# Postgraduate Research Experience Survey 2008
## Final report

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# Executive summary

This report summarises the top-level findings of the second national survey in the UK of what postgraduate research students think about their experiences, the Postgraduate Research Experience Survey 2008 (PRES 2008).

Results from the 2008 PRES survey are compared with those from the 2007 survey. The PRES 2007 final report[1] includes findings of analyses of differences in the views of particular groups of students based on the demographic variables.

Seventy-three higher education institutions (HEIs) took part in PRES 2008 (compared with 58 for PRES 2007), and a total of 16,524 replies were received from the 57,000 students surveyed, giving an overall response rate of 28.9% (compared with 25.2% for PRES 2007). The demographic profile of PRES 2008 respondents is similar to the sector profile recorded by HESA, and almost identical to the profile of PRES 2007 respondents.

## Key findings

### Stability in results between years

The aggregate results from PRES 2008 are almost identical to those from PRES 2007, despite the different group of HEIs taking part. This suggests that the survey is a highly reliable tool, effectively capturing underlying patterns of student views about their experience.

### Stability in results between institutions

Students' overall responses to the PRES 2008 questions are very similar, irrespective of which particular institution they were studying at. (It should be noted that a range of types and sizes of institutions took part in the 2008 survey.)

### Motivation

PRES 2008 included a new question asking students what their main motivations were in pursuing a research degree programme. The most common motivations were interest in the subject and improving career prospects for an academic or research career. Motivation appears to vary by age and discipline.

### Satisfaction

Students were most satisfied with supervision, opportunities to develop a range of research skills and access to appropriate facilities, and were least satisfied with opportunities to develop a range of transferable skills and provision of guidance on institutional standards and expectations.

1 www.heacademy.ac.uk/assets/york/documents/ourwork/research/survey/pres/pres.pdf

## Overall experience

More than four out of five research students rated their experience as having met or exceeded their expectations, and the main factors determining that were supervision and intellectual climate.

## Completion

Two-thirds of the students expected to complete their research degree programme more or less on schedule. Students considered supervision and skills development to be the two most important factors that influence successful completion.

## Supervision

Students rated supervision as the most important item for successful completion: nearly three out of four said they were satisfied with it, and nearly three-quarters rated their experience as having met or exceeded expectations. They were particularly positive about their supervisors' skills and subject knowledge, and were least positive about the advice they received regarding their literature searches.

## Skills development

Students rated research skills as the second most important item for successful completion, and nearly two-thirds were satisfied with it. They were much less positive about transferable skills, with which just over half were satisfied. Four out of five believed that their ability to learn independently and their analytical skills had improved. There are variations between disciplines in students' confidence about managing their research project, their views on improving analytical skills and their satisfaction with opportunities to develop research and transferable skills.

## Professional development and career

Three questions form a robust new scale, scores on which vary slightly with students' age.

## Teaching

Those who had experience of teaching did not have very positive views about the support and guidance they had received.

## Infrastructure

Two out of three students said they were satisfied with access to appropriate resources, but most regarded it as a relatively unimportant factor in the student experience. They were most positive about access to library and IT facilities, and equipment, and were least positive about availability of financial support. Students' attitudes varied by discipline.

### Intellectual climate

Nine out of ten students rated the research environment as important to successful completion, but only about half were satisfied with it. This was the lowest scoring scale in PRES. Only around half of the students agreed they had access to a good seminar series, had opportunities for social contact with other research students, had opportunities to become involved in the broader research culture, were stimulated by the research ambience in their department or felt integrated into their departmental community.

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### Goals and standards

Students regarded this as the least important item in successful completion, although more than two-thirds agreed that they understood the standard of work expected and the required standard for the thesis.

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### Thesis examination

Only students who had submitted their thesis could answer these questions. Most of them agreed that their work had been examined in a reasonable period of time and they had received adequate support and advice in revising their thesis after the viva. They were least positive about the support and advice they had received in preparing for their viva.

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### Personal factors

Students were very positive about the support they had received from friends, family and employers, but much less positive about the impact on their personal finances.

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### QAA Code of practice

Around three-quarters of students agreed that they understood their responsibilities as research students and the requirements and deadlines of formal progress monitoring. They were most critical about their institution valuing and responding to feedback from students, being encouraged to reflect on their professional development needs and career development needs, and the range of career opportunities available to them.

# 1. PRES: approach and format

## 1.1 Introduction

This report summarises the top-level findings of the second national survey in the UK of what postgraduate research students think about their experiences, the Postgraduate Research Experience Survey 2008 (PRES 2008). Details about how and why PRES was developed are given in the PRES 2007 final report[2] and on the PRES website[3]. This chapter briefly summarises relevant key points.

## 1.2 The survey instrument

PRES is an online survey tool designed to collect feedback from current research students about their experiences in a systematic, user-friendly and comparative way. The main objective is to help HEIs to enhance the quality of their postgraduate research degree provision, informed by evidence-based decision-making. Institutions can benchmark their own students' responses against those from the much larger aggregate sample, which is representative of the sector across the UK.

A number of design principles informed the development of PRES (Table 1).

### Table 1. Design principles

| The survey should be: |
|---|
| a. Student-centred: it must listen to the student voice, and focus on enhancement of the student experience. |
| b. Easy to use: from the student's perspective, it must be in an accessible online format, easy to understand, quick to complete; from the institution's perspective, it must be easy to set up and administer, and easy to analyse and interpret the results. |
| c. Voluntary: institutions and their research students must be allowed and encouraged, but not required, to take part. |
| d. Flexible: while for comparative purposes it must have an agreed standard set of core questions, it must be possible for HEIs to add their own questions if they wish to. |
| e. Useful: it must provide information that is useful to HEIs and national bodies, and this includes a focus on the student experience and the opportunity for comparative analysis (benchmarking and longitudinal tracking). |
| f. Cost-effective: it must be economical for HEIs to run [the Academy meets all central development and support costs]; the survey itself is free to users; participating HEIs need a BOS site licence. |
| g. Anonymous: the anonymity of student respondents and institutions taking part must be protected: all student responses are anonymous; a list of participating HEIs is not published. |
| h. Secure: participating HEIs must be confident that their institutional results will not be made available to any third party. Aggregate results are held on the BOS server; even the Academy cannot identify individual institutions by name in the aggregate results; aggregate results will not be released or sold to any third parties. |

2 www.heacademy.ac.uk/assets/york/documents/ourwork/research/survey/pres/pres.pdf
3 www.heacademy.ac.uk/ourwork/research/survey/pres

The development of PRES has been informed by wide consultation across the sector, including HEIs and bodies such as the National Postgraduate Committee (NPC), the Quality Assurance Agency (QAA), the English funding council (HEFCE) and research councils (RC-UK), and the Vitae (formerly UK GRAD) Regional Hubs.

PRES is based on a purpose-built online questionnaire delivered via the Bristol Online Surveys (BOS)[4] website. Participating institutions used their own BOS accounts to run PRES. Many already had BOS site licences because they were participating in the Careers in Research Online Survey (CROS) and using it for other online surveys. Those who didn't have a BOS site licence needed to buy one to use PRES. Information about the site licence can be obtained from BOS.

Participating institutions were responsible for contacting their research students by email to invite them to take part in PRES. Institutions could choose which students they would like to take part in the survey; most invited all of them.

Each participating institution designated a member of staff as its PRES officer, who was responsible for setting up and managing the survey, liaising with the Academy and overseeing analysis and internal reporting of the institutional results.

The BOS website allowed the PRES officers to monitor their own institutional results and the aggregate results at any time while the survey was open and after it closed.

## 1.3 The questionnaire

The PRES 2008 questionnaire is included in Appendix 1, and a copy can be downloaded from the Academy website[5]. A Welsh version of the questionnaire was also created (results from which are incorporated into this aggregate analysis).

The questionnaire includes a standard set of questions and some free-text boxes; it is very similar to the PRES 2007 questionnaire to allow comparisons between years. Informed by feedback from a focus group of PRES 2007 officers, a few of the questions from 2007 were removed (from the personal factors section) because they did not yield very informative results, one new question (question 27) was added (which asked students what their motivations were for pursuing a research degree programme), and the sequence in which some questions were asked was revised to make the survey easier for students to complete quickly.

Each institution was given an electronic template of the core PRES questionnaire before the survey went live, which they could modify by adding institution-specific questions. All core parts of the questionnaire were 'locked' and could not be changed in any way, to make sure that results would be comparable across institutions.

The questions in PRES 2008 were structured in 11 sections. The first six sections comprised 28 questions relating to six different dimensions of the research student experience, which were used to form six scales:

- supervision
- skills development
- infrastructure
- intellectual climate (research environment)
- goals and standards
- thesis examination.

4 www.survey.bris.ac.uk
5 www.heacademy.ac.uk/assets/york/documents/ourwork/research/pres_2008_questionnaire_final.pdf

The seventh section comprised ten questions that covered additional aspects of the research student experience, informed by precepts from Section 1 of the QAA *Code of practice:*

- career/personal development
- progress and review arrangements
- student representations, complaints and appeals
- feedback mechanisms
- selection, admission and induction of students
- skills training.

Section 8 included four questions relating to teaching opportunities, and Section 9 comprised three questions relating to personal factors that might have an impact on the research student experience.

Section 10 of the questionnaire asked students how important they considered six broad aspects of their experience to be with regard to completing their research degree programme, how satisfied they were with them, and how their experience of them had met with their expectations. The aspects were:

- supervisory support and guidance
- access to appropriate facilities
- opportunities to develop a range of research skills
- the research environment
- opportunities to develop a range of transferable skills
- provision of guidance on institutional standards and expectations for the research degree programme.

One question within Section 10 asked students to rate their confidence about completing their programme more or less within the planned timescale.

Section 11 asked students if they had completed the 2007 PRES questionnaire, and it contained an open question that invited them to add further comments on their experience of their research degree programme.

The demographic section consisted of 14 items, allowing analysis of patterns of responses for different types of student:

- age
- gender
- disability
- fee status (UK, EU, overseas)
- ethnicity
- full-time/part-time
- mode of study (face-to-face, distance)
- year of study
- previous activity (year before started)
- main motivation for pursuing a research degree
- current activity
- discipline
- department (optional for institutions to use)
- funding source
- degree registered for.

## 1.4 Ownership and anonymity

All student responses in PRES were collected on an anonymous basis. In a few institutions where students were invited to take part in a prize draw, they were asked to provide their email address if they wished to enter.

Institutional results remain confidential to the institution. Aggregated results, in which the identity of each institution is not recorded, remain confidential to the participating institutions and to the Academy. The list of institutions participating in PRES remains confidential to these institutions and the Academy.

Each institution is the owner of its own institutional data and can publish its own PRES results internally and externally; however, institutions cannot publish aggregate (sector-level) PRES data before the Academy has published this report.

The Academy has access to the aggregate dataset with individual institution-level data. Institutional names and free-text responses have been removed from this dataset to protect anonymity by making it impossible for the Academy to identify particular institutions.

# 2. The PRES 2008 survey

The survey was open from early March and originally was to be open for two months until the end of April. Because of a slightly lower response rate (than in 2007), towards the end of this period the survey was extended in 59 (of the 73) institutions until end of May 2008. A cross-tabulation analysis was conducted to make sure that there were no significant differences between replies collected in May and replies collected in March and April. This showed that the data are not time sensitive, and so the two sets of responses can be analysed together.

The Academy offered various forms of support to institutions during and after the survey, including documentation (How to set up PRES; How to analyse PRES data; and *How to set up a PRES benchmarking club*), a regular PRES email bulletin, the dedicated PRES website, and ad hoc support by telephone and email whenever necessary. A PRES officers' meeting was held in June (with representatives from 40 institutions) to follow up on the survey, gain feedback from institutions and share institution-level effective practice. The Academy also arranged technical support from the BOS team.

## 2.1 Participating institutions

All HEIs in the UK were invited to take part on a voluntary basis, so the sample of participating institutions was self-selecting. A total of 73 HEIs launched the survey, and useful results were collected at 72 [compared with 58 HEIs that took part in PRES 2007]. The sample included 60 [44] HEIs from England, five [eight] from Scotland, six [four] from Wales and two [two] from Northern Ireland. By type, the sample comprised 38 [25] post-92 institutions, 20 [19] pre-92 institutions, 12 [eight] Russell Group and three [six] small and specialist colleges.

