



SFC Corporate publication

Gender Action Plan: technical report

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Summary: This publication gives an overview of the analysis underpinning SFC's Gender Action Plan.

FAO: Principals and directors of Scotland's Colleges and Universities

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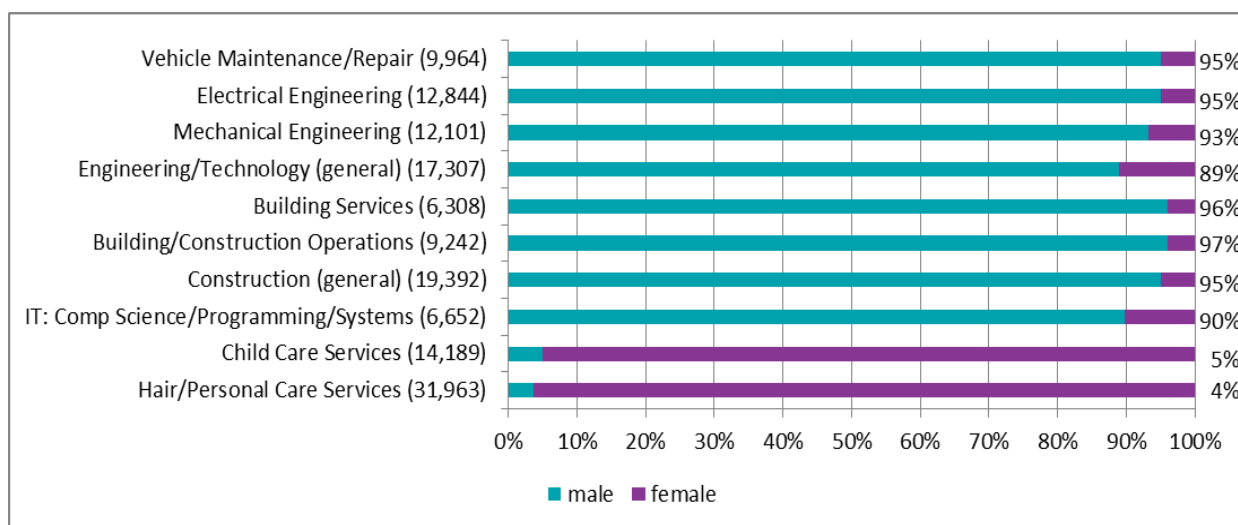
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Colleges

Enrolments

1. In Academic Year 2014-15 the gender imbalance between male and female enrolments to college was 2.2 percentage points. Females accounted for 51.1% of total enrolments and males accounted for 48.9%.
2. The gender balance across subjects studied, however, varies markedly. The graphs below show the extent of the gender imbalance for 16-24 year olds in the 'superclass' subjects of focus in the Gender Action Plan. Graph 1 shows the average gender imbalance over four years of data, starting with the baseline year of 2011-12 and going to 2014-15, the most recent year of available data.
3. This analysis is based on KPI 8 for the Developing the Young Workforce programme (DYW) which is "Increase by 5 percentage points the minority gender share in each of the 10 largest and most imbalanced superclasses among 16-24 year olds by 2021."

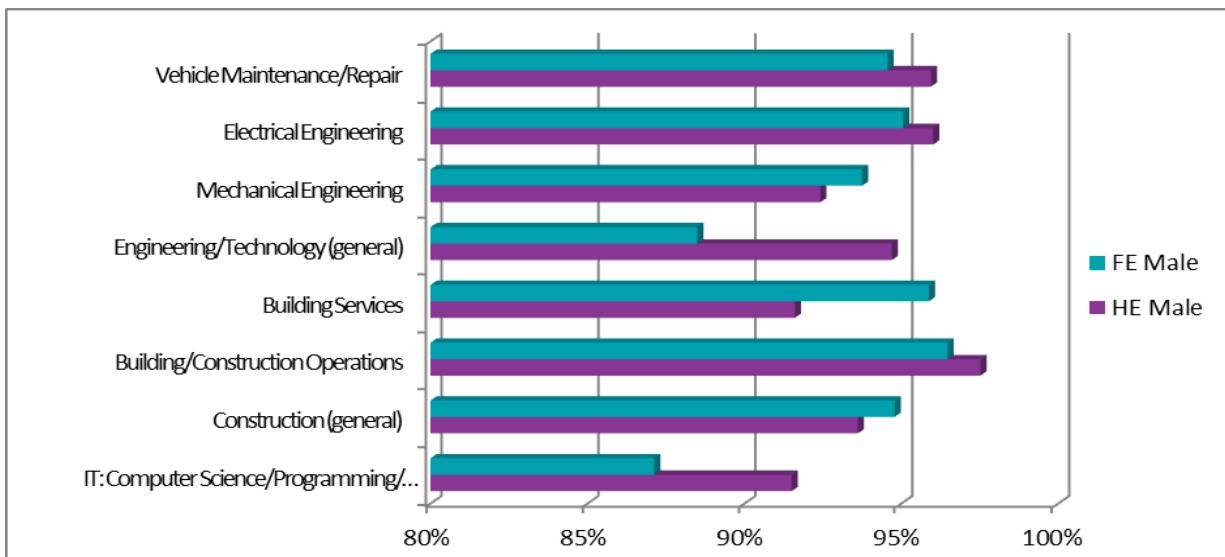
Graph 1: Gender balance at all levels of study in the most gender imbalanced Superclasses¹



