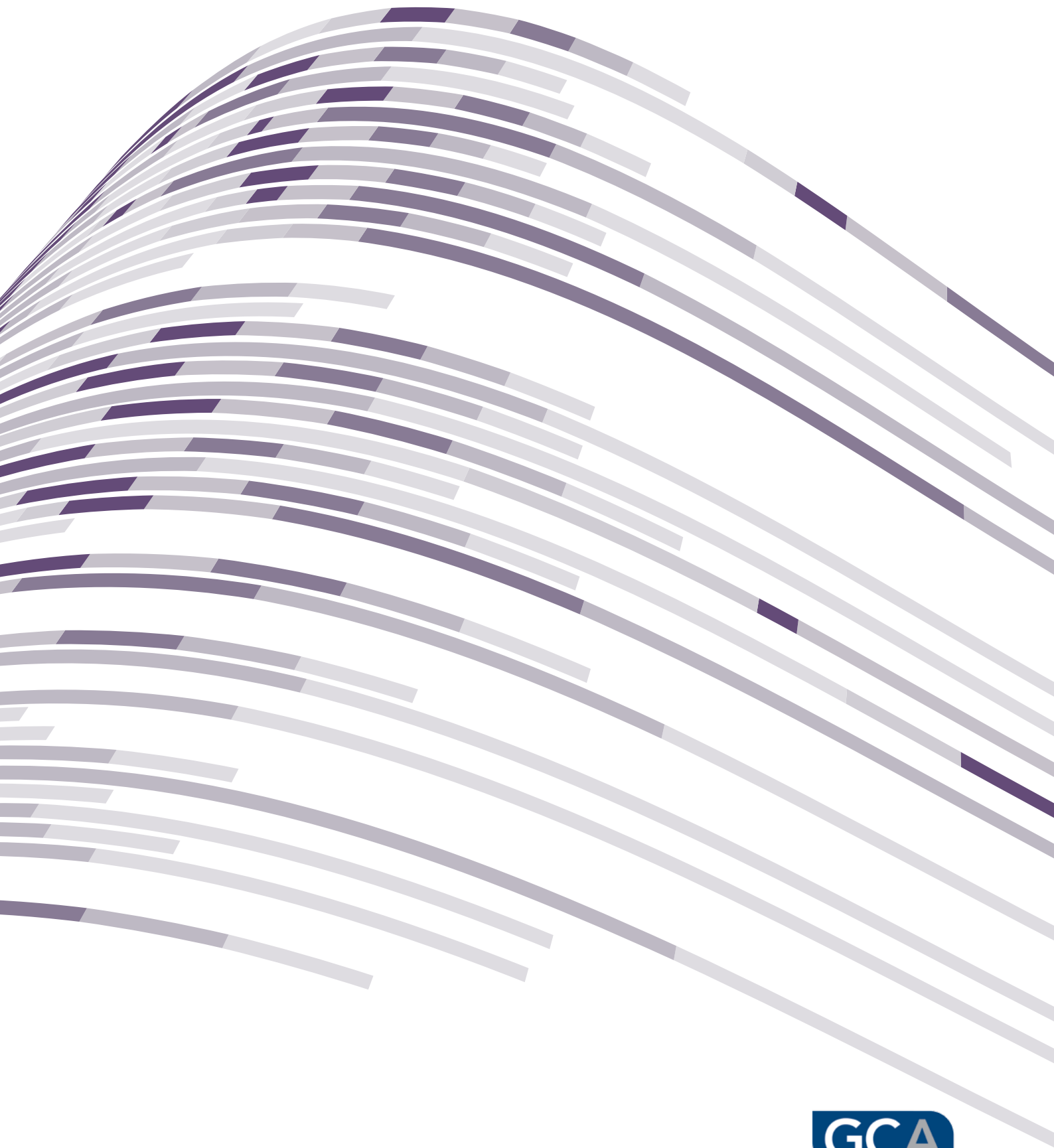


POSTGRADUATE RESEARCH EXPERIENCE 2014

A report on the postgraduate research experience perceptions
of recent higher degree research graduates



Postgraduate Research Experience 2014

A REPORT ON THE POSTGRADUATE RESEARCH EXPERIENCE
PERCEPTIONS OF RECENT HIGHER DEGREE RESEARCH GRADUATES





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Edwina Lindsay (Research Associate, Graduate Careers Australia) was the principal author of this report. Dr Noel Edge (Executive Director, Graduate Careers Australia) is the project director of the Australian Graduate Survey.

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INTRODUCTION

“... the PREQ is a complex instrument with a history stretching back more than a decade ...”

Welcome to *Postgraduate Research Experience 2014*, the 15th edition of the annual report into the research experience perceptions of doctoral and masters graduates who completed a research degree at an Australian higher education institution in 2013 and subsequently provided a response to the 2014 Postgraduate Research Experience Questionnaire (PREQ). In the PREQ, which is administered approximately four months after course completion, respondents are asked to rate the extent to which they agree or disagree with 28 Likert-type items constituting six summated rating scales and a single-item overall satisfaction indicator. The qualities of the postgraduate research experience measured by the PREQ are summarised in Table 1.

Like the other reports of the 2014 Australian Graduate Survey (AGS), only essential content has been included in order to provide a concise and accessible report that can be comprehended at a glance. A collection of supplementary tables and figures that present PREQ results in much more detail can be downloaded from www.graduatecareers.com.au/Research/ResearchReports/PostgraduateResearchExperience. These tables and figures are denoted by letters instead of numbers throughout this report.

Table 1: Qualities of the postgraduate research experience measured by PREQ

Title	Focus	Items
Supervision	the accessibility and quality research degree supervision	6
Intellectual Climate	the learning community and conditions provided by the institution	5
Skill Development	the extent of generic analytical and communication skill development	5
Infrastructure	the quality of learning infrastructures such as space, equipment and finance	5
Thesis Examination	whether the examination process was timely, fair and satisfactory	3
Goals and Expectations	the clarity of learning structures, requirements and standards	3
Overall Satisfaction	overall satisfaction with the recently completed degree	1

1.0

INTERPRETING PREQ RESULTS

By convention, PREQ item and scale statistics are reported using a -100, -50, 0, 50 and 100 reporting metric that corresponds to the five-point response format. The PREQ response format also includes a *does not apply* category, which graduates can mark if they feel that a particular item is not relevant to their postgraduate research experience. Responses in this category are excluded from the calculation of item and scale statistics. In addition, mean percentage agreement and mean percentage broad agreement scores are presented throughout this report. Mean percentage agreement scores reflect the distribution of responses in the *agree* and *strongly agree* response categories and can therefore be interpreted as the proportion of responses that fall within these categories. Mean percentage broad agreement scores reflect the mean distribution of responses in the *neither agree nor disagree*, *agree* and *strongly agree* response categories and may be interpreted accordingly.

While the PREQ is conducted as part of a national graduate census, the extent of non-response to the survey means that it is reasonable to consider the secured responses to be a sample of the overall higher degree research graduate population. As has been recommended in previous editions of this report, differences in PREQ scores of five points or more may be considered to be of practical interest because they represent a difference of at least a fifth of a standard deviation. It is important to bear this in mind when interpreting the results presented in this report and in the supplementary tables and figures. No historical figures are presented for 2001 because of a change in the timing of the survey.

As the PREQ is a complex instrument with a history stretching back more than a decade, a detailed discussion of its properties is beyond the scope of this summary report. Readers are directed to pre-2010 editions of *Postgraduate Research Experience*, which contain a detailed overview of the PREQ (e.g. GCA & ACER, 2010).

“... it is reasonable to consider the secured responses to be a sample of the overall higher degree research graduate population.”

2.0

PREQ RESPONDENT CHARACTERISTICS

“... 5,299 valid responses were returned, which represents a national PREQ response rate of 63.4 per cent.”

AGS questionnaires containing the PREQ were distributed to 8,353 higher degree research graduates and 5,299 valid responses were returned, which represents a national PREQ response rate of 63.4 per cent. This was slightly down from 64.3 per cent in 2013.

A total of 42 higher education providers participated in the 2014 survey. Institutional PREQ response rates ranged from 30.5 per cent to 100.0 per cent, with a median institutional response rate of 66.6 per cent. Institutional PREQ response rates are presented in Table A.