A total of 16,524 [10,544 in 2007] replies were received from the 57,000 [42,000] students invited to take part by the 73 [58] participating institutions, giving an overall response rate of 28.9% [25.2%].

Thirty-seven HEIs took part in both the 2007 and 2008 surveys; this represents 51% of the 2008 cohort and 64% of the 2007 cohort.

The BOS website allowed PRES officers to monitor their institutional response rates while the survey was open, in order to make informed decisions about what follow-up would be appropriate to encourage students to take part. Most PRES officers sent between three and six email reminders. A few institutions introduced prize draws in an effort to maximise response rates. Some institutions used a 'publicity plan', which included liaising with SU, research committees, posters etc.

## 2.2 Demographic profile of respondents

The demographic profile of PRES 2008 respondents (Appendix 2) is similar to the sector profile recorded by HESA, and almost identical to the profile of PRES 2007 respondents. PRES had relatively more female respondents than the sector average (54.0% against 45.3%: Table A2.2 in Appendix 2. However, it should be noted that females are often over-represented in surveys, because they are generally more keen to reply to questionnaires), but closely matched disability (Table A2.3) and domicile (Table A2.4), and broadly matched ethnicity (Table A2.5) in the sector. The biggest difference was in mode of study (Table

A2.6); PRES had relatively many more full-time students (78.3%) than the sector average (51.2%). This may be partly accounted for by the status of 'writing-up students', who are often recorded as part-time by institutions while the students see themselves as full-time, but also by the fact that part-time students are harder to reach with the online surveys.

Most (58.5%) of the PRES respondents were less than 30 years old (Table A2.1), studying primarily face-to-face (83.5%: Table A2.7), were in the first three years of study (77.7%: Table A2.8), and were registered for a PhD (74.6%: Table 2.14). Students were studying a wide range of disciplines (Table A2.12), the largest groups coming from biological sciences (14.2% of the overall sample), social studies (12.7%) and engineering and technology (10.1%). With regard to funding, almost a quarter (23%) were self-funded or received research council funding (21%), and less than a fifth (16%) received institutional funding.

The most common activities students undertook immediately before starting their research degree programme (Table A2.9) were completing a taught postgraduate programme (33.9%) or an undergraduate programme (17.8%), or working in a non-research role (17.4%). Most respondents (69.0%) were still engaged in doing their research or were writing up their thesis (23.4%) at the time of the survey (Table A2.11).

## 2.3 Motivation

PRES 2008 included a new question asking students what their motivations were in pursuing a research degree programme (Table A2.10). The most common motivations were interest in the subject (34.2%) and improving career prospects for an academic or research career (31.9%). Analysis of the relationships between motivation and demographic variables (Appendix 4) reveals some interesting patterns.

Motivations depend on the age of the respondents. For students aged 25 or younger, interest in the subject was a more important motivation than improving their academic or research career. This relationship was even stronger for students aged 51 and older. For students aged between 31 and 40, improving their academic or research career was a much more important motivation than interest in the subject. Although much less important in general, improvement of career prospects outside of academia was the most important motivation for the youngest students (for 9% of them it was the main motivation) and it decreased with age.

Interest in the subject was the most important motivation for mathematical and physical sciences students, and also for creative art and design, and historical and philosophical studies students. It was the least important for medicine and dentistry, veterinary and agriculture students. Improving career prospects for an academic or research career was the most important motivation for medicine and veterinary students, and improving career prospects outside of academia was most important for engineering and technology students.

# 3. Overview of PRES 2008 results

## 3.1 Introduction

This chapter summarises the overall findings from PRES 2008 at the aggregate (sector) level. Individual sections deal with headline findings (Section 3.2), overall experience of the programme (Section 3.3), confidence about completing on schedule (Section 3.4) and mean scale scores (Section 3.5)

## 3.2 Overall experience of the programme

More than four out of five (82.5%; 81% in 2007) research students rated their experience as having met (21.6%; 22%) or exceeded (60.9%; 59%) their expectations (Table 2). The 2008 results closely mirror those for the 2007 survey.

### Table 2. Overall experience of programme

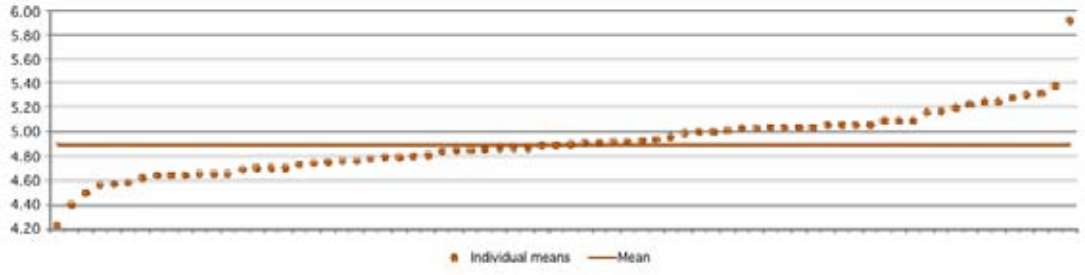
| Item | Mean* | SD | Compared with expectations | | |
|---|---|---|---|---|---|
| | | | % worse | % as expected | % better |
| 14.g. Overall experience of research programme | 4.87 [4.7] | 1.50 [1.5] | 17.5 [19.4] | 21.6 [22.1] | 60.9 [58.6] |

* *Note: This item was measured on a seven-point scale (1 = it was much more negative than expected; 4 = it met my expectations; and 7 = it was much more positive than expected). Figures in square brackets relate to PRES 2007 results.*

Multiple regression analysis (Appendix 3) shows that supervision and intellectual climate are the two strongest determinants (of those included in the survey) of students' ratings of their overall experience of their research degree programmes.

Despite the range of types and sizes of institutions that took part in PRES 2008, students' ratings of their overall experience of the programme varied relatively little between institutions. Figure 1 plots mean scores for the 72 participating institutions in increasing order; superimposed on the plot is the overall mean score (calculated as the mean of the 72 individual institutional mean scores, which is slightly different from the mean score calculated from all 16,524 individual student respondents). The overall mean score for this item is 4.90 (on a seven-point scale). Individual institutional mean scores range from 4.23 to 5.38 (standard deviation = 0.257), with the exception of one high outlier (5.92), which represents an institution that only had 13 respondents (so this result may not be representative of the institution as a whole).

Figure 1. Overall experience of the programme: variations between institutions




Students were asked to rate how important they thought particular aspects of their research degree programme were to successful completion, how satisfied they were with those aspects, and the extent to which their experiences of those aspects had met or exceeded their expectations. The results are summarised in Table 3.

Students rated supervisory support and guidance as the most important aspect of their research degree programme (95.7% rated it as important or very important: Figure 2), followed by opportunities to develop a range of research skills (91.3%), access to appropriate facilities (90.1%), the research environment (87.3%), provision of guidance on institutional standards and expectations (78.1%) and opportunities to develop a range of transferable skills (74.3%). Scores and rankings were almost identical in the 2007 and 2008 surveys.

Students ranked their satisfaction with aspects of the research degree programme in almost exactly the same sequence as they ranked importance, although percentage agreement and mean scores were consistently much lower for each aspect (Figure 2). In decreasing order of satisfaction, they rated supervisory support and guidance (71.2%), opportunities to develop a range of research skills (62.7%), access to appropriate facilities (62.0%), the research environment (57.4%), opportunities to develop a range of transferable skills (54.1%) and provision of guidance on institutional standards and expectations (49.9%). There was no question explicitly relating to satisfaction in PRES 2007.

Figure 2. Summary of ratings for importance, satisfaction and experience against expectations

Figure 2 summarises student responses with regard to importance (the percentage rating that factor 'important' and 'very important'), satisfaction (the percentage rating themselves 'satisfied' and 'very satisfied' with that factor) and experience against expectations (the percentage rating their experience of that factor as having 'met' or 'exceeded expectations').

With regard to experience against expectations, students rated their experience of supervisory support and guidance as highest of the items included in the study (79.0% agreed it had met or exceeded expectations: Figure 2). In decreasing order of experience against satisfaction, they rated opportunities to develop a range of research skills (82.9%) and transferable skills (82.4%), access to appropriate facilities (78.2%), provision of guidance on institutional standards and expectations (75.8%) and research environment (75.4%).

### 3.3 Confidence about completing on schedule

Two-thirds (67.0%; 65.2% in 2007) of the research students expected to complete their research degree programme more or less on schedule (Table 3).

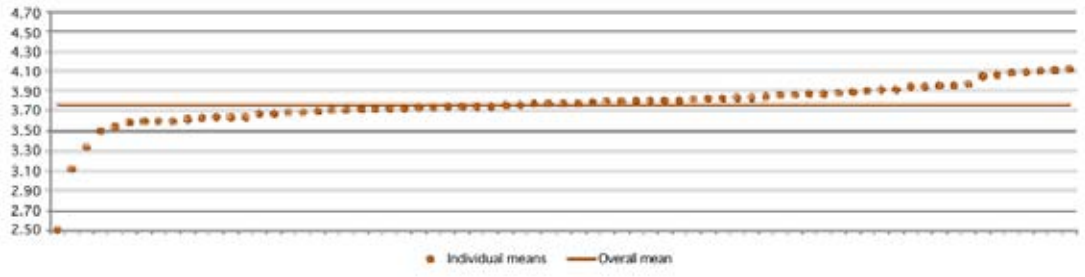
Table 3. Confidence about completing on schedule

| Item | Mean | SD | % disagree | % neutral | % agree |
|---|---|---|---|---|---|
| 15. I am confident that I will complete my research degree programme more or less within the planned timescale | 3.78 [3.74] | 1.12 [1.16] | 13.8 [15.2] | 19.2 [19.6] | 67.0 [65.2] |

In general the subject differences regarding confidence to complete on schedule are small, but non-science students and medicine and dentistry students were on average slightly more confident about completing on schedule than science students. Multiple regression analysis (Appendix 3) shows that supervision and skills development are moderately important factors affecting confidence to complete on schedule (however, in total all scales account for only 19% of variance of this item, which means that there are more important factors not measured for in this survey).

There are slight variations between institutions in student confidence about completing on schedule (Figure 3), but it should be noted that this was measured on a five-point scale, so direct comparisons with Figure 1 (based on a seven-point scale) are not possible. The overall mean score for this item is 3.769 (standard deviation = 0.23), and mean scores for individual institutions range from 3.12 to 4.13 (except for the low outlier of 2.5, which represents an institution with only five responses on this question).

Figure 3. Confidence about completing on schedule: variations between institutions




*Note: there are data missing for this item in one institution, so this graph shows the scores for 71 institutions not 72.*

## 3.4 Scale scores

Supervision received the highest mean score (4.02) in PRES 2008 (Table 4), followed in decreasing order by skills development (3.96), goals and standards (3.79), infrastructure (3.70) and intellectual climate (3.45). Thesis examination, which was only rated by a small sub-group of the students, was also rated very highly (4.01). The spread of individual student scores for each scale was very similar, which is why the standard deviation (SD) values in Table 4 are similar. All of the PRES scales were rated using a five-point scale.

Table 4. Mean scale scores

| Scale | Mean | SD |
|---|---|---|
| Supervision | 4.02 [3.93] | 0.950 [0.984] |
| Skill development | 3.96 [3.86] | 0.813 [0.798] |
| Infrastructure | 3.70 [3.62] | 0.914 [0.850] |
| Intellectual climate | 3.45 [3.40] | 1.010 [0.971] |
| Goals and standards | 3.79 [3.80] | 0.958 [0.883] |
| Thesis examination | 4.01 [3.96] | 1.034 [1.057] |

The close similarity in mean scale scores between PRES 2007 and PRES 2008 (Table 4) is striking, with regard to both absolute and relative values. Each scale has an almost identical mean score in each year, and the order in which students rated the scales is virtually the same in both years.

Some disciplinary differences were found across the different aspects of research degree students' experiences, but there were no consistent findings, with no one particular discipline receiving consistently more or less positive ratings. More detailed analysis of the scale results is given in Chapter 4, including variations between institutions and disciplines, responses to individual questions within each scale and the contribution of each scale to explaining variations in students' overall experience of their programme.

# 4. Analysis of scale scores

## 4.1 Introduction

This chapter summarises the aggregate (sector level) results from PRES 2008 by scale, with sections dealing with supervision (Section 4.2), skills development (Section 4.3), infrastructure (Section 4.4), intellectual climate (Section 4.5), goals and standards (Section 4.6) and thesis examination (Section 4.7). Results relating to personal factors (Section 4.8) and relevant precepts in the QAA Code of practice (Section 4.9) are also presented in this chapter.

