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PhD Survey
2013

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Preface

It gives me great pleasure to provide a preface to the report about the PhD Survey 2013, commissioned by the Groningen Graduate Schools and compiled by Carlien Vermue of the Centre for Information Technology of the University of Groningen. This report marks the third time that motivation, training and satisfaction of the PhD students in Groningen have been assessed and, since almost all of the reviewed items were evaluated similarly in 2011 and most of them in 2009, it is now possible to distinguish a number of trends, for example what has gone unchanged and what has improved or is growing worse. This makes the present report an interesting reading experience.

For PhD students the years spent at the University as promovendus are both an inspiring challenge and an important investment, not only as the first necessary steps towards a possible academic career, but also as a period in which they will master important 'transferable' skills. These skills no doubt will be a great aid in the rest of their professional lives and can be seen as a lasting benefit, whether they remain in academia or not once they have their PhDs. To get the most out of this investment it is important that the proper training conditions for PhD students exist and that the PhD students are encouraged to use these in the right way. The major part of PhD student training comes from performing research in a research team with an experienced researcher as supervisor. In addition to this obvious 'learning by doing', it is very important that PhD students in institutes and Graduate Schools are accommodated in such a way that they are encouraged to take part in various additional activities such as attending conferences and seminars, and following courses. Since PhD students produce a significant part of the research conducted at the University of Groningen, the University clearly has a keen interest in attracting the best PhD students and offering them an excellent 'research and teaching environment'. As Dean of Graduate Schools I am more than curious to see whether we are on the right track with our efforts to improve PhD students' lives in Groningen. Therefore the present report is an important reference point for me.

The most striking outcome is that PhD students are very happy with their situation at the University of Groningen. This is true for 2009, 2011 and 2013, which really is a very pleasing outcome. But, whereas the results in 2011 were clearly better than those of 2009, some of the assessed points appear to have stabilized in 2013 rather than having further improved, showing that there is still more room for improvement. To focus on that: I am happy to see in the present report that PhD students are more satisfied with their Training and Supervision Plan (TSP) as compared to the findings in 2011, and that more PhD students are well acquainted with their faculty's Graduate School (and everything it can provide), but this does still need further improvement. I am confident that these points can now be tackled in a much better way with 'Hora Finita', the recently introduced electronic PhD student information management system. In addition, it is still a major goal to establish a mindset where PhD students finish their thesis successfully within the time allotted. Acquiring better project management skills as well as writing and following a clear Training and Supervision Plan are a big help in promoting this. Hora Finita may also prove to act as a guide to the faculty Graduate Schools in monitoring the progress of their PhD students.

In sum, I have enjoyed reading the outcome of this survey and have learned a lot. The results will provide us with useful input to further improve the supervision and educational possibilities for our PhD students. I would like to thank all the PhD students who completed the lengthy questionnaire and – last but not least – I would like to extend my thanks to Carlien Vermue, Jan Folkert Deinum, Ineke Ganzeveld and Marjan Koopmans for their major contribution.

Prof. Lou de Leij
Dean of Groningen Graduate Schools

1 Summary, conclusions and recommendations

In this chapter we will first provide a short overview of the responses to the 2013 PhD Survey (1.1) and compare these with the 2011 survey. We will subsequently use these results to draw conclusions and make suggestions for improvement (1.2).

1.1 Summary

The results of the PhD questionnaire 2013 are based on the responses of 39% of the PhD population (581 PhD students). This is slightly lower than the 2011 response rate, which was 42% (860 PhD students). The response group had the following characteristics:

Table 1. Characteristics of the response group

Characteristics of response group	
Sex	54% female
Average age	29.6
Contract	66.5% employee 21.6% scholarship 11.8% other
Phase of PhD project	28.5% first year 44.8% second or third year 26.7% fourth year or more
Affiliation Graduate School	
Humanities	6.0%
Philosophy	0.7%
Behavioural and Social Sciences	7.7%
Spatial Sciences	0.7%
Theology and Religious Studies	0.3%
Economics and Business (SOM)	7.1%
Law	1.4%
Science	35.1%
Medical Sciences	41.3%
Not known	2.1%

1.1.1 Personal characteristics and competences

The great majority of the respondents in 2013 indicated that their primary reason for starting a PhD was intrinsic, such as their interest in the subject, liking research or curiosity. Of the respondents, 80% indicated that they had developed most of the skills and competences required of a researcher. However, they were less confident in their teaching and supervisory abilities. Most of these abilities are only developed by students in the final years of their PhD. Working in teams was an exception, with PhD students at the beginning of their project more often indicating that they had developed this ability. PhD students from SOM indicated less often than others that they had developed the capacity to instruct supporting staff or the ability to work in teams. PhD students from the Graduate School of Humanities indicated more often than PhD students from other Graduate Schools that they had not adequately developed the ability to prepare and perform teaching activities and also that they were less able to work in teams.

1.1.2 Average scores on satisfaction scales

Compared with the 2011 survey, PhD students have become significantly more satisfied with their training and supervision plans (TSP) and with their Graduate Schools. A decline in satisfaction was found in relation to their overall work: while PhD students in 2013 were equally satisfied with their work as the 2009 cohort, they were less satisfied than the 2011 cohort.

Table 2. Average scores on satisfaction scales

Scale	2009	2011	2013
Education	*	2.98	2.98
TSP	2.75	2.65	2.77
Grad. School	*	2.68	2.86
Organization of Supervision	3.23	3.32	3.29
Quality of Supervision	3.18	3.25	3.24
Expertise	3.01	3.13	3.10
Contact	*	*	2.89
Overall Work	3.20	3.28	3.20

* Not measured in that specific year

1.1.3 PhD Project

Of the respondents, 44% believed that they would finish their PhD in time and 22% thought this was not feasible. However, half of the PhD students in the last phase of their project no longer believed they could not finish in time. PhD students who did not expect to finish in time thought they would need, on average, an additional 7.6 months. PhD students who did not have scholarship and who were not employed by the University expected they would need quite a lot of additional time, on average one year. Employed PhD students and PhD students with a scholarship thought they would need about an additional 6 months beyond their contract to finish their PhD. Reasons for not finishing the PhD in time mainly concerned the time schedule of the research and/or delays in the research.

The majority of the respondents began their PhD with a predetermined research proposal, whether externally funded (28%) or not (29%). Of the respondents, 23% were free to develop their own research proposal and 15% applied with their own research proposal.

In 2013, fewer PhD students than in 2011 had considered discontinuing their PhD at some point (22%). Most of these PhD students had considered this in the first phase of their PhD project. Reasons for considering quitting were related to problems with the execution of the project, problems with supervision, uncertainty about individual capabilities or the work, and discontent with the working circumstances.

Respondents indicated they had to attend approximately 6 courses as part of their PhD programme. At the time of data collection, PhD students had attended on average 4.8 courses, which accounted for 23 days. Students in the first phase of their PhD had attended on average 2.4 courses in 12 days and PhD students who were nearly finished had attended 7.2 courses and invested 34 days. The courses that were most attended were content-related or concerned generic skills. Generally speaking, PhD students were satisfied with the educational programme offered. In relation to 2011, the satisfaction with educational opportunities neither increased nor decreased. PhD students from the Graduate School of Business and Economics (SOM) were most satisfied with the educational activities, while PhD students from the Humanities were least satisfied. The quality of the educational programme in particular was not valued very positively by PhD students from the Humanities.

Two-thirds of the employed respondents engaged in teaching activities. These teaching activities mostly consisted of supervising students, at a time cost on average of 16 hours per month. Only 28% indicated that they had received sufficient training for the teaching activities. Nevertheless, 80% of the teaching respondents were satisfied with the support they received for teaching. Most PhD students thought that teaching contributed to their own project, for example, by preparing them for a career in academia or by enhancing their presentation skills.

The sources consulted by PhD students for information about regulations and/or conditions of their employment/scholarship contract with the University were mainly the website and their contract. More than one-third (35%) of the respondents were not satisfied with the information about regulations and conditions of their contracts. One-quarter of the respondents indicated that they had or were experiencing problems with information provision. This frequently concerned the new website of the University, issues concerning taxation and finances and lack of clarity concerning rights and policies.

1.1.4 Supervision

The majority of the senior PhD students had regular evaluations during their project, and two-thirds of the senior respondents indicated that they had evaluations once a year, with the SOM Graduate School having the highest scores. In 81% of the cases, the supervisors were present at the go/no go interview, but a member of the Human Resources department was present in only 17%.

Compared with the 2009 and 2011 situations, PhD students stated less often that they had formal quantity and/or quality requirements for their dissertation. The figure has almost halved since 2009, when around 60% of the respondents confirmed that there were such

requirements. PhD students from the Graduate School of Medical Sciences most often had quality requirements, as did scholarship PhD students. PhD students in the first phase of their project were least aware of the requirements for their thesis.

Only 15% of the respondents were familiar with the requirements for a cum laude distinction for their thesis. Two-thirds of these well-informed PhD students had the ambition to obtain this distinction.

The proportion of PhD students with a Training and Supervision Plan (TSP) has not increased since 2011 and is still 63%. Almost three-quarters of the PhD students in the early stage of their project had a TSP and this is also roughly the same as in 2011. PhD students from the Graduate School of Behavioural and Social Sciences were least likely to have a TSP. Since 2011, the number of elements presented in the TSP have slightly increased, making the average TSP a slightly more complete document, with more emphasis on time planning and management in particular. Regular updating of the TSP is not standard: two-thirds of the PhD students at the beginning or in the middle phase of their project planned to update their TSP. In contrast to 2011, overall, PhD students have become more satisfied with their TSP, the exceptions being the Graduate School of Economics and Business and Behavioural and Social Sciences in particular, which was already low in 2011. This latter Graduate School scored particularly low on the items about the TSP being a good guideline and about regular evaluation of the TSP. Finally, PhD students became less satisfied with their TSP the further they were into their project.

Familiarity with the Graduate Schools has no longer increased. PhD students in the Behavioural and Social Sciences remain the least familiar with their Graduate School. However, on average, PhD students have become more satisfied with their Graduate Schools since 2011. PhD students from the SOM Graduate School were very satisfied, while a substantial number of PhD students from the Humanities and BSS were not satisfied.

The organization and the quality of supervision were, as in 2011, valued reasonably highly. In general, Graduate Schools scored the same with regard to the organization of supervision, but the quality of the supervision was valued most positively at the Graduate School of Economics and Business and least positively at the Graduate School of Behavioural and Social Sciences. The latter's scores have fallen seriously since 2011.

Feedback, expertise and the support offered by the supervisors were the aspects most appreciated in the supervision. Almost half of the respondents indicated not facing any challenges and/or frustrations in their supervision. PhD students who had experienced some challenges or frustrations generally indicated the frequency of the supervision as the cause.

1.1.5 Working environment

PhD students were satisfied with the expertise and support available in their departments. The score on this scale was comparable with the score in the 2011 survey. PhD students from the SOM Graduate School had the least regular contact with fellow PhD students in relation to their project and were least often members of a research group that met at least every two weeks. PhD students who were not employed or did not have a scholarship at the University were least satisfied with the expertise and support in their department.

Overall, PhD students were moderately satisfied with the contact they have with fellow PhD students and other staff members. PhD students from the Graduate School of Behavioural and Social Sciences were least satisfied with this, and although the respondents from SOM said they did not have much contact with fellow PhD students and relatively few were members of a research group that met regularly, they were not dissatisfied with the contact they did have with other PhD students and staff members.

The overall work satisfaction of PhD students has diminished since 2011, with the average score now back at the 2009 level. The satisfaction of PhD students from the Humanities and the Behavioural and Social Sciences has dropped considerably. Scholarship PhD students were less satisfied with their overall work, as were PhD students in the end phase of their project. Noteworthy is the fact that 30% of SOM's PhD students were not satisfied with their social relationships at work.

1.1.6 Career development

At the time of data collection, 45% of the respondents said they were exploring options for their future career. The majority (83%) of the PhD students in their final years were exploring their options, and of the first-year PhD students, 31% were already thinking about their future career. A quarter of the respondents were familiar with career training options. Only 12% had attended a career development event, while the figure was almost 25% for PhD students in the last phase of their project. The most favoured job after graduation was a postdoctoral position, whether abroad or in the Netherlands. However, one-quarter to one-third of the respondents who wanted such a position thought they would not succeed. In total, 72% of the respondents thought that finding their preferred job was an attainable goal. Of the respondents, 28% were planning to write a postdoctoral proposal. The majority of the respondents were determined to finish their PhD before accepting a full-time job, were satisfied with their prospects after finishing, were convinced their PhD degree would help them find a job, and thought the content of the PhD project was useful for their future career. PhD students were more divided about the extent of University support in relation to their future career plans and only 36% of the respondents thought there were sufficient job opportunities at the University. PhD students from the Humanities in particular were very dissatisfied with the job opportunities at the University of Groningen after completion of a PhD.

1.1.7 PhD organizations

No increase was found in familiarity with PhD organizations at the Graduate Schools. PhD students from the Graduate School of Humanities were most familiar with this organization, as were PhD students further into their PhD and those who were employed. Roughly two-thirds of the respondents were familiar with Gopher and one-third with GRIN. Three-quarters of the respondents were satisfied with the number of activities and services offered by the PhD organizations.

1.2 Conclusions and recommendations

The overall picture presented by the 2013 PhD survey reveals that the upward trend, found in 2011, is stabilizing. Improvements were found in relation to some issues, for example, there has been an increase in satisfaction with the training and supervision plan and with the Graduate Schools. However, on quite a few issues the state of affairs has remained unchanged or even declined. Based on the 2011 PhD survey, the Dean of Graduate Schools and the individual Graduate Schools themselves decided to focus on five themes in the upcoming years. The aims were to decrease the time PhD students need to finish their PhD, to improve information provision, to improve familiarity with the Graduate Schools and enlarge their role in the PhD projects, to have all PhD students using a training and supervision plan and to broaden career-orientation opportunities.

1.2.1 Training and supervision plan

After the 2011 PhD survey, Graduate Schools ensured that all of their PhD students began with a training and supervision plan. The Graduate Schools endorsed the importance and usefulness of this document and were therefore motivated to implement it. However, either their intentions have not been translated into practice or the use of the training and supervision plan is not salient enough and PhD students forget they have one. Looking at the figures for the whole group, the increase between 2009 and 2011 has not been replicated. Based on the ambitions of the Graduate Schools in 2011, an increase in first-year PhD students with a TSP was expected, but no improvement for this group was found.

It is encouraging that the average TSP has become a more complete document, with time planning and management more often part of the plan, which might be an influential factor in reducing the time PhD students require to finish their PhD. However, agreements about requirements for the thesis were still not found often enough in the training and supervision plans. PhD students have in fact become less aware of quantity and quality requirements for their thesis, with PhD students in the first phase of their project being least informed about such requirements.

While PhD students have become more satisfied with their training and supervision plan in comparison to 2011, this is merely on the same level as 2009. Moreover, not all PhD students were planning to regularly update their TSP. This may be related to the finding that PhD students in later phases of their project were less satisfied with the plan, since these PhD students in particular were not considering updating their plan, resulting in an outdated and less relevant document.

Recommendations (taken from the 2011 PhD Survey):

- All PhD students should have a TSP containing all the required elements to assist them plan and manage their project. These plans should be revised each year. The Graduate Schools should assume a monitoring role in this regard.