The distribution of PREQ respondents across key demographic and contextual groups is presented in Table 2, stratified by qualification level. These figures show that slightly more than 70 per cent of respondents graduated from four broad fields of education: natural and physical sciences (20.9 per cent), engineering and related technologies (13.9 per cent), health (15.8 per cent) and society and culture (22.2 per cent), with similar response patterns in 2013. Slightly less than two-thirds of respondents (64.5 per cent) funded their research studies through an Australian Postgraduate Award (APA) or via the Research Training Scheme (RTS), while a further 32.3 per cent paid domestic or international fees. Just 3.2 per cent of participating PREQ respondents reported that they funded their studies through the HECS system. In all, 74.0 per cent of respondents studied full time, with full-time attendance more common amongst research doctoral respondents (76.3 per cent). The

majority of respondents studied internally (75.6 per cent), while similar proportions studied either externally or through mixed-mode study (13.5 per cent and 11.0 per cent, respectively). These response patterns are generally similar to those observed in the 2013 survey.

The demographic composition of the PREQ sample was also consistent with recent surveys. Females accounted for 51.5 per cent of respondents, and 66.7 per cent of respondents were aged 40 years or under. In total, 72.4 per cent of respondents were Australian citizens or permanent residents at the time of the survey, and 38.5 per cent of respondents were from a non-English speaking background. Only 3.3 per cent of respondents identified themselves as having a disability. Regarding their labour market activities, a large majority of respondents had undertaken paid work in their final year of study (68.1 per cent). Following course completion, 53.9 per cent and 26.4 per cent of respondents were employed full time and part time, respectively, whereas 19.7 per cent were not in paid work at the time of the survey. Research doctoral respondents were more likely than research masters respondents to be in full-time work, whereas the reverse was true for part-time work and no work. A detailed examination of the labour market outcomes of higher degree research graduates is presented in the *Postgraduate Destinations 2014* report (GCA, 2015).

Table 2: 2014 PREQ respondent characteristics

	Research masters		Research doctorate		All research graduates		
	n	%	n	%	n	%	
Broad Field of Education	Natural and Physical Sciences	108	14.8	985	21.9	1,093	20.9
	Information Technology	37	5.1	170	3.8	207	4.0
	Engineering and Related Technologies	110	15.1	619	13.8	729	13.9
	Architecture and Building	12	1.6	59	1.3	71	1.4
	Agriculture, Environmental and Related Studies	14	1.9	127	2.8	141	2.7
	Health	105	14.4	719	16.0	824	15.8
	Education	61	8.4	292	6.5	353	6.8
	Management and Commerce	28	3.8	273	6.1	301	5.8
	Society and Culture	134	18.4	1,027	22.8	1,161	22.2
	Creative Arts	120	16.5	228	5.1	348	6.7
Means of financing study	HECS paid upfront	4	0.6	20	0.4	24	0.5
	HECS deferred some or all	38	5.3	103	2.3	141	2.7
	International fee-paying student	136	19.0	1,175	26.4	1,311	25.4
	Australian fee-paying student	78	10.9	276	6.2	354	6.9
	APA or RTS research student	460	64.2	2,871	64.6	3,331	64.5
Main attendance type	Mainly full time	435	59.6	3,426	76.3	3,861	74.0
	Mainly part time	295	40.4	1,062	23.7	1,357	26.0
Main attendance mode	Internal (on-campus)	489	67.4	3,451	76.9	3,940	75.6
	External (distance)	133	18.3	569	12.7	702	13.5
	Mixed mode (internal and external)	104	14.3	468	10.4	572	11.0
Sex	Male	340	46.6	2,197	48.8	2,537	48.5
	Female	390	53.4	2,303	51.2	2,693	51.5
	Unknown	0	0.0	0	0.0	0	0.0
Graduate age	40 or under	482	66.1	3,002	66.8	3,484	66.7
	Over 40	247	33.9	1,490	33.2	1,737	33.3
Permanent resident of Australia	Yes	587	80.4	3,197	71.1	3,784	72.4
	No	143	19.6	1,300	28.9	1,443	27.6
Main language spoken at home	English	489	69.8	2,625	60.2	3,114	61.5
	Other	212	30.2	1,735	39.8	1,947	38.5
Disability identification	Yes	39	5.4	132	3.0	171	3.3
	No	688	94.6	4,341	97.0	5,029	96.7
Paid work during your final year	Yes	535	73.7	3,002	67.1	3,537	68.1
	No	191	26.3	1,469	32.9	1,660	31.9
Paid work status	In full-time work	288	39.6	2,510	56.2	2,798	53.9
	In part-time work	251	34.5	1,122	25.1	1,373	26.4
	Not working	188	25.9	833	18.7	1,021	19.7

3.0

NATIONAL TRENDS IN POSTGRADUATE RESEARCH EXPERIENCE

“There is considerable variation in mean scale scores and agreement percentages.”

Summary statistics for each PREQ scale are presented in Table 3. For each scale, the number of valid scores (n), means (X), medians (M) and standard deviations (s) are presented for scale scores, based on the -100 to 100 reporting metric described in Section 2, and mean agreement figures.

There is considerable variation in mean scale scores and agreement percentages. Mean scale scores range from highs of 74.7 and 72.2 for Skill Development, and Goals and Expectations, respectively, to a low of 39.0 for Intellectual Climate. A similar pattern is observed when mean agreement percentages are considered. Because the PREQ scales represent different aspects of the postgraduate research experience, it is inadvisable to make

direct comparisons across the scales. It is interesting, however, to note the qualities of the research experience with which graduates expressed less agreement than others. It is also of value to note the standard deviation figure, as this illustrates the spread of scores from the mean. A smaller standard deviation indicates that scores are grouped tightly around the mean, while a larger standard deviation indicates that there is a wide dispersion of scores. These standard deviation figures tend to be fairly consistent over time, and are largest for the Overall Satisfaction item and the Thesis Examination and Intellectual Climate scales. Conversely, the Skill Development, and Goals and Expectations scales tend to be the most consistent.

Table 3: 2014 PREQ scale descriptive statistics

	n	Scale score			Mean agreement		
		X	M	s	X	M	s
Supervision	5,176	57.7	66.7	44.2	81.1	100.0	30.0
Intellectual Climate	4,947	39.0	50.0	45.2	67.5	80.0	34.7
Skill Development	5,142	74.7	80.0	30.6	93.7	100.0	18.0
Infrastructure	4,867	53.8	60.0	38.7	79.7	100.0	28.1
Thesis Examination	5,196	57.3	66.7	45.7	82.6	100.0	30.1
Goals and Expectations	5,188	72.2	83.3	33.2	93.7	100.0	19.6
Overall Satisfaction	5,193	61.6	50.0	46.7	86.8	100.0	33.8

To provide some context to these results, it is worth examining the relative importance that graduates place on each of the qualities of the postgraduate research experience when evaluating their overall satisfaction with their recently completed degree. Carroll (2014) investigated this statistically using data from the 2013 PREQ. He concluded that Supervision has the largest influence on graduates' overall experience, with an effect more than twice that of the next most important influencer, Intellectual Climate. Infrastructure and Skill Development were also significant influencers, as was Thesis Examination, but to a lesser extent. Goals and Expectations

had no significant impact on graduates' overall satisfaction with their experience. Comparing research masters and doctoral graduates, the only significant difference was observed in relation to Infrastructure, which was a significant influencer for research doctoral graduates but not masters graduates. Based on the results of this study and the summary statistics presented in Table 3, institutions might be wise to focus additional efforts on improving the aspects of the research experience measured by the Supervision and Intellectual Climate scales, as these are important influencers that are rated relatively low by respondents to the PREQ.

Trends in mean percentage agreement scores for the years 2000 to 2014 are shown in Figure 1. All scales have exhibited an upward trend over the past five years. The largest change over this period was observed for Infrastructure, which was 3.8 percentage points, followed closely by Intellectual Climate and Supervision (3.7 and 3.6 percentage points, respectively). It is likely that the steep upward trend observed for some scales between 2005 and 2006 is related to changes in the format and administration of the AGS, and does not necessarily reflect a real improvement in research experience perceptions.



Figure 1: 2000 to 2014 PREQ scale mean percentage agreement scores.