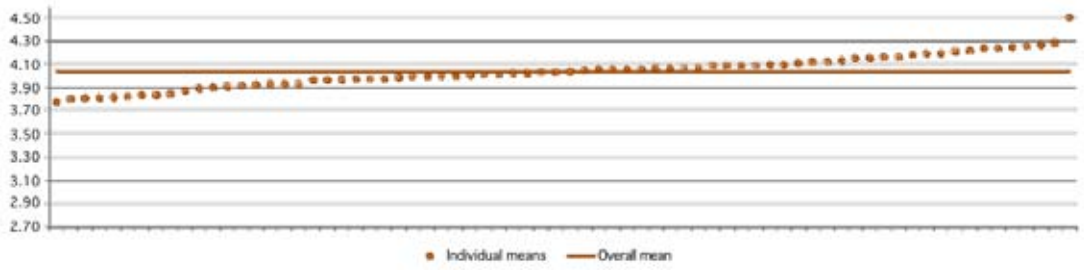
## 4.2 Supervision

Given the need for a good working relationship and trust between a research student and his or her supervisor, it is not surprising that students take a keen interest in the supervisory experience. Recall (Section 3.2) that students rated supervisory support and guidance as the most important item for successful completion (96% rated it as important or very important), nearly three out of four (71.2%) rated their satisfaction with it as high or very high, and nearly two-thirds (79%) rated their experience of it as having met or exceeded their expectations (Figure 2).

Supervision emerged with the highest mean scale score (4.02 out of 5) of the six PRES scales (Table 4), showing that students were more positive overall about supervision than about the other scales.

There are only very small differences between institutions' mean scores on the supervision scale (standard deviation = 0.138). All but one of the 72 participating institutions have a mean score on this scale within the range 3.77 to 4.28 (Figure 4), and they cluster around the overall mean score of 4.036. The one outlier (4.5) is an institution with very few (13) respondents, so this result may not be representative of the institution as a whole.

Figure 4. Supervision scale: variations between institutions




The supervision scale was shown in the multiple regression analysis (Appendix 3) to be the most important of the six PRES scales in explaining variations in students' views on their overall experience (beta = 0.395, highly significant: Table A3.2).

Although discipline differences are small, science students were less satisfied with supervision than non-science students (Table A4.1 and Figure A4.2 in Appendix 4).

Those studying medicine and dentistry, veterinary sciences, and engineering and technology were the least positive with regard to supervision items, while the most positive were those studying languages, history and philosophy, and education. Also, students who were currently making amendments to their thesis following the viva were on average 10% less satisfied than other groups of students regarding supervision items. Satisfaction with supervision decreases slightly with time; the higher the number of years on the programme, the lower satisfaction (Figure A4.1 in Appendix 4).

Most students rated aspects of the supervision scale highly (Table 5). More than four out of five (84%) agreed that their supervisors have the necessary skills and subject knowledge to adequately support their research. Around three-quarters agreed that their supervisors make a real effort to understand any difficulties they face (75%), offer good guidance on topic selection and refinement (72%), provide helpful feedback on their progress (73%) and are available when they need them (74%). The lowest scoring item on this scale was receiving good advice in literature searches from supervisors (64%). Student views are almost identical between PRES 2007 and PRES 2008 (Table 5).

Table 5. Supervision items

| Item | Mean | % Disagree | % Neutral | % Agree |
|---|---|---|---|---|
| 1.a. My supervisor/s have the skills and necessary subject knowledge to adequately support my research | 4.32 [4.27] | 7 [8] | 9 [9] | 84 [82] |
| 1.b. My supervisor/s make a real effort to understand any difficulties I face | 4.07 [4.00] | 11 [13] | 14 [14] | 75 [73] |
| 1.c. I have been given good guidance in topic selection and refinement by my supervisor/s | 3.96 [3.83] | 12 [15] | 15 [16] | 72 [68] |
| 1.d. I have received good guidance in my literature search from my supervisor/s | 3.76 [3.66] | 15 [18] | 21 [20] | 64 [62] |
| 1.e. My supervisor/s provide helpful feedback on my progress | 3.99 [3.90] | 12 [14] | 15 [15] | 73 [71] |
| 1.f. My supervisor/s are available when I need them | 4.02 [3.92] | 12 [14] | 14 [14] | 74 [72] |

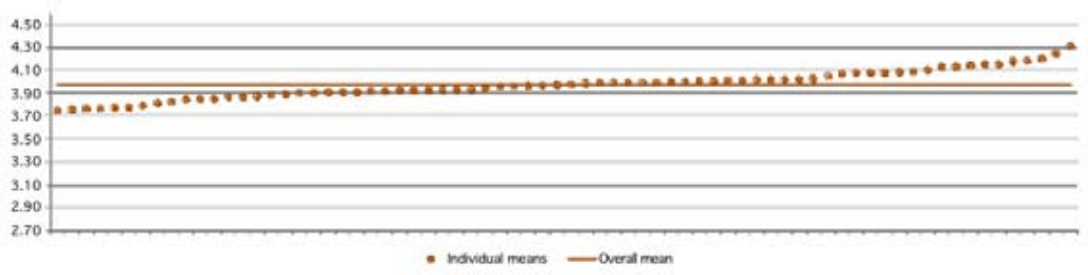
### 4.3 Skills development

Students rated skills development in third place out of the six PRES scales (mean score of 3.96 out of 5); it rises to second place if the thesis examination scale (scored by very few students) is discounted (Table 4).

More detailed analysis of skills, career and professional development are included in Section 5.2 of this report.

Institutional differences in mean scores on the skills development scale are very small (Figure 5). All of the institutions have a mean score within the range 3.75 to 4.31, and they cluster around the overall mean score of 3.975 (standard deviation = 0.122).

Figure 5. Skills development scale: variations between institutions




Students had mixed views about skills development, rating opportunities to develop a range of research skills much more highly than opportunities to develop a range of transferable skills (Figure 2). They rated research skills the second most important item for successful completion (91.3% agreed it was important), after supervisory guidance and support. Nearly two-thirds (62.7%) of students were satisfied or very satisfied with the opportunities to develop research skills, and over half (54.8%) rated their experience as having met or exceeded their expectations. Views on transferable skills were rather different; it was rated lowest of six items with regard to importance (74.3%), just over half (54.1%) were satisfied with it, and less than half (48.7%) rated it as having met or exceeded their expectations.

Results for questions relating to skills development are summarised in Table 6. The top four questions (2a to 2d) comprise the skills development scale, and there are two questions (7i and 7j) relating to the QAA Code of practice.

Within the skills development scale questions (Table 6), four out of five students agreed that as a result of their experience on their research degree programme, their ability to learn independently had improved (81%) and their analytical skills had improved (78%). More than two-thirds agreed that they had developed a range of communication skills (69%) and they felt more confident about managing a research project (69%).

Around half of the students agreed that they had had adequate opportunities to further develop their research skills (61%) and transferable skills (57%: Table 6).

Table 6. Skills development and related items

| Item | Mean | % Disagree | % Neutral | % Agree |
|---|---|---|---|---|
| 2.a. As a result of my experience so far I feel confident about managing a research project | 3.84 [3.75] | 10 [12] | 21 [22] | 69 [67] |
| 2.b. My experience so far has improved my analytical skills | 4.03 [3.92] | 7 [9] | 15 [17] | 78 [74] |
| 2.c. My experience so far has helped me to develop a range of communication skills | 3.84 [3.71] | 10 [12] | 22 [24] | 69 [64] |
| 2.d. As a result of my experience so far I have improved my ability to learn independently | 4.13 [4.08] | 6 [7] | 13 [13] | 81 [80] |
| 7.i. There are adequate opportunities for me to further develop my research skills (QAA precept: skills training) | 3.62 [3.62] | 14 [14] | 25 [25] | 61 [61] |
| 7.j. There are adequate opportunities available for me to further develop my transferable skills (QAA precept: skills training) | 3.59 [3.59] | 14 [14] | 28 [28] | 57 [58] |

## 4.4 Infrastructure

Access to appropriate resources was rated by students as the third most important factor for successful completion, after supervision and research environment; 90.1% rated it as important (Figure 2). Nearly two-thirds (62%) of the respondents agreed that they were satisfied with it (Figure 2), but it came second lowest among the six aspects in relation to student experience against expectations, with just under half (47.6%) agreeing that it met or exceeded their expectations (Figure 2).

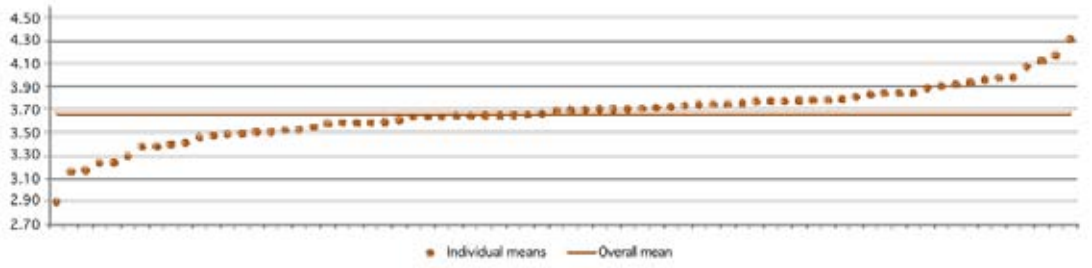
The infrastructure mean scale score of 3.70 was fourth out of six, after supervision, skills development, and goals and standards (Table 4).

Science students agreed substantially more with infrastructure items, and they were more satisfied with access to appropriate facilities than non-science students (Table A4.3 and Figure A4.3 in Appendix 4). Appropriate facilities were the most important for medicine and dentistry, veterinary and languages students. There are no statistically significant differences with regard to access to appropriate facilities between different types of research programmes. More interestingly there are no significant differences between full-time and part-time students. Distance learners were slightly less satisfied with access to appropriate facilities than campus-based students.

There are relatively larger differences between institutions in mean scores on the

infrastructure scale (standard deviation = 0.239) than on the supervision or skills development scales, hence the 'tails' are steeper in Figure 6 than in Figures 4 and 5. Institutional mean scores on this scale range between 2.880 and 4.308, and the overall mean score is 3.659.

Figure 6. Infrastructure scale: variations between institutions




Results for questions relating to infrastructure are summarised in Table 7. Students rated these aspects of infrastructure in variable ways. The most positive aspects, with around two-thirds of students agreeing, were the adequacy of provision of library facilities (70%) and computing resources and facilities (66%), access to equipment necessary for research (68%), provision of suitable working space (65%) and appropriate technical support (62%). The lowest level of student agreement was over the existence of appropriate financial support for research activities, with which 51% agreed and 27% disagreed. Students' views on many of these items of infrastructure in PRES 2008 were slightly more positive than in PRES 2007 (Table 7).

Table 7. Infrastructure items

| Item | Mean | % Disagree | % Neutral | % Agree |
|---|---|---|---|---|
| 3.a. I have had adequate access to the equipment necessary for my research | 3.82 [3.80] | 13 [14] | 19 [18] | 68 [68] |
| 3.b. I have a suitable working space | 3.73 [3.70] | 18 [19] | 17 [17] | 65 [64] |
| 3.c. There is appropriate financial support for research activities | 3.36 [3.16] | 27 [31] | 22 [24] | 51 [45] |
| 3.d. There is adequate provision of computing resources and facilities | 3.78 [3.73] | 16 [16] | 19 [18] | 66 [66] |
| 3.e. There is adequate provision of library facilities | 3.85 [3.73] | 14 [16] | 16 [18] | 70 [66] |
| 3.f. I have the technical support I need | 3.69 [3.60] | 14 [16] | 24 [25] | 62 [59] |

### 4.5 Intellectual climate

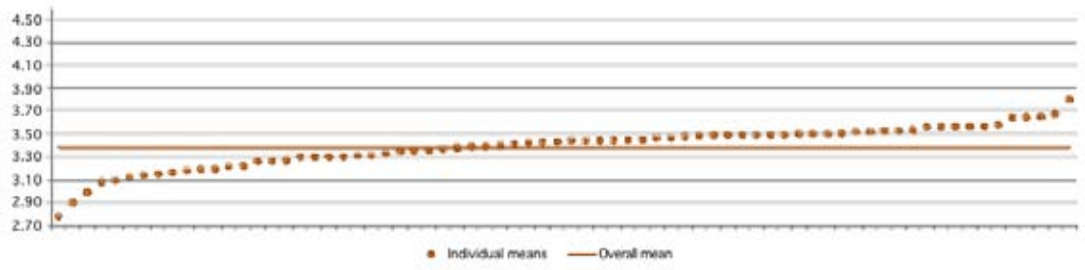
Intellectual climate, in the sense used here, refers to the environment or culture within which research students carry out their research; in most institutions this is heavily shaped by what happens locally at the level of the individual school or department. Although 87.3% of students agreed that the research environment was important to successful completion, they rated it as the second lowest of the six factors they were asked to score (Figure 2). Just over half (57.4%) agreed that they were satisfied with it, and slightly less than half (48.9%) agreed that it had met or exceeded their expectations. Research environment emerged equal third in relation to experience, after supervision and research skills, and equal with transferable skills (Figure 2).

