

## UNIVERSITY OF ABERDEEN

SENATE  
(24 April 2017)

**PHD COMPLETION RATES****1. EXECUTIVE SUMMARY**

This paper presents information about PhD completion rates in response to a request from Senate. It also provides information on supporting activities that may be implemented by the new University-wide Graduate School to improve completion rates.

Senate is invited to discuss the paper.

Further information is available from Professor Judith Masthoff, Dean of the Postgraduate Research School, e-mail: [j.masthoff@abdn.ac.uk](mailto:j.masthoff@abdn.ac.uk) and Dr Lucy Leiper, Manager of the Postgraduate Research School, [l.leiper@abdn.ac.uk](mailto:l.leiper@abdn.ac.uk).

**2. BACKGROUND AND STRATEGIC CONTEXT**

Postgraduate research students (PGRs) have significant influence on our research culture and its vibrancy. Ensuring the best environment for our PGRs is critically important to the strength of our research activity; to underpin the activity of our academic staff; our future REF submission strategy; to our continuing to build our global research profile and ultimately for the career development of our research students. Reporting of completion rates is essential for audit and funding purposes (HESA, Research Councils etc). Annually, the University is required to report to individual research councils the completion rates of RCUK funded students. Individual Research Councils have slightly varying requirements, but on average a current year or aggregated four year submission rate below 60-70% will trigger a warning and possible sanctions for the institution. These can include suspension of funding or prevention of new applications for a period of two years.

Completion rates also provide an indicator of the quality of the student experience, the quality of supervision, the effectiveness of our monitoring processes and the training and support we make available through the PhD journey.

They also reflect our admissions and selection processes, that is, how effectively we accept excellent students and who are well-matched to the research interests of their supervisory team and the research culture of the discipline within which they will be working. For students, low completion rates (including the length of time to complete) can be demotivating (Baird, 1990) and for the institution this can also suggest inefficiencies in institutional processes for managing PGRs and inefficient use of spaces, facilities and scholarships (Geven *et al.* 2013).

There are significant challenges around attracting PGR students in a highly competitive market that values a high quality supportive student experience. In order to remain competitive we must strive to continuously improve our completion rates across schools and the institution.

PGR completion data is generated from the Integrated Research Reporting database (IRR). The completion rate is calculated as the percentage of students who were due to submit within the selected year, who actually did so. It is based on headcount, and analysed by discipline of Study Aim. In the IRR, submission due dates are calculated as follows:

- For full-time students, up to 48 months from the student's start date
- For part-time students, up to 84 months from the student's start date

It is important to note that a successful completion means that a student has submitted a thesis within a given timeframe, but does not consider if the thesis was passed at viva and a doctorate awarded. This is also in line with the RCUK definition for completion rates.

The IRR uses an algorithm for calculating completion rates, however this does not account for changes to study mode and periods of study suspension. This gives an insight into how quickly a student completes, that is, overall how quickly a student finishes their PhD, it does not however take into account how many or often suspensions etc. are granted during a studentship. We have subsequently investigated and amended the algorithms underlying the IRR and have recalculated completion rate data to provide a more accurate picture of institutional and individual school completion rates.

Data presented in Section 3 shows the PGR student completion rate for supervised doctoral students for the selected year (01 August to 31 July). The data suggest that our institutional completion rates are low, 65% (AY 13/14), 60% (AY 14/15) and 59% (AY 15/16).

Differences in completion rates have also been investigated and are presented below. Details of actions the Graduate School can take to support schools and disciplines in addressing completion rates are outlined in Section 4.

### 3. COMPLETION RATE DATA

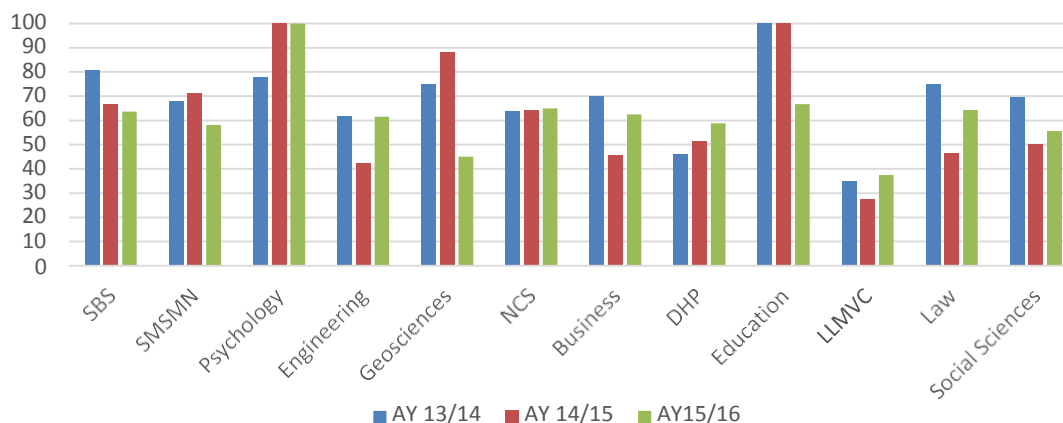
Data presented in this section shows the PGR student completion rate for doctoral students for the selected academic year (AY), i.e. from 01 August to 31 July. Figure 1 and Table 1 show the 'actual' completion data as calculated by manipulating the data from the IRR, taking account of study mode changes, periods of suspension, and allowing part-time students the equivalent time to full-time students (so, 96 months part-time versus 48 months full-time). In contrast, Figure 2 and Table 2 show the unmodified IRR data, which gives an insight into how quickly a student completes as described above.

**Schools.** A Chi-Square test on the combined data over the 3-year period<sup>1</sup> shows a significant association between school and on-time-completion ( $\chi(10)=41.5$ ,  $p<.001$ ), with a moderate strength of association (Cramer's  $V=.22$ ). When considering the differences in completion rates in the schools, it should be noted that some schools have very few PGR students, which makes completion data less reliable. Schools also differ widely in demographics (see Table 3); the impact this may have is studied below.

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<sup>1</sup>The school of Education has been excluded from the statistical test, as it resulted in a cell with expected count of less than 5.

**Figure 1. Actual PGR completion rates for AY 13/14, 14/15 and 15/16.** Data has been calculated based on the IRR and manipulated to account for study mode changes, periods of suspension, and part-time period allowed to complete.

