, the total number of women enrolled in university programs, measured on a full-time equivalent (FTE) basis, increased by nearly 35 per cent. By contrast, male enrolments rose 14 per



cent. Overall, the number of female students increased by more than 100,000, compared to a gain of just 38,000 for men (see figure 1). As a consequence, women's share of total university enrolments increased from 53 per cent in 1992 to 57 per cent in 2003.

Women experienced strong gains at all levels of study. At the undergraduate level, women's enrolments increased by 33 per cent between 1992 and 2003, compared with a gain of 12.5 per cent for men. The number of women pursuing a Master's degree grew by over 50 per cent, while the number of women enrolled in doctoral programs rose sharply by over 77 per cent (see table 1).

Across Canada, the share of women enrolled at the undergraduate level rose from 54.2 per cent in 1992 to 58.2 per cent in 2003. Female Master's students grew from a minority (47.3 per cent) to a majority (51.4 per cent) over this period. However, since 1999, proportion of women in Master's programs has fallen slightly each year. Significant progress towards equity in enrolments was also made in Doctoral programs, with women increasing their share from 35.4 per cent in 1992 to 45.6 per cent in 2003.

Provincial Trends

While gains in women's participation in post-secondary education occurred across all provinces, there were some notable differences, particularly in Master's and Doctoral enrolments. The highest rate of women's

Table 1 FTE University enrolments by level of study and sex, 1992 and 2003

		1992	2003	% change
Undergraduate	Women	273,907	362,415	32.3%
	Men	231,263	260,145	12.5%
Master's	Women	23,172	35,042	51.2%
	Men	25,782	33,133	28.5%
Doctorate	Women	7,814	13,858	77.3%
	Men	14,295	16,535	15.7%
Total	Women	304,893	411,315	34.9%
	Men	271,340	309,813	14.2%

Source: Statistics Canada, Postsecondary Student Information System

participation at the Baccalaureate level in 2003 was at the University of Prince Edward Island, at 66 per cent of FTE enrolments compared to a low of just over 57 per cent in British Columbia. All provinces began the period with women as a majority of Baccalaureate enrolments, and all provinces experienced an increase in women's representation at the undergraduate level.

The share of women in Master's programs also grew across all provinces between 1992 and 2003. There were interesting differences in the rate at which this growth happened. A number of provinces which started the period with a comparatively low rate of women's participation made significant gains over this period. For example, the proportion of women among Master's FTE enrolments at Memorial University of Newfoundland increased from

Table 2 Women's Share of FTE Student Enrolments by Program Level, Canada, 1992-2003

% Enrolments	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Baccalaureate	54.2%	54.6%	54.9%	55.4%	55.7%	56.0%	56.4%	57.0%	57.6%	57.9%	57.9%	58.2%
Master's	47.3%	48.0%	49.0%	50.1%	50.5%	51.4%	51.7%	52.1%	52.0%	51.9%	51.6%	51.4%
Doctoral	35.4%	36.9%	38.4%	39.6%	40.8%	42.5%	44.2%	44.5%	45.4%	46.0%	45.8%	45.6%
Total	52.9%	53.3%	53.7%	54.3%	54.6%	55.1%	55.5%	56.0%	56.6%	56.8%	56.8%	57.0%

Source: Statistics Canada, Postsecondary Student Information System

46.6 per cent in 1992 to 54.9 per cent in 2003, and Manitoba's by 43.7 per cent to 54.9 per cent over the same period, while Quebec's proportion of women increased only slightly from 48 per cent to 50 per cent.

Gains made by women were even more pronounced at the Doctoral level. New Brunswick in particular witnessed dramatic growth in women's share of FTE enrolments, with women doubling their representation (from 26.9 per cent in 1992 to 49.9 per cent in 2003).

Women's enrollment by discipline

While their overall participation in university programs has risen dramatically, women still tend to be under-represented in a number of major disciplines. At the Baccalaureate level, the largest relative increase in women's participation was in Personal, Protective and Transportation Services, which saw women's share of enrolments grow from 15 per cent in 1992 to about 58 per cent in 2003. (However, the relatively small number of students included in this category and possible classification uncertainties cast doubts on the reliability of these figures). Agriculture, Natural Resources and Conservation as well as Physical and Life Sciences (and Technologies) showed signifi-

cant growth, from 46 per cent to 57.5 per cent for the former and 49.9 per cent to 58.1 per cent for the latter.

