



PhD Student Satisfaction Survey 2009

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Abstract

A survey with 74 questions covering almost all aspects of the administrative, academic and social processes involved in PhD education programmes was sent to 689 PhD students in October 2009. Sixty per cent answered the questions in the survey. To see whether PhD students have changed their opinions, the survey was almost identical to one carried out in 2006.

The survey has three purposes: to describe the PhD student opinions of their education and everyday life as PhD students; to find out whether or not some of the general goals of PhD studies are fulfilled and to gain an impression of general PhD student satisfaction, relating it to the results from the 2006 survey.

Statistical analyses were performed to find statistically significant differences between the results from 2006, and between different subgroups in 2009.

A comparison between 2006 and 2009 reveals that overall satisfaction with PhD studies at SLU has increased. The General Satisfaction Index has risen from 6.6 to 7.1.

On average, PhD students with an undergraduate degree from abroad are more satisfied with their situation as a research student than are their Swedish counterparts.

A fairly large proportion of PhD students with an undergraduate degree from a foreign university worry a great deal, or a very great deal, about their personal finances.

The vast majority (68%) rate their confidence in their supervisor at 8, 9 or 10 on the 10-point scale.

Those attending a research school are more satisfied with the quality of supervision compared with those not doing so.

It is a high priority task for supervisors, departments and faculties to increase the number of subject courses so that supply matches the required timing, quality and content to higher degree than has so far been achieved.

At the LTJ faculty, satisfaction with PhD studies, the quality of courses in my own subject and access to international networks was significantly higher in 2009 than in 2006.

At SLU as a whole, the proportion who say they have ample opportunity to participate in research conferences has risen from 83% to 90%.

The mean rating for respect from colleagues and participation in scientific discussions increased slightly in 2009 to 8 on a 10-point scale.

Women's responses differed from those of men with regard to several aspects of their studies. The report discusses whether the signs of women reporting lower satisfaction with their studies may relate to different plans for their post-doc career. It is suggested that hypotheses relating to post-doc careers be tested to find explanations for the different ratings given by women.

The university is urged to improve the implementation of some rules, e.g., via periodical appraisals with PhD students, and to explain the general framework of the educational process to PhD students more effectively.

The university needs to know more about the kind of worries PhD students with a foreign undergraduate degree have and whether the university is the right organisation to supply support.

A high proportion of respondents report stress-related symptoms. The report finds no correlations primarily relating the stress symptoms to PhD programmes or being a PhD student.

1. Introduction

This is the second time the PhD Student Satisfaction Survey has been carried out. The first one was sent to all the SLU PhD students in October 2006. To be able to compare the 2009 results with those in 2006, most of the survey questions, with just a few exceptions, are the same as then.

Results from surveys of this type provide a certain kind of information about how PhD students rate their education. In many ways the responses both reflect an opinion at a certain point in time and a more long-term enduring perception.

This kind of survey is most useful when repeated several times over a reasonably long period. It is then possible to see whether improvements achieved have resulted in a higher level of satisfaction. Or, where a rating is considerably harsher than earlier, this indicates that something has happened to quality in other areas. Thus, discussion of the results will focus on comparing the two surveys.

The main **purpose** of this survey is to describe PhD students' opinions of their education and everyday life as PhD students. Another aim is to find out whether or not some of the overall objectives of PhD programmes are being met. A third and important purpose is to gain an impression of overall PhD student satisfaction, and relate it to the results of the 2006 survey. Correct information about PhD students' opinions is only one of several necessary tools for improving education programmes and working conditions.

2. Materials and methods

The PhD population of current interest was gathered from Ladok, the national system used for documentation of academic information. In November/December 2009 an e-mail was sent to **689** PhD students, asking them to participate in the survey by filling in a web questionnaire. This initial e-mail was then followed by four reminders over the following few weeks. The sampling frame was set to include PhD students that had a task level of at least 10% during the academic year 08/09. According to the Ladok system, **707** PhD students met these criteria, but only 689 of them had a known e-mail address. Of those **689** PhD students, **416 (60%)** completed the questionnaire.

Statistical analysis, i.e. analysis of variance and T-test were performed using the IBM SPSS Statistics software. Statistically significant differences are discussed in the text but they are not indicated in tables and diagrams.

The **questionnaire** is divided into seven parts, starting with questions about the education programme, courses and supervision. The second part is about everyday life as a PhD student, available facilities and resources. The third part covers health questions, while the fourth section touches on more difficult subjects such as failing, harassment and the future. The fifth section gives respondents the opportunity to answer questions regarding their satisfaction with the PhD programme. The questionnaire ends with some questions about awareness of laws and regulations at governmental, university and faculty levels, followed by some background questions on age, gender and faculty affiliation. The whole survey ([Attachment 1](#)), and all results at university level ([Attachment 2](#)), are attached at the end of this report.

3. Results and discussion

3.1 General descriptives

The survey reported in this paper is a repetition of a survey performed in 2006 (Office of Strategy and Planning SLU, 2007). A higher proportion, 60%, of the 689 PhD students who received the

questionnaire responded this time, compared with only 52% in 2006 (Office of Strategy and Planning SLU, 2007).

Moreover, the proportion completing their undergraduate studies at a university abroad was higher in 2009 than in 2006. According to other studies (National Agency for Higher Education, 2010), about 30% of PhD students at SLU in 2008 came from other countries.

Over the last two years some of the faculties have started research schools, so the increased proportion of students attending research schools is not surprising. Overall, in view of the listed general descriptive in Table 1, the respondents in the 2009 survey may be considered to be representative of SLU's PhD students as a whole.

Table 1. General descriptives of the respondents as a percentage of the total in 2006 and 2009.

	2006	2009
Total number of respondents	339(343)	413 (416)
Percentage		
Women	59	63
older than 35 years	23	24
who completed their undergraduate studies at a Swedish university other than SLU	39	36
who completed their undergraduate studies at a university abroad	22	31
who are attending a research school	28	42
who are engaged in part-time teaching and/or other activities at the department	49	47
who have used more than 50% of the total net study time	66	58
with a doctoral studentship (<i>Doktorandanställning</i>) as financial support	69	72

When discussing statistically significant differences between subgroups such as men/women; faculties and students with an undergraduate degree from a foreign university, it is important to be aware of the characteristics of these subgroups as shown in Table 2 below. To begin with, the percentage of responses at the S faculty is somewhat lower than at the other faculties. Moreover, it worth noting that PhD students belonging to the NL faculty attend research schools much more frequently than those belonging to the S or VH faculty. Also, the NL faculty has a lower proportion of PhD students older than 35 years than the other faculties. A characteristic feature of the VH faculty is its high proportion of women (8 out of 10, compared with about 5 out of 10 at other faculties). To some extent, it seems that, more than at other faculties, LTJ students are engaged in part-time teaching and/or other departmental activities. A main characteristic of S faculty PhD students is the relatively high proportion who have used more than 50% of their total net study time (almost 3 out of 4 in this survey).