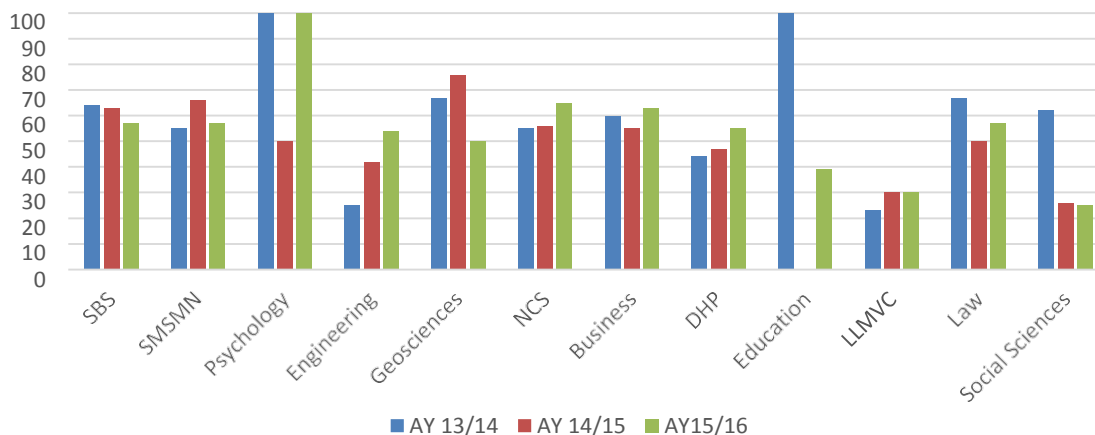


**Table 1. Actual PGR completion rates for AY 13/14, 14/15 and 15/16. N is number who should have completed, % is completion rate.**

Field of study	School	AY 13/14		AY 14/15		AY 15/16		Overall	
		%	N	%	N	%	N	%	N
Life Sciences and Physical Sciences	Biological Sciences	81	47	67	27	64	44	71	118
	MMSN	68	84	71	69	58	74	65	227
	Psychology	78	9	100	5	100	7	91	21
	Engineering	62	13	42	19	62	13	53	45
	Geosciences	75	24	88	17	45	20	69	61
	NCS	64	36	64	25	65	20	64	81
	<b>Overall</b>	<b>70</b>	<b>213</b>	<b>69</b>	<b>162</b>	<b>61</b>	<b>178</b>	<b>67</b>	<b>553</b>
Arts, Humanities, Social Sciences	Business	70	10	46	11	63	8	59	29
	DHP	46	37	51	35	59	34	52	106
	Education	100	6	100	1	67	3	90	10
	LLMVC	35	23	27	22	38	16	33	61
	Law	75	8	47	15	64	14	60	37
	Social Sciences	70	23	50	16	56	18	60	57
	<b>Overall</b>	<b>56</b>	<b>107</b>	<b>45</b>	<b>100</b>	<b>56</b>	<b>93</b>	<b>52</b>	<b>300</b>
<b>University Overall</b>	<b>65</b>	<b>320</b>	<b>60</b>	<b>262</b>	<b>59</b>	<b>271</b>	<b>62</b>	<b>853</b>	

The difference between Figures 1 and 2 is quite pronounced for some schools, such as Social Sciences. One possible reason is a higher frequency of study suspensions in some schools. More investigations are needed on the frequency and duration of suspensions, and the causes of such suspensions. Whilst some suspensions cannot be avoided (for example, suspensions due to physical illness or maternity leave), there may be other causes that can perhaps be reduced by better support.

**Figure 2. Original IRR completion rates which are an indication of how quickly a student completes for AY 13/14, 14/15 and 15/16.** Data is the original IRR completion rate data which does not account for study mode changes, periods of suspension, and has a shorter part-time expected study completion time (84 months).



**Table 2. Original IRR completion rates, which are an indication of how quickly a student completes for AY 13/14, 14/15, and 15/16. N is number who should have completed, % is completion rate.**

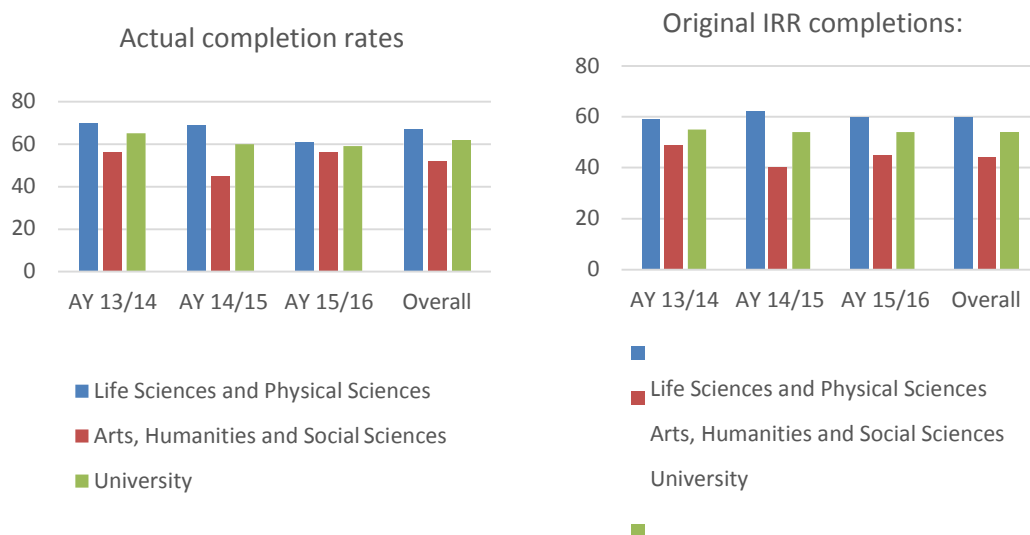
Field of Study	School	AY 13/14		AY 14/15		AY 15/16		Overall	
		%	N	%	N	%	N	%	N
Life Sciences and Physical Sciences <sup>2</sup>	Biological Sciences	64	47	63	30	57	44	61	121
	MMSN	55	78	66	73	57	72	59	223
	Psychology	100	8	50	2	100	9	95	19
	Engineering	25	12	42	19	54	13	41	44
	Geosciences	67	27	76	21	50	18	65	66
	NCS	55	31	56	27	65	17	57	75
	<b>Overall</b>		59	203	62	172	59	173	60
Arts, Humanities, Social Sciences	Business	60	10	55	11	63	8	58	29
	DHP	44	39	47	36	55	33	48	109
	Education	100	4	0	3	39	18	44	25
	LLMVC	23	22	30	23	30	10	27	55
	Law	67	9	50	18	57	14	56	41
	Social Sciences	62	21	26	19	25	16	39	56
	<b>Overall</b>		49	105	40	111	45	99	44
<b>University Overall</b>		55	308	54	282	54	272	54	862