Women's representation in major discipline groups where they already constituted a solid majority of enrolments continued to increase over the 1992 to 2003 period. This was most pronounced in Health, Parks, Recreation and Fitness FTE enrolments, where the share of female students increased from 61.7 per cent to 72.9 per cent. Education, which began the period with women comprising over three-quarters of FTE enrolments, ended the period with women's representation having grown to 78.1 per cent. Visual and Performing Arts, and Communications Technologies saw an increase in women's representation to 67.7 per cent from 62.8 per cent, and Social and Behavioural Sciences, and Law witnessed growth from 60.0 per cent to 66.2 per cent. More modest increases were found in Humanities (60.7 per cent to 64 per cent) and Business, Management and Public Administration (50.2 per cent to 54 per cent).

Conversely, in major discipline groups where women have traditionally been under-represented, gains were far more modest. In Architecture, Engineering and Related Technologies, women's representation showed rose slightly from 18.9 per cent in 1992 to

Table 3 Women's Share of FTE Student Enrolments by Program Level by Province, 1992-2003

% Enrolments		NL	PE	NS	NB	QC	ON	MB	SK	AB	BC
Baccalaureate	1992	55.5%	57.4%	54.9%	53.4%	54.7%	54.3%	53.3%	53.2%	53.8%	53.6%
	2003	60.3%	66.0%	59.5%	58.5%	58.3%	58.1%	59.6%	58.5%	57.5%	57.1%
+/- Change 1992-2003		+4.8	+8.6	+4.6	+5.1	+3.6	+3.9	+6.4	+5.3	+3.7	+3.4
Master's	1992	46.6%	43.5%	51.3%	45.0%	48.0%	46.4%	43.7%	38.9%	49.6%	49.2%
	2003	54.9%	64.5%	54.6%	48.4%	50.0%	50.5%	54.9%	52.6%	50.8%	55.6%
+/- Change 1992-2003		+8.3	+21.0	+3.3	+3.4	+2.1	+4.2	+11.2	+13.7	+1.1	+6.5
Doctoral	1992	24.7%	-	36.0%	26.9%	34.7%	36.6%	32.9%	26.0%	34.8%	36.1%
	2003	46.5%	51.9%	42.5%	49.9%	45.7%	45.8%	41.0%	42.3%	45.2%	46.4%
+/- Change 1992-2003		+21.8	-	+6.5	+23.1	+11.0	+9.1	+8.2	+16.3	+10.4	+10.4

Source: Statistics Canada, Postsecondary Student Information System
Italics indicates caution in interpreting results due to small counts with random rounding

Table 4 Women's Baccalaureate FTE Enrolments by Major Discipline Group, 1992-2003

Major Discipline Group	# / % Women	1992	1995	1997	1999	2001	2003
Education	Est. # Women	31,620.0	28,738.4	28,276.4	29,542.9	30,893.1	32,116.4
	% Women	75.4%	75.6%	75.8%	77.5%	78.5%	78.1%
Visual and Performing Arts, and Communications Technologies	Est. # Women	10,913.0	11,583.7	11,837.7	12,497.1	13,813.1	15,719.0
	% Women	62.8%	63.1%	63.7%	65.8%	66.8%	67.7%
Humanities	Est. # Women	60,461.7	57,131.1	53,417.6	51,877.3	57,148.3	67,043.6
	% Women	60.7%	60.8%	61.7%	62.9%	63.2%	64.0%
Social and Behavioural Sciences, and Law	Est. # Women	62,639.6	63,502.6	61,433.6	62,210.4	66,647.0	79,897.7
	% Women	60.0%	62.4%	63.7%	64.7%	66.1%	66.2%
Business, Management and Public Administration	Est. # Women	33,552.7	31,890.9	34,171.9	36,625.6	40,848.1	49,799.4
	% Women	50.2%	50.9%	51.7%	53.6%	55.0%	54.0%
Physical and Life Sciences, and Technologies	Est. # Women	26,308.3	30,176.7	31,305.7	33,898.6	34,639.3	40,743.3
	% Women	49.9%	52.3%	54.4%	56.7%	57.6%	58.1%
Mathematics, Computer and Information Sciences	Est. # Women	5,775.7	5,595.3	5,877.0	7,641.9	8,271.0	7,545.3
	% Women	28.9%	27.3%	26.2%	27.7%	26.9%	25.3%
Architecture, Engineering and Related Technologies	Est. # Women	8,512.3	9,062.3	9,750.3	10,921.6	12,422.1	13,268.9
	% Women	18.9%	20.7%	21.4%	22.5%	23.2%	22.1%
Agriculture, Natural Resources and Conservation	Est. # Women	3,208.1	4,808.3	5,264.1	5,371.7	4,889.7	4,905.3
	% Women	46.0%	50.6%	51.8%	54.2%	56.6%	57.5%
Health, Parks, Recreation and Fitness	Est. # Women	27,356.9	29,838.6	31,659.1	32,611.6	37,280.7	43,957.9
	% Women	61.7%	64.8%	66.6%	68.5%	70.7%	72.9%
Personal, Protective and Transportation Services	Est. # Women	24.3	12.3	14.6	24.6	138.6	230.7
	% Women	15.0%	33.3%	33.6%	39.8%	56.7%	58.1%
Other	Est. # Women	3,534.9	3,622.9	6,030.1	6,814.1	6,272.1	7,187.4
	% Women	61.3%	60.2%	61.1%	61.9%	62.9%	62.4%