1.2.2 Time span of the PhD project

In 2011, the average time needed to complete a PhD was 4.9 years. Clearly, Graduate Schools want to reduce this. The goal is to have at least 50% of all PhD students graduating within the allotted timeframe, but at present only 4% manage to graduate within 4 years and only 35% within 5 years. Among other factors, a belief in one's own ability to finish in time can be seen as an important condition for doing so. The self-fulfilling prophecy of being unable to finish in four years must be prevented as much as possible. Regular evaluations with supervisors as well as regular updating of training and supervision plans would lead to realistic project planning.

In 2013 a greater percentage of PhD students indicated that they would finish their project in time. Although this is a very encouraging finding, the average additional time needed was now estimated at 7.6 months. This means PhD students have become more conservative in their expectations. External PhD students in particular expect quite a long extension of their project.

Furthermore, the Graduate Schools are striving for a decrease in the drop-out rate. Actual drop-out rates were not investigated in this survey. The 2011 survey recommended further investigation of the reasons why PhD students dropped out. Unfortunately, no further information has been gathered in this regard, and thus the reasons remain unclear. However, the reasons for considering discontinuing the project are available, as well as the percentage of PhD students who have thought about leaving but did not. Fewer PhD students considered discontinuing in 2013 than in 2011 and 2009. Most PhD students who thought about quitting were in the early years of their project. Although PhD students indicated being satisfied with the supervision, in 4 out of 10 cases supervision issues were associated with the thought of leaving the project.

Recommendations:

- HR advisors should organize an exit interview with all students who discontinue their PhD.

1.2.3 Information provision

Information provision was one focus of attention in the 2009 and 2011 PhD surveys. However, in 2013 no improvements were found in this area. Fewer PhD students were satisfied with information provision and more indicated having problems with information provision. The information package that is handed out at the Graduate School introduction was not often used as a source of information. In this survey it remains unclear whether PhD students received such a package or not, or whether they simply do not use it. The website was most used as a source of information but at the same time this was also one of the main causes of problems with information provision. PhD students indicated having problems with the renewed site and pointed out that several links no longer work.

Recommendations:

- Ensure every PhD student receives an information package at the start of their PhD that contains clear and up-to-date information.
- Check all relevant web pages and ensure all links work and there are clear references to other pages.

1.2.4 Graduate Schools

The Graduate Schools have not become better known by PhD students since 2011. Unlike 2011, in 2013 there were no differences in familiarity with the Graduate Schools based on the phase of the PhD. In all phases, approximately 30% were not familiar with the Graduate School. Over half of the respondents from the Behavioural and Social Sciences were not familiar with their Graduate School. PhD students who were familiar with their Graduate School were more likely to have attended the introductory module.

PhD students are more satisfied with their Graduate School, although they were still not extremely satisfied. PhD students from SOM highly value their Graduate School, but PhD students from the Humanities and the Behavioural and Social Sciences were more critical of their Graduate Schools.

Recommendations (taken from the 2011 PhD Survey):

- Information about Graduate Schools needs to reach as many PhD students as possible. All new PhD students should be provided with an information package at the start of their PhD. There must also be a focus on PhD students who have been working on their project for a longer time, and they should be contacted more directly, for example, by regular email.
- The Graduate Schools' responsibilities should be stated more explicitly.

1.2.5 Career orientation

Only a minority of the PhD students were familiar with the career development opportunities offered in and outside the University. Moreover, only one-quarter had attended such an event. It is positive that PhD students were realistic about their chances of obtaining a research position at this university, but this implies that PhD students should start looking for alternative opportunities at the appropriate time.

Recommendations:

- Inform PhD students, especially those in their third and fourth years, more actively about the existence of career development opportunities and the importance of a timely start to exploring their future career opportunities.

Overall we can conclude that PhD students at the University of Groningen are generally satisfied. However, there has been no improvement since 2011. It is rather disappointing that the improvements sought have not eventuated two years further along.

2 Introduction

This chapter discusses the background to the PhD survey and the research questions, concluding with an overview of the remainder of the document.

2.1 Background and research questions

In 2009, the Board of the University formulated a number of goals relating to PhD projects: the number of doctoral degrees awarded should increase to 500 a year by 2015, 75% of all PhD students should graduate within five years and 85% should graduate within six years, and no more than 12% of PhD students should drop out in the first year. A PhD survey was conducted in 2009 to determine the state of affairs at that time. The survey was repeated in 2011 to determine whether the improvements were on the right track. The 'PhD Student Survey 2011' reported on the state of affairs in 2011 (see http://www.rug.nl/science-and-society/centre-for-information-technology/education/support/dienstverlenend-onderzoek/phdsurvey2011.pdf).

The PhD survey was administered again in 2013. Facts show that in 2013, 35% of PhD students graduated within 5 years and 4% within 4 years, which indicates that in order to reach the stated goals improvements have to be made. The following categories of factors that influence PhD students' progress were included in this survey: personal characteristics, the PhD programme, PhD supervision and the work environment. Personal characteristics included gender, type of affiliation with the University of Groningen (employee or scholarship status or other), motivation, skills and competences. The PhD programme category consisted of characteristics of the programme (e.g. research proposal), education, teaching activities and information provision. PhD supervision included matters such as the demands and requirements of the PhD project, the presence of and satisfaction with a Training and Supervision Plan, supervision by Graduate Schools and relationship with supervisor. The work environment included factors such as expertise and support within the department and general satisfaction with work. We also added some items to the questionnaire concerning PhD students' career development and PhD organizations.

The outcome of this survey should help answer the following questions:

1. What is the current state of affairs with regard to the personal factors, the PhD programme, supervision and working conditions?
2. How satisfied are PhD students with these factors?
3. What changes can be discerned in PhD students' background characteristics and their satisfaction in comparison with 2011 and 2009?

2.2 The report

This report consists of nine chapters. The first chapter provided a summary of the results, as well as conclusions and recommendations for further improvement. We also examined changes in relation to the results of the PhD Student Surveys in 2009 and 2011. This second chapter discussed the background to the survey. Chapters 3 to 8 will discuss the themes distinguished in this survey: personal characteristics, the PhD project, supervision, the working environment, career development and PhD organizations. Chapter 9 will address the methods used and the responses. The Appendix will provide an overview of the mean scores on the satisfaction scales as well as the scores from 2009 and 2011 and a breakdown of the 2013 scores for the various Graduate Schools.

3 Personal characteristics

This chapter discusses the PhD students' background characteristics, such as gender, age and previous education. It also considers the type of affiliation the PhD students have with the University of Groningen as well as their motivation, skills and competences.

3.1 Background characteristics of the PhD students

A total of 54% of the respondents were female. As in the 2011 PhD Survey, the average age was approximately 29.5 years. The youngest respondent was 23 and the oldest 71. Of the respondents, 247 were Dutch (43%), 62 were born in China, 25 in India, 22 in Italy, 21 in Germany and 204 in other countries. The distribution of male and female respondents has not changed considerably over the years, but there is a slight increase in foreign-born respondents for this PhD survey (Figure 1).

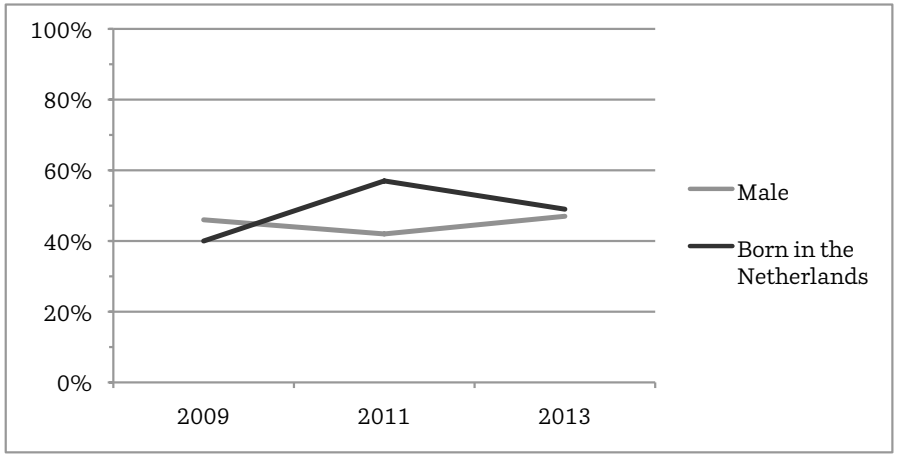

Figure 1. Percentage of male and Dutch respondents in 2009, 2011 and 2013

A total of 93% of the respondents had a Master's degree or equivalent when they started their PhD (61% Master's degree, 22% Research Master's degree and 10% 'Doctoraal'). Only 7% had a different type of diploma, such as an MD or a German Diplom. Only 4% had a Bachelor's degree when commencing their PhD (which was often an MD/PhD) (see Figure 2).

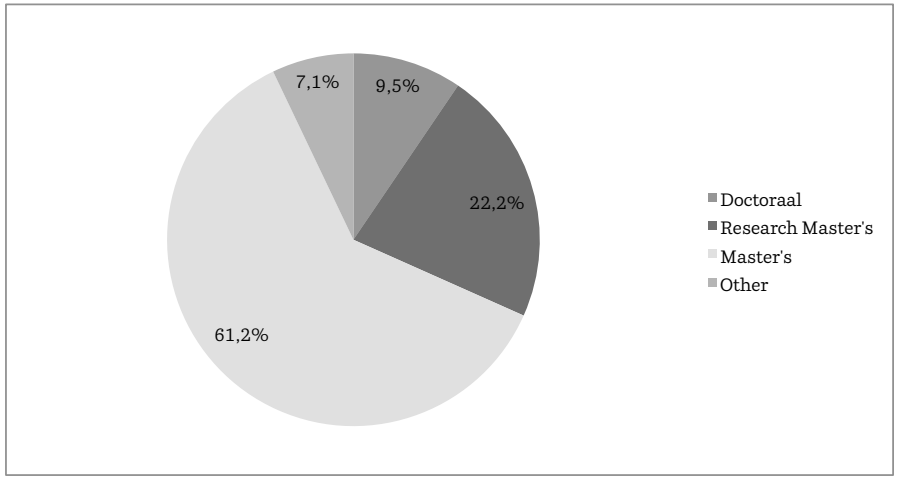

Figure 2. Degrees held by respondents before starting the PhD Project

Nearly 40% obtained this degree in Mathematics and Natural Sciences and 23% had a degree in Medical Sciences (Figure 3).

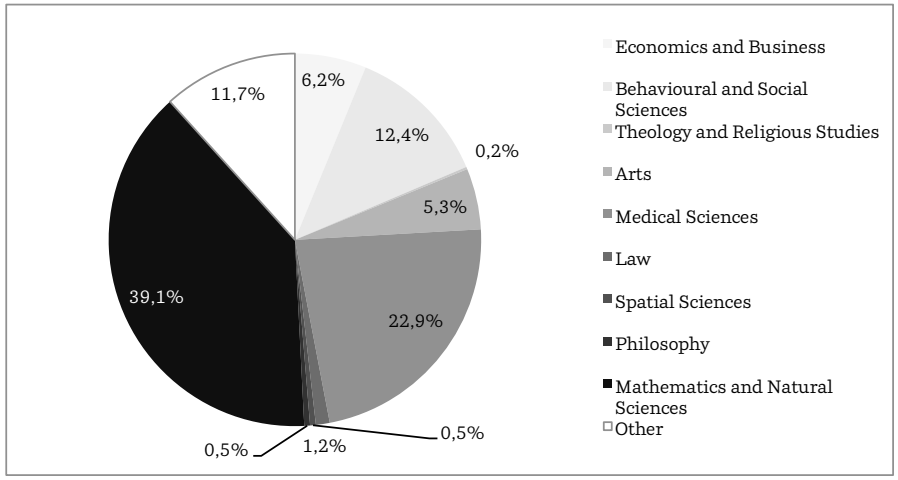

Figure 3. Discipline in which preliminary degree was obtained

Approximately 42% of the PhD students obtained their previous degree at the University of Groningen, 14% at another Dutch university, 18% at another European university, 23% at a university outside Europe and 3% at a different type of institution (Figure 4). PhD students who obtained their degree at another Dutch university mainly came from Radboud University Nijmegen (13), VU University Amsterdam (13) and Maastricht University (11).

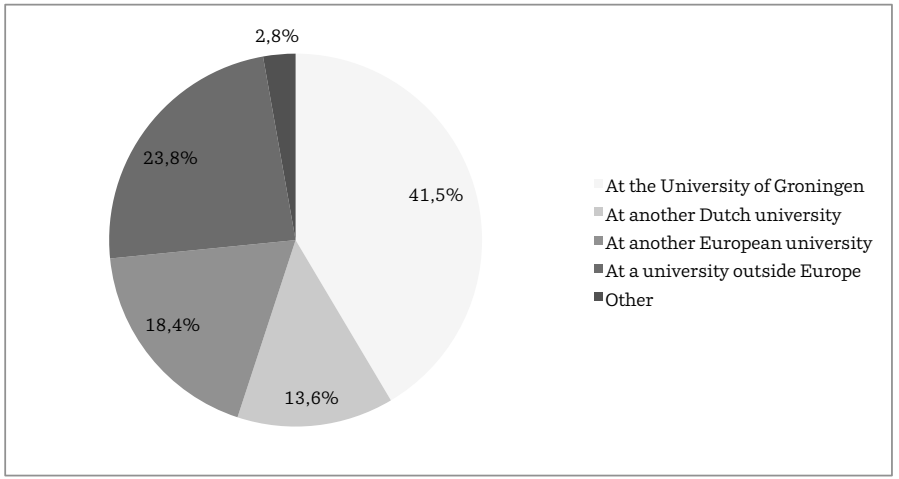

Figure 4. Place where preliminary degree was obtained

We also looked at which Graduate Schools the PhD students were affiliated with (Figure 5). In 2011, 12% of the respondents could not name their Graduate School. This had decreased to 2% in 2013. As in 2011, the majority were affiliated with the Graduate School of Medical Sciences or the Graduate School of Science. Noticeable is the fact that 14 respondents indicated they were affiliated with two Graduate Schools, usually the combination of Science and Medical Sciences. Table 3 shows the affiliations of PhD students with the University of Groningen's Graduate Schools.

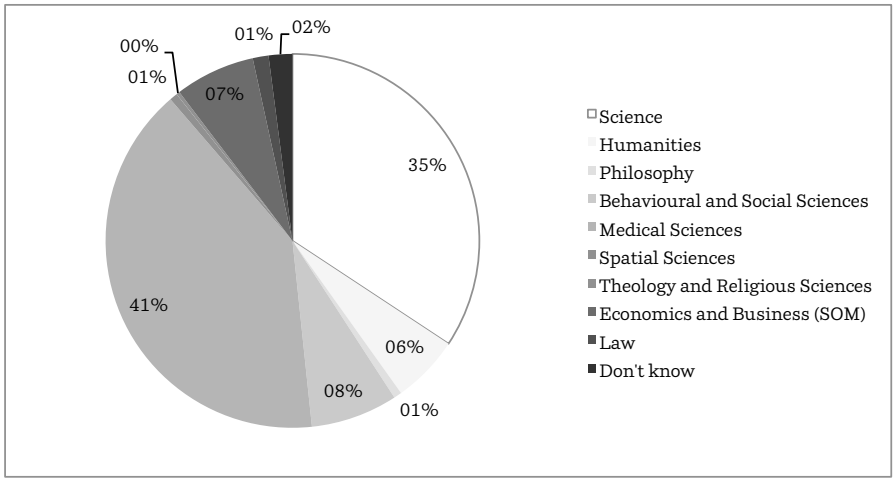

Figure 5. Respondents' affiliation with Graduate Schools

3.2 Affiliation with the University of Groningen

PhD students have different types of affiliation with the University. Figure 6 shows the percentages of the respondents in this survey for each of these different types of affiliations. The majority of the respondents (57%) have full-time employee status and 6% have part-time employee status; 7% have a scholarship from the University of Groningen or UMCG and 13% have another type of scholarship; 6% are MD/PhD students; 2% are sponsored by a non-academic employer; 1% are employed at the University; and 2% undertake research in their spare time. Another 7% have a different kind of affiliation: these PhD students usually describe themselves as 'external' or as a PhD student with another scholarship. This means that 62% had an employee affiliation, 20% had a scholarship affiliation, 11% had another type of affiliation with the University and 7% indicated that they did not belong to any of these groups. PhD students with part-time employee status had an average appointment of 27 hours per week.