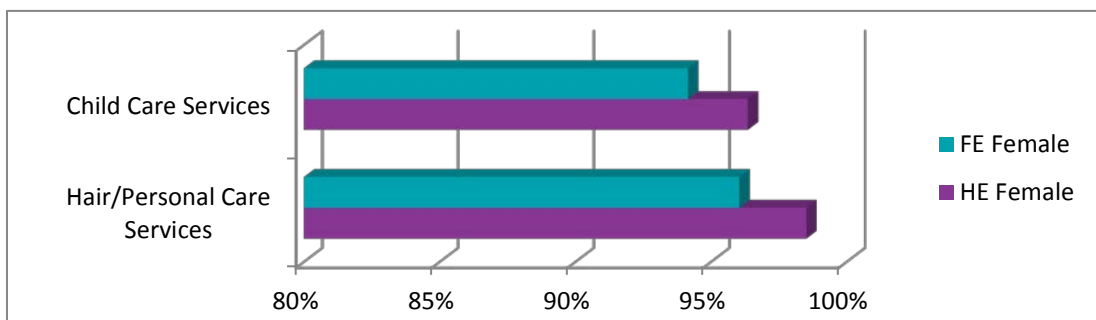
4. There are further differences in the subject gender imbalance when broken down to Further Education (FE) and Higher Education (HE) courses at college. For example, Graph 2 below shows that the gender imbalance is notably worse at HE level for subjects such as Engineering/Technology and IT: Computer Science/Programming/Systems.

¹ Brackets include total number of students in the subject area over the four year period

Graph 2: HE/FE split for male dominated subjects in colleges 2014-15



Graph 3: HE/FE split for female dominated subjects in colleges 2014-15

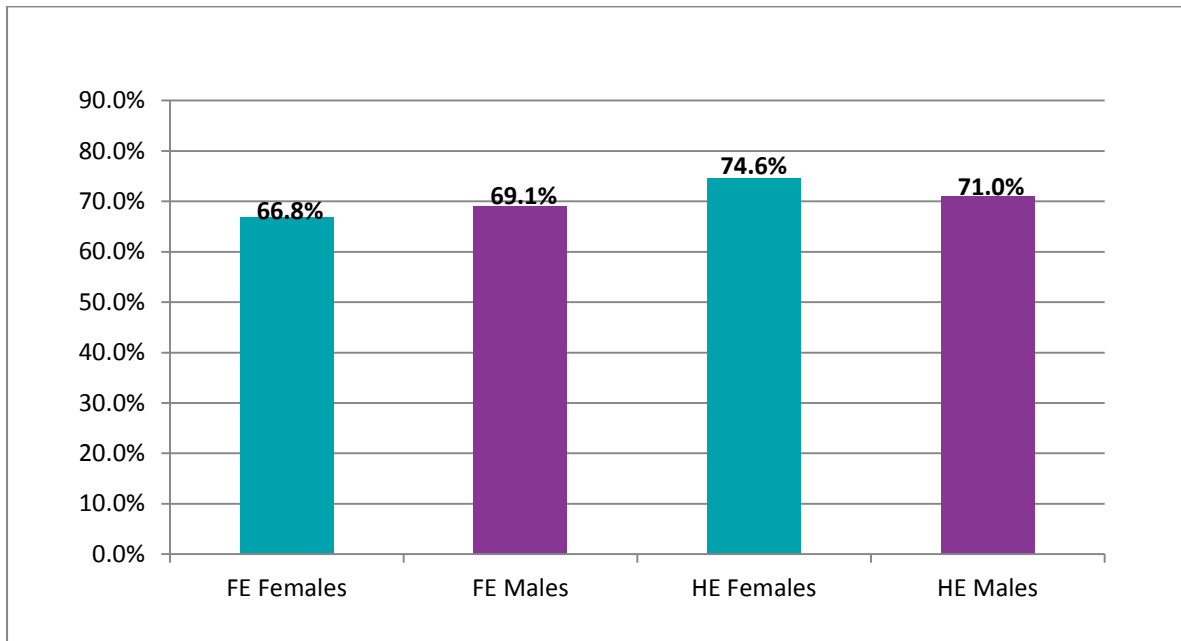


5. It is important to note that while these 'superclasses' represent the most imbalanced subjects, as outlined in the KPI, they do not show the entire scale of the gender imbalance in colleges and we are aware that imbalances exist in other subject areas.

