



UMEÅ UNIVERSITET



# **GRADUATION SURVEY FOR DOCTORAL EDUCATION AT UMEÅ UNIVERSITY, 2018/19**



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## Summary

Virtually all doctoral students at Umeå University who received their doctorate in 2018 or 2019 believe that their doctoral studies have prepared them for a continued career as a researcher. The graduation survey indicates that the most common type of doctoral student at Umeå University is a woman at the Faculty of Medicine, between 31 and 40 years of age. She has completed her undergraduate studies at Umeå University, works full time as a doctoral student and may have children under the age of 18. She did not grow up in a household where someone held a doctoral degree, and is satisfied with both her doctoral studies and her own performance. She has not been on maternity leave or sick leave during her studies.

Like the doctoral student described above, many students are satisfied or even very satisfied with their doctoral studies at Umeå University. They would also recommend their education programme to other people. Although many are satisfied, there are areas in which to improve. For example, it appears that the doctoral courses have such potential and can be made more relevant. It is proposed that the departments increase their cooperation with each other, as well as with other higher education institutions. There is also a demand for courses in innovation and entrepreneurship, as well as more knowledge about the writing of research applications.

The doctoral students are satisfied with the supervision they have received, and they indicate that it is the most important factor for promoting doctoral studies. Most doctoral students have regular contact with their supervisor. Half of the doctoral students see their supervisor at least once a month and one in three students see them as often as once a week. Virtually all doctoral students have participated in international conferences or workshops, but it is not nearly as common to spend time at a university abroad during part of their studies.

Those who have had the opportunity to teach during their doctoral studies have found this to be a positive experience, and recommend it to other doctoral students. They also wish to continue teaching after their public defence. Most also want to continue conducting research. Half of the doctoral students surveyed will continue to work at a Swedish or foreign university, and most of these will continue their employment at Umeå University. A fifth of students surveyed expect to be unemployed, at least in the short term.

The graduation survey was sent out to all doctoral students who received their doctorate from Umeå University in 2018 or 2019. Just over 40 per cent have conducted their doctoral studies on a part-time basis. Half of those who responded to the survey received their doctorate from the Faculty of Medicine. The questions in the survey focus on the education programmes and scientific aspects, supervision, pedagogical qualifications and teaching, and future professional focus, but also include background questions, such as why the students started their doctoral studies in the first place.





## Background, purpose and method

The university's efforts to quality-assure its doctoral education programmes includes a graduation survey of students who recently received their doctorates (Annex 1). The survey has previously been analysed annually, but since 2018 the analysis has been carried out every two years. It is distributed after the doctoral student's public defence, preferably to her/his private e-mail address. A maximum of five reminders to complete the survey have been sent. Doctoral students who have started their doctoral studies but have not applied to publicly defend their thesis are not included in the survey, but they are included in the employee survey. Approximately one quarter of respondents received their doctorate from the Faculty of Arts or the Faculty of Social Sciences, and the same number graduated from the Faculty of Science and Technology. A little more than half of the respondents received their doctorate from the Faculty of Medicine; this prevalence affects the outcome of the university-wide report.

According to the Fokus decision support system, in 2018/19 a total of 280 individuals received a PhD (136 individuals in 2018 and 144 individuals in 2019). The survey has been sent out to 255 individuals and answered by 180, of which 91 (51%) were women, 85 were men, and the remaining respondents had another gender identity (Table 1). The fact that more individuals received PhDs than responded to the survey may be partly due to the fact that 13 people's e-mail address did not work, but it may also be because certain people graduated with a delay. Annex 2 reports percentages and the number of responses, broken down by women/men, for a selection of questions.

Faculty	Percentage (%)	Number	Women/Men
Arts	8	15	9/6
Medicine	51	92	48/43
Social Sciences	17	30	17/13
Science and Technology	24	43	17/23
Total	100	180	91/85

Table 1: Distribution of the survey responses.

## The path to education at the doctoral level

The vast majority of doctoral students (just over 70 per cent) have an undergraduate degree from Umeå University. Half of respondents decided to continue on to doctoral studies after completing their master's-level studies. Only three per cent had made up their minds that they would study at the doctoral level before starting their university studies. Men were more likely to have decided during their undergraduate studies that they would continue on to doctoral studies, while more women decided to start researching after studying at the master's level (Figure 1).



