

Widening Participation at the University of Edinburgh (3): entry, progression and degree outcomes by subject area

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Introduction

Widening participation in higher education (HE) is a priority for the Scottish Government and Scottish HE institutions. HE provides many benefits to graduates, including access to professional occupations and higher earning potential. HE also provides benefits to society in terms of a well-educated population and highly skilled workforce (Milburn 2009). For too long the benefits of HE have been unequally distributed, with very low levels of participation among young people from low social class backgrounds or areas of deprivation (Cree et al 2006). Current policies recognise the need to widen participation in the interests of equality, fairness and social justice.

Strategies for widening participation have placed increasing emphasis on the policies and practices of individual universities. Institutions are encouraged to engage in outreach activities to raise aspirations, to develop new pathways into HE, to adopt recruitment strategies which may widen participation, to introduce 'fair admissions' procedures, to offer bursaries, fee waivers and other forms of financial support, and to organise their programmes in a way to attract members of under-represented groups. Most recently, in Scotland the Post-16 Education Bill (passed in 2013) places considerable emphasis on widening access and reinforces the duty on universities to recruit and retain more students from disadvantaged backgrounds by including clearly defined targets in the outcome agreements set between the Scottish Funding Council (SFC) and each individual university (Universities Scotland 2012).

The University of Edinburgh is committed to widening participation, increasing diversity and providing equality of opportunity for all prospective and current students (UofE Strategic Plan). It has developed a number of initiatives to encourage more prospective students from under-represented groups (Hood 2010). Initially, a major obstacle was the low level of applications from prospective students in the less advantaged groups, which in turn was linked to their relatively low prior qualifications (Cree et al 2006). In order to address this problem, in 2004 the University introduced the use of contextual data during the admissions process to identify disadvantaged students with the potential to benefit from the academic experience it offers, and enable their entry with slightly lower prior qualifications. This report describes a statistical analysis of patterns of the entry, progression and degree outcomes of a sample of young students entering the University since the

introduction of contextual data in admissions. Part 1 looks at overall findings, and Part 2 looks at differences between subject areas.

About the study

The aim of the study was to explore patterns of entry, progression and outcomes, and identify similarities and differences between students admitted to the University on the basis of contextual data and other students. The analysis is based on student records for young students who started their degree courses in selected subjects between 2004 – 2006, and had either withdrawn or graduated by the end of 2011. The subjects included in the sample were:

- Humanities & Social Science (HSS): Architecture; Business Studies; Divinity; English Literature; History; Law; Psychology; Sociology.
- Science & Engineering (SE): Biology; Chemistry; Mathematics; Physics.
- Medicine & Veterinary Medicine (MVM): Medicine; Veterinary Medicine.

Just over half (55%) of students in the sample had prior qualifications from the Scottish Qualifications Authority (SQA), and the main qualifications of other students were the General Certificate of Education (GCE) A-level. Although type of qualification did not entirely coincide with country of domicile – 98% of Scottish domiciled students had SQA Highers – it is a key factor in the analyses that follow in order to ensure that analyses are based on comparable levels of prior qualifications.

The use of contextual data to widen participation

Contextual data are taken into account during the admissions process in order to make entry to the University fairer and more socially inclusive. Normal entry requirements to the University are extremely high, and the strong competition for places favours highly-qualified applicants from high social class backgrounds and schools with a strong tradition of university entry. However, applicants from disadvantaged backgrounds and schools may have academic potential that is obscured by their relatively lower entry qualifications (Admissions to HE Review 2004). Since 2004 the University of Edinburgh has used contextual data to identify disadvantaged students during the admissions process. For entry to the Colleges of Humanities & Social Science and Science & Engineering, all offers are made within a range (e.g. from BBBB to AAAA). An offer made to a WP-indicated applicant may state conditions at the lower end of the range.

The Widening Participation (WP) indicators used in this study for Scottish-domiciled students are:

(1) The two most deprived quintiles of the Scottish Index of Multiple Deprivation (SIMD), linked to post-code of home address. SIMD provides key 'measures of success' for the Scottish Funding Council (SFC)'s policy on widening participation - 'Learning for All' (SFC 2011).

(2) The two lowest quintiles ("Bands D and E") of a classification of schools based on average rates of progression to HE per school. There are considerable differences between schools in the average qualifications of their pupils and in the proportion who go on to HE. For example, students from independent schools have very high average qualifications and very high entry rates to the most prestigious universities, and in Scotland there are a number of comprehensive schools with similar high average performance. Studies elsewhere have identified school effects on prior qualifications, and suggested that students who enter university from low performing schools are likely to achieve more highly than would be predicted by their prior qualifications (Hoare & Johnston 2010, Naylor and Smith 2002, Ogg et al 2009).

(3) Prior selection for the Lothians Equal Access Partnership for Schools (LEAPS), which takes account of family circumstances. LEAPS works with students in local schools in order to raise aspirations and attainment.

The WP indicators used in this study for students domiciled in the rest of the UK (RUK) are:

(1) The two lowest quintiles ("Bands D and E") of a classification of schools based on average prior qualifications per school. (This is slightly different to the classification of schools used for Scottish-domiciled students, which is based on average progression.)

(2) The lowest quintile of the "young participation rate" (YPR) based on a measure of "participation in local areas" (POLAR2)¹ provided by the Higher Education Funding Council for England (HEFCE). The YPR is based on the HE participation rates of people who were aged 18 between 2000 and 2004 and entered an HE course in a UK higher education institution or GB further education college, aged 18 or 19, between academic years 2000-01 and 2005-06. The YPR is divided into quintiles with 1 representing the lowest participation.

