Report B Appendix 2 Analysis of Student PI data from 2014 – current

It is not possible to use data from 2016/17 as enrolment for many courses will be ongoing until June/July time. Other FE and HE institutions are also only using previous years in their data reports.

Student Statistics 2-year comparison 2015 – 2017

I. Disability

	2014/15		2015/16		
	Disabled	Non-disabled	Disabled	Non-disabled	
Enrolments	13%	87%	13%	87%	
Retention	92%	93%	88%	93%	
Attainment	88%	88%	82%	87%	
Retention Attainment	92% 88%	93% 88%	88% 82%	93% 87%	

In 2014/15, the proportion of students studying in Scotland's colleges who disclosed as disabled was 13%.

Scotland-wide, the completion gap between students who disclosed as disabled and non-disabled students was 2.5 percentage points.



Chart View 1:

Chart view 2:









Disabled students by impairment

	2014/15			2015/16		
	Enrolments	Retention	Attainment	Enrolments	Retention	Attainment
SpLDifficulty	6%	92%	87%	6%	88%	81%
Long standing illness	4%	92%	89%	4%	91%	86%
МН	3%	91%	88%	4%	90%	87%
D/deaf/HI	1%	95%	92%	1%	92%	84%
Other	1%	90%	82%	1%	88%	80%
Blind/VI	1%	92%	90%	1%	90%	88%
Social/Communication	1%	94%	90%	1%	90%	86%
Physical/mobility	1%	92%	92%	1%	92%	88%
Two or more	1%	90%	86%	1%	91%	86%

	2014/15	2015/16
SpLDifficulty	34%	31%
Long standing illness	21%	22%
МН	18%	22%
Other	7%	6%
D/deaf/HI	4%	4%
Physical/mobility	3%	4%
Two or more	5%	4%
Social/Communication	4%	3%
Blind/VI	3%	3%
Personal Care support	0%	0%
Specific Learning Disability	0%	0%



Among students who disclosed as disabled, the most common impairment type disclosed in 2015/16 was a specific learning difficulty, such as dyslexia, dyspraxia or AD(H)D (31%), followed by a mental health condition (22%), and a long standing illness (22%).

4% of students who disclosed as disabled in 2015/16 had multiple impairments.

II. Ethnicity

	2014/	'15	2015/16		
	White	BME	White	BME	
Enrolments	98%	2%	98%	2%	
Retention	93%	93%	92%	90%	
Attainment	88%	87%	86%	81%	

The Scotland-wide figure for students from BME backgrounds in 2014/15 was 6%. The lower figure for FVC is explained by the lower percentage of the BME population in the catchment area.

Is the difference for attainment in 2015/16 statistically significant?

Chi-squared test: Assume that the attainment rate is the same for White and BME students.

White enrolled: 14636. Attainment: 86% -> 12587

BME enrolled: 247. If attainment was 86% -> 212 expected. Actually, attainment was 81% -> 200

	Attained	Not attained	Total
White	12587	2049	14636
BME	200	47	247
Total	12787	2096	14883

Chi-Square = 5.07629; Degrees of Freedom = 1

p = 0.043, i.e. p > 0.01. This means the difference is *not* significant.

Comment: P is an estimate of the probability that the result **has** in fact occurred by statistical accident. A large value of p represents a small level of statistical significance and vice versa. A typical level at which the threshold of P is set is 0.01; this means that there is a 1% chance that the result was accidental. Generally, P<0.01 is considered significant and P<0.001 highly significant.

Short answer: No, the difference in attainment in 2015/16 is not significant.

Chart View 1:



Chart View 2:



III. Gender

	2014/15		20		
_	Male	Female	Male	Female	
Enrolments	52%	48%	53%		47%
Retention	94%	92%	93%		91%
Attainment	88%	88%	85%		87%

The Scotland-wide figures were 51% female and 49% male in 2014/15.

Scotland-wide successful completion rates in 2014/15 were higher for male (79.3%) than female (75.9%) students, a difference of 3.4 percentage points.