**Field of study.** To investigate a possible effect of field of study, we have divided the data into two groups: Life Sciences and Physical Sciences on the one hand, and Arts, Humanities and Social Sciences on the other. This has been done at the level of schools, which provides an approximation only<sup>3</sup>. Tables 1 and 2 show the data per field of study, and Figure 3 visualizes this data. There seems to be an effect of field of study, with Life Sciences and Physical Sciences having a better completion rate than Arts, Humanities and Social Sciences. A Chi-Square test on

<sup>3</sup>The split made here is not completely correct, as there is humanities and social science research in the schools listed under Life and Physical Sciences, e.g., in Human Geography, Archaeology, and Health Sciences.

the combined data over the 3-year period<sup>4</sup> indeed shows a significant association between field of study and on-time-completion ( $\chi^2(1)=16.6$ ,  $p<.001$ ), however, the strength of association is very weak (Cramer's  $V=.14$ ). Performing an analysis per year, there is a significant association in AY 13/14 and 14/15 (with moderate strength in AY 14/15, Cramer's  $V=.233$ ), but not in the most recent AY 15/16. There is some evidence from the literature that field of study may influence completion rates. For example, Park (2005) found that drop-out rates were much higher in non-science students than science students, and cites several studies from North America, Australia and Britain with similar results. A more detailed analysis in van der Haert et al (2014) found no differences in field of study for drop-out rates when funding was taken into consideration.

**Figure 3. Actual versus original completion rates (%) in AY13/14-15/16, split by field of study.**



**Table 3. Demographics of students (%) per school in actual completion data for the 3-year period AY 13/14, 14/15 and 15/16. See Table 4 for Nationality abbreviations.**

School	Gender %		Study mode %		Fee status %		Nationality %									
	F	M	FT	PT	H	O	UK	REU	NAM	LAM	ME	A	E A	SE A	SA	R
SBS	60	40	92	8	69	31	44	25	2	1	6	10	6	3	4	-
MMSN	59	41	80	20	69	31	43	23	1	-	10	5	8	4	4	2
Psychology	76	24	67	33	95	5	76	19	5	-	-	-	-	-	-	-
Engineering	20	80	91	9	47	53	33	13	-	-	13	22	7	2	4	4
Geosciences	43	57	97	3	61	39	46	15	5	7	5	12	3	3	3	2
NCS	30	70	93	7	62	38	42	16	4	1	5	14	1	9	5	4
Business	35	66	97	3	3	97	-	3	3	-	38	35	3	3	14	-
DHP	28	72	89	11	47	53	30	17	29	-	7	2	2	2	9	2
Education	50	50	50	50	50	50	50	10	-	-	20	20	-	-	-	-
LLMVC	57	43	92	8	66	34	51	13	26	-	2	-	2	-	5	2
Law	30	70	97	3	24	76	19	5	3	5	16	38	3	8	3	0
Soc.Sciences	60	40	93	7	61	39	42	19	12	5	4	5	5	-	2	5
University	48	53	88	12	59	41	40	18	8	1	8	10	5	3	5	2

<sup>4</sup>The school of Education has been excluded from the statistical test, as it resulted in a cell with expected count of less than 5.

**Table 4. Demographics of students (N) in actual completion data for AY 13/14, 14/15, 15/16.**

Demographic		AY 13/14	AY 14/15	AY 15/16
<b>Gender<sup>5</sup></b>	Female (F)	149	115	141
	Male (M)	171	147	130
<b>Study Mode</b>	Full-time (FT)	277	238	237
	Part-time (PT)	43	24	34
<b>Fee status</b>	Home (H)	204	145	157
	Overseas (O)	116	117	114
<b>Nationality</b>	UK	138	99	105
	Rest EU (REU)	62	41	52
	North America (NAM)	26	19	22
	Latin America (LAM)	4	4	3
	Middle East <sup>6</sup> (ME)	22	27	23
	Africa (A)	19	35	28
	East Asia <sup>7</sup> (EA)	19	9	12
	South East Asia <sup>8</sup> (SEA)	7	9	11
	South Asia <sup>9</sup> (SA)	18	14	9
	Rest of World <sup>10</sup> (R)	5	5	6

Figures 4, 5 and 6 show actual completion rate data based on study mode (Full-time v Part-time), fee status (Overseas v Home) and gender (Male v Female). Figures 7 and 8 show completion rates by nationality, for individual years and collated. Table 4 shows the percentage of students in each demographics' category in the 3 year period. Table 3 shows the numbers of students in each demographics' category, which helps to interpret the data as some categories have few students so completion data will be less reliable. This highlights the vastly differing demographics in the schools.

**Study mode.** Over the 3-year period, part-time completion rates are better than full-time ones, with very clear differences in AY 13/14 and 14/15, whilst more similar in AY 15/16. A Chi-Square test on the combined data over the 3-year period shows a significant association between study mode and on-time-completion ( $\chi(1)=11.9$ ,  $p<.005$ ), but the strength of the association is very weak (Cramer's  $V=.12$ ). This result is in line with findings by Park (2005), who found that part-time students were more likely to successfully finish PhDs than full-time students. However, a study by HEFCE (2005) found no difference between study modes. We do not have data to identify potential underlying reasons for differences between full and part-time students, but it would be interesting to explore how part-time students define part-time in terms of hours. Similarly, anecdotal evidence suggests that many full-time students are working to sustain themselves (a Tier 4 visa allows working up to 20 hours a week). This raises the question how many hours full-time students are devoting to their PhD, and whether perhaps the working hours of many full-time students are similar to those of part-time students.

The available data does not allow an easy comparison between distance-learning and on campus students. Part-time students will include students who are on-campus, for instance students in work such as some clinical students, or students with caring responsibilities.

<sup>5</sup>The data is based on student records, which only has these two gender categories.