Intellectual climate was the lowest scoring scale in PRES 2008 as it was in PRES 2007; its mean scale score was 3.45 out of 5 (Table 5), which is much lower than the mean scale score of 4.02 for supervision and 4.01 for thesis examination.

Using the multiple regression model to explain variations in overall experience of the programme (Appendix 3), intellectual climate emerged as the second most important factor (beta = 0.306: Table A3.2) after supervision (beta = 0.395).

Mathematical and physical science students were the most satisfied with the research environment, while law students were least satisfied (Table A4.4 in Appendix 4). Campus-based full-time students were slightly more satisfied with research environment than part-time or distance learners. Also New Route PhD students were significantly less satisfied with the research environment than students on any other research programmes.

Figure 7. Intellectual climate scale: variations between institutions




Most institutions have similar mean scores on the intellectual climate scale (Figure 7). The overall mean score is 3.387 and individual institutional mean scores range from 2.780 to 3.800. The spread of institutional mean scores (standard deviation = 0.182) is the second highest of the five scales included in the analysis.

Results for questions relating to the intellectual climate scale are summarised in Table 8; results for PRES 2008 and PRES 2007 are virtually identical. Students' levels of agreement on each question in this scale were generally lower than for all other questions in the survey. Just over half agreed that they had access to a good seminar series (59%), opportunities for social contact with other research students (57%) and opportunities to become involved in the broader research culture (55%), and barely half agreed that the research ambience in their department or faculty stimulated their work (50%) or that they felt integrated into their department's community (47%: Table 8).

Table 8. Intellectual climate items

| Items | Mean | % Disagree | % Neutral | % Agree |
|---|---|---|---|---|
| 4.a. My department provides opportunities for social contact with other research students | 3.54 [3.43] | 20 [23] | 23 [23] | 57 [54] |
| 4.b. My department provides opportunities for me to become involved in the broader research culture | 3.50 [3.40] | 20 [23] | 25 [25] | 55 [52] |
| 4.c. The research ambience in my department or faculty stimulates my work | 3.36 [3.33] | 24 [24] | 26 [26] | 50 [50] |
| 4.d. I feel integrated into my department's community | 3.26 [3.31] | 28 [27] | 26 [24] | 47 [49] |
| 4.e. My department provides a good seminar programme for research students | 3.58 [3.54] | 19 [20] | 23 [23] | 59 [57] |

## 4.6 Goals and standards

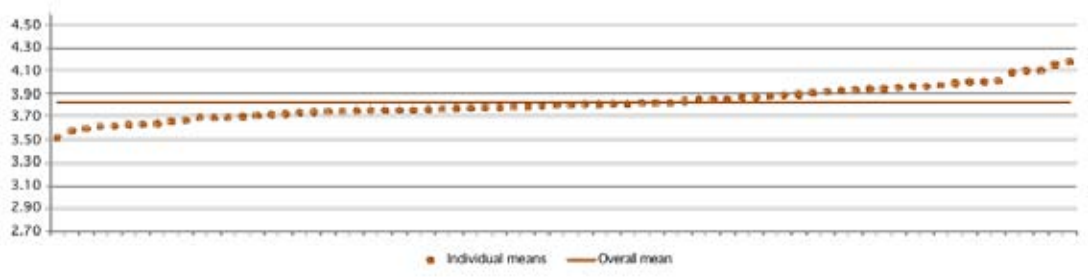
Students rated the provision of guidance on institutional on institutional standards and expectations as the least important of the six factors in relation to successful completion, with only 78.1% agreeing that it is important (Figure 2). They also rated it as the lowest with regards to satisfaction (49.9% agreed that they were satisfied with it) and their experience relative to expectations (a mere 36.6% – half the proportion in PRES 2007 – agreed that it met or exceeded their expectations: Figure 2).

The goals and standards scale had the fourth lowest of the mean scale scores at 3.79, higher than that for intellectual climate (3.45) or infrastructure (3.70: Table 4).

There were no significant differences between discipline groups in satisfaction with goals and standards.

There is a moderate range of mean scores between institutions on the goals and standards scale, from 3.521 to 4.179 (standard deviation = 0.138) around the overall mean of 3.818 (Figure 8).

Figure 8. Goals and standards scale: variations between institutions




Results for questions relating to the goals and standards scale are summarised in Table 9, which shows that the PRES 2008 results largely mirror those for PRES 2007. Just over two-thirds of the students agreed that they understood the standard of work expected (73%) and understood the required standard for the thesis (70%), and just under two-thirds agreed that they understood the requirements of the thesis examination (61%).

Table 9. Goals and standards items

| Items | Mean | % Disagree | % Neutral | % Agree |
|---|---|---|---|---|
| 5.a. I understand the required standard for the thesis | 3.82 [3.81] | 11 [11] | 19 [19] | 70 [69] |
| 5.b. I understand the standard of work expected | 3.89 [3.95] | 10 [8] | 18 [16] | 73 [76] |
| 5.c. I understand the requirements of thesis examination | 3.65 [3.65] | 15 [15] | 25 [24] | 61 [61] |

## 4.7 Thesis examination

Only a small subset of the students who participated in PRES – a mere 4% (627 respondents) – responded to the questions relating to the thesis examination scale.

With regard to mean scale scores, thesis examination was very highly rated (Table 4) with a mean of 4.01 out of 5, second only to supervision (mean = 4.02).

The multiple regression model for overall satisfaction with the programme (Appendix 3) was run twice, once including and once excluding thesis examination (because of its very small sample size). When it was included it was ranked as the third most important factor (beta = 0.114), after supervision (0.395) and intellectual climate (0.306: Table A3.2).

Because of the very small number of students who responded to these questions in most institutions, an analysis of variations in mean scale scores for thesis examination between institutions would not yield reliable results or be suitable for analysis of subject differences.

Results for questions relating to the thesis examination scale are summarised in Table

10; results for PRES 2008 and PRES 2007 are virtually identical. Students' views about these items were on the whole very positive. Four out of five (81%) agreed that the examination process was fair, and three-quarters agreed that the examination had been completed in a reasonable period of time (75%) and they had received adequate support and guidance in revising their thesis post-viva (74%). The lowest levels of satisfaction were with the level of support and guidance received in preparation for the viva; only 65% agreed it had been adequate, and 20% disagreed.

Table 10. Thesis examination items

| Item | Mean | % Disagree | % Neutral | % Agree |
|---|---|---|---|---|
| 6.a.i. The thesis examination process was fair | 4.26 [4.30] | 11 [9] | 8 [9] | 81 [82] |
| 6.a.ii. The examination of my thesis was completed in a reasonable time scale | 4.07 [4.13] | 15 [14] | 10 [9] | 75 [77] |
| 6.a.iii. I was given adequate support and guidance in preparation for my viva voce | 3.72 [3.62] | 20 [24] | 16 [14] | 64 [62] |
| 6.a.iv. I was given adequate support and guidance to make any changes to my thesis following my viva voce | 3.96 [3.84] | 15 [18] | 12 [11] | 74 [71] |

## 4.8 Personal factors

Students were asked for their views about the support they had received from family and friends, and employers, and about the impact of their personal finances on their student experience. More questions on this theme were asked in PRES 2007, but the number was reduced to streamline the questionnaire and following feedback from PRES officers.

The three questions relating to personal factors are stand alone items, not a scale in the sense that questions relating to factors such as supervision, intellectual climate or infrastructure (Table 4) comprised scales within PRES. Students were not asked about the importance of these items, or about their satisfaction or experience relative to expectations (Figure 2). Because they did not constitute a scale, these items were not included in the analysis of variations between institutions.

Responses to the questions relating to personal factors are summarised in Table 11. The responses were very positive: students agreed that friends and family (87%), and where applicable employers (74%), were supportive of their programmes. Half of students agreed that financing their research degree programme places a strain on their personal finances, but at the same time one in three disagreed with the statement (Table 11).

Table 11. Personal factors items

| Items | Mean | % Disagree | % Neutral | % Agree |
|---|---|---|---|---|
| 12.a. My friends and family are supportive of my research degree programme | 4.45 [4.45] | 5 [5] | 8 [8] | 87 [87] |
| 12.b. My employer is supportive of my research degree programme | 4.03 [3.97] | 12 [13] | 15 [15] | 74 [72] |
| 12.c The financing of my research degree programme places a strain on my personal finances*. | 3.29 | 34 | 17 | 50 |

* *Note: This item has been reworded for 2008, so results cannot be compared directly.*

### 4.9 *QAA Code of practice*

The final set of questions were designed to explore students' views on their experiences in the context of particular precepts within Section 1 of the *QAA Code of practice*, which relates to research degree programmes[6]. Responses to these questions are summarised in Table 12, grouped together in their respective precepts. Responses are very similar between PRES 2007 and PRES 2008.

6 www.qaa.ac.uk/academicinfrastructure/codeofpractice/section1/postgrad2004.pdf

Table 12. QAA Code of practice items

| Items | Mean | % Disagree | % Neutral | % Agree |
|---|---|---|---|---|
| Student representations, complaints and appeals (precepts 25–27) | | | | |
| 7.d. I know who to approach, or where to find this out, if I am dissatisfied with any element of my research degree programme | 3.46 [3.56] | 21 [20] | 25 [21] | 54 [59] |
| Feedback mechanisms (precept 21) | | | | |
| 7.e. My institution values and responds to feedback from research degree students | 3.32 [3.39] | 20 [18] | 35 [34] | 46 [48] |
| Progress and review arrangements (precepts 15–17) | | | | |
| 7.f. I understand the requirements and deadlines for formal monitoring of my progress | 3.85 [3.92] | 11 [10] | 19 [16] | 71 [74] |
| Selection, admission and induction of students (precepts 6–10) | | | | |
| 7.g. I understand my responsibilities as a research degree student | 3.98 [4.01] | 7 [7] | 16 [15] | 77 [78] |
| 7.h. I am aware of my institution's responsibilities towards me as a research degree student | 3.54 [3.32] | 17 [23] | 27 [30] | 56 [47] |

Students were most positive about understanding their responsibilities as research students (77% agreed) and understanding the requirements and deadlines for formal progress monitoring (71%: Table 12). Just over half of the students were aware of their institution's responsibilities towards them (56%), or knew who to approach if they had problems with their programme (54%). Students' views were most negative about their institution valuing and responding to feedback from students (46% agreed, 20% disagreed).

The QAA items relating to professional and career development are analysed in more details in Chapter 5.

# 5. Skills, career and professional development

## 5.1 Introduction

This chapter looks at the relationships between demographic factors and the key items of skills development, career development and professional development, in an attempt to understand better how different groups of research students view these items within their overall student experience.

## 5.2 Skills development scale

There are no obvious differences between disciplines when looking at mean score for the whole scale. However, once the scale is broken down into single items (Table A4.2 in Appendix 4), some differences emerge. Students of mass communication, historical and philosophical studies, and art and design tended to be more confident about managing their research project and the improvement of their analytical skills than physical, mathematical and veterinary sciences students and engineering students. Biological sciences, agriculture and physical sciences students agreed the most that they have improved their communication skills, while engineering and architecture students agreed the least.

With regard to satisfaction with opportunities to develop research and transferable skills, the pattern is the same – social studies, law, and business and administration students were slightly less satisfied than average. The importance of opportunities for skill development decreased with age, and was lower for transferable skills than for research skills.