Successful completion rates for enrolments to courses lasting 160 hours or more by subject

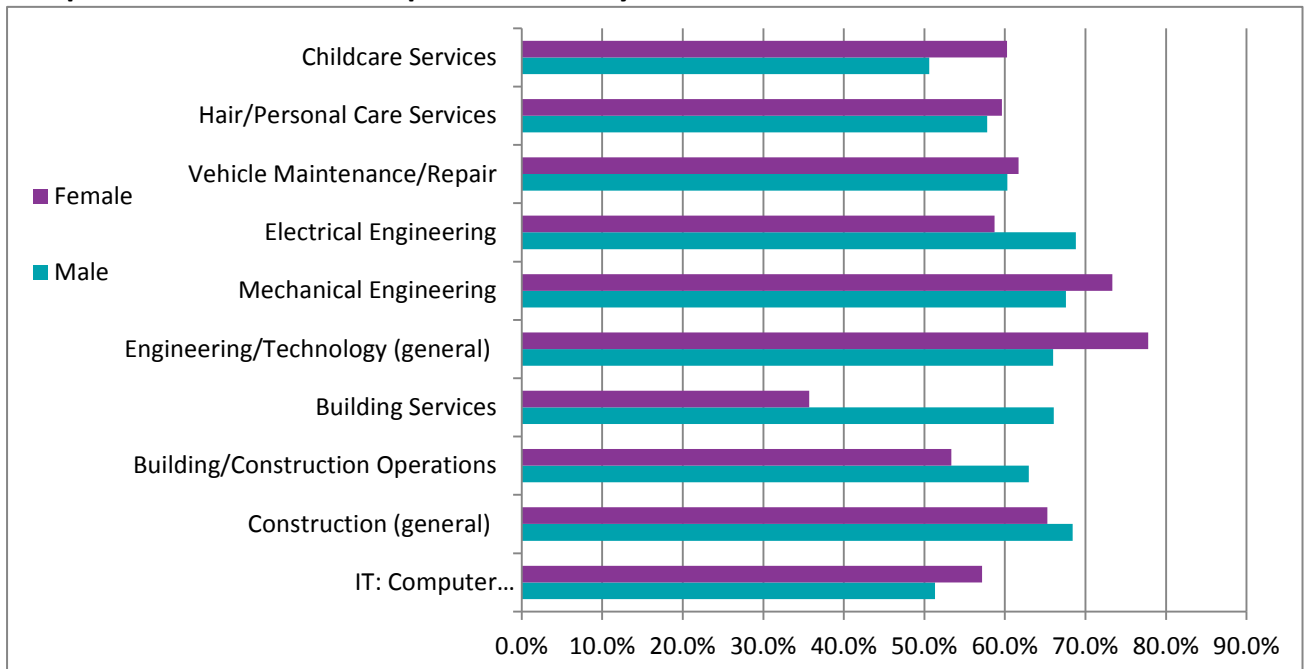
6. The imbalance between males and females can be seen not only in their uptake to these subject areas at college but also in their outcomes. Using the Performance Indicators for successful completion, variances in performance rates between males and females at sector level are shown in the graph below.

Graph 4: Successful completion rates for enrolments to courses lasting 160 hours or more in 2014-15



7. Graph 4 shows that males studying at FE level have a higher successful completion rate than females. 69.1% of males studying at FE level successfully complete their course, compared to 66.8% of females.
8. The opposite is true for males and females studying at HE level, with 74.6% of females at HE level successfully completing their course compared to 71.0% of males.
9. Again, these imbalances are more evident in certain subject groups at FE and HE level. Graph 5 shows successful completion rates across the subjects of focus in the Gender Action Plan at FE level and Graph 6 shows the successful completion rates across these subjects at HE level.