Table 2. Some general descriptives of the respondents, by faculty (2009)

	LTJ	NL	S	VH
Total number of respondents (% of total number active PhD students at the faculty)	57 (66)	170 (58)	77 (52)	109 (64)
Percentage				
Women	58	58	53	81
older than 35 years	34	18	34	32
who completed their undergraduate studies at a Swedish university other than SLU	30	42	43	25
who completed their undergraduate studies at a university abroad	37	32	34	25
who are attending a research school	45	71	19	11
who are engaged in part-time teaching and/or other activities at the department	34	54	49	42
who have used more than 50% of their total net study time	55	50	74	63
with a doctoral studentship (<i>Doktorandanställning</i>) as financial support	65	77	73	66

3.2 General Satisfaction Index

This survey, with 74 questions covering almost all aspects of the administrative, academic and social processes involved in PhD programmes, offers answers to a myriad of hypotheses. Although we are aware that testing numerous hypotheses separately increases the risk of finding correlations based on chance rather than cause, we present results of testing some separate hypotheses taking account of differences between the following subgroups: faculties, men/women and Swedish/foreign undergraduate degrees. Due to the risk mentioned above, results of testing separate hypotheses will mainly be used to highlight possible correlations requiring further examination.

In accordance with the previous survey 2006 (Office of Strategy and Planning SLU, 2007) a general Satisfaction Index was calculated on the basis of these three questions:

- If you make a general judgement of your situation as a research student, how satisfied are you? (very dissatisfied – very satisfied)
- How does your situation as a research student fulfil your expectations? (not at all – completely)
- Imagining the perfect PhD education and the perfect work situation at the perfect department – Please rate how close to this perfect situation your actual situation is? (not close at all – very close)

The responses to these questions, on a 10-point scale, were weighted using a Factor analysis (principal axis factoring) to create a single variable representing general satisfaction.

The General Satisfaction Index has risen slightly from 6.6 in 2006 to 7.1 in 2009. **Thus, PhD students are still quite satisfied with PhD programmes in general.** Of course, this index is not of much help when trying to understand why respondents are satisfied or not. It is of even less help when considering what to do to make them more satisfied. However, the index serves as a

signal. A figure below 4 means improvements need to be implemented soon, whereas a figure above 7 is interpreted as “keep up the good work”.

When analysing levels of satisfaction in the subgroups, differences between those with a Swedish or foreign undergraduate degree proved to be statistically significant. **The average PhD student with an undergraduate degree from abroad is more satisfied (p=0.013) with his/her situation as a research student than his/her Swedish colleague.** But is this level of satisfaction valid for all PhD students with a foreign undergraduate degree? Table 3 reveals an intriguing pattern of differences, although not statistically significant, correlated with educational background, gender and faculty.

Women with a Swedish undergraduate degree are less satisfied than women with a foreign background. In addition, women with a foreign background are less satisfied than men with a foreign background.

The signs that women as a subgroup differ from men in their satisfaction with their situation as a PhD student will be further discussed and placed in a broader context in the section “Women – a group rating differently?”

At faculty level, we find some extremes. For instance, there is a great difference between male students at the LTJ faculty depending on their undergraduate degree. Also worth reflecting, is the fact that female PhD students with a Swedish undergraduate degree at the S faculty seem less satisfied with their situation as a research student, not only than their male faculty colleagues, but also their female colleagues with a foreign background. Here, we must stress that these results are in some cases based on responses from only 8 - 11 people.

Table 3. General assessment of situation as a research student

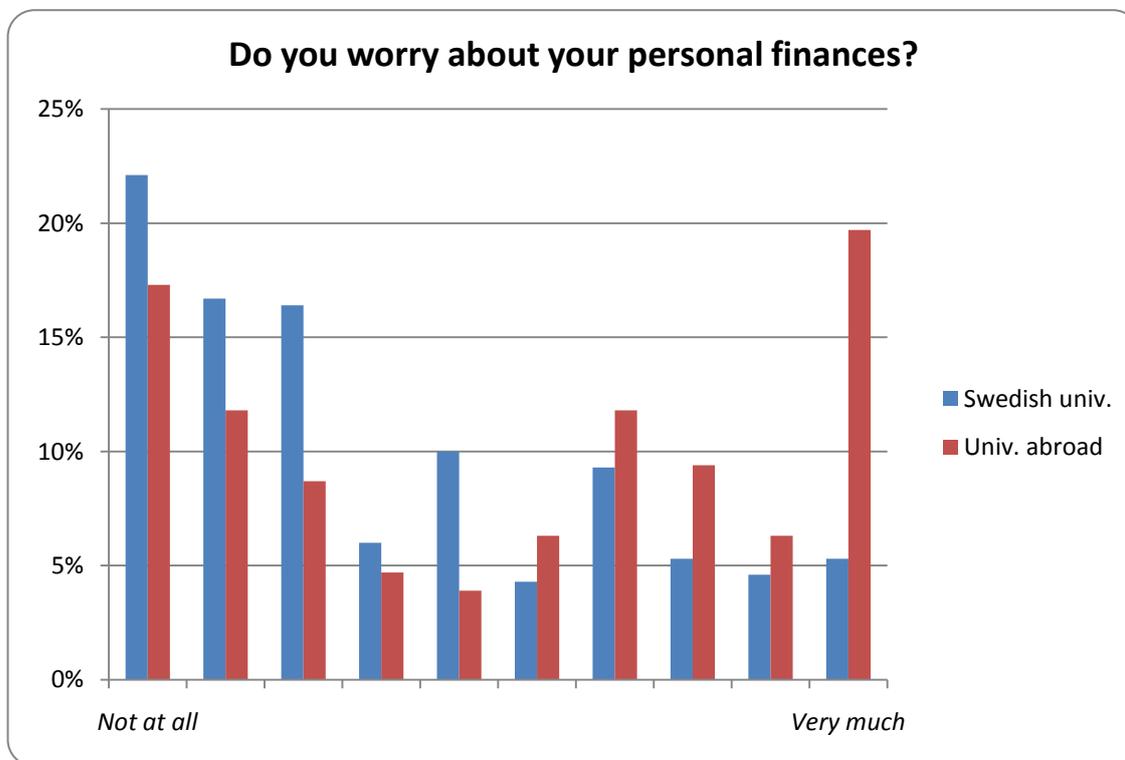
(mean by faculty and gender on a 10-point scale from 1=Very dissatisfied to 10=Very satisfied)

Faculty	Women		Men	
	Swedish degree	Foreign degree	Swedish degree	Foreign degree
LTJ	6.3	7.2	6.2	8.2
VH	7.1	6.9	7.0	7.6
NL	6.9	7.0	7.0	7.3
S	6.3	7.8	7.6	7.8
SLU Total	6.8	7.2	7.0	7.6

Another difference (p=0.000) between PhD students with an undergraduate degree from a Swedish university and **those with an undergraduate degree from a foreign university** is the extent to which they **worry about personal finances**. As shown in Figure 1 below, a fairly high proportion of foreign PhD students worry a great deal, or a very great deal, about their personal finances.