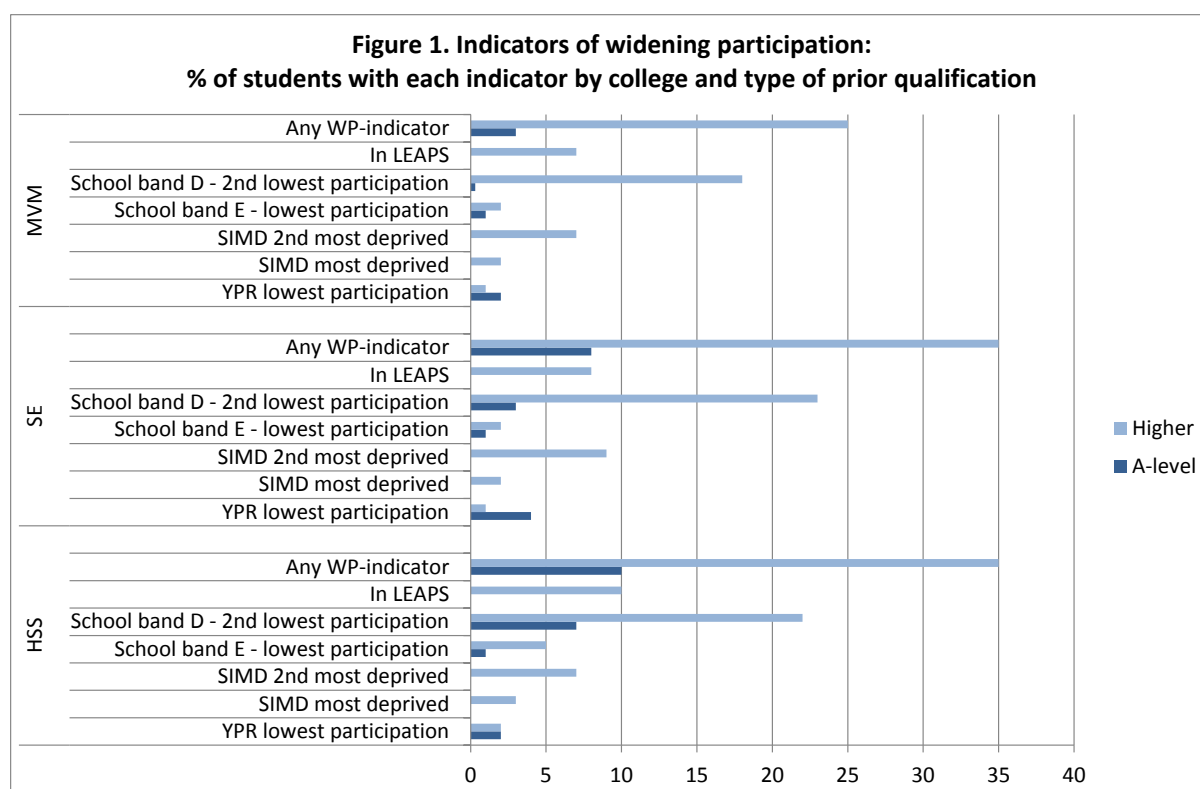
¹ <http://www.hefce.ac.uk/whatwedo/wp/ourresearch/polar/polar2/>

PART 1. The Overall Picture

Patterns of entry

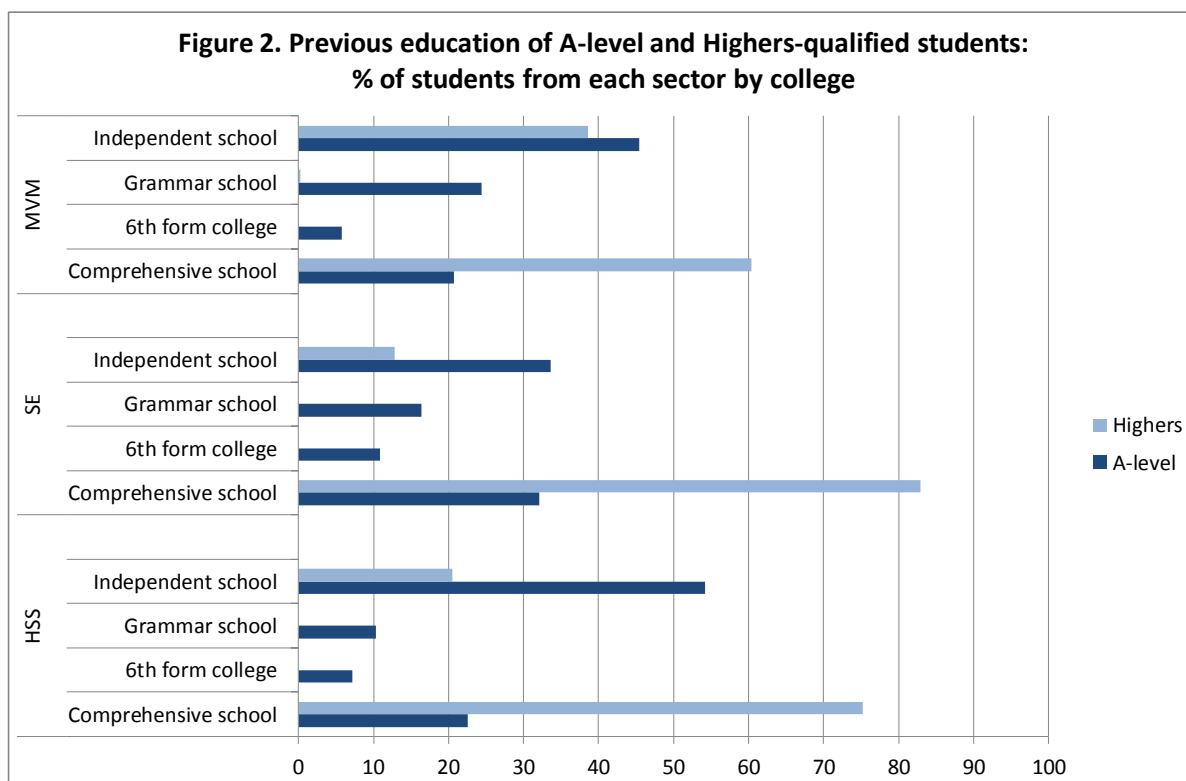
In the sample as a whole, 22% of entrants had indicators relevant to widening participation - the proportion varied by college: 16% of the MVM sample students were WP-indicated, compared with 22% of the SE sample students and 25% of the HSS sample students.

Figure 1 shows the distribution of indicators, and suggests that low-participation schools provided the largest number with WP indicators. There were marked differences between two sub-samples of students defined on the basis of their prior qualifications. The study found that 34% of Highers-qualified students, and just 8% of A-level qualified students in the sample had at least one WP-indicator.