Table 4: 2014 PREQ item descriptive statistics and response category percentages

Scale	Label	Item	Descriptive statistics						Response category percentages						Missing data
			n	X	M	s	PA	BA	SD	D	U	A	SA	NA	n
Supervision	PREQ01	Supervision was available when I needed it	5,195	66.5	100.0	49.2	86.8	92.2	2.5	5.0	4.8	30.0	57.6	0.1	0.1
	PREQ07	My supervisor/s made a real effort to understand difficulties I faced	5,147	62.2	100.0	52.5	83.3	91.3	3.6	5.2	8.0	28.5	54.0	0.7	0.1
	PREQ13	My supervisor/s provided additional information relevant to my topic	5,144	59.4	50.0	51.1	82.7	91.6	3.2	5.3	8.5	34.6	47.8	0.7	0.2
	PREQ17	I was given good guidance in topic selection and refinement	5,099	48.5	50.0	53.1	75.4	89.2	3.3	7.7	14.0	38.1	35.2	1.8	0.3
	PREQ21	My supervisor/s provided helpful feedback on my progress	5,156	64.7	100.0	50.1	85.7	92.5	3.3	4.3	6.4	29.3	56.3	0.4	0.2
	PREQ24	I received good guidance in my literature search	5,136	44.3	50.0	52.4	72.6	88.7	3.1	8.4	16.4	39.4	32.0	0.7	0.3
Intellectual Climate	PREQ05	The department provided opportunities for social contact with other postgraduate students	5,017	48.6	50.0	51.6	75.0	89.5	3.0	8.0	13.2	40.9	34.5	0.4	0.2
	PREQ09	I was integrated into the department's community	4,970	35.6	50.0	56.1	64.3	84.2	4.9	10.8	19.3	36.6	27.6	0.8	0.1
	PREQ16	The department provided opportunities for me to become involved in the broader research culture	5,056	36.1	50.0	56.0	65.7	84.3	5.1	10.3	17.9	38.7	27.7	0.3	0.1
	PREQ22	A good seminar program for postgraduate students was provided	4,995	42.5	50.0	53.2	70.7	87.5	3.8	8.8	17.1	38.9	30.3	1.2	0.2
	PREQ23	The research ambience in the department or faculty stimulated my work	4,940	32.7	50.0	56.5	61.9	83.7	6.0	11.0	20.5	35.9	25.3	1.3	0.3
Skill Development	PREQ06	My research further developed my problem-solving skills	5,165	77.9	100.0	35.2	94.9	98.0	1.2	0.7	3.1	32.2	62.5	0.3	0.1
	PREQ10	I learned to develop my ideas and present them in my written work	5,156	75.2	100.0	35.5	95.0	98.0	1.3	0.7	3.3	35.8	58.6	0.3	0.2
	PREQ14	My research sharpened my analytic skills	5,149	79.7	100.0	33.9	95.6	98.3	1.3	0.5	2.3	29.5	66.2	0.2	0.2
	PREQ20	Doing my research helped me to develop my ability to plan my own work	5,141	73.2	100.0	37.7	92.6	97.6	1.3	0.9	5.4	35.0	57.1	0.3	0.3
	PREQ26	As a result of my research, I feel confident about tackling unfamiliar problems	5,125	67.5	50.0	39.2	90.4	97.2	1.4	1.3	7.1	40.5	49.1	0.6	0.3
Infrastructure	PREQ03	I had access to a suitable working space	4,893	62.3	100.0	49.7	84.6	92.0	3.1	5.2	7.2	33.2	49.5	1.7	0.4
	PREQ08	I had good access to the technical support I needed	5,061	51.8	50.0	49.4	79.3	90.9	2.5	6.4	12.3	42.1	36.4	0.4	0.0
	PREQ12	I was able to organise good access to necessary equipment	4,836	58.1	50.0	44.2	84.2	94.5	2.2	3.7	9.8	42.9	38.8	2.6	0.1
	PREQ18	I had good access to computing facilities and services	4,923	57.5	50.0	48.4	82.5	92.5	3.0	5.2	9.8	38.6	42.2	1.2	0.2
	PREQ27	There was appropriate financial support for research activities	4,972	38.9	50.0	57.4	68.2	84.0	6.3	10.1	15.4	35.9	30.3	2.0	0.4
Thesis Examination	PREQ02	The thesis examination process was fair	5,185	68.7	100.0	43.9	89.9	94.8	2.5	3.2	4.8	35.0	54.1	0.4	0.2
	PREQ15	I was satisfied with the thesis examination process	5,178	59.3	50.0	51.1	84.0	91.0	4.0	5.4	6.6	36.1	47.7	0.2	0.2
	PREQ25	The examination of my thesis was completed in a reasonable time	5,172	43.9	50.0	63.2	73.8	82.0	8.7	10.1	8.2	33.1	39.6	0.3	0.3
Goals and Expectations	PREQ04	I developed an understanding of the standard of work expected	5,172	71.8	100.0	37.7	93.4	97.0	1.4	1.9	3.7	37.0	55.7	0.3	0.2
	PREQ11	I understood the required standard for the thesis	5,161	73.3	100.0	37.5	93.9	97.1	1.4	1.8	3.7	36.0	56.8	0.3	0.2
	PREQ19	I understood the requirements of thesis examination	5,158	71.3	100.0	37.5	93.8	97.1	1.4	1.4	3.6	41.4	52.0	0.2	0.4
Overall Satisfaction	PREQ28	Overall, I was satisfied with the quality of my higher degree research experience	5,193	61.6	50.0	46.7	86.8	93.4	2.7	3.6	7.0	41.3	45.4	0.0	0.0

Descriptive statistics and response category percentages for the 28 Likert-type items underpinning the seven PREQ scales are presented for all respondents in Table 4. This table presents, for each item, the number of responses (n), mean (X), median (M), standard deviation (s), mean percentage agreement (PA), mean percentage broad agreement (BA), the distribution of responses across the six response categories (strongly disagree (SD), disagree (D), neither agree nor disagree (U), agree (A), strongly agree (SA) and not applicable (NA)), and the percentage of unplanned missing data (UP). Response category percentages may not sum precisely to 100 due to rounding errors.

In addition, item mean percentage agreement figures are presented in Figure 2 to visually illustrate the variation in the items comprising each scale, and the mean agreement to the discrete phenomenon tapped by each scale. The items have been sorted within their respective scales by mean percentage agreement.

Research graduates tend to agree least with the statements represented by items PREQ23 ('The research ambience in the department or faculty stimulated my work'), PREQ09 ('I was integrated into the department's community') and PREQ16 ('The department provided opportunities for me to become involved in the broader research culture'). These items, all components of the Intellectual Climate

scale, relate to the forms of research support provided by academic departments that are intended to help students integrate their work into the broader research community. Conversely, the highest item mean percentage agreement figures are observed for PREQ14 ('My research sharpened my analytic skills'), PREQ10 ('I learned to develop my ideas and present them in my written work'), and PREQ06 ('My research further developed my problem-solving skills'), all three of which reflect graduates' perceptions of their own skill development. These items also exhibited the least variation between respondents, illustrated by the relatively small standard deviation associated with each item. Interestingly, the most variation was observed for PREQ25 ('The examination of my thesis was completed in a reasonable time'). This result could be due to variation in thesis examination times between departments and institutions, or may reflect differences in what students consider to be 'reasonable'. Highly similar results were obtained from the 2013 survey. Together, these results suggest that, while graduates generally have a positive view of their postgraduate research experience as an exercise in skill development, many did not feel a part of the research community during their time at university.

Multi-year trends for each item are presented in Figures A to G, with each figure corresponding to a PREQ scale. It is important to keep in mind that the measurement provided by these individual items is not as reliable as that provided by the summated rating scales.

The PREQ distinguishes between two distinct forms of missing data: not applicable responses (NA), where graduates select the *does not apply* category on the response format if they feel that a particular item is not relevant to their own postgraduate research experience, and unplanned missing data (UP), which are due to simple item-level non-response. The highest level of NA response was observed for PREQ12 ('I was able to organise good access to necessary equipment'), whereas the lowest level of NA response was recorded for PREQ28 ('Overall, I was satisfied with the quality of my higher degree research experience'). This finding is logical: while research graduates from many disciplines would not have required the use of specialised equipment to undertake their research, every graduate could comment on their overall experience. Levels of UP missing data were very low across all 28 items, ranging from 0.0 per cent (PREQ08, PREQ28) to just 0.4 per cent (PREQ03, PREQ27 and PREQ19).