We do not know much about the kind of financial worries that foreign PhD students have. They may worry about anything from not having enough money for their daily upkeep or problems supporting their family at home, to worries about large mortgages, etc. It may be assumed that worries of this kind can disturb the concentration needed for studies and thesis work. However, before anything is done to support these PhD students, we need to know more about the kind of worries they have, and whether the university is the right organisation to give support.

Figure 1. Worry about personal finances, by undergraduate degree from a Swedish university or undergraduate degree from a university abroad (2009)

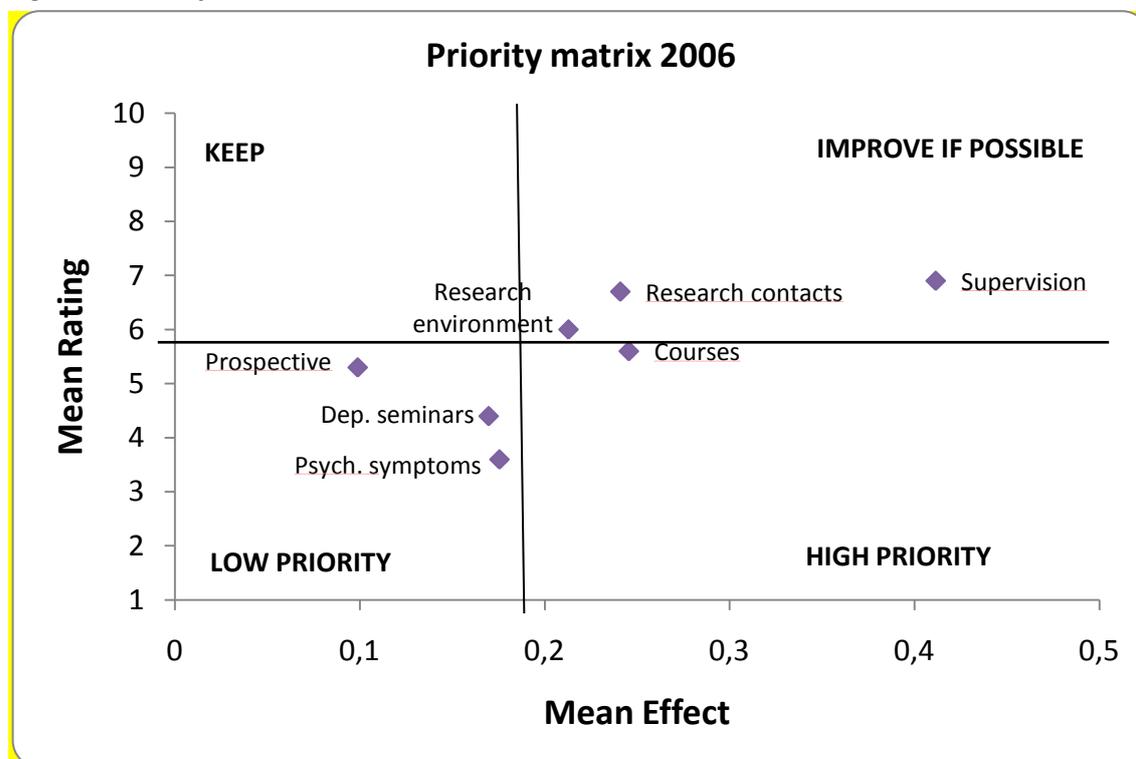


3.3 General factors affecting the level of satisfaction

A factor analysis was performed in the 2006 survey (Office of Strategy and Planning SLU, 2007). The analysis yielded nine factors. Each was named according to the questions whose responses had the greatest influence in the analysis.

A regression analysis was made to find out how each factor contributed (effect) to the general Satisfaction Index. The analysis resulted in a model in which the mean effect of each factor was plotted against the mean rating of each factor, resulting in a priority matrix, Figure 2.

Figure 2. Priority matrix (2006)



According to the regression analysis, the **Supervision factor** had the largest effect on the General Satisfaction Index. Other factors that greatly influenced the General Satisfaction Index were **Courses, Research contacts** and **Research environment**. The Courses factor was categorised in the priority matrix as an area of “High priority”. The Research Environment, Research Contacts and Supervision factors were categorised as “Improve if possible”.

- The Supervision factor was mostly influenced by questions 1.7 – 1.15
- The Courses factor was mostly influenced by questions 1.1 – 1.4
- The Research Contacts factor was mostly influenced by questions 2.1, 2.2, 2.5 and 2.9
- The Research Environment factor was mostly influenced by questions 2.3, 2.4 and 2.6

The comparison between the results from 2006 and 2009 focuses on these four factors having a potentially pronounced effect on the General Satisfaction Index.

3.3.1 The Supervision factor

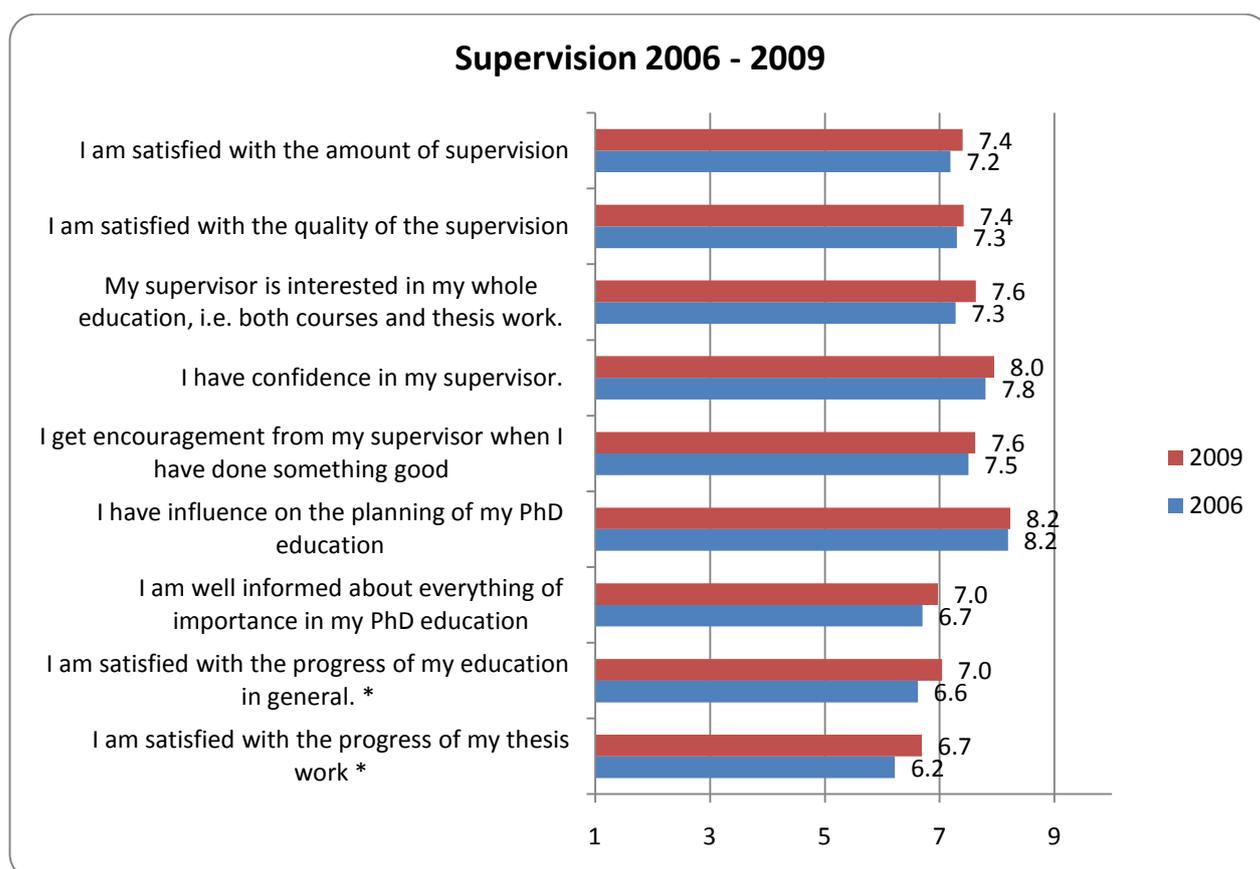
The Supervision factor was mainly based on the responses to the questions on amount, quality, confidence, encouragement and influence of/by supervision/supervisors.

