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Evaluation of the Realising Opportunities Programme

Report for the Realising Opportunities Partnership

Final Evaluation Report

December 2016

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Acknowledgements

The evaluation team wish to thank the Realising Opportunities Central Team at Newcastle University (Barbara Herring and Claire Burnham) for their support during this evaluation and the provision of much of the data upon which this report is based.

Our work is indebted to the research teams from the Institute for Effective Education (IEE), University of York, the National Foundation for Educational Research (NFER) and Critical Thinking, who each completed previous evaluations of the Realising Opportunities programme. We express particular thanks to Dr Peter Rudd, formerly of the IEE, for his work on the evaluation up until January 2016.

Finally, we wish to thank the students, teachers and university staff, who provided the information to make this evaluation possible. Their contributions are of great value to guiding the future improvement of the Realising Opportunities programme.

This report should be cited as:

Hancock, S., Wakeling, P., and Ewart, A. (2016) Evaluation of the Realising Opportunities Programme: Report for the Realising Opportunities Partnership. York: University of York, Department of Education.

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Executive summary

- This evaluation report provides an analysis of all data collected to date for an evaluation of the Realising Opportunities (RO) programme. The intention of this report is to offer an independent and comprehensive overview of the RO Programme to assess whether it is achieving its stated aims and the impact it has had on participating students.

Recruitment to the RO programme

- RO intends to recruit the ‘most able, least likely’ students. It targets a particularly high-attaining group: ‘most able’ students are defined as those who have achieved, as a minimum, eight A* to C GCSE grades, including in English Language and Mathematics. Of these, at least five subjects must be graded at A* to B. ‘Least likely’ refers to socio-economic disadvantage, identified through a set of criteria that has evolved with the development of the programme, and which currently includes eligibility for Free School Meals (FSM) and/or discretionary payments or the 16- 19 bursary, first in family to attend higher education, socio-economic disadvantage based on postcode and looked-after children.
- Eligibility for the programme additionally depends on several school-level characteristics being met, including: below the national average for GCSE achievement; below the national average for Key Stage 5 (KS5) achievement; higher than the national average of students eligible for free school meals (FSM); or more than sixty per cent of students from the first 13,000 super output areas within the Index of Multiple Deprivation (IMD).
- With regards to attainment and socio-economic disadvantage, RO appears to be recruiting increasingly well with each successive cohort. Not only has the programme expanded considerably in size, an analysis of the profile of each cohort suggests that the socio-economic disadvantage of enrolled recruits has increased in subsequent years. Success is particularly evident in the recruitment of students who are eligible for FSM, or who are currently/ have been in care. For more recent cohorts, the number of care leavers participating in RO constitutes approximately 6.0% of all looked after children who progress to UK HE; indicating that the programme is performing particularly impressively in this regard.
- Around one-fifth of enrolled recruits leave the RO programme before completion. Preliminary analysis indicates that white male students may be ‘at risk’ from dropping out of the programme prematurely.

Applications and enrolments to higher education

- The RO programme demonstrates some success in terms of encouraging applications to university. The extent of success that can be claimed for the programme will depend upon any forthcoming analysis of national data.
- Data from the RO internal records, UCAS applications, and HESA enrolments were linked together to form a single database with a thorough record for each participant in the RO programme. Further details of this can be found in section 1.4. In the most recent cohort for which these data are available (cohort 3), eight out of ten students applied to any university; seven out of ten applied to a research-intensive university; and just over two-thirds applied to an RO university. There are, however, some causes for concern. The proportions of RO students applying to, and enrolling at, any university, a research-intensive university (RIU), or, an RO university visibly declines across cohorts. The proportion of RO students choosing to apply to and enrol at their host RO university considerably reduces over time. In contrast, the proportions of RO students enrolling at ‘other’ - so to say, non-research-intensive - universities has steadily increased over the same period. For enrolments, data were available up to and including Cohort 4, where applications were limited to the first three cohorts only. Enrolment data were based on the HESA database for the most complete record possible.
- Preliminary statistical analysis was carried out on cohorts 1 to 3 of the RO dataset to identify any characteristics that serve as potential indicators for probability to apply or enrol at any university, RIUs, or RO partner universities. A school-level effect was generally detected, and accounted for around 10-20 per cent of outcome influence. With the data available to date, looking solely within the RO population, success appeared strongly dominated by Key Stage 4 (KS4) attainment and subject choice, with applicants to Science, Technology, Engineering and Maths (STEM) courses more likely to apply to RIUs. Relative to the national average KS4 attainment, it is evident that the KS4 attainment of successive RO cohorts has fallen. This, coupled with a decrease in applications to STEM courses offers a possible explanation for the falling rates of RIU enrolment observed. Socio-economic background characteristics, including ethnicity, were not detected as significant factors in the limited dataset available.
- The proportion of alternative or ‘dual’ offers (AO) made by RO universities is fairly constant between cohorts 1-5, at around ninety per cent of all offers made to RO students from partner institutions. Around half of enrolling students do so on the basis of an AO. The proportion of RO students who fail to meet their offer is also fairly constant (at around fifteen per cent). This is interesting to note, given the observation that the proportion of RO students enrolling at either a RIU or RO university decreases over successive cohorts.
- Around-two thirds of students who receive an AO enrol on this basis. This implies that around-one third of those who receive an AO do not in fact require it, or choose not to use it. This could be interpreted as ‘over subscription’ to the AO, but data from the student feedback surveys confirm that it has an important role in attracting the ‘most

able, least likely' to join the RO programme and take seriously the notion of applying for higher education study.

Student perceptions of the RO programme

- RO students judge the programme as a source of beneficial information, advice and guidance, which positively assists their transition to university. A specific improvement in students' knowledge of universities is reported after participating in the programme. The most marked advance in knowledge relates to the application process and understanding of what a RIU is. Students do report feeling more ready for university at the end of the programme, but this shift is not as great as the perceived knowledge gain. Most students complete the programme feeling 'quite prepared' for university; with confidence towards managing finances and living independently most improved.
- The most popular aspect of the RO programme is reported to be the alternative offer. The proportion of students identifying the ementor scheme as the most helpful aspect of the programme has fallen notably with successive cohorts. However, it should be noted that ementoring retains a good overall satisfaction rating, and a recent evaluation by the charity Brightside (2015) indicated that cohort 5 students rated ementoring more positively than cohort 4 students, in most regards. The numbers valuing the academic assignment/extended project qualification (EPQ) have risen.
- RO students who progress to university appear to be performing well. Just over ninety per cent of cohort 1, and seventy five per cent of cohort two, are known to have completed their degree within the expected timeframe. The number of RO students who withdraw from their university course is very low (some 2.8% of cohort 1, compared to a national average of around six per cent).

Outcomes from higher education

- A comparative analysis of the degree results of RO students at RO universities, suggests that a slightly lower proportion of RO students receive a first-class degree, but that the proportions of RO students receiving upper and lower second class degrees are higher¹ than those reported for the total student population. This difference in distribution is explained by the observation that no RO student in cohorts 1 or 2 received either a third or unclassified degree (which account for around 10 per cent of all degrees awarded to the total student population).

¹ For further information, see 'Summary of UK performance indicators 2014/15'
<https://www.hesa.ac.uk/pis/summary1415>

Recommendations

- With an aim to increase proportions enrolling at RIUs, recommendations include a combination of seeking better feedback from the RO participants as to reasons for not applying/enrolling to university, as well improving how to actively promote such choices through the RO activities. Student questionnaires should directly seek out the reasons as to why RIUs are not applied to or enrolled at. Some refinement of the ementoring scheme might be considered, since ratings of its usefulness have dipped over successive cohorts. This is suggested since recent research notes the central importance of mentoring schemes to effective outreach programmes.

1. Introduction

1.1 Focus of this report

This report provides an analysis of all data collected to date for an evaluation of the Realising Opportunities (RO) programme. The intention of this report is to offer an independent and comprehensive overview of the RO Programme to assess whether it is achieving its stated aims and the impact it has had on participating students.

Since February 2016, this evaluation has been undertaken by a research team based at the Department of Education, University of York. Previous evaluations of the RO programme were carried out by the Institute for Effective Education, University of York (2013-16) and the National Foundation for Education Research (NFER) (2012-12).

This report provides, for the first time, an analysis of the latest cohort of RO for whom data are available (cohort 6), as well as collating data from all students recruited for RO so far (cohorts 1-6). Data for cohorts 1-5 have been freshly analysed for the purposes of this report, meaning that there are some minor discrepancies between the values reported here and those found in earlier reports. An example of this is the number of students within each cohort who have completed RO. We are confident that the information presented here is the most accurate to date.

1.2 The Realising Opportunities programme

Realising Opportunities (RO) is a unique partnership of fifteen leading research-intensive universities (RIUs), who are collaborating to promote fair access and social mobility of students from groups traditionally under-represented in higher education (HE). The Partnership began with a three-year Higher Education Funding Council for England (HEFCE)-funded pilot (2009 – 2012) involving twelve universities. In 2012, the Partnership became self-funding, and in 2013, the Partnership expanded to include three more universities, thereby widening its geographical reach and offering to participating students.

The RO programme aims to: equip the ‘most able, least likely’ students with the skills and information to make informed decisions about their futures; to raise these students’ aspirations to apply to an RIU; and, to support their current work at school or college. Participating students are supported through the programme by their local RO university, and are assigned an ementor who is a current student at an RO university. Successful completion of the programme leads to a number of benefits, including:

- Additional consideration of participating students’ UCAS applications
- An alternative offer of up to two A level grades lower than the standard typical offer
- Skills development through the online study module, Skills4uni, and participation in the annual National Student Conference
- Insight into student life at RO universities, through events, activities and residential opportunities and the support of an undergraduate ementor
- Access to employers who will offer careers advice and information

The pilot phase of Realising Opportunities involved 12 research intensive universities². In 2013 the Partnership invited other research intensive universities to express an interest in joining the Partnership. Three new universities joined taking numbers to 15³. In 2015 one original Partner withdrew from the Partnership⁴, with one new university joining⁵.

The Partnership was awarded the Times Higher Education, Widening Participation Initiative of the Year 2011 and was featured as an example of good practice in Alan Milburn's October 2012 report 'University Challenge: How Higher Education Can Advance Social Mobility' (Cabinet Office, 2012), and the Office for Fair Access (OFFA) and HEFCE joint interim report (2013) to the Department for Business, Innovation and Skills (BIS) 'National Strategy for Access and Student Success'.

1.3 Evaluation aims and objectives

The aim of this latest evaluation is provide RO colleagues with accessible information to guide partner universities in taking the programme forward. In contrast to previous evaluations of the programme, the progression of RO students is analysed, where possible, in comparison to national norms. The key research questions and details of analysis, as noted in the revised evaluation proposal published in July 2015, are set out in table 1.1, overleaf.

² University of Birmingham, University of Bristol, University of Essex, University of Exeter, King's College London, University of Leeds, University of Leicester, University of Liverpool, University of Manchester, Newcastle University, University of Warwick, University of York.

³ Goldsmiths, University of London, University of Sheffield, University of Sussex.

⁴ University of Essex.

⁵ University College London.

Research question	Details of analysis and report reference
1. Has the programme targeted the most able, least likely students?	GCSE attainment and background characteristics of cohorts 1-6 are analysed and summarised in table form and graphically. <i>Chapter 2.</i>
2. Are RO students more likely a) to apply to b) to have as their final destination: - i) any university; ii) an RIU; iii) an RO university – compared to national norms for FSM students?	Applications from RO students from cohorts 1-3 are summarised in table form and graphically. Final destination information is summarised for cohorts 1-4. An extract from the National Pupil Database has been applied for to compare with national norms. <i>Chapter 3.</i>
3. Why do students in the target group choose not to apply to an RIU?	Follow-up survey data for cohorts 1-4 are analysed to summarise the reasons reported by those who did not apply to <i>any</i> university. <i>Section 3.5.</i>
4a. Were RO students offered an alternative offer? 4b. Were RO students influenced by prospect of receiving an alternative offer?	Data provided by partner universities are analysed and the percentage of AOs offered is summarised. Follow-up survey data from cohorts 1-4 are analysed to explore whether these students were influenced by the prospect of an AO. <i>Chapter 4.</i>
5a. Are RO students better informed about RIUs and university life in general as result of the RO programme? 5b. How did students feel being targeted as part of the programme? 5c. What do they think were the main benefits? 5d. How did they rate the various elements of the programme? 5e. Why do students withdraw from the programme?	Previous analyses of data provided by cohorts 1-4 in relation to questions 5 a, c and d have been consolidated and combined with new analysis of survey data from cohorts 5- 6. Due to available data it is not possible to address questions b and e.
6. How successful are RO students who attend a RIU?	Graduation and degree classification data for cohorts 1-2 are analysed and compared to rates for all students in RO universities during the same academic year (obtained from the Higher Education Information Database for Institutions). <i>Chapter 6.</i>

Table 1.1 Key questions and summary of data analysis

1.4 Overview of evaluation methods

Numerical data were obtained from a variety of sources. The RO central team provided details of each RO participant, based on their own in-house surveys and records, and where possible, with linked data to UCAS applications and HEAT university enrolments. This was done by matching the RO identification numbers and names of the participants. Socio-economic background characteristics, academic attainment and higher education progressions were compiled for all students for whom such information were available. Details of those who were known to have dropped out of RO were also provided. From this, a database of all RO individuals was created. In some cases, there was ambiguity concerning those participants who seemingly either repeated their year in the RO programme, were missing from the UCAS records, or presumably deferred their applications or enrolments to a degree programme. These were analysed on a case-by-case basis and suitable assumptions or exclusions from the subsequent analysis made. A final compiled database consisting of the most accurate and complete records of all participants was created and submitted to the RO team.

Background characteristics were easily categorised and summarised, once drop-outs were identified. UCAS application data was matched to the HEAT university enrolments, and numbers of applications, offers, replies and decisions catalogued. Where necessary, assumptions have been made for those individuals who are absent from the UCAS records, but nonetheless appear as enrolled students on degree programmes. Calculations were also made to track those who appear to have dropped out of university, applied in later years, or took deferred entry. A complete record tracking all those who were recruited to the RO program was therefore created, and used to describe the numbers and proportions detailed in this report. Degree classifications for the RO partner institutions were compared to those who graduated and completed RO.

Statistical modelling was carried out within the RO student dataset and used to estimate factors that influence the probability of various application and enrolment outcomes. Details of these methods are described in chapter 3.

Analysis of qualitative survey data was carried out using the coded response files provided by the RO central team. These were either tallied in the given form, or assigned suitable scoring in order to give an indication of overall responses and their variability.

1.5 Structure of report

Chapter 2 summarises the characteristics of those enrolled on the RO programme and addresses the question of how successfully the programme's recruitment aims are met. The applications and enrolments to higher education for RO cohorts is assessed in chapter 3, followed by a detailed analysis of the adjusted university entry requirements that the RO programme facilitates in chapter 4. In chapter 5, the perceptions of RO participants towards the programme are analysed and discussed. Chapter 6 details the degree classifications of students from cohorts 1 and 2, who have graduated from an RO university. Graduate rates and degree classifications are compared to results for the total population of students at these universities. Conclusions and recommendations are presented in chapter 7.

2. Recruitment to the Realising Opportunities programme

This chapter considers whether RO has, from cohorts 1-6, ‘targeted the most able, least likely’ students.

2.1 Eligibility for the RO programme

RO intends to recruit the ‘most able, least likely’ students. The ‘most able’ students are defined as those who have achieved, as a minimum, eight A* to C GCSE grades, including in English Language and Mathematics. Of these, at least five subjects are to be graded at A* to B. The ‘least likely’ are defined as students from widening participation and/or socio-economically disadvantaged backgrounds. While criteria to identify the ‘least likely’ students have evolved with the development of the programme, the central principle of assisting young people from traditionally under-represented groups to gain access to research-intensive universities has continued. As can be seen in Appendix A, applicants to RO need to demonstrate that they meet a minimum number of the criteria pertaining to widening participation and/or socio-economic disadvantage.

A further eligibility stipulation concerns the school or college attended. Applicants to RO must be enrolled at a school or college which participates in the programme. Since cohort 3, schools and colleges have been deemed eligible on the basis of meeting at least two of the four following criteria:

- the school is performing below the national average for the proportion of students achieving five A*-C grades at GCSE (including English and Mathematics), or
- the school/college is performing below the national average at Key Stage 5, or
- school has a higher than national average proportion of students eligible for free school meals (FSM), or
- the school has more than sixty per cent of students from the first 13,000 super output areas within the Index of Multiple Deprivation (IMD)

2.2 Cohort characteristics

Table 2.1, overleaf, presents the key characteristics of all students successfully enrolled on the RO programme over the first six cohorts.

Data was available for cohorts three to six detailing which students were recruited but did not actually start on the RO programme. At least one student is known to be such a case in cohort two, but the total for cohort one is completely unknown.

It is necessary to define at this stage what it is to be a ‘completer’ or indeed a ‘drop out’ of RO in this study. There is currently no source of verified EPQ results for students taking RO, therefore all students are assumed to have completed RO unless specifically identified by the RO central team as having failed to enrol or dropped out. The true drop-out rate is likely to be higher than presented here, due to students not completing or not achieving a grade C in the EPQ. .

	C1		C2		C3		C4		C5		C6	
	<i>n</i>	%										
Recruited	306	-	354	-	537	-	488	-	810	-	814	-
Did not start	--	-	1	-	41	-	28	-	51	-	31	-
Started RO	306	-	353	-	496	-	460	-	759	-	783	-
Repeat enrollers from previous year	0	0.0	9	2.5	6	1.2	1	0.2	17	2.2	12	1.5
Dropped-out completely	135	44.1	88	24.9	92	18.5	63	13.7	101	13.3	84	10.7
Completed RO	171	55.9	265	75.1	404	81.5	397	86.3	658	86.7	699	89.3
Male	103	33.7	127	36.0	175	35.3	142	30.9	261	34.4	285	36.4
Female	203	66.3	226	64.0	321	64.7	318	69.1	498	65.6	498	63.6
White	145	47.4	189	53.5	253	51.0	259	56.3	437	57.6	456	58.2
Black	22	7.2	26	7.4	29	5.8	48	10.4	59	7.8	85	10.9
Asian	107	35.0	93	26.3	172	34.7	124	27.0	209	27.5	173	22.1
Chinese	1	0.3	2	0.6	13	2.6	2	0.4	0	0.0	0	0.0
Mixed	10	3.3	11	3.1	18	3.6	14	3.0	27	3.6	30	3.8
Other ethnic background	5	1.6	6	1.7	7	1.4	9	2.0	15	2.0	15	1.9
Not known	16	5.2	26	7.4	3	0.6	4	0.9	10	1.3	23	2.9
Refused	0	0.0	0	0.0	1	0.2	0	0.0	2	0.3	1	0.1
Disability or special needs	11	3.6	11	3.1	12	2.4	16	3.5	41	5.4	65	8.3
In care or have been in care	4	1.3	12	3.4	7	1.4	9	2.0	20	2.6	23	2.9

Table 2.1 Characteristics of cohorts 1-6 (*continued overleaf*)

Notes: % refers to percentage of those starting RO within each cohort. The number of those who were recruited to but did not start RO is unknown for cohort 1 and 2 (at least one individual is known to have failed to start in cohort 2).

	C1		C2		C3		C4		C5		C6	
	<i>n</i>	<i>%</i>										
Receipt of Free School Meals	61	19.9	70	19.8	129	26.0	107	23.3	192	25.3	253	32.3
One or both parents HE	43	14.1	47	13.3	27	5.4	11	2.4	51	6.7	58	7.4
Neither parents HE	252	82.4	280	79.3	469	94.6	449	97.6	708	93.3	725	92.6
<i>Unknown</i>	11	3.6	26	7.4	0	0.0	0	0.0	0	0.0	0	0.0
NS-SEC 1	17	5.6	16	4.5	24	4.8	21	4.6	42	5.5	0	0.0
NS-SEC 2	54	17.6	55	15.6	56	11.3	55	12.0	145	19.1	58	7.4
NS-SEC 3	30	9.8	35	9.9	51	10.3	58	12.6	120	15.8	89	11.4
NS-SEC 4	36	11.8	23	6.5	47	9.5	33	7.2	30	4.0	66	8.4
NS-SEC 5	6	2.0	10	2.8	29	5.8	13	2.8	37	4.9	34	4.3
NS-SEC 6	59	19.3	78	22.1	100	20.2	95	20.7	113	14.9	216	27.6
NS-SEC 7	23	7.5	20	5.7	29	5.8	37	8.0	74	9.7	104	13.3
NS-SEC 8	0	0.0	0	0.0	0	0.0	0	0.0	46	6.1	48	6.1
<i>Unknown</i>	81	26.5	116	32.9	160	32.3	148	32.2	152	20.0	161	20.6
POLAR quintile 1	112	36.6	121	34.3	155	31.3	169	36.7	267	35.2	267	34.1
POLAR quintile 2	80	26.1	97	27.5	233	47.0	198	43.0	239	31.5	260	33.2
POLAR quintile 3	46	15.0	53	15.0	70	14.1	58	12.6	155	20.4	143	18.3
POLAR quintile 4	28	9.2	31	8.8	16	3.2	23	5.0	55	7.2	68	8.7
POLAR quintile 5	21	6.9	22	6.2	11	2.2	11	2.4	31	4.1	41	5.2
<i>Unknown</i>	19	6.2	29	8.2	11	2.2	1	0.2	12	1.6	4	0.5

Table 2.1 Characteristics of cohorts 1-6 Notes: For cohorts 1-4, the POLAR2 classification was applied; for cohorts 5-6, the POLAR3 classification was applied. NS-SEC is calculated on the basis of the occupation of the parent or guardian who is the main earner in the household.

It is clear from table 2.1 that recruitment on to the RO programme has expanded over time. With the exception of a slight dip in cohort 4, the rising number of recruits is steady and impressive. To some extent, this growth will reflect the development of the RO partnership, from twelve to fifteen universities, but it nonetheless suggests that student demand for RO is healthy, and that the programme has been able to increase successive cohorts in a sustainable manner.

A further positive observation is that the proportion of enrolled students prematurely leaving the RO programme decreases between cohorts 1-6, while the proportion of students completing it has increased. It should be noted that the completion rates reported for cohorts 1 and 2 appear higher than is likely the case, since the numbers of recruited students who did not start the programme are unknown. However, beginning with cohort 3, the first year for which the number of dropouts is accurately known, we see that 18.5% of enrolled students leave the programme early, and 81.5% complete it. By cohort 6, the drop-out rate is 10.7%, and the completion rate has risen to 89.3%. Further remarks on the characteristics of those who leave the RO programme prior to completion are offered in section 2.3, below.

Around two-thirds of RO enrolled recruits are female, which is a constant trend across cohorts 1-6. The majority ethnic group is White; and this increases, from around half of all those enrolled in cohort 1, to just under two-thirds of those enrolled in cohort 6. The second largest ethnic category, Asian, is seen to decrease across the cohorts; constituting one-third of enrollers in cohort 1, to just over one-fifth of cohort 6. Around one-tenth of enrollers are Black, and this remains fairly constant over the six cohorts. However, when national data are taken into account, the ethnic composition of successive RO cohorts appears to be less of a source for concern; recent analysis presented by UCAS confirmed that Black and Asian students remain over-represented on RO, when compared to the national population (Curnock Cook 2015). A detailed breakdown of each cohort by ethnicity can be found in Appendix B.

The proportion of RO enrollers reporting a disability notably increases in cohorts 5 and 6 (5.4% and 8.3%, respectively). The proportion of care-leavers enrolling on the programme can also be seen to increase, from 1.3% in cohort 1, to 2.9% in cohort 6. The number of care leavers participating in RO constitutes approximately 6.0% of all looked after children who progress to UK HE (DfE 2013)⁶; indicating that the programme is performing impressively in this regard. The proportion of those enrolled eligible for Free School Meals rises, constituting one-fifth of cohort 1, and one-third of cohort 6. Nationally, just over ten per cent of those eligible for FSM aged 15 go on to enter HE; suggesting further success for the programme in the steady recruitment of this group (BIS 2015: 4).