## 5.3 Professional development and career

There are three QAA informed items in the questionnaire that, pulled together, can be analysed as a scale. These items are:

7.a I am encouraged to think about the range of career opportunities that are available to me

7.b I am encouraged to reflect on my professional development needs

7.c I am encouraged to reflect on my career development needs.

Cronbach's alpha coefficient measures how well a scale measures the particular thing it is describing (such as professional development and career). The coefficient has a value up to 1, and all scales with a coefficient higher than 0.8 are considered to be reliable. The Cronbach's alpha coefficient for the professional development and career scale is 0.94.

Table 13. Professional development and career items

| | Mean | % Disagree | % Neutral | % Agree |
|---|---|---|---|---|
| 7.a. I am encouraged to think about the range of career opportunities that are available to me | 3.14 | 30.7 | 34.5 | 34.8 |
| 7.b. I am encouraged to reflect on my professional development needs | 3.23 | 25.2 | 30.5 | 44.3 |
| 7.c. I am encouraged to reflect on my career development needs | 3.03 | 27.5 | 33 | 39.6 |

Just under half (44%) of the students agreed that they are encouraged to reflect on their professional development needs (Table 13). Students who had previously worked in the same organisation that they currently work in and professional doctorate students agreed more with this item. Almost 40% agreed they are encouraged to reflect on their career development needs (28% disagreed with this statement) and 35% agreed they are encouraged to think about the range of career opportunities available to them (31% disagreed).

There are no significant differences in the professional development and career items by gender or mode of study (full-time/part-time). Mature students (51+) tended to agree a bit less with these items, probably because of their motivation to undertake a postgraduate research programme (older students tend to do a doctorate because of personal interests more often than any other age group: Section 2.3) There is also no clear relationship between discipline and the professional development and career scale.

## 5.4 Teaching

Just under half (48%) of the research students agreed that they had been given adequate opportunity to gain experience of teaching (Table 14). A similar proportion (43%) agreed that they had been given an adequate support and guidance for their teaching.

Table 14. Teaching items

| | Mean | % Disagree | % Neutral | %Agree |
|---|---|---|---|---|
| 8. I have had adequate opportunity to gain experience of teaching [e.g., lectures, seminars or workshops] whilst doing my research degree programme | 3.22 | 31.6 | 21 | 47.5 |
| 9. I have been given adequate support and guidance for my teaching | 3.12 | 31.4 | 25.9 | 42.7 |
| 10. I think the experience that I have gained through teaching has been a worthwhile aspect of my research degree programme | 3.67 | 21.2 | 16.8 | 62 |

Nearly two-thirds (62%) agreed that the experience that they had gained through teaching had been a worthwhile aspect of their research programme. Mathematical and physical science students agreed more with the statement, while veterinary and education students agreed the least (Table A4.5 in Appendix 4). Females agreed slightly more with the item than males. There are no significant differences between part-time and full-time students, or between different age groups.

# 6. Follow-up

## 6.1 Sharing effective practice

One of the key design principles (Table 1) that underpinned the development of PRES was that the survey should be useful to HEIs and national bodies.

Opportunities have been taken to collect feedback from users in various ways to inform both improvement of the questionnaire and the ways in which the Academy supports institutions in using PRES. These included the initial PRES pilot in 2006, a meeting with pilot PRES officers following the pilot, a survey of PRES 2007 officers, the PRES 2007 report launch in December 2007, and finally a PRES 2008 meeting in June 2008.

After only two years, PRES is being taken seriously by higher education institutions across the UK, and it is yielding valuable information that is being used to inform decision-making within institutions (for example, relating to changes in procedures, practices or facilities). The time seems right for the Academy to capitalise on this momentum and seek ways of sharing effective practice across the sector; for example, by running workshops (perhaps in partnership with the Quality Assurance Agency) designed to share experiences of using PRES to enhance the quality of the research student experience.

## 6.2 PRES 2009

The Academy has agreed that PRES will run again in 2009 at the same time as in 2008 (i.e. early March to late May), and that it will provide advice and support at a similar level and in similar ways as for the 2008 survey.

For further details of the arrangements for PRES 2009, please contact Gosia Kulej (surveys@heacademy.ac.uk).

Copies of this report can be downloaded (in PDF format) from the PRES website: www.heacademy.ac.uk/ourwork/research/surveys/pres.

# Appendix 1. The 2008 PRES questionnaire

## Section 1: supervision

1. For each statement, please rate the extent of your agreement or disagreement. (1 = Strongly Disagree and 5 = Strongly Agree)

| | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| a. My supervisor/s have the skills and subject knowledge to adequately support my research | ☐ | ☐ | ☐ | ☐ | ☐ |
| b. My supervisor/s make a real effort to understand any difficulties I face | ☐ | ☐ | ☐ | ☐ | ☐ |
| c. I have been given good guidance in topic selection and refinement by my supervisor/s | ☐ | ☐ | ☐ | ☐ | ☐ |
| d. I have received good guidance in my literature search from my supervisor/s | ☐ | ☐ | ☐ | ☐ | ☐ |
| e. My supervisor/s provide helpful feedback on my progress | ☐ | ☐ | ☐ | ☐ | ☐ |
| f. My supervisor/s are available when I need them | ☐ | ☐ | ☐ | ☐ | ☐ |

## Section 2: skills development

2. For each statement, please rate the extent of your agreement or disagreement. (1 = Strongly Disagree and 5 = Strongly Agree)

| | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| a. As a result of my experience so far I feel confident about managing a research project | ☐ | ☐ | ☐ | ☐ | ☐ |
| b. My experience so far has improved my analytical skills | ☐ | ☐ | ☐ | ☐ | ☐ |
| c. My experience so far has helped me to develop a range of communication skills | ☐ | ☐ | ☐ | ☐ | ☐ |
| d. As a result of my experience so far I have improved my ability to learn independently | ☐ | ☐ | ☐ | ☐ | ☐ |

## Section 3: infrastructure

3. For each statement, please rate the extent of your agreement or disagreement. (1 = Strongly Disagree and 5 = Strongly Agree)

| | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| a. I have adequate access to the equipment necessary for my research | ☐ | ☐ | ☐ | ☐ | ☐ |
| b. I have a suitable working space | ☐ | ☐ | ☐ | ☐ | ☐ |
| c. There is appropriate financial support for research activities | ☐ | ☐ | ☐ | ☐ | ☐ |
| d. There is adequate provision of computing resources and facilities | ☐ | ☐ | ☐ | ☐ | ☐ |
| e. There is adequate provision of library facilities | ☐ | ☐ | ☐ | ☐ | ☐ |
| f. I have the technical support I need | ☐ | ☐ | ☐ | ☐ | ☐ |

## Section 4: intellectual climate

4. For each statement, please rate the extent of your agreement or disagreement. (1 = Strongly Disagree and 5 = Strongly Agree)

| | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| a. My department provides opportunities for social contact with other research students | ☐ | ☐ | ☐ | ☐ | ☐ |
| b. My department provides opportunities for me to become involved in the broader research culture | ☐ | ☐ | ☐ | ☐ | ☐ |
| c. The research ambience in my department or faculty stimulates my work | ☐ | ☐ | ☐ | ☐ | ☐ |
| d. I feel integrated into my department's community | ☐ | ☐ | ☐ | ☐ | ☐ |
| e. My department provides a good seminar programme for research students | ☐ | ☐ | ☐ | ☐ | ☐ |

## Section 5: goals and standards

5. For each statement, please rate the extent of your agreement or disagreement. (1 = Strongly Disagree and 5 = Strongly Agree)

| | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| a. I understand the required standard for the thesis | ☐ | ☐ | ☐ | ☐ | ☐ |
| b. I understand the standard of work expected | ☐ | ☐ | ☐ | ☐ | ☐ |
| c. I understand the requirements of thesis examination | ☐ | ☐ | ☐ | ☐ | ☐ |

## Section 6: thesis examination

6. Have you sat your final viva examination?

☐ No (If No, please go to section 7)
☐ Yes (If Yes, please respond to the following statements: )

For each of the following, show the extent of your agreement or disagreement. (1 = Strongly Disagree and 5 = Strongly Agree)

| | 1 | 2 | 3 | 4 | 5 | NA |
|---|---|---|---|---|---|---|
| a. The thesis examination process was fair | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| b. The examination of my thesis was completed in a reasonable time scale | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| c. I was given adequate support and guidance in preparation for my viva voce | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| d. I was given adequate support and guidance to make any changes to my thesis following my viva voce | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

## SECTION 7: *QAA Code of Practice*

Questions in this section have been informed by the Section 1 in the *QAA Code of Practice: Postgraduate Research Programmes*.

7. For each statement, please rate the extent of your agreement or disagreement. (1 = Strongly Disagree and 5 = Strongly Agree)

| | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| a. I am encouraged to think about the range of career opportunities that are available to me. | ☐ | ☐ | ☐ | ☐ | ☐ |
| b. I am encouraged to reflect on my professional development needs | ☐ | ☐ | ☐ | ☐ | ☐ |
| c. I am encouraged to reflect on my career development needs | ☐ | ☐ | ☐ | ☐ | ☐ |
| d. I know who to approach, or where to find this out, if I am dissatisfied with any element of my research degree programme | ☐ | ☐ | ☐ | ☐ | ☐ |
| e. My institution values and responds to feedback from research degree students | ☐ | ☐ | ☐ | ☐ | ☐ |
| f. I understand the requirements and deadlines for formal monitoring of my progress | ☐ | ☐ | ☐ | ☐ | ☐ |
| g. I understand my responsibilities as a research degree student | ☐ | ☐ | ☐ | ☐ | ☐ |
| h. I am aware of my institution's responsibilities towards me as a research degree student | ☐ | ☐ | ☐ | ☐ | ☐ |
| i. There are adequate opportunities available for me to further develop my research skills | ☐ | ☐ | ☐ | ☐ | ☐ |
| j. There are adequate opportunities available for me to further develop my transferable skills | ☐ | ☐ | ☐ | ☐ | ☐ |

## Section 8: teaching opportunities

8. I have had adequate opportunity to gain experience of teaching [e.g., lectures, seminars or workshops] whilst doing my research degree programme. (1 = Strongly Disagree and 5 = Strongly Agree)

   1 2 3 4 5

9. I have been given adequate support and guidance for my teaching. (1 = Strongly Disagree and 5 = Strongly Agree)

   1 2 3 4 5 NA

10. I think the experience that I have gained through teaching has been a worthwhile aspect of my research degree programme. (1 = Strongly Disagree and 5 = Strongly Agree)

    1 2 3 4 5 NA

11. Please provide further information regarding your teaching experience:

.....

.....

.....

## Section 9: personal factors

12. Please state to what extent you agree with the following statements. (1 = Strongly Disagree and 5 = Strongly Agree)

| | 1 | 2 | 3 | 4 | 5 | NA |
|---|---|---|---|---|---|---|
| a. My friends and family are supportive of my research degree programme | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| b. My employer is supportive of my research degree programme | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| c. The financing of my research degree programme places a strain on my personal finances. | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

## Section 10

13. For the following items, please rate how important, in terms of successfully completing your research degree programme, you consider them to be and how satisfied you are with them (1 = Not satisfied at all and 5 = Very satisfied).

| | Importance | | | | | Satisfaction | | | | | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 | |
| a. Supervisory support and guidance | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| b. Opportunities to develop a range of research skills | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| c. Opportunities to develop a range of transferable skills | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| d. Access to appropriate facilities | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| e. The research environment | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| f. Provision of guidance on institutional standards and expectations for your research degree programme | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |

14. Please rate the following broad aspects of your research degree programme in terms of how your experience of them has met with your expectations. (-3 = it is much more negative, 0 = it has met my expectations, +3 = it is much more positive)

| | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
|---|---|---|---|---|---|---|---|
| a. Supervisory support and guidance | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| b. Opportunities to develop a range of research skills | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| c. Opportunities to develop a range of transferable skills | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| d. Access to appropriate facilities | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| e. The research environment | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| f. Provision of guidance on institutional standards and expectations for your research degree programme | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| g. Overall experience of my research programme | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

15. I am confident that I will complete my research degree programme more or less within the planned timescale. (1 = Strongly Disagree and 5 = Strongly Agree)

1 2 3 4 5

## Section 11

16. Did you complete the 2007 PRES questionnaire?

Yes No NA

17. Please provide further information about your experience of your research degree programme. For example, what would further improve your experience?