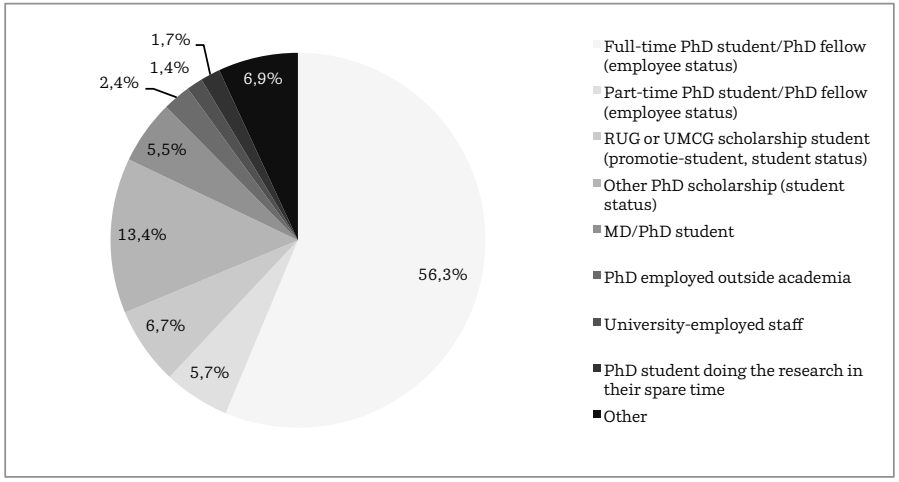

Figure 6. Type of affiliation with the University of Groningen

Figure 7 shows the phase of the PhD programme respondents were in at the time of filling out the questionnaire: 29% were in their first year (started after 1 May 2012), 45% were in their second or third years (started between 1 May 2010 and 1 May 2012) and 27% were in their fourth or a subsequent year (started before 1 May 2010).

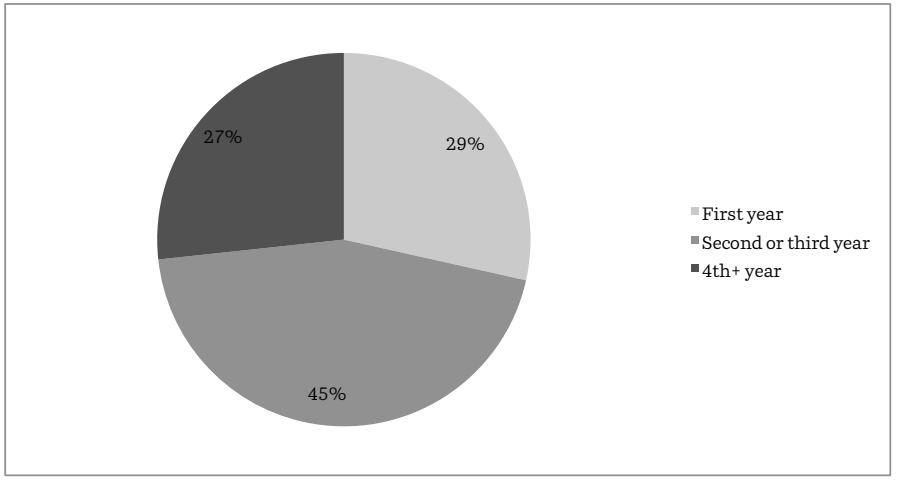

Figure 7. Phase of the project

Table 3 summarizes the mean age, the phase of the PhD and the type of affiliation with the University, subdivided by Graduate School. PhD students from the Graduate School of Humanities were on average the oldest respondents and respondents from the Graduate School of Science were the youngest. The proportions of respondents in the various phases differ across the five larger Graduate Schools: over half of the Humanities, SOM and Medical Sciences respondents were in their second or third years, over half of the Behavioural and Social Sciences respondents were in their fourth or a subsequent year, while Science had a more even distribution. For all of the larger Graduate Schools the majority of the PhD students who responded to the questionnaire were employed. The Graduate School of Science had the highest proportion of scholarship PhD students, at around 32%.

Table 3. Age, phase and affiliation by Graduate School

	Age	Phase			Affiliation		
	Mean	% First year	% Second or third	% 4th+ year	% Employee	% Scholar-ship	% Other
Humanities	35.7	3.3	53.3	43.3	56.0	20.0	24.0
Philosophy	30.4	0.0	100.0	0.0	100.0	0.0	0.0
Behavioural and Social Sciences	32.0	9.3	39.5	51.2	82.5	2.5	15.0
Spatial Sciences	34.2	25.0	0.0	75.0	25.0	50.0	25.0
Theology and Religious Sciences	31.9	50.0	0.0	50.0	100.0	0.0	0.0
Economics and Business (SOM)	30.1	26.8	53.7	19.5	73.2	12.2	14.6
Law	31.0	0.0	37.5	62.5	75.0	12.5	12.5
Science	28.3	40.4	37.3	22.3	65.2	32.1	2.7
Medical Sciences	29.1	27.5	50.4	22.0	65.0	18.8	16.1
Total RUG	29.6	28.5	44.8	26.7	66.5	21.6	11.8

3.3 Motivation, skills and competences

3.3.1 Motivation

The respondents were asked about what motivated them to become a PhD student. Of the respondents, 517 gave a codable answer to this question and of these answers we categorized the motive that was listed first. Table 4 presents the categories into which these motives were placed. Over 80% of the PhD students reported intrinsic motives for wanting to carry out a PhD project. Examples of the motives listed in this category included: like doing research, curiosity, personal development and interest in the subject. Fifteen percent of the PhD students listed extrinsic motives first. Motives that were mentioned in this category included a PhD being a requirement for an academic career or better job opportunities. Two percent reported altruistic reasons for starting the project: these PhD students wanted to make a contribution.

Table 4. Primary motivation for becoming a PhD student

Type of motivation	Percentage
Intrinsic	83.2
Extrinsic	14.7
Altruistic	2.1

3.3.2 Skills and competences

The majority of the respondents felt they had developed the skills and competences required of a researcher (see Error! Reference source not found.). Almost 100% of the respondents thought they were capable of becoming familiar with the subject and theoretical framework of the research project. The respondents were least confident about their abilities to perform teaching activities, including supervising Bachelor's and Master's theses.

Table 5. Developed abilities and skills by respondents

I have developed the following abilities/skills:	Percentage
The ability to familiarize oneself with the subject and theoretical framework of a research project	99.5
The ability to define the subject and theoretical framework of a research project	96.1
The ability to collect, analyse and interpret data both empirically and theoretically	96.1
The ability to identify, pose and resolve problems by formulating working hypotheses and performing adequate studies	94.8
Understanding ethical conduct as a researcher, teacher and professional, including issues of intellectual property	90.1
The ability to work in teams	86.0
The ability to communicate to a general public	85.8
The capacity to publish research results in journals of standing	85.7
The capacity to instruct supporting staff	80.3
The ability to supervise students in writing a Bachelor's/Master's thesis	71.8
The ability to prepare for teaching activities and the ability to perform them adequately	70.9

When a distinction is made between the phase of the PhD, it is apparent that the further into the PhD, the more confident students become about having developed several competences (see Figure 8). For instance, 30% of the PhD students in their first year thought they had not yet developed the ability to supervise Bachelor's or Master's students, while for those in their final year, only 9% thought they had not acquired this capability. In contrast, the opposite was true for working in teams: students in their first year indicated more often that they had developed this ability compared with students in their fourth or a subsequent year.

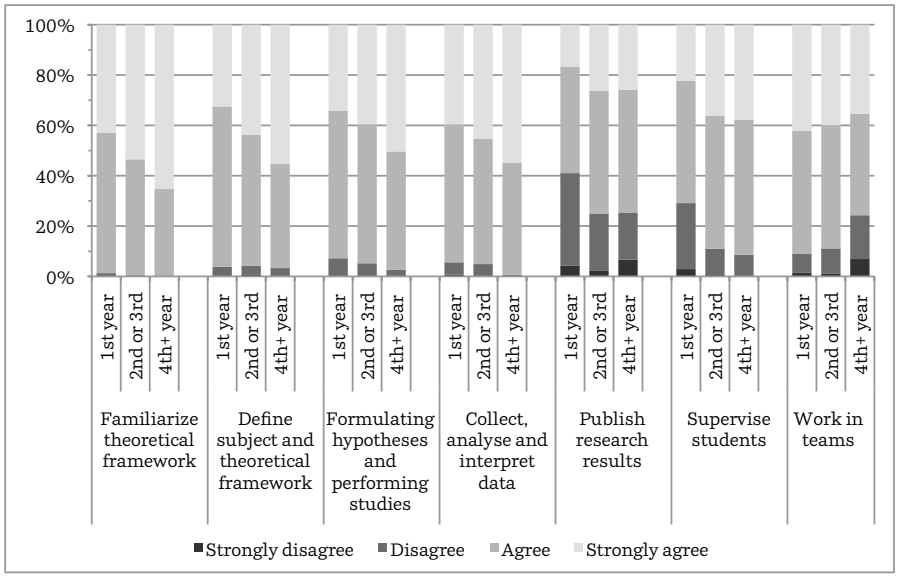

Figure 8. Significant differences in skills and competences by phase

Figure 9 only shows the significant differences between Graduate Schools on the items concerning skills and competences. On two of the three significant items SOM, the Graduate School of Economics and Business, stands out negatively. These PhD students were less likely to feel capable of instructing support staff and less capable of working in teams. PhD students from the Graduate School of Humanities were also less likely to feel they had the capacity to work in teams. PhD students from the Graduate School of Behavioural and Social Sciences felt best prepared for teaching activities.

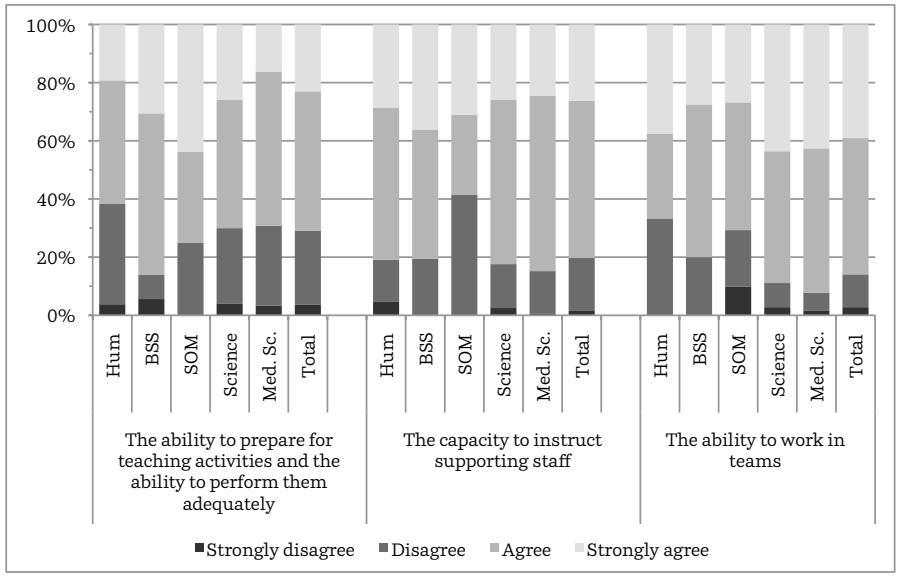

Figure 9. Significant differences in skills and competences by Graduate School

One significant difference in the skills and competences developed by PhD students was found in relation to the type of affiliation with the University. Employed PhD students were slightly more confident in their ability to familiarize themselves with the subject and theoretical framework of their research project.

Of the respondents, 6% indicated having experienced language difficulties during their PhD. The majority mentioned problems with Dutch, such as official documents in Dutch and problems with social relationships, since the Dutch like to talk Dutch. However, few respondents said they did not have sufficient knowledge of English to communicate about their research.

4 PhD Project

This chapter discusses the characteristics of the PhD projects and considers a number of themes, including PhD students' training and their satisfaction with this, as well as their teaching duties and the provision of information.

4.1 Characteristics of the PhD project

4.1.1 Time span of the project

The first issue to be addressed in this chapter concerns the confidence of PhD students in being able to finish in time. Of the respondents, 44% believed they could finish in time. One-third were still unsure about this and 22% thought finishing in time was not feasible. About 40% to 45% of students in each phase of the project thought the goal was attainable. Over half of the participants in the first year of their PhD said it was too early to say, while over half of the PhD students in their final year thought they would not finish in time.

The PhD students expected they would require an average of 7.6 additional months to finish their project. This is slightly less than in 2009, when they estimated they would need an additional 8 months to finish, but it is one month more than the average estimation of the 2011 respondents. Scholarship PhD students expected to need an additional 6 months, employed PhD students 6.6 months, and PhD students with another type of affiliation with the University, 12.5 months. The expected reasons for not finishing by the official date are summarized in Table 6. The reasons stated in the category 'Other' are mostly combinations of the various reasons stated in Table 6.

Table 6. Reasons for not finishing in time

Reason for not finishing in time	Percentage
Time schedule of the research was too ambitious and/or the research was delayed	42.6
Problems concerning supervision	11.0
Unforeseen personal circumstances	8.8
Work-related activities besides PhD project	6.6
I will use the full period of my appointment or scholarship time to perform research, and will only start writing the thesis afterwards	5.1
Other, namely:	20.6

4.1.2 Research proposal

PhD students start their project with different kinds of research proposals. These are presented in Table 7, along with the percentages for each. The majority of the respondents had a predetermined research proposal. The category 'Other' revealed that several PhD students combined a predetermined research proposal with ideas of their own.

Table 7. Type of research proposal

Research proposal	Percentage
It was a predetermined research proposal	29.3
It was a predetermined, externally funded research proposal	28.2
I was free to develop my own research proposal	23.1
I applied with my own research proposal	15.1
Other, namely:	3.8

4.1.3 Discontinuing the PhD

In 2011, 27% of the respondents had considered discontinuing at some point. In the 2013 survey this was 22%. As in 2011, PhD students more often consider quitting in the first stage of their project (see Table 8). Several PhD students also indicated that they thought about leaving at multiple stages in the project.

Table 8. Percentage of all respondents who considered discontinuing in 2009, 2011 and 2013

Stage in which discontinuing was considered	% 2009	% 2011	% 2013
In the first year	8.8	13.4	12.9
In the second year	6.6	14.4	11.7
In the third year	2.3	9.0	6.7
In the fourth year	0.5	2.8	2.6
After the fourth year	*	1.5	1.0
At different moments in my PhD project	10.6	*	*

* Not asked in that specific year

The reasons for thinking about discontinuing the PhD were mainly related to problems with the execution of the project, problems with supervision, uncertainty about individual capability or the work, and discontent with the working conditions (Figure 8). A substantial number of PhD students indicated more than one reason for considering quitting. In the category 'Other' respondents stated reasons such as personal circumstances or very specific problems.