Compared with 2006, the mean rating for all the supervision questions was slightly higher in 2009. However, only the mean ratings for the questions concerning progress with education and thesis work were statistically significant (Figure 3).

About 60 – 70% of respondents were satisfied or **very satisfied with their supervisor** and supervision. For example, the vast majority (68%) rated their confidence in their supervisor as 8, 9 or 10 on the 10-point scale. General confidence in supervisors is affirmed by the fact that, on

the 10-point scale ranging from *Not at all* to *Very much*, nearly two-thirds (63%) responded *Not at all* (1) to the question of whether they have considered changing principal supervisor. Studying the mean ratings for the 9 statements in Figure 3 below, it is obvious they also experience a high level of influence over the planning of their PhD studies.

Figure 3. Satisfaction with supervision and progress with education and thesis work, respectively (2006 and 2009) (mean on a 10-point scale from 1=Not at all to 10=Completely)



3.3.1.1 Differences between subgroups in relation to supervision

An analysis of possible differences between the subgroups revealed that the respondents at the LTJ faculty were significantly ($p=0.016$) more satisfied with the **amount of supervision** in 2009 than they were in 2006 (up from 6.2 to 7.5).

Regarding satisfaction with the **quality of supervision** there is a statistically significant difference ($p=0.001$) between those who attend a research school and those who do not. This difference is not influenced by differences between faculties or gender, Table 4.

If this increased satisfaction is cause-related and not created by chance, we can only speculate on the reasons for this somewhat unexpected finding at the research schools. For example, several research schools invite both PhD students and their supervisors to take part in courses, seminars and workshops. It is reasonable to assume that discussions in this context form a valuable part of supervision.

Table 4. Satisfaction with the quality of supervision*(mean by faculty and gender on a 10-point scale from 1=Very dissatisfied to 10=Very satisfied)*

Faculty	Women		Men		Total
	Research school	No Research school	Research school	No Research school	
LTJ	7.4	6.3	8.1	7.0	7.1
VH	8.8	7.5	8.3	7.5	7.6
NL	7.8	7.3	7.6	6.9	7.5
S	7.9	6.2	8.9	7.5	7.1
SLU Total	7.8	7.0	7.9	7.3	7.4

It is also worth noting that overall, men are more satisfied than women with the **progress of their education in general** ($p=0.003$), and that they are also more satisfied with the **progress of their thesis work** ($p=0.030$) (Tables 5 and 6). Depending on whether or not they had an undergraduate degree from a Swedish university, the picture is somewhat different. As shown in Tables 5 and 6 below, the high rating given by men with a foreign degree is striking.

The indication that women as a subgroup differ from men in their satisfaction with the progress of their education and thesis work is further discussed and placed in a broader context in the section “Women – a group rating differently?”

Table 5. Satisfaction with the progress of education in general, mean by gender and undergraduate degree (2009)

Undergraduate degree from...	Women	Men
Sweden	6.9	7.1
Abroad	6.6	8.0
Total	6.8	7.4

Table 6. Satisfaction with the progress of thesis work, mean by gender and undergraduate degree (2009)

Undergraduate degree from...	Women	Men
Sweden	6.5	6.7
Abroad	6.4	7.5
Total	6.5	7.0

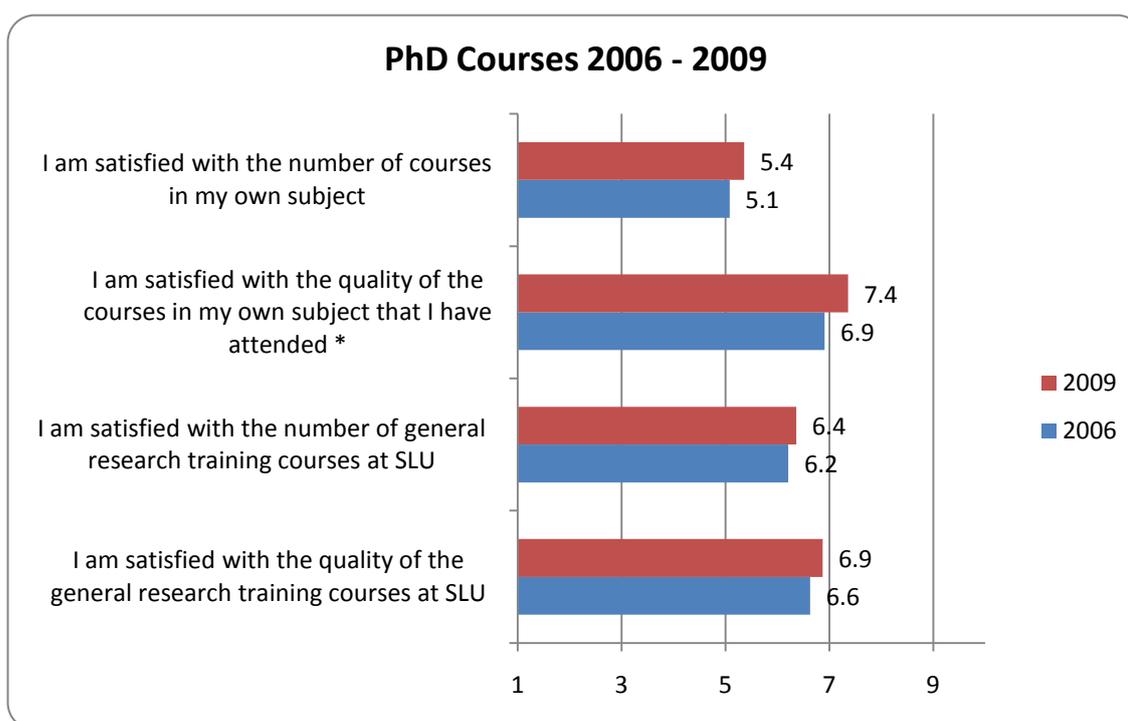
It is interesting to note that men with a foreign undergraduate degree are very satisfied. If possible, it might be useful to find out more about the underlying causes.