<sup>6</sup>Egypt and Turkey are included in the Middle East, whilst Libya is included in Africa

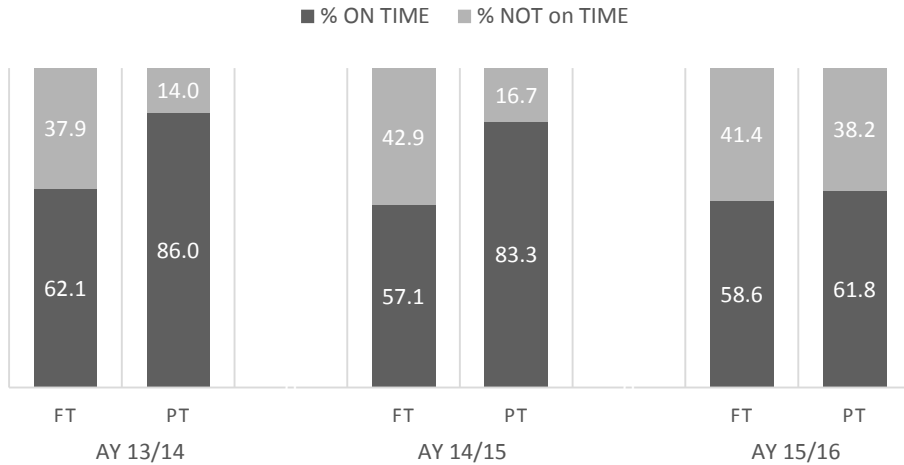
<sup>7</sup>East Asia contains countries such as India, Pakistan, Nepal, Bangladesh, Sri Lanka

<sup>8</sup>South East Asia contains countries such as Indonesia, Malaysia, Thailand, Vietnam, Cambodia, the Philippines

<sup>9</sup>South Asia contains countries such as China, Japan, South Korea

<sup>10</sup>Rest of the world includes countries such as Norway, Russia, Ukraine, New Zealand, Switzerland, Serbia

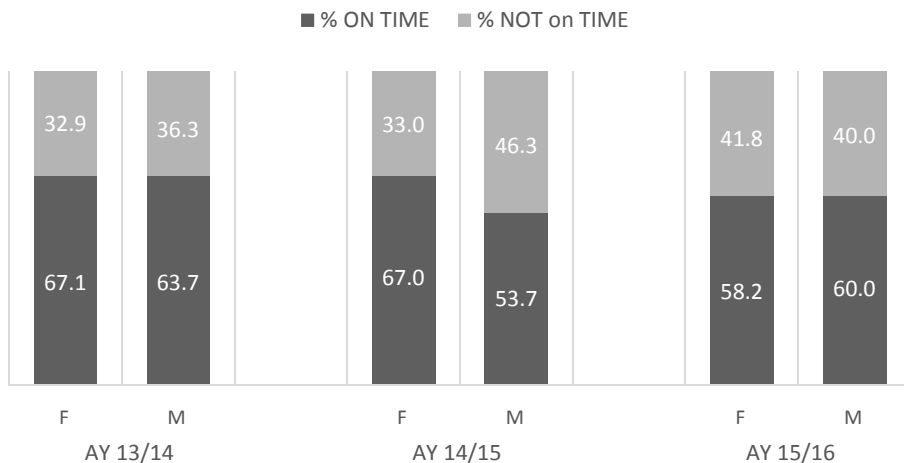
**Figure 4. Actual completion rates by study mode for AY 13/14, 14/15 and 15/16.**



**Funded versus self-funded.** The available data does not identify funded and self-funded students and it will be important to identify if access to funding impacts on completion rates. Several research studies suggest funding significantly improves completion rates (discussed in Section 4). This may impact completion rates in schools with higher proportions of self-funded students. It is likely that there are fewer funded students in certain disciplines, particularly in arts and humanities (outside of Law and Business), which may be a contributing factor to the lower completion rates in those disciplines.

**Gender.** There seems to be no difference in completion rates based on gender; whilst the completion rates of female students were better in AY 13/14 and 14/15, more recently they have become very similar. A Chi-Square test on the combined data over the 3-year period shows no significant association between gender and on-time-completion ( $\chi^2(1)=1.9, p=.17$ ). This is in line with results from Park (2005) who also found no significant association between gender and drop-out rates. However, as there clearly are differences in the disciplines studied (see Table 3), further analysis is needed to examine the impact of gender if other factors are equal.

**Figure 5. Actual completion rates by gender for AY 13/14, 14/15 and 15/16.**



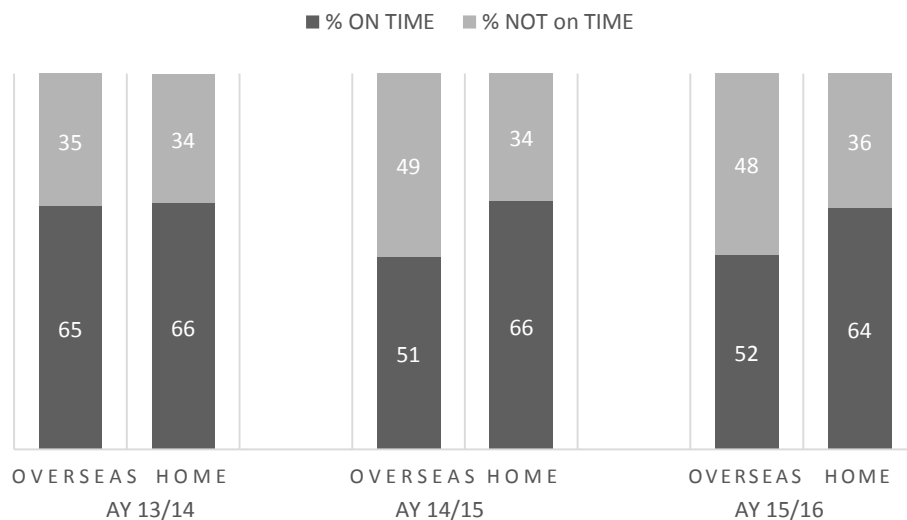
**Fee status.** Completion rates of home<sup>11</sup> students tend to be higher than those of overseas<sup>12</sup> students, with there being a clear difference in the last two years of the investigated period. This

<sup>11</sup> Home students are students who have been classified as needing to pay home fees. This normally includes UK students and students from the EU.

<sup>12</sup> Overseas students are students who have been classified as needing to pay international fees.

may impact completion rates in schools with higher numbers of international students (such as Business, Law, Engineering, DHP). A Chi-Square test on the combined data over the 3-year period shows a significant association between fee status and on-time-completion ( $\chi(1)=7.9$ ,  $p<.01$ ), but the strength of the association is very weak (Cramer's  $V=.1$ ). Also, the logistic regression below shows no effect when accounting for other factors, such as school. The literature on fee-status is divided, with some finding that home students are more likely to drop-out than overseas students (e.g. Park, 2005; Smallwood 2004), whilst others find the opposite (e.g. HEFCE, 2005). Of course, there is a difference between successful completion and the completion rates in this paper, which are about completing within a specified period.