The proportion of those enrolled with neither parent having attended higher education varies slightly across the six cohorts, reflecting a change in eligibility criteria from cohort 3 onwards (see Appendix A). For cohorts 3-6, this does not fall below 90 per cent, meaning that the proportion of RO recruits with a family history of HE remains fairly low. Certainly with regard to these particular socio-economic measures, it can be inferred that RO has recruited a more disadvantaged group of students over time. This success is all the more noteworthy since widening participation to many Russell Group institutions has stalled in recent years (*Times Higher Education* 2016).

Recruitment trends for NS-SEC and POLAR are presented in charts 2.1 and 2.2, overleaf. The data provided for NS-SEC 8 and 'unknown', have been combined for the purposes of chart 2.1, since it

⁶ See Table F.2 in the document 'National tables: SFR36/2013' <https://www.gov.uk/government/statistics/children-looked-after-in-england-including-adoption>

is plausible to infer that they indicate the same status of ‘never worked or long-term unemployed’. RO recruits provided this information directly; a non-response to a question seeking parental occupation may well indicate no occupation. This inference is further supported by the observation that the proportion of recruits in either the NS-SEC 8 or ‘unknown’ category remains fairly constant over time (see table 2.1). If this assumption is correct, it is significant; approximately one-third of all RO enrollers originate from a household where the main earner is not in employment. Proportions of RO enrollers who originated from householders where the main earner is employed in a semi-routine or routine job, typically associated with lower earnings, have increased, particularly in the more recent cohorts. In contrast, the proportion of recruits originating from households where the main earner is engaged in managerial or professional work has reduced. This again suggests that RO has succeeded in targeting more disadvantaged recruits over successive cohorts.

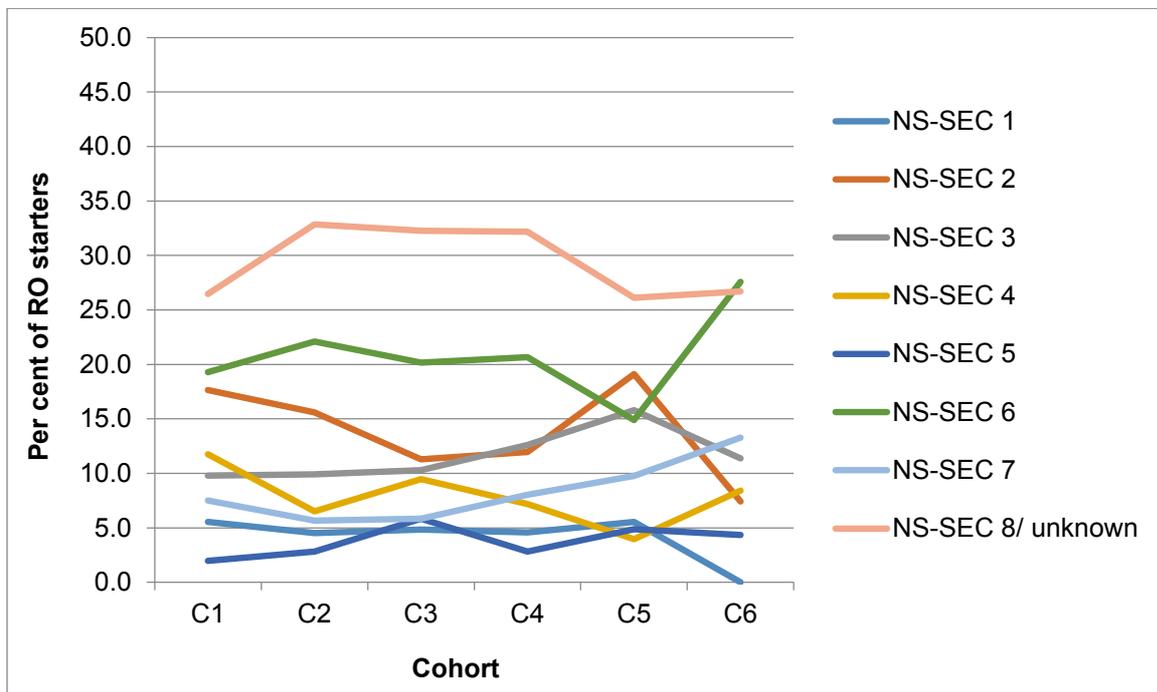


Chart 2.1 NS-SEC characteristics of cohorts 1-6

Chart 2.2 presents a similar story regarding POLAR, with most of those enrolled originating from local areas of relatively low mean participation in higher education. For cohorts 1-6 combined, just under seventy per cent of those enrolled originate from an area classified as either POLAR quintile 1 or 2. The picture generated complements recent analysis by UCAS for the partnership, which suggested that half of all RO recruits attend the very poorest schools in the UK (Curnock Cook 2015).

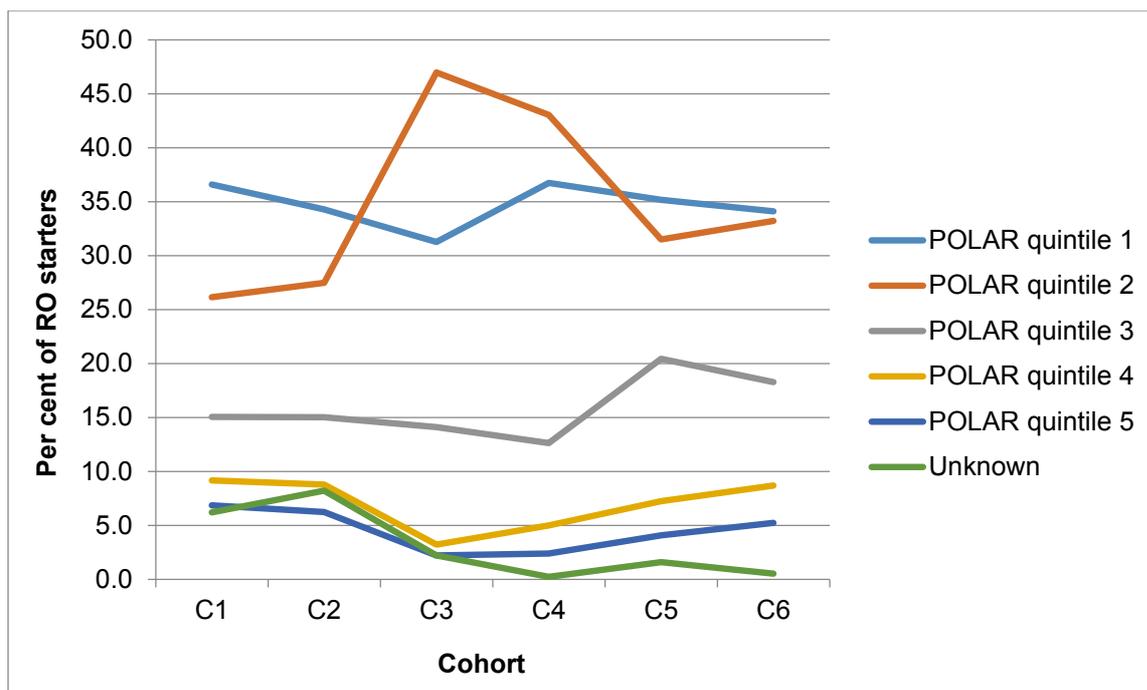


Chart 2.2 POLAR characteristics of cohorts 1-6

The characteristics of recruits to, and dropouts from, cohorts 1-6 are summarised in table 2.2, overleaf. Table 2.2 allows for a comparison between those enrolled on RO, and those who dropout from the programme. The purpose of this analysis is to identify any particular characteristics associated with the dropout group, thereby alerting the programme to any recruits who may be ‘at-risk’ from not completing. It can be observed that across cohorts 1-6, almost one fifth of enrolled recruits leave the programme. Compared to all programme starters, the dropout group is seen to include a higher proportion of White students, Males, and those from POLAR quintile 1 or NS-SEC 1. The dropout rate for white males is 21.4%, as opposed to 15.6% for those outside of this category. The dropout rate for working-class white males (NS-SEC 4-8), is 20.1% (16.3% for those outside of this category).

There are at least two contrasting possible explanations for these observations. It may be the case that these students become disengaged with the programme because they lose interest in the idea of applying to university (consider the recent policy interest in ‘white working class boys’ as the worst performing ethnic group in terms of entry to HE)⁷. Conversely, it may be countered that these students judge that there is little to be gained from completing the RO programme (consider the relatively higher proportion of dropouts from NS-SEC 1). It should further be noted, however, that in many aspects the dropout group do not differ markedly from the sample of total recruits. A good proportion of those eligible for FSM stay with the programme, as do care leavers.

⁷ See Johnson, J (2016) ‘Universities must reach out to the poorest in society – for everybody’s sake’ <http://www.theguardian.com/commentisfree/2016/feb/11/universities-action-reach-out-poorest-jo-johnson>

	C1-6 (starters)		C1-6 (dropouts)	
	<i>n</i>	%	<i>n</i>	%
Recruited	3309	-	-	-
Did not start	152	-	-	-
Started RO	3157	-	-	-
Repeat enrollers from prev. year	45	1.4	-	-
Dropped-out completely	563	17.8	563	-
Completed RO	2594	82.2	-	-
Male	1093	34.6	214	38.0
Female	2064	65.4	349	62.0
White	1739	55.1	377	67.0
Black	269	8.5	22	3.9
Asian	878	27.8	96	17.1
Chinese	18	0.6	4	0.7
Mixed	110	3.5	20	3.6
Other ethnic background	57	1.8	7	1.2
Not known	82	2.6	0	0.0
Refused	4	0.1	0	0.0
Disability or special needs	156	4.9	31	5.5
In care or have been in care	75	2.4	13	2.3
Receipt of Free School Meals	812	25.7	118	21.0
Receipt of Education Maintenance Allowance	1736	55.0	324	57.5
One or both parents HE	237	7.5	43	7.6
Neither parents HE	2883	91.3	493	87.6
Unknown	37	1.2	27	4.8
NS-SEC 1	120	3.8	30	5.3
NS-SEC 2	423	13.4	71	12.6
NS-SEC 3	383	12.1	81	14.4
NS-SEC 4	235	7.4	40	7.1
NS-SEC 5	129	4.1	21	3.7
NS-SEC 6	661	20.9	109	19.4
NS-SEC 7	287	9.1	46	8.2
NS-SEC 8	94	3.0	11	2.0
Unknown	818	25.9	152	27.0
POLAR quintile 1	1091	34.6	217	38.5
POLAR quintile 2	1107	35.1	177	31.4
POLAR quintile 3	525	16.6	76	13.5
POLAR quintile 4	221	7.0	29	5.2
POLAR quintile 5	137	4.3	16	2.8
Unknown	76	2.4	48	8.5

Table 2.2 Programme recruits and dropouts, cohorts 1-6 combined

Notes: Starters % refers to percentage of RO recruits over cohorts 1-6; dropout % refers to percentage of dropouts only.

3. Applications and enrolments to university

This chapter will address whether RO students are more likely to a) apply to and b) have as their final destination: - i) any university; ii) a research-intensive university; iii) an RO university – compared to national norms for FSM students.

Applications from RO students are summarised for cohorts 1-3, the only years for which data from the Universities and Colleges Admissions Service (UCAS) are available. Application data for these cohorts were verified by crosschecking UCAS data with information provided by the Higher Education Access Tracker service (HEAT). Enrolments (i.e. the ‘final destinations’ of RO students) are summarised for cohorts 1-4, using HEAT data. Application and enrolment data are presented for any UK university, research-intensive universities, and RO universities.

3.1 *Applications to university*

Table 3.1, overleaf, tentatively indicates success for the RO programme in terms of encouraging applications to university. The extent of success that can be claimed for the programme will depend upon the analysis of national data (see section 3.3, below, for a discussion of this planned work). The proportion of RO students that apply to any university is healthy – eight out of ten students in cohort 3. Seven out of ten students from cohort 3 applied to a research-intensive university, and a similar proportion applied to an RO university (67.1%). There are, however, some causes for concern. First, it can be observed that the proportion of RO students applying to: i) any university; ii) a research-intensive university; or iii) an RO university has declined over cohorts 1-3. Second, the proportion of RO students choosing to apply to their host RO university undergoes considerable decline over time; from approximately two-thirds of cohort 1, to fewer than half in cohort 3.

3.2 *Enrolments at university*

Table 3.2, summarises the university enrolments for students who complete the RO programme. As stated, these data are currently only available for cohorts 1-4. Some successes can be noted. Related to the expansion of the programme, the numbers progressing to higher education increase with each cohort. However, it can be observed that for all universities, research-intensive universities and RO universities, the proportions of RO students progressing decline across cohorts 1-3. The reasons why students do not progress are considered later in this chapter (section 3.5); it is important to bear in mind that these declining rates of progression may owe not just to academic factors, but to the personal and financial situations of students who are known to be increasingly disadvantaged in socio-economic terms. Nevertheless, it is striking to observe that only 1 in 4 these ‘most able’ students from cohort 4 enrol at a RIU. The numbers enrolling at partner universities are small and in decline. In contrast, the proportions enrolling at ‘other’ - so to say, non-research-intensive - HEIs has steadily increased over time, from 25.7% in cohort 1 to 39.8% of cohort 4. This outcome is not a stated aim of the RO programme. It is however important to recognise that this trend may owe not to KS4 attainment, but rather demonstrates the shifting preferences of RO students.

	C1		C2		C3	
	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>
Finished RO	171	-	265	-	404	-
With UCAS record (C1-3 only)	165	96.5	265	100.0	397	98.3
Applied to study First Degree (FD)	158	92.4	230	86.8	326	80.7
In UCAS but no First Degree application	7	4.1	35	13.2	71	17.6
Enrolled on a FD anyway	0	0.0	0	0.0	2	0.0
Enrolled on a non-FD	0	0.0	0	0.0	1	0.0
Failed to enrol in HE	7	4.1	35	0.0	68	0.0
No UCAS record	6	3.5	0	0.0	7	1.7
No UCAS record but studied First Degree	2	1.2	0	0.0	1	0.2
No UCAS record but went to RO	2	1.2	0	0.0	1	0.2
No UCAS record but went to host RO	1	0.6	0	0.0	1	0.2
No UCAS record but went to other RIU	0	0.0	0	0.0	0	0.0
No UCAS record but went to other HEI	0	0.0	0	0.0	0	0.0
No UCAS record and did not study First Degree	4	0.0	0	0.0	6	0.0
No UCAS, did non-First Degree HE	3	1.8	0	0.0	0	0.0
No UCAS record and no HE attended	1	0.6	0	0.0	6	1.5
Applied to university that year (all)	160	93.6	230	86.8	329	81.4
Applied to RO institutions	141	82.5	178	67.2	271	67.1
Applied to host RO institution	101	59.1	116	43.8	163	40.3
Applied to RIU (including RO)	145	84.4	195	73.6	284	70.3
Applied to RIU (excluding RO)	69	40.4	83	31.3	157	38.9
Applied to other HEI (non-RO, non-RIU)	126	73.7	197	74.3	258	63.9
Total who did not apply for First Degree that year	11	6.4	35	13.2	75	18.6
Enrolled on non-First Degree HE	3	1.8	0	0.0	1	0.2
No application/enrolment to HE that year	8	4.7	35	13.2	74	18.3
Did a First Degree on a later year	4	2.3	18	6.8	41	10.1
Did a non-First Degree on a later year	1	0.6	1	0.4	3	0.7
No record ever of HE	3	1.8	16	6.0	30	7.4

Table 3.1 University applications of those who complete the RO programme

Notes: % refers to percentage of those who completed RO

	C1		C2		C3		C4	
	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>
Finished RO	171	-	265	-	404	-	397	-
Progressed to university (First Degree)	119	69.6	168	63.4	262	64.9	258	65.0
Applied but failed to enrol for First Degree	41	24.0	62	23.4	67	16.6	-	-
Assumed gap year (deferred entry)	0	0.0	2	0.8	1	0.2	-	-
Did not undertake First Degree that year	52	30.4	97	36.6	142	35.1	139	35.0
Enrolled on non-First Degree HE	9	5.3	10	3.8	10	2.5	4	1.0
No enrolment to HE that year	43	25.1	87	32.8	132	32.7	135	34.0
Did a First Degree on a later year	16	9.4	44	16.6	73	18.1	0	0.0
Did a non-First Degree on a later year	1	0.6	1	0.4	3	0.7	0	0.0
No record ever of HE	26	15.2	42	15.8	56	13.9	135	34.0
Total who undertook First Degrees	119	69.6	168	63.4	262	64.9	258	65.0
3 year degrees	85	49.7	117	44.2	168	41.6	150	37.8
4 year degrees	22	12.9	42	15.8	70	17.3	89	22.4
>4yrs degrees	12	7.0	9	3.4	24	5.9	19	4.8
Progressed to university (all)	119	69.6	168	63.4	262	64.9	258	65.0
RO (all)	66	38.6	65	24.5	102	25.2	71	17.9
Host RO	40	23.4	40	15.1	53	13.1	39	9.8
RIU (including RO)	75	43.4	83	31.3	131	32.4	100	25.2
RIU (excluding RO)	9	5.3	18	6.8	29	7.2	29	7.3
Other HEI	44	25.7	85	32.1	131	32.4	158	39.8

Table 3.2 University enrolments of those who complete the RO programme

Notes: % refers to percentage of those who completed RO

Chart 3.1, overleaf, summarises the university applications and enrolments of those who complete the RO programme. Details of the applications, offers and enrolments of RO students from cohorts 1-3, to each partner university can be found in Appendix C. These are based upon data provided by UCAS/HEAT only.

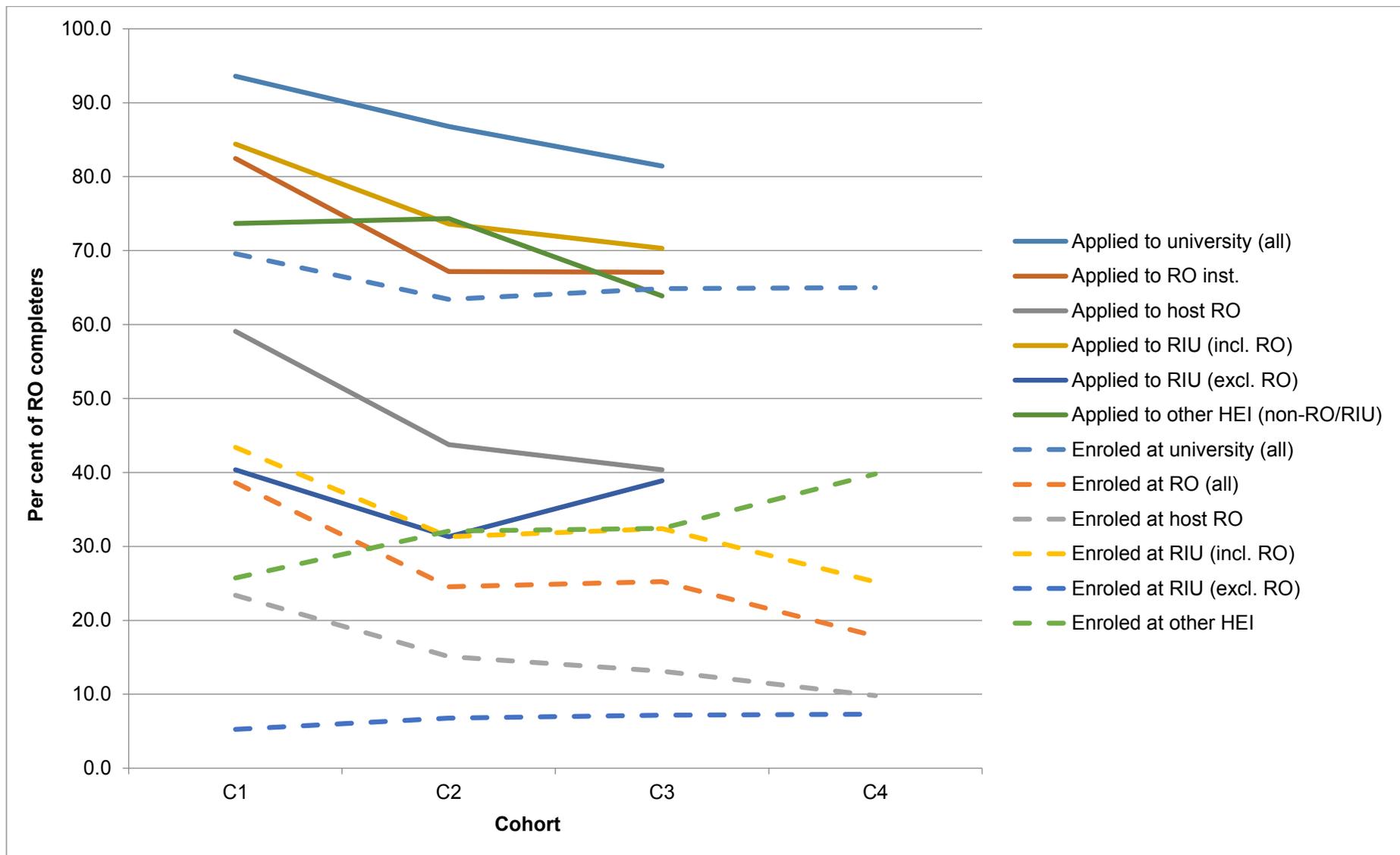


Chart 3.1 University applications and enrolments of those who complete the RO programme

3.3. Comparisons to national norms – application for NPD-HESA linked data extract

The latter part of this research question notes that the results for RO students will be compared to the national norms for FSM students. In order to actualise this, the research team have applied for an extract of linked data from the Department of Education (DfE), but this has not been received in time for inclusion in the final report. Although this approach was first outlined in the revised evaluation proposal last July, the delay in receiving these data primarily owes to the change of the evaluation team, from February 2016. The linked-data request opened by the former evaluation team was closed on the advice of the DfE, which clearly states that data cannot be passed from the applicant to others for analysis.

The evaluation team started work on a new request following a meeting with the senior project manager on February 26th. It should be noted that the content of this new request required significant revision from that drafted by the former evaluation team, which contained a number of problems and omissions, and had been prepared using a now obsolete application form. Following discussions with colleagues at the DfE it was, for example, decided that ethnicity be removed as a requested field, since sensitive personal data of this nature will likely not be approved; and that secondary school data for students enrolled at sixth form or further education colleges will not be requested, as seeking a further linked aspect (to Individual Learner Records) will prolong receipt of the dataset yet further. The application was re-drafted by mid-March, but there was some delay in submitting these documents since colleagues at the NPD were engaged with priority departmental work until mid-April, and did not respond to emails or data request applications in that time. The application was finally submitted on 19th April, following a telephone conversation with a colleague at the NPD, who kindly offered to prioritise the request. The evaluation team was notified that the application will require panel review and approval before the data can be released. Unfortunately this is still pending at the time of writing and the data has not been received in time for inclusion in this final report.

In the absence of the NPD HESA data extract, we have however made every effort to analyse the outcomes and backgrounds of the RO participants, including a multilevel logistical regression for the group of RO students only. Although this is not compared to any national norms, this is useful to identify variables *within* successive RO cohorts which are associated with applications to the various types of university and successful enrolments at these institutions.

3.4 Statistical analysis within the RO student dataset

In the absence of a full comparison with national data, an analysis of the factors affecting the applications and enrolments of the RO students themselves could be carried out. Multilevel modelling was employed to assess the strength of factors believed to influence the probability for RO students to reach the various aforementioned outcomes.

Multilevel modelling is an appropriate method for analysis over simple regression models, since the RO students are clearly nested within discrete groups (their schools), and thus are subject to clustering effects based on supposed properties of the school they attend. As an initial overview, a simple tabulation of the background characteristics of cohorts 1-3 was created, referenced to the applications and enrolments of varying university classifications. In table 3.2, NS-SEC and POLAR2 values for each student are presented for the following: whether they a) applied to and b) enrolled at: - any university; any 'other' university (i.e. neither RO/ RIU); a RIU; and, a RO university. Since

the total number of RO students within each category varies, the proportion of applications and enrolments has been shown.