## Demographics

18. I am:

- ☐ 25 years old or younger
- ☐ 26–30 years old
- ☐ 31–35 years old
- ☐ 36–40 years old
- ☐ 41–45 years old
- ☐ 46–50 years old
- ☐ 51–55 years old
- ☐ 56 years old or older

19. I am:

- ☐ Male
- ☐ Female

20. Do you consider yourself to have a disability?

- ☐ Yes
- ☐ No

20.a If yes, please choose one from the following options: (as a drop down list)

Dyslexia
Blind/visually impaired
Deaf/hard of hearing
Wheelchair-user/mobility impairments
Mental health difficulties
Autistic spectrum disorder
Unseen disability
Multiple disabilities
Other (If other, please specify ……

21. For fees purposes, is your normal place of residence registered as:

- ☐ Home
- ☐ Other EU
- ☐ Non EU

22. I class myself as:

- ☐ White: British/Irish/Any other white background
- ☐ Mixed: White and Black Caribbean/White and Black/White and Asian/Any other mixed background
- ☐ Asian or Asian British: Indian/Pakistani/Bangladeshi/Any other West or South Asian background
- ☐ Black or Black British: Caribbean/African/Any other Black background
- ☐ Chinese: Chinese/Any other East Asian background
- ☐ Other (Please specify) ……

23. I am currently registered as studying:

- ☐ Full time
- ☐ Part time

24. I am:

- ☐ Primarily a face to face learner [e.g., based at my institution]
- ☐ Primarily a distance learner

25. What year of your research degree programme are you in?

Drop down list from 1 to 9 years

Other ……

26. In the year before starting my research degree programme I:

- ☐ Completed my undergraduate studies
- ☐ Completed my postgraduate studies [for example, MSc, MA]
- ☐ Took a gap year
- ☐ Worked in the same organisation that I currently work in
- ☐ Worked as a researcher
- ☐ Worked in a non research role
- ☐ Other (please specify …… )

27. The main motivation for me pursuing a research degree programme was:

- ☐ my interest in the subject
- ☐ improving my career prospects for an academic/research career
- ☐ improving my career prospects outside of an academic/research career
- ☐ I was encouraged by a former academic tutor/supervisor
- ☐ the funding was available
- ☐ it felt like a natural step for me
- ☐ I felt inspired to work with a particular academic
- ☐ Other (Please specify …… )

28. I currently:

- ☐ am planning or doing my research
- ☐ am writing up my thesis
- ☐ have submitted my thesis and I am awaiting my viva
- ☐ am making amendments to my thesis following my viva
- ☐ am awaiting my doctoral award following my viva
- ☐ Other

29. My discipline is:

- ☐ Medicine and dentistry
- ☐ Subjects allied to medicine
- ☐ Biological sciences
- ☐ Veterinary science
- ☐ Agriculture and related subjects
- ☐ Physical sciences
- ☐ Mathematical sciences
- ☐ Computer science
- ☐ Engineering and technology
- ☐ Architecture, building and planning
- ☐ Social studies
- ☐ Law
- ☐ Business and administrative studies
- ☐ Mass communications and documentation
- ☐ Languages
- ☐ Historical and philosophical studies
- ☐ Creative arts and design
- ☐ Education
- ☐ Combined

30. (Here institutions may insert their own question about faculties/departments. This question will not be suitable for cross-institutional comparisons.)

31. You are: (Select all that apply)

- ☐ Self-funded
- ☐ Research Council funded
- ☐ Charity
- ☐ Institution funded
- ☐ UK industry funded
- ☐ UK Government funded
- ☐ EU/EC funded
- ☐ Funded overseas
- ☐ Other

Note: Institution funded = Higher Education Institution funded.

32. I am registered as doing a:

- ☐ PhD
- ☐ Professional doctorate
- ☐ PhD by published work
- ☐ New Route PhD
- ☐ MPhil with transfer to PhD
- ☐ MPhil
- ☐ Master in research
- ☐ Other

Note: PhD includes DPhil courses.

# Appendix 2. Demographic profile of respondents

PRES data are compared below with HESA data (where available) for the period 2004–05. Some groupings used in PRES are different to those used by HESA, and in such cases the HESA data are aggregated or disaggregated where possible, to provide more comparable groupings. Missing data and use of different groupings in the two datasets result in some percentages not adding up to 100 per cent.

### Table A2.1 Profile of respondents by age

| Age (Q18) | % |
|---|---|
| 25 and younger | 25.9 [28.0] |
| 26–30 | 32.6 [32.3] |
| 31–35 | 15.6 [14.4] |
| 36–40 | 8.2 [8.4] |
| 41–45 | 6.6 [5.9] |
| 46–50 | 4.5 [4.1] |
| 51–55 | 3.2 [3.0] |
| 56 and older | 3.4 [3.1] |

### Table A2.2 Profile of respondents by gender

| Gender (Q19) | | % |
|---|---|---|
| Male | PRES | 46.0 [45.7] |
| | HESA | 54.7 |
| Female | PRES | 54.0 [54.3] |
| | HESA | 45.3 |

### Table A2.3 Profile of respondents by disability

| Disability (Q20) | | % |
|---|---|---|
| Yes | PRES | 5.3 [5.1] |
| | HESA | 5.8 |
| No | PRES | 94.7 [93.8] |
| | HESA | 94.2 |

Table A2.4 Profile of respondents by domicile

| Domicile (Q21) | | % |
|---|---|---|
| Home | PRES | 61.1 [60.5] |
| | HESA | 59.4 |
| Other EU | PRES | 13.9 [13.8] |
| | HESA | 12.3 |
| Non-EU | PRES | 25.0 [25.3] |
| | HESA | 28.3 |

Table A2.5 Profile of respondents by ethnicity

| Ethnicity (Q22) | | % |
|---|---|---|
| White | PRES | 73.7 [74.4] |
| | HESA | 87.8 |
| Mixed | PRES | 2.6 [2.3] |
| | HESA | 2.9 |
| Asian | PRES | 7.1 [6.7] |
| | HESA | 5.4 |
| Black | PRES | 2.8 [2.2] |
| | HESA | 2.2 |
| Chinese | PRES | 7.4 [7.8] |
| | HESA | 1.5 |
| Other | PRES | 6.4 [6.6] |
| | HESA | 2.9 |

Table A2.6 Profile of respondents by mode of study

| Mode of study (Q23) | | % |
|---|---|---|
| Full-time | PRES | 78.3 [79.3] |
| | HESA | 51.2 |
| Part-time | PRES | 21.7 [20.7] |
| | HESA | 48.1 |

Table A2.7 Profile of respondents by mode of delivery

| Mode of delivery (Q24) | % |
|---|---|
| Primarily face-to-face | 83.5 [84.3] |
| Primarily distance learner | 16.5 [15.7] |

Table A2.8 Profile of respondents by year of study

| Current year of study (Q25) | % |
|---|---|
| 1 | 30.5 [31.6] |
| 2 | 26.2 [25.8] |
| 3 | 21.0 [22.5] |
| 4 | 12.6 [12.7] |
| 5 | 3.9 [3.9] |
| 6 | 1.8 [1.8] |
| 7 | 0.9 [1.1] |
| 8 | 0.4 [0.3] |
| 9+ | 2.9 [0.2] |

Table A2.9 Profile of respondents by previous activity

| Previous activity (Q26) | % |
|---|---|
| Completed undergraduate studies | 17.8 [19.8] |
| Completed postgraduate studies | 33.9 [33.1] |
| Gap year | 3.7 [4.3] |
| Worked in the same organisation that I currently work in | 10.1 [8.8] |
| Worked as a researcher | 10.0 [9.5] |
| Worked in a non research role | 17.4 [16.3] |
| Other | 7.1 [8.3] |

Table A2.10 Profile of respondents by motivation for pursuing a research degree programme

| Motivation (Q27) | % |
|---|---|
| Interest in the subject | 34.2 |
| Improving career prospects for academic or research career | 31.9 |
| Improving career prospects outside of academic or research career | 8.3 |
| I was encouraged by a former academic tutor/supervisor | 4.6 |
| Funding was available | 3.2 |
| It felt like a natural step for me | 13.5 |
| I felt inspired to work with a particular academic | 1.6 |
| Other | 2.7 |

Table A2.11 Profile of respondents by current activity

| Current activity (Q28) | % |
|---|---|
| Am planning or doing my research | 69.0 [68.2] |
| Am writing up my thesis | 23.4 [22.7] |
| Have submitted my thesis and am awaiting my viva | 2.5 [2.8] |
| Am making amendments to my thesis following my viva | 1.4 [1.5] |
| Am awaiting my doctoral award following my viva | 1.6 [1.8] |
| Other | 2.0 [3.1] |

Table A2.12 Profile of respondents by discipline

Note: more detailed categories were used in the 2008 survey than in the 2007 survey, so no comparisons between the years are possible.

| Discipline (Q29) | % |
|---|---|
| Medicine and dentistry | 5.3 |
| Subjects allied to medicine | 6.7 |
| Biological sciences | 14.2 |
| Veterinary science | 0.6 |
| Agriculture and related subjects | 1.0 |
| Physical sciences | 9.6 |
| Mathematical sciences | 2.2 |
| Computer science | 4.1 |
| Engineering and technology | 10.1 |
| Architecture, building and planning | 0.9 |
| Social studies | 12.7 |
| Law | 2.0 |
| Business and administrative studies | 4.3 |
| Mass communications and documentation | 0.6 |
| Languages | 4.0 |
| Historical and philosophical studies | 7.9 |
| Creative arts and design | 3.3 |
| Education | 5.5 |
| Combined | 5.0 |

Table A2.13 Profile of respondents by source of funding

| Funding (Q31) | % |
|---|---|
| Self-funded | 29.6 [23.3] |
| Research council funded | 25.8 [21.2] |
| Charity | 3.8 [2.5] |
| Institution funded | 22.2 [16.3] |
| UK industry funded | 3.8 [1.8] |
| UK government funded | 4.5 [3.1] |
| EU/EC funded | 2.7 [2.3] |
| Funded overseas | 8.7 [6.7] |
| Mixed | - [11.0] |
| Other | - [11.9] |

Table A2.14 Profile of respondents by degree registered for

| Registered for (Q32) | % |
|---|---|
| PhD | 74.0 [76.0] |
| Professional doctorate | 3.0 [2.0] |
| PhD by published work | 0.2 [0.2] |
| New Route PhD | 0.6 [0.4] |
| MPhil with transfer to PhD | 14.7 [13.6] |
| MPhil | 2.1 [2.1] |
| MRes | 2.9 [2.7] |
| Other | 2.6 [3.0] |

# Appendix 3. Results of multiple regression analysis

Multiple regression was used to examine to what extent all scales combined can 'explain' or predict the score on 'overall experience of the programme' and which of the six scales affect students' experience the most.

The multiple regression equation has the form:

$Y = a + b1X1 + b2X2 + b3X3 + \ldots + bnXn$

Where:

Y – the dependent variable
a – a constant
X – the independent variables (which account for variations in Y)
b – X coefficient (weight) that shows how 'important' a particular independent variable (X) is.

## a. Overall experience of the programme

For this analysis the dependent variable is the response to the 'overall experience of the programme' question, and the six PRES scales are the independent variables. Because the thesis examination scale only 620 received replies (4% of the whole sample) the analysis was run twice, including and excluding that scale.

Analysis with all six scales:

Table A3.1 Model summary for analysis with all six scales

| Model | R | R square | Adjusted R square | Std. error of the estimate |
|---|---|---|---|---|
| | 0.683 | 0.467 | 0.462 | 1.285 |

The R square value tells us how much of the students' rating of their overall experience (the variance of this item) can be explained or predicted by all of the scales combined. It is 47%, which is considered to be a medium effect. This means that the remaining 53% can be explained or predicted by variables that are not included in the survey or in this analysis.

Table A3.2 Coefficients for analysis with all six scales

| Model | Unstandardised coefficients | | Standardised coefficients | t | Sig. |
|---|---|---|---|---|---|
| | B | Std. error | Beta | B | Std. error |
| (Constant) | .299 | .298 | | 1.002 | .317 |
| Skills development | -.139 | .084 | -.069 | -1.655 | .098 |
| Supervision scale | .612 | .069 | .395 | 8.842 | .000 |
| Goals and standards | .031 | .074 | .018 | .420 | .675 |
| Infrastructure | .069 | .069 | .036 | .992 | .322 |
| Intellectual climate | .491 | .063 | .306 | 7.811 | .000 |
| Thesis and examination | .194 | .073 | .114 | 2.661 | .008 |

The table above shows the partial regression coefficients (beta value) for each scale. The supervision scale (beta = 0.395) and intellectual climate scale (beta = 0.306) are the most important 'factors' affecting the overall experience, and both have the highest significance level (.0001). The thesis examination scale (beta = 0.114) also has a statistically significant (.008) effect on overall experience.