Source: Statistics Canada, Postsecondary Student Information System

Table 5 Baccalaureate FTE Enrolment Growth by Major Discipline Group and Gender, 1992-2003

Major Discipline Group	Male FTE Enrolment	Female FTE Enrolment
All/Total	+12.5%	+32.5%
Health, Parks, Recreation and Fitness	-4.1%	+60.7%
Architecture, Engineering and Related Technologies	+27.5%	+55.9%
Physical and Life Sciences, and Technologies	+11.2%	+54.9%
Agriculture, Natural Resources and Conservation	-3.8%	+52.9%
Business, Management and Public Administration	+27.8%	+48.4%
Visual and Performing Arts, and Communications Technologies	+16.3%	+44.0%
Mathematics, Computer and Information Sciences	+56.3%	+30.6%
Social and Behavioural Sciences, and Law	-2.3%	+27.6%
Humanities	-3.8%	+10.9%
Education	-12.6%	+1.6%
Personal, Protective and Transportation Services	+20.4%	+850.0%
Other	+94.3%	+103.3%

Source: Statistics Canada, Postsecondary Student Information System

22.1 cent in 2003. In Mathematics, Computer and Information Sciences, women's representation actually declined over this period, falling from 28.9 per cent to 25.3 per cent of total FTE enrolments. This was despite a 30.6 increase in the number of women enrolling in the field because these gains were overshadowed by a 56.3 per cent jump in male enrolments (see Table 5).

At the graduate level, the share of women enrolled in Master's programs in Mathematics, Computer and Information Sciences declined over from 41.3 per cent in 1992 to 38.1 per cent in 2003. On the other hand, gains were made in other traditionally under-represented fields of study such as Architecture, Engineering and Related Technologies, where women's representation increased from 20.8 per cent of Master's FTE

enrolments in 1992 to 28.5 per cent in 2003. As well, Physical and Life Sciences, and Technologies grew from 40.2 per cent to 52.3 per cent over the same period. Similarly, women enrolled in Agriculture, Natural Resources and Conservation share their share rise from 41.8 per cent to 56.9 per cent of total FTE enrolments.

Female graduate students also increased their share in major discipline groups where they already comprised a majority. Women pursuing Master's degrees in Health, Parks, Recreation and Fitness increased from 65.6 per cent of the total in 1992 to 73.1 per cent by 2003. In Social and Behavioural Sciences, and Law, the proportion of female FTE enrolments grew from 53.4 per cent to 63.5 per cent. The share of female Education FTE enrolments also increased, from 70.0 per cent to 74.5 per cent