Graph 5: FE Successful Completion rates by Gender 2014-15

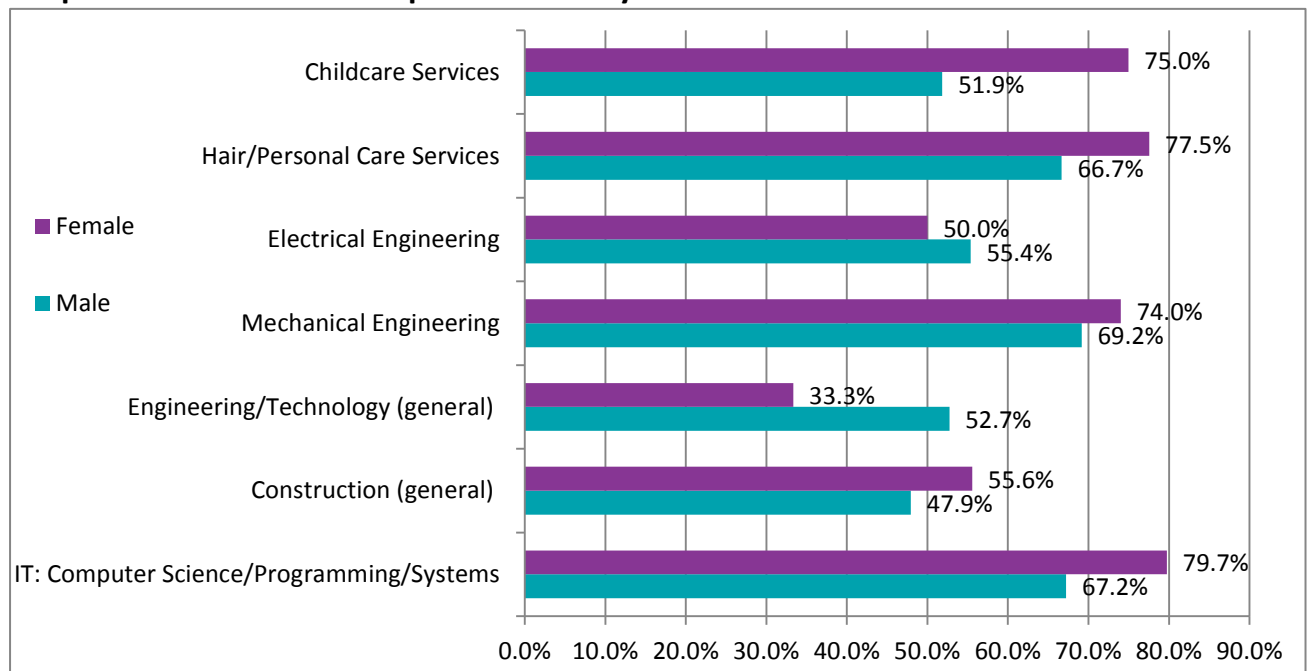


10. In both the female dominated subjects; Childcare Services and Hair/Personal Care Services, females have higher successful completion rates. There is just less than a 10 percentage point difference in success rates between males (50.6%) and females (60.2%) studying Childcare Services.

11. The successful completion rates between male and female students in the male dominated subjects vary despite males having a higher successful completion rate at sector level for FE courses, shown above. Females have higher success rates in Vehicle Maintenance/Repair, Mechanical Engineering, Engineering/Technology (General) and IT: Computer Science/Programming/Systems, and males having higher success rates in Electrical Engineering, Building Services, Building/Construction Operations and Construction (General).

12. It should be noted that some of the subjects in this graph, particularly females studying Building Services, have very small numbers and this should be kept in mind when using the percentages. These figures are shown in Annex A.

Graph 6: HE Successful Completion rates by Gender 2014-15²



13. Females have a higher successful completion rate at sector level for HE courses and have higher successful completion rates in the Gender Action Plan subjects in all but Electrical Engineering and Engineering/Technology (General).

14. The gap between males and females in the female dominated subjects is greater at HE level than it was at FE level, most notably in Childcare Services where there is a 23.1 percentage point difference.

15. It should be noted that some of the subjects in this graph, particularly females studying Construction (general) and Engineering/Technology(general), and males studying Hair/Personal Care Services, have very small numbers and this should be kept in mind when using the percentages. These figures are shown in Annex A.

² Not all of the 10 GAP subjects of focus have provision at HE level

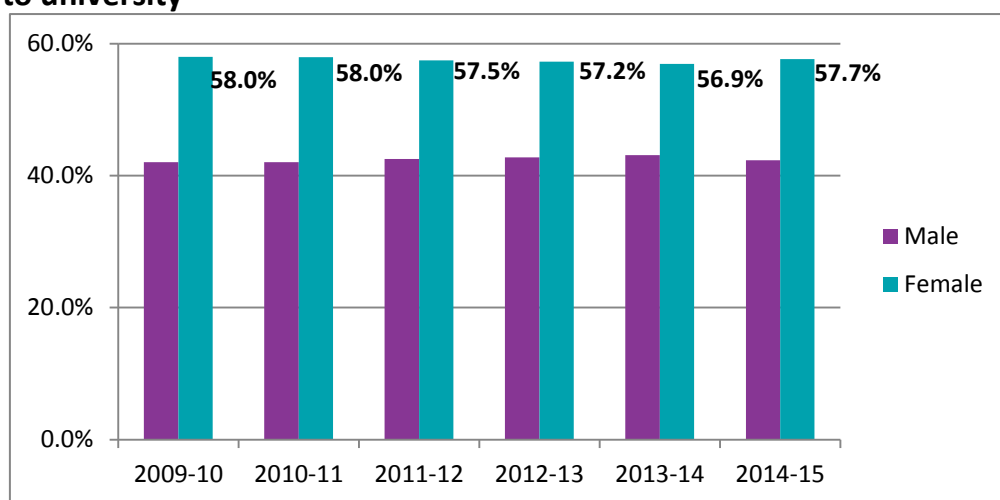
Universities

Entrants

16. In Academic Year 2014-15 the gender imbalance between male and female Scottish Domiciled Undergraduate Entrants (SDUE) at university was 15.3 percentage points. Females accounted for 57.7% of total enrolments and males accounted for 42.3%.

17. These sector level totals, and the gap in participation, are shown across a six year time period in Graph 7 and Table 1 below.

Graph 7: Overall gender balance across Scottish domiciled undergraduate entrants to university



18. Over the last 6 years, the gap in participation between males and females has ranged between 13.8% (2013-14) and 15.9% (2009-10 and 2010-11). There has been an overall decrease in the gap between males and females and generally a declining trend, until the gap widened between 2013-14 and 2014-15, as shown below.