Chart View 1:

Chart View 2:



<mark>IV. Age</mark>

	2014/15			2015/16		
	Enrolments	Retention	Attainment	Enrolments	Retention	Attainment
<16	3%	90%	88%	4%	92%	89%
16-19	39%	93%	87%	35%	90%	83%
20-24	20%	93%	85%	20%	92%	85%
25-44	25%	93%	89%	26%	93%	88%
45-59	10%	95%	91%	11%	96%	90%
60+	2%	97%	94%	3%	98%	94%

The national rate in 2014/15 for attainment of learners aged 16 – 19 was 71% while under 16 the rate was 82%.*

<mark>V. Domicile</mark>

General background information

Council area codes are listed here: <u>http://www.gov.scot/Publications/2005/08/31114510/45128#b</u>

These codes are not broken down further to refer to smaller geographic areas. Instead, datazones are used, which **nest directly into** intermediate geographies and **local authorities**: <u>http://www.gov.scot/Topics/Statistics/SIMD/FAQUsingSIMD</u> The **Scottish Index of Multiple Deprivation** (SIMD) (<u>http://www.gov.scot/Topics/Statistics/SIMD</u>). SIMD ranks small areas (called **datazones**) from most deprived (ranked 1) to least deprived (ranked 6,976). Data zones have, on average, populations of between 500 and 1,000 household residents.

Many uses of the SIMD focus on the most deprived 15% of datazones in Scotland. This means any datazone with a rank between 1 and 976. Because datazones all have roughly the same population, the population in the 15% most deprived areas is approximately 15% of the Scottish population.

The SIMD is calculated at datazone level only. In order to measure how deprived larger areas are, it is necessary to look at the proportion of datazones within that larger area that fall within the 5, 10 or 15% most deprived areas, or the proportion that fall within bands of say 5% or 10%.

SIMD16 council area profiles: http://www.gov.scot/Topics/Statistics/SIMD/analysis/councils

Local share tool: <u>http://www.gov.scot/Topics/Statistics/SIMD/analysis/tools</u> for 15% most deprived areas.

Relevance for this report

The rate of enrolment (as in percentage of population of each council area enrolled at FVC) is perhaps not of interest, as the reasons for a higher or lower enrolment in a specific datazone are varied, with 'opposite' causes having the same impact on the enrolment rate. For example, adults in less deprived areas often already have qualifications, and more young people from this area will go to university or a college in e.g. Glasgow/Edinburgh, thus lowering the enrolment at FVC from this area. On the other hand, a greater proportion of the population in a more deprived area will not be participating in education at all. Hence it may be difficult to compare enrolment data meaningfully. In contrast, the retention area by area/ SIMD should provide meaningful information. However, early retention is more or less the same across all areas irrespective of their ranking regarding the local share of datazones in the most deprived 15% (see table below).

Cod	Council area	SIMD	2014/15		2015	2015/16		2016/17	
е		Ranking/L	Enrolme	Early	Enrolme	Early	Enrolme	Early	
		ocal Share	nts	Retenti	nts	Retenti	nts	Retenti	
		(15%)		on		on		on	
240	Falkirk	13	43%	99	43%	99%	45%	97%	
390	Stirling	16	20%	98	20%	99%	21%	96%	
150	Clackmannans	9	17%	97	17%	98%	16%	96%	
	hire								
Subto	otal				80%		82%		
Furth	er council areas	with enrolmer	nts >1%:	To be inclu	ded or not?				
400	West	17	3%	98%	4%	100%	3%	98%	
	Lothian								
250	Fife	11	3%	100%	3%	99%	3%	99%	
320	North	6	3%	98%	3%	99%	2%	98%	
	Lanarkshire								
230	Edinburgh	14	1%	99%	2%	99%	2%	98%	
	City								
260	Glasgow	1	1%	98%	1%	98%	1%	99%	
	City								
340	Perth &	21	1%	99%	1%	99%	1%	99%	
	Kinross								
Subto	otal				14%		12%		

FVC Domiciles

For next year's report, it should be worthwhile to create a Cognos report for enrolment and attainment based on the postcode and the associated SIMD datazone of each student's home address.