Highers-qualified and A-level qualified students also differed with respect to the types of school they had attended (Figure 2). Although school type is not used to contextualise admissions, it may be a source of educational advantage/disadvantage that influences students' prior qualifications, progression and outcomes. Three-quarters of the Highers-qualified students had previously attended a comprehensive school, compared with just over a quarter of A-level qualified students. In the MVM sample a substantial minority of students came from independent schools (39% of Highers-qualified and 45% of A-level qualified). In the SE sample a smaller proportion of both Highers

and A-level qualified students had attended independent schools (13% of Highers-qualified and 34% of A-level qualified). However, the largest contrast was in the HSS sample, where 21% of Highers-qualified compared with 54% of A-level qualified students had previously attended independent schools.



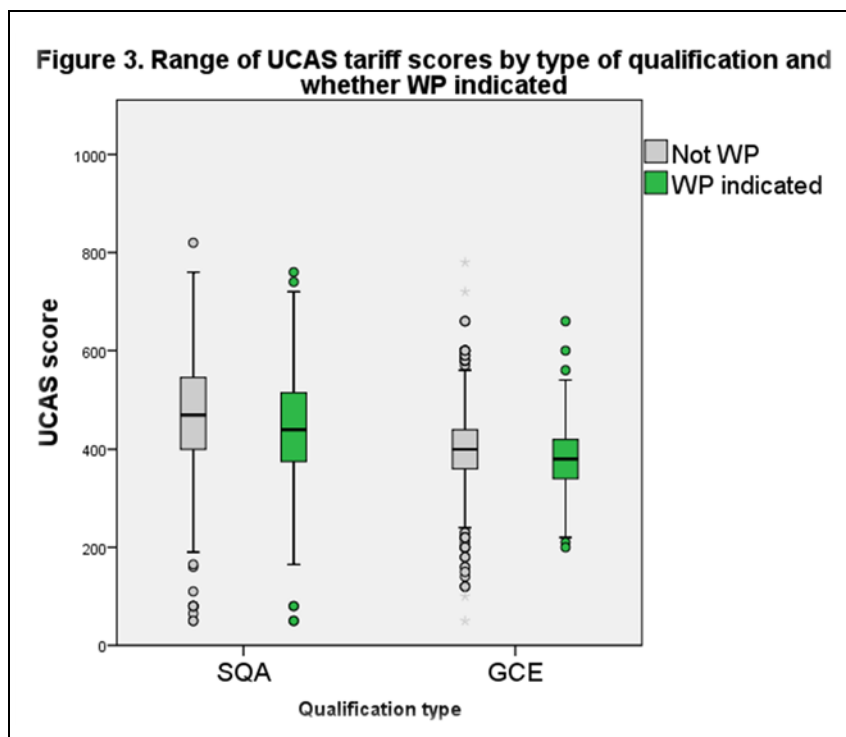
There were also demographic differences between the Highers and A-level qualified samples: A-level qualified students were more likely to be female (61% vs 56%) and older (41% compared with 9% were aged 19 or over).

Prior qualifications

Prior qualifications are the main criterion for entry to the University. Most Highers-qualified students are required to achieve four (or five) Higher grade results at grades A or B, and they are encouraged to achieve further qualifications at Advanced Higher. In the MVM sample, however, awards at Advanced Higher are required for entry to Veterinary Medicine. A-level qualified entrants are required to achieve three A-levels at grades A or B.

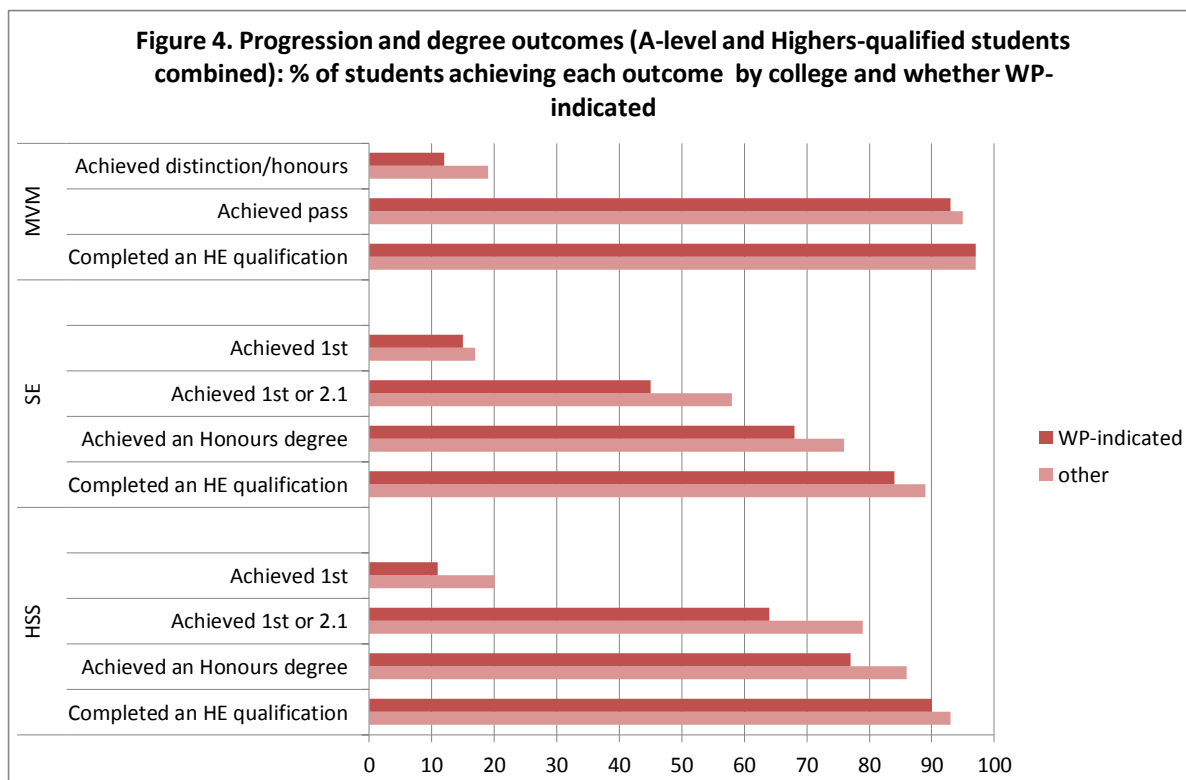
It is difficult to compare levels of prior attainment from the two different qualification systems, but for some analyses we have made use of the tariff defined by the Universities and Colleges Admissions Service (UCAS) which gives approximate equivalences between different qualifications. The University does not use the UCAS tariff for admissions, but we have used detailed information

on students' qualifications and grades to reproduce the tariff for these analyses. The range of tariff scores is illustrated in Figure 3, and shows that Highers-qualified students had a wider range of attainment scores than A-level qualified students. Figure 3 also suggests that although WP-indicated entrants tended to have lower average prior qualifications than other students, the differences were quite small.