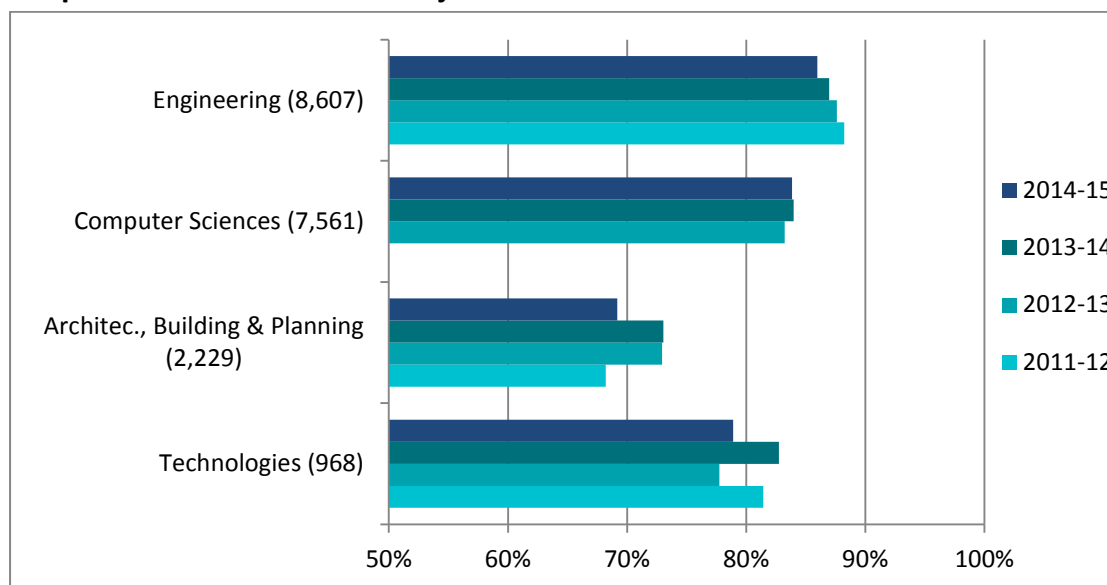
Table 1: Gap in participation between males and females

Academic Year	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Percentage point gap in participation	15.9	15.9	14.9	14.5	13.8	15.3

19. The graphs below show the extent of the gender imbalance in Scottish domiciled undergraduate entrants for the subjects of focus in Scotland's universities. They show participation rates for four years of data, starting with the baseline year of 2011-12 and going to 2014-15, the most recent year of available data.

20. The subjects of focus are those with an imbalance greater than 75:25, or where the imbalance was increasing between 2011-12 and 2013-14 towards an imbalance of 75:25.
21. While the data for these broad curriculum areas shows striking gender imbalances, it should be noted that within these larger subject areas, some of the individual subjects display more pronounced gender gaps. The two main examples of this are within Architecture, Building and Planning and Social Studies. These figures are shown in Annex B.

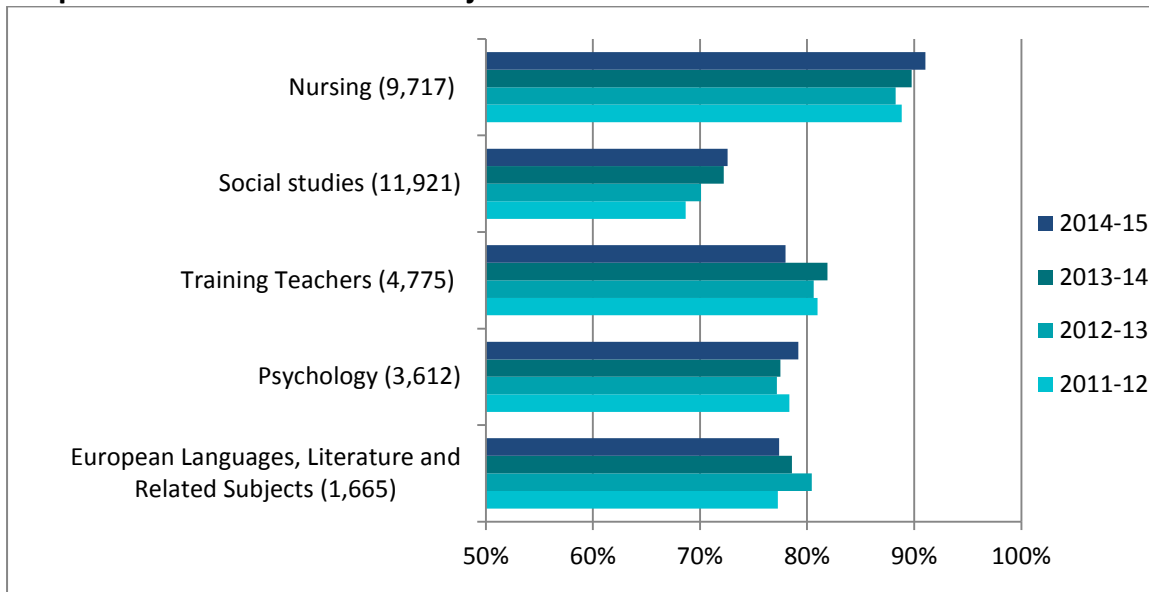
Graph 8: Male dominated subjects in universities³



22. The greatest imbalance in male dominated subjects can be seen in Engineering, with males accounting for 86.0% of SDUE students in 2014-15. This gap has, however, been narrowing from 88.2% in 2011-12.
23. The gender imbalance across all male dominated subjects decreased between 2013-14 and 2014-15. Most notably, the gender gap in both Technologies and Architecture, Building and Planning SDUE students narrowed by 3.8 percentage points.