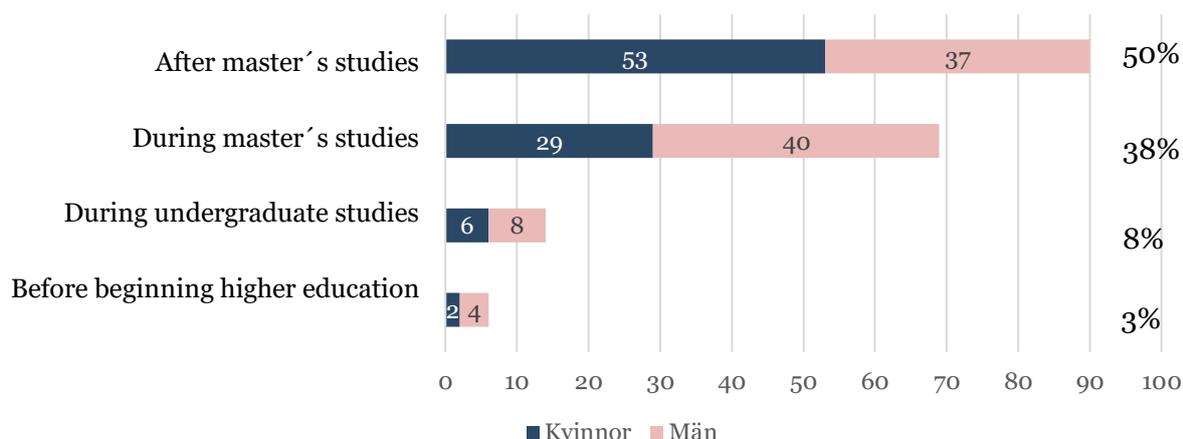


Figure 1: Number of responses to the question: "At what point did you decide to apply for doctoral studies?", broken down by gender. Percentage of all respondents on the right.

Forty per cent took part in research before they were admitted. The majority, 90 per cent, were partly or fully aware of what would be expected of them. In their comments, respondents state "I understood enough", "I think it's hard to know what to expect in advance, even if you get a lot of oral and written information when you are admitted", and "I talked to other doctoral students".

The main reason given for starting doctoral studies is *my own interest*; 36 per cent of respondents indicated a research career as their primary motivation. Comments on this point include "It was both – my own interest and a research career", "It's expected of us as medical doctors", "A real patient case sparked my interest", and "Demands/wishes of my employer".

## Education and scientific aspects

The majority of respondents believe to a large extent that their doctoral studies have provided relevant knowledge and skills for a future career. Half of the graduates surveyed received information about the rights and obligations of doctoral students during the course of their studies. Just over half consider the courses to be relevant to the programme (Table 2).

Statements about doctoral studies	Percentage
The programme has provided me with relevant knowledge in preparation for a future career	79%
The programme has provided me with relevant skills in preparation for a future career	77%
The requirements during the programme were reasonable	66%
I read information about the educational objectives for the programme	62%
The courses were relevant to the programme	56%



I read information about rules and regulations for the programme	55%
I read information about the rights and obligations of doctoral students while a part of the programme	50%

Table 2: To what extent do you agree with the following statements about your doctoral studies? Percentage of respondents who responded to 5+6, on a six-point scale where six means “completely agree” and one means “do not agree at all”.

## National education objectives

The majority state that they have achieved in-depth and up-to-date knowledge in their specific research domain, as well as of the methods of the specific research domain, and that they have obtained the knowledge specified in the objectives, Table 3.

Statements about education objectives	Percentage
I have in-depth and up-to-date knowledge in my own specific research domain	89%
I have knowledge of my own specific research domain’s methods in particular	88%
I have broad expertise and a systematic understanding of my research domain	85%
The programme has provided me with the knowledge specified by the objectives	76%
I have knowledge of scientific methodology in general	74%

Table 3: To what extent do you agree with the following statements about your doctoral studies? Percentage of respondents who responded to 5+6, on a six-point scale where six means “completely agree” and one means “do not agree at all”.

## Areas that promote doctoral studies

Most respondents indicate that supervision has had the greatest impact on promoting their doctoral studies. The academic, physical and social environment is also of great importance to many, while fewer respondents specify courses as significant (Figure 2). Thirteen per cent stated that the courses did not promote their doctoral studies at all.