* References to Scotland-wide figures are based on: Equality in Colleges in Scotland: statistical report 2016 – Equality Challenge Unit <u>http://www.ecu.ac.uk/wp-content/uploads/2016/09/Scottish-</u> <u>colleges-equality-stats-report-2016.pdf</u>

VI. Intersections

Disability & Gender

2014/15		Enrolment Count	Enrolment %	Retention	Achievement
Female	Disabled	1,003	7%	92%	88%
	No disability	6,185	41%	92%	88%
Male	Disabled	1,004	7%	92%	88%
	No disability	6,912	46%	94%	88%

Enrolment rate is the same for disabled female and male students; disabled female students have a higher enrolment rate compared to male students (or, of course, may be more willing to disclose a disability).

Attainment is the same across all intersections.

Disability & Ethnicity

2014/	15	Enrolment Count	Enrolment %	Achievement
BME	Disabled	20	0%	80%
	No disability	221	1%	87%
White	Disabled	1,987	13%	88%
	No disability	12,876	85%	88%

Enrolment of BME is low, and correspondingly, the enrolment of disabled BME students is even lower. The proportion of disabled students is lower (8%) among BME students compared to white students (13%). Attainment of disabled BME students is considerably lower than that of the three groups in this intersection.

<u>Is the difference in attainment between disabled BMD and disabled white students statistically</u> <u>significant?</u>

Chi-squared test: Assume that the attainment rate is the same for disabled BME and white students.

	Attained	Not attained	Total
White disabled	1749	238	1987
BME disabled	16	4	20
Total	1765	242	2007

 $Chi^2 = 1.2017$

Degrees of Freedom = 1

p = 0.273, i.e. p > 0.01. This means the difference is *not* significant. However, one of the observed values is less than 5, so result not reliable.

Ethnicity & Gender

2014/15		Enrolment Count	Enrolment %	Retention	Achievement
BME	Female	112	1%	90%	82%
	Male	129	1%	95%	91%
White	Female	7,076	47%	92%	88%
	Male	7,787	52%	94%	88%

Attainment of BME Females is comparatively low.

Statistical significance between BME females and males (bearing in mind that white females perform as well or better than white males, and that BME students perform slightly worse than white students)?

	Attained	Not attained
BME Female	92	20
BME Male	117	12

 $Chi^2 = 3.8102$; p = 0.05094. i.e. p > 0.01. This means the difference is *not* significant (and it even would not be significant if p was set at 0.05!).

		Enrolment Count	Enrolment %	Retention	Achievement
<16	Disabled	70	0%	89%	86%
	No disability	430	3%	91%	88%
16-19	Disabled	884	6%	93%	89%
	No disability	5,072	34%	93%	86%
20-24	Disabled	377	2%	92%	85%
	No disability	2,673	18%	93%	85%
25-29	Disabled	162	1%	91%	88%
	No disability	1,202	8%	92%	87%
30-34	Disabled	111	1%	90%	89%
	No disability	880	6%	93%	90%
35-39	Disabled	80	1%	93%	89%
	No disability	697	5%	94%	91%
40-44	Disabled	83	1%	88%	88%
	No disability	573	4%	94%	90%
45-59	Disabled	195	1%	92%	89%
	No disability	1,311	9%	96%	92%
60+	Disabled	45	0%	100%	100%
	No disability	259	2%	97%	93%

Age & Gender

Attainment is very similar within the age groups between disabled and non-disabled students.

		Enrolment Count	Enrolment %	Retention	Achievement
<16	BME	3	0%	100%	67%
	White	497	3%	90%	88%
16-19	BME	56	0%	95%	89%
	White	5,900	39%	93%	87%
20-24	BME	52	0%	94%	87%
	White	2,998	20%	93%	85%
25-29	BME	24	0%	96%	92%
	White	1,340	9%	92%	87%
30-34	BME	41	0%	95%	90%
	White	950	6%	93%	90%
35-39	BME	23	0%	96%	96%
	White	754	5%	94%	91%
40-44	BME	19	0%	79%	68%
	White	637	4%	94%	91%
45-59	BME	23	0%	83%	78%
	White	1,483	10%	95%	92%
60+	White	304	2%	97%	94%

Ethnicity & Age

BME students in the age group 16 - 39 perform better (attainment) than white students in the same age group. The trend is reversed from age 40 plus. Age group <16 not discussed as sample too small.