Progression and degree outcomes

Most students, including those who were WP-indicated, successfully completed an HE qualification, but WP-indicated students were less likely to achieve the top classes of degree than other students. The types of degree awarded differed between colleges, as shown by Figure 4. In the MVM sample the degrees awarded to the majority of students were classed simply as a pass, with a very small minority passing “with distinction” or “honours”; fewer WP-indicated students achieved top levels of degree in MVM. In SE and HSS degrees were differentiated into classes of Honours, and WP-indicated students were less likely than other students to achieve the higher classes of Honours: the gap in achievement of the top two classes of degree - 1st or 2.1 – is most noticeable.



Factors influencing progression and degree outcomes

Statistical models enable us to analyse the effects of contextual variables and prior qualifications on each of the four degree outcomes while controlling for all other factors. Initially, the analyses were performed separately for Highers and A-level qualified students. They found that:

- Prior qualifications were the key factors influencing each degree outcome. Among Highers-qualified students, those with qualifications at Advanced Higher (or A-level) were more likely to achieve each outcome than those with Higher Grade only.
- After taking account of prior qualifications, there was no difference between WP-indicated students and their peers in the likelihood of completing a qualification, achieving an Honours degree, or of achieving a top class degree.
- Among Highers-qualified students (but not A-level qualified students) those who were WP-indicated were less likely to achieve the top two classes of degree (1st or 2.1).

When the WP-indicators were disaggregated, we found that:

- Students from low progression schools (school bands D and E) appeared less likely to achieve the top two classes of degree or a top class degree (the size and significance of these differences vary across qualification types).

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- Among Highers-qualified students, those from SIMD-indicated neighbourhoods were less likely to achieve an Honours degree or the top two classes of degree, but among A-level qualified students living in a low participation neighbourhood made no difference to their outcomes.
- LEAPS students achieved as good outcomes as their peers with the same prior qualifications.

Part 2. Differences between Subject areas

Patterns of entry

The recruitment of students with Highers or A-level qualifications varied considerably between subject areas (Table 1). Students in Business Studies, Law, Sociology, Physics and Chemistry were predominantly Highers-qualified, whereas A-level qualified students were in the majority in Divinity, History and English Literature.

There were also differences between subject areas in the distributions of WP-indicated students and students from independent schools. In Business Studies, Law and English Literature around one third of students were WP-indicated, compared with just 7% in Divinity, 15% in Medicine and 16% in History. On the other hand, independent school students were most over-represented in the three subject areas with the lowest proportions of WP-indicated students (Divinity: 65%; History: 48% and Medicine: 47%). Differences in student mix may influence the context in which students study.

Table 1. Subject area differences in characteristics of students (%)

	Type of prior qualifications		WP-indicated	From independent school	Sample size
	Highers	A-level			
Architecture	53	47	21	24	160
Business Studies	88	12	34	26	268
Divinity	14	86	7	65	163
English lit	38	62	30	27	194
History	30	70	16	48	468
Law	93	7	34	23	497
Psychology	56	44	21	38	288
Sociology	66	34	28	26	109
All HSS	58	42	25	35	2147
Medicine	54	46	15	47	474
Vet medicine	58	42	18	27	179
All MVM	55	45	16	42	653
Biology	46	54	21	28	789
Chemistry	61	39	24	23	306
Mathematics	44	56	19	20	328
Physics	67	33	25	12	256
All SE	51	49	22	23	1679
All	55	45	22	31	4479

Progression and degree outcomes by subject area

The proportion of students achieving each degree outcome varied across the subject areas (Table 2). For example, the propensity of students to achieve 1st or 2.1 was higher than average in English Literature. On the other hand, the propensity of students to achieve Honours and the top two classes of degree was lower in Chemistry and Physics than in other subject areas. The pattern of awards in MVM is very different to other colleges.

Table 2. Percentage of sample achieving each outcome

	Completed an HE qualification	Achieved Honours	Achieved top 2 classes (1st or 2.1, or MVM pass)	Achieved top class degree (1st of MVM honours/distinction)
Architecture	89	84	71	19
Business Studies	89	78	69	16
Divinity	90	83	72	20
English lit	91	84	81	31
History	96	89	80	16
Law	92	88	80	18
Psychology	93	77	71	14
Sociology	89	75	62	9
All HSS	92	84	75	18
Medicine	97		94	8
Vet medicine	97		95	42
All MVM	97		94	18
Biology	91	81	65	12
Chemistry	85	67	46	20
Mathematics	88	73	52	21
Physics	82	63	41	20
All SE	88	74	55	16
All	91	80	71	17

Factors influencing progression and degree outcomes per subject

Statistical models enable us to analyse the effects of contextual variables and prior qualifications on each of the four degree outcomes while controlling for all other factors. For the subject-level analysis, the data for both Highers-qualified and A-level qualified students were combined, but this raises some questions about the comparability of students with different qualification types:

- SQA and GCE qualifications are based on different school systems, with different educational philosophies. Consequently, A-level qualified students have a narrower range of prior qualifications than Highers-qualified students, as shown by Figure 3. In order to bring the two measures of prior qualifications together for analysis purposes, the strategy we have adopted is firstly to create summary measures based on the UCAS tariff, and then to normalise the scores separately within each qualification type. This allows us to compare the outcomes of “average” Highers-qualified students with “average” A-level qualified students.
- Students with Highers and A-levels are not entirely comparable in terms of their background characteristics: A-level qualified students are domiciled mainly (but not exclusively) in the rest of the UK, and they are more likely to come from independent or grammar schools, and to be older, than Highers-qualified students. Potentially there are also un-measurable differences associated with students who have chosen (and could afford) to move to a different nation for study, compared to students studying within their own national education system.
- Contextual measures of widening participation differ between Scottish-domiciled and RUK-domiciled students (SIMD and LEAPS are exclusively Scottish measures), the definition of school band also differs, and HESA do not consider the YPR measure used in RUK to be appropriate for the Scottish context. We have applied WP indicators appropriate to each domicile. We cannot discount the effect of measurement differences on the lower proportion of WP-indicated students among the A-level qualified than the Highers-qualified, but it seems likely that this difference reflects that WP-indicated students tend to study locally.