Table 6 Women's Master's FTE Enrolments by Major Discipline Group, 1992-2003

Major Discipline Group	# / % Women	1992	1995	1997	1999	2001	2003
Education	Est. # Women	4,196.4	4,204.0	4,121.0	3,860.9	3,646.9	4,050.1
	% Women	70.0%	72.0%	73.3%	73.4%	74.3%	74.5%
Visual and Performing Arts and Communications Technologies	Est. # Women	769.1	823.1	812.0	854.3	892.0	1,023.4
	% Women	59.3%	60.7%	62.0%	64.2%	62.1%	59.4%
Humanities	Est. # Women	2,732.9	2,887.0	2,876.1	2,899.3	2,725.3	2,979.6
	% Women	52.8%	53.3%	55.5%	57.2%	56.0%	56.1%
Social and Behavioural Sciences and Law	Est. # Women	3,835.1	4,212.9	4,263.4	4,841.7	5,342.4	5,996.9
	% Women	53.4%	56.9%	59.0%	60.5%	62.3%	63.5%
Business, Management and Public Administration	Est. # Women	3,961.7	3,934.1	4,468.7	5,436.4	5,766.4	6,403.9
	% Women	41.6%	43.5%	44.8%	44.9%	44.9%	43.9%
Physical and Life Sciences and Technologies	Est. # Women	2,021.6	2,411.7	2,522.0	2,902.4	3,372.7	3,993.9
	% Women	40.2%	44.1%	45.7%	47.8%	50.4%	52.3%
Mathematics, Computer and Information Sciences	Est. # Women	1,059.3	968.0	964.0	1,106.4	1,381.9	1,693.0
	% Women	41.3%	39.7%	39.1%	38.9%	40.6%	38.1%
Architecture, Engineering and Related Technologies	Est. # Women	1,373.4	1,607.0	1,622.0	1,977.9	2,399.1	3,152.4
	% Women	20.8%	25.3%	26.1%	28.9%	28.3%	28.5%
Agriculture, Natural Resources and Conservation	Est. # Women	737.3	786.4	1,036.6	1,168.3	1,226.6	1,323.3
	% Women	41.8%	48.9%	53.3%	54.9%	56.4%	56.9%
Health, Parks, Recreation and Fitness	Est. # Women	2,355.4	2,701.6	2,797.4	3,141.7	3,422.4	4,270.9
	% Women	65.6%	67.2%	68.2%	70.1%	71.9%	73.1%
Personal, Protective and Transportation Services	Est. # Women	7.4	8.6	7.7	21.4	22.0	27.4
	% Women	17.5%	13.3%	6.8%	19.7%	19.5%	20.1%
Other	Est. # Women	122.1	119.3	247.6	308.9	134.6	127.6
	% Women	62.5%	56.8%	60.5%	63.8%	63.5%	56.7%

Source: Statistics Canada, Postsecondary Student Information System

over the period, although women's representation increased by virtue of their enrolments not declining at the same rate as men.

Two major discipline groups remained largely unchanged. The share of women Master's enrolments in Business, Management and Public Administration increased only slightly, from 41.6 per cent to 43.9 per cent. As well, Visual and Performing Arts, and Communications Technologies FTE enrolments were virtually unchanged over this period.

The most dramatic gains in women's enrolments came at the Doctoral program level where progress was made in every major discipline group. In 1992, women constituted a majority (61.4 per cent) of FTE enrolments in Education at the Doctoral level, and a minority in all other major discipline groups. By 2003, female doctoral students were a majority in five of the eleven major discipline groups.

Female PhD students saw their share of enrolments in Health, Parks, Recreation and Fitness increase from 44.9 per cent in 1992 to nearly 60 per cent by 2003. Female enrolments in Visual and Performing Arts, and

Communications Technologies grew from 45.3 per cent to 61.4 per cent over the same period. Similarly, female Doctoral students in Humanities increased their share from 45.4 per cent to 50.4 per cent, and those in Social and Behavioural Sciences, and Law went from 47.8 per cent to 59.7 per cent.

Women increased their share of FTE enrolments to over 40 per cent in Agriculture, Natural Resources and Conservation, and Physical and Life Sciences, and Technologies. Women also gained ground yet remained a minority among FTE enrolments in Business, Management and Public Administration, beginning at 32.4 per cent and ending at 44.3 per cent.

There was some noticeable improvement in women's participation in traditionally under-represented fields, although they still trail far behind men. The share of women PhD students in Architecture, Engineering and Related Technologies grew sharply from 10.5 per cent to 19.3 per cent. In Mathematics, Computer and Information Sciences, the proportion of female doctoral students climbed from 8.2 per cent to 27.6 per cent.

Table 7 Master's FTE Enrolment Growth by Major Discipline Group and Gender, 1992-2003

Major Discipline Group	Male FTE Enrolment	Female FTE Enrolment
All/Total	+28.5%	+51.2%
Architecture, Engineering and Related Technologies	+51.7%	+129.5%
Physical and Life Sciences, and Technologies	+21.2%	+97.6%
Health, Parks, Recreation and Fitness	+27.2%	+81.3%
Agriculture, Natural Resources and Conservation	-2.3%	+79.5%
Business, Management and Public Administration	+47.1%	+61.6%
Mathematics, Computer and Information Sciences	+83.1%	+59.8%
Social and Behavioural Sciences, and Law	+3.0%	+56.4%
Visual and Performing Arts, and Communications Technologies	+32.9%	+33.1%
Humanities	-4.8%	+9.0%
Education	-23.3%	-3.5%
Personal, Protective and Transportation Services	+211.4%	+269.2%
Other	+33.0%	+4.4%