	% of class with application					% of class with enrolment				
	<i>Any HEI</i>	<i>Other HEI</i>	<i>RIU/RO</i>	<i>RIU</i>	<i>RO</i>	<i>Any HEI</i>	<i>Other HEI</i>	<i>RIU/RO</i>	<i>RIU</i>	<i>RO</i>
NS-SEC										
NS-SEC 1	94.3	82.9	82.9	45.7	77.1	71.4	45.7	25.7	5.7	20.0
NS-SEC 2	80.6	62.1	72.6	39.5	67.7	58.1	24.2	33.9	5.6	28.2
NS-SEC 3	87.2	66.7	75.6	47.4	67.9	71.8	32.1	39.7	10.3	29.5
NS-SEC 4	84.8	69.6	74.7	29.1	72.2	69.6	36.7	32.9	6.3	26.6
NS-SEC 5	75.8	60.6	60.6	36.4	60.6	66.7	30.3	36.4	18.2	18.2
NS-SEC 6	90.5	70.0	80.0	38.4	75.3	71.1	27.4	43.7	7.9	35.8
NS-SEC 7	84.8	80.4	67.4	26.1	63.0	63.0	39.1	23.9	2.2	21.7
NS-SEC 8	84.3	69.8	72.2	34.1	69.4	60.8	31.4	29.4	4.7	24.7
POLAR2										
Quintile 1	86.8	69.6	72.9	37.4	69.2	65.6	30.8	34.8	7.7	27.1
Quintile 2	83.3	67.8	73.3	36.8	68.7	65.3	31.9	33.4	6.7	26.7
Quintile 3	84.8	68.8	72.8	36.8	70.4	61.6	32.0	29.6	7.2	22.4
Quintile 4	87.7	64.9	82.5	31.6	75.4	66.7	21.1	45.6	3.5	42.1
Quintile 5	92.7	82.9	82.9	39.0	78.0	80.5	43.9	36.6	4.9	31.7

Table 3.3 Applications, enrolments, and student background characteristics (cohorts 1-3)

Notes: observations for NS-SEC8 and unknown are merged since the data provided seems to describe these interchangeably throughout different cohorts. Percentages represent the proportion within each group applying to or enrolling at each type of university. These will not total one hundred since each individual can make multiple applications.

While not entirely linear, it can be broadly observed that on both measures – NS-SEC and POLAR2 – lower proportions of RO students from more disadvantaged backgrounds (i.e. NS-SEC 4-8; POLAR2 quintile 1-2) apply to and enrol at any university, regardless of the institutional grouping used. A similar tabulation was carried out in table 3.4, overleaf, for student characteristics, with gender, parental experience of higher education, FSM eligibility and broad categorisation of ethnicity chosen (white, Asian, all others).

	% of class with application					% of class with enrolment				
	Any HEI	Other HEI	RIU/RO	RIU	RO	Any HEI	Other HEI	RIU/RO	RIU	RO
Gender										
Male	87.0	62.5	77.3	41.9	73.6	64.6	28.2	36.5	7.2	29.2
Female	84.9	72.5	72.8	34.3	68.6	65.7	32.3	33.4	6.4	27.0
Parental HE										
Both/either	83.3	66.7	77.4	40.5	70.2	65.5	27.4	38.1	6.0	32.1
none	85.8	69.3	73.9	36.2	70.2	65.7	31.5	34.2	6.8	27.3
FSM										
Yes	86.0	68.8	72.0	36.8	68.0	66.0	28.5	37.5	7.3	30.3
No	86.1	68.5	74.2	38.1	70.6	66.8	31.3	35.4	6.9	28.5
Ethnicity										
White	86.0	68.8	72.0	36.8	68.0	66.0	28.5	37.5	7.3	30.3
Asian	85.4	70.8	74.7	33.1	71.1	64.9	35.7	29.2	4.5	24.7
Other	84.8	66.7	80.3	45.5	75.0	64.4	27.3	37.1	9.8	27.3

Table 3.4 Applications, enrolments, and student background characteristics (cohorts 1-3)

Notes: Percentages represent the proportion within each group applying to or enrolling at each type of university. These will not total one hundred since each individual can make multiple applications.

A number of interesting findings emerge in table 3.4. The proportion of females applying to and enrolling at any university is higher than that observed for males; but the proportion of females applying to RO universities is comparably lower. Note also that the gender difference in applications and enrolments reduces; which suggests that male applicants are more likely than their female counterparts to receive an offer. Parental experience of higher education appears to result in little difference in terms of applications and enrolments, but it should be restated that the number of RO students with parental experience of higher education is small. A slightly higher proportion of students with parental experience of higher experience apply to RIUs outside of the RO partnership, but the enrolment rate is lower. A similar observation is made with regard to FSM eligibility; a slightly higher proportion of students who are not eligible go on to apply to a RIU outside of RO, but a lower proportion of this group eventually enrol. The values pertaining to other universities are mixed, and the total application and enrolment rates differ little. Higher proportions of White students apply to and enrol at any university, but the differences between this ethnic group and the other groups reported here are small.

Subject choices for applications and enrolments were analysed and are presented in tables 3.5 and 3.6. These have been categorised using both JACS coding (table 3.5), and broad groupings of STEM, Social Sciences, Arts and Humanities, and Combined (table 3.6). Data were available for cohorts 1-3 only, and individual applications (normally five per student) were counted. For both applications and enrolments, STEM subjects constitute around half of the total distributions.

	UCAS Applications		Enrolments	
	<i>n</i>	%	<i>n</i>	%
STEM subjects	2003	55.6	306	55.7
A Medicine And Dentistry	324	9.0	31	5.6
B Subjects Allied To Medicine	580	16.1	73	13.3
C Biological Sciences	420	11.7	89	16.2
D Veterinary Sciences, Agriculture And Related Subjects	31	0.9	4	0.7
F Physical Sciences	242	6.7	38	6.9
G Mathematical Sciences	125	3.5	25	4.6
H Engineering	162	4.5	26	4.7
I Computer Sciences	57	1.6	9	1.6
J Technologies	12	0.3	2	0.4
K Architecture, Building And Planning	50	1.4	9	1.6
Social Science subjects	799	22.2	153	27.9
X Education	76	2.1	9	1.6
L Social Studies	219	6.1	51	9.3
M Law	303	8.4	46	8.4
N Business And Administrative Studies	174	4.8	36	6.6
P Mass Communication And Documentation	27	0.7	11	2.0
Arts and Humanities subjects	475	13.2	84	15.3
Q Linguistics, Classics And Related Subjects	169	4.7	40	7.3
R European Languages, Literature And Related Subjects	31	0.9	4	0.7
T Eastern, Asiatic, African, American And Australasian Languages, Literature And Related Subjects	22	0.6	5	0.9
V Historical And Philosophical Studies	149	4.1	20	3.6
W Creative Arts And Design	104	2.9	15	2.7
Combined subjects	325	9.0	6	1.1
Y Combined (undefined)	300	8.3	6	1.1
Z Combined (three subjects)	25	0.7	0	0.0
Total	3602		549	

Table 3.5 Applications and enrolments by subject type (cohorts 1-3)

Notes: Percentages represent the proportion of all applications or enrolments made. Applications based on complete UCAS data only.

	% applications				% enrolments			
	Other HEI	RIU/RO	RIU (ex. RO)	RO	Other HEI	RIU/RO	RIU (ex. RO)	RO
STEM	42.2	57.8	15.0	42.7	48.4	51.6	10.1	41.5
Social Sciences	56.8	43.2	11.3	31.9	51.0	49.0	7.2	41.8
Arts & Humanities	44.4	55.6	15.4	40.2	39.3	60.7	16.7	44.0
Combined	57.5	42.5	11.4	31.1	16.7	83.3	0.0	83.3

Table 3.6 Applications and enrolments to university type by subject area (cohorts 1-3)

Notes: Percentages represent the proportion of total applications or enrolments within subject area. The categories RIU/RO, RIU (ex. RO) and RO are not mutually exclusive. Applications based on completed UCAS data only.

Table 3.6 indicates how applicants and enrollers within each subject area are distributed. The distributions for STEM and Arts and Humanities applicants are notably similar; around sixty per cent are to research-intensive institutions (within and beyond the RO partnership), and around forty per cent of applications are to ‘other’, non-research intensive, universities. This distribution is mirrored for Social Science and Combined applications: around sixty per cent are to ‘other’ institutions, and the remaining forty per cent directed to research-intensive institutions. These differences recede when enrolments are considered. Approximately half of STEM and Social Science enrolments are at ‘other’ HEIs; the overall rise in enrolments at other HEIs cannot, therefore, be explained entirely with regard to subject choice. Higher proportions of Arts and Humanities and Combined students enrol at research-intensive universities.

Geography is likely to play some significant part in influencing the application and enrolment decisions of RO students. The home regions of RO students, and regions of all applied and enrolled universities, were available through UCAS and HESA data, and were analysed to examine distances involved. To achieve this, regions were tabulated into a matrix of all possible home region/institution region combinations, with a ‘range band’ score between one and five assigned to each unique pair of regions (see table 3.7). An application or enrolment in one’s home region was assigned a score of one, increasing incrementally with range from the home region considered, to the furthest region away. A number of assumptions were made to simplify the model, since the UCAS data only contains the region – not the name – of any non-RO institutions applied to. Therefore, in the case of the region label ‘Scotland’, for example, applications were assumed to be to the Central Belt region (e.g. Edinburgh and Glasgow), as opposed to the less-likely applied to University of The Highlands and Islands. Obviously there are significantly different geographic implications between such locations within Scotland, so such assumptions are necessary, if simplistic. Similar assumptions were made for applications to all other regions where the region in question is particularly large or elongated, such as the South West region. A full list of assumptions is included in the notes beneath table 3.7.

The scoring used in table 3.7 was then applied to the known individual applications for RO completers in cohorts 1-3, where UCAS data existed. In addition, the enrolment region range band was also calculated for those that ultimately enrolled on a degree programme for the year following their RO participation. Although known, cohort 4’s enrolled destinations were ignored for the statistical modelling, to only consider enrolments and applications for the years where both were known. For both applications and enrolments, there is a strong tendency to opt for institutions either in the home (range score of one) or neighbouring (score of two) region.

UK Regions	South West	Yorks & The Humber	West Midlands	Greater London	North East	North West	East Midlands	Eastern	Scotland	Northern Ireland	South East	Wales
South West	1	4	2	2	5	3	3	3	5	5	2	2
Yorks & The Humber	4	1	2	3	2	2	2	3	3	5	3	3
West Midlands	2	2	1	2	3	2	2	2	4	5	2	2
Greater London	2	3	2	1	4	3	2	2	5	5	2	3
North East	5	2	3	4	1	2	3	4	2	4	4	4
North West	3	2	2	3	2	1	2	3	3	4	3	2
East Midlands	3	2	2	2	3	2	1	2	4	5	2	3
Eastern	3	3	2	2	4	3	2	1	5	5	2	3
Scotland	5	3	4	5	2	3	4	5	1	3	5	5
Northern Ireland	5	5	5	5	4	4	5	5	3	1	5	4
South East	2	3	2	2	4	3	2	2	5	5	1	3
Wales	2	3	2	3	4	2	3	3	5	4	3	1

Table 3.7 Range bands between students' home and institution regions

Notes: The values shown above are intended to approximately reflect the geographic range between any pair of UK region considered, valued between 1-5. Range bands should be treated as approximate only, and a number of assumptions have been made for each combination estimated. In the case of elongated or larger geographic regions, centring has been applied, based on the concentration of the largest HEIs in that region. For Scotland, the focus is upon the Central Belt area (e.g. Edinburgh and Glasgow). For South West England, the focus is upon the Bristol/Exeter area. For Wales, the focus is on the Cardiff area. For the South East, the focus is on the Reading area. For the North West, the focus is on the Liverpool/Manchester area. Merseyside (a region specified in the UCAS data) has been merged into the North West region. Where appropriate, ranges to Northern Ireland have been given an extra weighting for increased distance due to the assumed increase in travel costs or time from the rest of the UK. This effect is higher in closer regions such as the North West, as opposed to the South East, where Northern Ireland is effectively 'as far' as Scotland, in overall geographic terms.

Region band	UCAS Applications		Enrolments	
	<i>n</i>	%	<i>n</i>	%
1	1750	48.6	359	65.4
2	1472	40.9	149	27.1
3	299	8.3	35	6.4
4	57	1.6	5	0.9
5	24	0.7	1	0.2

Table 3.8 Regional range bands for applications and enrolments (cohorts 1-3)

Notes: Refer to table 3.7 for coding of the range values. Data is based on cohorts 1-3, completers of RO, with known applications in UCAS. Percentages refer to the proportion of all UCAS applications, and known enrolments in the year following each cohort's A levels.

For the purposes of modelling, in order to obtain a measure of student tendency to apply to institutions further from their home region, an average application range band score was calculated for each student. In most cases, there were five applications in the UCAS data for each applicant to degree programmes. An average range band score was calculated for each student, based on the regions and number of applications each applicant made. For those who applied anywhere, the mean of these average application range bands was 1.650 regions away from their home region. For enrolments (for which there could only be one range band score associated with each student), the average for successful enrollers was 1.434. In general therefore, RO students appear to be slightly wider ranging geographically from their home regions for applications, than where they ultimately chose to enrol. This is reflected in the increased emphasis on home regions (region band 1) for enrolments.

School level characteristics were acquired from recent Ofsted reports, publicly available online. Each school's most recent Ofsted score, average A Level results, and KS5 added value (a measure of progress for ages 16-18) was recorded. The proportion of FSM eligibility was also noted but with many of the schools involved being sixth form colleges, these values were not always available.

A level (KS5) results for the RO students are currently not available, but in most cases the GCSE (KS4) points scores are. The significance of any given score is related to the contextual conditions occurring in each year, so the GCSE scores were subtracted from the national (capped) average for each year to give a new relative score. Average national GCSE scores were obtained from the Department of Education's online collection of assessment statistics. The appropriate years of KS4 examination were selected and used to compute each RO student's relative score.

Cohort	RO Average GCSE score	National average GCSE score	Mean GCSE score relative to national average
1	415.5	318.2 (2008-9)	+97.3
2	410.1	327.6 (2009-10)	+82.5
3	415.4	336.6 (2010-11)	+78.8

Table 3.9 KS4 attainments scores (cohorts 1-3) Note: only valid GCSE scores counted, all RO recruits.

3.5 Statistical modelling of application and enrolment outcomes

A database containing a record for each RO student was assembled, containing background characteristics obtained from the RO central team, together with numbers, destinations and subject type of all applications and enrolments. Each student with an application was given an average regional range band for their UCAS applications, a regional range band for their enrolled institution, and a GCSE score relative to the national average. Cohort was also recorded as way of being an indicator for any further contextual effects that differ from year to year.

Multilevel logistic modelling was carried out on all available data to estimate the predicted probability of numerous tested outcomes for applications and enrolments. These outcomes were applications and enrolments to any university, to non-RIUs, to RIUs (including RO universities), to RIUs (excluding RO universities), and to RO universities themselves.

Logical combinations of assumed predictors were tested for significance (i.e. where they were detected to within 95% certainty of having some effect on the outcomes considered). Where no significance was detected, the predictor considered was removed from the model. Since many of the variables for the RO students contained 'unknowns' (e.g. GCSE score, parental experience of HE), the final set of RO records used in the models was updated to include as many students as possible. In effect, only students with known values of all the characteristics found to be significant in any of the models were used throughout. This is therefore a total of 704 students used in these models, comprising cohorts 1-3, completers of RO, known/valid GCSE scores, and known Ofsted and Added Value scores for their schools (based on the detected significant variables found in tables 3.10 and 3.11).

Variables were assumed to have fixed effects on probability, with random 'level 2' variations for school groupings. Only the variable of 'Average application range band' was allowed to vary in its effect size as the significance of this value depends on where in the UK the school/individual actually is.

Tables 3.10 and 3.11 contain the summary results of the modelling, showing the average likelihood of the various outcomes occurring, which characteristics are significant indicators of influencing the outcome, and what effect changes to these variables have on the odds of the outcome being true. Where a multilevel (school) effect was detected, this has been noted, together with any particular characteristic of the school that was detected as being a predictor (if any).

The models have overall a high degree of variability, and can only be regarded as approximate tools for predicting outcomes for a student with given characteristics. The magnitudes of the effects are to be taken as approximate only, but confidence can be given that there is at least some detectable effect from the characteristics noted as being significant in predicting the outcomes. For a reliable model, there needs to be enough accuracy in the measured variables (predictors). As well as accurate variables, there needs to be enough of the sample population analysed with variable outcomes, to confidently make assumptions as to which characteristics have a causal effect on the results. Of the 704 students used throughout all the models, only 91 did not apply to university, meaning it is very difficult to reliably indicate the (presumably very numerous) reasons for not applying. Additionally, 472 of this model subset of RO students enrolled at any institution, and even fewer specifically to RIUs and non-RIUs.

Outcome	Average probability	Significant factors affecting likelihood	Estimated effect on odds
Application to any university	90%	Relative GCSE score ¹ Cohort Multilevel school effects	x 1.01 per point x 0.66 for each cohort (1-3) Particularly unpredictable outcome due to so few non-applicants
Application to Non-RIU university	79%	Relative GCSE score ¹ Gender is STEM applicant is Social sci. applicant is Arts/Hum. applicant Multilevel school effect	x 0.98 per point x 1.96 if female x 62.79 if with any STEM app x 58.52 if with any Social Sci. app x 37.75 if with any Arts/Hum. app No significant factors identified
Application to RIU (inc. RO)	87%	Relative GCSE score ¹ is STEM applicant Average application range band ² Multilevel school effect KS5 Added Value of school	x 1.02 per point x 2.69 if with any STEM app x 12.19 per range band increment x 0.87 for each 0.1 of score
Application to RIU (ex. RO)	32%	Relative GCSE score ¹ Average application range band Cohort No multilevel school effect	x 1.02 per point x 5.36 per range band increment x 1.37 for each cohort (1-3)
Application to RO university	78%	Relative GCSE score ¹ is STEM applicant Average application range band ² Multilevel school effect	x 1.02 per point x 1.89 if with any STEM app x 6.88 per range band increment No significant factors identified

Table 3.10 Factors affecting applications (cohorts 1-3)

Notes: The above refers to data comprising RO completers from Cohorts 1-3, with known GCSE scores and schools with known Ofsted and KS5 characteristics. ¹Points are measured relative to the national average for each student's cohort, a positive value being above the national average for the corresponding year of KS4 results. ²Where a multilevel school model was found to exist, the effect of 'Average application range band' was allowed to vary between schools.

Outcome	Average probability	Significant factors affecting likelihood	Estimated effect on odds
Enrolment to any university	69%	Relative GCSE score ¹	x 1.001 per point
		Multilevel school effect	Particularly unpredictable outcome due to so few non-enrollers with common characteristics
Enrolment to Non-RIU university	26%	Relative GCSE score ¹ is STEM applicant is Social sci. applicant is Arts/Hum. applicant	x 0.98 per point x 5.44 if with any STEM app x 4.17 if with any Social Sci. app x 4.34 if with any Arts/Hum. app
		Multilevel school effect	No significant factors identified
Enrolment to RIU (inc. RO)	31%	Relative GCSE score ¹ Average application range band ²	x 1.02 per point x 3.39 per range band increment
		Multilevel school effect School Ofsted rating	x 0.72 per score increment
Enrolment to RIU (ex. RO)	5%	Relative GCSE score ¹ is Arts/Hum. applicant Cohort	x 1.03 per point x 2.20 if with any Arts/Hum app x 1.58 for each cohort (1-3)
		No multilevel school effect	Particularly unpredictable outcome due to so few enrollers
Enrolment to RO university	24%	Relative GCSE score ¹ Average application range band ²	x 1.01 per point x 2.64 per range band increment
		Multilevel school effect	No significant factors identified

Table 3.11 Factors affecting applications (cohorts 1-3)

Notes: The above refers to data comprising RO completers from Cohorts 1-3, with known GCSE scores and schools with known Ofsted and KS5 characteristics. ¹Points are measured relative to the national average for each student's cohort, a positive value being above the national average for the corresponding year of KS4 results.

Outcome	Average RO student	Example most likely individuals	Example least likely individuals
Application to any university	Rel. GCSE score: +85.56 Belongs to 'Cohort 2.259' <i>Probability: 90%</i>	High rel. GCSE score: +130 Cohort 1 <i>Probability: 96%</i>	Low rel. GCSE score: +40 Cohort 3 <i>Probability: 77%</i>
Application to Non-RIU university	Rel. GCSE score: +85.56 Gender: 67.3% female 52.1% STEM / 27.4% Soc. Sci. / 15.8% Arts/Hum. applicant <i>Probability: 79%</i>	Low rel. GCSE score: +40 Gender: female STEM applicant <i>Probability: 94%</i>	High rel. GCSE score: +130 Gender: male Arts/Hum. applicant <i>Probability: 43%</i>
Application to RIU (inc. RO)	Rel. GCSE score: +85.56 52.1% STEM applicant Average application range band: 1.411 regions away KS5 Added Value of school: -0.068 <i>Probability: 87%</i>	High rel. GCSE score: +130 STEM applicant Average application range band: 2 regions away KS5 Added Value of school: 0.1 <i>Probability: 99%</i>	Low rel. GCSE score: +40 Not STEM applicant Average application range band: home region only KS5 Added Value of school: -0.3 <i>Probability: 26%</i>
Application to RIU (ex. RO)	Rel. GCSE score: +85.56 Average application range band: 1.411 regions away Belongs to 'Cohort 2.259' <i>Probability: 32%</i>	High rel. GCSE score: +130 Average application range band: 2 regions away Cohort 3 <i>Probability: 81%</i>	Low rel. GCSE score: +40 Average application range band: home region only Cohort 1 <i>Probability: 6%</i>
Application to RO university	Rel. GCSE score: +85.56 52.1% STEM applicant Average application range band: 1.411 regions away <i>Probability: 78%</i>	High rel. GCSE score: +130 STEM applicant Average application range band: 2 regions away <i>Probability: 96%</i>	Low rel. GCSE score: +40 Not STEM applicant Average application range band: home region only <i>Probability: 37%</i>

Table 3.12 Factors affecting applications and enrolments (cohorts 1-3)

Notes: The above refers to data comprising RO completers from Cohorts 1-3, with known GCSE scores and schools with known Ofsted and KS5 characteristics.

Outcome	Average RO student	Example most likely individuals	Example least likely individuals
Enrolment to any university	Rel. GCSE score: +85.56 <i>Probability: 69%</i>	High rel. GCSE score: +130 <i>Probability: 76%</i>	Low rel. GCSE score: +40 <i>Probability: 61%</i>
Enrolment to Non-RIU university	Rel. GCSE score: +85.56 52.1% STEM / 27.4% Soc. Sci. / 15.8% Arts/Hum. applicant <i>Probability: 26%</i>	Low rel. GCSE score: +40 STEM applicant <i>Probability: 48%</i>	High rel. GCSE score: +130 Social Science applicant <i>Probability: 13%</i>
Enrolment to RIU (inc. RO)	Rel. GCSE score: +85.56 Average application range band: 1.411 regions away School Ofsted rating 2.193 <i>Probability: 31%</i>	High rel. GCSE score: +130 Average application range band: 2 regions away School Ofsted rating 1 <i>Probability: 77%</i>	Low rel. GCSE score: +40 Average application range band: home region only School Ofsted rating 4 <i>Probability: 6%</i>
Enrolment to RIU (ex. RO)	Rel. GCSE score: +85.56 15.8% Arts/Hum. applicant Belongs to 'Cohort 2.259' <i>Probability: 5%</i>	High rel. GCSE score: +130 Is Arts/Hum. applicant Belongs to Cohort 3 <i>Probability: 37%</i>	Low rel. GCSE score: +40 Is not Arts/Hum. applicant Belongs to Cohort 1 <i>Probability: 1%</i>
Enrolment to RO university	Rel. GCSE score: +85.56 Average application range band: 1.411 regions away <i>Probability: 24%</i>	High rel. GCSE score: +130 Average application range band: 2 regions away <i>Probability: 49%</i>	Low rel. GCSE score: +40 Average application range band: home region <i>Probability: 11%</i>

Table 3.13 Factors affecting applications and enrolments (cohorts 1-3) Notes: The above refers to data comprising RO completers from Cohorts 1-3, with known GCSE scores and schools with known Ofsted and KS5 characteristics.