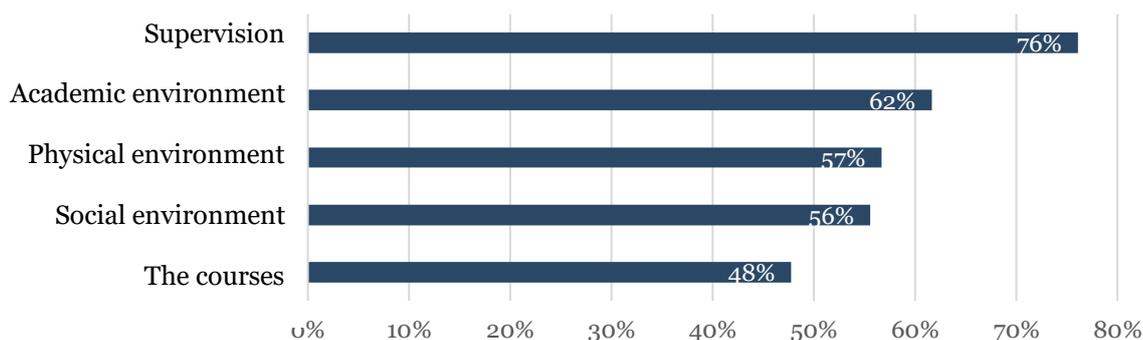


Figure 2: “To what extent do you think the following areas have been satisfactory in promoting your doctoral studies?” Percentage of respondents who responded to 5+6, on a six-point scale where six means “completely agree” and one means “do not agree at all”.





## Academic environment

In more specific questions about the academic environment, 40 per cent of respondents believe that it encouraged them to commit to a long-term research career. Just over half believe that the academic environment provided support in their doctoral projects, that the environment provided an opportunity for interaction and discussion with other researchers, and that it was creative and inspiring.

## International conferences

Virtually all doctoral students at Umeå University have participated in international conferences and workshops. The variation is great (0-14 events), but on average the doctoral students have participated in five conferences/workshops. More than 20 per cent spent part of their doctoral studies at an international university, and 33 per cent have co-published with international researchers. More men than women have co-published with researchers at another university, both in Sweden and abroad (Figure 3).

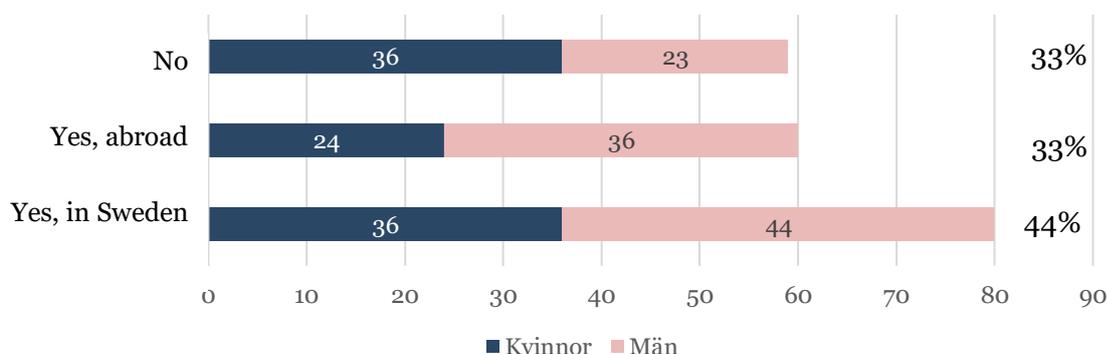


Figure 3: Number of respondents who have co-published with researchers at another higher education institution and/or other actors outside the university, broken down by gender. Percentage of all responses on the right. There were multiple response options.

## Supervision

Nearly 90 per cent say they are satisfied with the supervision they received. This is also clear in the comments, where examples include: “*Very skilled principal supervisor, both pedagogically and on a social level*”, “*My supervisors were available and invested in making sure that I got a good education*”, and “*Available, inspiring, pedagogical*”. There are also less satisfied opinions, i.e. “*Directly sabotaged my studies*”. More women than men are dissatisfied with the supervision (13 women cf. 5 men).