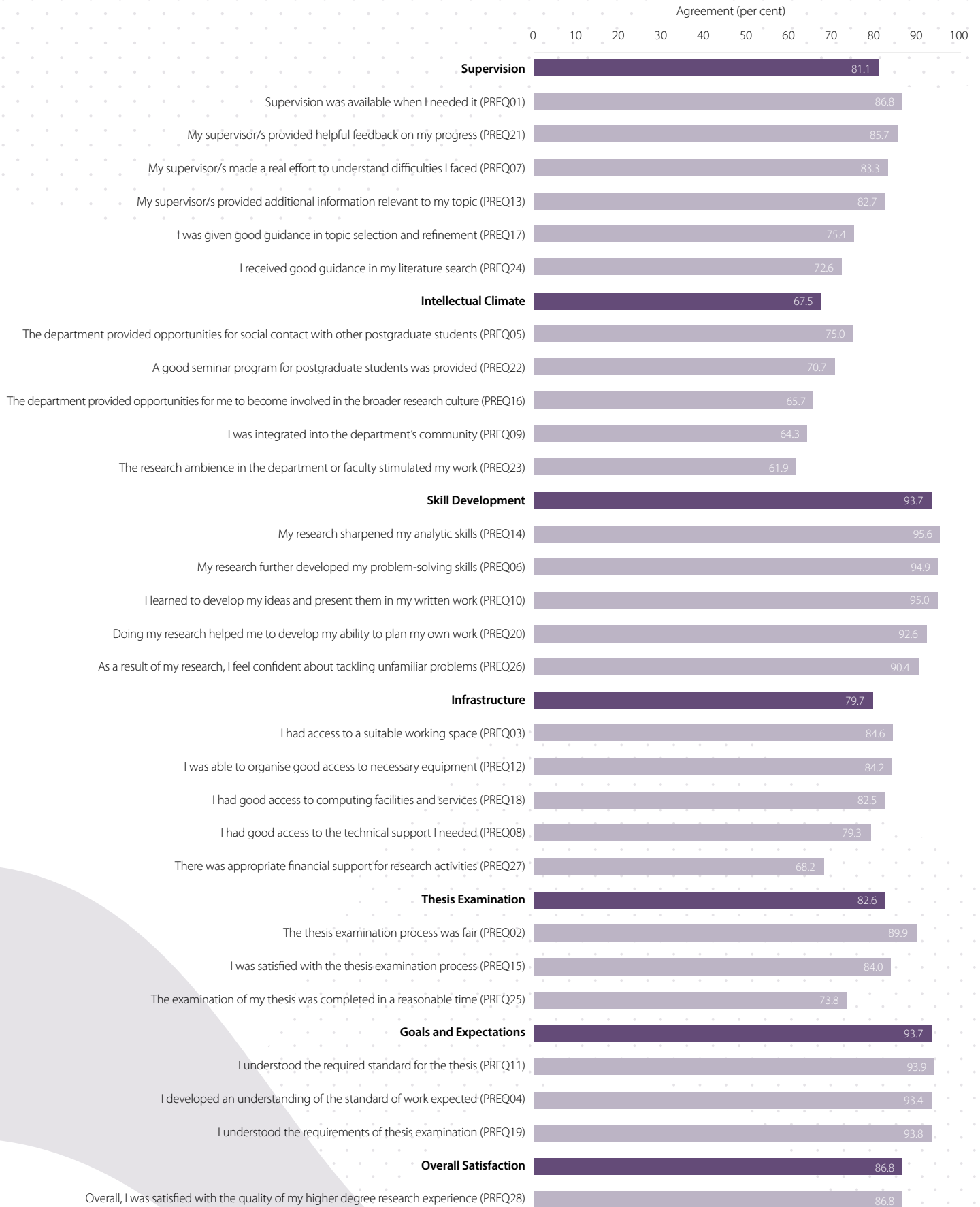


Figure 2: 2014 PREQ scale and item mean percentage agreement scores

4.0

THE INFLUENCE OF
COURSE CHARACTERISTICS

This section presents PREQ scale descriptive statistics stratified on the basis of different course characteristics, including qualification level, broad field of education (BFOE), detailed field of education (DFOE) and attendance type. Additional stratifications by means of financing study and attendance mode are presented in Tables B and C, respectively.

As discussed earlier, it is not advisable to make direct comparisons across the scales, as each reflects a different quality of the postgraduate research experience. The point of reference for each mean percentage agreement figure is either the corresponding figure for another contextual group or for the whole sample.

Mean percentage agreement figures over the period 2000 to 2014 are presented in Table 5, stratified by qualification level. With the exception of scores on the Supervision scale in 2002, 2004 and 2010, research doctoral graduates have higher levels of mean agreement than research masters graduates across all PREQ scales. This result may be attributable to the more extensive and deeper nature of the doctoral research experience.

Table 5: 2000 to 2014 PREQ scale mean percentage agreement scores by qualification level

		2000		2002		2003		2004		2005		2006		2007	
		%	n	%	n	%	n	%	n	%	n	%	n	%	n
Research masters	Supervision	69.6	600	70.7	618	71.8	671	72.8	703	72.1	611	75.6	702	74.2	747
	Intellectual Climate	46.7	542	51.0	539	49.7	612	51.8	643	52.6	561	58.5	648	58.1	694
	Skill Development	85.2	622	87.8	624	85.2	665	87.5	699	89.0	600	87.4	694	87.8	748
	Infrastructure	57.2	478	61.7	503	60.6	583	61.9	605	63.0	529	67.9	628	68.1	656
	Thesis Examination	75.1	627	73.7	633	72.2	661	74.5	708	75.2	606	76.3	686	76.9	743
	Goals and Expectations	81.4	622	82.2	632	84.0	668	86.3	708	85.0	610	85.7	698	86.5	746
	Overall Satisfaction	79.6	646	78.8	619	78.3	667	80.2	702	78.0	609	81.0	696	80.6	753
Research doctorate	Supervision	71.5	1,502	70.5	1,658	73.1	1,899	72.8	2,336	74.2	2,387	76.3	2,521	77.2	2,866
	Intellectual Climate	59.3	1,456	56.3	1,545	58.6	1,791	59.2	2,206	59.6	2,247	64.3	2,380	63.6	2,713
	Skill Development	91.8	1,574	90.6	1,689	91.1	1,892	92.1	2,325	91.1	2,359	92.2	2,506	92.6	2,852
	Infrastructure	71.2	1,371	68.1	1,484	69.4	1,747	70.3	2,147	71.3	2,206	74.0	2,338	75.4	2,670
	Thesis Examination	78.3	1,599	76.1	1,714	75.9	1,904	77.3	2,348	80.5	2,388	81.2	2,523	81.5	2,875
	Goals and Expectations	91.0	1,591	90.2	1,729	91.2	1,907	91.2	2,348	91.3	2,393	92.7	2,532	93.3	2,883
	Overall Satisfaction	86.9	1,608	81.8	1,696	83.5	1,890	84.8	2,339	84.7	2,378	85.7	2,511	87.0	2,873
		2008		2009		2010		2011		2012		2013		2014	
		%	n	%	n	%	n	%	n	%	n	%	n	%	n
Research masters	Supervision	74.3	660	75.5	733	77.8	614	76.8	653	78.2	750	79.7	743	78.3	719
	Intellectual Climate	57.3	616	59.6	676	61.6	569	61.3	618	62.0	706	64.0	694	62.9	674
	Skill Development	89.9	658	89.6	728	90.0	607	89.6	647	91.9	741	91.1	736	90.6	713
	Infrastructure	68.6	577	70.1	639	72.9	550	71.1	571	74.0	681	76.5	666	73.9	650
	Thesis Examination	78.2	655	76.5	722	77.5	614	77.7	650	79.1	749	79.3	739	78.0	720
	Goals and Expectations	85.9	662	87.1	728	89.8	613	88.9	649	89.0	753	89.7	741	90.0	718
	Overall Satisfaction	80.0	660	80.2	731	81.1	614	82.0	651	83.4	751	84.0	743	82.2	725
Research doctorate	Supervision	77.0	2,968	77.2	3,231	77.5	3,242	78.8	3,450	79.5	3,935	81.3	4,066	81.6	4,457
	Intellectual Climate	64.4	2,824	63.9	3,052	64.2	3,079	65.7	3,284	66.4	3,751	68.5	3,876	68.2	4,273
	Skill Development	93.8	2,947	93.2	3,204	93.2	3,218	93.8	3,416	94.2	3,915	94.1	4,035	94.2	4,429
	Infrastructure	76.7	2,774	77.3	3,033	76.5	3,025	78.2	3,235	78.5	3,713	79.6	3,850	80.6	4,217
	Thesis Examination	81.4	2,951	80.9	3,228	81.7	3,245	80.9	3,451	82.5	3,939	82.6	4,086	83.3	4,476
	Goals and Expectations	93.0	2,970	93.0	3,236	93.2	3,242	92.9	3,449	93.6	3,939	93.9	4,073	94.3	4,470
	Overall Satisfaction	86.8	2,952	86.4	3,227	85.5	3,235	87.0	3,442	86.7	3,930	87.2	4,076	87.6	4,468

Mean percentage agreement figures across the ten BFOE from the 2014 PREQ are presented in Table 6, stratified by qualification level. It is clear from this table that mean percentage agreement levels for each scale vary considerably by BFOE and qualification level. While research doctoral graduates generally appear more positive about their postgraduate research experience than research masters graduates at the overall level, there are numerous exceptions when these figures are examined by BFOE. Research masters graduates from the fields of information technology, engineering and related technologies, architecture and building, agriculture, environmental and related studies, and management and commerce had higher mean percentage agreement scores than research doctoral graduates on at least one scale. Conversely, research doctoral graduates from the fields of natural and physical sciences, health, education, society and culture, and creative arts exhibited higher levels of mean agreement than research masters graduates on every scale. These results are presented graphically in Figures H to Q.