³ Brackets include total number of students in the subject area over the four year period. Computer Sciences fell within Jacs Group 'Mathematics & Computer Science' in 2011-12 so is not shown here.

Graph 9: Female dominated subjects in universities ⁴



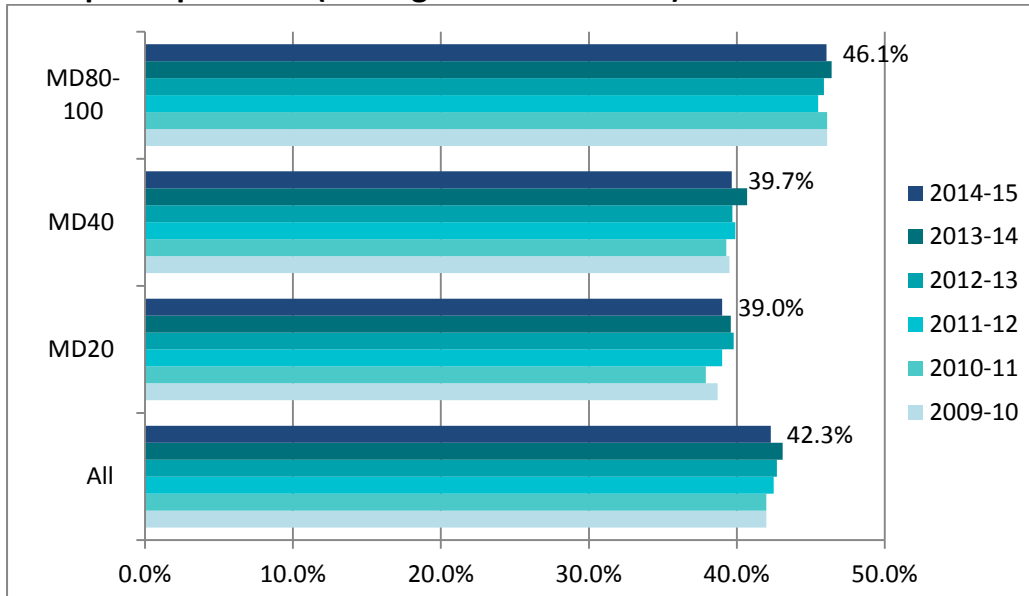
24. The greatest imbalance in female dominated subjects can be seen in Nursing, with females accounting for 91.0% of SDUE students in 2014-15.

⁴ Brackets include total number of students in the subject area over the four year period

Students from the Most Deprived Areas

25. As shown in Graph 7 the sector gender level is 42.3%. This gap is exaggerated for young men from the most deprived areas of Scotland and this is shown in the graph below.

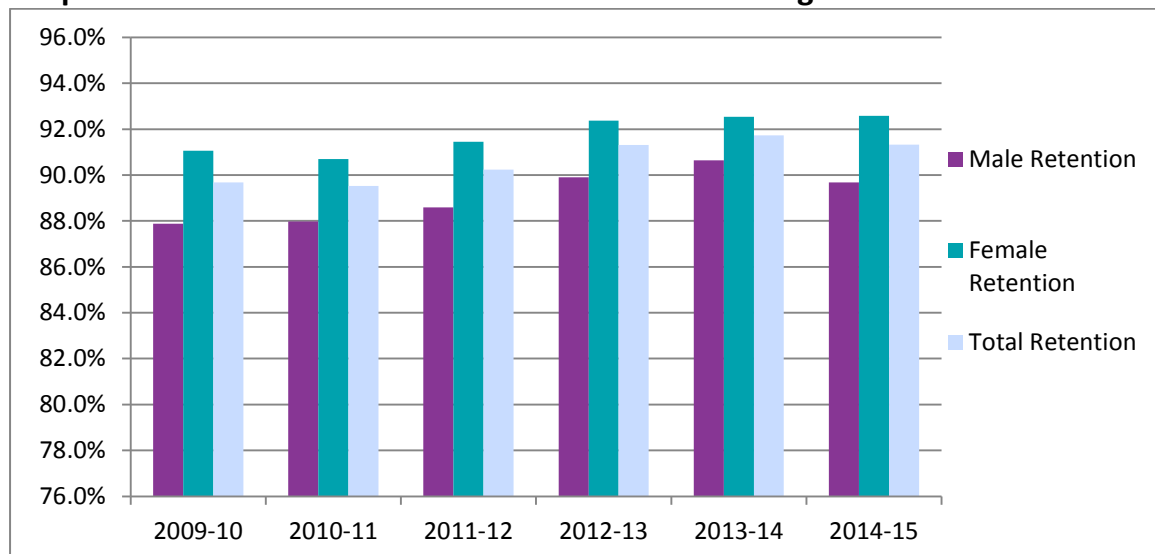
Graph 10: Male representation in universities by quintile of the Scottish Index of Multiple Deprivation (undergraduate entrants)



26. The gender imbalance is at its greatest for students from the 20% most deprived areas. Males account for 39.0% and females 61.0% of students from the 20% most deprived areas. The gender gap is smallest for students from the 20% least deprived areas, as 46.1% of these students are male and 53.9% are female.