3.3.2 The Courses factor

Satisfaction with both number and quality of courses has increased since 2006 (see Figure 4 below). However, only the increased satisfaction with the quality of courses in my own subject was statistically significant. Even though satisfaction has risen, a figure of 5.4 on the 10-grade scale for satisfaction with the number of courses in my own subject is quite low, and suggests a strong demand for more courses. The lack of subject courses is known at the university. The new

research schools have started new subject courses, and they will continue to start courses as long as they exist. Nevertheless, it must be a high priority task for supervisors, departments and faculties to increase the number of subject courses so that supply matches demand to a greater degree than has so far been achieved. The new courses must naturally also have a relevant content, good quality and timing.

Figure 4. Satisfaction with different aspects of PhD Courses (2006 and 2009)
(mean on a 10-point scale from 1=Not at all to 10=Completely)



3.3.2.1 Differences between subgroups in relation to the Courses factor

When discussing satisfaction with the number of courses in my own subject, it is once again interesting to note that in 2009, **men and women** had statistically significant different opinions. Men were more satisfied than women with the number of courses in their own subject ($p=0.000$).

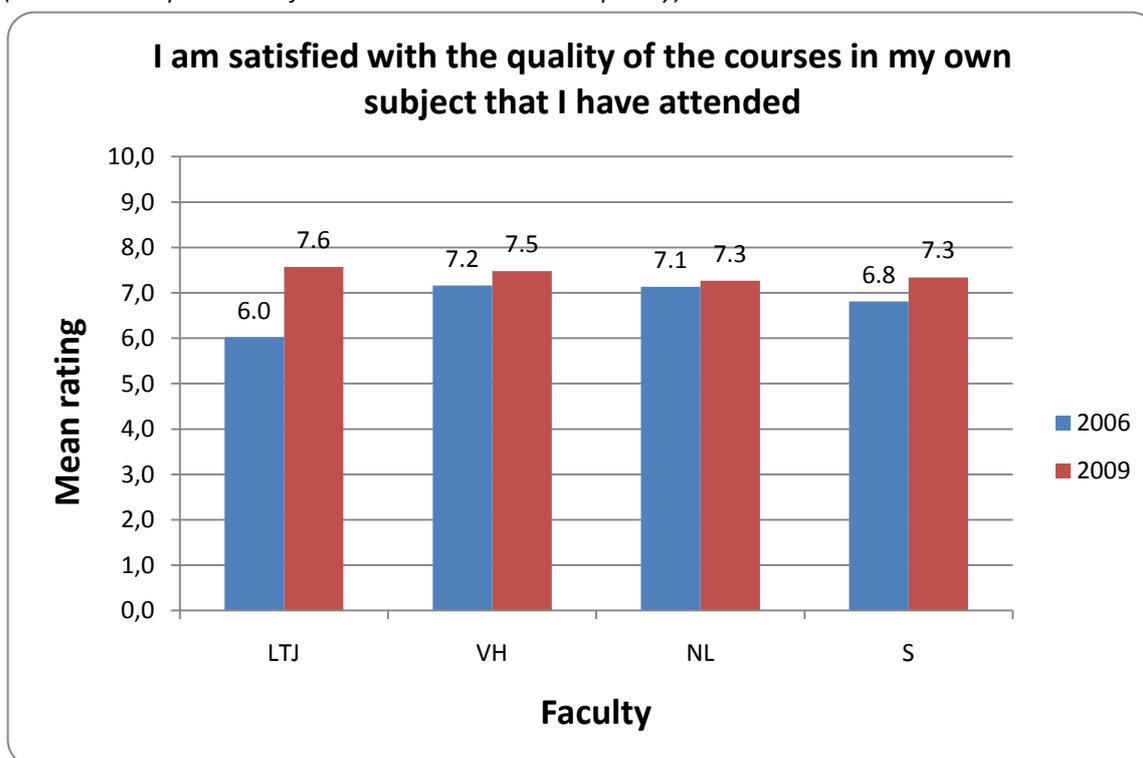
The indication that women as a subgroup differ from men in their satisfaction with the number of subject courses is further discussed and placed in a broader context in the section “Women – a group rating differently?”

At the same time, there are significant overall differences between those who attend a research school and those who do not. Table 7 illustrates some of the complexity also taking into account **faculty** affiliation.

Table 7. Satisfaction with the number of courses in their own subject (2009)*(mean by faculty and gender on a 10-point scale from 1=Very dissatisfied to 10=Very satisfied)*

Faculty	Women		Men		Total
	Research school	No Research school	Research school	No Research school	
LTJ	4.9	3.7	5.9	6.0	4.9
VH	7.5	4.6	7.8	5.7	5.1
NL	5.7	5.0	6.2	5.8	5.8
S	5.1	4.5	6.9	5.3	5.1
SLU Total	5.7	4.5	6.4	5.6	5.4

When comparing the four **faculties** with each other in terms of satisfaction with PhD courses, most of the improvement in satisfaction with the **quality of courses** in my own subject can be explained by the improvement ($p=0.001$) at the LTJ faculty (see Figure 5).

Figure 5. Satisfaction with the quality of courses (2006 and 2009).*(mean on a 10-point scale from 1=Not at all to 10=Completely)*

3.3.3 The Research Contacts factor

The third factor having a pronounced effect on the Satisfaction Index is **Research Contacts**. This factor is mainly based on responses to questions about opportunities to attend research conferences, and whether respondents have access to international networks.

At SLU as a whole, the proportion who said they had good opportunities to attend research conferences rose from 83% to 90% between 2006 and 2009. While the increase at the NL and S **faculties** is fairly modest, that at the VH faculty and particularly at the LTJ faculty is considerably greater (see Table 8 below).

Table 8. Proportion who said they had good opportunities to attend research conferences, by faculty and total (2006, 2009)

Faculty	2006	2009
LTJ	65%	89%
VH	84%	94%
NL	87%	89%
S	86%	87%
Total SLU	83%	90%

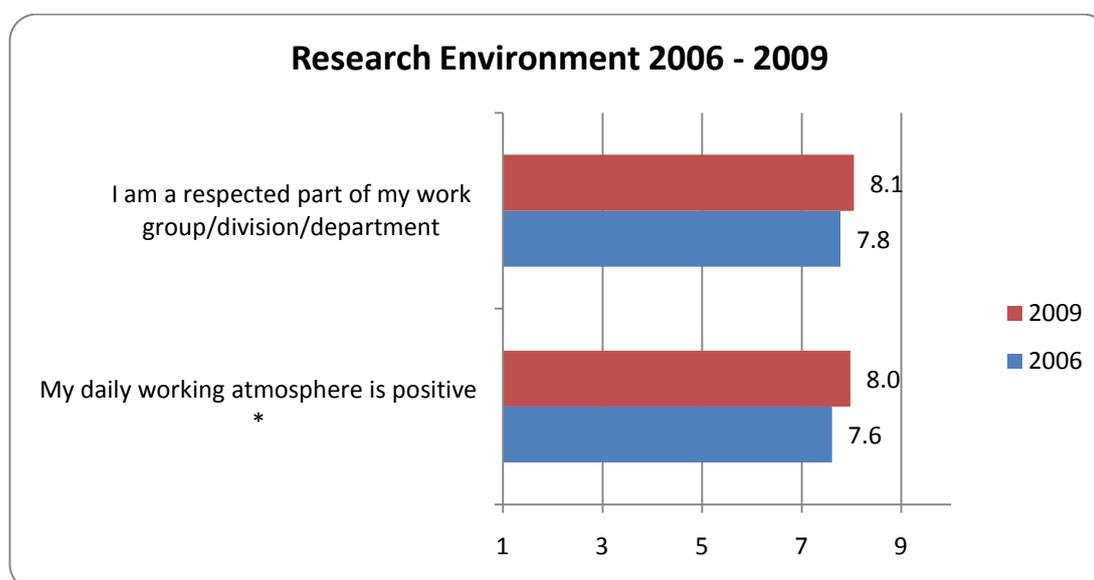
At SLU as a whole, 72 – 73% said they had access to international networks, about the same proportion in 2009 as in 2006. Once more, the **LTJ faculty** stands out, with a significantly higher proportion satisfied with their access to international networks: 75% in 2009, compared with 56% in 2006.