Table 9. Reasons for considering discontinuing the PhD

Reason for considering discontinuing	Percentage
Problems with the execution of the project	44.4
Problems with supervision	42.9
Uncertainty about my capabilities/PhD work	37.3
Discontent with the working circumstances	36.5
Discontent with the working conditions/salary	18.3
Fading interest in the subject	15.9
Other, namely:	19.0

If given the choice, 85% of the participants in the 2013 survey would again opt for a PhD position, which seems a lot less than the 92% in 2011. Examining the open question of why respondents would not opt to do a PhD again, it became evident that most of the PhD students misunderstood the question and thought it referred to considering a second PhD rather than reflecting on their choice to do a PhD in the first place. Therefore, we are unable to draw conclusions from this question.

4.2 Education programme

Firstly, PhD students were asked how many courses they had to complete as part of their PhD. On average, PhD students were required to complete 5.8 courses. PhD students at the beginning of their project said they were required to complete around 5 courses, while PhD students who had been working on their project for more than one year said they were required to complete around 6 courses. At the time of data collection, PhD students had completed on average 4.8 courses, which required 23 days. It is not surprising that PhD students who had just started had attended the least courses (2.4 courses). PhD students who were in the final phase of their project had completed more courses (over 7) than required (6 courses). PhD students were also asked about the type of courses completed. Over half of the respondents attended at least one content-related course and/or a generic skills course (see Table 10). One-third had attended the introductory event for PhD students and almost one-third had taken a language course.

Table 10. Educational activities completed by respondents

Educational activities	Percentage
Content-related courses, including statistics and methodology, etc.	57.0
Generic skills courses such as time management and presentation, etc.	51.1
Introductory event organized by the Dean of Graduate School	34.8
Languages	32.7
Future career within academia	10.8
Teaching skills	10.2
IT	7.2
Future career outside academia	6.5
Other, namely:	8.3
None yet	13.1

Satisfaction with the educational activities offered was measured by the following five items, each on a 4-point Likert scale:

- I am satisfied with the number of educational activities offered.
- I am satisfied with the quality of educational activities offered.
- I am satisfied with the diversity of educational activities offered.
- I am satisfied with the opportunities I have to participate in educational activities.
- Overall, I am satisfied with the educational activities in which I have taken part.

The item, 'I am free to select the educational activities in which I want to take part', was deleted in the 2013 questionnaire. The reliability of this satisfaction scale remained high, with the average score for all respondents being 3.0. This means PhD students were not particularly satisfied or dissatisfied with the educational activities. Furthermore, the score in 2013 was precisely the same as the score in 2011, indicating that the opinion of PhD students with regard to the educational activities was unchanged.

Graduate Schools differed on the total scale score, with the Graduate School of Humanities scoring lowest (an average score of 2.5) and SOM the highest (an average score of 3.1). Scores did not differ between PhD students who were in different phases of their project, nor between PhD students with different types of affiliations with the University.

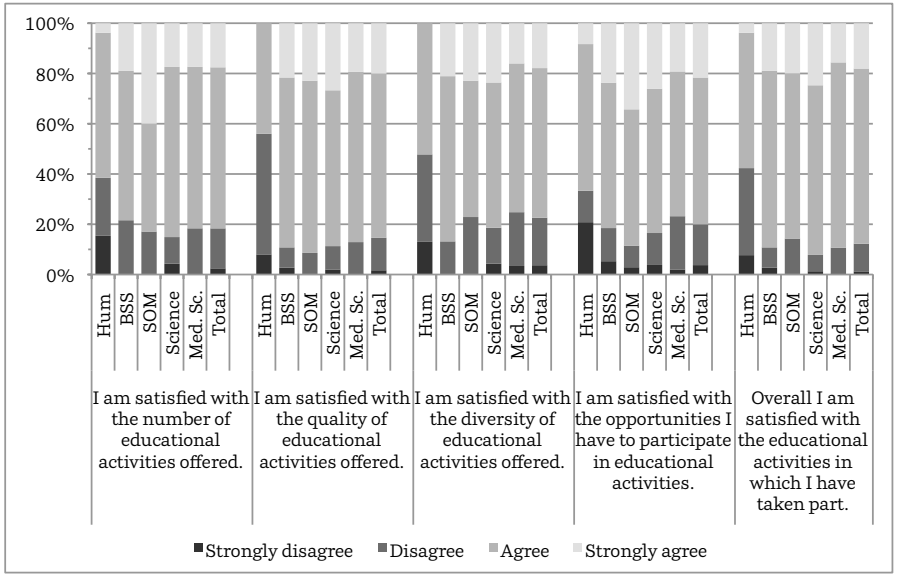

Figure 10. Significant items of satisfaction with education by Graduate School

Figure 10 shows the significant differences between the larger Graduate Schools on the individual items about educational activities. It is striking that the Graduate School of Humanities scored lowest on all of the five items, which explains the lower total scale score. No significant differences based on affiliation or phase in the project were found on the individual items.

4.3 Teaching activities

Since only employed PhD students are allowed to teach, we will only report in detail about this group of PhD students. However, in relation to the remainder of the PhD students, only approximately one-third stated that they did not perform teaching activities. When we take a closer look at this non-teaching group, it is apparent that 50% are first-year PhD students. PhD students who did teach, usually performed supervisory duties or gave small-scale lectures (see Table 11). On average, PhD students spent 16 hours on teaching and supervising each month.

Table 11. Percentage of teaching activities performed by employed PhD students

Teaching activities	Percentage
No, I do not teach or supervise students	30.8
Yes, supervising students	47.2
Yes, small-scale courses (seminars/tutorials/'werkcolleges')	31.9
Yes, practicals (experimental work, lab work)	22.2
Yes, large-scale lectures ('hoorcollege')	5.8
Yes, other, namely:	2.8

Of the PhD students who taught, 28% said they received sufficient training for teaching and supervising students, 64% said they did not receive sufficient training and 5% indicated that they planned to do some training. However, 80% said they received sufficient support for teaching and supervising. PhD students who did not think they received sufficient support, ascribed this to too little information about how to teach and supervise and to unawareness of a teaching course. The majority (70%) of the teaching respondents were satisfied with the amount of teaching. A few PhD students would like to teach less (16%) rather than more (13%). Two-thirds of the students said the teaching and supervisory activities contributed to their own PhD project. Table 12 presents the manner in which the teaching activities were believed to contribute to the PhD project. In the category 'Other' PhD students mentioned, for example, learning to explain complex theoretical frameworks or the research in a clear and simple way.

Table 12. Areas in which teaching contributes to the PhD Project

Contribution to the project	Percentage
Preparing for a career in academia	52.5
Presenting in public	48.7
Generating and formulating ideas	45.6
Achieving my research goals	39.9
Structuring my PhD project	27.2
Other, namely:	8.9

4.4 Information provision

PhD students were asked to indicate what kind of information they used concerning the regulations and/or conditions of their employment/scholarship contract with the University. Most often the website and contract were consulted for information about employment or the scholarship (see Table 13). Approximately 40% used the PhD guide and only 28% used the information package they received at the start of the project. Of the larger Graduate Schools, PhD students from Economics and Business used the information package most often (44%), while PhD students from Science used it least (25%). In the category 'Other', PhD students often mentioned colleagues as a source of information.

Table 13. Information sources consulted by PhD students

Information sources	Percentage
Website	59.4
Contract	52.2
PhD guide	38.2
Information package at introduction	27.9
Other, namely:	9.0

Two-thirds of the respondents believed they were well-informed about the regulations and/or conditions of their employment/scholarship contract with the University of Groningen, leaving 35% of respondents who were not satisfied with the information provision. Three-quarters of all respondents indicated that they did not experience any personal difficulties with information provision. The 25% of respondents who did experience difficulties were mainly concerned about the new website, on which several links no longer work, issues with finances and taxation, the vagueness of their rights and policies (especially for scholarship PhD students) and which courses can and/or should be followed. PhD students from the Graduate School of Science least often said they experienced problems with information provision, while 32% of the PhD students from SOM had experienced difficulties with information provision at some point (see Figure 11). However, these differences between Graduate Schools are not significant.

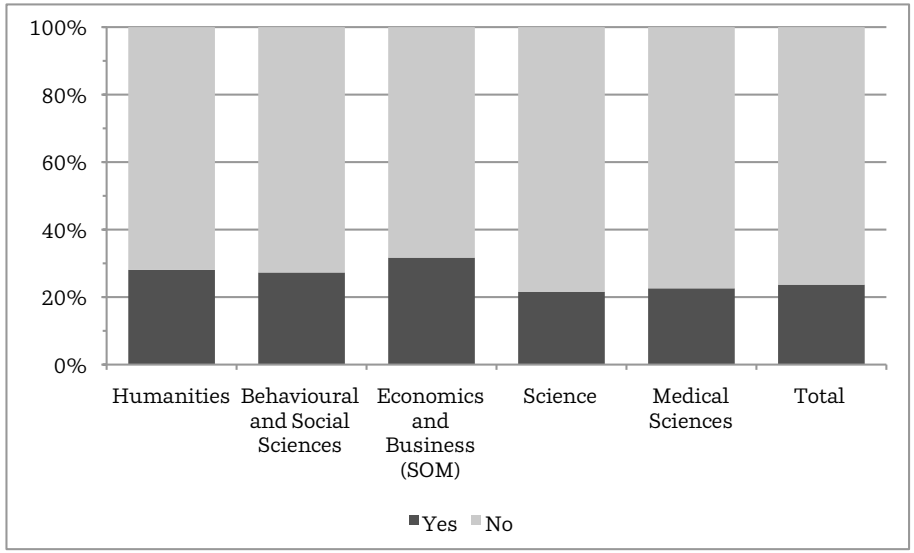

Figure 11. Difficulties with information provision by Graduate School

5 Supervision

Supervision is an essential part of a successful PhD project. This chapter first discusses the demands and requirements of a PhD project. It will then consider the Training and Supervision Plan (TSP) before moving on to the supervision provided by the Graduate School. It concludes by discussing the supervisor and daily supervisor.

5.1 Demands and requirements of the PhD project

PhD students' performance should be formally evaluated at least once a year. As most of the PhD students in their first year had not yet completed a whole year, they were not included in these analyses. Of the respondents, 68% who were in their second or subsequent year indicated that their performance was evaluated once a year in a performance appraisal and career/project development interview. Of the respondents, 21% stated that their performance was evaluated very irregularly and 11% that their performance had not yet been evaluated. More PhD students in their second or third years indicated that their performance was evaluated regularly than PhD students who were in the final phase of their project, with the latter more often stating that they were evaluated irregularly. There were also significant differences between the Graduate Schools. Of the PhD students from larger Graduate Schools, those from the Graduate School of Economics and Business (SOM) reported most often that their performance was evaluated regularly (see Figure 12), while the performance of PhD students from the Graduate School of Behavioural and Social Sciences was evaluated least often on a regular basis. Furthermore, PhD students with a scholarship were evaluated most regularly, while the performances of PhD students who were not employed and did not have a scholarship were least regularly evaluated.

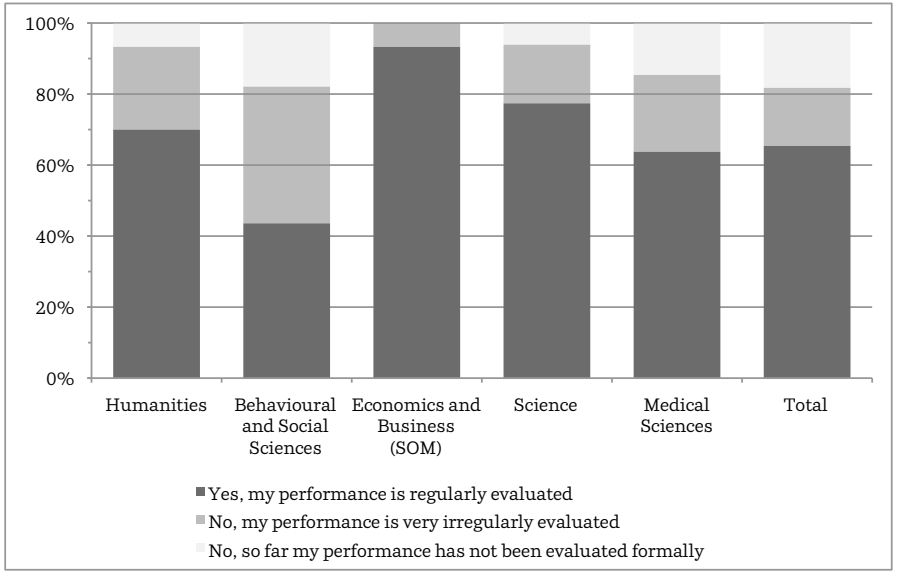

Figure 12. Performance evaluation by Graduate School

Table 14 lists the people present at go/no go (appraisal) interviews for PhD students. Of the respondents, 81% indicated that their main supervisor(s) was present at the first-year evaluation. In over 57% of the cases the daily supervisor was also present. In only 17% of the cases was a member of the Human Resources department present. This is a smaller percentage than those measured in 2009 and 2011. In the category 'Other', PhD students mentioned several others involved, such as an external supervisor or head of department, but quite a few PhD students also said they had not yet had a go/no go interview. Note that this analysis only included second or subsequent year PhD students.

Table 14. People present at go/no go interview

People present at go/no go interview	Percentage
Main supervisor(s)	81.0
Daily supervisor	57.6
Graduate school delegate	12.4
Personnel department (P&O)	17.4
Other, namely:	8.8

As was done in the 2009 and 2011 surveys, we asked the PhD students whether they were aware of formal quantity (e.g. how many pages, chapters, or articles) and quality (e.g. publishing in high-ranking journals) requirements for their thesis, and found that they appear to be less aware of the requirements for their thesis than previously. In 2009, over 60% of the respondents were familiar with these requirements and in 2011 approximately 40% of the respondents said they were aware of quantity and/or quality requirements. In 2013, only 32% of the respondents said they had formal quantity requirements for the PhD thesis, while 26% had formal quality requirements. PhD students who did have formal requirements were very satisfied with these: only 7% thought they were too demanding.

When we compare the different groups of PhD students, we mainly see differences in quality requirements: PhD students from the Graduate School of Medical Science most often had quality requirements (35%) and PhD students from the Humanities had these least often (15%) (see Figure 13). PhD students with a scholarship were more aware of quality requirements than PhD students with another kind of affiliation, and PhD students in their first year indicated least often that they were aware of these requirements. First-year PhD students were also less aware of quantity requirements than experienced PhD students.

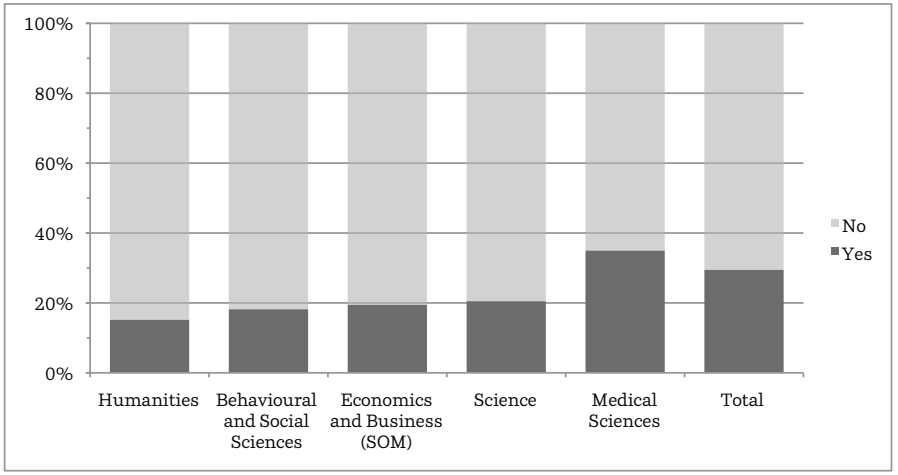

Figure 13. Percentage of PhD students that had quality requirements for their thesis by Graduate School

In this year's survey we added new questions about the cum laude distinction. Only 15% of the respondents indicated they were familiar with the requirements for a cum laude distinction for their dissertation. Of this 15%, two-thirds had the ambition to attain the distinction.