Tables 3.12 and 3.13 show the characteristics of those who are most likely and least likely to achieve the various outcomes tested in the models.

In all outcomes tested, **KS4 attainment** was seen as the common factor affecting each. The effect of attainment varies however in how influential it is upon predicting the various types of applications and enrolments. Considering the effect on the odds in table 3.10, there is a slight increase in tendency towards specifically RIU applications over any application as KS4 attainment increases (x1.02 compared to x1.01). There is also a decrease in likelihood in applying to a non-RIU with increased attainment (x0.98 per GCSE point above national average). A similar relationship exists for enrolment, but with a stronger distinction evident between non-RO RIUs, and RO universities. With higher attainment, there is an increased tendency to enrol to non-RO RIUs over RO universities (x1.03 compared to x1.01).

KS4 attainment is known to have been falling over time, as shown in table 3.9. This may in part therefore explain some of the reduction in RIU applications and enrolments. A far greater indicator would be the KS5 (A level) data.

Gender was only found to be significant in probabilities of applying to non-RIUs, with females being significantly more likely to apply to such institutions than males. In a larger dataset there is likely to be a reciprocal relationship (i.e. an increase in probability for males for applying to RIUs), but this was not detected in the model probably due to small sample sizes and high variation. There is no significant change in the gender balance between the cohorts however.

Subject choice showed varied statistical relationships. Having at least one STEM application increases the likelihood of applying to both RIU and non-RIU institutions alike. It should be noted that some 79% of RIU applicants in general *also* applied to at least one other non-RIU. For STEM applications, there is however particular significance in affecting chances of being associated with an RIU institution, compared to the other subject fields. Arts and Humanities subjects have a greater likelihood than Social Science subjects of being non-RIU applications, although they are fewer in number.

With regard to enrolments, the application subject choice factors can be interpreted as the average measure of success for the applications, where a noticeable shift was detected. Arts and Humanities applicants have a particular increase in overall probability of enrolling at a non-RO RIU. This was not detected at RO universities, implying a more uniform rate of success at these institutions. At non-RIUs, STEM subjects have the greatest success, whilst Social Science subjects have the least.

A STEM application over any other is more likely to result in an RIU application or enrolment. The decreasing proportion of RO completers with a STEM application - from 62% in cohort 1, 53% in cohort 2, to 48% in cohort 3 – may therefore in part explain the corresponding dip in RIU applications and enrolments.

Geographic range from home region also has a strong relationship to applications and enrolments. Generally, there is a higher association of RIUs with range of applications and enrolments. It must be stressed that by its very definition, the average application range is already intrinsically linked to the application outcomes. It is not, therefore, wholly a characteristic which can be regarded as a causal indicator for predicting applications or enrolments. The ‘enrolled institution range’ score was not used in the models, since it is too highly linked with the outcomes it is intended to predict. One could argue, however, that choosing to enrol further away is a better ultimate measure of a student’s readiness to live remotely from home, than by measuring the range of applications. However, it is statistically safer to only use the application ranges. The average application range

score could be regarded as an indicator for students that have a higher measure of ambition or confidence (by their decreased ties to their home region). This was found to be statistically associated with higher likelihood in applying and enrolling to RIUs.

Cohort (i.e. when a student participated in RO, and when potential applications or enrolments occur) was seen to have an effect on likelihood of some application and enrolment types. The meaning of one cohort value to another, where shown to be a significant factor, should be interpreted as effects specifically associated with that year. These effects could be to do with characteristics of the RO programme, characteristics of the RO students, or effects of contextual events entirely external to the programme. Characteristics of the RO students change each year, and although these models intend to detect their effects, this is not always possible. Statistical significance in the group students (as a whole) in a cohort is therefore likely to be at least partly due to some as-yet unmeasured significantly different personal characteristic or trait.

There is a decline in application to any HEI probability with later cohorts. At the same time, there is an increase in both application and enrolment to non-RO RIU probabilities.

With later cohorts, there is a decrease in likelihood for applying to non-RIUs, and an increase in likelihood in applying (and enrolling) to RIUs – excluding RO partner institutions. With only three cohorts considered, it is difficult to draw any firm conclusions. The influence of which cohort a student belongs to can be interpreted as a mixture of contextual effects from both within and outwith the RO programme.

School effects were detected in many of the outcomes, but more often than not were not attributable to any particular known variable. The KS5 ‘Value Added’ score for the schools was found to be significant in predicting applications to RIUs, whilst the Ofsted score was found to relate to RIU enrolment probability. In reality, a more comprehensive combined school variable probably exists (being an interaction of many different scores, geographic and contextual factors), but this is not detectable when there are so few RO students per school in the model subset data. It would be safer to interpret the results here as ‘general quality of performance’ of school as relating to RIU application and enrolment probabilities, as opposed to being precisely linked to KS5 Value Added and Ofsted scores. Examining the three cohorts tested, there is no significant change in school Ofsted or Value Added scores over time to help explain the observed reductions to RIU application and enrolment.

All other characteristics – such as ethnicity, NS-SEC or POLAR classification, parental experience of HE – were *not* detected as significant factors for any of the model outcomes tested. Some, such as belonging to NS-SEC 1-3, did have some indication of having a measurable effect towards RIU application and enrolment, but with no clear statistical strength in the dataset of this size.

Tables 3.12 and 3.13 highlight the individuals who are statistically most and least likely to apply or enrol at the various institution types. Looking specifically at RIUs, the likelihoods were seen to relate to student’s academic attainment, their propensity to apply/enrol further from their home region, the quality of their school, and in the case of applications only, whether they applied for STEM subject courses or not. The least likely RIU applicants are those with low KS4 attainment who apply only to universities within their home region - but one in four of these students nevertheless apply to a RIU. Their chances of enrolling however are much slimmer, but understandably this largely governed by attainment, and likely also to be especially related to their A levels.

The individual effects of varying the characteristics found to be significant for RIU applications and enrolment probability have been isolated and are presented in charts 3.2 to 3.8. These show the effect on the probability when all other variables found to be significant are kept at their average values for the model subset data. Each chart should be regarded therefore as the average effect that varying each characteristic has on an average RO student's probabilities for RIU applications and enrolments. There are of course a wide range of combinations of characteristics where a different curve is found if any one characteristic is varied, but this would detract from the overall useful conclusions and be outside the scope of the report.

With each chart, the mean value of the variable together with its standard deviation and maximum and minimum values have been shown, to indicate the overall significance that varying the chosen variable has. These values, as with the models, are again only based on the filtered subset of 704 students from cohorts 1-3, for whom a full set of valid variables were available.

Considering the range of expected probabilities against the range and distribution of the scores, and the uncertainties of the modelling, all the variables give similar effects on probability. There is however some variation to be discussed.

KS4 attainment does not hold as much power over predicting probabilities to apply to RIUs as first thought. The slope of the effect in Chart 3.2 is constant, and gives only a small boost (<10%) for every standard deviation from the mean. The school effect, modelled in chart 3.4 as the KS5 Value Added score, and the choice of applying for STEM subjects or not (chart 3.3), seems to have a slightly more powerful impact on the predicted probability, compared to the attainment scores.

In terms of enrolments, a much stronger relationship with attainment is observed (chart 3.6). It is noteworthy that the effect of attainment on enrolment to RIU probability changes less for the lower-most attainers, with middle-range attainers feeling the benefits to their chances of enrolments more. School effects in chart 3.7, detected in the model as the Ofsted score, shows a clear relationship (on average) between a school's overall rating and the probability of RIU enrolment. It is approximately as strong as the effect of KS4 attainment when considering the wide spread of Ofsted ratings at the RO partner schools.

Average range of applications, in chart 3.8, gives a strong indication of probability, in the sense that the further away from the home region a student applies, the probability of including an RIU/RO application increases. This observation must of course be treated as correlational, and not causal (so to say, distance in itself cannot account for likelihood of applying to an RIU/ RO). The effect of the range score is far more spread out and uniform for enrolments. Those with high geographic ranges in their applications tend to be very likely enrol at RIUs.

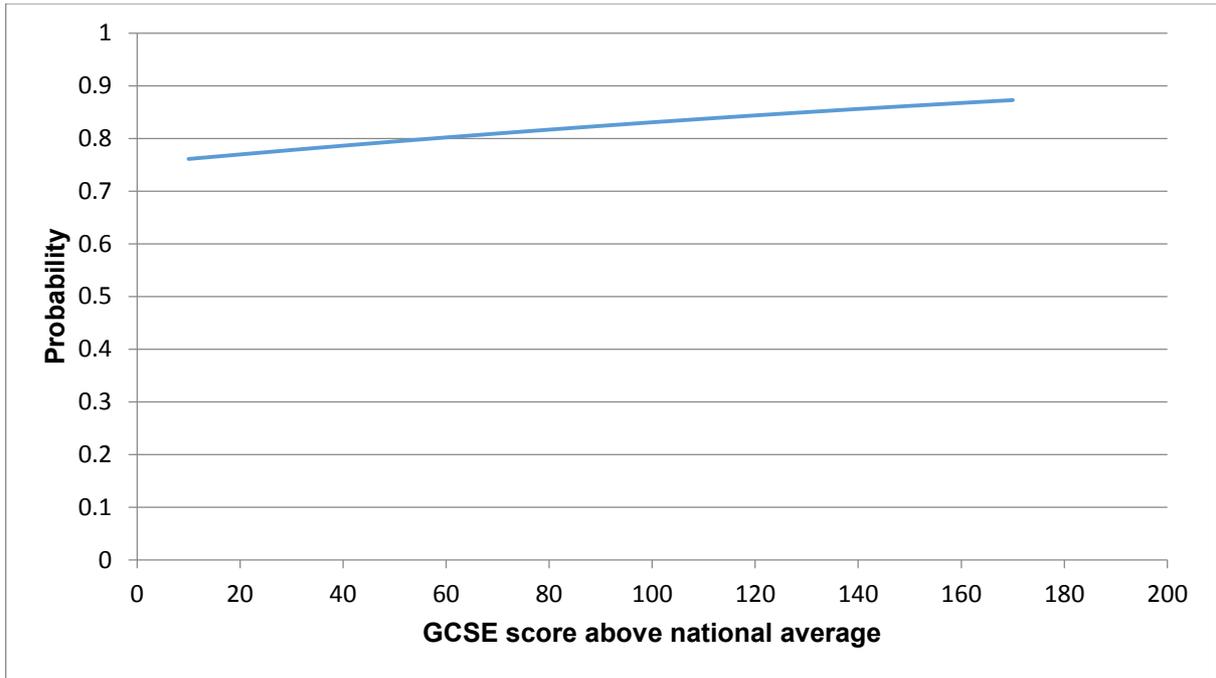


Chart 3.2 Average probability of applying to RIU with varied KS4 attainment (cohorts 1-3)

Notes: mean score = +85.560pts, standard deviation = 29.9pts, min. = +13.4pts, max. = +158.8pts

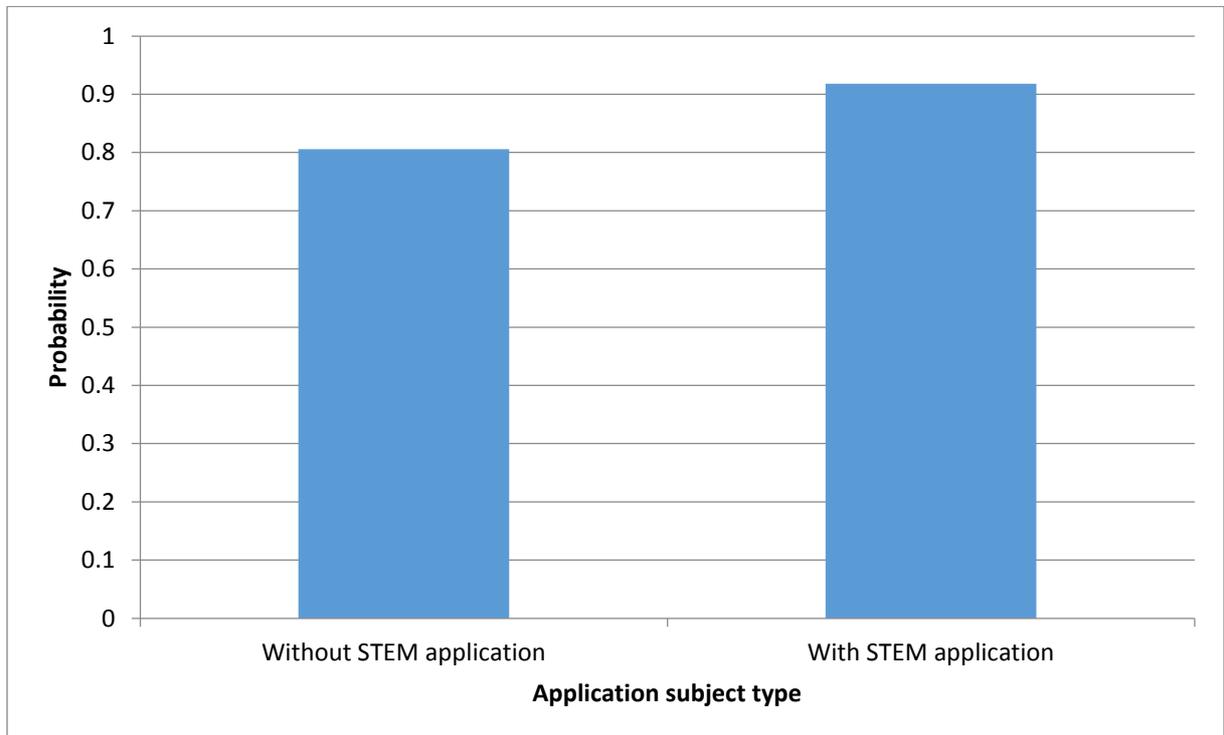


Chart 3.3 Average probability of applying to RIU with varied subject choice (cohorts 1-3)

Notes: 52% of students with STEM applications, 48% without.

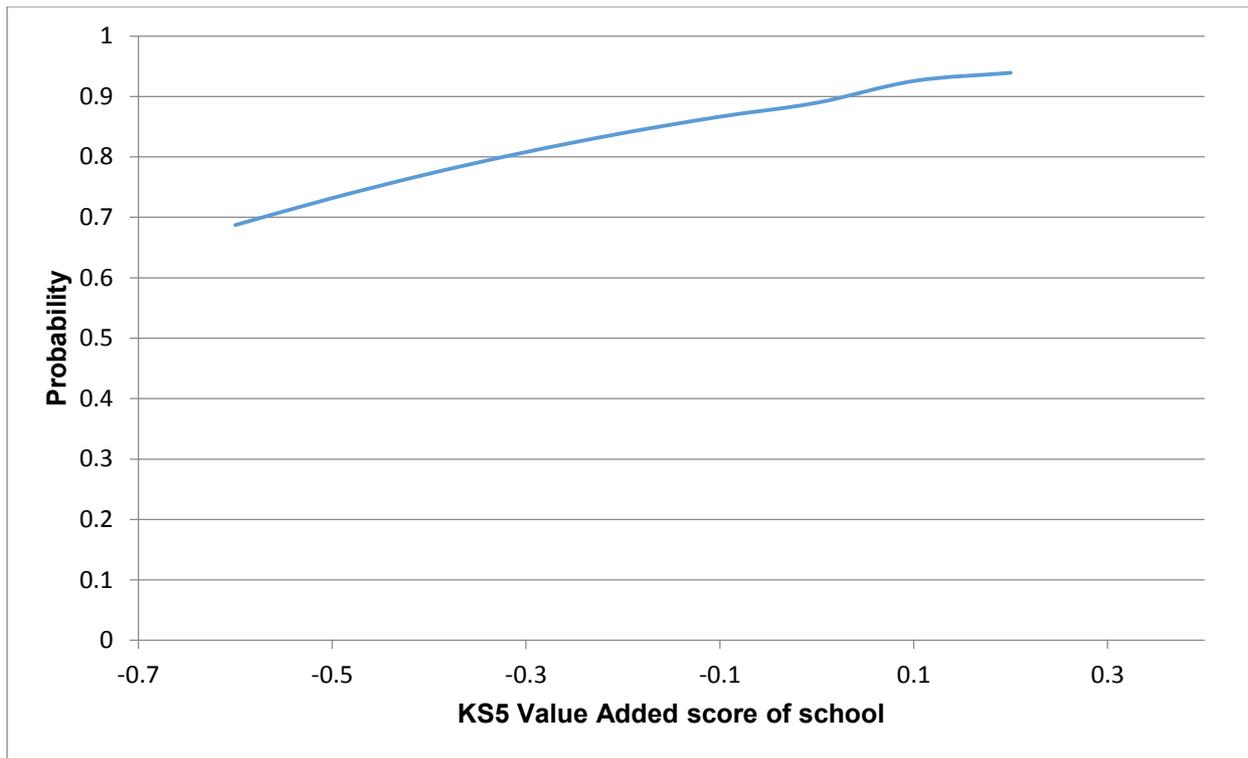


Chart 3.4 Average probability of applying to RIU with varied school KS5 Value Added score

Notes: mean score = -0.068, standard deviation = 0.17, min. = -0.54, max. = 0.28.

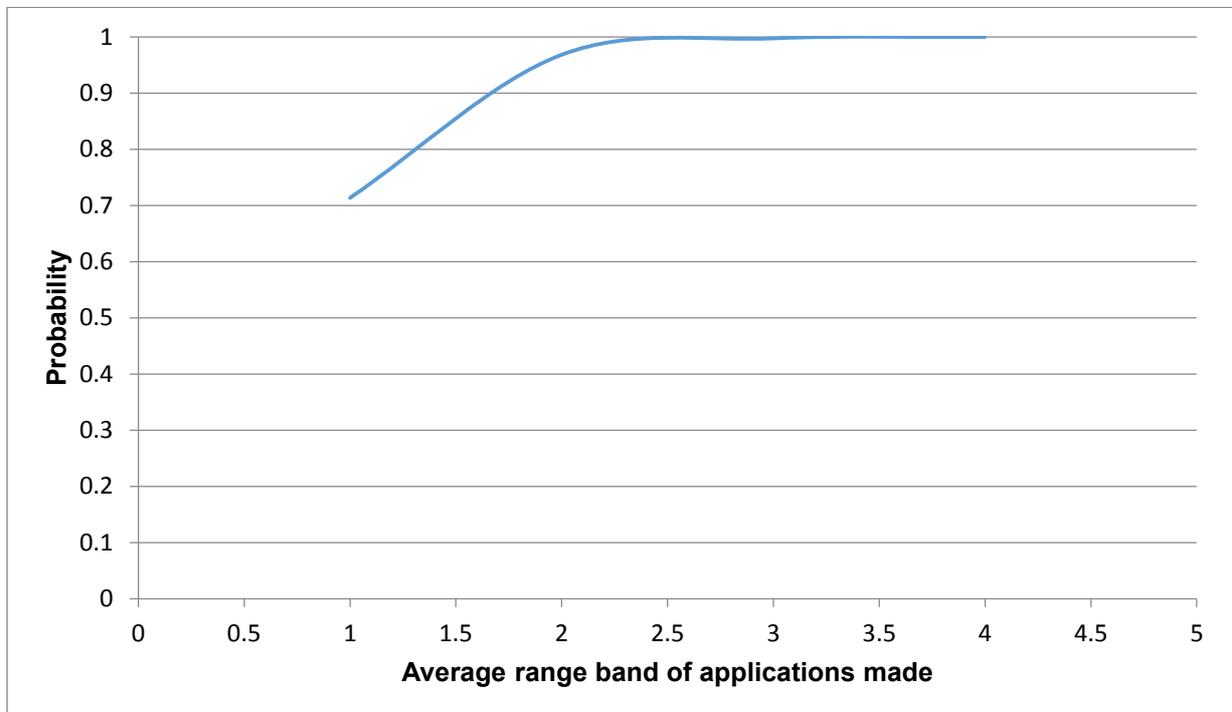


Chart 3.5 Average probability of applying to RIU with varied Average application range band

Notes: mean = 1.411 regions, standard deviation = 0.7 regions, min. = 1, max. = 3.4

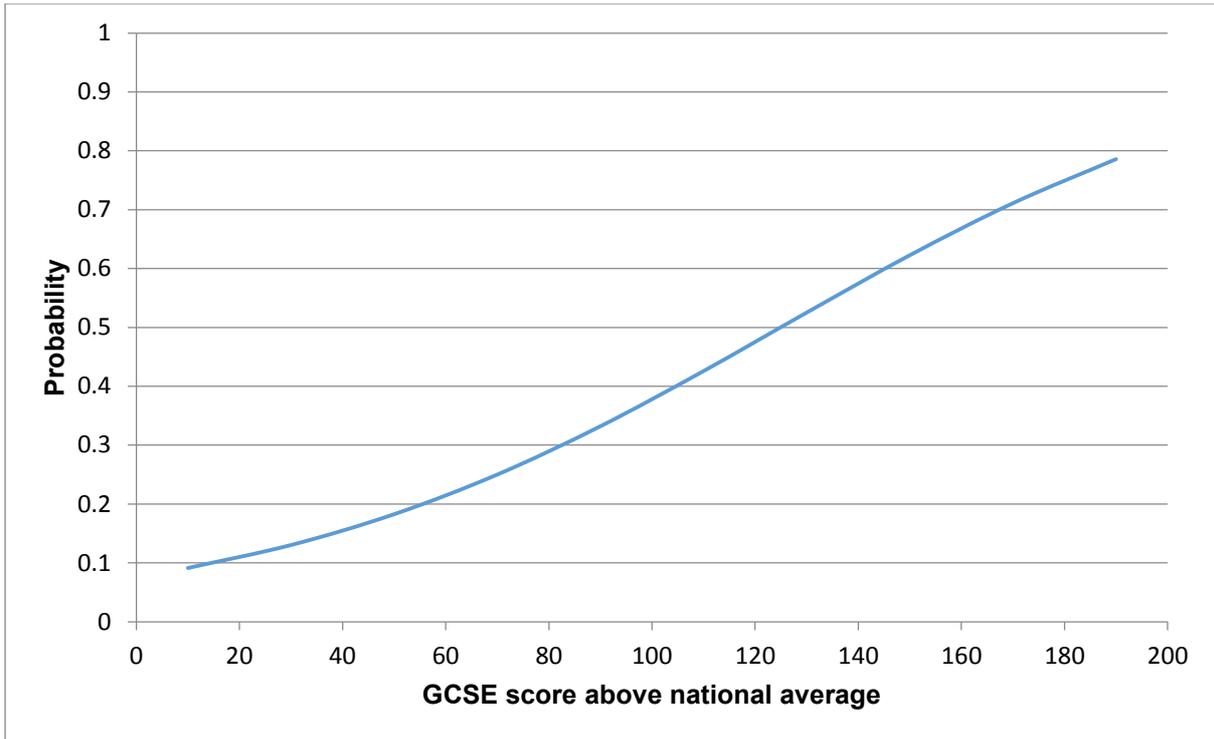


Chart 3.6 Average probability of enrolling to RIU with varied KS4 attainment (cohorts 1-3)

Notes: mean score = +85.560pts, standard deviation = 29.9pts, min. = +13.4pts, max. = +158.8pts