The 2009 survey revealed no significant differences between faculties in the proportion who said they had access to international research networks. Approximately three out of four PhD students say they did.

3.3.4 The Research Environment factor

The Research Environment factor was mostly influenced by the responses to questions about working atmosphere, respect from colleagues and participation in scientific discussions. The mean ratings for respect from colleagues and opportunities to participate in scientific discussions increased slightly in 2009 to 8 on a 10-point scale ranging from *Not at all (1)* to *Completely (10)*, which must be considered a very high level, Figure 6.

Figure 6. Satisfaction with the research environment (2006 and 2009).
(mean on a 10-point scale from 1=Not at all to 10=Completely)



3.3.4.1 Differences between subgroups

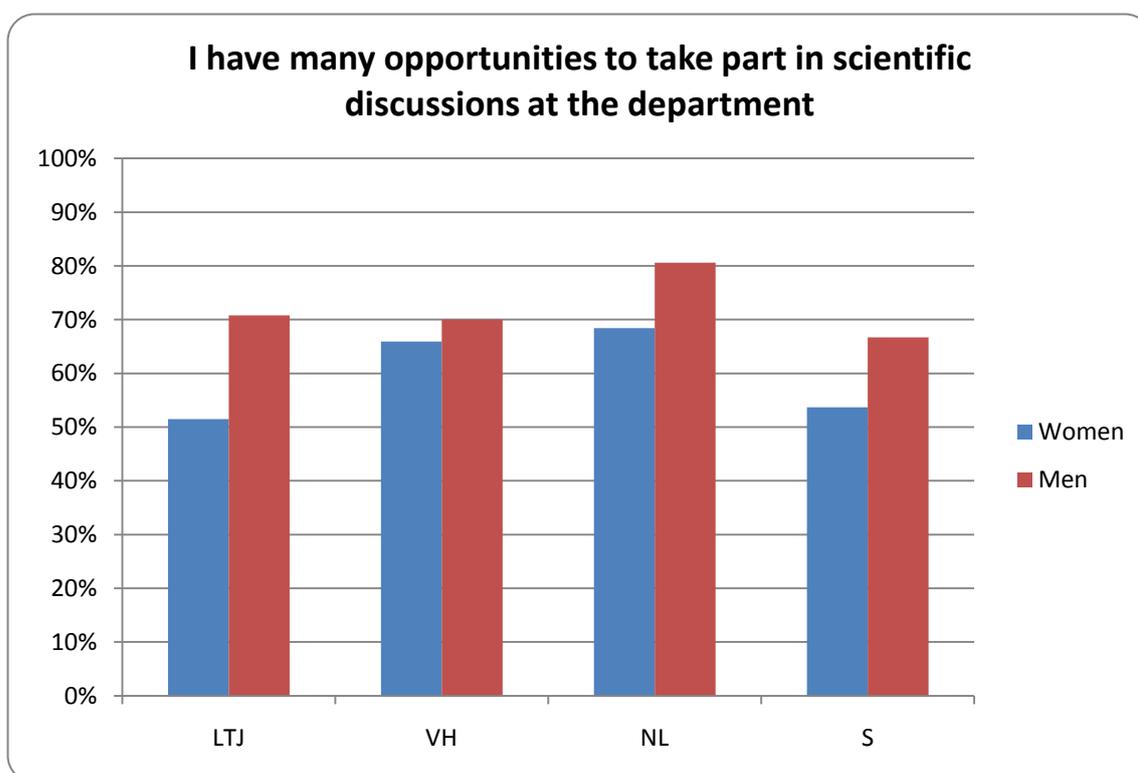
There are some differences between **faculties** regarding the Research Environment factor. For instance, the proportion who said they had many opportunities to take part in scientific discussions at the department was higher at the NL faculty (74%) than at the LTJ faculty (60%) or S faculty (60%), Figure 7.

Responses to the questions about everyday PhD student life and available facilities for research and studies, i.e. questions number 2.1 – 2.9, reveal no major differences between **men and women**. However, the question on opportunities to take part in scientific discussions at the department is an exception, where, overall, 75% of men said yes, whereas only 63% of women were of the same opinion. This is yet another indication of rating differences between men and women.

There is also a correlation with **faculty** affiliation (Figure 7). For example, 80% of men at the NL faculty thought they had many opportunities to take part in scientific discussions in their department, while only 50% of the women at the LTJ faculty did.

The indication that women as a subgroup differ from men in their ratings is further discussed and placed in a broader context in the section “Women – a group rating differently?”.

Figure 7. Proportion considering there are plentiful opportunities to take part in scientific discussions at the department, by faculty and gender (2009)



3.4 Stress symptoms

The survey contained a number of questions about aches, pains and difficulties concentrating, sleeping difficulties and other common symptoms of stress. According to the analysis of the 2006 results, a lower proportion reporting these stress symptoms would not have a significant impact on the General Satisfaction Index. Moreover, a comparison with a survey asking all employees at SLU about sleeping problems and stress (AB Previa, 2006) revealed the same levels as in the PhD survey. Thus, the 2006 report concluded that the causes were probably to be found in general working conditions, rather than circumstances relating to PhD studies or the situation as a

PhD student. Consequently, the 2006 report did not recommend any actions as regards the educational situation to reduce the number of individuals reporting stress symptoms.

Compared with the results in 2006, there are no significant changes in the overall proportion of people reporting stress symptoms; see Table 9. In both years more than half of PhD students said they experienced stress and had difficulties relaxing. More than 40% said they had difficulties concentrating, and 30 – 50%, particularly women, reported pain in their neck/shoulders.

Neck and shoulder problems were more frequent in the 2009 survey ($p=0.001$) among **women**: 50% of women but only 32% of men experienced these problems.

The fact that women as a subgroup differ from men in terms of stress symptoms is further discussed and placed in a broader context in the section “Women – a subgroup rating differently?”