Since aggregations at the BFOE level hide much of the detail that is of interest to individual schools, faculties and academic departments, mean percentage agreement figures for the 30 largest DFOE for research masters and research doctoral graduates are presented in Tables 7 and 8, respectively. Both tables are sorted in descending order of response numbers. These 30 DFOE account for 82.9 per cent of all research masters respondents and 81.8 per cent of all research doctoral respondents. In relation to research masters graduates, the fields of civil engineering, public health, mechanical and industrial engineering and technology, management and commerce, and health had relatively high scores across many scales. Indeed, management and commerce graduates had the highest scores out of any of the listed fields on two scales, as did those from the other health field. The fields of studies in human society, teacher education, performing arts, communication and media studies, and physics and astronomy tended to have the lowest scores. The widest range of scores across fields was observed for the Infrastructure

scale (58.9 percentage points), and the narrowest for the Goals and Expectations scale (20.0 percentage points). For research doctorates, the fields of electrical and electronic engineering and technology, economics and econometrics, other health, mathematical sciences, and nursing tended to have relatively high scores across a number of scales, whereas the fields of behavioural science, language and literature, communication and media studies, political science and policy studies, and visual arts and crafts tended to have the lowest. As with research masters graduates, the narrowest range of scores across fields was observed in relation to the Goals and Expectations scale (7.3 percentage points). The widest was observed in relation to the Intellectual Climate scale (25.9 percentage points). The spread of scores across fields was narrower for research doctoral graduates than research masters graduates; however it is important to note that the scores for research masters graduates are based on far smaller numbers of responses.

Table 6: PREQ scale mean percentage agreement scores by broad field of education

		Natural and Physical Sciences	Information Technology	Engineering and Related Technologies	Architecture and Building	Agriculture, Environmental and Related Studies	Health	Education	Management and Commerce	Society and Culture	Creative Arts
Research masters	Supervision	71.4	76.6	78.7	73.6	81.0	84.5	78.9	81.5	78.3	78.3
	Intellectual Climate	67.3	70.0	71.9	66.0	55.4	62.8	58.8	74.3	55.0	57.2
	Skill Development	89.5	92.2	94.1	95.0	81.4	91.2	90.6	93.6	88.8	89.2
	Infrastructure	75.6	83.5	81.7	74.0	84.6	74.2	63.6	85.7	67.1	69.2
	Thesis Examination	80.6	80.2	83.0	80.6	73.8	79.9	73.3	76.2	75.8	74.1
	Goals and Expectations	89.2	93.7	92.4	91.7	90.5	93.2	92.7	91.7	86.7	86.0
	Overall Satisfaction	75.0	83.8	90.7	66.7	92.9	87.6	82.0	82.1	81.7	76.7
Research doctorate	Supervision	78.7	81.8	81.4	81.6	82.4	84.5	86.2	83.2	80.4	82.3
	Intellectual Climate	71.7	68.3	72.2	71.3	67.8	71.6	65.0	69.3	62.1	60.4
	Skill Development	95.4	94.1	93.8	95.4	94.4	95.2	93.4	93.1	93.2	93.3
	Infrastructure	83.6	84.1	84.0	72.3	82.1	82.8	76.7	82.0	76.3	71.4
	Thesis Examination	82.9	82.2	84.9	86.2	83.5	84.1	87.5	85.0	81.1	80.0
	Goals and Expectations	94.1	96.7	94.2	91.8	93.4	95.3	95.1	94.7	93.8	93.2
	Overall Satisfaction	86.6	90.5	88.8	88.1	89.0	91.0	89.7	87.4	84.8	84.4

Table 7: 2014 PREQ mean percentage agreement scores for the 30 largest detailed fields of education for research masters graduates

	n	Supervision	Intellectual Climate	Development	Skill Infrastructure	Thesis Examination	Goals and Expectations	Overall Satisfaction
Visual Arts and Crafts	54	81.4	53.2	94.5	73.8	82.7	87.7	83.3
Studies in Human Society	48	74.8	57.2	91.1	63.2	68.8	85.8	76.6
Biological Sciences	40	71.7	72.1	92.0	83.2	85.0	90.0	75.0
Teacher Education	37	79.3	49.7	89.0	61.2	72.5	91.7	78.4
Medical Studies	32	79.7	62.9	88.1	69.0	72.0	90.6	87.5
Electrical and Electronic Engineering and Technology	32	70.4	66.6	93.1	82.8	80.2	90.6	90.6
Performing Arts	30	80.3	63.0	87.6	72.1	61.9	86.9	73.3
Civil Engineering	28	83.3	80.8	97.0	83.7	86.9	95.1	100.0
Other Natural and Physical Sciences	27	73.5	76.3	92.6	71.5	81.5	88.9	81.5
Philosophy and Religious Studies	26	92.9	63.5	92.3	76.0	84.6	97.4	92.3
Process and Resources Engineering	21	77.8	76.2	95.2	78.8	81.0	95.2	90.5
Language and Literature	19	75.0	57.8	81.1	64.6	79.6	83.3	84.2
Communication and Media Studies	16	65.6	50.0	75.0	41.1	64.6	85.4	62.5
Curriculum and Education Studies	16	75.6	75.7	94.7	71.4	78.9	91.1	87.5
Nursing	14	88.1	53.3	94.3	69.6	78.6	95.2	92.9
Information Systems	14	70.2	84.3	93.6	84.3	78.6	97.6	85.7
Computer Science	14	85.7	64.6	100.0	88.6	88.1	97.6	85.7
Other Health	13	89.4	35.7	98.2	69.3	90.9	100.0	84.6
Business and Management	12	76.4	65.0	90.0	75.0	69.4	88.9	75.0
Public Health	12	88.9	79.6	96.7	87.3	77.8	91.7	100.0
Architecture and Urban Environment	12	73.6	66.0	95.0	74.0	80.6	91.7	66.7
Physics and Astronomy	12	54.9	46.9	78.2	62.1	75.0	88.9	66.7
Mathematical Sciences	12	88.9	56.7	95.0	72.7	75.0	88.9	75.0
Graphic and Design Studies	11	81.7	80.0	87.5	83.9	70.0	80.0	81.8
Mechanical and Industrial Engineering and Technology	11	89.4	71.8	98.2	95.6	87.9	90.9	90.0
Behavioural Science	10	80.0	70.0	92.0	75.0	85.2	88.9	80.0
Other Creative Arts	8	75.4	54.3	97.5	65.7	83.3	87.5	75.0
Human Welfare Studies and Services	8	83.3	48.6	95.0	65.6	79.2	95.8	100.0
Management and Commerce (not elsewhere classified)	8	85.4	85.0	95.0	100.0	79.2	95.8	87.5
Health (not elsewhere classified)	8	89.6	80.0	92.5	90.0	83.3	100.0	75.0

Table 8: 2014 PREQ mean percentage agreement scores for the 30 largest detailed fields of education for doctorate graduates

	n	Supervision	Intellectual Climate	Skill Development	Infrastructure	Thesis Examination	Goals and Expectations	Overall Satisfaction
Biological Sciences	444	77.6	71.2	95.4	81.8	83.2	93.2	84.8
Studies in Human Society	243	81.6	61.3	93.6	75.5	83.2	93.7	85.1
Behavioural Science	241	76.6	61.0	95.0	77.2	78.0	94.4	85.7
Medical Studies	236	84.6	74.1	95.8	83.6	84.9	95.9	91.1
Electrical and Electronic Engineering and Technology	191	86.2	73.2	95.2	83.5	87.9	95.4	91.6
Chemical Sciences	160	78.5	71.0	96.7	84.9	84.9	95.8	88.8
Teacher Education	155	87.6	63.8	92.9	79.2	87.5	95.5	89.6
Process and Resources Engineering	140	79.6	75.6	94.7	85.2	85.0	92.9	89.3
Other Natural and Physical Sciences	136	77.4	67.1	93.4	83.0	79.7	93.9	83.1
Public Health	135	84.6	71.0	93.9	83.1	81.0	94.1	88.7
Business and Management	131	80.6	64.3	90.0	77.2	81.1	93.9	85.4
Language and Literature	126	77.9	57.0	88.4	70.7	80.0	90.2	79.4
Civil Engineering	106	80.4	71.6	92.2	84.6	82.5	95.6	89.6
Computer Science	102	82.5	67.1	93.3	83.6	79.1	94.8	91.1
Communication and Media Studies	90	81.4	58.5	91.4	70.2	78.5	94.0	85.2
Philosophy and Religious Studies	87	78.5	62.4	91.5	78.0	80.8	96.2	87.4
Physics and Astronomy	87	81.3	77.8	94.9	84.8	81.6	94.2	90.8
Economics and Econometrics	80	89.8	79.7	96.6	89.4	87.9	97.5	97.5
Environmental Studies	78	82.6	68.7	95.3	79.0	84.2	92.3	87.2
Earth Sciences	76	78.6	72.5	97.4	87.7	81.1	95.2	88.0
Other Health	73	87.8	68.9	96.9	80.1	92.0	96.5	93.1
Curriculum and Education Studies	72	86.6	66.9	94.1	76.4	90.1	94.4	91.5
Mechanical and Industrial Engineering and Technology	71	79.8	70.4	92.9	83.9	83.3	95.7	84.3
Political Science and Policy Studies	64	83.6	56.7	92.7	71.7	75.5	91.1	75.8
Law	63	87.8	67.1	91.7	82.5	86.6	94.5	92.1
Mathematical Sciences	63	88.4	82.6	97.1	90.3	87.8	95.2	95.2
Health (not elsewhere classified)	62	77.7	68.5	94.6	81.8	84.9	93.5	86.9
Visual Arts and Crafts	59	77.6	60.2	97.0	68.6	83.6	93.1	77.6
Nursing	57	86.7	72.6	96.2	80.6	85.5	97.0	92.6
Rehabilitation Therapies	52	90.1	62.4	94.7	83.5	82.1	93.6	96.1