Retention Rates from Year 1 into Year 2

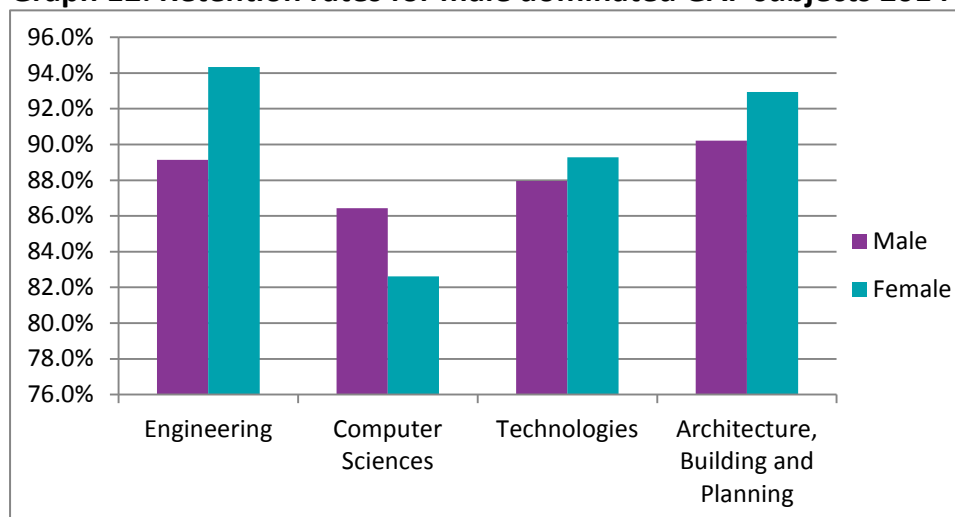
Graph 11: Retention rates for Scottish domiciled undergraduate full time students



27. Total retention for the sector has returned to the level of 2012-13 after a 0.4% increase between 2012-13 and 2013-14. Overall, between 2009-10 and 2014-15, retention for the sector has increased by 1.6 percentage points from 89.7% to 91.3%.

28. Females are retained at a higher rate than males, with 92.6% of females compared to 89.7% of males. As with the gender imbalance in university entrants, this imbalance can be seen more starkly at subject level as shown in Graphs 12 and 13 below.

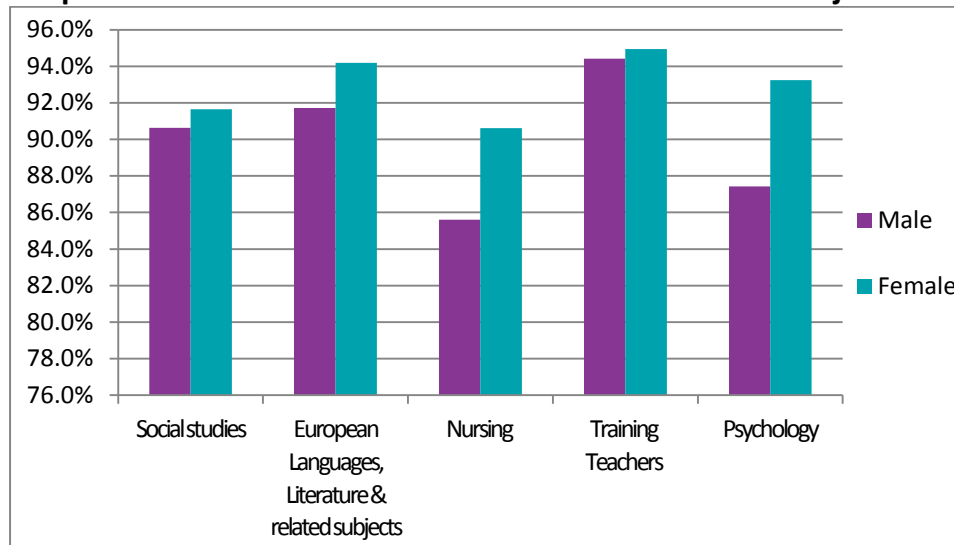
Graph 12: Retention rates for male dominated GAP subjects 2014-15



29. Computer Science is the only GAP subject where males have higher retention rates than females. In 2014-15, 82.6% of females studying Computer Science were retained into Year 2, compared to the sector retention rate for females of 92.6%.

30. In all the other university subjects in the GAP where the entrant population is male dominated, females have higher retention rates. Females studying Engineering have a retention rate of 94.3%, which is higher than the overall sector retention rate for females, and also higher than the equivalent male rate for the subject of 89.1%.

Graph 13: Retention rates for female dominated GAP subjects 2014-15



31. Females have higher retention rates in all the university subjects in the GAP where the entrant population is female dominated. The largest differences in female and male retention from Graph 13 are in Nursing and Psychology, with a gap of 5.0 and 5.8 percentage points respectively.