A series of statistical models explored differences in achievement of each of the four outcomes summarised in Table 2. (Details of the statistical models are given in the Appendix.) The first set of models is based on the sample as a whole, and shows:

- Prior qualifications were a major influence on all four outcomes.
- On average, A-level qualified students were more likely to achieve all four outcomes than Highers-qualified students.
- WP-indicated students were less likely than others to achieve the three main outcomes - an Honours degree, a “good” degree or a top class degree – after taking account of prior qualifications.

The second set of models focused separately on each subject in turn. **We must emphasize that sample sizes for individual subjects are relatively small and this has a bearing on the extent to**

which statistically significant differences can be identified. Interaction terms (for example WP-indicated student with A-level qualifications) have not been included in the models because of small sample sizes. In spite of these limitations, the models show interesting differences in the effects of contextual variables and prior qualifications on students' outcomes. In the summary below, statistically-significant effects are reported after taking account of all other factors.

However, we must emphasise that the confidence level for our test of statistical significance is 95%, and it is possible that some of the differences reported could have arisen from random factors.

WP-indicated students

- In the MVM sample there was no difference in outcomes between WP-indicated and other students.
- In the HSS sample the disadvantage of WP-indicated students was confined to Architecture (Honours), English Literature (1st), and Law (top two classes).
- In the SE sample the disadvantage of WP-indicated students was confined to Biology (Honours and top two classes).
- In 10 out of 14 subject areas there was no evidence that WP-indicated students achieved different outcomes to their peers, once prior qualifications were taken into account. These subject areas were: Business studies, Divinity, History, Psychology, Sociology, Medicine, Veterinary Medicine, Chemistry, Mathematics, and Physics.

Prior qualifications

- Prior qualification score was a significant predictor of outcomes in all subject areas except Medicine.
- In the MVM sample the advantage accruing to high qualifications and GCE qualifications was only found in Veterinary Medicine, whereas there were no differences in Medicine.
- In the HSS sample the advantage of A-level qualified students was particularly marked in Architecture where the relative odds of a A-level qualified student achieving a 1st class degree were 20.7 times those of an Highers-qualified student (and only a little less for other outcomes). The only HSS subjects in which A-level qualified students did not have a greater likelihood of achieving at least one outcome were Divinity and Law.
- In the SE sample the advantage associated with GCE-qualifications was greatest in Biology and also influenced outcomes in Mathematics and Physics.
- In just 4 out of 14 subject areas there was no evidence of different outcomes associated with type of qualification. These subjects were: Divinity, Law, Medicine and Chemistry.

Issues arising from the study

The results confirm that prior qualifications are the main factor determining degree outcomes, so that students with the highest qualifications are most likely to progress and achieve good degree outcomes. On average, WP-indicated students had slightly lower prior qualifications than other students, and this has affected their degree outcomes.

The use of contextual data in admissions has ensured that WP-indicated students are able to access degree courses at the University despite in some cases having slightly lower prior qualifications. The policy arose from a perception that the “potential” of these students was not adequately reflected in their prior qualifications. Research elsewhere suggested that students who enter university from low performing schools are likely to achieve more highly than would be predicted by their prior qualifications (Naylor and Smith 2002, Ogg et al 2009). In view of this research we might (optimistically) have hoped to find that WP-indicated students would achieve better outcomes than their peers with the same level of prior qualifications. The fact that Highers-qualified WP-indicated students in some HSS and SE subjects did not achieve as good outcomes as other students, while disappointing, may be a reflection of the fact that WP students at university suffer similar disadvantages and adverse pressures to school students from disadvantaged backgrounds – particularly with respect to cultural, social and economic capital. Nevertheless, the number of subjects in which WP-indicated students were at an added disadvantage is relatively small, and it may be worthwhile to investigate further whether there are specific difficulties in these subject areas

It is encouraging to note that among A-level qualified students there is evidence of WP-indicated students in the HSS sample being more likely to achieve a 1st class degree than would have been predicted by their prior qualifications (this result based on separate analysis of A-level qualified students is detailed in a separate report). It would be interesting to investigate further the factors leading to this positive result. There were relatively few WP-indicated students with GCE qualifications, but these appear to have been less disadvantaged in their progression and outcomes than was the case for WP-indicated students with SQA qualifications. We may speculate that differences (inadequacies?) in WP indicators may have resulted in spurious identification of WP students.

Differences in qualifications systems pose particular difficulties for analysis of progression at the University of Edinburgh that were not encountered in the English universities where previously quoted research was carried out. Not only are the qualifications different in breadth and depth, but

the background characteristics of students with GCE qualifications are very different to those with SQA qualifications. Consequently, it is difficult to draw clear conclusions about the better degree outcomes of A-level qualified students compared to Highers-qualified students: is this merely a case of measurement error, a reflection of differences in personal characteristics, or advantage accruing to depth of prior study? The difference in outcomes associated with GCE qualifications is particularly striking in certain subjects, whereas there is no difference in subjects such as Medicine, where SQA qualified students are most likely to have Advanced Highers. Further investigation of subject area differences might be illuminating.

Our previous analysis of data for Highers-qualified students only (detailed in a separate report) showed clearly that students who had gained prior qualifications at Advanced Higher or A-level (ie SCQF level 7) were likely to achieve better outcomes than those with Highers only (SCQF level 6). Since provision of Advanced Higher courses is most problematic in the low-participation schools attended by many WP-indicated students, we need to consider the implications for their levels of preparedness for degree-level study, and the additional study support that may be required.

This raises questions for policy and practice:

- Can we identify the barriers preventing disadvantaged students achieving their potential? And how should they be addressed?
- Are teaching staff sufficiently aware of challenges faced by WP-indicated students?
- Is the first year curriculum accessible to Highers-qualified WP students?
- Do WP-indicated students need more academic support during the first two years of their degree course to compensate for gaps in their prior learning?
- Should recruitment place greater emphasis on achievement of Advanced Highers, or would this exacerbate inequalities in access?
- Do WP students have to spend too much time in paid jobs to support themselves?