From Table 9, it can be seen that part-time research students tend to have lower mean agreement scores than full-time research students, with the largest differences observed on the Infrastructure and

Intellectual Climate scales. Considering that part-time research students would likely spend less time on campus than their full-time counterparts, this finding is expected. It is also consistent with recent surveys.

Table 9: 2000 to 2014 PREQ scale mean percentage agreement scores by attendance type

		2000		2002		2003		2004		2005		2006		2007	
		%	n	%	n	%	n	%	n	%	n	%	n	%	n
Full-time students	Supervision	70.5	1,285	70.7	1,185	73.7	1,348	73.0	1,531	74.1	1,732	76.2	1,979	76.1	2,231
	Intellectual Climate	58.3	1,273	56.3	1,124	58.3	1,303	60.0	1,501	61.4	1,685	65.1	1,919	64.7	2,182
	Skill Development	90.6	1,341	90.7	1,198	90.3	1,343	92.3	1,523	91.7	1,705	91.9	1,968	92.3	2,223
	Infrastructure	71.2	1,230	69.4	1,114	70.9	1,281	71.6	1,483	74.0	1,668	75.9	1,912	76.9	2,161
	Thesis Examination	77.8	1,347	76.1	1,211	76.3	1,347	76.6	1,534	79.9	1,728	80.3	1,975	81.4	2,229
	Goals and Expectations	89.3	1,341	89.2	1,218	90.2	1,350	90.6	1,535	91.4	1,730	91.9	1,986	92.7	2,239
	Overall Satisfaction	86.1	1,357	80.4	1,201	83.9	1,339	84.2	1,529	85.4	1,715	85.6	1,967	87.1	2,232
Part-time students	Supervision	71.7	815	70.4	1,083	71.6	1,183	72.7	1,433	73.4	1,215	76.1	1,233	77.7	1,304
	Intellectual Climate	51.6	721	53.2	951	53.9	1,065	54.5	1,280	53.6	1,075	59.5	1,099	58.5	1,148
	Skill Development	88.9	854	88.8	1,107	88.7	1,175	89.7	1,422	89.3	1,204	89.9	1,221	90.5	1,300
	Infrastructure	60.5	618	62.8	864	62.6	1,016	65.1	1,204	63.1	1,017	66.8	1,045	68.2	1,089
	Thesis Examination	76.8	877	75.0	1,126	73.2	1,179	76.7	1,443	78.9	1,216	80.0	1,223	79.8	1,311
	Goals and Expectations	86.7	871	86.9	1,133	88.1	1,186	89.5	1,442	88.3	1,222	90.0	1,233	90.7	1,312
	Overall Satisfaction	82.9	899	81.8	1,104	79.9	1,180	83.3	1,434	80.6	1,221	83.5	1,229	83.4	1,317
		2008		2009		2010		2011		2012		2013		2014	
		%	n	%	n	%	n	%	n	%	n	%	n	%	n
Full-time students	Supervision	76.8	2,307	76.4	2,562	77.4	2,631	78.3	2,848	79.2	3,281	81.3	3,434	81.3	3,837
	Intellectual Climate	66.4	2,261	64.8	2,491	66.1	2,568	66.9	2,780	67.7	3,210	70.0	3,366	69.4	3,758
	Skill Development	94.2	2,292	92.9	2,535	93.2	2,605	93.5	2,826	94.2	3,267	94.2	3,412	94.2	3,807
	Infrastructure	78.3	2,242	78.7	2,490	78.9	2,548	79.6	2,768	80.5	3,194	81.5	3,335	82.1	3,729
	Thesis Examination	81.2	2,286	80.3	2,548	80.8	2,628	80.1	2,845	82.2	3,287	82.4	3,443	83.2	3,841
	Goals and Expectations	92.5	2,304	92.5	2,556	92.7	2,624	92.3	2,842	93.2	3,288	93.7	3,435	94.0	3,836
	Overall Satisfaction	87.5	2,296	85.8	2,556	86.1	2,621	86.4	2,839	86.7	3,281	87.5	3,437	87.3	3,831
Part-time students	Supervision	75.9	1,300	78.0	1,389	77.8	1,211	79.0	1,236	79.6	1,380	80.3	1,354	80.7	1,327
	Intellectual Climate	56.6	1,159	59.7	1,225	58.2	1,068	60.2	1,103	60.4	1,223	61.8	1,186	61.6	1,178
	Skill Development	91.3	1,292	91.9	1,384	91.7	1,206	92.5	1,218	93.0	1,365	92.2	1,338	92.3	1,323
	Infrastructure	69.2	1,091	70.5	1,169	68.7	1,015	70.6	1,019	70.5	1,176	72.6	1,163	72.1	1,127
	Thesis Examination	80.0	1,299	79.9	1,389	81.8	1,216	81.2	1,237	81.4	1,377	81.5	1,361	80.7	1,343
	Goals and Expectations	90.1	1,307	90.9	1,395	92.9	1,216	92.3	1,237	92.0	1,380	92.1	1,358	93.0	1,340
	Overall Satisfaction	81.9	1,295	84.2	1,389	82.2	1,213	85.7	1,235	84.8	1,376	84.8	1,361	85.5	1,350

5.0

THE INFLUENCE OF RESPONDENT CHARACTERISTICS

“... male research graduates had higher mean percentage agreement scores than female research graduates all of the PREQ scales.”

This section presents PREQ scale descriptive statistics for different respondent groups, including ones based on sex, age group, permanent resident status, final year work status, and labour market activity at the time of the survey.

As shown in Table 10, in 2014 male research graduates had higher mean percentage agreement scores than female research graduates all of the PREQ scales.

The largest differences were recorded for the Intellectual Climate and Infrastructure scales; however these differences were relatively minor (4.8 and 4.2 percentage points, respectively). It is noteworthy that males have consistently given higher mean scores than females on the Overall Satisfaction scale since the inception of the PREQ, and in all but one round for the Intellectual Scale.