Analysis with five scales (thesis scale excluded):

Table A3.3 Model summary for analysis with five scales (thesis scale excluded)

| Model | R | R square | Adjusted R square | Std. error of the estimate |
|---|---|---|---|---|
| | 0.629 | 0.395 | 0.395 | 1.169 |

In this analysis the R square value decreases to 40%, which is still a medium effect.

Table A3.4 Coefficients for analysis with five scales (thesis scale excluded)

| Model | Unstandardised coefficients | | Standardised coefficients | t | Sig. |
|---|---|---|---|---|---|
| | B | Std. error | Beta | B | Std. error |
| (Constant) | .026 | .054 | | .484 | .628 |
| Skills development | .170 | .015 | .092 | 11.140 | .000 |
| Supervision scale | .521 | .013 | .328 | 41.231 | .000 |
| Goals and standards | .073 | .012 | .046 | 5.926 | .000 |
| Infrastructure | .136 | .012 | .082 | 11.201 | .000 |
| Intellectual climate | .376 | .012 | .252 | 32.332 | .000 |

In this analysis all five scales are highly significant (0.0001), and again supervision (beta = 0.328) and intellectual climate (beta = 0.252) are the most important predictors of students' overall experience of their programme.

### b. Confidence about completing on schedule

For this analysis the dependent variable is response to the question about 'confidence about completing on schedule' (question 15), and the five PRES scales (excluding thesis examination) are the independent variables.

Table A3.5 Model summary

| Model | R | R square | Adjusted R square | Std. error of the estimate |
|---|---|---|---|---|
| | .438 | .192 | .192 | 1.011 |

All of the scales combined (excluding thesis examination) account for only 19% of the variance, which means that it is rather a weak predictor of this item.

## Table A3.6 Coefficients

| Model | Unstandardised coefficients | | Standardised coefficients | t | Sig. |
|---|---|---|---|---|---|
| | B | Std. error | Beta | B | Std. error |
| (Constant) | 1.112 | .047 | | 23.495 | .000 |
| Goals and standards | .177 | .011 | .150 | 16.429 | .000 |
| Infrastructure | .035 | .011 | .029 | 3.341 | .001 |
| Intellectual climate | .008 | .010 | .007 | .754 | .451 |
| Skills development | .237 | .013 | .170 | 17.606 | .000 |
| Supervision scale | .225 | .011 | .189 | 20.268 | .000 |

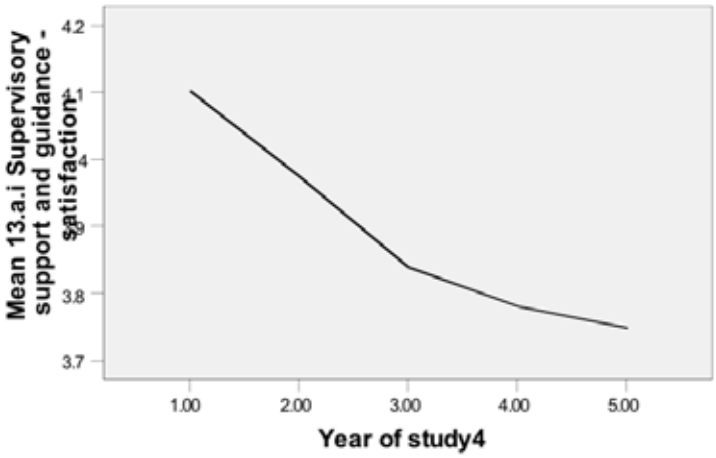
The most important predictors are supervision and skills development, but betas are relatively small.

# Appendix 4. Results of analysis of relationships with demographic factors

## Table A4.1 Supervision items by discipline (mean scores)

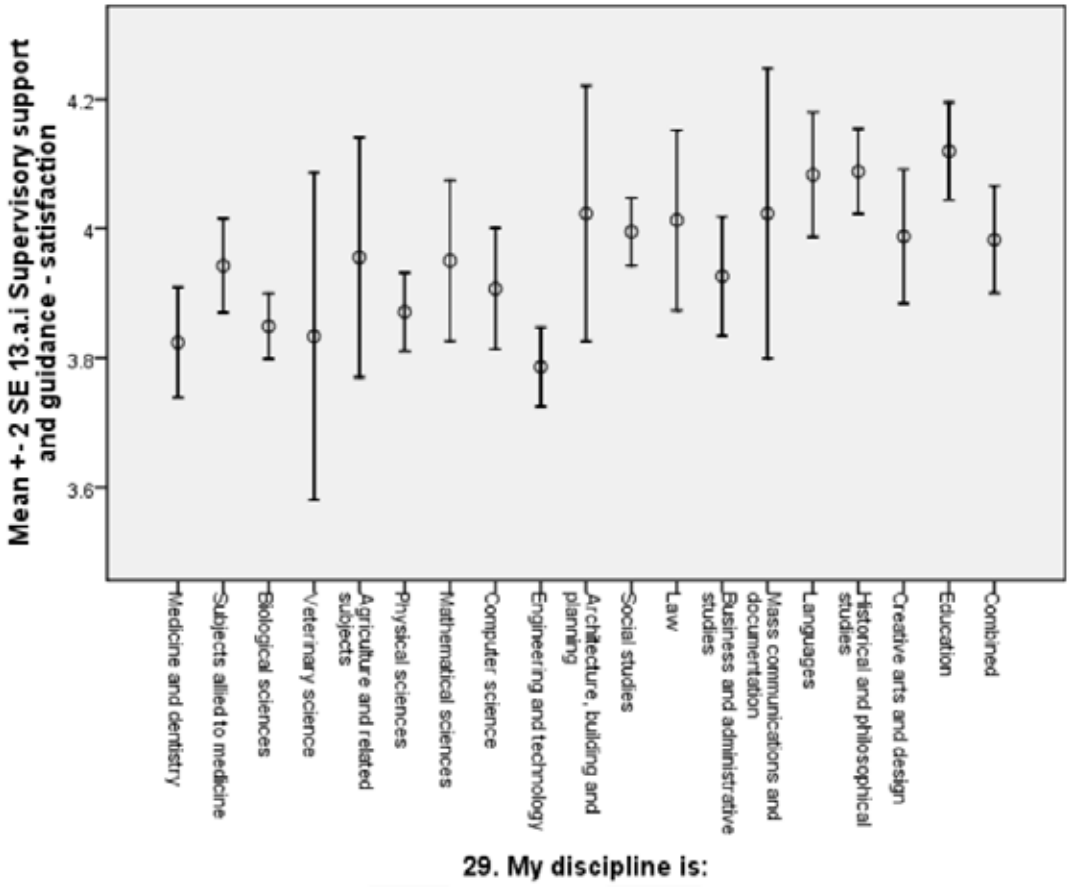
| | I.a My supervisor/s have the skills and subject knowledge to adequately support my research | I.b My supervisor/s make a real effort to understand any difficulties I face | I.c I have been given good guidance in topic selection and refinement by my supervisor/s | I.d I have received good guidance in my literature search from my supervisor/s | I.e My supervisor/s provide helpful feedback on my progress | I.f My supervisor/s are available when I need them |
|---|---|---|---|---|---|---|
| **Medicine and dentistry** | **4.27** | **3.93** | **3.82** | **3.57** | **3.84** | **3.95** |
| Subjects allied to medicine | 4.35 | 4.04 | 3.96 | 3.7 | 4 | 3.98 |
| Biological sciences | 4.36 | 3.97 | 3.87 | 3.63 | 3.84 | 4.01 |
| **Veterinary science** | **4.19** | **3.87** | **3.96** | **3.61** | **3.74** | **3.86** |
| Agriculture and related subjects | 4.25 | 4.13 | 4.05 | 3.81 | 4.05 | 4.01 |
| Physical sciences | 4.44 | 3.99 | 3.87 | 3.7 | 3.83 | 3.91 |
| Mathematical sciences | 4.42 | 4.01 | 3.93 | 3.84 | 3.87 | 4.11 |
| Computer science | 4.27 | 4.12 | 3.96 | 3.81 | 4.04 | 4.11 |
| **Engineering and technology** | **4.2** | **3.98** | **3.84** | **3.62** | **3.85** | **3.9** |
| Architecture, building and planning | 4.17 | 4.07 | 3.91 | 3.68 | 3.91 | 4.04 |
| Social studies | 4.3 | 4.1 | 3.99 | 3.79 | 4.08 | 4.07 |
| Law | 4.37 | 4.14 | 4.02 | 3.83 | 4.02 | 4.05 |
| Business and administrative studies | 4.22 | 4.05 | 3.97 | 3.75 | 4.05 | 4.02 |
| Mass communications and documentation | 4.32 | 4.33 | 4.17 | 3.94 | 4.16 | 4.02 |
| **Languages** | **4.42** | **4.17** | **4.11** | **3.94** | **4.17** | **4.11** |
| **Historical and philosophical studies** | **4.41** | **4.22** | **4.13** | **4.02** | **4.2** | **4.11** |
| Creative arts and design | 4.26 | 4.18 | 4.09 | 3.83 | 4.13 | 4.02 |
| **Education** | **4.35** | **4.26** | **4.12** | **3.91** | **4.2** | **4.14** |
| Combined | 4.26 | 4.16 | 4.03 | 3.82 | 4.06 | 4.07 |
| Total | 4.32 | 4.07 | 3.96 | 3.76 | 3.99 | 4.02 |

Figure A4.1 Variations in satisfaction with supervision by year of study




Note: the differences are actually small but the trend is clearly visible. On the year of study axis, '5' represents five years or more.

Figure A4.2 Variations in satisfaction with supervision by discipline



Note: the differences are very small, but you can see clearly two groups on the graph: science and non-science.

## Table A4.2 Skills development items by discipline (mean scores)

| 29. My discipline is: | 2.a As a result of my experience so far I feel confident about managing a research project | 2.b My experience so far has improved my analytical skills | 2.c My experience so far has helped me to develop a range of communication skills | 2.d As a result of my experience so far I have improved my ability to learn independently |
|---|---|---|---|---|
| Medicine and dentistry | 3.81 | 4 | 3.86 | 4.12 |
| Subjects allied to medicine | 3.81 | 4.01 | 3.85 | 4.12 |
| Biological sciences | 3.79 | 4.06 | 3.95 | 4.19 |
| Veterinary science | 3.54 | 4.05 | 3.84 | 4.17 |
| Agriculture and related subjects | 3.91 | 3.99 | 3.92 | 4.18 |
| Physical sciences | 3.76 | 4.07 | 3.92 | 4.12 |
| Mathematical sciences | 3.65 | 4.06 | 3.78 | 4.14 |
| Computer science | 3.9 | 4.06 | 3.88 | 4.18 |
| Engineering and technology | 3.78 | 3.92 | 3.77 | 4.12 |
| Architecture, building and planning | 3.91 | 3.97 | 3.87 | 4.09 |
| Social studies | 3.84 | 4.02 | 3.75 | 4.07 |
| Law | 3.81 | 3.95 | 3.78 | 4.13 |
| Business and administrative studies | 3.93 | 4.01 | 3.79 | 4.15 |
| Mass communications and documentation | 3.94 | 4.15 | 3.87 | 4.13 |
| Languages | 3.84 | 4.06 | 3.78 | 4.16 |
| Historical and philosophical studies | 3.96 | 4.09 | 3.85 | 4.18 |
| Creative arts and design | 3.95 | 4.09 | 3.89 | 4.15 |
| Education | 3.9 | 4.05 | 3.81 | 4.08 |
| Combined | 3.88 | 4.02 | 3.85 | 4.14 |