5.2 Training and supervision plan

In the 2011 survey we found an increase in the proportion of PhD students who had a training and supervision plan (TSP) in relation to 2009 (63% and 57% respectively). This increase did not continue in 2013, although 63% of the respondents reported that they had a training and supervision plan. Again, 18% said they had no training and supervision plan and 18% were not sure whether they had such a plan or not. PhD students affiliated to the Graduate School of Science indicated most often that they had a TSP, while only 46% of the PhD students affiliated to the Graduate School of Behavioural and Social Sciences had a TSP (see Figure 14). The data also revealed a difference in the number of PhD students with a TSP depending on when they started their project: just over 55% of PhD students who had been working on their PhD for more than three years had a TSP, compared with 74% of PhD students in their first year.

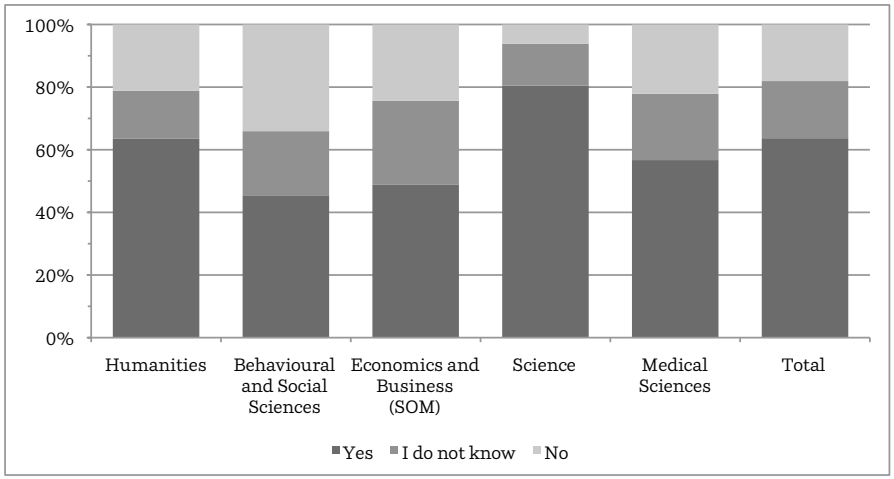

Figure 14. Percentage of PhD students with a training and supervision plan by Graduate Schools

The great majority of the TSPs contained an explanation of the research content and design (Table 15). Three-quarters included a time schedule and only one-in-five included agremeents concerning teaching activities. In comparison with the results of the 2011 PhD survey, the TSP has again become a slightly more complete document. In 2013, time management in particular was more often a part of the training and supervision plan.

Table 15. Elements present in training and supervision plans

Elements in training and supervision plan	Percentage
Research content and design	84.6
Time planning and management	74.6
Educational activities	67.3
Evaluation and appraisal moments	39.7
Number of contact hours with supervisors	37.6
Requirements concerning the PhD thesis	26.5
The number of teaching activities	22.2

It is desirable that all PhD students update their TSP regularly to ensure it remains relevant. Only a small majority of the PhD students with a plan said they intended to update the plan regularly. However, taking a closer look at this result, it is apparent that it is PhD students in their fourth or a subsequent year who do not plan to update their TSP, while two-thirds of PhD students in earlier phases do intend to do so.

The TSP satisfaction scale was measured with the following five items:

- My training and supervision plan serves as a good guideline throughout my PhD.
- Drawing up a training and supervision plan helps me plan my PhD project.
- I have sufficient opportunities to revise my training and supervision plan when necessary.
- My training and supervision plan is evaluated regularly in a formal evaluation.
- Overall, I am satisfied with my training and supervision plan.

Generally speaking, PhD students were only moderately satisfied with their TSP, with the average score on this scale 2.8. PhD students from the Graduate School of Behavioural and Social Sciences who did have a TSP were particularly unsatisfied with it. PhD students from the Graduate School of Science were most satisfied with their plans. Furthermore, PhD students with a scholarship and PhD students who were in their first, second or third years were also more satisfied with their TSP than their counterparts. Despite the relatively low score on this issue, it was significantly higher in 2013 than in 2011 when it was 2.7. Figure 15 shows the increase in satisfaction with the TSP since 2011 for four Graduate Schools. Most striking is the decline in the satisfaction of PhD students from the Behavioural and Social Sciences, and to a lesser extent of PhD students from Economics and Business.

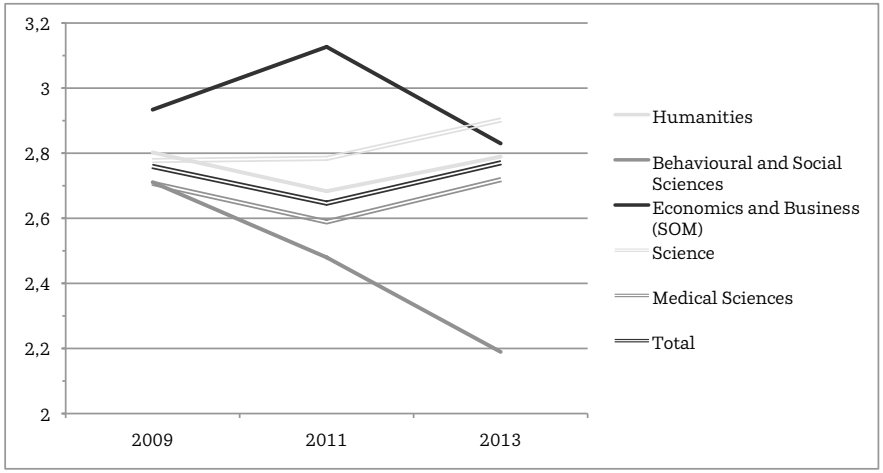

Figure 15. Mean scale score on satisfaction with TSP by Graduate School in 2009, 2011 and 2013

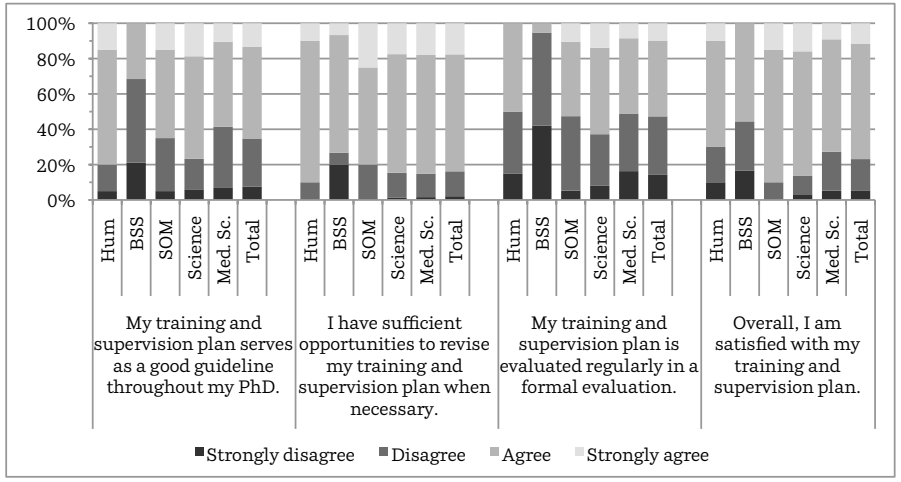

Figure 16. Significant items of satisfaction with TSP by Graduate School

Taking a closer look at the items in this scale, it is apparent that Graduate Schools differ on four of the five items, with all items being least positively assessed by PhD students from the Graduate School of Behavioural and Social Sciences (see Figure 16). The only item that did not differ between Graduate Schools was: 'Drawing up a training and supervision plan helped me plan my PhD project'. Differences were also found based on the phase of the PhD. From Figure 17 it can be concluded that new PhD students either have become more satisfied with the format of the training and supervision plan or they are only satisfied with their plan at the beginning of the project because they have just written it and it becomes less relevant over the course of the project.

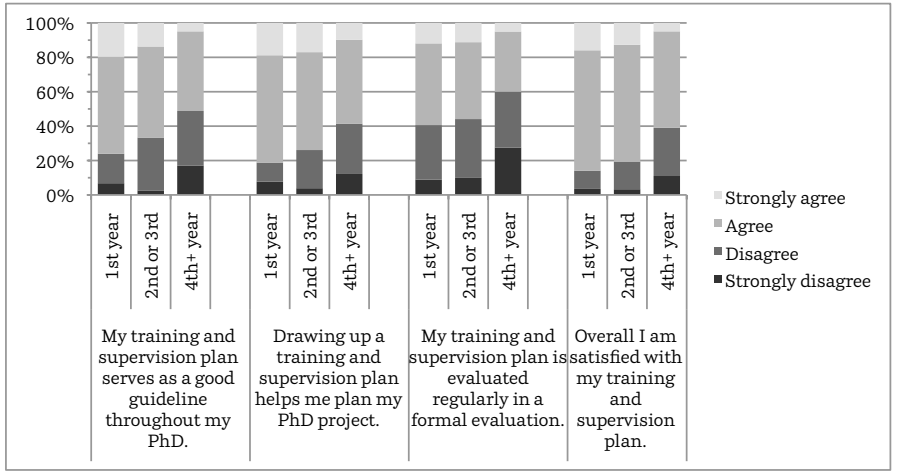

Figure 17. Significant items of satisfaction with TSP by phase

5.3 Graduate School

In 2013, 71% of the respondents were familiar with their Graduate School and its role. This is a little less than the 75% in 2011, but more than the 67% of respondents in 2009 who were familiar with their Graduate School. Familiarity differs between the Schools (Figure 18). The Graduate School of Behavioural and Social Sciences was least known by its PhD students, as was the case in 2011.

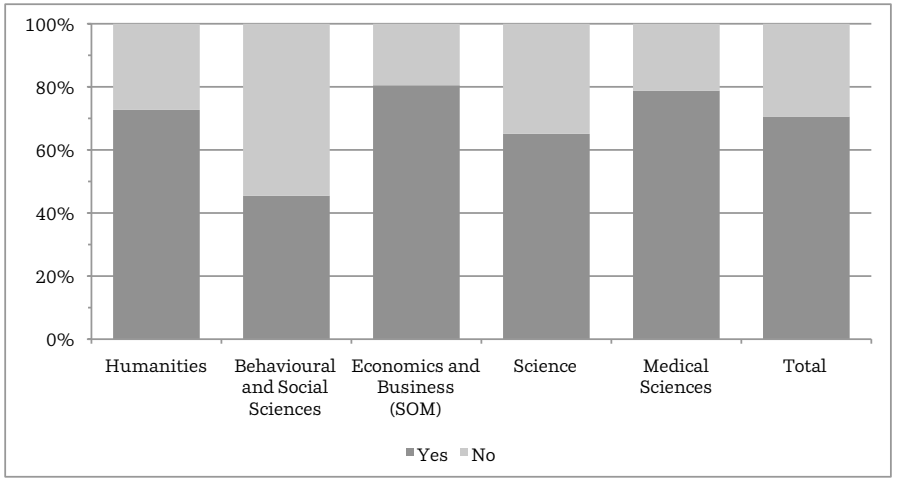

Figure 18. Familiarity with the Graduate School

More than half of the respondents who were familiar with their Graduate School had attended an introductory module at the School, which is more than the 43% of respondents in 2011. Graduate Schools did not significantly differ in the percentage of participants in these introductory modules, but the highest percentage was found in the Graduate School of Humanities, where 65% enrolled in such a module.
Satisfaction with the Graduate School was measured using seven items rated on a four-point Likert scale:

- I know who I can turn to in the Graduate School when facing problems in general, e.g. with my supervision or training.
- I am satisfied with the education provided by my Graduate School.
- I am satisfied with the way my Graduate School monitors and supports the supervision of my PhD project.
- I am satisfied with the way in which my Graduate School monitors the progress of my PhD project.
- My Graduate School provides for a stimulating study and research environment, which allows for interaction and efficiency.
- My Graduate School provides me with adequate information (website, PhD guide).
- Overall, I am satisfied with how my Graduate School functions.

The average score on this topic was 2.9, which is significantly higher than the average score of 2.7 in 2011. Significant differences were found based on Graduate School, affiliation and phase of the project. PhD students from the Graduate School of Economics and Business rated their Graduate School best and PhD students from the Humanities were least satisfied with their Graduate School. This means that the relationship between familiarity and satisfaction with the Graduate School that was found in the 2011 survey does not apply in 2013. Furthermore, as with the other satisfaction scales, PhD students with a scholarship or at the beginning of their project were more positive.

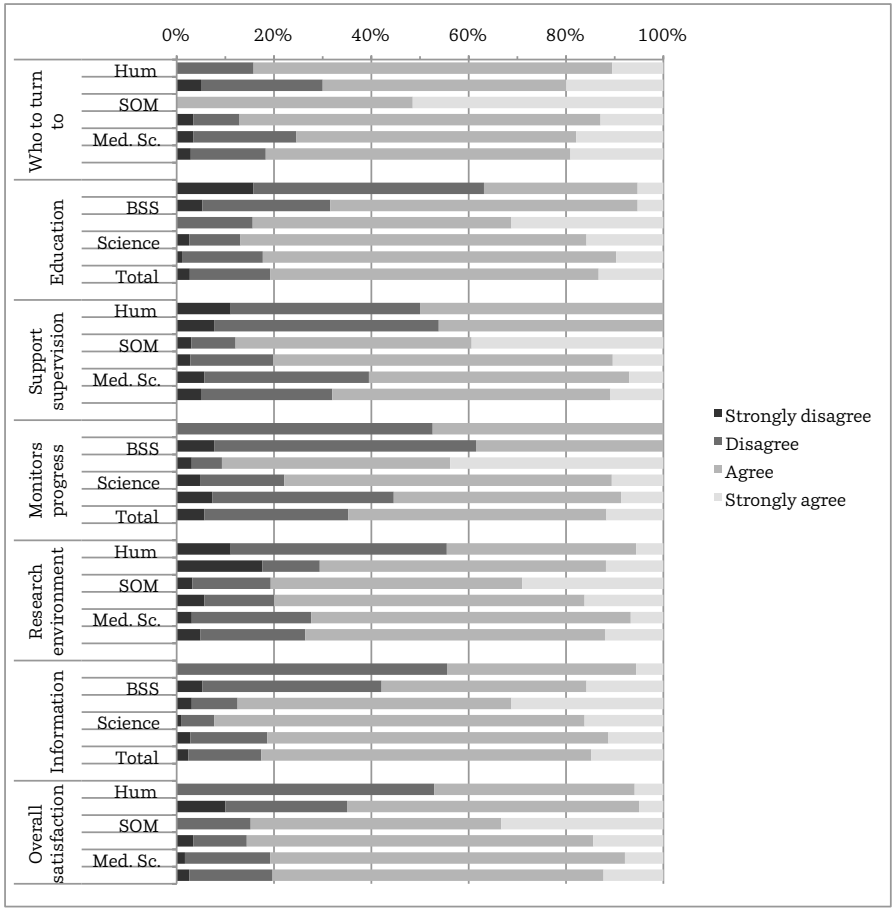

Figure 19. Significant items of satisfaction with Graduate School

From Figure 19 it becomes evident that PhD students from the Graduate School of Economics and Business (SOM) were most satisfied with their Graduate School. For example, all of the respondents knew who they could turn to in the Graduate School if they experienced general problems. Humanities along with Behavioural and Social Sciences scored the lowest on the items in this topic. PhD students who were neither employed nor had a scholarship were significantly less satisfied on the item concerning who they can turn to in the Graduate School and were least satisfied with the way the Graduate School monitored and supported the supervision of their PhD projects. PhD students who had just started were most satisfied with the way in which the Graduate School monitored their progress, with the information provided by the Graduate School and with the overall functioning of the Graduate School.