**Figure 6. Actual completion rates by fee status for AY 13/14, 14/15 and 15/16.**

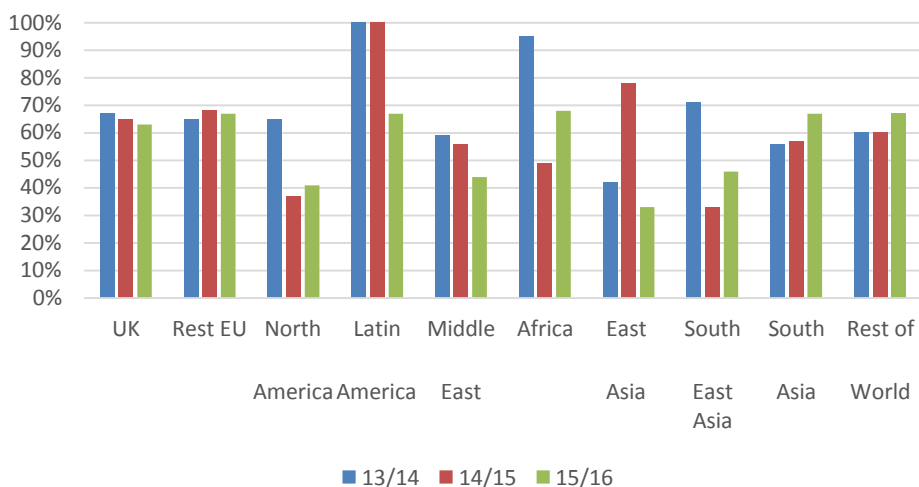


**Nationality.** Overseas students are a very heterogeneous groups, so we also investigated the impact of nationality. As shown in Figure 6, for some geographical areas there is much fluctuation in the completion data over the years. In part this may be caused by student numbers from some areas being quite small (as can be seen in Table 3). We have therefore also collated the data over the 3-year period, as shown in Figure 7. Even in this collation, some numbers are still quite small. So, for example, although it looks as if Latin American students have better completion rates, this is a rather small sample and so we cannot really reliably draw this conclusion. A Chi-Square test on the combined data over the 3-year period<sup>13</sup> shows a significant association between nationality and on-time-completion ( $\chi(8)=16.0$ ,  $p<.05$ ), but the strength of the association is very weak (Cramer's  $V=.14$ ). We had expected a clearer effect of language, with lower completion rates for students from areas with less fluency in English. However, completion rates for North American students are quite similar to those from South East Asia, East Asia and the Middle East, with better completion rates for South Asia. Of course, there may be other confounding factors, such as the disciplines studied, the academic background of the students, and whether the students have funding. For example, we expect more of the North American students to be self-funded, whilst more of the South East Asian students may be funded through government schemes. Given the sample sizes, it will be hard to investigate the impact of nationality when other factors are equal (and indeed the logistic regression below shows no effect), but follow on qualitative research can be done to investigate in more detail what has caused students from certain nationalities to not complete on time.

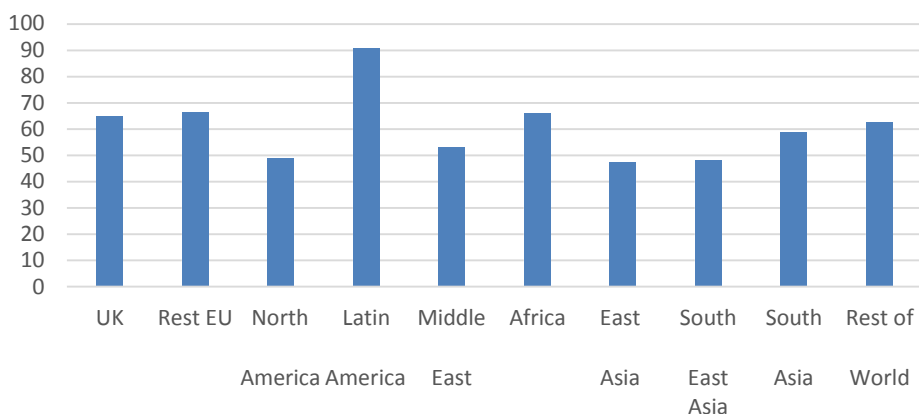
<sup>13</sup> Latin America has been excluded from the statistical test, as it resulted in a cell with expected count of less than 5.



**Figure 7. Actual completion rates by nationality for AY 13/14, 14/15 and 15/16.**



**Figure 8. Collated actual completion rates by nationality for the three year period of AY 13/14, 14/15 and 15/16.**



**Regression model.** A logistic regression was performed to ascertain the effects of school, field of study, study mode, fee status, gender, and nationality on the likelihood that PGR students complete on time. The logistic regression model was statistically significant,  $\chi^2(23) = 71.811$ ,  $p < .001$ . The model explained 11.0% (Nagelkerke  $R^2$ ) of the variance in on-time completion and correctly classified 64% of cases. There was a highly significant overall effect of school (Wald=34,  $df=11$ ,  $p < .001$ ), with students in Psychology more likely to complete on time (OR=5.2) and students in LLMVC less likely (OR=0.33). There was also a highly significant overall effect of study mode (Wald=10,  $df=1$ ,  $p < .005$ ), with full-time students less likely to complete on time (OR=0.44). There were no significant effects of gender, fee status, and nationality, when controlling for the other factors. However, this does not mean that these demographic factors need to be excluded when considering improvements in completion rates, as the reasons for not completing on time and the support that could improve completion rates may well differ depending on the kind of student. Also, the relatively low sample sizes for nationalities may obscure an effect.

The model did not incorporate field of study, which is not surprising given its relationship with schools. Performing the logistic regression without school as a variable, results in field of study being included (significant, Wald=12,  $p < .005$ ), with students who study Arts, Humanities, and Social Sciences less likely to complete on time (OR=.58). However, this model is worse; it only explains 7% (Nagelkerke  $R^2$ ) of the variance in on-time completion and only correctly classified 62% of cases, which is pretty similar to a model that simply predicts on-time completion for all students. So, whilst there may be some association of completion time with field of study, it seems that there is more of an association with schools.

## 4. GRADUATE SCHOOL ACTIONS TO SUPPORT IMPROVING COMPLETION RATES

This section details actions that the Graduate School can undertake, some of which are already underway, that will help to positively impact on the student experience and in time, completion rates. Many actions are based on student feedback (e.g. evaluation forms, Postgraduate Research Experience Survey (PRES) data and anecdotal evidence) and from published research into completion rates (most of which is on drop-out rates, with a meta-analysis of 118 studies in Baird & Haworth, 1999). All actions are initial proposals, which require more detail and will need to be discussed and co-designed with the Schools, PGR student representatives, and other stakeholders. The implementation of actions will require close collaboration with Schools.