Source: Statistics Canada, Postsecondary Student Information System

Table 8 Women's Doctoral FTE Enrolments by Major Discipline Group, 1992-2003

Major Discipline Group	# / % Women	1992	1995	1997	1999	2001	2003
Education	Est. # Women	1,130.6	1,327.0	1,487.4	1,466.4	1,485.6	1,630.3
	% Women	61.4%	65.8%	67.7%	68.0%	68.1%	69.8%
Visual and Performing Arts, & Communications Technologies	Est. # Women	113.0	162.1	204.6	239.0	280.0	322.0
	% Women	45.3%	54.4%	58.0%	57.0%	62.2%	61.4%
Humanities	Est. # Women	1,614.3	1,892.9	1,875.6	1,806.1	1,755.7	1,900.1
	% Women	45.4%	49.2%	49.5%	49.9%	50.3%	50.4%
Social and Behavioural Sciences, and Law	Est. # Women	1,954.6	2,386.7	2,572.9	2,883.1	3,114.7	3,563.0
	% Women	47.8%	51.8%	54.3%	57.4%	58.9%	59.7%
Business, Management and Public Administration	Est. # Women	187.0	282.0	331.9	379.7	457.6	559.3
	% Women	32.4%	39.6%	41.2%	43.3%	45.5%	44.3%
Physical and Life Sciences and Technologies	Est. # Women	1,444.1	1,703.4	1,790.3	2,030.9	2,286.7	2,763.7
	% Women	28.0%	31.6%	34.4%	36.8%	39.4%	40.6%
Mathematics, Computer and Information Sciences	Est. # Women	217.4	244.0	226.0	264.1	338.1	502.4
	% Women	18.2%	19.4%	20.3%	23.0%	26.2%	27.6%
Architecture, Engineering and Related Technologies	Est. # Women	354.4	437.0	511.3	564.4	618.4	920.4
	% Women	10.5%	12.7%	16.1%	18.4%	18.8%	19.3%
Agriculture, Natural Resources and Conservation	Est. # Women	213.3	253.1	275.0	295.1	317.7	377.1
	% Women	26.8%	30.8%	33.7%	35.2%	40.1%	42.3%
Health, Parks, Recreation and Fitness	Est. # Women	510.9	678.7	750.1	786.3	900.1	1,208.9
	% Women	44.9%	49.1%	51.1%	52.8%	56.8%	59.7%
Personal, Protective and Transportation Services	Est. # Women	5.3	5.3	4.0	5.3	6.3	11.1
	% Women	25.5%	30.6%	23.1%	23.3%	27.0%	28.2%
Other	Est. # Women	72.6	158.0	159.3	169.7	101.3	100.0
	% Women	55.3%	62.2%	59.2%	57.8%	63.5%	58.6%

Source: Statistics Canada, Postsecondary Student Information System

Table 9 Doctoral FTE Enrolment Growth by Major discipline Group and Gender, 1992-2003

Major Discipline Group	Male FTE Enrolment	Female FTE Enrolment
All/Total	+15.7%	+77.3%
Business, Management and Public Administration	+79.5%	+199.1%
Visual and Performing Arts, and Communications Technologies	+48.2%	+185.0%
Architecture, Engineering and Related Technologies	+28.1%	+159.7%
Health, Parks, Recreation and Fitness	+30.2%	+136.6%
Mathematics, Computer and Information Sciences	+35.5%	+131.1%
Physical and Life Sciences, and Technologies	+9.2%	+91.4%
Social and Behavioural Sciences, and Law	+12.5%	+82.3%
Agriculture, Natural Resources and Conservation	-11.7%	+76.8%
Education	-1.2%	+44.2%
Humanities	-3.6%	+17.7%
Personal, Protective and Transportation Services	+84.3%	+110.8%
Other	+20.4%	+37.8%

Source: Statistics Canada, Postsecondary Student Information System

Conclusion

The increasing enrollment of women across all university programs has been a long-standing trend. Women have made up a majority of undergraduate students since 1985. Since 1995, women's enrolments in Master's programs have surpassed those of men. This stands in stark contrast to when the Report of the Royal Commission on the Status of Women in Canada was released in 1970. Identifying inequalities in the education system, the report warned that women made up just 38.6 per cent of all undergraduate students at the time. Just

over a decade later, however, women become the majority, and the gap has widened ever since.

Nevertheless, it is important to recognize that the feminization of universities has not been spread evenly across disciplines. Women are still far more likely to be enrolled in Education, Visual and Performing Arts, and Communications Technologies, Humanities, and Social and Behavioural Sciences and Law. By contrast, and despite recent gains, women still remain significantly under-represented in Mathematics, Computer and Information Sciences, and Architecture, Engineering and Related Technologies. ■

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