5.4 Supervisors

PhD students were asked to indicate how many supervisors they had. The average number of supervisors was 2.3, somewhat less than in 2011. The PhD students with the fewest supervisors had only one, while the PhD students with the most had six. The respondents were also asked to distinguish between supervisors and daily supervisors. On average the respondents had 1.7 supervisors (e.g. main supervisor, second supervisor) and one daily supervisor (e.g. postdocs, assistant professors).

Satisfaction with supervision was measured using 12 items divided into two categories, one relating to the organization of supervision and one relating to the quality of supervision, all scored on a four-point Likert scale. The five items about the organization of supervision were:

- I am satisfied with the way my supervision is organized.
- I am satisfied with the number of meetings I have with my supervisor(s).
- I am satisfied with the number of meetings I have with my daily supervisor(s).
- When I need information at short notice, at least one of my supervisors is available.
- I have enough freedom to determine my own contribution to my research project.

The seven items about the quality of supervision were:

- At our meetings my supervisors are usually well prepared.
- My supervisors provide me with adequate feedback.
- My supervisors show commitment to my project.
- My supervisors support me in choosing educational activities which I find interesting.
- I am being stimulated by my supervisors to present my work at conferences.
- Generally speaking, my supervisors agree with each other on where my research should be going.
- Overall, I am satisfied with the supervision.

The organization of supervision had an average score of 3.3. This is a rather good score and did not differ from the score of 2011. Most of the larger Graduate Schools did not exhibit major differences across the three moments of measurement (Figure 20). Only the score of the Graduate School of Behavioural and Social Sciences showed a slight decrease since 2011. For this scale we did not find any differences based on Graduate School or based on affiliation. We did find differences based on the phase of the PhD: first-year and second or third-year PhD students were more satisfied with the organization of supervision than PhD students who were in their final year. Overall, the PhD students were satisfied with the organization of supervision.

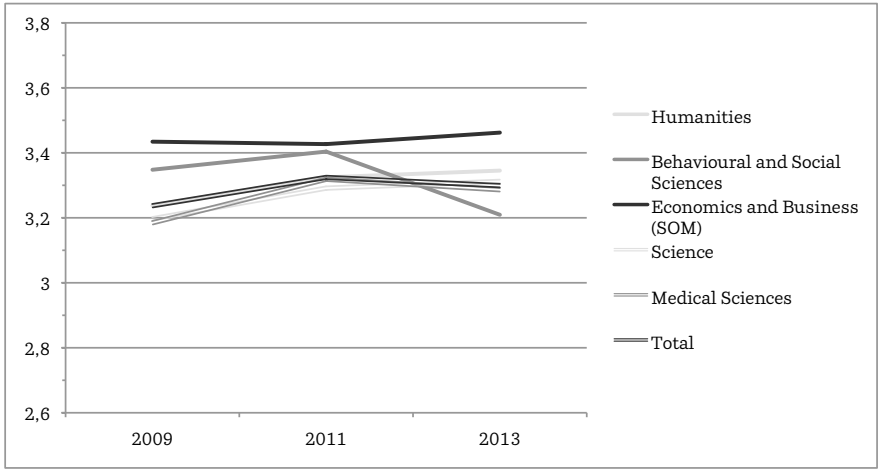

Figure 20. Mean scale score on satisfaction with organization of supervision by Graduate School in 2009, 2011 and 2013

Similarly positive results were found for the quality of supervision, with the average score being 3.2, which was also the same as the 2011 score. The average scores on the quality of supervision of the Graduate Schools over the years are to a large extent similar to the scores on the organization of supervision, with most Graduate Schools' scores rather stable, although the score for the Graduate School of Behavioural and Social Sciences has decreased since 2011 (Figure 21).

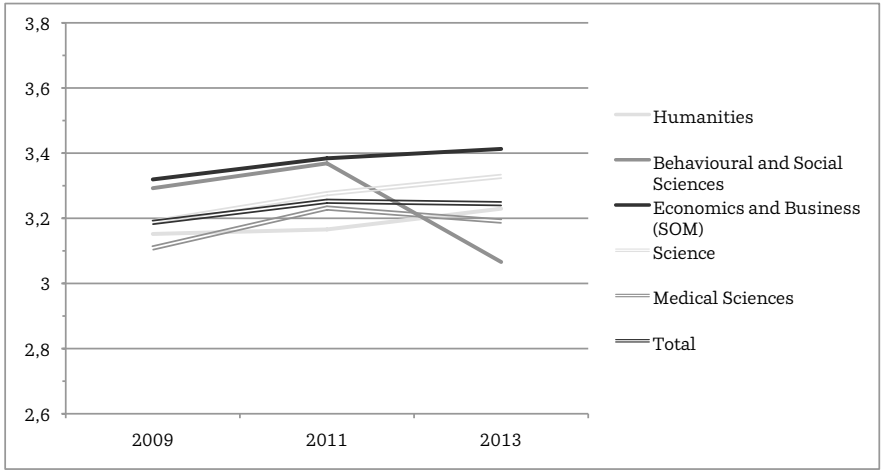

Figure 21. Mean scale score on satisfaction with quality of supervision by Graduate School in 2009, 2011 and 2013

However, we did find differences between Graduate Schools. The PhD students from the Graduate School of Economics and Business were most satisfied with the quality of supervision, while PhD students from the Graduate School of Behavioural and Social Sciences were least content. Moreover, we found significant differences between the PhD students in different phases of their project: the further into the PhD they were, the more critical they were about supervision.

Every item was tested to determine whether scores differed between different types of PhD students. PhD students who had another type of affiliation with the University (for example, employees sponsored by their employer or doing the PhD in their spare time) were less satisfied with the availability of a supervisor when information is needed at short notice than University employed or scholarship PhD students. The differences based on phase are shown in Figure 22.

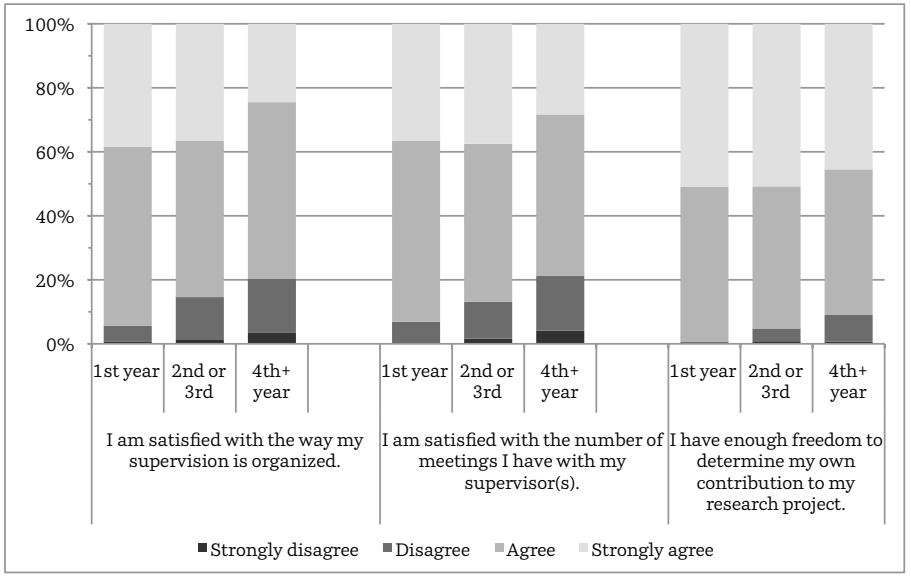

Figure 22. Significant items of satisfaction with organization of supervision by phase

With regard to the quality of supervision, Graduate Schools differed on only one item, namely the support from supervisors in making decisions about educational activities. PhD students from the Graduate School of Behavioural and Social Sciences were least satisfied with this. Based on affiliation there was also one significantly different item: PhD students with an affiliation with the University other than employment or scholarship said their supervisors agreed less on where the research should be going. Furthermore, most items differed depending on the different phases of the project (Figure 23). It is worth noting that PhD students who are further into their PhD feel less stimulated by their supervisors to present their work at conferences.

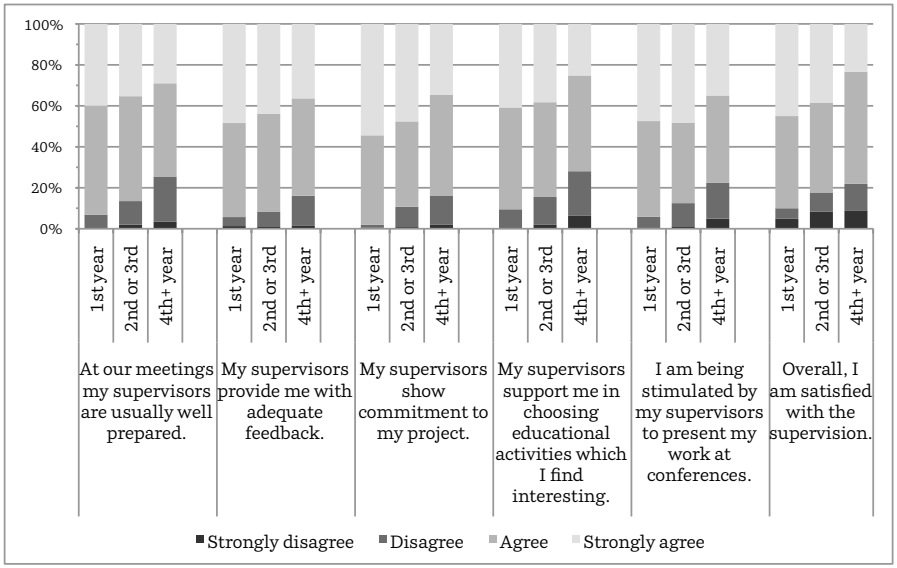

Figure 23. Significant items of satisfaction with quality of supervision by phase

Respondents were also asked what they appreciated most about the supervision. Table 16 presents the results, which makes it clear that the majority of the respondents appreciated the feedback and/or support given by their supervisor(s) and/or their expertise. Other aspects of supervision were also mentioned quite often.

Table 16. Aspects PhD students appreciate most in the supervision

Appreciated most in supervision	Percentage
Feedback, expertise or support given by my supervisor(s)	51.4
Approachability/availability of my supervisor(s)	15.3
Freedom in my project	14.4
Commitment/enthusiasm of my supervisor(s)	12.3
Personal characteristics of my supervisor(s) or our personal relationship	4.4
Other, namely:	2.3

The question about challenges and frustrations faced in their PhD was answered very positively. Almost half of the respondents said they had not?? faced challenges or frustrations in relation to supervision (Table 17). Those who did have comments about the supervision usually mentioned its frequency. In 2011, this question was an open question, with very few indicating at the time that they did not face challenges or frustrations in the supervision.

Table 17. Causes of challenges or frustrations in the supervision

Challenges/frustrations in supervision	Percentage
None	48.2
Frequency of supervision	13.7
Quality and/or content of supervision	8.6
Lack of interest or lack of commitment of supervisor(s)	6.7
Lack of expertise of my supervisor(s)	6.9
Personal fit with supervisor(s)	4.2
Too many or disagreeing supervisor(s)	3.9
Other, namely:	7.7

6 Working environment

In this chapter we focus on the working environment of the PhD students. We will discuss their satisfaction with the expertise and support within the department, their satisfaction with their contact with peers and their overall satisfaction with their work.

6.1 Expertise and support

Five items contribute to a satisfaction score relating to the students' experience of expertise and support in the department. In the two previous PhD surveys this score consisted of six items, but in this survey the items about access to books and journals were combined into one. The items about the expertise and support were:

- A sufficient number of experts are available in my working environment to help me deal with problems related to my project.
- I have regular (formal or informal) contact with fellow PhD students about my PhD project.
- I am a member of a research group that meets at least once every two weeks.
- I have good access to the books and journals that are relevant to my research topic.
- I received good support during the collection of my data.

In general, PhD students were satisfied with the expertise and support available in their department: the average score was 3.1 and thereby approximately the same as 2011 and slightly higher than 2009. The majority of the Graduate Schools scored somewhat lower than in 2011, but still higher than in 2009 (see Figure 24).

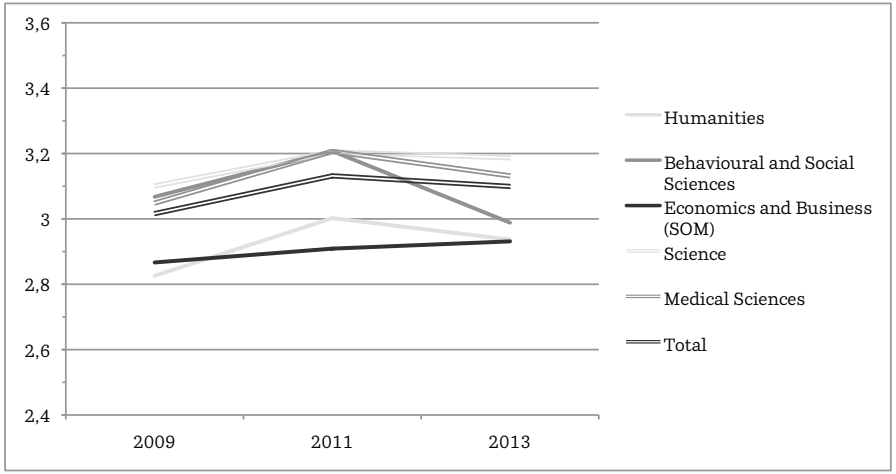

Figure 24. Mean scale score on satisfaction with expertise and support by Graduate School in 2009, 2011 and 2013

PhD students from the Graduate Schools of the Humanities and Economics and Business were least satisfied with the expertise and support, while PhD students from Science and the Medical Sciences were most satisfied. Not surprisingly, PhD students who were not employed or did not have a scholarship were less satisfied with the expertise and support, presumably because they spent less time in the department. PhD students who were further advanced in their project were also more critical about the expertise and support in their department.

Figure 25 shows the significant differences between PhD students from different Graduate Schools on the various items. Figure 26 shows the significant differences based on the phase of the project and Figure 27 the differences based on the type of affiliation with the University. Most noteworthy is that 80% of the PhD students from Economics and Business indicated they were not a member of a research group that meets at least every two weeks.