### 4.1 Increasing the proportion of funded PGR students

The high risk of dropout for self-funded students has been highlighted by van der Haert *et al* (2014) and may be a factor in the lower completion rates observed for certain schools, particularly in Arts, Humanities, and Social Sciences. Litalien and Guay (2015) predicted (using mathematical modeling) that obtaining a scholarship appears to play a role in completion rates. Several other studies (reviewed by Geven *et al.* 2013) have identified that financial support is an important factor as it can ensure that students can live without having to take up employment elsewhere (including teaching roles), which can distract from research priorities, particularly in the final stages of thesis completion. Student feedback has also highlighted a need for more financial support for their studies, including for conference travel.

Possible actions include:

- Improving the submission and success rates of grants by staff and PGR students that can finance PGR stipends and research costs, such as Doctoral Training Centres and grants provided directly to students by societies and companies. This involves (1) better horizon scanning, (2) more strategic actions such as focused sand-pits to encourage appropriate submissions, (3) better training for staff (which can be provided as part of the Grant Academy), (4) better quality control and early feedback on planned proposals.
- Improving funding from charitable donations by close collaboration with the Development Trust and ensuring funding for PGR students is incorporated where possible in the fund-raising projects.
- Improving the recruitment of international PGR students who are funded through government and university capacity building schemes, in close collaboration with Student Recruitment and Admissions. This may involve:
  - Increasing the support provided for such students to find appropriate supervisors, prepare a good research proposal (where required by the discipline), and improve English language skills (where required). One possibility is to develop a structured foundation to PhD programme.
  - Developing specific PhD programmes that are attractive to the target market. This may for example involve incorporating teaching development into programmes for applicants who are already employed as lecturers in their home universities. It may involve the development of more distance learning or internationally collaborative PhDs. It may involve the development of more interdisciplinary PhDs, or PhDs with embedded internships.
  - Improving the marketing of PGR programmes in countries with good funding opportunities, in close collaboration with Marketing.

### 4.2 Recruiting high quality PGR students

Several studies have shown that student ability has an impact on drop-out rates (reviewed in Van der Haert *et al*, 2014), though it needs to be considered that more able students are also more likely to have attracted funding. Schools have different approaches to assessing applicants' ability for doctoral study. In some schools (particularly in Life Sciences), applicants are assessed through interviews. In some, a written research proposal forms the basis of the assessment, whilst in others decisions are mainly based on performance in previous undergraduate and masters studies and motivation shown in the personal statement.

The survey in (Baird & Haworth, 1999) found little evidence that past academic performance (in terms of grade point average, or having finished a masters before starting the PhD, or having a previous degree from a higher ranked institution) predicted successful completion.

Most graduate schools in the US use a standardized test (such as the Graduate Record Examination, GRE, or the Millers Analogies Test, MAT) as part of their admissions process, though the importance they place on it varies. The GRE aims to measure verbal reasoning, quantitative reasoning, analytical writing, and critical thinking skills. The MAT aims to measure logical and analytical skills. There is limited evidence of an association between the general GRE/MAT scores and successful doctoral degree completion, with only some studies showing a significant effect (Baird & Haworth, 1999). However, the GRE was significantly modified in 2011 and the MAT in 2004, so after the surveyed studies happened. There is more evidence that Subject Specific GRE scores are related to successful degree completion (Baird & Haworth, 1999), but these are only available for Biology, Chemistry, English Literature, Mathematics, Physics and Psychology. The cost for taking the GRE tests is substantial (\$150-\$220), so it could reduce applicant numbers if made compulsory. The MAT test tends to be cheaper (around \$100), but its dependence on knowledge of Western Culture may make it less suitable to test international applicants, and there is also some research that shows it is age biased (Kaplan & Saccuzo, 2009).

The Graduate School will:

- Organize a workshop with the disciplines' academic PGR coordinators to discuss the current practices in the disciplines regarding the assessment of PhD applicants' ability, share best practice, and discuss ways in which these assessments can be improved.

#### **4.3 Ensuring PGR students are well prepared for doctoral research**

Doctoral research is often very different from masters and undergraduate study, with a higher need for independent learning, and more emphasis on problem solving, critical analysis and writing skills. One possible way to reduce time to complete is by ensuring PGR students are well-prepared before they start their PhD. Qualitative research into the main challenges faced by doctoral students in the first year shows that these include time-management, coping with reading and understanding many research articles, communication skills, and statistics (Schramm-Possinger & Powers, 2015). The Centre for Academic Development already runs a comprehensive programme of related training courses, which students can take after they have started their PhD. Time-management is also discussed as part of the university-wide induction programme. However, the question arises whether more can be done to support PGR students before arrival.

In some disciplines, there is much interaction with PGR applicants, as students may be supported in writing a research proposal. In other disciplines, there is no or very limited interaction, and academic input is only provided after the student has officially started. With the exception of our MRes provision in certain disciplines, and the courses provided by the Language Centre to help applicants meet English entry requirements, there is no structured approach to preparing a PhD student for arrival.

The Graduate School will:

- Explore the provision of preparatory work and training to PhD applicants who have accepted their offers. This could be specific to their field of research, to their programme or to the PhD project.
- Explore whether fee-bearing distance-learning courses can be introduced to provide a foundation for PGR study. This could for example include the provision of a Postgraduate Certificate. This may include the supervised writing of a research proposal.

#### **4.4 Ensuring PGR students are well-supported in their research**

Many studies show that the culture of supervision in a department has an influence on drop-out rates (see a meta-analysis in Bair & Haworth, 1999) and that departments that provide more support and structure increase the probability of successful completion (Gardner, 2008). Positive

relationships between students and supervisors or other academic staff are core to this, with many studies show that drop-outs are caused in part by poor supervision, lack of interest or attention of the supervisors, unavailability of the supervisors and other staff, or even a negative relationship between the student and the supervisors (Bair & Haworth, 1999).

Unsatisfactory student-supervisor relations can stem from a lack of mutually understood expectations (Austin, 2002), with expectations of the relationship often differing between students and supervisors and influenced by cultural differences (Brown, 2008). Some students may find it difficult to approach their supervisor for help, and when students do not express a need for help, supervisors may assume students do not need it (Janta et al, 2014). Given the large proportion of international students and staff in the University, ensuring a mutual understanding of expectations, and ensuring reasonable expectations from both sides is important.