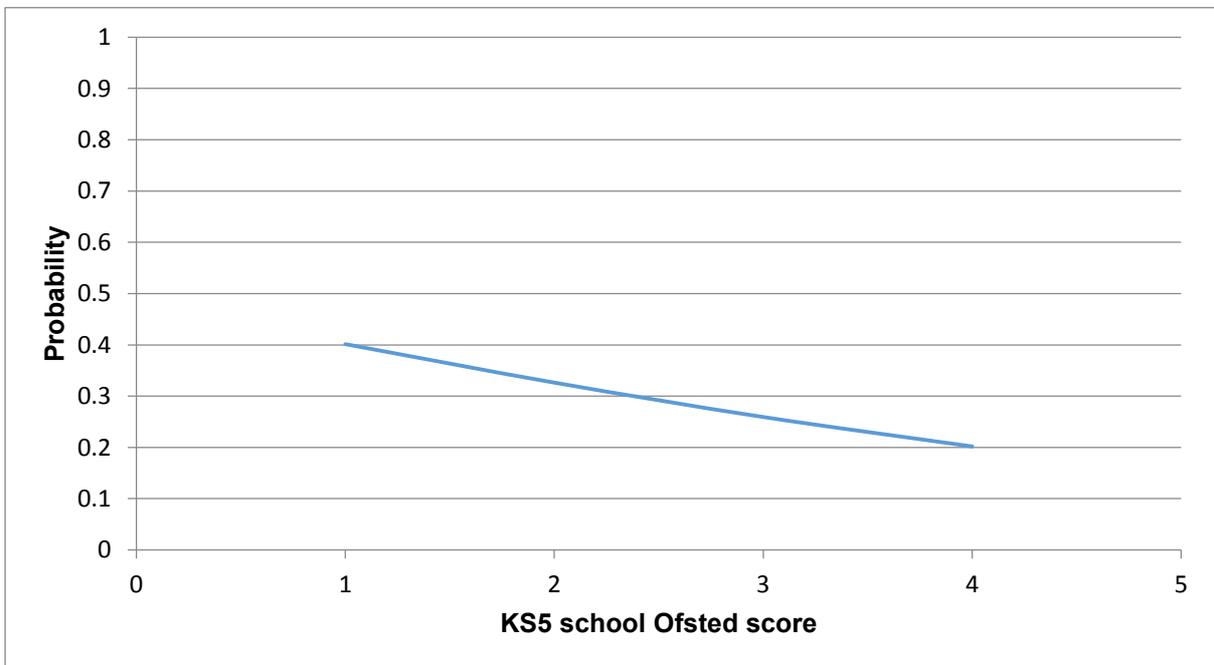


Chart 3.7 Average probability of enrolling to RIU with varied KS5 school Ofsted score

Notes: mean score = 2.193 pts, standard deviation = 1.0, min. = 1, max. = 4

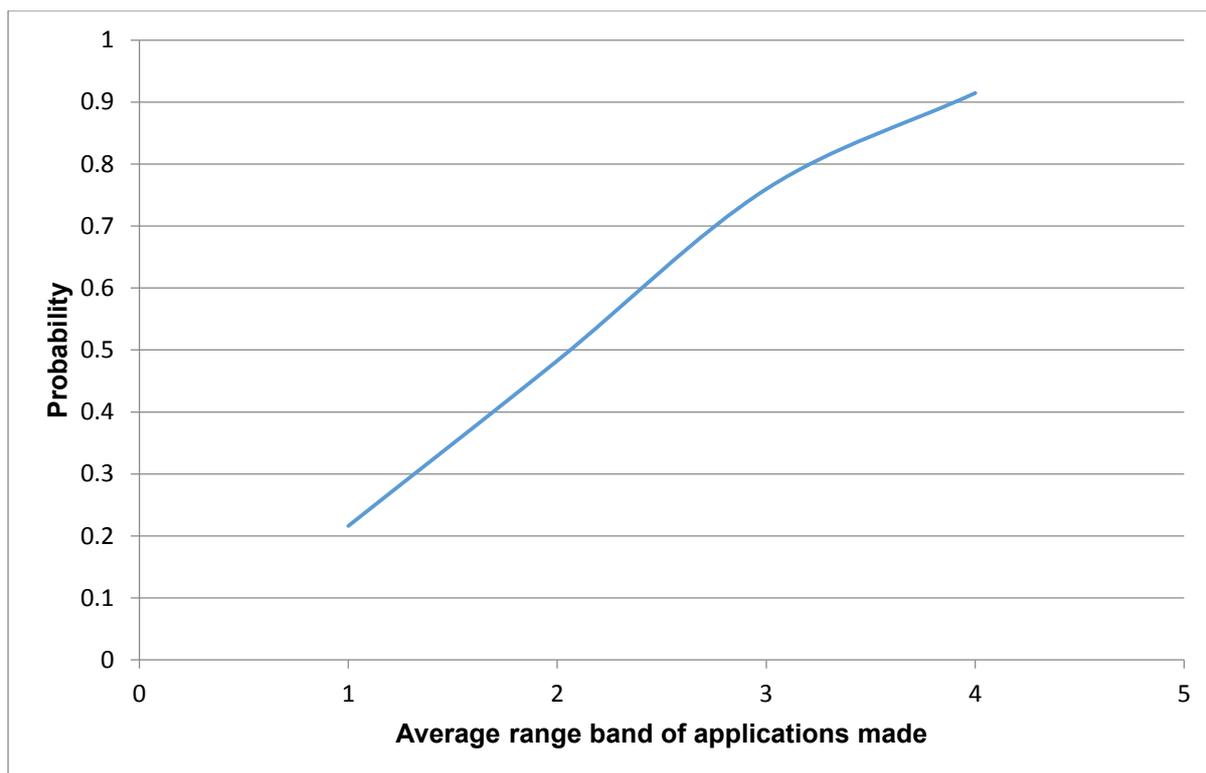


Chart 3.8 Average probability of enrolling to RIU with varied Average application range band

Notes: mean = 1.411 regions, standard deviation = 0.7 regions, min. = 1, max. = 3.4

3.6 Why do RO students choose not to apply to a research-intensive university?

The reasons for applying to a RIU are at this stage conjectured only from the statistical analysis, with the influence of gender and social status suspected of taking a significant role. The student feedback questionnaires issued by the RO team to date have only included a field on reasons why students would not apply to *any* university. These responses have nonetheless been analysed with an aim of highlighting any frequencies that may explain why individuals choose to not pursue the fundamental aim of the RO programme.

A total of 75 respondents from cohorts 1-5 gave a description for their reasons not to apply to university that year. In cohorts 1-3 (where UCAS records of applications are known), 121 students are believed to have not applied to university in the year of completing their RO programme. Out of the 75 respondents with the relevant questionnaire answer, 38 were from cohorts 1-3. This implies that the figures below represent approximately one third of all known individuals who do not apply to study a degree in the year typical of their cohort. In cohorts 1-3, only three individuals are known to have taken a gap year based on a deferred entry which was subsequently fulfilled. These individuals are not believed to be counted in the table 3.14, although also technically having taken a gap year. Student IDs in the coded feedback data were incomplete so no further characteristics of these individuals could be ascertained at this time.

Stated reasons for not applying	<i>n</i>	<i>%</i>
<i>Undertaking additional year of study at college or sixth form</i>	39	52.0
Repeating a year (unspecified)	16	21.3
No further information given	10	13.3
Re-sitting AS levels	6	8.0
Re-sitting A levels	3	4.0
Studying additional AS levels	2	2.7
Studying additional A levels	1	1.3
Studying other qualification	1	1.3
<i>Gap year</i>	16	21.3
No further information given	8	10.7
No stated reason, intend to re-apply next year	6	8.0
To improve work experience	1	1.3
To improve personal statement	1	1.3
<i>Unsure what to study</i>	10	13.3
<i>Don't want to study at university</i>	4	5.3
<i>Intending to study Foundation Degree</i>	2	2.7
<i>Haven't applied yet (but will)</i>	2	2.7
<i>Not sufficiently qualified</i>	2	2.7

Table 3.14 Reasons for not applying to university, from feedback questionnaires Notes: % refers to the number of respondents to this question.

The majority of reasons for not applying appear to be related to academic performance. Just as academic level is the strongest factor in likelihood of university application and enrolment, it is similarly the largest contributor for those who do not apply.

It is likely that many of those who specified 'gap year' are stating a desire to defer their application (as opposed to a definite planned enrolment), so these individuals are not entirely distinct from those who simply state they are 'unsure'. It would have been very informative if more details of planned gap year activities were extracted from the students, to count those who delay their applications for financial reasons. Clearly, finance has major implications on university enrolment, but it would be very interesting to see how many state this as an apparent and real obstacle to their HE progression at the time of their cohort's applications. Presumably, some of those taking a gap year are doing so for financial reasons, but how many is not clear. Only two individuals specifically stated that university was not their desired destination post-school; this finding can surely be regarded as a success for the RO program.

4. The role of the Alternative Offer

This chapter explores the role of the alternative offer (AO), by considering two sources of data. First, information provided by partner universities, detailing the percentage of AOs offered to RO students across cohorts 1-5, and whether these AOs led to enrolments, will be summarised. Second, RO students' perceptions of the AO will be considered, drawing on data from the annual feedback questionnaires.

4.1 Offers made to RO students from partner universities

Table 4.1, below, documents the offers made to RO students from partner universities, based on information from the institutions themselves. It should be noted that the quantity of responses from the partner institutions was limited, with several not supplying any figures. Additionally, the figures for Cohort 5 should be regarded as less reliable due to the timing of the survey and the possibility of late applications from RO students. It can be observed that the proportion of dual offers made by RO universities is fairly constant between cohorts 1-5, at around 90.0%. This is consistent with the aims of the RO programme. Around half of enrolling students do so on the basis of an AO. The proportion of RO students who fail to meet their offer is fairly constant (~15.0%), but there is no suggestion that it is increasing. This is interesting to note, given the earlier observation in chapter 3 that the proportion of RO students enrolling at either a RIU or RO university decreases over successive cohorts.

	C1		C2		C3		C4		C5	
	<i>n</i>	%								
Offers										
Standard	14	10.5	19	13.3	19	7.5	10	3.9	27	7.5
Dual (standard and alternative)	119	89.5	124	86.7	233	92.5	244	96.1	331	92.5
Enrolments										
Standard	22	46.8	18	42.9	46	56.8	14	34.1	9	45.0
Alternative	25	53.2	24	57.1	35	43.2	27	65.9	11	55.0
Offer not met	21	15.8	23	16.1	32	12.7	49	19.3	47	13.1

Table 4.1 Offers made to RO students from RO universities Notes: Values based on institutions where both the totals of standard and dual/alternative offers or enrolments were known (several institutions omitted due to incomplete data)

Table 4.2, below, displays the proportion of alternative enrolments to offers. With the exception of cohort 3, this value does not vary greatly over time. Around-two thirds of students who receive an AO enrol on this basis. The remaining third of recipients of an AO do not enrol on its basis, instead meeting the requirements of a standard offer. Details of the alternative offers made by each RO partner university, from cohorts 1-5, can be found in Appendix D.

	C1	C2	C3	C4	C5
	%	%	%	%	%
Alternative enrolments: alternative offers	59.5	65.9	46.7	68.6	59.5

Table 4.2 Alternative offer enrolments to RO universities by RO students

4.2 RO students' perceptions of the alternative offer

Students' perceptions of the AO were collected in the annual student feedback questionnaires issued by the RO team to each cohort in Year 13. Two questions specifically deal with the AO:

Did the possibility of receiving an alternative offer sway your decision about which universities to apply to?

Did you receive any alternative offers?

Responses to these questions are summarised in tables 4.3 and 4.4. Data are presented for cohorts 1 to 5 (the maximum number of questionnaires available at the time of writing).

"Did the possibility of receiving an alternative offer sway your decision about which universities to apply to?"	<i>n</i>	<i>% of main categories</i>	<i>% total respondents</i>
Yes	394	-	54.5
Received an alternative offer	327	83.0	45.2
Did not receive an alternative offer	46	11.7	6.4
Don't know/not applicable	13	3.3	1.8
Unknown (blank)	8	2.0	1.1
No	162	-	22.4
Received an alternative offer	73	45.1	10.1
Did not receive an alternative offer	68	42.0	9.4
Don't know/not applicable	16	9.9	2.2
Unknown (blank)	5	3.1	0.7
Don't know/Not applicable	74	-	10.2
Received an alternative offer	20	27.0	2.8
Did not receive an alternative offer	21	28.4	2.9
Don't know/not applicable	31	41.9	4.3
Unknown (blank)	2	2.7	0.3
Unknown (blank)	92	-	12.7
Received an alternative offer	4	4.3	0.6
Did not receive an alternative offer	8	8.7	1.1
Don't know/not applicable	0	0.0	0.0
Unknown (blank)	80	87.0	11.1
Total respondents	722	-	-

Table 4.3 Role of the alternative offer - complete student feedback questionnaire data

Overall totals of alternative offers from student feedback questionnaires	<i>n</i>	<i>% Total respondents</i>
Received an alternative offer	424	58.6
Did not receive an alternative offer	143	19.8
Don't know/not applicable	60	8.3
Unknown (blank)	95	1.1

Table 4.4 Role of the alternative offer - summary of student feedback questionnaire data

Some 723 questionnaires were submitted, representing 38.0% of all those who completed RO. It should be noted that there is likely to be some bias present in the survey sample. A bias analysis was attempted, but it was not possible to align survey respondents with key information such as completion/ dropout, applications and enrolments (since questionnaire data were not entirely linked to student IDs throughout and a one hundred per cent match across the sample is needed to conduct a bias analysis).

Tables 4.3 and 4.4 provide some insight into the effect of the alternative offer. The alternative offer has a clear influence over applications to university (see table 4.3). Over half of respondents (54.5%) confirmed this. Of those stating that the AO influenced their university application, the majority (83.0%), received an AO. The majority of students (58.6%) report that they received an alternative offer (see table 4.4); which corresponds to the information provided by the partner institutions (table 4.1). Table 4.5, below, shows the proportion of each of the five cohorts who stated that the AO influenced their applications, alongside the proportion of students who received such an offer.

Role of the alternative offer	C1		C2		C3		C4		C5	
	<i>n</i>	<i>%</i>								
Was influential in applications	65	51.6	51	52.6	98	51.0	104	58.1	76	59.4
Received an alternative offer	69	54.8	54	55.7	122	63.5	104	58.1	75	58.6
Total questionnaires	126		97		192		179		128	

Table 4.5 Influence of the alternative offer and totals of offers made over time - student feedback questionnaire data

Notes: % refers to total number of submitted questionnaires for each cohort

It is evident from table 4.5 that the proportion of students who state that the AO is influential in their application to university increases, albeit slightly, over successive cohorts. This observation is contrary to the overall reduction in applications and enrolments to RO partner institution, noted in chapter 3. Thus, while interest in the prospect of an AO is maintained across cohorts, its influence on the decisions that students eventually make with regard to higher education is less clear over time.

5. Student perceptions of the RO programme

5.1 Baseline and follow-up questionnaires

Each successive cohort of RO students is issued a baseline questionnaire upon starting the programme in Year 12. A follow-up questionnaire is issued in Year 13, to the students who by that time will have likely applied to university through UCAS, and potentially received offers decisions. The baseline questionnaire seeks to both characterise the students' backgrounds, as well as measure their level of knowledge and readiness for a potential life at university. The follow-up survey repeats many of the questions from the baseline survey, to gauge any changes to knowledge and readiness to university life that RO students may have experienced within the programme timeframe. Additionally, the follow-up surveys directly ask the participants about their opinions of the various aspects of the RO programme.

To date, cohorts 1-6 have been issued baseline surveys, with cohorts 1-5 also completing the follow-up surveys. Response rates (returned questionnaires) for each cohort are as follows:

Student questionnaires	C1		C2		C3		C4		C5		C1-5	
	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>								
Total number of RO starters	306	-	353	-	496	-	460	-	759	-	2374	-
Returned baseline surveys	194	63.4	260	73.7	468	94.4	450	97.8	657	86.6	2029	85.5
Returned follow-up surveys	126	41.2	97	27.5	194	39.1	179	38.9	128	16.8	724	30.5

Table 5.1 Response rates to student attitude baseline and follow-up questionnaires

Notes: % refer to the number of students starting the RO program each year. Cohorts 1 and 2 have over-estimated starting values since the total drop-out rate is not recorded.

Table 5.1 shows the baseline surveys have remained consistently high, though there is considerable variation across the cohorts for response rate for the follow-up surveys. Overall, around 86.0% and 31.0% of students starting the RO programme returned the baseline and follow-up questionnaires respectively.

5.2 Knowledge and readiness for university

The baseline and follow-up surveys posed questions to the RO students about both their level of knowledge of universities, and how prepared they feel to potentially attend one. Students' knowledge was measured in questions 13 (C1-3) and 14 (C4-5) in the baseline surveys, and questions 16 (C1-4) and 23 (C5) in the follow-up surveys. The summarised responses to these questions are shown in table 5.2. The average 'score' (mean, \bar{x}) was computed for each cohort's responses, as well as a measure of the variation of responses (standard deviation, SD). The mean +/- SD represents the bounds within which around two-thirds of the respondents' scores lie. Scoring is based on ordinal rankings of the student responses, detailed below.

	C1		C2		C3		C4		C5		C1-5	
Sources of knowledge about university	<i>Before</i>	<i>After</i>										
	\bar{x}	<i>SD</i>										
Your future career options	2.3	0.7	2.0	0.7	2.3	0.7	2.1	0.8	2.2	0.8	1.9	0.7
The differences between universities	2.5	0.8	2.1	0.7	2.6	0.9	2.1	0.7	2.6	0.8	2.0	0.8
The differences between courses	2.6	0.8	2.0	0.7	2.6	0.9	2.1	0.8	2.4	0.8	2.0	0.8
How to apply to university	2.5	0.8	1.3	0.5	2.6	0.8	1.3	0.5	2.6	0.9	1.4	0.5
What is a research intensive university	3.2	0.8	2.0	0.8	3.2	0.8	2.2	0.9	3.1	0.8	2.0	0.8
The costs and financial support available	2.6	0.8	1.8	0.7	2.8	0.8	1.9	0.7	2.6	0.8	1.8	0.7
How to find out about courses	1.9	0.8	1.5	0.6	2.1	0.8	1.5	0.6	2.1	0.8	1.5	0.6
How university study compares to school	2.2	0.8	1.7	0.7	2.4	0.9	1.9	0.8	2.4	0.8	1.8	0.7
What student life is like	2.4	0.7	2.0	0.7	2.5	0.8	1.9	0.7	2.4	0.8	1.9	0.6
What the subjects the interest you involve	2.1	0.8	1.5	0.6	2.3	0.9	1.5	0.6	2.2	0.8	1.6	0.6
The best university for the subjects that interest you	2.4	0.9	1.7	0.6	2.5	1.0	1.8	0.7	2.4	0.9	1.7	0.7
<i>No. questionnaires (complete or partial)</i>	194		126		260		97		468		194	
									450		179	
									657		128	
											2029	724

Table 5.2 Regardless of whether or not you intend to go to university, how much do you feel you know about the following? Notes: Scale is as follows: 1 = A lot; 2 = Quite a lot; 3 = A little; 4 = Nothing. Blank entries for specific questions have been excluded from mean and variance calculations. Only consistently appearing questions shown.

	C1		C2		C3		C4		C5		C1-5													
Measures of readiness for university	<i>Before</i>	<i>After</i>																						
	\bar{x}	<i>SD</i>																						
Meeting new people	1.8	0.7	1.8	0.6	1.6	0.6	1.8	0.7	1.9	0.7	1.7	0.6	1.9	0.7	1.9	0.8	1.8	0.7	1.8	0.7				
Independent study	1.8	0.6	1.7	0.5	1.8	0.6	1.7	0.6	1.9	0.7	1.7	0.5	1.8	0.7	1.8	0.6	1.8	0.7	1.7	0.6				
Managing your finances	2.5	0.9	1.9	0.6	2.3	0.9	2.0	0.7	2.2	0.8	2.1	0.8	2.3	0.9	2.0	0.7	2.4	0.8	2.1	0.7	2.3	0.9	2.0	0.7
Possibly living away from home	2.3	0.9	1.6	1.1	2.2	0.9	1.8	1.1	2.2	0.9	1.8	1.0	2.2	1.0	1.9	1.0	2.2	0.9	1.8	1.1	2.2	0.9	1.8	1.0
Getting used to a university campus/ place to study	2.0	0.7	1.8	0.6	2.0	0.7	1.9	0.7	1.9	0.7	1.9	0.7	2.1	0.8	1.9	0.7	2.1	0.8	1.9	0.8	2.0	0.8	1.9	0.7
University life in general	2.1	0.7	1.8	0.5	2.0	0.8	1.8	0.6	1.9	0.8	1.8	0.7	2.1	0.8	1.8	0.7	2.1	0.8	1.9	0.8	2.1	0.8	1.8	0.7
<i>No. questionnaires (complete or partial)</i>	194		126		260		97		468		194		450		179		657		128		2029		724	

Table 5.3 How prepared/ready do you feel you are for the following aspects of a university education?

Notes: Scale is as follows: 1 = Very prepared; 2 = Quite prepared; 3 = Not very prepared; 4 = Not at all prepared; 0 = Don't know/Not applicable. Blank entries for specific questions have been excluded from mean and variance calculations. Only consistently appearing questions shown.

Table 5.2 shows that across the board, the RO students show an improvement in their self-perceived knowledge of universities. Most changes measured are fairly noteworthy. Overall the baseline knowledge across the categories tends to be between the ‘Quite prepared’ and ‘Not very prepared’, rising to a low-end ‘Very prepared’ after the RO program. The most significant rises in knowledge occur in how to apply to university, and knowing what a research intensive university is.

The variance of the answers remains fairly consistent both between the questions, and across the cohorts. The strongest change is in the knowledge of how to apply to university, showing an overall focussing of answers towards higher levels of knowledge in follow-up surveys.

Self-perceived readiness for university was similarly measured in questions 7 (C1-2) and 8 (C3-5) in the baseline surveys, and questions 9 (C1-4) and 16 (C5) in the follow-up surveys. The results are shown in table 5.3, which again show a rise between the two surveys. The overall ‘rise in readiness’ is not, however, as marked as the overall ‘rise in knowledge’. Although slightly better prepared, most answers are consistently placed around the ‘quite prepared’ level, in both the baseline and follow-up questionnaires. The largest rise in confidence was seen to be in managing finances and living independently from home.

Note for the data in both tables 5.2 and 5.3, only the consistently-asked questions have been included. Item M (“How to develop a career in some of the top professions”) does not appear in question 13 of the baseline survey for C1-2. Likewise, item H (“What different universities are like”) does not appear in question 14 of C5.

5.3 Perceived main benefits of Realising Opportunities

The students were asked in questions 19 (C4) and 27 (C5) what they specifically felt was the most beneficial part of Realising Opportunities in helping them progress to university. Table 5.4 shows the distribution of answers for these two cohorts (the question was not asked to cohorts 1-3).

	C4	C5	C4-5
Votes for most helpful aspect of RO	%	%	%
The Academic Assignment/EPQ	13.4	17.2	15.0
Having an ementor	18.4	10.2	15.0
Realising Opportunities workshops and conferences	16.8	18.8	17.6
The alternative offer	41.3	39.8	40.7
Not applicable	3.4	4.7	3.9
Unknown (blank)	6.7	9.4	7.8
<i>Total questionnaires (complete or partial)</i>	<i>179</i>	<i>128</i>	<i>307</i>

Table 5.4. Which of the following aspects of the Realising Opportunities Programme was the most useful in terms of encouraging you to go to university? Notes: % refers to the total number of returned follow-up questionnaires in each cohort.