Table 9. Proportion who felt pain, aches, stress, etc. at least every week (2006, 2009)

Did you (at least every week)...	2006	2009
have pain in your lower back?	25%	25%
have pain in your neck/shoulders?	41%	43%
have a headache?	29%	25%
feel stress and have difficulties relaxing?	63%	59%
feel depressed, unhappy or uneasy?	32%	34%
have difficulties concentrating?	44%	43%
have difficulties sleeping?	28%	31%

Nearly two-thirds of female respondents reporting pains in their neck/shoulders related the pains to their studies, whereas almost one-third thought that the pains had been caused by their working conditions.

Compared with other groups of SLU employees, PhD students have been overrepresented among those on sick leave (Sundén, 2010). To prevent sick leave due to stress among PhD students, SLU's Human Resources Division introduced a programme for newly admitted PhD students in 2010. The programme contains three parts: an individual discussion with a nurse about health issues, an ergonomic survey of the workplace and a group session with other PhD students.

3.5 Other important results

The questionnaire also inquired whether respondents felt they had been **insulted or harassed** over the last year. The general impression is that harassment on grounds of disability, ethnicity, religion or sexual orientation was rare in 2006 and remained so in 2009. Somewhere between 0.5% and 3% of PhD students answered yes to the questions on these types of harassment.

In the 2009 survey a question was added about insult or harassment relating to gender. Out of the total 416 responses to this question, 19 PhD students (5%) said they had been harassed or insulted with regard to their gender. The vast majority (18 of 19) of them were women. In general, these problems are not more common at any particular faculty.

In 2007 the National Agency for Higher Education performed a national survey “*Doktorandspegeln*” (National Agency for Higher Education, 2008). The survey showed that 25% of the women responding had experienced some form of discrimination due to gender, compared with 6% of men. In the same study, between 12 and 38% of female PhD students at SLU said they had experienced discrimination due to gender. The corresponding figures for male

PhD students at SLU were 4 to 16%. Since the discrimination in question had come from fellow students, supervisors, teaching staff or administrative personnel, it is possible that this discrimination may be related to structures in the working environment.

Under Swedish law (SFS 2008:567), the university must have an equality plan. The Action plan for equal treatment of students at SLU (SLU 2010), states that the university will promptly investigate and act to stop harassment reported by a student or coming to the university's attention in some other way.

In response to the “*Doktorandspegeln*” findings, some of the faculties have addressed equal treatment issues in seminars and workshops.

The 2009 survey also contained several questions about **educational planning and knowledge of rules and guidelines (educational rights)**.

Compared with 2006, an increased proportion ($p=0.015$) knew where to find the faculty guidelines for PhD programmes (up from 67% to 75%), and had actually read them (up from 59% to 70%, $p=0.002$).

Other than this, there were no significant differences between the responses of the PhD students to the questions on rules, guidelines and educational planning in 2006 and 2009.

It is worth noting that all but one of the PhD students said they had an individual study plan, and most of them (83%) said it had been updated the previous year. When asked whether they found the individual study plan supportive or not, the answers differed, depending on how much of their net study time they had used. The longer they had been a PhD student, the less important the individual study plan seemed to be.

Only 3 out of 4 PhD students were introduced at the department, and even fewer (61%) were given an introduction to the PhD programme.

There were virtually no differences between the faculties in the responses to questions on educational planning and associated formalities,

The questions on educational rights reveal some interesting results. Almost 9 out of 10 PhD students knew how to make contact with the PhD Commissioner (*doktorandombudsmannen*) and their PhD councils at student unions (*doktorandråd*). However, only 3 out of 4 PhD students knew where to find the general aims and goals of PhD education at SLU, and even fewer (62%) had actually read the document. The responses to the questions on educational rights reveal no startling difference between the faculties.

The questions about educational planning and knowledge of rules and guidelines (educational rights) deal either with the university's obligations, or with the framework for PhD education as a whole, i.e. aims and goals. Practically all PhD students should have answered yes to these questions. Thus, it is quite clear that the university must improve its implementation of some rules, e.g., by way of performance appraisals with PhD students. The university must also find ways of communicating important information more effectively than hitherto.

3.6 Women – a group rating differently?

The report highlights six examples of differences in rating relating to gender in the results from 2009. As we have pointed out earlier, several of these differences, although large, are not statistically significant, and if significant they may merely have occurred by chance and not have any real explanatory value. Moreover, female respondents are somewhat overrepresented

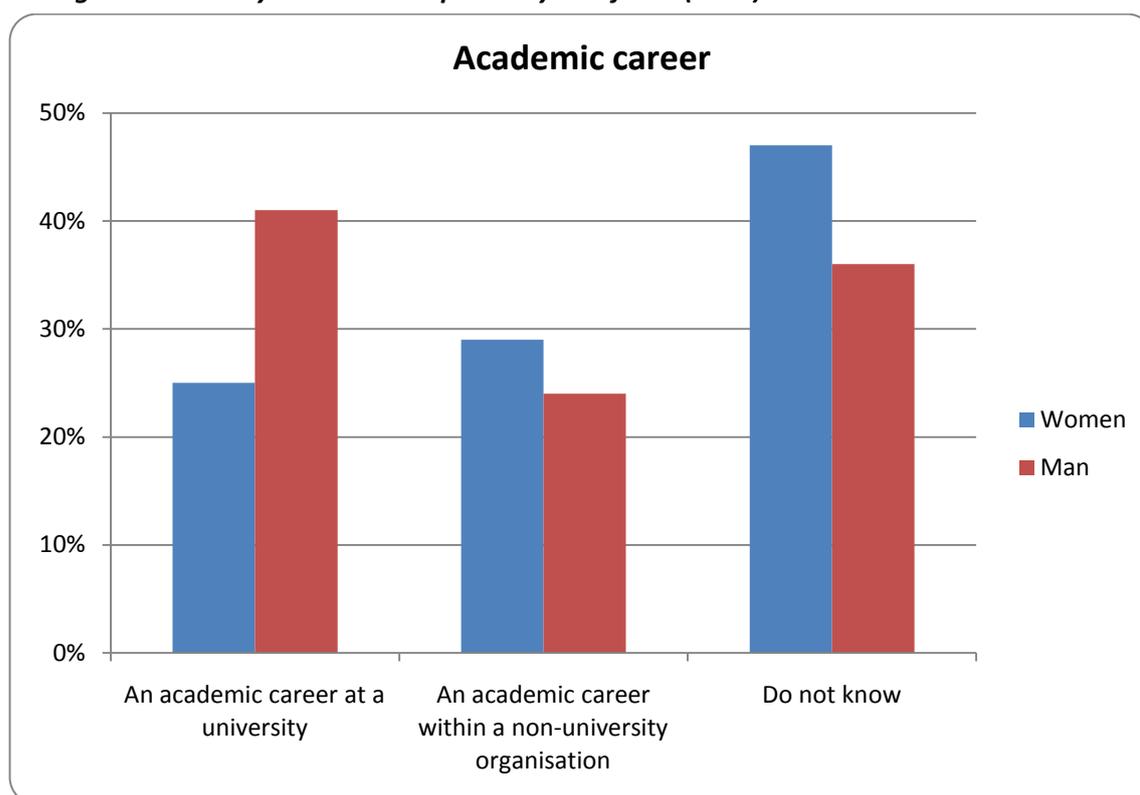
compared with the proportion of female PhD students. Finally, we need to stress that the women are merely less satisfied than men – they are not very dissatisfied, given that their mean ratings are in the range 5 – 8 on a 10-point scale. Bearing these provisos in mind, we nonetheless wish to speculate over possible correlations, and what could be done to find out more about possible underlying causes.