Table 10: 2000 to 2014 PREQ scale mean percentage agreement scores by sex

		2000		2002		2003		2004		2005		2006		2007	
		%	n	%	n	%	n	%	n	%	n	%	n	%	n
Males	Supervision	71.6	1,173	72.0	1,103	74.0	1,254	74.9	1,475	73.9	1,495	76.9	1,560	79.1	1,671
	Intellectual Climate	57.2	1,115	56.4	1,005	57.1	1,180	59.6	1,384	60.6	1,401	63.0	1,464	65.2	1,580
	Skill Development	90.2	1,217	90.2	1,121	89.4	1,250	90.5	1,473	91.3	1,468	90.7	1,549	92.1	1,665
	Infrastructure	71.4	1,048	68.6	962	70.0	1,151	71.5	1,350	72.2	1,369	73.7	1,442	76.8	1,538
	Thesis Examination	76.2	1,232	75.2	1,139	75.1	1,254	75.9	1,489	79.3	1,487	78.8	1,548	80.9	1,677
	Goals and Expectations	88.0	1,225	88.0	1,152	89.6	1,258	90.0	1,489	89.9	1,495	90.9	1,564	92.9	1,682
	Overall Satisfaction	86.6	1,244	82.5	1,118	84.5	1,247	85.7	1,479	84.6	1,485	85.3	1,555	88.8	1,678
Females	Supervision	70.1	929	69.2	1,173	71.5	1,313	70.7	1,563	73.8	1,500	75.4	1,663	74.5	1,877
	Intellectual Climate	54.2	882	53.5	1,079	55.6	1,219	55.6	1,464	56.0	1,404	63.1	1,564	60.1	1,762
	Skill Development	89.7	981	89.5	1,192	89.8	1,304	91.6	1,550	90.1	1,488	91.5	1,651	91.2	1,870
	Infrastructure	62.5	800	64.5	1,025	64.5	1,176	65.5	1,401	67.3	1,363	71.7	1,524	71.5	1,725
	Thesis Examination	78.8	994	75.7	1,208	74.8	1,308	77.3	1,566	79.6	1,504	81.4	1,661	80.7	1,876
	Goals and Expectations	88.6	990	88.1	1,209	89.1	1,314	90.2	1,566	90.1	1,505	91.4	1,666	91.2	1,882
	Overall Satisfaction	82.5	1,016	79.6	1,197	79.9	1,306	81.8	1,561	82.1	1,499	84.2	1,652	83.0	1,883
		2008		2009		2010		2011		2012		2013		2014	
		%	n	%	n	%	n	%	n	%	n	%	n	%	n
Males	Supervision	79.4	1,745	79.2	1,948	78.5	1,806	80.1	1,998	81.2	2,272	82.4	2,325	82.9	2,507
	Intellectual Climate	65.3	1,652	65.0	1,829	65.3	1,712	66.2	1,898	67.4	2,175	69.6	2,225	69.9	2,410
	Skill Development	93.5	1,739	92.8	1,935	92.1	1,790	93.1	1,983	94.6	2,253	93.4	2,309	94.1	2,489
	Infrastructure	77.9	1,608	78.2	1,820	77.8	1,687	78.8	1,862	79.2	2,154	80.2	2,205	81.9	2,363
	Thesis Examination	80.2	1,743	81.6	1,942	80.8	1,806	80.0	2,001	82.4	2,276	81.3	2,338	83.3	2,519
	Goals and Expectations	92.1	1,754	92.2	1,952	92.0	1,805	92.7	2,007	93.2	2,272	93.1	2,328	94.2	2,512
	Overall Satisfaction	87.6	1,744	87.5	1,949	86.7	1,803	88.4	1,996	87.7	2,276	88.5	2,335	88.2	2,516
Females	Supervision	73.8	1,876	74.7	2,007	76.7	2,038	76.9	2,101	77.6	2,409	79.7	2,481	79.4	2,669
	Intellectual Climate	61.1	1,782	61.4	1,890	62.4	1,924	63.9	2,000	64.1	2,278	66.1	2,342	65.1	2,537
	Skill Development	92.7	1,859	92.3	1,988	93.3	2,023	93.2	2,076	93.2	2,399	93.8	2,459	93.3	2,653
	Infrastructure	72.9	1,738	74.0	1,843	74.3	1,876	75.5	1,940	76.4	2,236	78.2	2,308	77.7	2,504
	Thesis Examination	81.4	1,856	78.8	1,999	81.3	2,041	80.7	2,096	81.6	2,408	82.8	2,484	81.9	2,677
	Goals and Expectations	91.3	1,871	91.8	2,003	93.3	2,038	91.9	2,087	92.5	2,416	93.4	2,483	93.3	2,676
	Overall Satisfaction	83.6	1,861	83.0	2,000	83.2	2,034	84.1	2,093	84.7	2,401	85.0	2,481	85.5	2,677

Research graduates aged over 40 years gave higher mean percentage agreement scores than their counterparts aged 40 years and under on four of the seven PREQ scales (Table 11); however the largest differences were observed on the Infrastructure and Intellectual Climate scales, both of which saw younger graduates give higher scores than older graduates.

This result is consistent with the last few years of the survey. Notably, the difference in terms of Overall Satisfaction was only marginal between the two age groups under examination (0.2 percentage points).

Table 11: 2000 to 2014 PREQ scale mean percentage agreement scores by age group

		2000		2002		2003		2004		2005		2006		2007	
		%	n	%	n	%	n	%	n	%	n	%	n	%	n
40 years and under	Supervision	69.6	1,187	70.5	1,370	72.6	1,552	70.9	1,834	72.9	1,805	74.2	1,905	75.3	2,155
	Intellectual Climate	56.6	1,174	56.6	1,289	56.4	1,493	58.6	1,773	60.1	1,745	64.9	1,842	63.8	2,095
	Skill Development	90.2	1,234	90.8	1,389	90.9	1,547	92.1	1,829	92.0	1,792	92.1	1,891	92.9	2,149
	Infrastructure	69.9	1,128	69.1	1,272	70.1	1,472	70.7	1,750	71.9	1,727	74.7	1,842	76.2	2,091
	Thesis Examination	77.1	1,244	75.6	1,393	74.8	1,546	76.5	1,837	79.7	1,801	79.9	1,887	80.8	2,147
	Goals and Expectations	88.1	1,245	87.8	1,403	89.5	1,552	89.6	1,839	89.8	1,811	90.4	1,900	92.0	2,154
	Overall Satisfaction	83.9	1,255	80.5	1,383	83.3	1,543	83.1	1,832	84.3	1,798	84.1	1,888	86.0	2,158
Over 40 years	Supervision	73.4	725	70.6	906	73.0	1,018	75.6	1,204	75.2	1,184	78.9	1,317	78.7	1,392
	Intellectual Climate	55.7	655	52.2	795	56.1	910	55.9	1,075	55.3	1,055	60.2	1,185	60.3	1,246
	Skill Development	89.2	767	88.3	924	87.6	1,010	89.4	1,194	88.6	1,158	89.7	1,308	89.7	1,385
	Infrastructure	63.8	558	61.8	715	62.2	858	64.7	1,001	66.1	1,001	69.3	1,123	69.9	1,171
	Thesis Examination	78.0	778	75.3	954	75.1	1,019	76.8	1,218	79.2	1,184	80.4	1,321	80.8	1,405
	Goals and Expectations	88.6	766	88.3	958	88.9	1,023	90.8	1,216	90.4	1,183	92.2	1,329	91.9	1,409
	Overall Satisfaction	85.5	798	81.8	932	80.3	1,014	84.7	1,208	82.0	1,180	85.7	1,318	85.2	1,402
		2008		2009		2010		2011		2012		2013		2014	
		%	n	%	n	%	n	%	n	%	n	%	n	%	n
40 years and under	Supervision	75.7	2,329	76.1	2,526	76.6	2,451	78.2	2,685	78.7	3,165	81.3	3,207	80.9	3,463
	Intellectual Climate	64.2	2,265	63.8	2,454	65.3	2,380	66.5	2,624	67.2	3,086	69.3	3,137	68.5	3,392
	Skill Development	94.3	2,311	93.3	2,504	93.6	2,431	93.8	2,663	94.5	3,146	94.4	3,183	94.3	3,438
	Infrastructure	76.5	2,231	77.2	2,438	77.5	2,373	79.1	2,597	79.9	3,075	81.0	3,119	81.6	3,375
	Thesis Examination	80.7	2,304	80.2	2,509	80.5	2,451	79.7	2,682	82.7	3,162	82.4	3,213	82.4	3,464
	Goals and Expectations	91.7	2,326	91.8	2,522	92.0	2,447	92.0	2,677	92.9	3,164	93.4	3,204	93.4	3,461
	Overall Satisfaction	86.0	2,320	85.4	2,521	85.2	2,444	86.6	2,671	86.3	3,158	87.7	3,209	86.8	3,465
Over 40 years	Supervision	78.0	1,291	78.4	1,424	79.2	1,387	79.1	1,409	80.5	1,504	80.5	1,599	81.6	1,704
	Intellectual Climate	60.9	1,167	61.9	1,260	61.0	1,251	61.9	1,269	62.1	1,355	64.5	1,430	65.3	1,546
	Skill Development	90.9	1,286	91.2	1,414	91.3	1,377	91.9	1,391	92.5	1,494	92.2	1,585	92.5	1,695
	Infrastructure	72.9	1,114	73.9	1,220	72.9	1,184	72.8	1,200	72.7	1,304	75.0	1,394	75.6	1,484
	Thesis Examination	81.0	1,294	80.2	1,427	82.2	1,390	81.7	1,410	80.6	1,510	81.3	1,609	82.7	1,723
	Goals and Expectations	91.7	1,298	92.2	1,428	94.1	1,390	92.9	1,412	92.8	1,512	92.9	1,607	94.4	1,718
	Overall Satisfaction	84.7	1,284	84.8	1,423	84.3	1,387	85.4	1,413	85.8	1,507	84.7	1,607	87.0	1,719

Table 12 demonstrates that research graduates who were overseas residents at the time of the survey were more positive about their postgraduate research experience than Australian residents, and have been since the inception of the PREQ. In 2014,

the largest differences were observed on the Intellectual Climate and Infrastructure scales. Conversely, the differences between groups on the Skill Development and Goals and Expectations scales were only small in magnitude.