Age & Gender

		Enrolment Count	Enrolment %	Retention	Achievement
<16	Female	242	2%	91%	89%
	Male	258	2%	90%	87%
16-19	Female	2,542	17%	92%	86%
	Male	3,414	23%	94%	87%
20-24	Female	1,241	8%	90%	83%
	Male	1,809	12%	94%	87%
25-29	Female	749	5%	91%	88%
	Male	615	4%	93%	86%
30-34	Female	599	4%	93%	90%
	Male	392	3%	93%	89%
35-39	Female	459	3%	93%	91%
	Male	318	2%	96%	91%

40-44	Female	414	3%	93%	91%
	Male	242	2%	95%	89%
45-59	Female	807	5%	95%	93%
	Male	699	5%	95%	90%
60+	Female	135	1%	97%	96%
	Male	169	1%	97%	93%

Attainment is fairly level within the different age groups when comparing males and females, with one exception: Females aged 20-24 lie 4 percentage points below males (significant).

Statistical significance between females and males in this age group?

2014/15	Attained	Not attained
20-24 Female	1030	211
20-24 Male	1574	235

Chi² = 9.48891

P = 0.002067.

Difference is significant! This age group also has the greatest difference in retention between the genders. Perhaps due to maternity and child care?

5 highest and lowest attaining intersections (intersection "rankings") 2014/15:

Highest Attainment		Lowest Attainment	
Disabled 60+	(100%)	BME 40-44	(68%)
Female 60+	(96%)	BME 49-59	(78%)
BME 35-39			
	(94%)	BME Disabled	(80%)
Non-Disabled 60+	(93%)	BME Female	(82%)
Non-Disabled 49-59	(92%)	Female 20-24	(83%)

5 highest and lowest retention intersections (intersection "rankings") 2014/15:

Highest Retention		Lowest Retention	
Disabled 60+	(100%)	BME 40-44	(79%)
Non-Disabled 60+	(97%)	BME 45-49	(83%)
White 60+			
Female 60+			
Male 60+			
45-59 Non-disabled	(96%)	Disabled 40-44	(88%)
25-29 BME			
35-39 BME			
35-39 Male			
BME Male	(95%)	<16 Disabled	(89%)
BME 16-19			

BME 30-34			
White 45-59			
Male 40-44			
Female 45-59			
Male 45-59			
Male Disabled	(94%)	BME Disabled	(90%)
Male White		BME Female	
Non-Disabled 35-39		Disabled 30-34	
Non-Disabled 40-44		White <16	
BME 20-24		<16 Male	
White 35-39		Female 20-24	
White 40-44			
Male 16-19			
Male 20-24			

Disability & Gender 2015/16

		Enrolment Count	Enrolment %	Retention	Achievement
Female	Disabled	955	6%	87%	82%
	No disability	6,002	40%	91%	87%
Male	Disabled	1,008	7%	90%	82%
	No disability	6,909	46%	94%	86%

Enrolment similar to the previous year. Retention and attainment differ more: there is now a gap of 4 and 5 percentage points, respectively, between disabled and non-disabled females and males.

Disability & Ethnicity 2015/16

		Enrolment Count	Enrolment %	Retention	Achievement	
BME	Disabled	14	0%	93%	8	86%
	No disability	229	2%	90%	8	81%
White	Disabled	1,949	13%	88%	8	32%
	No disability	12,682	85%	93%	8	37%

Enrolment comparable to the previous year.

The proportion of disabled students is lower (6%) among BME students compared to White students (15%) - with a greater gap than in the previous year.

Attainment of disabled BME students within these four intersectional groups has improved compared to last year and is now similar to non-disabled white students. However, the difference last year was not statistically significant.

Ethnicity & Gender 2015/16

		Enrolment Count	Enrolment %	Retention	Achievement
BME	Female	115	1%	90%	80%
	Male	128	1%	91%	82%
White	Female	6,842	46%	91%	87%
	Male	7,789	52%	93%	85%

Attainment of BME Females remains low compared to white females, but is on a par with male BME students.