Overall, the most popular aspect of RO helping participants attend university is reported to be the alternative offer (AO). With around 50-60% of students enrolled at partner universities by means of an AO, this is perhaps unsurprising (the AO quite literally enabled these students to enrol on their chosen course). There is little change between the cohorts in this respect, although there is a

detectable shift in popularity rates of the other RO elements. The proportion of students identifying the ementor scheme as the *most* helpful aspect of the programme has fallen considerably, while the numbers preferring the academic assignment/EPQ has risen. It should however be noted that ementoring retains a good overall satisfaction rating, and a recent evaluation by the charity Brightside (2015) indicated that cohort 5 students rated ementoring more positively than cohort 4 students, in most regards, and despite the ongoing and considerable expansion of the RO programme. These findings to some extent complement recent research conducted by the Sutton Trust (2015), which highlighted academic tutoring and assistance with application as essential attributes of successful outreach schemes. The Sutton Trust also identified mentoring as one of the best outreach strategies to widen access to higher education. The RO partnership may therefore wish to explore further students' reasons for the dip in students' perceptions as ementoring as the *most* useful aspect of the programme, to ensure its continued positive contribution for future cohorts.

RO students were further asked about their opinions on the overall main benefits from the various parts of the programme. This was asked in questions 20 (C1-4) and 29 (C5) of the follow-up surveys, and thus appears in all follow-up surveys to date. The average scores and distributions for these questions are shown in table 5.5. Only item C ("Your knowledge of different courses at university") has been omitted, since this was removed from the cohort 5 questionnaire.

	C1	C2	C3	C4	C5	C1-5
Benefits to skills from RO	\bar{x} <i>SD</i>					
Your knowledge of student finance	2.3 0.7	2.3 0.8	2.4 0.9	2.2 0.8	2.2 0.8	2.3 0.8
Your understanding of what a research intensive university is	2.1 0.8	2.2 0.9	2.0 0.8	1.9 0.8	1.9 0.8	2.0 0.8
Your knowledge about the UCAS application process	2.3 0.9	2.2 1.0	2.1 1.0	1.9 0.8	2.0 0.9	2.1 0.9
Understanding your personality type	2.3 1.0	2.3 1.0	2.3 1.0	2.5 1.0	2.4 0.9	2.4 1.0
Your self confidence	2.3 0.9	2.4 0.9	2.2 0.9	2.4 0.9	2.4 0.9	2.3 0.9
Your study skills	2.0 0.9	2.1 0.9	2.0 0.9	2.0 0.8	1.9 0.9	2.0 0.9
Your presentation skills	2.4 0.9	2.3 1.0	2.3 1.0	2.2 0.9	2.2 0.9	2.2 1.0
Your ability to set goals	2.2 0.9	2.3 1.0	2.1 0.9	2.1 0.8	2.1 0.9	2.2 0.9
Your revision skills	2.3 0.9	2.4 1.0	2.3 1.0	2.3 0.9	2.2 0.9	2.3 0.9
Your ability to reference academic sources	2.1 0.9	1.9 0.9	1.9 0.9	1.8 0.9	1.7 0.7	1.9 0.9
<i>Total questionnaires (completed or partial)</i>	126	97	194	179	128	724

Table 5.5 How much has Realising Opportunities helped to improve the following?

Notes: Scale is as follows: 1 = A lot; 2 = Quite a lot; 3 = A little; 4 = None at all. Blank entries for specific questions have been excluded from mean and variance calculations. Only consistently appearing questions shown.

There is little variation in any respect of the data in table 5.5. All aspects of the program are typically rated 'Quite a lot' in terms of how much help they gave, by the students who responded. This does

not change in either cohort or distribution of responses. The ability to reference academic sources receives some distinct improvement, followed by understanding of what a research intensive university is. Understanding of personality type and levels of self-confidence remain the least high scoring of all the aspects, meaning that RO had the least impact upon participants in those regards.

5.4 Usefulness of the activities within Realising Opportunities

The students were asked in questions 13 (C1-4) and 20 (C5) how useful they considered the component activities of RO to be in informing them about applying to university. Students were then invited to compare the activities facilitated by RO to other sources of information and guidance pertaining to their preparations for university. Table 5.6, overleaf, shows the average scored results from the follow-up surveys, with the Realising Opportunities activities highlighted.

On the whole, the programme ranks higher than most other sources of knowledge or assistance, scoring a low 'very useful' rating. Only students' own research ranked higher as a better source of information and help. Although the programme show an overall slight increase in rating over the five cohorts measured, the individual programme elements mostly show a consistent rating. Only the ementor scheme shows any apparent change over time, but this is only a progression from a high 'useful' to a low 'very useful'.

The lowest ranking items listed in table 5.6 also have the highest variance. This is due to a large number of respondents in these categories listing them as having provided 'no information', a rank which in this study has been given a strong negative bias (5 points). This is as opposed to a 'don't know' response (not an option in the questionnaires), which elsewhere has been given a score of zero. The students who did receive information from these sources (e.g. from Connexions advisors, employers and initiatives such as Aimhigher), did not necessarily rate them particularly poorly. Many students, however, simply stated that they received no information from such sources at all.

5.5 Summarising attitudes to Realising Opportunities

In students' own words, RO has continually provided a beneficial source of information, advice and guidance, assisting participants with the transition to university. The positive aspects of the programme are most clearly seen in the 'before and after' surveys measuring the knowledge and readiness about university life ahead.

Typically, RO has helped improve student skills for university 'quite a lot', with a uniform distribution across the range of skills suggested. All elements of the RO programme rate highly in comparison to other means of assistance when considering university study. The prospect of the alternative offer is the single most important aspect to students in providing help to reach university.

	C1	C2	C3	C4	C5	C1-5
Useful sources of information	\bar{x} <i>SD</i>					
Teachers	2.1 0.9	2.0 0.8	2.2 0.9	2.1 0.7	2.0 0.7	2.1 0.8
School careers coordinators	3.0 1.3	3.1 1.4	2.9 1.3	2.7 1.3	2.8 1.3	2.9 1.3
Connexions advisers	3.4 1.3	3.8 1.3	3.6 1.3	3.6 1.4	3.8 1.4	3.6 1.3
Parents/carers	2.4 1.1	2.4 1.1	2.4 1.1	2.4 1.1	2.8 1.2	2.5 1.1
University staff	1.8 0.8	1.7 0.9	1.7 0.7	1.8 0.9	2.1 1.0	1.8 0.8
University prospectuses	1.7 0.7	1.8 0.7	1.8 0.7	1.7 0.6	1.9 0.8	1.8 0.7
Visits to university campuses	1.5 0.7	1.4 0.6	1.3 0.6	1.5 0.7	1.6 0.9	1.4 0.7
University residential summer schools	3.1 1.6	2.8 1.7	2.5 1.7	2.6 1.7	3.1 1.7	2.8 1.7
Current university students	2.0 0.9	2.1 1.1	1.9 1.1	2.1 1.1	2.2 1.1	2.0 1.1
Employers	3.6 1.4	3.8 1.4	3.7 1.4	3.4 1.4	3.6 1.4	3.6 1.4
Other family members (e.g. sister, uncle)	2.8 1.5	2.9 1.5	3.1 1.5	2.8 1.4	3.1 1.4	2.9 1.5
Your own research	1.6 0.6	1.7 0.6	1.5 0.6	1.5 0.6	1.5 0.6	1.6 0.6
Realising Opportunities	1.9 0.7	1.8 0.7	1.8 0.8	1.6 0.7	1.7 0.7	1.8 0.8
The Realising Opportunities Programme Guide	2.2 0.8	2.1 0.7	2.1 0.9	1.9 0.8	2.0 0.9	2.0 0.8
My Realising Opportunities e-mentor	2.2 1.0	2.0 0.9	2.2 1.1	1.9 0.8	1.9 0.9	2.1 1.0
The Realising Opportunities National Student Conference	2.2 1.0	2.1 1.0	2.2 0.9	2.1 0.9	2.2 1.0	2.2 0.9
Initiatives such as Aimhigher, etc.	3.1 1.6	3.4 1.6	3.5 1.6	3.8 1.5	3.8 1.5	3.5 1.6
<i>Total questionnaires</i>	<i>126</i>	<i>97</i>	<i>194</i>	<i>179</i>	<i>128</i>	<i>724</i>

Table 5.6 Regardless of whether or not you would like to go to university, please tick to indicate how useful you have found the information that they provide

Notes: Scale is as follows: 1 = Very useful; 2 = Useful; 3 = Not very useful; 4 = Not at all useful; 5 = No information provided.

6. Degree outcomes of RO students

This chapter considers how successful RO students who progress to research-intensive universities are. To explore this, graduation and degree classification data for cohorts 1-2 are analysed, and these are compared with the graduation rates for all students in each partner university.

6.1 First degree graduation rates

For those RO students from cohort 1 who enrolled upon a university degree programme, just over ninety per cent are known to have completed their degree within the expected timeframe (see table 6.1). Around three per cent of students from cohort 1 are thought to have withdrawn from their course. Unsurprisingly, the data for the more recently enrolled students from cohort 2 indicates a comparatively reduced graduation rate (75.7%), and a higher proportion of students still enrolled (15.7%). It is expected that the graduation rates reported for cohorts 1 and 2 will align more closely with time. The proportion of withdrawals is, however, notably higher for cohort 2 (8.7%), although the numbers involved are relatively low.

	C1		C2	
	<i>n</i>	%	<i>n</i>	%
Have graduated	97	90.7	87	75.7
Thought to have withdrawn	3	2.8	10	8.7
Still enrolled (results not yet published)	7	6.5	18	15.7

Table 6.1 First degree graduation rates of RO students at all universities

Notes: The calculations presented here are based upon data provided by HEAT, for students expected to have graduated by 2014/15. For cohort 1, students enrolled upon three and four year degree programmes are included in the expected total. For cohort 2, only students enrolled upon three year degree programmes are included. Twelve students from cohort 1, and nine students from cohort 2, are enrolled on degree programmes that exceed four years and are therefore excluded here (and from table 5.2, below).

6.2 First degree classification results

Table 6.2, overleaf details the degree results of RO students at RIUs, and allows for comparison between these students' results and the results for all students at all RIUs in the same academic year. Compared to the total student population, a slightly lower proportion of RO students receive a first-class degree, although this difference narrows for cohort 2 students. For both cohorts, the proportions of RO students receiving upper and lower second class degrees are higher than those reported for the total student population. This difference in distribution is explained by the observation that no RO student in cohorts 1 or 2 received either a third or unclassified degree (which account for around 10 per cent of all degrees awarded to the total student population).

	C1		C2	
	<i>n</i>	%	<i>n</i>	%
<i>RO students at RIUs</i>				
First class	11	19.0	11	25.6
Upper second class	37	63.8	25	58.1
Lower second class	10	17.2	7	16.3
Third class	0	0.0	0	0.0
Unclassified	0	0.0	0	0.0
<i>All students at RIUs</i>				
First class	29685	22.6	31715	24.5
Upper second class	68565	52.2	66305	51.2
Lower second class	20010	15.2	18780	14.5
Third class	3615	2.8	3310	2.6
Unclassified	9475	7.2	9285	7.2

Table 6.2 Published first degree results of RO students and all students at RI universities

Notes: The calculations presented here are based upon data provided by HEAT. For cohort 1, students enrolled upon three and four year degree programmes are included in the expected total. For cohort 2, only students enrolled upon three year degree programmes are included.

Chart 6.1, overleaf, summarises the first degree results of RO students at RI universities for the two cohorts combined, and allows for comparison to all students at RI universities. The patterns outlined earlier are once again confirmed; the proportion of RO students receiving a first class degree is lower, by approximately five per cent; while the proportion of RO students receiving an upper second class degree is higher than that reported for the total student population, by around ten per cent. The proportion of RO students obtaining a lower second class degree is also higher, by almost five per cent; while no RO student is observed to receive a third or unclassified degree.

Chart 6.2, overleaf, summarises the first degree results of RO students at all universities nationally for the two cohorts combined, and allows for comparison to all students to national average. The only notable differences with these results compared to those in Chart 6.1 are the proportions receiving 2.1 or 2.2 degrees. Looking at the national average, the RO students are slightly more likely to receive a 2.1 and less likely to receive a 2.2, than for those RO students specifically enrolled at an RIU.

Chart 6.3 presents the first degree results of all RO students regardless of the higher education institution attended. This is of interest since a significant and increasing number of RO students are known to progress to universities outside of the RO partnership, which are not recognised as research-intensive (refer to chart 3.1). These data indicate broadly similar trends to those observed for RO students who have graduated from RIUs. For example, similar proportions – slightly fewer than twenty per cent – obtain a first class degree; and this proportion is seen to increase slightly for cohort 2 students. The proportions obtaining upper second or third class degrees vary between the two cohorts – in the order of roughly ten per cent. Two-thirds of cohort 1 students secure an upper second class degree; for cohort 2, around half of students do. Conversely, while only one-fifth of cohort 1 students receive a lower second class degree, around one-third of cohort 2 students graduate with this result. For both cohorts, no third class degrees are awarded, and the proportion receiving an unclassified degree is extremely low (~1.0%).

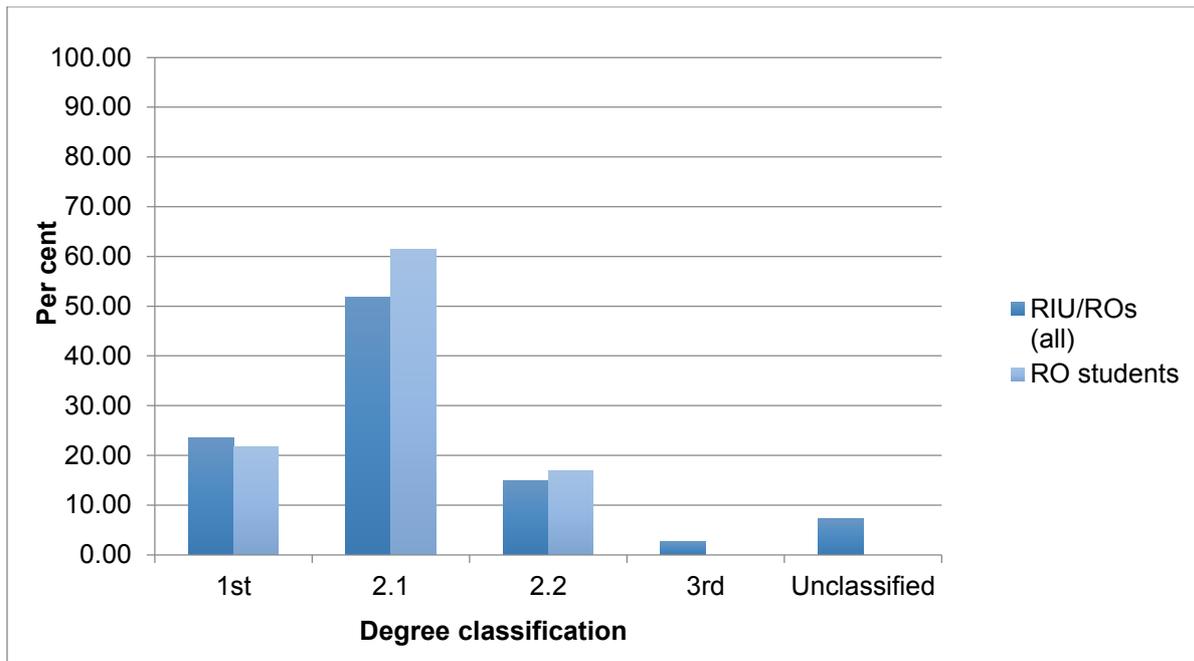


Chart 6.1 Published first degree results of RO students and all students at RI universities

Notes: data are presented for cohorts 1 and 2 combined, from HEAT records of all those who had graduated by 2014/15. Although proportions are compared, it should be noted that the numbers in each group differ greatly; RO students $n=101$; all RIU students $n=260,745$.

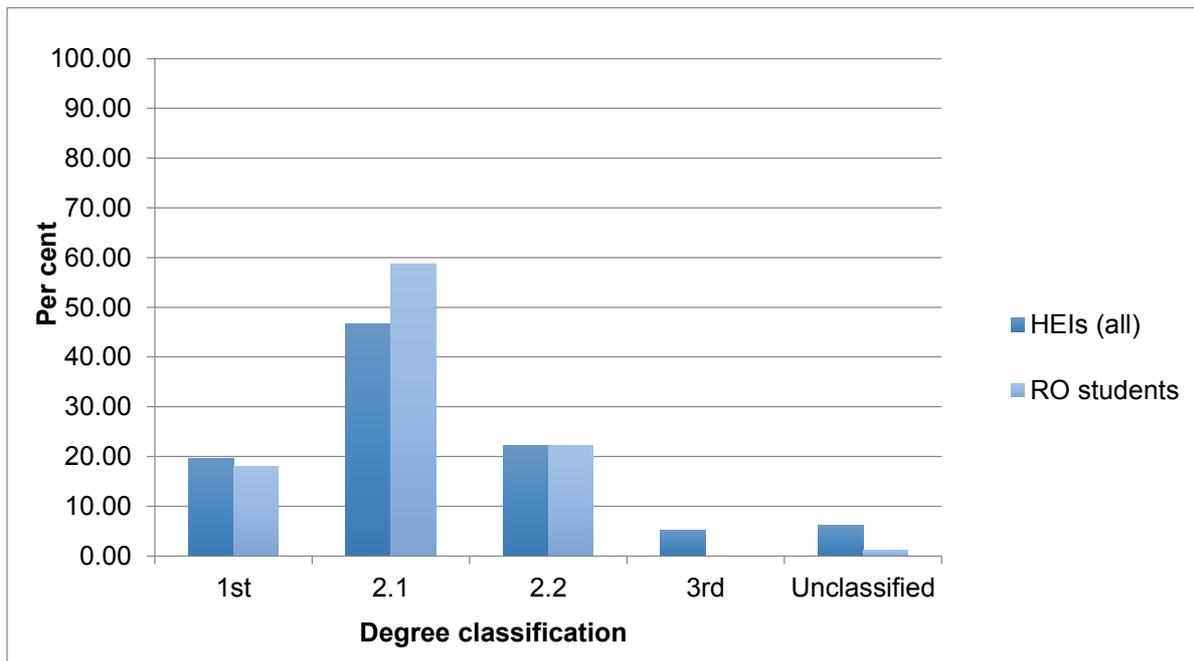


Chart 6.2 Published first degree results of RO students and all students at HEIs

Notes: data are presented for cohorts 1 and 2 combined, from HEAT records of all those who had graduated by 2014/15. Although proportions are compared, it should be noted that the numbers in each group differ greatly; RO students $n=184$; all RIU students $n=817,205$.

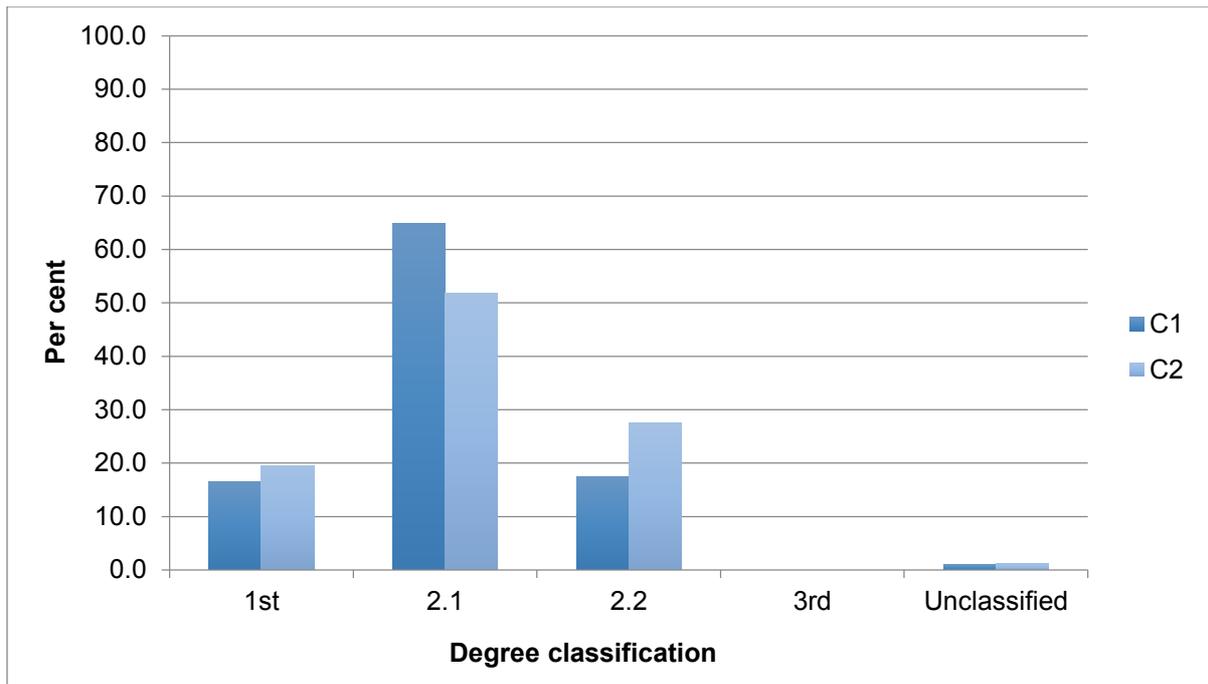


Chart 6.3 Published first degree results of all RO students at all universities

Notes: data are presented for all universities (RO partner, RIU and 'other'), on the basis of HEAT records of all those who had graduated by 2014/15.

7. Conclusions and recommendations

It is clear from the characteristics of the successive cohorts within RO that the aims of targeting the ‘most able, least likely’ are being achieved. As the programme expands, the profile of recruits is tending towards greater socio-economic disadvantage, and yet the high academic entry requirements of RO have been maintained. The central aim of RO is to encourage these students, who are typically under-represented in higher education, to apply to a research-intensive university. The vast majority of the RO students do apply to university, and report that in many regards, their knowledge of, and confidence towards, attending university has improved during their participation in the programme. The extent to which success can be claimed for the programme in this aspect will depend upon any forthcoming analysis of national data, which would enable quantification of the HE progression rate of those students who match the attainment and socio-economic profile of RO recruits, but did not benefit from participation in the programme.

As a result of this evaluation analysis, a clear change in application and enrolment trends has been observed, which can be broadly summarised as two key effects. Firstly, the overall application rate, particularly to the RO partner institutions, is declining. This observation may be attributed to the better targeting of RO recruits over time; simply put, the programme increasingly attracts students for whom we might expect the transition to HE to be less straightforward. Nevertheless, it must be acknowledged that this trend is at odds with a key aim of the programme; that is, to enable progression to a specific type of higher education institution – RIUs. Secondly, a similar but more complex trend is noted for enrolments. Overall, university enrolments remain fairly steady across cohorts – around two-thirds of RO completers begin a university course. However, enrolment into RIUs is falling (and, specifically, enrolment into RO partner universities), which is coupled with a marked (and roughly proportional) increase in enrolments to non-research intensive universities.

The reasons for these changes are at present far from certain, but there are some initial indications. It may be the case that these patterns simply reflect national trends for this set of students. Preliminary statistical modelling on the RO dataset alone indicates that application and enrolment probabilities are strongly dominated by academic achievement, subject type of application, and to some extent the school attended. RIU applications and enrolments are associated with higher KS4 attainment, STEM applications, and better Ofsted school scores. The propensity for students to apply further from their home region is also linked to their tendency to apply and enrol to RIUs. A link between gender and application to non-RIUs was noted, with females being less likely to apply. In the study carried out so far, no clear link with social background, ethnicity or class with RIU application and enrolments were found with any strong statistical likelihood.

Considering the detected main variables of significance that can be regarded as true predictors – KS4 attainment, subject choice, and school quality – it is certainly noteworthy that these are changing over time. In the analysed cohorts (1-3), average KS4 attainment has fallen, and fewer students proportionally are applying for STEM courses. Both of these observations relate to a decreased rate of application and enrolment to RIUs, which is evident in the overall totals. However, without KS5 attainment, it is not possible to fully align attainment with application and enrolment patterns.