Approximately 17 per cent changed supervisors during their time as a doctoral student – women to a greater extent than men (19 women, 11 men). The reasons for the change of supervisor vary, and include retirement, change of university, and illness, but also non-functioning communication, a lack of expertise, and problems with the principal supervisor.





Nearly 80 per cent of respondents met with their supervisor at least once a week or month (Figure 4). Women were more likely to receive supervision at least once a month (49 women, cf. 33 men), while more men received supervision at least once a week (23 women cf. 32 men).

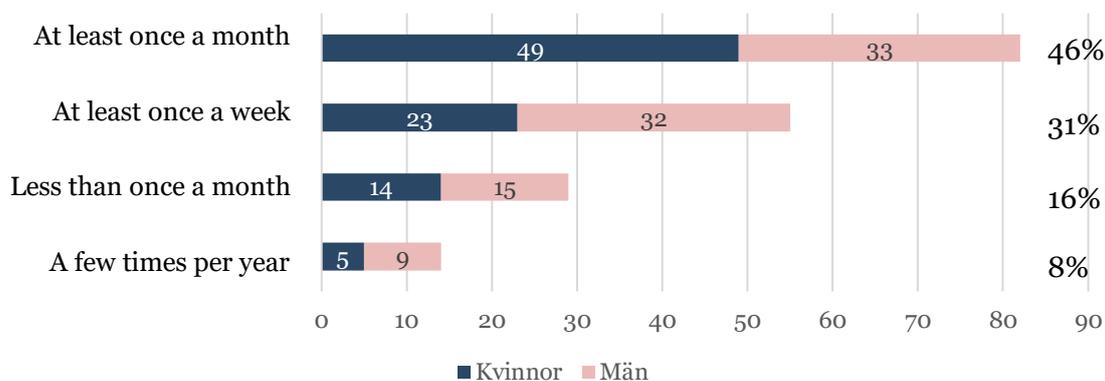


Figure 4: Number of respondents to the question “Estimate how often you have had supervisory discussions during your studies”, broken down by gender. Percentage of all respondents on the right.

The principal supervisor is the person with whom the doctoral student has most of their supervisory discussions; for almost 20 per cent of the doctoral students, their co-supervisor never participated (Figure 5).

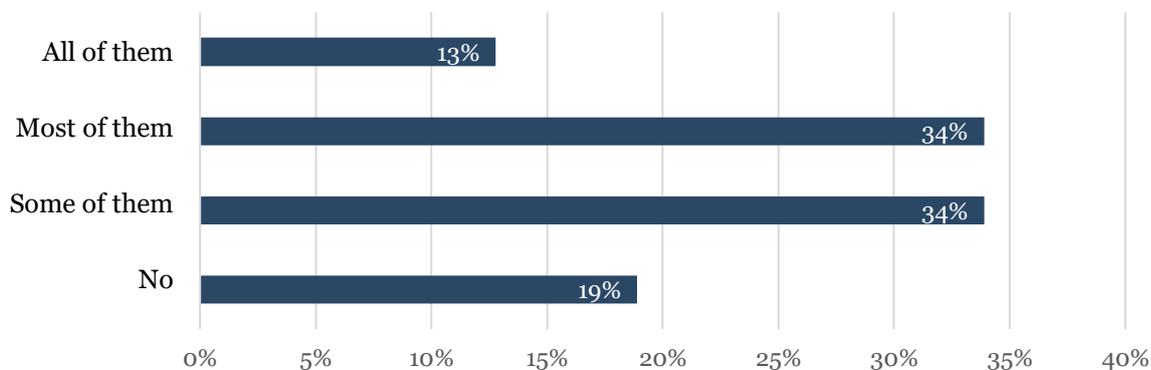


Figure 5: Percentage of responses to the question “Has an assistant supervisor been present at the supervisory discussions?”

Most doctoral students are satisfied with the follow-up of their individual study plan – more women than men (72 women cf. 61 men). However, a quarter are dissatisfied, and examples of comments include: “Abolish the individual study plan. It’s just unnecessary bureaucracy”, “The web-based ISP is poorly constructed”, “Too detailed”, “I felt that this follow-up was unnecessary. It was just time-consuming”, “More time-consuming than it was constructive”, and “As a part-time doctoral student, this takes an unreasonable amount of time and should be reduced”.