References

- Admissions to Higher Education Review (2004) **Fair admissions to higher education: recommendations for good practice** (The Schwartz report), <http://www.admissions-review.org.uk/>
- Cree, V.E, Croxford, L., Halliwell, J., Iannelli, C., Kendall, L. and Winterstein, D. (2006) Widening Participation at an Ancient Scottish University, **Scottish Affairs**, 56 (Summer 2006), 102-130
- Hoare, A. and Johnston, R. (2010) Widening participation through admissions policy – a British study of school and university performance, **Studies in Higher Education** 2010, 1-21.
- Hood, K. (2010) **The University of Edinburgh Widening Participation Background Briefing**, www.sra.ed.ac.uk
- Milburn, A. (2010) **Unleashing Aspirations: The Final report of the panel on fair Access to the Professions**, <http://www.bis.gov.uk/assets/biscore/corporate/migratedd/publications/p/panel-fair-access-to-professions-final-report-21july09.pdf>
- Naylor, R. and Smith, J. (2002) **Schooling Effects on Subsequent University Performance: evidence from the UK University Population**, Warwick Economic Research Papers, no 657, University of Warwick.
- Ogg, T., Zimdars, A. and Heath, A. (2009) Schooling effects on degree performance: a comparison of the predictive validity of aptitude testing and secondary school grades at Oxford University, **British Educational Research Journal**, 35 (5) 781-807.
- SFC (2011) **Learning for All: Fifth update report on measures of success**, www.sfc.ac.uk
- Universities Scotland (2012) **“Outcome agreements demonstrate level of university commitment to deliver for Scotland”**. <http://www.universities-scotland.ac.uk/index.php?mact=News,cntnt01,detail,0&cntnt01articleid=134&cntnt01returnid=23>

Appendix**Appendix Table 1. Binary logistic regression models to predict outcomes: all students in sample programmes**

	Outcome	Variables included in models	B	S.E.	Sig.	Exp(B)
Total sample <i>(N=4395)</i>	Completed HE qualification	WP-indicated	-0.08	0.13	0.55	0.93
		A-level qualified	0.71	0.13	0.00	2.03
		Prior quals (normal score)	0.59	0.06	0.00	1.81
		% achieved outcome per subject	0.10	0.01	0.00	1.10
		Ref. cat.	2.34	0.09	0.00	10.40
	Achieved Honours	WP-indicated	-0.23	0.10	0.02	0.79
		A-level qualified	0.63	0.10	0.00	1.88
		Prior quals (normal score)	0.68	0.05	0.00	1.97
		% achieved outcome per subject	0.06	0.01	0.00	1.06
		Ref. cat.	1.44	0.07	0.00	4.22
	Achieved 1st, 2.1 or MVM pass	WP-indicated	-0.39	0.09	0.00	0.68
		A-level qualified	0.59	0.08	0.00	1.80
		Prior quals (normal score)	0.70	0.04	0.00	2.01
		% achieved outcome per subject	0.05	0.00	0.00	1.05
		Ref. cat.	0.96	0.06	0.00	2.61
	Achieved 1st or MVM honours/distinction	WP-indicated	-0.23	0.12	0.05	0.80
		A-level qualified	0.48	0.09	0.00	1.61
Prior quals (normal score)		0.64	0.05	0.00	1.90	
% achieved outcome per subject		0.06	0.00	0.00	1.06	
Ref. cat.		-1.94	0.07	0.00	0.14	

Notes:

1. "WP-indicated" and "GCE qualified" are dummy variables.
2. The measure of prior qualifications is based on the UCAS tariff score which has been transformed to the normal score separately for each type of qualification.
3. The measure "% achieved outcome per subject" takes account of differences between subjects in their propensities to award each level of degree; it is centred on the average for each outcome.
4. Reference category refers to a student who is not WP-indicated, is Highers-qualified, has average prior qualifications (mean for qualification type), and studying a subject with average achievement of this outcome.

Appendix Table 2. Binary logistic regression models to predict outcomes per sample subject area

	Outcome	Variable	B	S.E.	Sig.	Exp(B)
Architecture (N=159)	Completed an HE qualification	WP-indicated	-1.03	0.57	0.07	0.36
		A-level qualified	1.43	0.81	0.08	4.16
		Prior quals	0.66	0.32	0.04	1.94
		Ref. cat.	2.09	0.42	0.00	8.05
	Achieved Honours	WP-indicated	-1.10	0.49	0.02	0.33
		A-level qualified	2.22	0.79	0.00	9.17
		Prior quals	0.22	0.27	0.43	1.24
		Ref. cat.	1.42	0.33	0.00	4.14
	Achieved 1st of 2.1	WP-indicated	-0.79	0.44	0.07	0.46
		A-level qualified	2.12	0.51	0.00	8.32
		Prior quals	-0.01	0.22	0.95	0.99
		Ref. cat.	0.42	0.26	0.11	1.52
	Achieved 1st	WP-indicated	-0.77	0.83	0.35	0.46
		A-level qualified	3.03	0.77	0.00	20.66
		Prior quals	0.21	0.25	0.39	1.24
		Ref. cat.	-3.54	0.73	0.00	0.03
	Business studies (N=263)	Completed an HE qualification	WP-indicated			
A-level qualified						
Prior quals						
Ref. cat.						
Achieved Honours		WP-indicated	-0.22	0.34	0.51	0.80
		A-level qualified	0.96	0.65	0.14	2.62
		Prior quals	1.05	0.20	0.00	2.85
		Ref. cat.	1.71	0.24	0.00	5.55
Achieved 1st of 2.1		WP-indicated	-0.26	0.30	0.38	0.77
		A-level qualified	1.11	0.57	0.05	3.05
		Prior quals	0.75	0.17	0.00	2.12
		Ref. cat.	1.05	0.20	0.00	2.87
Achieved 1st		WP-indicated	-0.41	0.39	0.29	0.66
	A-level qualified	0.31	0.51	0.55	1.36	
	Prior quals	0.79	0.22	0.00	2.21	
	Ref. cat.	-1.46	0.22	0.00	0.23	