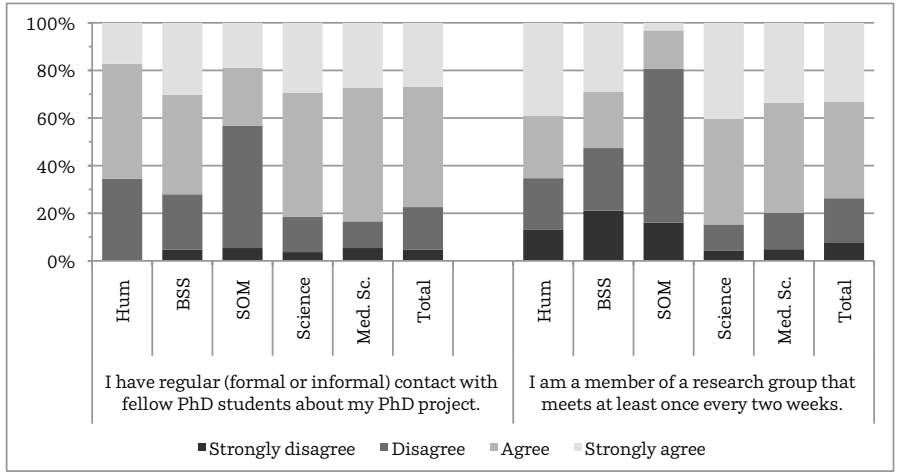

Figure 25. Significant items of satisfaction with expertise and support by Graduate School

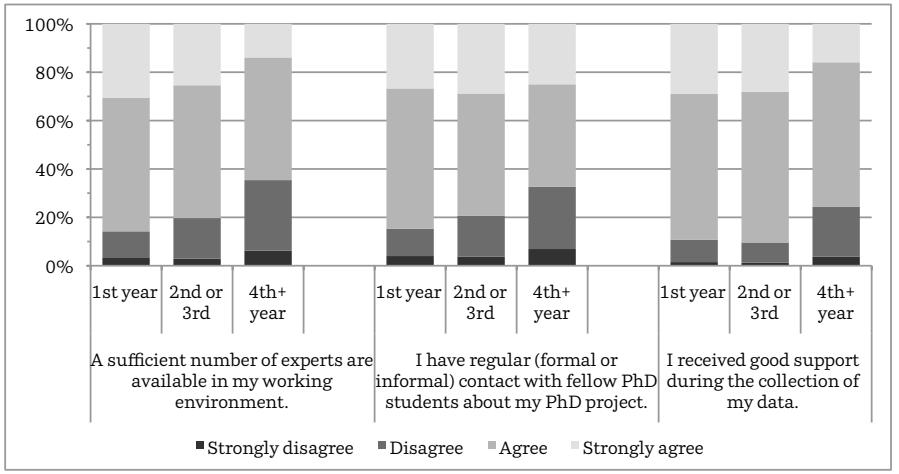

Figure 26. Significant items of satisfaction with expertise and support by phase

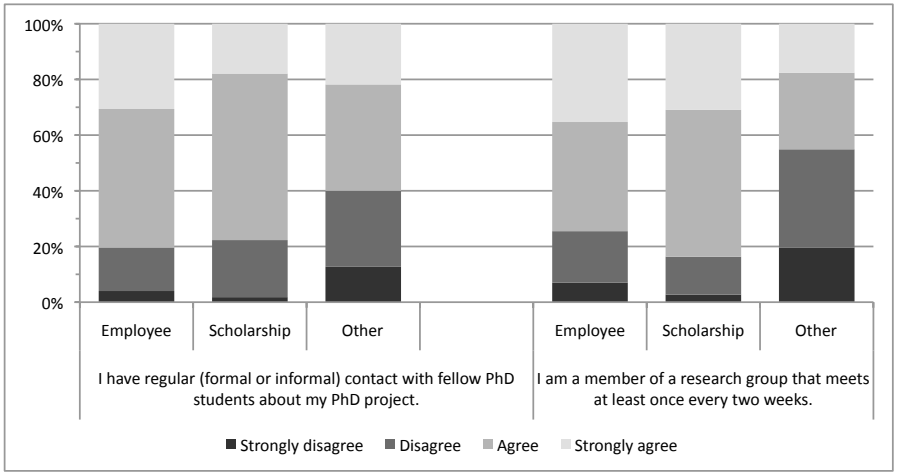

Figure 27. Significant items of satisfaction with expertise and support by affiliation

6.2 Contact with others

In the 2009 and 2011 surveys, PhD students were asked about several aspects of their working conditions. In 2013, the decision was made to adjust this satisfaction scale to focus more on the contact PhD students have with other PhD students and staff members and how satisfied they are with this contact. The new items were:

I am satisfied with ...
- my contact with other PhD students in my department.
- my contact with other PhD students in my Graduate School.
- my contact with other PhD students at the University of Groningen.
- my contact with other PhD students in my field (nationally).
- my contact with other PhD students in my field (internationally).
- my contact with other staff members in the research group.

The average score on this scale was 2.9, indicating moderate satisfaction with the contact they have. Based on the total scores, the only differences found depended on the Graduate School. PhD students from the Graduate School of Behavioural and Social Sciences were least satisfied with the contact they had with peers. Looking at the individual items, it is apparent that this difference is due to three of the six items: contact with other PhD students in the Graduate School, international contacts and contact with other staff members in the research group (see Figure 28). In addition, PhD students who have another type of affiliation with the University were less satisfied with the contact they had with staff members in the research group.

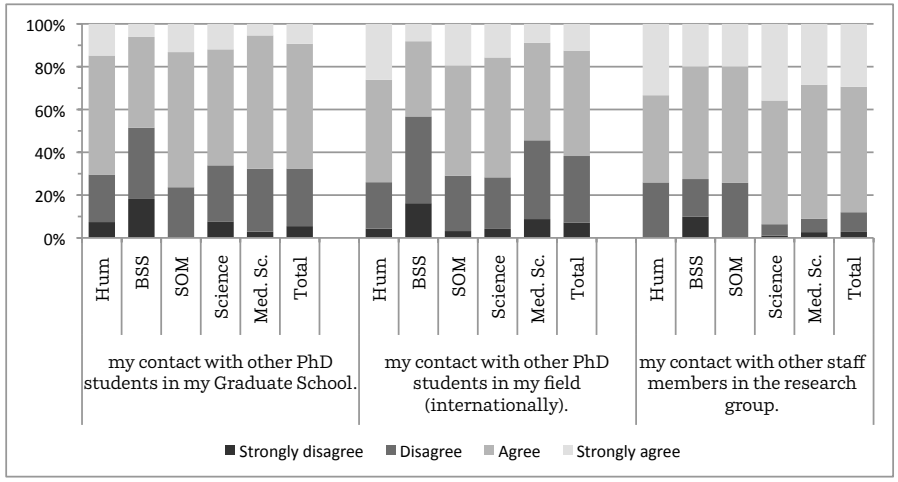

Figure 28. Satisfaction with contact with others by Graduate School

6.3 Overall work satisfaction

The final satisfaction scale in this chapter deals with the PhD students' overall satisfaction with their work. The three items were:

- Overall, I am satisfied with the content of my work.
- Overall, I am satisfied with my working environment.
- Overall, I am satisfied with my social relationships at work.

The average score was 3.2, which is rather good. However, it is significantly lower than the score in the 2011 PhD Survey and only equal to the average score from 2009. None of the Graduate Schools scored higher in 2013 than in 2011 and only PhD students from the Medical Sciences were a fraction more satisfied with their overall work than in 2009. PhD students from the Graduate School of Humanities exhibited a considerable drop in satisfaction with their work. PhD students from the Graduate School of Behavioural and Social Sciences were the most satisfied PhD students in 2011, but in 2013 their rating was second lowest.

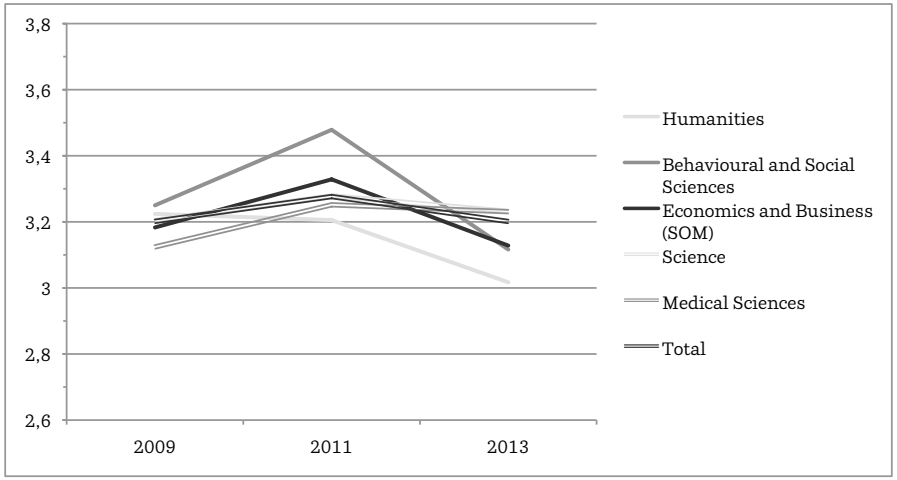

Figure 29. Mean score on satisfaction with work by Graduate School in 2009, 2011 and 2013

Graduate Schools did not differ significantly on this issue in 2013, but PhD students with different types of affiliations or in different phases of their project did score differently. Scholarship PhD students were less satisfied with their overall work, and PhD students at the end of their project were also less positive about their work. However, there was no single individual item that explained the lower level of satisfaction of scholarship PhD students. PhD students who were in the last phase of their project scored two items significantly lower than their counterparts: satisfaction with the content of the work and satisfaction with their working environment. To conclude, PhD students from different Graduate Schools differed in the way they appreciated their social relationships at work: over 30% of the respondents from the Graduate School of Economics and Business were not satisfied with their relationships.

7 Career development

This chapter discusses the future prospects of PhD students. We focus first on their current orientation towards a future career and then discuss their desired job after graduation and the feasibility of obtaining such a job.

7.1 Career orientation

We asked the PhD students whether they were exploring future career options, of which 54% said that they were. It is not surprising that a greater number of PhD students in their final years were exploring their future career options (83%) than those in their second or third years (51%) or those in their first year (31%). Nevertheless, approximately one-third of the PhD students who had only been working for one year or less on their dissertation were already thinking about their career after graduation.

The PhD students who were not yet exploring their future career options were asked when they would do so. Almost 48% indicated that they would start considering these in the final year of their PhD project, 46% indicated that they would start in their third year, 4% in their second year and 2% in their first year (Figure 30). Of the PhD students who were in their fourth or a subsequent year and were not yet exploring their future career options, 77% stated they would begin in the final year of their project.

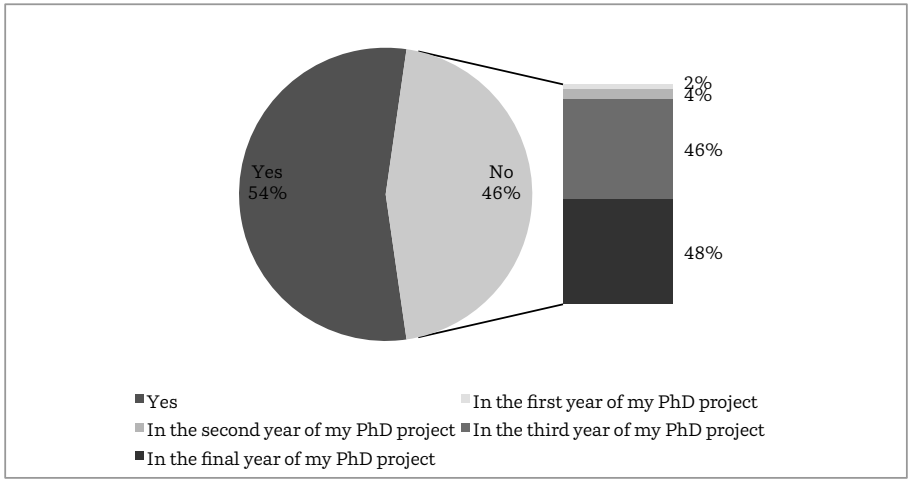

Figure 30. Percentage of all respondents who explored a future career, or indication of when they planned to start exploring future career

Only 25% of the respondents were familiar with career training opportunities (e.g. via the University's HR Experts department). The students' familiarity with this career training was not the same across the larger Graduate Schools. PhD students affiliated to the Graduate School of Behavioural and Social Sciences were, as in 2011, more familiar with such opportunities than PhD students affiliated to the Graduate Schools of Economics and Business, Science or Medical Sciences.

PhD students with employee status were more familiar with career training opportunities (31%) than PhD students with scholarship status (15%), while PhD students with another type of affiliation lay between the two, with 23% being familiar with career training opportunities. PhD students in their fourth or a subsequent year were more familiar with career training opportunities than PhD students in earlier years: 36% of the PhD students in the final stage of their project, 22% of the PhD students in their second or third years and 20% of the PhD students in their first year were familiar with such opportunities.

Only 12% of the respondents had attended career development activities. Almost one-quarter of the PhD students in the last phase of their project had attended a career -development activity. Quite a few different activities were mentioned here, including the PhD day, career development activities for PhD students and the GSMS conference.

The last question in this section was an open question about how the University of Groningen could support career planning. Many PhD students requested more information about options for a career within academia as well as beyond, and about current vacancies. They also indicated that they would like to have more courses and direct contact with industry or business, and to hear about the experiences of graduates.

7.2 Future career

The PhD students were asked about the kind of work they would prefer once they had graduated. New to this year's survey was the question of what kind of work they expected to do after graduation. Table 18 shows that all of the positions were more aspired to than expected. This means that many PhD students were not very confident about finding their preferred job. It also indicates that respondents did not think that they would have to accept a job that they did not prefer. As in the previous PhD survey, PhD students were most interested in a postdoctoral position. In general, research and/or academic positions were most aspired to by the respondents. Of the respondents, 72% believed that finding their preferred job was an attainable goal, 4% were less confident and 24% did not have an opinion at the time about the feasibility of finding their preferred job. In comparison to the situation in 2011, PhD students have become less certain about finding the job they want after graduation. In 2011, 80% thought they would obtain their preferred job, while in 2009, the figure was 69%. Half of the respondents were not sure at the time whether they wanted to write a postdoctoral proposal or not. Of the respondents, 28% stated that they would write such a proposal, while 21% indicated that they did not want to write a postdoctoral proposal.

Table 18. Preferred and expected future work

Future work	Preferred	Expected
Postdoctoral position abroad	39.9	29.7
Postdoctoral position in the Netherlands	38.9	24.9
Commercial research position	26.9	14.7
Research position at a governmental institution (e.g. CBS, CPB, etc.)	26.1	10.0
Assistant professor	23.1	6.6
Other position at a university	18.1	9.7
Teaching/lecturing position at an institute for higher vocational education (HBO)	16.8	11.2
Consultancy	15.9	8.5
Management position	14.2	6.2
Policy advisor for the government	12.6	5.5
Setting up my own business	9.8	5.9
Other	11.6	9.3

We subsequently presented the respondents with a number of items concerning their future prospects. The majority of the respondents were determined to finish their dissertation before finding a full-time job. This differed across the phases of the PhD: 87% of the first-year PhD students were certain that they would graduate before getting a full-time job, but this dropped to 73% of the respondents in their fourth or a subsequent year.

Of the respondents, 82% thought their prospects were sufficient after finishing their PhD (Table 19). The great majority of the respondents thought the PhD title would help them in their future career. The majority also thought that the content of their PhD project would be useful in their future career. The way the University supports PhD students in their future career planning was not always valued positively. Finally, the job opportunities at the University after graduation were not considered sufficient by most of the respondents.