Table 12: 2000 to 2014 PREQ scale mean percentage agreement scores by permanent resident status

		2000		2002		2003		2004		2005		2006		2007	
		%	n	%	n	%	n	%	n	%	n	%	n	%	n
Australian resident	Supervision	69.5	1,808	69.3	1,927	71.9	2,235	72.1	2,657	72.7	2,620	75.3	2,745	75.3	2,938
	Intellectual Climate	54.2	1,712	53.1	1,756	55.2	2,088	56.3	2,490	57.1	2,447	62.1	2,575	60.3	2,763
	Skill Development	89.5	1,895	89.5	1,959	89.5	2,223	90.9	2,645	90.2	2,584	91.0	2,726	91.3	2,919
	Infrastructure	65.6	1,568	64.7	1,665	66.3	2,013	67.3	2,393	68.4	2,376	71.6	2,513	72.3	2,673
	Thesis Examination	77.3	1,928	74.8	1,992	75.3	2,231	76.7	2,672	79.4	2,619	80.5	2,733	80.2	2,944
	Goals and Expectations	87.8	1,911	87.2	2,002	89.2	2,240	89.8	2,674	89.7	2,625	91.3	2,749	91.4	2,952
	Overall Satisfaction	83.9	1,953	80.2	1,955	81.1	2,225	83.0	2,660	82.6	2,614	84.4	2,732	84.7	2,950
Overseas resident	Supervision	80.1	287	77.6	342	78.6	330	77.5	378	81.4	375	80.8	471	82.2	661
	Intellectual Climate	65.3	278	65.3	320	63.6	311	66.2	356	66.1	358	69.0	447	72.3	630
	Skill Development	92.8	295	92.2	345	90.4	329	92.3	376	93.8	372	91.6	468	93.4	666
	Infrastructure	78.0	275	75.8	315	72.8	313	76.6	355	78.9	356	78.7	447	80.9	641
	Thesis Examination	77.9	293	79.3	346	72.7	329	76.3	380	80.3	372	78.0	469	81.9	660
	Goals and Expectations	91.4	296	93.0	350	89.8	330	92.2	378	92.8	375	90.8	474	94.3	662
	Overall Satisfaction	90.0	299	85.5	351	89.3	327	88.9	377	89.2	370	86.8	469	90.0	662
		2008		2009		2010		2011		2012		2013		2014	
		%	n	%	n	%	n	%	n	%	n	%	n	%	n
Australian resident	Supervision	75.5	2,943	75.9	3,163	76.0	3,061	78.0	3,179	78.0	3,601	79.2	3,528	79.7	3,740
	Intellectual Climate	61.0	2,772	61.5	2,963	62.0	2,883	63.2	3,012	63.4	3,409	64.5	3,331	64.3	3,552
	Skill Development	92.9	2,926	92.2	3,142	92.7	3,031	93.1	3,148	93.8	3,580	93.0	3,503	93.4	3,714
	Infrastructure	73.7	2,686	74.6	2,907	74.5	2,813	75.4	2,908	75.8	3,342	76.6	3,282	77.2	3,469
	Thesis Examination	80.9	2,935	79.7	3,160	80.9	3,066	80.5	3,177	81.5	3,604	81.6	3,540	81.8	3,757
	Goals and Expectations	90.9	2,946	91.6	3,167	92.6	3,062	92.0	3,177	92.2	3,612	92.4	3,535	93.3	3,750
	Overall Satisfaction	84.4	2,925	84.3	3,161	83.7	3,054	85.5	3,172	84.9	3,602	84.9	3,537	85.9	3,753
Overseas resident	Supervision	81.5	671	80.8	793	83.5	785	80.0	915	83.6	1,082	86.2	1,271	84.7	1,433
	Intellectual Climate	72.5	654	69.2	757	70.6	755	71.2	881	73.0	1,047	76.7	1,229	75.8	1,392
	Skill Development	94.0	665	93.8	782	93.2	784	93.0	906	94.2	1,074	95.4	1,258	94.6	1,425
	Infrastructure	82.3	653	81.6	758	81.3	752	83.0	889	84.1	1,050	86.3	1,224	86.1	1,395
	Thesis Examination	80.6	657	81.7	782	81.5	783	79.5	915	83.4	1,082	83.5	1,275	84.7	1,436
	Goals and Expectations	95.0	672	93.3	789	93.3	783	93.2	912	95.2	1,078	95.7	1,269	94.8	1,435
	Overall Satisfaction	90.8	673	89.1	789	89.3	785	88.5	912	90.4	1,077	91.7	1,272	89.2	1,437

As shown in Table 13, research doctoral graduates who were not in paid work during their final year of study tended to be more positive about their postgraduate research experience than graduates who were in paid work, although only the differences on the Intellectual Climate and Infrastructure scales were arguably of practical importance. A similar result was observed for research masters graduates

on these two scales; however, in a major difference between masters and doctoral graduates, those who were in paid work during their final year of study tended to give higher scores in relation to the other five scales. It is interesting to note the general similarity between the results on the Intellectual Climate and Infrastructure scales when stratified by final-year work to those when the same two scales are stratified

by attendance type (Table 9). A similar interpretation may apply: research students who were engaged in paid work during their final year of study would generally have less time to spend on campus than those who were not in work—except, of course, those engaged in academic employment—which could explain their lower mean scores on these particular scales.

Table 13: 2014 PREQ scale mean percentage agreement scores by final year work

		Worked in final year	No work in final year
Research masters	Supervision	79.2	75.5
	Intellectual Climate	61.0	67.7
	Skill Development	90.9	90.2
	Infrastructure	72.4	78.0
	Thesis Examination	78.2	77.0
	Goals and Expectations	91.0	86.8
	Overall Satisfaction	82.7	80.5
Research doctorate	Supervision	80.8	83.0
	Intellectual Climate	66.4	71.9
	Skill Development	94.0	94.6
	Infrastructure	78.7	84.5
	Thesis Examination	83.0	83.7
	Goals and Expectations	94.0	95.1
	Overall Satisfaction	87.0	88.7
All research graduates	Supervision	80.6	82.1
	Intellectual Climate	65.6	71.4
	Skill Development	93.5	94.1
	Infrastructure	77.8	83.7
	Thesis Examination	82.3	82.9
	Goals and Expectations	93.5	94.2
	Overall Satisfaction	86.3	87.8

Research graduates who were in full-time work at the time of the survey tended to be more positive about their postgraduate research experience than those who were in part-time work or seeking work (Table 14). Focusing solely on the Overall Satisfaction scale, research doctoral graduates gave higher mean percentage agreement scores than comparable research masters graduates across all labour market activities, with the largest differences observed in relation to part-time employment and not participating in the labour market (each with 6.4 percentage points).

It is important to note that this discussion on the influence of course and respondent characteristics on PREQ scores does not account for any interdependence between characteristics. The differences in scores for male and female research graduates, for example, are more likely the result of differences in their enrolment characteristics than any fundamental difference between the sexes. In other words, sex may reflect a difference in PREQ scores, but it is not necessarily the cause of such. This should be kept in mind when interpreting the statistics in this report. This analytical approach was chosen to maintain consistency with earlier reports in this series.

Table 14: 2014 PREQ scale mean percentage agreement scores by labour market activity after graduation

		Working full time	Working part time	Seeking work	Not participating in labour market
Research masters	Supervision	79.3	79.9	70.9	77.8
	Intellectual Climate	62.6	61.0	59.4	70.9
	Skill Development	92.4	89.0	89.7	91.5
	Infrastructure	73.5	72.6	72.7	79.5
	Thesis Examination	76.8	78.5	75.6	81.7
	Goals and Expectations	90.6	91.1	84.6	90.6
	Overall Satisfaction	85.7	79.9	76.1	82.6
Research doctorate	Supervision	82.3	80.4	77.8	83.8
	Intellectual Climate	69.5	66.1	61.6	72.6
	Skill Development	94.5	93.7	93.4	94.7
	Infrastructure	81.3	78.6	78.0	84.7
	Thesis Examination	83.3	83.9	81.6	82.2
	Goals and Expectations	94.4	94.1	93.0	96.0
	Overall Satisfaction	89.2	86.3	80.9	89.0
All research graduates	Supervision	82.0	80.3	76.9	82.5
	Intellectual Climate	68.8	65.2	61.3	72.2
	Skill Development	94.3	92.8	92.9	94.0
	Infrastructure	80.6	77.6	77.3	83.5
	Thesis Examination	82.6	83.0	80.8	82.1
	Goals and Expectations	94.0	93.6	91.8	94.8
	Overall Satisfaction	88.8	85.1	80.2	87.5



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