Success rates of obtaining and meeting university offers appear roughly consistent over the three years of UCAS data available. Additionally, analysis of the data provided by partner institutions

indicates that the proportion of RO students failing to meet any given offers is roughly constant. GCSE scores are similar across the first three cohorts. The shift to increased enrolment at non-RIUs therefore appears to reflect student choice, as opposed to a reduction in either academic attainment or offers to study at an RO university in the cohorts where UCAS data is available.

Student questionnaire data generate a positive image of the programme: participants report gains in knowledge, preparedness and confidence following their engagement with RO. The alternative offer is the most popular aspect of the programme in terms of direct assistance to reaching higher education, though it is noteworthy that approximately one third of those who receive an AO, do not require it to enrol.

A number of recommendations emerge from this evaluative work. These recommendations seek to address perhaps the most important issue identified through these analyses: that of the falling rates of applications and enrolments to RIUs. There is a need to increase both the quantity and validity of data in order to better understand experiences of and outcomes from the programme. We recommend that the student feedback questionnaire contain a direct question asking why students chose not to apply or enrol at an RIU or RO partner university. Response rates to the student questionnaire require improvement, to increase the certainty of conclusions that can be drawn (see Appendix E). The baseline questionnaire might be appended to any enrolment documents that students must complete at the start of the programme, to ensure that the response rate for this is close to universal. It is to be expected that responses to the follow-up survey will generally be lower than those achieved for the baseline survey, but alternative strategies, such as amending the timing of the survey or rethinking the provision of incentives may be explored in order to improve on previous years.

Those students who leave the programme early, or who do not apply to university, may be the hardest to engage in the survey and we recommend that alternative approaches to data collection – such as focus groups or (telephone) interviews – might be trialled in order to ensure the perceptions and decisions of these students are better understood. Rather than waiting for these data to accumulate over future cohorts, it might be instructive at this stage to contact students from previous cohorts who enrolled at other HEIs, and seek their reasons and motivations for doing so, on a retrospective basis.

Data concerning offers, provided by partner institutions, were of fairly poor quality – with much information incomplete, and evident inconsistencies in how the data request was interpreted (i.e. whether the unit of analysis was applicants or applications). This data collection exercise must be improved for future years if the role of AO, and the enrolment profile of RO students to RO universities, is to be better understood.

Academic attainment is found to be strongly associated with applications and enrolments to RIUs, but is not entirely clear how much of the changing enrolment patterns have been due to a changing academic attainment levels. There is a correlation with subject area, with STEM subjects having greater likelihood for application and enrolment. Analysis of further data (namely, future cohorts), together with a national comparison (NPD dataset) is needed to firmly clarify these results.

In the meantime, the programme should look to opportunities within its current range of activities to further encourage these applications and enrolments. Any amendments to the scheme ought to

be based upon the student feedback acquired so far. The ementoring scheme stands out as one aspect of the programme in need of constant and careful review. Most students rate this as 'quite' useful, and the proportion identifying it as the *most* useful aspect of the programme has declined over time. Recent research notes the central importance of mentoring to successful outreach schemes. These data were not made available to the evaluation team, but it is recommended that the selection of ementors is carefully considered, and that their characteristics should, as far as possible, reflect those of RO students. Since attainment is not an obvious barrier for RO students to progress to RIUs, further consideration of potential social and economic barriers, and of strategies to overcome these, ought to be undertaken.

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Appendix A

Eligibility criteria for the Realising Opportunities Programme - cohorts 1 to 6

Cohorts 1 and 2 - Students were drawn from targeted schools that:

- had greater than 60 per cent of students from the first 13,000 super output areas in the Index of Multiple Deprivation (IMD);
- performed at lower than the national average for five A* to C GCSE grades.

Year 12 students were targeted to meet the following eligibility criteria. They must:

- have a minimum of eight A* to C GCSEs (including English and Mathematics) with five GCSEs at a minimum of Grade B;
- be among the most academically talented amongst their year group;
- be in receipt of (or entitled to) an Educational Maintenance Allowance (EMA);
- or be living in, or have experience of, local authority care.

Cohorts 3 and 4 - To participate in the RO Programme Year 12 students must:

- have attended a school that is performing below the national average for five A* to C at GCSE (including English and Mathematics), or;
- be attending a school/college which is performing below the national average at key stage 5, or;
- have attended a school where there are higher than the national average number of students eligible for free school meals (FSM), or;
- have attended a school where there is greater than 60 per cent of students from the first 13,000 super output areas within the Index of Multiple Deprivation.

And meet all of the following criteria:

- have achieved at least eight A* to C grades at GCSE including English Language and Mathematics and a minimum of five GCSEs at grades A*/A or B;
- come from a home where neither parent attended university in the UK or abroad or have lived in or be living in local authority care
- be a Home/EU registered student.

And meet at least one of the following criteria⁸:

- live in a 'low participation' neighbourhood, as defined by home postcode, or;
- be in receipt of or entitled to discretionary payments at school/college, or;
- be in receipt of or entitled to FSM.

Cohort 5

Step 1 - To participate in the RO programme students must:

- Have attended a school that is performing below the national average for 5 A*- C at GCSE (including English and Mathematics), or
- Be attending a school/college which is performing below the national average at Key Stage 5, or
- Have attended a school where there is higher than the national average number of students eligible for free school meals, or

⁸ It should be noted that if students do not meet any of these criteria they can still be eligible under an 'Extenuating Circumstances' clause. This states to applicants that if they 'have experienced difficult family or individual circumstances that you or your school or college believe may affect your performance in exams or the likelihood of going to university, your application to RO can still be considered on an individual basis'.

- Have attended a school where there is greater than 60% of students from the first 13,000 super output areas within the Index of Multiple Deprivation.

Step 2 - Meet all of the following criteria:

- Have achieved at least 8 A* to C grades at GCSE (or equivalent, e.g. GNVQ, BTEC Certificate) including English Language and Mathematics
- Of these 8 GCSEs or equivalent, at least 5 must be at grade A*, A or B
- Be a Home/EU registered student.

Step 3 - Students must also meet at least two of the following criteria*:

- Live in a 'low participation' neighbourhood. This is defined by home postcode
- Come from a home where neither parent attended university in the UK or abroad
- Be in receipt of or entitled to discretionary payments/16-19 bursary at school/college
- Be in receipt of or entitled to free school meals.

*If students do not meet at least two of the criteria outlined in above, but have experienced difficult family or individual circumstances that may affect their performance in exams or the likelihood of them going to university, their application may still be considered on an individual basis.

Or alternatively meet the following:

- be living in, or have lived in, local authority care

Cohort 6

Step 1 - In order to be eligible to apply for the RO programme students must:

- Have attended a school that is performing below the national average for 5 A*- C at GCSE (including English and Mathematics), or
- Be attending a school/college which is performing below the national average at Key Stage 5, or
- Have attended a school where there is higher than the national average number of students eligible for free school meals, or
- Have attended a school where there is greater than 60% of students from the first 13,000 super output areas within the Index of Multiple Deprivation.

Step 2 - Meet all of the following criteria:

- Have achieved at least 8 A* to C grades at GCSE (or equivalent, eg GNVQ, BTEC Certificate) including English Language and Mathematics.**
- Of these 8 GCSEs or equivalent, at least 5 must be at grade A*, A or B**
- Be a Home/EU registered student.

Step 3 - Students must also meet at least two of the following criteria**:

- Live in a neighbourhood which has a low progression rate to higher education or an area which has a high level of financial, social or economic deprivation. This is defined by home postcode
- Come from a home where neither parent attended university in the UK or abroad
- Be in receipt of or entitled to discretionary payments/16-19 bursary/Pupil Premium at school/college
- Be in receipt of or entitled to free school meals.

Or alternatively meet the following:

- be living in, or have lived in, local authority care

** If students do not meet the prior attainment outlined in step 2 or at least two of the criteria outlined in step 3, but have experienced difficult family or individual circumstances that may affect their performance in exams or the likelihood of them going to university, their application may still be considered on an individual basis.

Appendix B

Ethnic background of enrolled recruits to cohorts 1-6 of the Realising Opportunities Programme

	C1		C2		C3		C4		C5		C6		C1-6	
	<i>n</i>	%												
White	143	46.7	188	53.3	249	50.2	248	53.9	313	41.2	209	26.7	1350	42.8
White - British	2	0.7	1	0.3	0	0.0	2	0.4	103	13.6	229	29.2	337	10.7
White - Irish	0	0.0	0	0.0	0	0.0	1	0.2	1	0.1	3	0.4	5	0.2
Other White background	0	0.0	0	0.0	4	0.8	8	1.7	20	2.6	15	1.9	47	1.5
Black or Black British - Caribbean	3	1.0	1	0.3	6	1.2	6	1.3	10	1.3	14	1.8	40	1.3
Black or Black British - African	18	5.9	25	7.1	22	4.4	40	8.7	40	5.3	65	8.3	210	6.7
Other Black background	1	0.3	0	0.0	1	0.2	2	0.4	9	1.2	6	0.8	19	0.6
Asian or Asian British - Indian	23	7.5	22	6.2	23	4.6	28	6.1	39	5.1	41	5.2	176	5.6
Asian or Asian British - Pakistani	55	18.0	52	14.7	92	18.5	62	13.5	86	11.3	58	7.4	405	12.8
Asian or Asian British - Bangladeshi	20	6.5	14	4.0	41	8.3	16	3.5	50	6.6	37	4.7	178	5.6
Asian or Asian British - Chinese	0	0.0	0	0.0	0	0.0	0	0.0	10	1.3	9	1.1	19	0.6
Chinese or Other Ethnic background -														
Chinese	1	0.3	2	0.6	13	2.6	2	0.4	0	0.0	0	0.0	18	0.6
Other Asian background	9	2.9	5	1.4	16	3.2	18	3.9	24	3.2	28	3.6	100	3.2
Mixed - White and Black Caribbean	5	1.6	3	0.8	11	2.2	8	1.7	0	0.0	0	0.0	27	0.9
Mixed or Multiple - White and Black Caribbean	0	0.0	0	0.0	0	0.0	0	0.0	10	1.3	16	2.0	26	0.8
Mixed - White and Black African	0	0.0	2	0.6	0	0.0	1	0.2	0	0.0	0	0.0	3	0.1
Mixed or Multiple - White and Black African	0	0.0	0	0.0	0	0.0	0	0.0	4	0.5	4	0.5	8	0.3
Mixed - White and Asian	2	0.7	3	0.8	4	0.8	0	0.0	0	0.0	0	0.0	9	0.3
Mixed or Multiple - White and Asian	0	0.0	0	0.0	0	0.0	0	0.0	4	0.5	6	0.8	10	0.3
Mixed or Multiple - Other Mixed background	0	0.0	0	0.0	0	0.0	0	0.0	9	1.2	4	0.5	13	0.4
Other Mixed background	3	1.0	3	0.8	3	0.6	5	1.1	0	0.0	0	0.0	14	0.4
Other Ethnic background	5	1.6	6	1.7	7	1.4	9	2.0	15	2.0	15	1.9	57	1.8
Not known	16	5.2	26	7.4	3	0.6	4	0.9	10	1.3	23	2.9	82	2.6
Information refused	0	0.0	0	0.0	1	0.2	0	0.0	2	0.3	1	0.1	4	0.1

Appendix C

Applications, offers and enrolments of RO students to each partner university (calculations from UCAS/HEAT data)

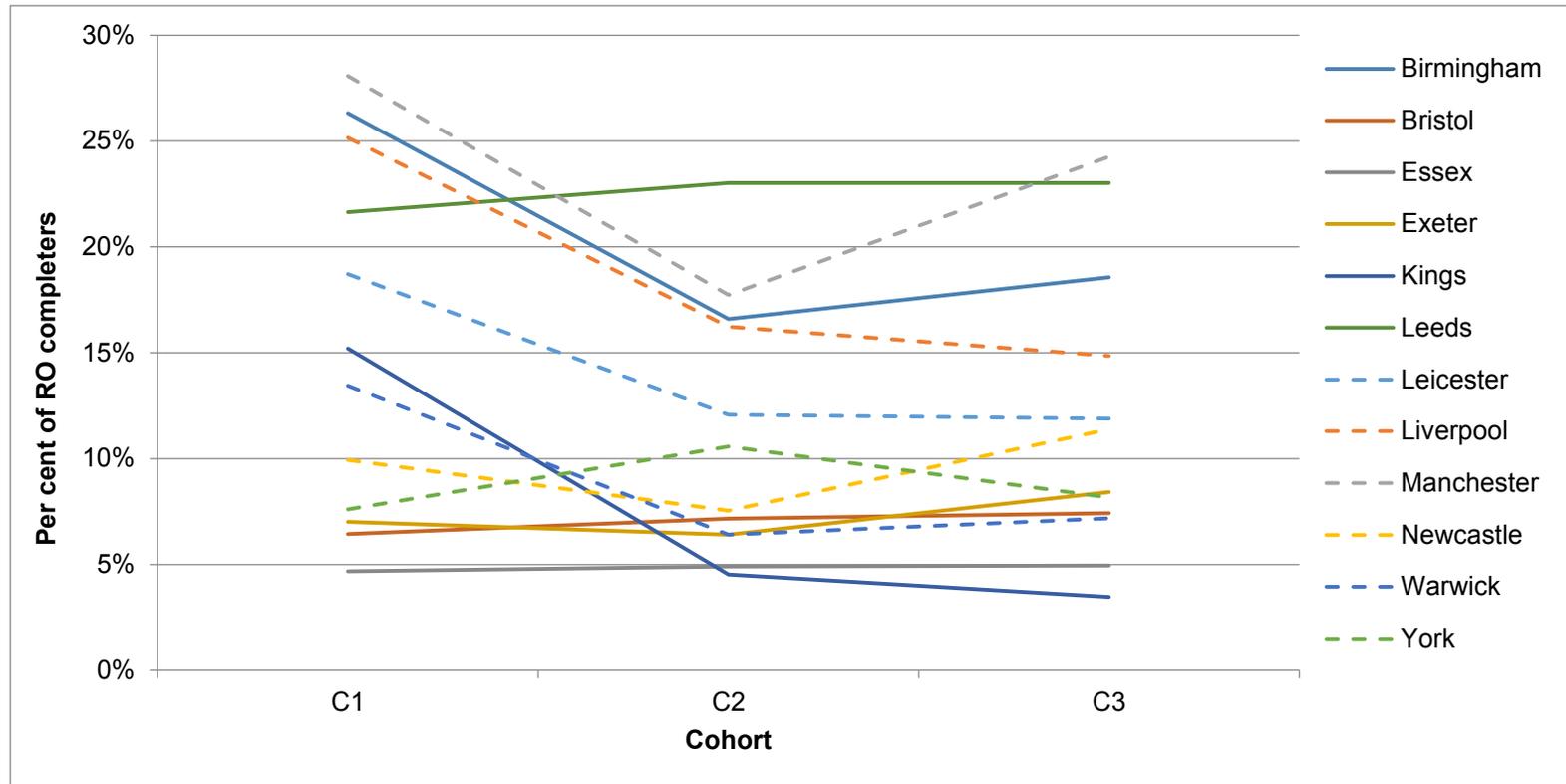


Chart C.1 RO completers who apply to each partner university

Notes: These values include those known to have enrolled (if missing as applicants from UCAS). Across all cohorts, Manchester is most frequently applied to. However, the number of RO completers applying to Manchester, Birmingham, Liverpool, Leicester, Kings, and Warwick has reduced since the first cohort. There is an increase in applicant popularity to Newcastle, although the numbers are fairly small. The number of applicants to Leeds, York, Exeter, Liverpool and Essex is relatively steady over the cohorts.

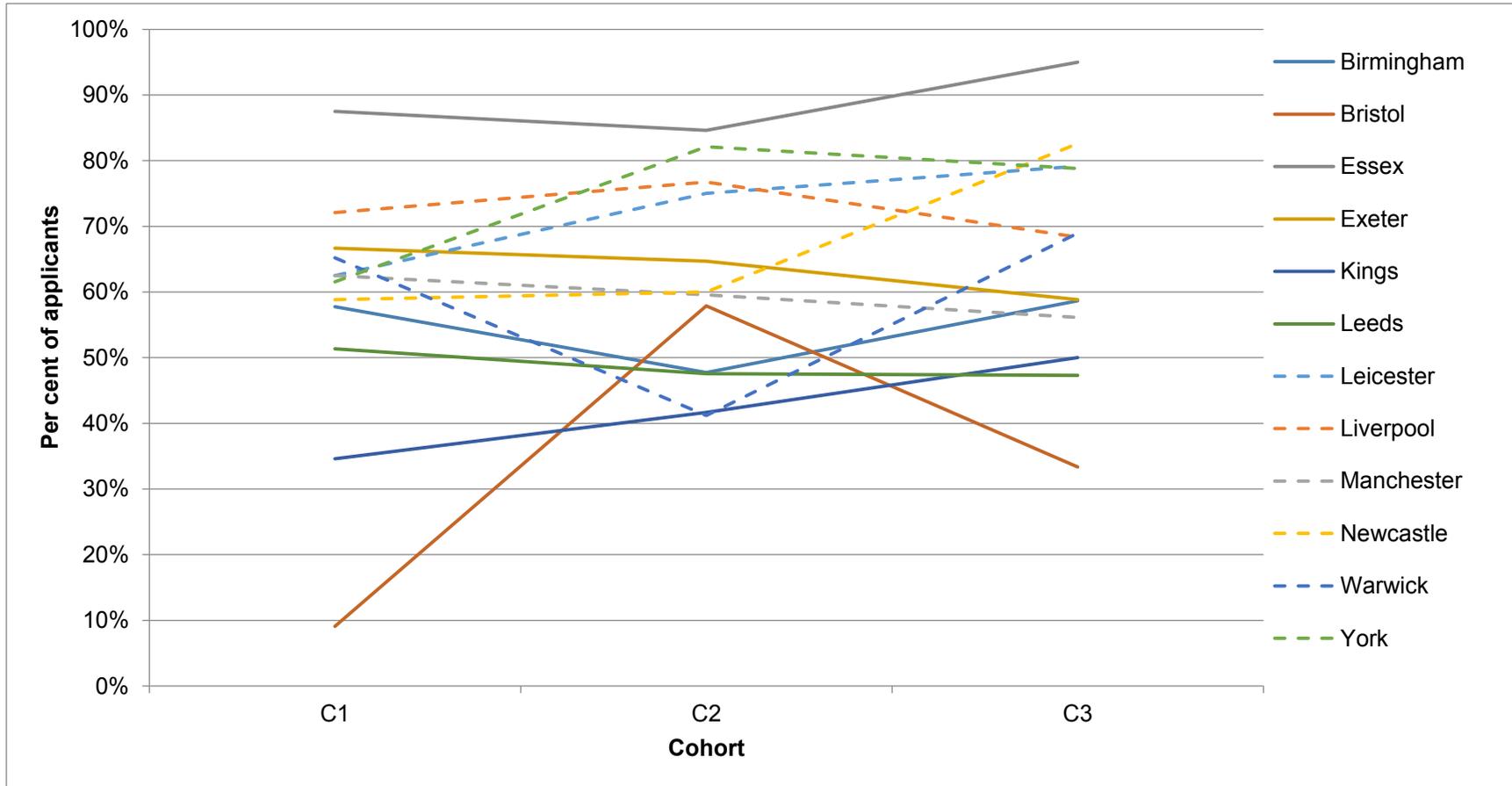


Chart C.2 Percentage of RO applicants receiving offers at each partner university

This chart details the proportion of applicants who are successful in receiving an offer from each RO institution. This measure is based upon applicants, not applications (of which there are potentially five per applicant). The vast majority (>95%) of applicants do not apply to same institution twice on their UCAS form (i.e. they do not apply to multiple courses at the same university). In contrast to Chart C.2, which relates an overall downward trend in the proportion of RO completers who apply to an RO university, here we see that for those students who *do* apply to RO universities, there is a slight increase in the proportion of offers being made across the cohorts. The numbers of offers at each university are generally small (between 10-30 typically each year for each institution), meaning that the lines can vary considerably. Bristol has the lowest in absolute terms, with 1, 11 and 10 applicants with offers in C1-3 respectively.

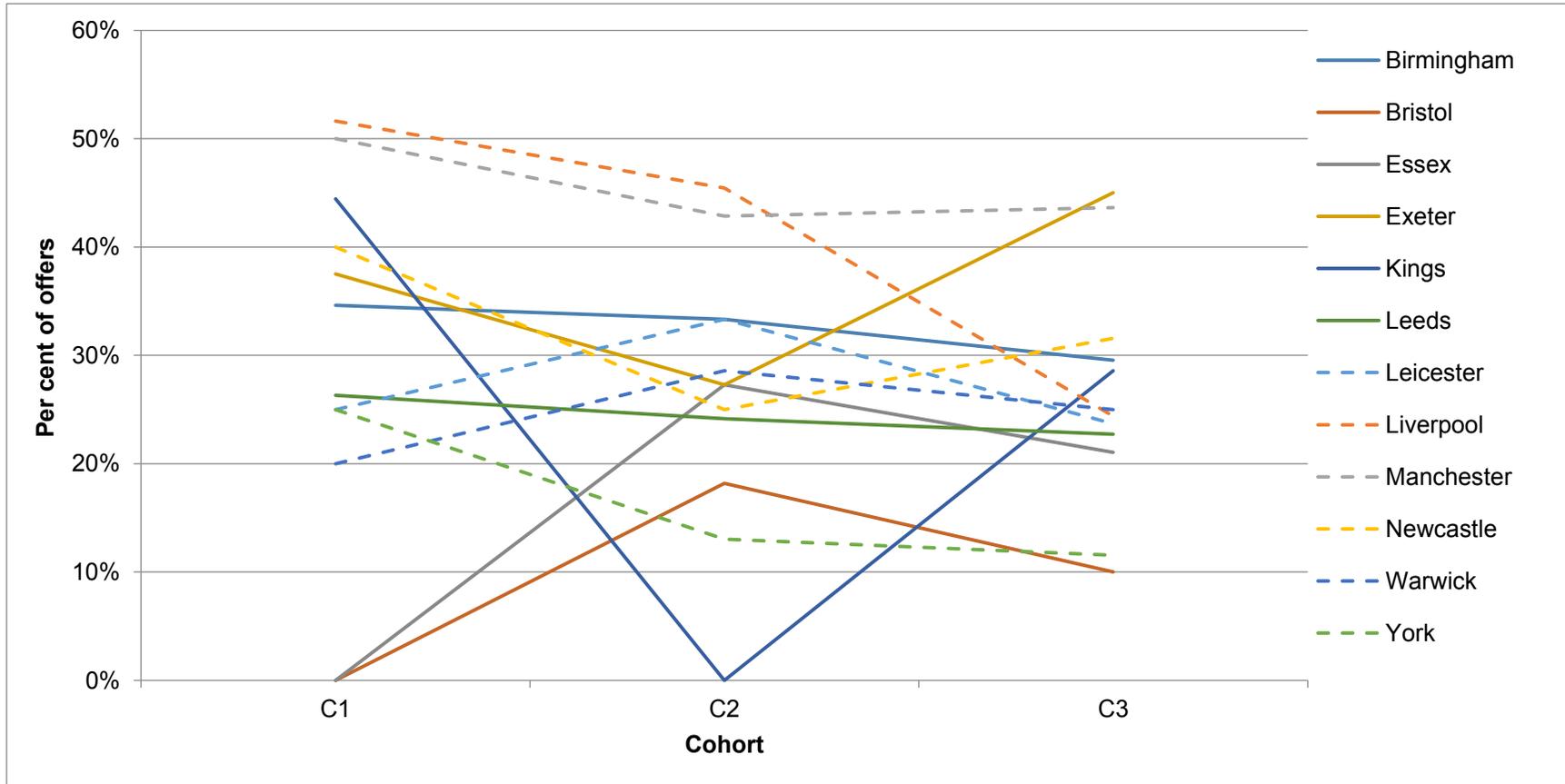


Chart C.3 Percentage of offers leading to enrolments of RO completers at each partner university

This chart provides a measure of the proportion of applicants with offers who eventually enrol at each partner institution. Since this chart is based upon UCAS data, it is not possible to distinguish which enrolments were based upon alternative or standard offers (this informed, provided by each partner university, is presented in Appendix D). Given the relatively low numbers of offers made at each university, caution should be taken in inferring conclusions about the relationship between offers and enrolments at each institution. Bristol and Kings College London appear to make relatively fewer offers and observe fewer enrolments. York makes a notably higher number of offers to applicants, but is seen to observe a relatively low number of enrolments

Appendix D

Alternative Offers at each partner university¹

	C1			C2			C3			C4			C5		
	<i>n</i>	% RO completers	%	<i>n</i>	% RO completers	%	<i>n</i>	% RO completers	%	<i>n</i>	% RO completers	%	<i>n</i>	% RO completers	%
Birmingham															
<i>UCAS/HEAT</i>															
Applied	45	26.3		44	36.6		75	18.6		-	-		-	-	
Receive offer	26	15.2		21	7.9		44	10.9		-	-		-	-	
Accept offer	12	7.0		10	3.8		23	5.7		-	-		-	-	
Enrol	9	5.3		7	2.6		13	3.2		6	1.5		-	-	
Applications receiving offer			57.8			47.7			58.7			-			-
Offers accepted			46.2			47.6			52.3			-			-
Offers enrolled			34.6			33.3			29.5			-			-
Applications enrolled			20.0			15.9			17.3			-			-
Offer rate (offers: applications)		55.6% (54: 30)			45.8% (48: 22)			57.6% (85: 49)							
Unconditional offers (known)		33.3% (10)			31.8% (7)			28.6% (14)							
<i>Data from institution</i>															
Applied	-			-			-			-			-		
Offer (standard)	0			0			0			0			0		
Offer (standard and alternative)	21			19			38			50			45		
Offer (total)	21			19			38			50			45		
<i>UCAS offer mismatch</i>	-5			-2			-6			-			-		
Did not meet offer	11			8			6			16			-		
Enrolled (standard)	4			4			12			1			-		
Enrolled (alternative)	6			2			6			5			-		
Enrolled (total)	10			6			18			6			-		
<i>HEAT enrolled mismatch</i>	1			-1			5			-			-		

¹ Notes: in each table, the third column, entitled ‘%’ is calculated either as a percentage of **applications** for the UCAS/HEAT data, or of **offers made** from the institution data. Mismatch between UCAS/ HEAT and institutional data likely owes to uncertainty over the unit of analysis, i.e. whether applicants or applications ought to be counted by institutions.