Table 19. Items about future prospects

Future prospects	Percentage
Overall, I think my prospects are sufficient after finishing my PhD.	81.8
Obtaining my PhD degree will help me find a job.	87.9
The content of my PhD project is useful for my future career.	89.0
The University supports me in my future career planning.	57.3
There are sufficient job opportunities at the University after completion of my PhD.	35.9

On all of the items about future prospects, several differences were found between different groups. For example, 28% of the respondents from the Behavioural and Social Sciences did not think the PhD degree would help them find a job (Figure 31). Also, PhD students from the Graduate School of Humanities were least satisfied with the job opportunities at the University, with more than 90% indicating that there were not sufficient job opportunities after graduation. Differences based on phase of the project were found on the perceived support from the University in planning a future career and on satisfaction with the job opportunities at the University (Figure 32). Both items were most positively answered by PhD students in the first phase of their project. Figure 33 shows the three items on which PhD students with different types of affiliations varied. The scholarship students were most concerned about their future prospects and the job opportunities at the University. PhD students who were not employed and did not have a scholarship were least convinced of the usefulness of the content of their PhD in a future career.

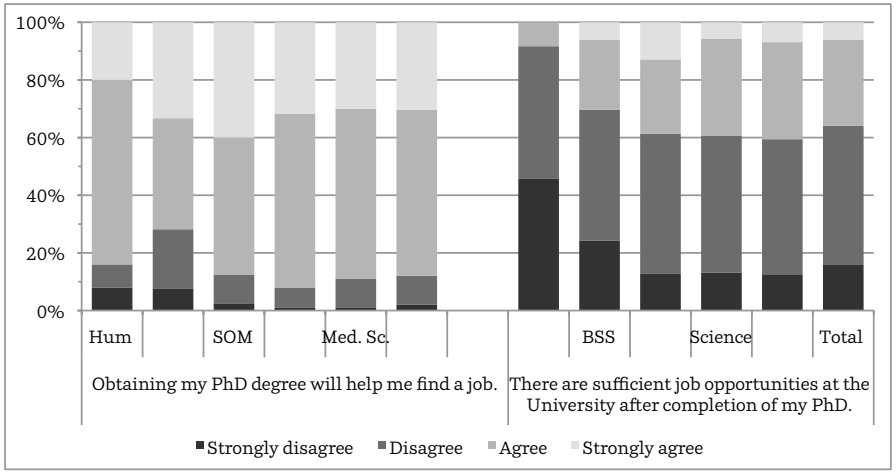

Figure 31. Significant items of satisfaction with future prospects by Graduate School

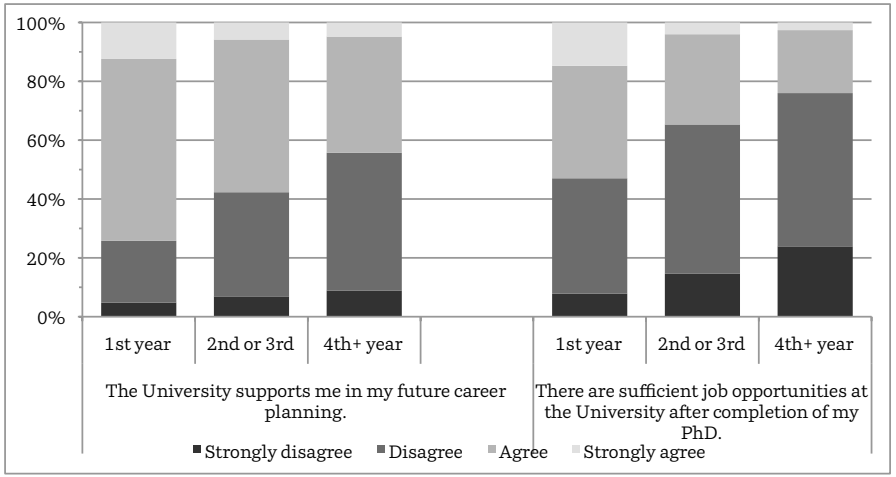

Figure 32. Significant items of satisfaction with future prospects by phase

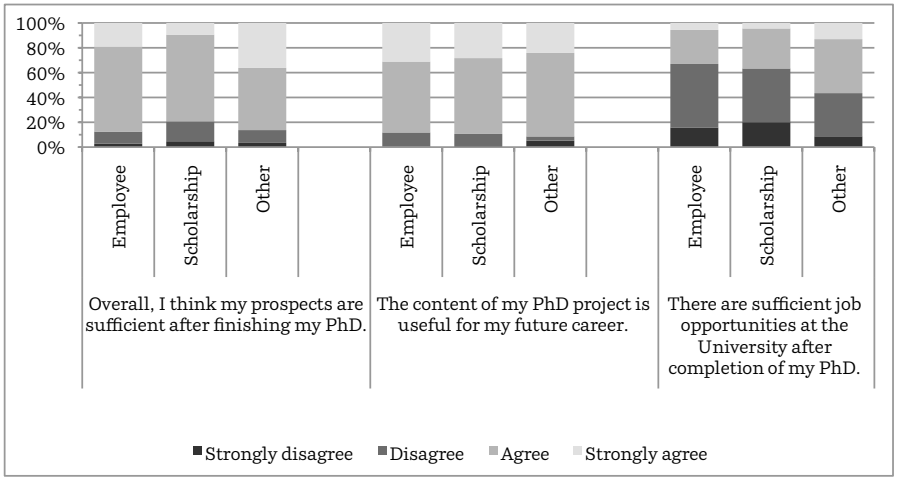

Figure 33. Significant items of satisfaction with future prospects by affiliation

8 PhD Organizations

This chapter focuses on the PhD organizations at the Graduate Schools, Gopher and GRIN and their activities.

Familiarity with the PhD organizations at the different Graduate Schools has not increased since 2011. In 2011, 54% of the respondents were familiar with the PhD organization at their Graduate School, in 2013 this was 49%. PhD students from the Graduate School of Humanities were most familiar with the PhD organization in their Graduate School and PhD students from the Graduate School of Science were least familiar with this organization. Furthermore, employed PhD students were most familiar with the PhD organization in their Graduate School and PhD students with another type of affiliation were least familiar. Finally, the further advanced the PhD students were in their project, the more familiar they were with the PhD organization of the Graduate School. Knowledge can be improved by publicizing the PhD organizations to students in the early stages of their PhD.

Familiarity with Gopher was greater than familiarity with particular PhD organizations of the various Graduate Schools: 64% of the respondents had heard about Gopher. GRIN, however, was less known, with only 36% of the respondents familiar with this organization.

Most of the respondents (73%) were satisfied with the number of activities and services offered by the PhD organizations. PhD students who did not think there were sufficient activities and/or services indicated that they especially would like more information about practical issues concerning the PhD and living in Groningen. Social activities and general courses were also mentioned quite frequently.

Table 20. Additional activities and services requested from PhD organizations

Activities and services by PhD organizations	Percentage
Informing PhD students about practical issues concerning the PhD project and living in Groningen	67.3
Social activities	55.3
General courses	50.9
Representation of the interests of PhD students in the Graduate School	41.5
Excursions	35.2
Thematic sessions (themamiddagen)	34.6
Other, namely:	7.5

9 Research Accountability

This chapter examines the survey instrument and response, before moving on to an explanation of the analyses.

9.1 Instrument and response

9.1.1 Instrument

A first PhD Student Survey was administered by the UOCG in 2009. The goal was to obtain information about the circumstances in which PhD students conduct their research and the degree of satisfaction with these circumstances. The PhD Thesis Supervision Questionnaire used at the University of Manchester was taken as an exemplar. A few items were added to the 2011 survey relating to the PhD students' motivation, skills and competences, as well as items relating to abilities and skills that correspond to the position of researcher, as defined by the University of Groningen. In 2013, several items about the cum laude distinction were added and questions about research schools were removed. The results of the 2013 survey can be compared with the 2011 and 2009 surveys insofar as the essence, and therefore many of the items, remains the same.

Several items were combined into satisfaction scale categories that measured one underlying concept. The degree to which several items measured the same concept is represented in the reliability of the scale. Reliability was measured using Cronbach's alpha, which varies between 0 and 1. A reliability between .60 and .90 can be regarded as reasonable to high. In 2013, a few scales had items removed to reduce the overall length of the questionnaire. One item was deleted from each of two scales, while another scale was adjusted more thoroughly, keeping in mind the need to maintain reliability. Table 21 shows the reliability and number of items in the scales in 2009, 2011 and 2013. The reliability scores before and after the deletion of the items are presented.

Table 21. Reliability of original scales in 2009 and 2011 and adapted scales in 2009, 2011 and 2013

Scale	Original scales			Adapted scales			
	μ 2009	μ 2011	N	μ 2009	μ 2011	μ 2013	N
Satisfaction with educational activities	.81	.86	6	*	.88	.87	5
Satisfaction with training and supervision plan	.79	.88	5	=	=	.86	5
Satisfaction with the Graduate School	*	.93	7	*	.92	.90	7
Organization of supervision	.83	.87	5	=	=	.88	5
Quality of supervision	.84	.89	7	=	=	.87	7
Expertise and support	.65	.76	6	.62	.73	.73	5
Contact	.78	.83	11	*	*	.81	6
General work satisfaction	.68	.76	3	=	=	.82	3

* Not measured in that specific year
= Scale and reliability were unchanged

9.1.2 Response

Active PhD students were traced in Hora Finita, with a total of 1,585 being sent a digital invitation to participate in this survey. The email contained a link to the questionnaire. Of the total, 88 could not be reached at the email address given, three indicated that they were not PhD students and 211 started the survey but did not complete at least two-thirds of the obligatory questions. Two reminders were sent to those who had not yet completed the questionnaire. A total of 581 PhD students completed at least 67% of the questionnaire, which translates into a response rate of 39%, which is somewhat lower than the response rate (42%) of the 2011 survey.

A relatively large number of PhD students born outside the Netherlands filled out the questionnaire in 2013 compared to Dutch PhD students (Figure 34). The distribution of males and females was roughly the same in the sample as in the total population.

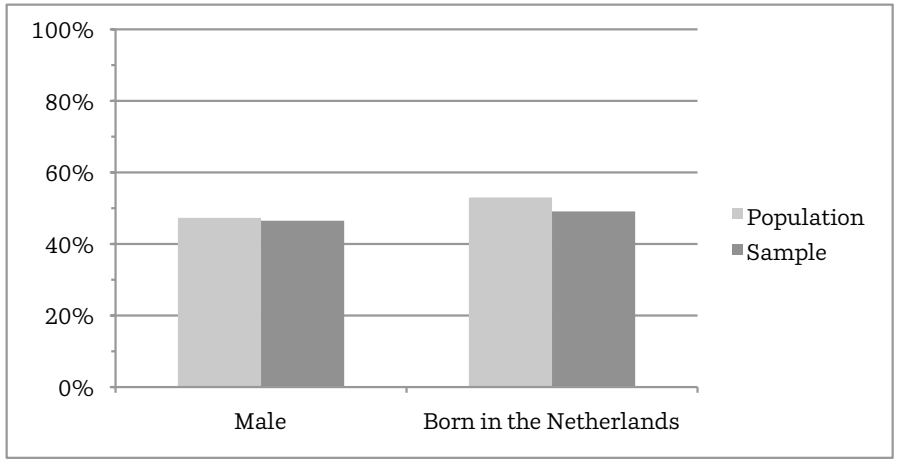

Figure 34. Percentage male and percentage born in the Netherlands of all PhDs and of 2013 respondents

Almost all of the respondents indicated the Graduate School to which they were affiliated (Table 22). A relatively large number of PhD students from the Graduate School of Medical Sciences participated in this survey (see Figure 35). PhD students from the Graduate Schools of Humanities, Behavioural and Social Sciences, Spatial Sciences and Law responded relatively less frequently to this survey. As the Graduate School of Philosophy and the Graduate School of Theology and Religious Studies are small, only a few PhD students from these Graduate Schools filled out the questionnaire. However, this year relatively few PhD students from the Graduate Schools of Spatial Sciences and Law filled out the survey, resulting in very few respondents from these Graduate Schools. This did not generate any reliable data and we therefore cannot report on these Graduate Schools, nor can we draw any conclusions from these figures. Nevertheless, data from these PhD students are included in the general discussions.

Table 22. Number of respondents by Graduate School

Graduate School	N
Humanities	35
Philosophy	4
Behavioural and Social Sciences	45
Spatial Sciences	4
Theology and Religious Sciences	2
Economics and Business (SOM)	41
Law	8
Science	204
Medical Sciences	240
Not known	12

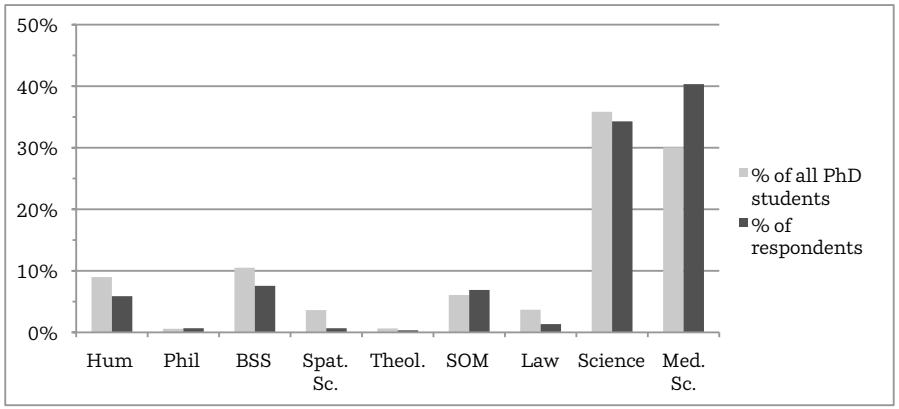

Figure 35. Percentage of PhD students and respondents per Graduate School

9.2 Analyses

The eight scales listed in Table 21 were used to determine the PhD students' satisfaction with the themes indicated. The total score for each scale was calculated by averaging the scores on the items in each scale. All items were answered on a four-point Likert Scale, where 1 = 'strongly disagree' and 4 = 'strongly agree'. Furthermore, the option, 'does not yet apply', was added in some cases. Therefore, the scale scores vary between 1 and 4, with higher scores indicating a higher degree of satisfaction. Items that do not fit into a satisfaction scale are discussed individually, and in such cases we used a criterion of 80% to indicate that the PhD students were satisfied with the situation.

For a number of items and scales we investigated whether there were differences between

certain groups of PhD students. We therefore analysed whether there were differences between PhD students with employee status, with scholarship status and those with another type of affiliation with the University; whether there were differences between Graduate Schools; and whether there were differences between PhD students in their first, second or third, and in their fourth or a subsequent year. This report only discusses the significant differences between the groups that emerged from a Chi-square test or ANOVA. Since data from the 2009 and 2011 PhD questionnaires were available, we made comparisons between the 2009, 2011 and 2013 data. The differences between the adapted mean scale scores were examined using ANOVA.

Appendix 1

	2009	2011	2013	Humanities	Behavioural and Social Sciences	Economics and Business (SOM)	Science	Medical Sciences
Education	*	2.98	2.98	2.54	2.97	3.11	3.05	2.99
TSP	2.75	2.65	2.77	2.79	2.19	2.83	2.90	2.72
Grad. School	*	2.68	2.86	2.53	2.64	3.24	2.94	2.79
Organization Supervision	3.23	3.32	3.29	3.34	3.21	3.46	3.31	3.29
Quality Supervision	3.18	3.25	3.24	3.25	3.07	3.41	3.33	3.19
Expertise	3.01	3.13	3.10	2.93	2.99	2.93	3.19	3.13
Contacts	*	*	2.89	2.86	2.65	2.89	2.97	2.87
Overall Work	3.20	3.28	3.20	3.02	3.12	3.13	3.23	3.23

Light grey box: significantly higher in 2013 than in 2011
Dark grey box: significantly lower in 2013 than in 2011