		Enrolment Count	Enrolment %	Retention	Achievement
<16	Disabled	75	1%	85%	79%
	No disability	519	3%	93%	90%
16-19	Disabled	846	6%	88%	81%
	No disability	4,432	30%	90%	83%
20-24	Disabled	381	3%	89%	81%
	No disability	2,652	18%	93%	85%
25-29	Disabled	161	1%	84%	81%
	No disability	1,237	8%	92%	86%
30-34	Disabled	102	1%	88%	84%
	No disability	921	6%	93%	88%
35-39	Disabled	93	1%	95%	89%
	No disability	736	5%	94%	89%
40-44	Disabled	76	1%	91%	86%
	No disability	611	4%	96%	91%
45-59	Disabled	183	1%	87%	83%
	No disability	1,477	10%	97%	91%
60+	Disabled	46	0%	100%	98%
	No disability	326	2%	98%	93%

Disability & Age 2015/16

Attainment this year is much less similar compared to last year within the age groups between disabled and non-disabled students. However, the gap is smaller or the same if compared to all age groups (where disabled students are 5 percentage points lower in attainment than non-disabled students), except in age groups <16 (11 percentage points gap) and 45-59 (8 percentage points). Also, the gap is reversed in age group 60+, where disabled students perform better than non-disabled students. There is no gap in age group 35-39, and a smaller gap of only 2 percentage points in age group 16-19. Statistical significance not yet calculated (will do this if required).

Ethnicity & Age 2015/16

		Enrolment Count	Enrolment %	Retention	Achievement
<16	BME	6	0%	100%	100%
	White	588	4%	92%	89%
16-19	BME	65	0%	91%	80%
	White	5,213	35%	90%	83%
20-24	BME	47	0%	91%	77%
	White	2,986	20%	92%	85%
25-29	BME	14	0%	86%	71%
	White	1,384	9%	91%	86%
30-34	BME	38	0%	84%	74%
	White	985	7%	93%	88%
35-39	BME	28	0%	96%	86%
	White	801	5%	94%	89%
40-44	BME	25	0%	96%	96%
	White	662	4%	95%	91%
45-59	BME	19	0%	84%	84%
	White	1,641	11%	96%	90%
60+	BME	1	0%	100%	100%
	White	371	2%	98%	94%

In contrast to 2014/15, BME students across all age groups perform worse compared to white students in the same age group, with the exception of age group 40-44. The gap is especially large in the following age groups: 20-24 (8 percentage points); 25-29 (17 percentage points!); and 30-34 (14 percentage points). As reference: the gap of the overall BME student population compared to white students is 6 percentage points. Age groups <16 and 60+ are not discussed as sample too small.

Age & Gender 2015/16

		Enrolment Count	Enrolment %	Retention	Achievement
<16	Female	291	2%	92%	89%
	Male	303	2%	93%	88%
16-19	Female	2,148	14%	88%	82%
	Male	3,130	21%	91%	84%
20-24	Female	1,078	7%	89%	84%
	Male	1,955	13%	94%	86%
25-29	Female	789	5%	90%	87%
	Male	609	4%	93%	84%
30-34	Female	627	4%	91%	88%
	Male	396	3%	94%	87%
35-39	Female	504	3%	93%	88%
	Male	325	2%	97%	90%
40-44	Female	444	3%	95%	93%
	Male	243	2%	96%	88%
45-59	Female	917	6%	95%	93%
	Male	743	5%	96%	87%
60+	Female	159	1%	99%	98%
	Male	213	1%	98%	90%

As last year, attainment is fairly level within the different age groups when comparing males and females, including females aged 20-24 (unlike last year).

5 highest and lowest attaining intersections (intersection "rankings") 2015/16:

Highest Attainment		Lowest Attainment	
Disabled 60+	(98%)	BME 25-29	(71%)
Female 60+			
BME 40-44	(96%)	BME 30-34	(74%)
White 60+	(94%)	BME 20-24	(77%)
20-24 Male			
30-34 Male			
Non-Disabled 60+	(93%)	Disabled <16	(79%)
Female 40-44			
Female 45-59			
Non-Disabled 40-44	(91%)	Female BME	(80%)
Non-Disabled 45-59		16-19 BME	
White 40-44			

5 highest and lowest retention intersections (intersection "rankings") 2015/16:

Highest Retention		Lowest Retention	
Disabled 60+	(100%)	Disabled 25-29	(84%)
		BME 30-34	
		BME 45-59	
Female 60+	(99%)	<16 Disabled	(85%)
Non-Disabled 60+	(98%)	BME 25-29	(86%)
Male 60+			
White 60+			
Non-disabled 45-59	(97%)	Female Disabled	(87%)
Male 35-39		Disabled 45-59	
Non-Disabled 40-44	(96%)	White Disabled	(88%)
Male 40-44		Disabled 30-34	
Male 45-59		Disabled 16-19	
		Female 16-19	