32. Retention rates for Training Teachers students are almost equal between males (94.4%) and females (94.9%) and are also higher than the equivalent male and female sector retention rates.

Annex A

Table 2: Completion rates for enrolments to courses lasting 160 hours or more by subject and gender

Level and Subject	Total Students	% Completed Successfully	Complete successfully	Completed Partial Success	Withdrawn	Early Withdrawal
FE						
Male						
IT: Computer Science/Programming/Systems	450	51.3%	231	109	73	37
Hair/Personal Care Services	128	57.8%	74	11	31	12
Childcare Services	83	50.6%	42	13	20	8
Construction (general)	1392	68.4%	952	115	221	104
Building/Construction Operations	859	63.0%	541	74	183	61
Building Services	339	66.1%	224	27	55	33
Engineering/Technology (general)	1141	66.0%	753	156	160	72
Mechanical Engineering	552	67.6%	373	53	89	37
Electrical Engineering	955	68.8%	657	122	121	55
Vehicle Maintenance/Repair	1070	60.3%	645	98	210	117
HE						
IT: Computer Science/Programming/Systems	1001	67.2%	673	155	144	29
Hair/Personal Care Services	12	66.7%	*	*	*	*
Childcare Services	27	51.9%	14	*	*	*
Construction (general)	73	47.9%	35	21	12	5
Engineering/Technology (general)	201	52.7%	106	57	28	10
Mechanical Engineering	587	69.2%	406	131	38	12
Electrical Engineering	410	55.4%	227	111	46	26
FE						
Female						
IT: Computer Science/Programming/Systems	56	57.1%	32	*	*	*
Hair/Personal Care Services	4100	59.6%	2444	359	881	416
Childcare Services	1796	60.2%	1082	208	344	162
Construction (general)	72	65.3%	47	5	10	10
Building/Construction Operations	30	53.3%	*	*	*	*
Building Services	14	35.7%	*	*	*	*
Engineering/Technology (general)	72	77.8%	56	*	*	*
Mechanical Engineering	30	73.3%	22	*	*	8
Electrical Engineering	46	58.7%	27	*	*	*
Vehicle Maintenance/Repair	107	61.7%	66	5	21	15
HE						
IT: Computer Science/Programming/Systems	74	79.7%	59	*	*	*
Hair/Personal Care Services	953	77.5%	739	73	98	43
Childcare Services	791	75.0%	593	77	93	28
Construction (general)	9	55.6%	*	*	*	*
Engineering/Technology (general)	18	33.3%	*	*	*	*
Mechanical Engineering	50	74.0%	37	*	*	*
Electrical Engineering	20	50.0%	10	*	*	*

**Completion rate figures of less than 5 students have been hidden.*

Annex B

Table 3: Gender imbalance at Jacs subject level

Jacs Group	Jacs Subject	Male	Female	Other	% Male	% Female
Engineering	General Engineering	445	91	1	83%	17%
	Civil Engineering	421	62	0	87%	13%
	Mechanical Engineering	708	80	0	90%	10%
	Aerospace Engineering	109	6	0	95%	5%
	Naval Architecture	40	10	0	80%	20%
	Electronic and Electrical Engineering	574	53	0	92%	8%
	Production & Manufacturing Engineering	112	39	0	74%	26%
	Chemical, Process & Energy Engineering	246	88	0	74%	26%
	Others in Engineering	18	7	0	72%	28%
Computer Sciences	Computer Science	1296	262	1	83%	17%
	Information Systems	169	35	0	83%	17%
	Software Engineering	266	44	1	86%	14%
	Artificial Intelligence	25	3	0	89%	11%
	Games	79	2	0	98%	2%
	Computer Generated visual & audio effects	13	10	0	57%	43%
	Others in Computer Science	1	0	0	100%	0%
Technologies	Maritime Technology	29	1	0	97%	3%
	Industrial Biotechnology	10	28	0	26%	74%
	Others in Technology	118	13	0	90%	10%
Architecture, Building and Planning	Architecture	172	136	0	56%	44%
	Building	400	97	0	80%	20%
	Landscape Design	17	10	0	63%	37%
	Planning (Urban, Rural and Regional)	37	36	0	51%	49%
Social studies	Economics	154	90	0	63%	37%
	Politics	201	219	0	48%	52%
	Sociology	267	743	0	26%	74%
	Social Policy	38	164	0	19%	81%
	Social Work	90	838	0	10%	90%
	Anthropology	34	94	0	27%	73%
	Human and Social Geography	55	94	0	37%	63%
	Others in Social Studies	20	32	0	38%	62%
European Languages, Literature and related	French Studies	38	162	1	19%	81%
	German Studies	5	13	0	28%	72%
	Italian Studies	4	6	0	40%	60%
	Spanish Studies	24	66	0	27%	73%
	Portuguese Studies	0	2	0	0%	100%
	Scandinavian Studies	0	2	0	0%	100%
	Russian and East European studies	6	13	0	32%	68%
	European Studies	0	1	0	0%	100%
	Others in EL, L & R	6	19	0	24%	76%