	C1			C2			C3			C4			C5		
	<i>n</i>	% RO completers	%	<i>n</i>	% RO completers	%	<i>n</i>	% RO completers	%	<i>n</i>	% RO completers	%	<i>n</i>	% RO completers	%
Bristol															
<i>UCAS/HEAT</i>															
Applied	11	6.4		19	7.2		30	7.4		-	-		-	-	
Receive offer	1	0.6		11	4.2		10	2.5		-	-		-	-	
Accept offer	0	0.0		3	1.1		5	1.2		-	-		-	-	
Enrol	0	0.0		2	0.8		1	0.2		4	-		-	-	
Applications receiving offer			9.1			57.9			33.3			-			-
Offers accepted			0.0			27.3			50.0			-			-
Offers enrolled			0.0			18.2			10.0			-			-
Applications enrolled			0.0			10.5			3.3			-			-
Offer rate (offers: applications)		9.1% (11: 1)			55.0% (20: 11)			31.3% (32: 10)				-			-
Unconditional offers (known)		0% (0)			27.3% (3)			30.0% (3)				-			-
<i>Data from institution</i>															
Applied	-			-			-			-			67		-
Offer (standard)	-			0			5			-			9		-
Offer (standard and alternative)	-			2			7			-			21		-
Offer (total)	-			2			12			-			30		-
UCAS offer mismatch	-			-9			2			-			-		-
Did not meet offer	-			-			-			-			21		-
Enrolled (standard)	-			-			-			-			-		-
Enrolled (alternative)	-			-			-		5				-		-
Enrolled (total)	-			1			-		6				-		-
HEAT enrolled mismatch	-			-1			-		2				-		-

	C1			C2			C3			C4			C5		
	<i>n</i>	% RO completers	%	<i>n</i>	% RO completers	%	<i>n</i>	% RO completers	%	<i>n</i>	% RO completers	%	<i>n</i>	% RO completers	%
Essex															
<i>UCAS/HEAT</i>															
Applied	8	4.7		13	4.9		20	5.0		-	-		-	-	
Receive offer	7	4.1		11	4.2		19	4.7		-	-		-	-	
Accept offer	4	2.3		4	1.5		9	2.2		-	-		-	-	
Enrol	0	0.0		3	1.1		4	1.0		9	-		0	-	
Applications receiving offer			87.5			84.6			95.0			-			-
Offers accepted			57.1			36.4			47.4			-			-
Offers enrolled			0			27.3			21.1			-			-
Applications enrolled			0			23.1			20.0			-			-
Offer rate (offers: applications)		87.5% (8: 7)			84.6% (13: 11)			87.0% (23: 20)				-			-
Unconditional offers (known)		57.1% (4)			36.4% (4)			30.0% (6)				-			-
<i>Data from institution</i>															
Applied	-														
Offer (standard)	-														
Offer (standard and alternative)	-														
Offer (total)	-														
<i>UCAS offer mismatch</i>	-														
Did not meet offer	-														
Enrolled (standard)	-														
Enrolled (alternative)	-														
Enrolled (total)	-														
<i>HEAT enrolled mismatch</i>	-														

	C1			C2			C3			C4			C5		
	<i>n</i>	% RO completers	%	<i>n</i>	% RO completers	%									
Exeter															
<i>UCAS/HEAT</i>															
Applied	12	7.0		17	6.4		34	8.4		-	-		-	-	
Receive offer	8	4.7		11	4.2		20	5.0		-	-		-	-	
Accept offer	4	2.3		4	1.5		13	3.2		-	-		-	-	
Enrol	3	1.8		3	1.1		9	2.2		-	-		-	-	
Applications receiving offer			66.7			64.7			58.8			-			-
Offers accepted			50.0			36.4			65.0			-			-
Offers enrolled			37.5			27.3			45.0			-			-
Applications enrolled			25.0			17.6			26.5			-			-
Offer rate (offers: applications)		57.1% (14: 8)			63.2% (19: 12)			57.9% (38: 22)							
Unconditional offers (known)		50.0% (4)			41.7% (5)			54.5% (12)							
<i>Data from institution</i>															
Applied	-			-			-			-			-		
Offer (standard)	0			0			0			0			0		
Offer (standard and alternative)	14			19			19			34			61		
Offer (total)	14			19			19			34			61		
<i>UCAS offer mismatch</i>	6			8			8			-			-		
Did not meet offer	3		21.4				3		15.8	6		17.6	-		
Enrolled (standard)	2						1			0			-		
Enrolled (alternative)	1						3			0			-		
Enrolled (total)	3		21.4				4		21.1	0			-		
<i>HEAT enrolled mismatch</i>	-						1			-			-		

	C1			C2			C3			C4			C5		
	<i>n</i>	% RO completers	%	<i>n</i>	% RO completers	%	<i>n</i>	% RO completers	%	<i>n</i>	% RO completers	%	<i>n</i>	% RO completers	%
King's College London															
<i>UCAS/HEAT</i>															
Applied	26	15.2		12	4.5		14	3.5		-	-		-	-	
Receive offer	9	5.3		5	1.9		7	1.7		-	-		-	-	
Accept offer	6	3.5		1	0.4		3	0.7		-	-		-	-	
Enrol	4	2.3		0	0.0		2	0.5		3	-		-	-	
Applications receiving offer			34.6			41.7			50.0			-			-
Offers accepted			66.7			20.0			42.9			-			-
Offers enrolled			44.4			0.0			28.6			-			-
Applications enrolled			15.4			0.0			14.3			-			-
Offer rate (offers: applications)		34.5% (29: 10)			41.7% (12: 5)			50.0% (17: 7)							
Unconditional offers (known)		60.0% (6)			20.0% (1)			42.9% (3)							
<i>Data from institution</i>															
Applied	-			-			-			-			-		
Offer (standard)	-			-			-			-			6		
Offer (standard and alternative)	-			-			-			-			26		
Offer (total)	-			-			-			-			32		
<i>UCAS offer mismatch</i>	-			-			-			-			-		
Did not meet offer	-			-			-			-			-		
Enrolled (standard)	-			-			-			-			-		
Enrolled (alternative)	-			-			-			-			-		
Enrolled (total)	-			-			-			-			-		
<i>HEAT enrolled mismatch</i>	-			-			-			-			-		

	C1			C2			C3			C4			C5		
	<i>n</i>	% RO completers	%	<i>n</i>	% RO completers	%	<i>n</i>	% RO completers	%	<i>n</i>	% RO completers	%	<i>n</i>	% RO completers	%
Leeds															
<i>UCAS/HEAT</i>															
Applied	37	21.6		61	23.0		93	23		-			-		-
Receive offer	19	11.1		29	10.9		44	10.9		-			-		-
Accept offer	8	4.7		10	3.8		16	4		-			-		-
Enrol	5	2.9		7	2.6		10	2.5		11	-		-		-
Applications receiving offer			51.4			47.5			47.3			-			-
Offers accepted			42.1			34.5			36.4			-			-
Offers enrolled			26.3			24.1			22.7			-			-
Applications enrolled			13.5			11.5			10.8			-			-
Offer rate (offers: applications)	47.5% (40: 19)			44.1% (68: 30)			45.1% (102: 46)								
Unconditional offers (known)	21.1% (4)			33.3% (10)			30.4% (14)								
<i>Data from institution</i>															
Applied	-			-			-			-			-		-
Offer (standard)	0			0			0			0			0		-
Offer (standard and alternative)	26			19			52			48			67		-
Offer (total)	26			19			52			48			67		-
<i>UCAS offer mismatch</i>	7			10			8			-			-		-
Did not meet offer	0		0.0	8		42.1	13		25.0	1		2.1	-		-
Enrolled (standard)	3			2			8			2			-		-
Enrolled (alternative)	2			4			5			10			-		-
Enrolled (total)	5		19.2	6		31.6	13		25.0	12		25.0	-		-
<i>HEAT enrolled mismatch</i>	-			1			3			1			-		-

	C1			C2			C3			C4			C5		
	<i>n</i>	% RO completers	%	<i>n</i>	% RO completers	%	<i>n</i>	% RO completers	%	<i>n</i>	% RO completers	%	<i>n</i>	% RO completers	%
Leicester															
<i>UCAS/HEAT</i>															
Applied	32	18.7		32	12.1		48	11.9		-			-		
Receive offer	20	11.7		24	9.1		38	9.4		-			-		
Accept offer	10	5.8		11	4.2		19	4.7		-			-		
Enrol	5	2.9		8	3.0		9	2.2		8			-		
Applications receiving offer			62.5			75.0			79.2				-		-
Offers accepted			50.0			45.8			50.0				-		-
Offers enrolled			25.0			33.3			23.7				-		-
Applications enrolled			15.6			25.0			18.8				-		-
Offer rate (offers: applications)		58.3% (36: 21)			72.7% (33: 24)			78.8% (52: 41)							
Unconditional offers (known)		47.6% (10)			37.5% (9)			34.1% (14)							
<i>Data from institution</i>															
Applied	-			-			-			-			-		
Offer (standard)	-			-			-			-			-		
Offer (standard and alternative)	-			-			-			-			-		
Offer (total)	-			-			-			-			-		
<i>UCAS offer mismatch</i>	-			-			-			-			-		
Did not meet offer	-			-			-			-			-		
Enrolled (standard)	-			-			-			-			-		
Enrolled (alternative)	-			-			-			-			-		
Enrolled (total)	-			-			-			-			-		
<i>HEAT enrolled mismatch</i>	-			-			-			-			-		

	C1			C2			C3			C4			C5		
	<i>n</i>	% RO completers	%												
Liverpool															
<i>UCAS/HEAT</i>															
Applied	43	25.1		43	16.2		60	14.9		-			-		
Receive offer	31	18.1		33	12.5		41	10.1		-			-		
Accept offer	24	14.0		19	7.2		22	5.4		-			-		
Enrol	16	9.4		15	5.7		10	2.5		4			-		
Applications receiving offer			72.1			76.7			68.3			-			-
Offers accepted			77.4			57.6			53.7			-			-
Offers enrolled			51.6			45.4			24.4			-			-
Applications enrolled			37.2			34.9			16.7			-			-
Offer rate (offers: applications)		61.0% (59: 36)			64.5% (62: 40)			66.7% (66: 44)							
Unconditional offers (known)		50.0% (18)			42.5% (17)			29.5% (13)						-	
<i>Data from institution</i>															
Applied	-			51			65			74			56		
Offer (standard)	6			12			6			5			6		
Offer (standard and alternative)	35			33			44			50			40		
Offer (total)	41			45			50			55			46		
<i>UCAS offer mismatch</i>	10			12			9			-			-		
Did not meet offer	4		9.8	3		6.7	5		10	18		32.7	11		23.9
Enrolled (standard)	7			5			5			2			1		
Enrolled (alternative)	10			10			7			3			5		
Enrolled (total)	17		41.5	15		33.3	12		24.0	5		9.1	6		13.0
<i>HEAT enrolled mismatch</i>	1			-			2			1			-		

	C1			C2			C3			C4			C5		
	<i>n</i>	% RO completers	%	<i>n</i>	% RO completers	%	<i>n</i>	% RO completers	%	<i>n</i>	% RO completers	%	<i>n</i>	% RO completers	%
Manchester															
<i>UCAS/HEAT</i>															
Applied	48	28.1		47	17.7		98	24.3		-	-		-	-	
Receive offer	30	17.5		28	10.6		55	13.6		-	-		-	-	
Accept offer	19	11.1		16	6.0		32	7.9		-	-		-	-	
Enrol	15	8.8		12	4.5		24	5.9		12	-		-	-	
Applications receiving offer			62.5			59.6			56.1			-			-
Offers accepted			63.3			57.1			58.2			-			-
Offers enrolled			50.0			42.9			43.6			-			-
Applications enrolled			31.3			25.5			24.5			-			-
Offer rate (offers: applications)		57.6% (59: 34)			52.5% (59: 31)			54.5% (112: 61)							
Unconditional offers (known)		64.7% (22)			48.4% (15)			60.7% (37)							
<i>Data from institution</i>															
Applied	-		-	-		-	-		-	-		-	-		-
Offer (standard)	0		-	0		-	0		-	-		-	-		-
Offer (standard and alternative)	-		-	-		-	-		-	-		-	-		-
Offer (total)	-		-	-		-	-		-	-		-	-		-
<i>UCAS offer mismatch</i>	-		-	-		-	-		-	-		-	-		-
Did not meet offer	-		-	-		-	-		-	-		-	-		-
Enrolled (standard)	4		-	3		-	9		-	3		-	-		-
Enrolled (alternative)	3		-	1		-	4		-	4		-	-		-
Enrolled (total)	7		-	4		-	13		-	7		-	-		-
<i>HEAT enrolled mismatch</i>	8		-	8		-	11		-	-5		-	-		-

	C1			C2			C3			C4			C5		
	<i>n</i>	% RO completers	%	<i>n</i>	% RO completers	%	<i>n</i>	% RO completers	%	<i>n</i>	% RO completers	%	<i>n</i>	% RO completers	%
Newcastle															
<i>UCAS/HEAT</i>															
Applied	17	9.9		20	7.5		46	11.4		-	-		-	-	
Receive offer	10	5.8		12	4.5		38	9.4		-	-		-	-	
Accept offer	4	2.3		3	1.1		15	3.7		-	-		-	-	
Enrol	4	2.3		3	11		12	3.0		4	-		-	-	
Applications receiving offer			58.8			60.0			82.6			-			-
Offers accepted			40.0			25.0			39.5			-			-
Offers enrolled			40.0			25.0			31.6			-			-
Applications enrolled			23.5			15.0			26.1			-			-
Offer rate (offers: applications)		58.8% (17: 10)			54.5% (22: 12)			75.5% (53: 40)							
Unconditional offers (known)		40.0% (4)			25.0% (3)			42.5% (17)							
<i>Data from institution</i>															
Applied	-			-			-			-			-		
Offer (standard)	0			2			7			1			1		
Offer (standard and alternative)	16			11			39			39			37		
Offer (total)	16			13			46			40			38		
<i>UCAS offer mismatch</i>	6			1			8			-			-		
Did not meet offer	2		12.5	0			3		6.5	8			-		-
Enrolled (standard)	2			1			6			1			-		-
Enrolled (alternative)	3			2			6			3			-		-
Enrolled (total)	5		31.3	3		23.1	12		26.1	4			-		-
<i>HEAT enrolled mismatch</i>	1			-			-			-			-		-

	C1			C2			C3			C4			C5		
	<i>n</i>	% RO completers	%	<i>n</i>	% RO completers	%	<i>n</i>	% RO completers	%	<i>n</i>	% RO completers	%	<i>n</i>	% RO completers	%
Warwick															
<i>UCAS/HEAT</i>															
Applied	23	13.5		17	6.4		29	7.2		-	-		-	-	
Receive offer	15	8.8		7	2.6		20	5		-	-		-	-	
Accept offer	5	2.9		2	0.8		6	1.5		-	-		-	-	
Enrol	3	1.8		2	0.8		5	1.2		3	-		-	-	
Applications receiving offer			65.2			41.2			69.0			-			-
Offers accepted			33.3			28.6			30.0			-			-
Offers enrolled			20.0			28.6			25.0			-			-
Applications enrolled			13.0			11.8			17.2			-			-
Offer rate (offers: applications)	62.5% (24: 15)			41.2% (17: 7)			64.5% (31: 20)								
Unconditional offers (known)	20% (3)			42.9% (3)			25.0% (5)								
<i>Data from institution</i>															
Applied	-			-			-			-			-		
Offer (standard)	-			7			21			6			5		
Offer (standard and alternative)	0			0			0			0			34		
Offer (total)	-			7			21			6			39		
<i>UCAS offer mismatch</i>	-			-			1			-			-		
Did not meet offer	-			5			9		42.9	2		33.3	15		38.5
Enrolled (standard)	-			2			7			3			8		
Enrolled (alternative)	0			0			0			0			6		
Enrolled (total)	-			2		28.6	7		33.3	3		50.0	14		35.9
<i>HEAT enrolled mismatch</i>	-			-			2			-			-		

	C1			C2			C3			C4			C5		
	<i>n</i>	% RO completers	%	<i>n</i>	% RO completers	%									
York															
<i>UCAS/HEAT</i>															
Applied	13	7.6		28	10.6		33	8.2		-	-		-	-	
Receive offer	8	4.7		23	8.7		26	6.4		-	-		-	-	
Accept offer	4	2.3		10	3.8		8	2.0		-	-		-	-	
Enrol	2	1.2		3	1.1		3	0.7		7	-		-	-	
Applications receiving offer			61.5			82.1			78.8			-			-
Offers accepted			50.0			43.5			30.8			-			-
Offers enrolled			25.0			13.0			11.5			-			-
Applications enrolled			15.4			10.7			9.1			-			-
Offer rate (offers: applications)		61.5% (13: 8)			82.1% (28: 23)			76.5% (34: 26)							
Unconditional offers (known)		12.5% (1)			21.7% (5)			15.4% (4)							
<i>Data from institution</i>															
Applied	-			-			-			-			-		
Offer (standard)	8			5			1			4			-		
Offer (standard and alternative)	7			21			28			23			3		
Offer (total)	15			26			29			27			-		
<i>UCAS offer mismatch</i>	7			3			3			-			-		
Did not meet offer	1		6.7	1		3.8	2		6.9	0			-		-
Enrolled (standard)	3			2			2			5			-		-
Enrolled (alternative)	-			2			1			2			-		-
Enrolled (total)	-			4		15.4	3		10.3	7		25.9	-		-
<i>HEAT enrolled mismatch</i>	-			1			1			-			-		-

Appendix E

Survey response rates

This evaluation has recommended that response rates to the student questionnaire require improvement, to increase the certainty of conclusions that can be drawn. In this Appendix, more detailed recommendations are presented, specific to this aim.

Firstly however, it is important to acknowledge that responses to student surveys have fallen internationally over the last decade (Coates 2006; Sid Nair *et al.* 2008); in other words, the issue faced by the RO partnership is a sector-wide concern. Nevertheless, low response rates are considered problematic since they undermine confidence in the extent to which an achieved sample is likely to be similar to the survey population. In addition, the decision to participate in a survey or not, is itself thought to introduce a form of bias – often known as ‘non-response’ bias – meaning that survey respondents are in some way different to non-respondents. This further undermines confidence in the validity and reliability of survey results. Non-response bias can be gauged to some extent by conducting a bias analysis (see below), but may relate to an ‘un-observed’ variable or number of variables, such as personality or prior experience, which correlate with a set of responses that are either more positive or more negative than one would find in a representative sample. Put simply, non-response bias may lead to the recording of more extreme views.

While the academic literature is divided on the matter of an ‘acceptable’ response rate, the following suggestions are made to boost response rates and improve confidence in the questionnaire data collected.

- **Timing** – the timing of surveys is thought to have a significant impact upon response rates. The partnership should systematically consider the academic timetable of its students, and take care to avoid any pinch-points such as mock or final exams. It is strongly recommended that the possibility of appending the baseline questionnaire to any enrolment documents is explored. If students are advised that they must complete the baseline questionnaire at the start of the programme, and this is presented as part of the induction process, a close to universal response rate may be achievable. It is thought that the day of the week may also have an effect; with surveys launched on Friday performing better than those released on a Monday (SurveyMonkey 2011). It can work well if student surveys are active during the holidays, but surveys should not be *launched* during holidays.
- **Sell** – the purpose and importance of the questionnaire must be clearly communicated to students. The survey preface should clearly explain the aims and rationale for the survey, the benefits of participation (for instance, that data collected will be used for the purposes of improving the programme for current and future cohorts), and what participation entails (for example, by including a brief outline of the survey contents). Ideally this message should come directly from a senior figure in the RO partnership.
- **Combination of incentives** – incentives are known to increase response rates, and we note that the partnership currently employs a prize draw. An alternative approach may be considered, which combines different incentive systems. For example, the offer of a prize draw plus a guaranteed small prize for the first x respondents. The partnership should periodically

review the attractiveness of the prizes that they offer. Current students on the programme may be asked for their views on a desirable prize. Offering a set-amount charity donation for each survey response has, in recent years, proved a popular and effective alternative to the standard prize draw.

- **Use of online survey software** – we welcome the partnership’s decision to employ online survey software. The use of targeted reminders should be explored, as these are known to boost response rates by sending a focused reminder to those who have not yet participated (Dillman *et al.* 2009). Many students may complete the questionnaire using a mobile device. Therefore, the partnership should ensure that the questionnaire can easily be completed on a smartphone (most online survey software packages have a function to optimise the survey for use on a mobile). The use of a progress bar, possible on most survey software packages, can encourage participants to submit a complete return.
- **Bias analysis** – once survey data have been collected, a simple bias analysis can be conducted to see whether the survey sample well reflects the total cohort. This can be done by comparing key socio-economic and academic variables across the survey sample and entire cohort. If the two groups appear to be similar, a low response rate can be defended. However, if there are differences between the two groups, supplementary data collection may be considered (see below).
- **Supplementary data collection** – this last point relates mostly to the follow-up questionnaire, which receives the lowest response rates. To an extent, it is to be expected that responses to the follow-up survey will generally be lower than those achieved for the baseline survey, but the suggestions offered above should be considered to see whether improvements can be achieved. Furthermore, in terms of reaching students who leave the programme early, or who do not apply to university (likely the ‘hardest to engage’), focus groups or telephone interviews might be trialled in order to ensure the perceptions and decisions of these students are better understood. As noted in the report, rather than waiting for these data to accumulate over future cohorts, it might be instructive at this stage to contact students from previous cohorts who enrolled at other HEIs, and seek their reasons and motivations for doing so, on a retrospective basis.

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