In short, the differences observed are that

- women are less satisfied than men with their situation as a PhD student
- women are less satisfied than men with the progress of their education and thesis work
- women are less satisfied than men with the number of courses in my own subject
- women are less satisfied than men with the opportunities to take part in scientific discussions in the department
- a higher proportion of women than men report neck and shoulder pain
- all but one of the 5% reporting harassment or insults with regard to their gender are women

Finally, men and women differ in the view of their academic careers. Although nearly half of the women and one third of the men do not yet know whether they are aiming for an academic career within or outside the University, it seems that an academic career at a university appeals more to male PhD students than to their female colleagues, Figure 8.

Figure 8. With my PhD studies I primarily aim for ... (2009)



Perhaps the last observation about different plans for future careers could be further explored. It may be assumed that people pursuing education with quite different goals have different expectations and needs during their studies. Perhaps those aiming for a career at a non-university organisation:

- expect work/study situations to explicitly prepare them for work and a career in a different kind of organisation with different values and priorities;
- define scientific discussion, and what one could expect to learn from it, differently than those aiming for a university career;

- want to place their subject and thesis work in a context defined in other ways than is customary. For example, they might want to relate to society and industry in ways other than those justified from a purely academic viewpoint. Feeling that they differ from the “normal group” aiming for a university career, they also become dissatisfied with the progress of their education and thesis work.

The brief discussion above suggests that the pattern observed for women rating differently than men should not be taken literally. **The results suggest that many female PhD students are intending to have a different type of the career from the men, and thus expect and need other things from their studies than are normally offered.**

To learn more about the underlying causes of the different ratings discussed above, we suggest that further studies be performed using tools other than the blunt one of a survey.

In conjunction with the above analyses it might also be advisable for the university to learn more about and better understand how potential PhD students understand and interpret the expectations the university and supervisors have of them. In the long term, accurate information in these areas is vital.

Studies of boys and girls at school repeatedly find that girls find it more difficult than boys to maintain their self-esteem when stressed or receiving negative feedback (SOU 2010:79). It is possible that this gender difference also exists in higher education and has influenced the results of this survey. Actions recommended for primary school may also be relevant to higher education. Thus, the report *Skolan och ungdomars psykosociala hälsa* ("School and the psychosocial well-being of young people") (SOU 21010:80) could be used in further discussions of the study environment for PhD students at SLU.

Other studies have noted that women's ratings of PhD education differ from men's ratings. Possible causes have been further investigated, and the problems observed have often been attributed to **organisational and/or financial structures**. For example, interview studies of PhD students on sick leave due to stress-induced problems have pointed to unclear rules, roles and expectations, together with underfunding and unplanned education (Guteklint et al. 2009).

Naturally, SLU also has problems similar to those as described above on its PhD programmes. However, for many years SLU has been developing and hopefully improving administrative, educational and social structures and working procedures on its PhD programmes. For example, all main supervisors have three weeks of pedagogical training focusing on ways of developing the professional relationship between supervisor and PhD student. Gender and ethnicity perspectives are discussed and supervisors are informed of guidelines and regulations in these areas. In addition, the position of PhD Commissioner has existed at the university for x years. The faculties have developed the administrative support for PhD programmes to make it easy for PhD students to find the right people to ask, and documents to read to understand the educational process and their rights and obligations. Every year the PhD councils at student unions arrange both thematic seminars relevant to the educational situation of PhD students and social events. These efforts have focused on creating structures that are **suited to preventing rather than causing stress**. Perhaps the fairly high general level of satisfaction shown by the survey to some extent supports the contention that SLU has a good strategy.

3.7 Final comments on recommendations in the 2006 report

The report on the results of the 2006 survey (Office of Strategy and Planning, SLU 2007) recommended that the PhD programmes be organised in interdepartmental thematic structures such as **research schools** to improve satisfaction with courses and social issues. According to the 2009 survey, 42% of respondents attend research schools, compared with 28% in 2006. As discussed earlier in this report, satisfaction with courses has increased slightly, but as far as we can see from the survey results, the most significant effect of increased attendance at research

schools is increased satisfaction with the **quality of supervision**. Perhaps the research school environment provides more opportunities for critical and creative discussions, with examples of good and bad science and different role models than is usually possible on a daily basis in the department. In other words, the general skills and abilities of being a researcher are honed during discussions in the research school environment.

The 2006 report also suggested that the proportion of PhD students introduced at the department and receiving an introduction to their PhD programme should be increased. It was assumed that when **properly introduced**, PhD students would also be better informed about educational planning and be better aware of rules and guidelines (educational rights). However, since the proportion taking part in any kind of introduction remained as low in 2009 as in 2006, this assumption has not been tested.

4. References

All the following documents are in Swedish.

- AB Previa, 2006
- Guteklint S., Almkvist, B. and Enstam, D. 2009. Human Resources Department, Stockholm University 2009. *Kvinnliga doktorander och stress. Djupintervjuer med tolv kvinnliga doktorander vid Stockholms universitet vilka varit aktuella för arbetslivsinriktad rehabilitering inom företagshälsovården* ("Female doctoral students and stress. In-depth interviews with twelve female doctoral students at Stockholm University who have undergone occupational rehabilitation at the company health service.")
- National Agency for Higher Education 2008. *Doktorandspegeln*. National Agency for Higher Education Report series 2008:23R
- National Agency for Higher Education 2010. *Universitet & Högskolor* ("Universities and Colleges"). National Agency for Higher Education Annual Report 2010. National Agency for Higher Education Report series 2010:10 R.
- Office of Strategy and Planning, SLU 2007. *Omdömen om forskarutbildningen samt studie- och arbetsmiljö. Resultat av en enkät till forskarstudenterna i oktober 2006* ("Opinions of PhD programmes and the study and working environment. Results from a questionnaire sent to PhD students in October 2006")
- SLU 2010. *Handlingsplan för likabehandling av studenter vid SLU 2010* ("Action plan for equal treatment of students at SLU") Journal No. SLU 30-1062/10
- SOU 2010:79. *Pojkar och flickors psykiska hälsa i skolan en kunskapsöversikt* ("An overview of the mental health of boys and girls at school") M. Westling Allodi. Swedish Government Official Reports, Rapport IX från Delegationen för jämställdhet i skolan (Commission on Gender Equality at School). Stockholm 2010.
- SOU 2010:80. *Skolan och ungdomars psykosociala hälsa* ("School and the psycho-social well-being of young people") Swedish Government Official Reports, Rapport IX från Delegationen för jämställdhet i skolan (Commission on Gender Equality at School). Stockholm 2010.
- Sundén, J. 2010 Human Resources Division, SLU. Oral communication