	Outcome	Variable	B	S.E.	Sig.	Exp(B)	
Divinity (N=159)	Completed an HE qualification	WP-indicated					
		A-level qualified	<i>Model unstable</i>				
		Prior quals					
		Ref. cat.					
	Achieved Honours	WP-indicated	0.18	0.92	0.84	1.20	
		A-level qualified	0.59	0.61	0.33	1.81	
		Prior quals	0.67	0.27	0.01	1.94	
		Ref. cat.	1.55	0.62	0.01	4.73	
	Achieved 1st of 2.1	WP-indicated	-0.81	0.72	0.26	0.44	
		A-level qualified	0.12	0.55	0.83	1.13	
		Prior quals	0.84	0.24	0.00	2.32	
		Ref. cat.	1.36	0.57	0.02	3.91	
	Achieved 1st	WP-indicated	-1.09	1.16	0.35	0.34	
		A-level qualified	-0.38	0.67	0.57	0.69	
		Prior quals	0.97	0.28	0.00	2.64	
		Ref. cat.	-0.84	0.63	0.19	0.43	
English Lit (N=189)	Completed an HE qualification	WP-indicated	0.66	0.62	0.29	1.94	
		A-level qualified	-0.10	0.56	0.85	0.90	
		Prior quals	0.75	0.31	0.02	2.12	
		Ref. cat.	2.46	0.49	0.00	11.70	
	Achieved Honours	WP-indicated	-0.59	0.42	0.16	0.56	
		A-level qualified	0.30	0.41	0.47	1.35	
		Prior quals	0.32	0.24	0.18	1.38	
		Ref. cat.	1.73	0.35	0.00	5.62	
	Achieved 1st of 2.1	WP-indicated	-0.61	0.40	0.13	0.54	
		A-level qualified	0.60	0.40	0.13	1.82	
		Prior quals	0.37	0.23	0.11	1.44	
		Ref. cat.	1.44	0.33	0.00	4.22	
	Achieved 1st	WP-indicated	-1.85	0.52	0.00	0.16	
		A-level qualified	1.23	0.40	0.00	3.43	
		Prior quals	0.25	0.22	0.25	1.28	
		Ref. cat.	-1.26	0.34	0.00	0.28	

	Outcome	Variable	B	S.E.	Sig.	Exp(B)
History <i>(N=454)</i>	Completed an HE qualification	WP-indicated	-0.96	0.50	0.06	0.38
		A-level qualified	0.83	0.48	0.08	2.30
		Prior quals	0.37	0.28	0.18	1.45
		Ref. cat.	2.94	0.40	0.00	18.88
	Achieved Honours	WP-indicated	-0.36	0.37	0.33	0.70
		A-level qualified	1.00	0.32	0.00	2.71
		Prior quals	0.57	0.19	0.00	1.77
		Ref. cat.	1.75	0.26	0.00	5.73
	Achieved 1st of 2.1	WP-indicated	-0.51	0.31	0.10	0.60
		A-level qualified	1.40	0.26	0.00	4.07
		Prior quals	0.58	0.15	0.00	1.79
		Ref. cat.	0.78	0.20	0.00	2.19
	Achieved 1st	WP-indicated	-0.13	0.43	0.76	0.88
A-level qualified		1.32	0.40	0.00	3.74	
Prior quals		0.79	0.17	0.00	2.19	
Ref. cat.		-2.80	0.38	0.00	0.06	
Law <i>(N=494)</i>	Completed an HE qualification	WP-indicated	-0.29	0.35	0.40	0.75
		A-level qualified	1.26	1.05	0.23	3.52
		Prior quals	0.81	0.19	0.00	2.25
		Ref. cat.	2.53	0.24	0.00	12.52
	Achieved Honours	WP-indicated	-0.50	0.30	0.10	0.61
		A-level qualified	-0.28	0.53	0.60	0.76
		Prior quals	0.65	0.16	0.00	1.92
		Ref. cat.	2.20	0.21	0.00	9.05
	Achieved 1st of 2.1	WP-indicated	-0.85	0.24	0.00	0.43
		A-level qualified	-0.21	0.46	0.66	0.81
		Prior quals	0.50	0.13	0.00	1.65
		Ref. cat.	1.67	0.17	0.00	5.33
	Achieved 1st	WP-indicated	-0.36	0.28	0.20	0.70
A-level qualified		0.11	0.48	0.83	1.11	
Prior quals		0.51	0.13	0.00	1.66	
Ref. cat.		-1.65	0.17	0.00	0.19	

	Outcome	Variable	B	S.E.	Sig.	Exp(B)
Psychology (N=283)	Completed an HE qualification	WP-indicated	1.12	0.67	0.09	3.05
		A-level qualified	1.72	0.66	0.01	5.59
		Prior quals	0.40	0.26	0.12	1.50
		Ref. cat.	2.01	0.32	0.00	7.48
	Achieved Honours	WP-indicated	-0.22	0.36	0.54	0.80
		A-level qualified	0.79	0.35	0.02	2.21
		Prior quals	0.79	0.18	0.00	2.21
		Ref. cat.	1.20	0.24	0.00	3.31
	Achieved 1st of 2.1	WP-indicated	-0.27	0.35	0.43	0.76
		A-level qualified	1.08	0.33	0.00	2.94
		Prior quals	0.81	0.17	0.00	2.24
		Ref. cat.	0.78	0.23	0.00	2.18
	Achieved 1st	WP-indicated	0.53	0.57	0.35	1.70
		A-level qualified	1.43	0.44	0.00	4.17
		Prior quals	0.75	0.23	0.00	2.11
		Ref. cat.	-2.76	0.40	0.00	0.06
Sociology (N=106)	Completed an HE qualification	WP-indicated	1.26	0.85	0.14	3.53
		A-level qualified	1.32	0.83	0.11	3.75
		Prior quals	0.38	0.38	0.32	1.47
		Ref. cat.	1.57	0.41	0.00	4.80
	Achieved Honours	WP-indicated	0.37	0.56	0.50	1.45
		A-level qualified	1.72	0.70	0.01	5.59
		Prior quals	0.83	0.33	0.01	2.29
		Ref. cat.	0.93	0.36	0.01	2.54
	Achieved 1st of 2.1	WP-indicated	0.04	0.53	0.95	1.04
		A-level qualified	1.53	0.57	0.01	4.62
		Prior quals	1.04	0.32	0.00	2.82
		Ref. cat.	0.41	0.34	0.22	1.51
	Achieved 1st	WP-indicated	-0.11	1.11	0.92	0.90
		A-level qualified	0.58	0.83	0.49	1.78
		Prior quals	1.78	0.51	0.00	5.93
		Ref. cat.	-2.80	0.67	0.00	0.06