Retention rankings 2014/15



%age	Intersection(s)	%age	Intersection(s)	%age	Intersection(s)
Group		Group		Group	
68	BME 40-44	88	Male Non-Disabled	89	BME 16-19
78	BME 45-59		White Disabled		Female <16
80	BME Disabled		White Non-Disabled		Male 30-34
82	BME Female		White Female		Male 40-44
83	Female 20-24		White Male		Disabled 35-39
85	Non-Disabled 20-24		Female Disabled		Disabled 16-19
	Disabled 20-24		Female Non-Disabled		Disabled 30-34
	White 20-24		Male Disabled		Disabled 45-59

86	Disabled <16	Male 20-24	90	Non-Disabled 30-34
	Non-Disabled 16-19	Non-Disabled <16		Non-Disabled 40-44
	Female 16-19	Disabled 25-29		BME 30-34
	Male 25-29	Disabled 40-44		White 30-34
87	BME Non-Disabled	White <16		Female 30-34
	Non-Disabled 25-29	Female 25-29		Male 45-59
	White 16-19	÷	91	BME Male
	BME 20-24			Non-Disabled 35-39
	White 25-29			White 35-39
	Male <16			White 40-44
	Male 16-19			Female 35-39
				Female 40-44
				Male 35-39
			92	BME 25-29
				White 45-59
				Non-Disabled 45-59
			93	Female 45-59
				Male 60+
				Non-Disabled 60+
			94	White 60+
			96	BME 35-39
				Female 60+

Disabled 60+



%age	Intersection(s)	%age	Intersection(s)	%age	Intersection(s)
Group		Group		Group	
71	BME 25-29	86	Male Non-Disabled	87	Female Non-Disabled
74	BME 30-34		BME Disabled		White Non-Disabled
77	BME 20-24		Non-Disabled 25-29		White Female
79	Disabled <16		Disabled 40-44		Female 25-29
80	BME Female		White 25-29		Male 30-34
	BME 16-19		BME 35-39		Male 45-59
81	BME Non-Disabled		Male 20-24	88	Non-Disabled 30-34
	Disabled 16-19				White 30-34
	Disabled 20-24				Female 30-34
	Disabled 25-29				Female 35-39
82	Female Disabled				Male 40-44
	Male Disabled			89	Non-Disabled 35-39
	White Disabled				Disabled 35-39
	BME Male				White <16
	Female 16-19				White 35-39
83	Non-Disabled 16-19				Female <16
	Disabled 45-59			90	Non-Disabled <16
	White 16-19				Disabled 16-19
84	Disabled 30-34				White 45-59
	BME 45-59				Male 35-39
	Male 16-19				Male 60+
	Female 20-24			91	Non-Disabled 40-44
	Male 25-29				Non-Disabled 45-59
85	White Male				White 40-44
	Non-Disabled 20-24			93	Non-Disabled 60+
	White 20-24				Female 40-44

	Female 45-59
94	White 60+
96	BME 40-44
98	Disabled 60+
	Female 60+

A comparison of the intersectional groups which are more than 3 percentage points removed from the attainment average shows that only one group occurs in this category in both 2014/15 and 2015/16: BME Female. In contrast, for example BME 25-29 ranks lowest in 2015/16 with 68% attainment, whereas the same group was in one of the top categories, with 92% attainment, in the previous year. Whatever the reasons are, they are not systemic, but much more linked to admissions practice.

A comparison of the highest achieving intersectional groups (more than 3 percentage points removed from the average), identifies a larger range of groups as doing well over a two year period:

Female 45-59

White 45-59

Non-Disabled 45-59

Non-Disabled 60+

Disabled 60+

Male 60+

Female 60+

White 60+

All these are of above average student age.

When extending the range to students whose attainment is more than 2 (rather than more than 3) percentage points below the average, a further intersectional group appears in both 2014/15 and 2016 in the lowest achieving intersections: Disabled 20-24.

So, the two consistently significantly underachieving groups are BME Female and Disabled 20-24.