The Graduate School will:

- Ensure there is a comprehensive programme of training for supervisors (see below).
- Explore possibilities of making supervisory training compulsory for all new staff who have not yet successfully completed PhD students.
- Establish a process for tracking supervisory meetings, to ensure these happen regularly and in accordance to the expectations in the discipline and the university guidelines. This should go beyond the current recording of meetings on the 6 monthly routine monitoring forms.
- Explore the establishment of an effective system of PhD advisors (outside of the supervisory team), learning from best current practice.
- Explore more robust ways to monitor and enhance the quality of the student-supervisor relationship to help prevent and overcome problematic interactions, and ensure appropriate academic and emotional support is provided.
- Ensure detailed statements of expectations for students and supervisors are specified which may be tailored to the discipline. This will go beyond what is currently specified in the academic code of practice.

One form of structure that can be provided to PGR students is structured training in the research skills relevant to their discipline. This is already the case in some of our disciplines; for example, in Psychology students are encouraged to take courses from the MRes. An initial review of some of the MRes provision in the university has already been undertaken as part of our commitment to the Scottish Graduate School for Social Science.

The Graduate School will explore in close collaboration with academic PGR coordinators and existing providers of MRes courses:

- The provision of a structured programme in research skills and research methods training for all PhD students, with different pathways tailored to discipline types, and with flexibility to tailor course selection to the background and needs of individual students.

As identified above, the Graduate School will ensure there is a comprehensive training programme for supervisors that builds on existing provision. An enhanced supervisor training programme will be piloted in June and will include:

- Understanding what the role of supervision entails, especially as UK/Scottish HE develops and changes
- Engagement with institutional, national and international frameworks for good supervisory practice
- The importance of mentoring researchers, including promoting research integrity, and exploring effective communication strategies for achieving this.
- The culture of care: the need to support research students, and to focus on their well-being, whilst also being realistic and managing their expectations
- Specific challenges faced in supervision
- More effective academic writing: Self-improvement to also improve supervisors' ability to mentor and advise their PGRs
- Supervision as part of academic career development strategy

This will integrate with PGR orientation programmes (described below).

## 4.5 Reducing PGR students' feelings of isolation and loneliness

Janta et al (2014) found that PGR students often feel isolated, are lacking emotional support, and struggle to have meaningful relationships with peers. Ali and Kohun (2007) showed that feelings of isolation contribute to PhD drop-out. Student feedback also identifies a need for more opportunities to meet and network with other PGR students, within and beyond their discipline, to feel more integrated in the discipline's research, and share research issues and questions. The positive impact of the development of a wide and vibrant PGR community that extends beyond individual disciplines has also been identified by many research studies. Some activities supported by the Centre for Academic Development are already facilitating PGR networking through the establishment of a Postgraduate Interdisciplinary Journal (Granite) and the Qualitative Research Network (meets monthly throughout the academic year). Data from the students' responses to the Postgraduate Research Experience Survey (PRES) 2015 suggest the need for an active research community, facilitated by the University that would provide an infrastructure (e.g. online platform for PGRs, buddy-programmes) for PGRs to engage more widely beyond discipline boundaries.

The Graduate School is planning new initiatives to support the PGR community in activities beyond training and development. In doing so we hope to impact positively on the wider PGR student experience while in Aberdeen. Initiatives include:

- An Enterprising Researchers' Project to explore the evidence that suggests many postgraduate students experience loneliness and isolation during their studies. This short project will investigate the extent to which postgraduate students at the University of Aberdeen experience a sense of community and belonging during their studies, and if so, how/where they gain this experience. It will also aim to identify opportunities to promote community activities which foster a sense of belonging and collegiality among PGR students at every stage of their study period
- Collaboration with the International Centre to provide a series of events targeted towards PGRs including
  - Global families events, for PGR students and their families
  - Orientation support for international students during induction
  - A calendar of social activities for PGR students
- Collaboration with the Public Engagement Unit, to provide a structured programme of opportunities for PGR students to interact with each other and the wider world in the context of Public Engagement.

Additionally, the Graduate School will explore the establishment of:

- A PGR peer-mentoring scheme, with well-defined activities to be undertaken by the mentor at different stages of the PhD.

## 4.6 Improving monitoring and progression

Geven *et al.* (2013) found that a more structured programme including imposed thesis completion deadlines impacted on completion rate between 7 and 20 percentage points. This is supported by both qualitative and quantitative evidence from studies (Hansen, 1990; De Valero, 2001; Hovdhaugen, 2011) that more structured monitoring interactions between supervisors and students can help supervisors better identify potential delays and makes the student experience more standardised which in turn can impact positively on timely PhD completion.

An essential ingredient for timely submission and completion is the clear management of expectations of both student and supervisor in relation to project aims, including explicit monitoring of progress, anticipating potential requirements for suspensions and extensions and taking action early to support students appropriately. Although we have suitable policies and procedures in place, there are instances where these have not been implemented robustly enough, meaning that while the majority of our postgraduate research students do complete their studies, too many fail to complete their degrees within the required timescale of 48 months or equivalent. The Graduate School is currently auditing monitoring processes within schools and will support the development of new practices if required and appropriate.

The Graduate School will support schools by enhancing and where necessary improve monitoring processes through:

- Identification and sharing of good practice across schools and disciplines
- Improving student's awareness of monitoring and progression requirements e.g. signposting to discipline requirements for assessments on Graduate School webpages in response to comments from students in PRES 2015.
- Development of agreed timescales for assessments within schools
- Improved follow up of skills audit forms by the Graduate School to ensure that training needs identified are supported through training and development programmes and supported by relevant Professional Services teams. PRES 2015 data also suggests 49% of responders have not undertaken a skills audit with their supervisor, even though all students should have done so within 3 months if current processes were followed. This must be improved and the Graduate School will investigate and recommend ways to improve completion of skills audits.
- Regular robust auditing of progress monitoring forms and assessments within schools.
- Exploring making successful completion of research methods courses a requirement for PhD progression.
- Development of monitoring database for reporting (including exploring links with PURE).
- Review of data recording practices.
- Review and refining of current monitoring/assessment documents.

#### 4.7 Improving Training and Development and providing a Supportive Environment

The skills and training agenda at PhD level is not new. The Roberts Report (2002) and follow on reports (Hodge, 2010 and Wilson, 2012) argued that the traditional focus in PhD research on production of the thesis has led to failure to recognise the need to acquire a wide range of skills. More recently a statement of expectation<sup>14</sup> for Postgraduate Training supported by RCUK and other funders (e.g. Wellcome Trust) underlines the commitment to training in transferable skills by funders.