	Outcome	Variable	B	S.E.	Sig.	Exp(B)
Medicine (N=469)	Completed an HE qualification	WP-indicated	1.03	1.07	0.34	2.81
		A-level qualified	0.17	0.57	0.77	1.18
		Prior quals	0.43	0.34	0.22	1.53
		Ref. cat.	3.01	0.41	0.00	20.31
	Achieved pass	WP-indicated	0.10	0.59	0.87	1.10
		A-level qualified	-0.01	0.43	0.98	0.99
		Prior quals	0.29	0.26	0.26	1.34
		Ref. cat.	2.58	0.33	0.00	13.19
	Achieved honours/ distinction	WP-indicated	-0.06	0.53	0.92	0.95
		A-level qualified	0.31	0.36	0.38	1.37
		Prior quals	0.24	0.22	0.29	1.27
		Ref. cat.	-2.72	0.33	0.00	0.07
	Veterinary Medicine (N=175)	Completed an HE qualification	WP-indicated	-0.37	0.91	0.68
A-level qualified						
Prior quals			-0.17	0.66	0.80	0.84
Ref. cat.			2.98	0.70	0.00	19.66
Achieved pass		WP-indicated	-0.52	0.77	0.50	0.60
		A-level qualified	1.72	1.09	0.11	5.59
		Prior quals	-0.14	0.52	0.79	0.87
		Ref. cat.	2.70	0.59	0.00	14.85
Achieved honours/ distinction		WP-indicated	-0.73	0.48	0.13	0.48
		A-level qualified	0.94	0.34	0.01	2.56
		Prior quals	0.70	0.25	0.00	2.02
		Ref. cat.	-1.01	0.31	0.00	0.36

	Outcome	Variable	B	S.E.	Sig.	Exp(B)
Biology (N=766)	Completed an HE qualification	WP-indicated	-0.48	0.29	0.10	0.62
		A-level qualified	0.54	0.28	0.05	1.72
		Prior quals	0.28	0.14	0.05	1.32
		Ref. cat.	2.35	0.22	0.00	10.47
	Achieved Honours	WP-indicated	-0.63	0.22	0.00	0.53
		A-level qualified	0.74	0.21	0.00	2.11
		Prior quals	0.63	0.11	0.00	1.89
		Ref. cat.	1.62	0.17	0.00	5.07
	Achieved 1st of 2.1	WP-indicated	-0.58	0.20	0.00	0.56
		A-level qualified	0.70	0.17	0.00	2.02
		Prior quals	0.82	0.10	0.00	2.26
		Ref. cat.	0.81	0.14	0.00	2.26
	Achieved 1st	WP-indicated	-0.21	0.35	0.55	0.81
		A-level qualified	0.99	0.26	0.00	2.68
		Prior quals	0.77	0.13	0.00	2.17
		Ref. cat.	-2.47	0.23	0.00	0.08
Chemistry (N=298)	Completed an HE qualification	WP-indicated	0.54	0.48	0.27	1.71
		A-level qualified	0.06	0.38	0.87	1.06
		Prior quals	0.72	0.17	0.00	2.06
		Ref. cat.	2.07	0.29	0.00	7.91
	Achieved Honours	WP-indicated	0.44	0.34	0.20	1.55
		A-level qualified	0.27	0.30	0.36	1.31
		Prior quals	0.72	0.13	0.00	2.06
		Ref. cat.	0.84	0.21	0.00	2.32
	Achieved 1st of 2.1	WP-indicated	-0.15	0.32	0.64	0.86
		A-level qualified	0.16	0.29	0.58	1.17
		Prior quals	0.87	0.14	0.00	2.38
		Ref. cat.	0.03	0.20	0.87	1.03
	Achieved 1st	WP-indicated	-0.11	0.40	0.79	0.90
		A-level qualified	-0.26	0.37	0.48	0.77
		Prior quals	1.03	0.17	0.00	2.81
		Ref. cat.	-1.30	0.24	0.00	0.27

	Outcome	Variable	B	S.E.	Sig.	Exp(B)
Mathematics <i>(N=326)</i>	Completed an HE qualification	WP-indicated	-0.09	0.43	0.83	0.91
		A-level qualified	1.19	0.40	0.00	3.30
		Prior quals	0.62	0.19	0.00	1.85
		Ref. cat.	1.59	0.28	0.00	4.91
	Achieved Honours	WP-indicated	0.22	0.35	0.52	1.25
		A-level qualified	1.04	0.29	0.00	2.83
		Prior quals	0.75	0.15	0.00	2.12
		Ref. cat.	0.47	0.22	0.04	1.60
	Achieved 1st of 2.1	WP-indicated	-0.14	0.32	0.66	0.87
		A-level qualified	0.36	0.25	0.15	1.44
		Prior quals	0.65	0.12	0.00	1.92
		Ref. cat.	-0.17	0.21	0.43	0.85
	Achieved 1st	WP-indicated	0.06	0.39	0.88	1.06
		A-level qualified	0.00	0.31	0.99	1.00
		Prior quals	0.68	0.14	0.00	1.98
		Ref. cat.	-1.52	0.26	0.00	0.22
Physics <i>(N=254)</i>	Completed an HE qualification	WP-indicated	-0.38	0.39	0.33	0.68
		A-level qualified	1.04	0.45	0.02	2.82
		Prior quals	0.78	0.20	0.00	2.19
		Ref. cat.	1.60	0.26	0.00	4.94
	Achieved Honours	WP-indicated	0.16	0.33	0.63	1.17
		A-level qualified	0.54	0.31	0.08	1.72
		Prior quals	0.66	0.15	0.00	1.93
		Ref. cat.	0.40	0.20	0.05	1.49
	Achieved 1st of 2.1	WP-indicated	0.07	0.34	0.83	1.08
		A-level qualified	0.55	0.31	0.08	1.74
		Prior quals	0.92	0.16	0.00	2.52
		Ref. cat.	-0.58	0.21	0.01	0.56
	Achieved 1st	WP-indicated	0.04	0.40	0.91	1.04
		A-level qualified	-0.17	0.39	0.67	0.85
		Prior quals	1.01	0.19	0.00	2.76
		Ref. cat.	-1.59	0.26	0.00	0.20

See notes to Appendix Table 1.