## Table A4.3 Infrastructure items by discipline (mean scores)

| 29. My discipline is: | 3.a I have adequate access to the equipment necessary for my research | 3.b I have a suitable working space | 3.c There is appropriate financial support for research activities | 3.d There is adequate provision of computing resources and facilities | 3.e There is adequate provision of library facilities | 3.f I have the technical support I need |
|---|---|---|---|---|---|---|
| **Medicine and dentistry** | **4.01** | **3.97** | **3.75** | **4.06** | **4.14** | **3.86** |
| Subjects allied to medicine | 3.94 | 3.91 | 3.55 | 3.94 | 4.03 | 3.82 |
| Biological sciences | 3.92 | 4.02 | 3.79 | 3.91 | 3.97 | 3.82 |
| Veterinary science | 3.91 | 3.89 | 3.8 | 4.16 | 4.24 | 3.68 |
| Agriculture and related subjects | 3.83 | 3.94 | 3.58 | 4.04 | 4.11 | 3.82 |
| Physical sciences | 3.92 | 3.98 | 3.85 | 3.95 | 4.02 | 3.84 |
| **Mathematical sciences** | **4.07** | **4.05** | **3.83** | **4.01** | **3.94** | **3.91** |
| **Computer science** | **4.09** | **4.08** | **3.57** | **4.09** | **3.98** | **3.98** |
| Engineering and technology | 3.72 | 3.86 | 3.62 | 3.92 | 4.03 | 3.68 |
| Architecture, building and planning | 3.69 | 3.62 | 2.98 | 3.62 | 3.94 | 3.64 |
| Social studies | 3.76 | 3.6 | 3.06 | 3.65 | 3.66 | 3.59 |
| **Law** | **3.61** | **3.3** | **2.77** | **3.44** | **3.58** | **3.46** |
| Business and administrative studies | 3.8 | 3.6 | 3.11 | 3.71 | 3.9 | 3.62 |
| Mass communications and documentation | 3.56 | 3.25 | 2.79 | 3.47 | 3.81 | 3.53 |
| **Languages** | **3.72** | **3.19** | **2.87** | **3.44** | **3.6** | **3.46** |
| Historical and philosophical studies | 3.71 | 3.28 | 2.8 | 3.45 | 3.44 | 3.5 |
| **Creative arts and design** | **3.61** | **3.27** | **2.84** | **3.43** | **3.68** | **3.44** |
| Education | 3.81 | 3.61 | 3.01 | 3.71 | 3.95 | 3.65 |
| Combined | 3.69 | 3.51 | 3.13 | 3.64 | 3.7 | 3.58 |

Figure A4.3 Variations in satisfaction with infrastructure by discipline

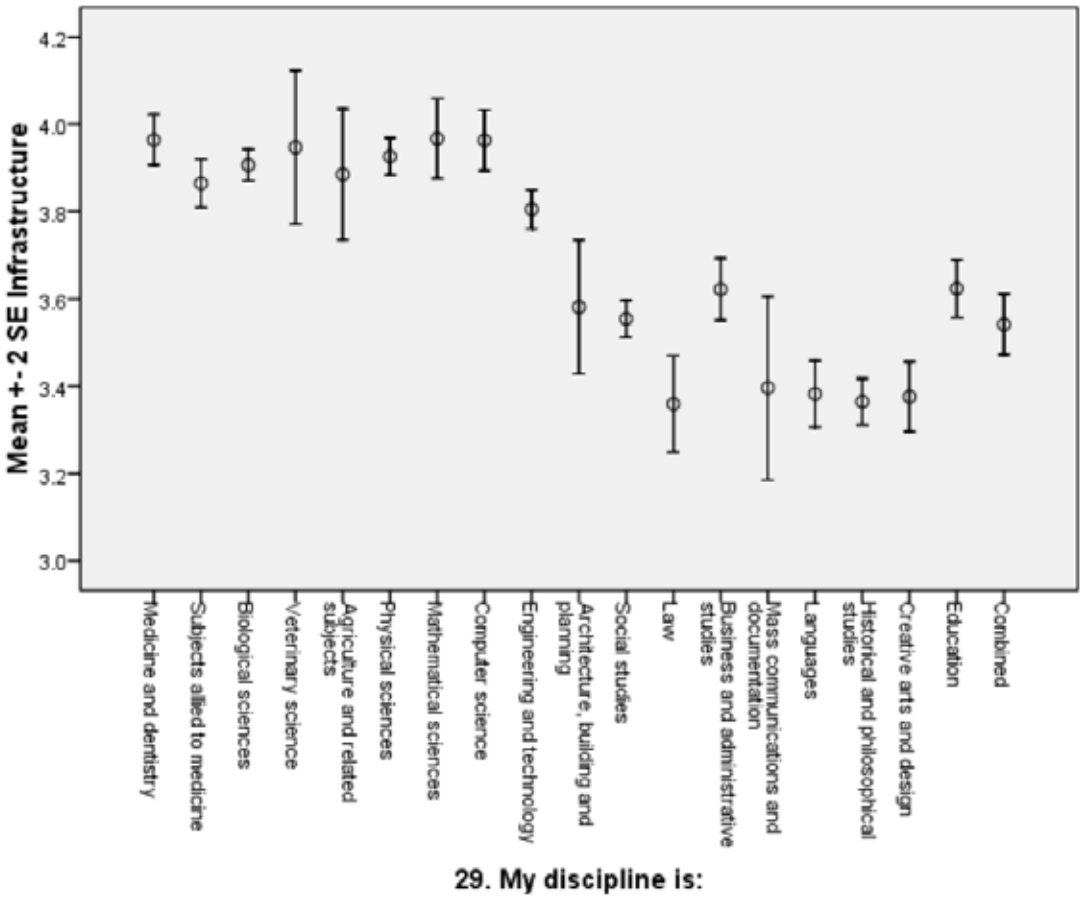
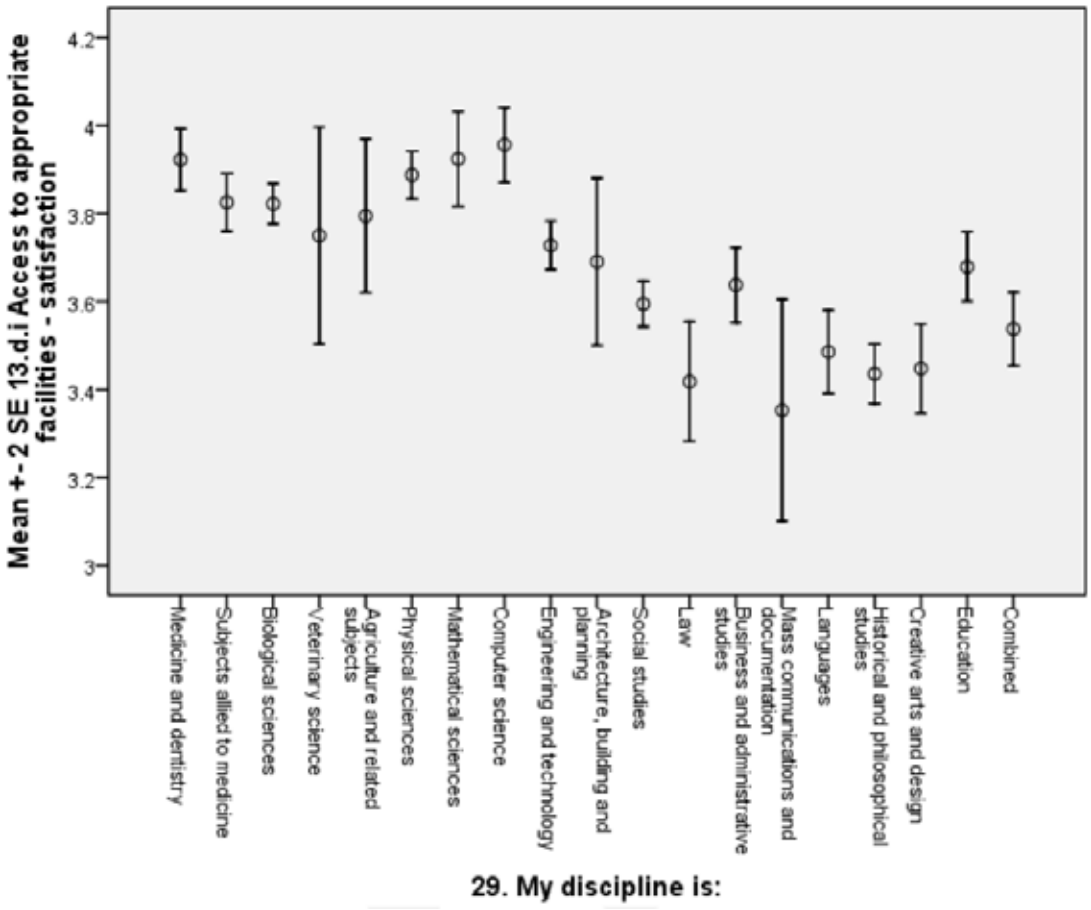


Figure A4.4 Variations in satisfaction with access to appropriate facilities by discipline



## Table A4.4 Intellectual climate items by discipline (mean scores)

| 29. My discipline is: | 4.a My department provides opportunities for social contact with other research students | 4.b My department provides opportunities for me to become involved in the broader research culture | 4.c The research ambience in my department or faculty stimulates my work | 4.d I feel integrated into my department's community | 4.e My department provides a good seminar programme for research students |
|---|---|---|---|---|---|
| Medicine and dentistry | 3.56 | 3.61 | 3.55 | 3.56 | 3.62 |
| Subjects allied to medicine | 3.48 | 3.53 | 3.4 | 3.31 | 3.58 |
| Biological sciences | 3.58 | 3.51 | 3.41 | 3.41 | 3.75 |
| Veterinary science | 3.53 | 3.33 | 3.41 | 3.4 | 3.67 |
| Agriculture and related subjects | 3.47 | 3.51 | 3.43 | 3.35 | 3.54 |
| **Physical sciences** | **3.67** | **3.58** | **3.48** | **3.49** | **3.69** |
| **Mathematical sciences** | **3.78** | **3.74** | **3.52** | **3.56** | **3.85** |
| Computer science | 3.59 | 3.52 | 3.42 | 3.33 | 3.72 |
| Engineering and technology | 3.42 | 3.34 | 3.3 | 3.28 | 3.44 |
| Architecture, building and planning | 3.4 | 3.29 | 3.13 | 3.09 | 3.45 |
| Social studies | 3.57 | 3.51 | 3.3 | 3.08 | 3.51 |
| **Law** | **3.44** | **3.38** | **3.24** | **3.02** | **3.44** |
| Business and administrative studies | 3.47 | 3.46 | 3.28 | 3.14 | 3.46 |
| Mass communications and documentation | 3.63 | 3.53 | 3.23 | 3.1 | 3.52 |
| Languages | 3.5 | 3.48 | 3.34 | 3.16 | 3.5 |
| Historical and philosophical studies | 3.55 | 3.55 | 3.34 | 3.13 | 3.63 |
| Creative arts and design | 3.51 | 3.48 | 3.27 | 3.19 | 3.44 |
| Education | 3.57 | 3.53 | 3.36 | 3.06 | 3.58 |
| Combined | 3.53 | 3.49 | 3.3 | 3.12 | 3.46 |

Table A4.5 'I think the experience that I have gained through teaching has been a worthwhile aspect of my research degree programme' item by discipline (mean scores)

| | N | Mean | % Agree |
|---|---|---|---|
| Medicine and dentistry | 540 | 3.44 | 55.2 |
| Subjects allied to medicine | 626 | 3.53 | 57.5 |
| Biological sciences | 1477 | 3.7 | 62.2 |
| **Veterinary science** | **53** | **3.15** | **41.5** |
| Agriculture and related subjects | 101 | 3.32 | 49.5 |
| **Physical sciences** | **1124** | **4.03** | **75.2** |
| **Mathematical sciences** | **274** | **4.04** | **72.6** |
| Computer science | 433 | 3.83 | 67.9 |
| Engineering and technology | 1092 | 3.51 | 56.8 |
| Architecture, building and planning | 82 | 3.26 | 47.6 |
| Social studies | 1226 | 3.75 | 65.1 |
| Law | 180 | 3.32 | 51.7 |
| Business and administrative studies | 414 | 3.49 | 55.6 |
| Mass communications and documentation | 63 | 3.84 | 68.3 |
| Languages | 375 | 3.85 | 69.1 |
| Historical and philosophical studies | 715 | 3.75 | 64.6 |
| Creative arts and design | 312 | 3.56 | 57.4 |
| **Education** | **430** | **3.21** | **45.6** |
| Combined | 472 | 3.7 | 62.3 |

The item was measured on a five-point scale (1=Strongly Disagree and 5=Strongly Agree).

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