In addition to the comprehensive (generic) training and development programme for students (provided by the Centre for Academic Development), the Graduate School is already implementing enhanced training and development activities to support PGR students.

New training and development initiatives that the Graduate School will include:

**Induction and Orientation:** An enhanced University-wide induction (piloted in February) for all new students including information on policies and procedures, support and training available to students, opportunities to network, orientation information, introduction to working with supervisors and making the best start in the PhD. Specifically this enhanced induction programme will:

- Elucidate and manage expectations about the doctoral process and expected timescales
- Clarify some of the issues and potential concerns, share some of these to indicate commonalities, provide suggestions for solutions
- Start to think about self-directed working, including both own working practices and also focussing on the supports that are available within the institution
- Focus in particular on the importance of developing strong supervisory relationships
- Yearly induction programme for new PGR student cohorts (piloting May-Nov 2017) including: Year 1 (6 months in): Getting Started; Year 2: Staying motivated, and Final Year: Getting finished, producing a thesis, preparing for examination and next career steps.

**Support for Writing:** Feedback evaluations from Researcher Development courses and through PRES (2015) continue to identify support for writing as an essential requirement for students. The Graduate School will:

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<sup>14</sup> <http://www.rcuk.ac.uk/documents/skills/statementofexpectation-pdf/>

- Continue to work closely with the Academic Writing advisers in the Student Learning Service to enhance the provision they already offer for PGR students
- Explore possibilities of writing retreats, peer-led writing groups, writing assistance to groups of students from several disciplines so they can appreciate the commonality of writing difficulties, and more support for supervisors.

**Research Integrity:** An online Research Governance and Ethics module already exist for all research active students and staff. To compliment this module and to satisfy expectations set out within the Concordat to Support Research Integrity<sup>15</sup> :

- An online research integrity module (for Life and Physical Sciences) is being developed (launching September 2017).
- Research Integrity workshops for Arts, Humanities and Social Sciences will take place between June and November with a view to developing as online modules next academic year. Research Integrity and 'Culture of Care' will be embedded into Supervisor training programmes, focusing on researcher well-being and how this can reflect integrity.

**Employment and careers post-completion:** Support from supervisors can be extremely valuable in advising students on the breadth of career opportunities, providing introductions and the use of the careers services in the University. A focus on a career can be a major incentive in encouraging timely completion, where success in the doctorate is often a prerequisite for the career. PRES 2015 data shows that 47% of respondents anticipate a research career in higher education. Through close working with the Careers Service and the Centre for Academic Development the Graduate School will facilitate improvements to:

- Support research students in understanding the career and employment landscape and the breadth of career opportunities available to them
- Encourage students to engage with the Careers Service and advice available to PGR students
- Support students to network in their field through conference attendance (as identified above)
- Provide opportunities to network and meet alt-academic employers through Careers Fairs and other employability initiatives.

#### 4.8 Enhancing PGR governance

As the University-wide Graduate School is established, the Postgraduate Research Committee (PGR Committee) will be the main institutional forum for the development of policy and strategy for PGR students and the new Graduate School. It will be a formal sub-Committee of the Research Policy Committee (RPC), and PGR performance will be reported to senior management and Court through the regular reports of the RPC.

The PGR committee will review student numbers, completion rates and other PGR related metrics and report them to the RPC. It will also monitor compliance with institutional policies and procedures, and oversee quality assurance of PGR provision, including supervisor training and support across all schools. Chaired by the Dean for Postgraduate Research, the PGR Committee will interface with Postgraduate Taught Students Committee; School Research Committees; School PGR Committees, Student Experience and Recruitment and Admissions Committees.

As such the PGR Committee provides a forum to discuss:

- Institutional and school based approaches to judgements of quality before admission.
- Refining (and communicating) expectations of supervisors and students such that each are aware of the expected roles, responsibilities and completion timeframes from the outset, which are recorded and reviewed regularly.
- Improved awarding of studentship support for self-funded students.

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<sup>15</sup> <http://www.universitiesuk.ac.uk/policy-and-analysis/reports/Documents/2012/the-concordat-to-support-research-integrity.pdf>

- Enhancing monitoring and progression processes.
- Enhancing PGR support in consideration of this report and the data from the now yearly Postgraduate Research Experience Survey (PRES; PRES 2017 open March-June).

## 5. CONSULTATION

The improvement of submission and completion rates is an important target across the institution and within schools for meeting aspirations for a higher level of research activity. PhD completion rates, causes and potential improvement actions will be discussed at the Postgraduate Research Student Committee, and consultations will happen with School staff (Heads of School, PGR coordinators, PGR administrators), PGR student representatives, and other stakeholders. PGR students will also be engaged through PRES, where we will gather valuable information for example about the PGR student experience, training and development needs and research skill requirements.

## 6. RESOURCE IMPLICATIONS

We will need to consider ongoing IT support to make required changes to how the IRR fundamentally calculates the data as in this instance algorithms were applied manually.

## 7. RISK MANAGEMENT

Provision of graduate studies and issues relating to postgraduate research students are covered by the strategic risk STRA\_2016-17-06 Research Performance and Impact which includes the following risk:

Failure to achieve postgraduate numbers and completion targets (Research Councils expectations of 60-70% completion targets).

Higher completion rates will improve REF related research metrics.

The establishment of a central University-wide Graduate School seeks to establish the capacity to increase student numbers and to improve the PGR student experience, and therefore improving completion rates. The measures that will be put in place by the new Graduate School will therefore mitigate the risk of not achieving the PGR related targets set out in the strategic plan.

## 8. EQUALITY IMPACT ASSESSMENT

EIAs will be conducted if any material changes to these processes is approved by the Postgraduate Research Committee.

## 9. SUSTAINABILITY & SOCIAL RESPONSIBILITY

There are no sustainability or social responsibility issues arising out of this paper.

## 10. RECOMMENDED ACTION

Senate is invited to discuss the paper.

## 11. FURTHER INFORMATION

Further information is available from Professor Judith Masthoff, Dean of the Postgraduate Research School, e-mail: [j.masthoff@abdn.ac.uk](mailto:j.masthoff@abdn.ac.uk) and Dr Lucy Leiper, Manager of the Postgraduate Research School, [l.leiper@abdn.ac.uk](mailto:l.leiper@abdn.ac.uk).

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	Board/Committee	Date
Previously considered by		



Further approval required	Postgraduate School Committee	
	Research Policy Committee	9 June 2017

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