## Pedagogical qualifications and teaching

Just over 70 per cent of doctoral students were offered the opportunity to teach during their doctoral studies. Of these, half believe that it had a positive impact on their doctoral studies, and almost all of them recommend that other doctoral students teach during their studies.

More than 65 per cent of doctoral students have engaged in non-teaching assignments in addition to their doctoral studies. Other assignments may include student union assignments, administration, or other studies. A quarter of respondents indicated that they had clinical employment. Nearly half believe that “other assignments” also had a positive impact on their doctoral studies.

## Future professional focus

The students’ research activities has left them with an appetite for more, and the vast majority, 88 per cent, who have received their doctorate wish to continue researching after graduation and have discussed future careers with their supervisor or other senior researchers (Figure 6).

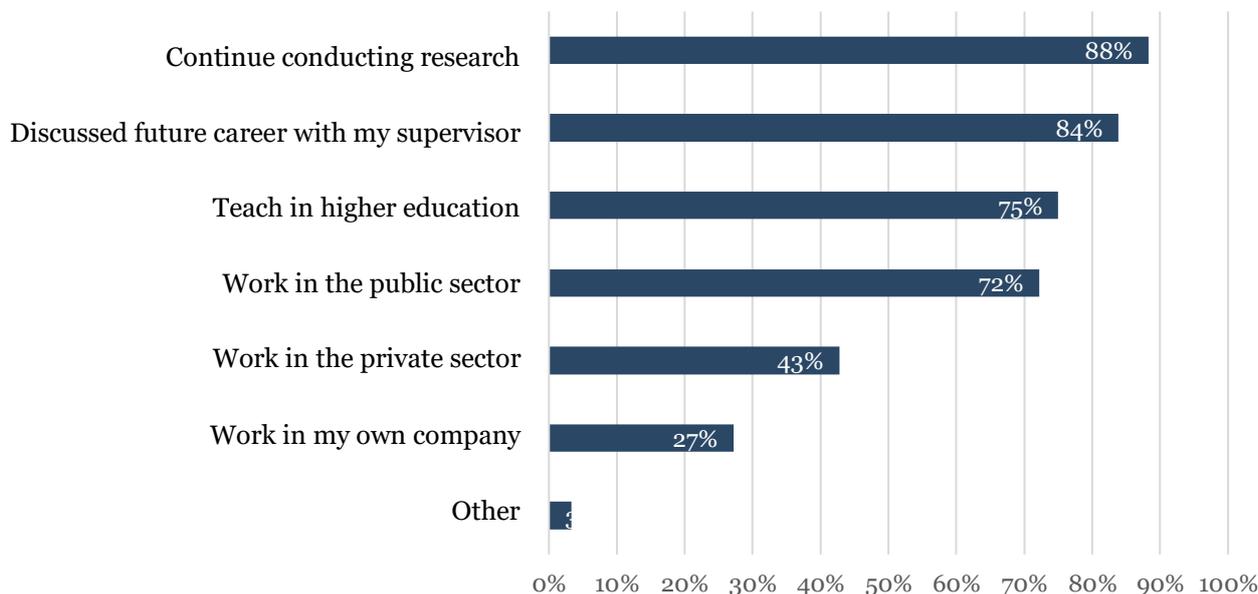


Figure 6: Percentage who answered “Yes” to statements about their future professional focus.

The occupations to which the newly graduated doctoral students intend to devote themselves immediately after their public defence vary. Nearly 20 per cent have no employment so far, and





about 40 per cent will continue to work at Umeå University. Others are employed in the health sector in one of the northernmost regions of Sweden or other regions of the country, work at another university in Sweden or abroad, have their own company or hold positions in the private sector.

Most believe that their doctoral studies have prepared them for a continued career as a researcher, and 70 per cent consider themselves prepared to apply for funding for further research (Table 4). Comments from those who do not feel that they are prepared to apply for research funding include: “I have not been able to *participate and do so during my time as a doctoral student*”, “*I have not worked with it specifically during my doctoral studies*”, “*There is little support relating to this*”, and “*Not a clear part of my doctoral studies*”.

Question	Percentage
Have your doctoral studies prepared you for a continued career as a researcher?	94%
Do you feel prepared to seek funding for further research?	70%
Have your doctoral studies prepared you for a working life outside academia?	54%
Have your doctoral studies given you sufficient knowledge about entrepreneurship and innovation?	28%

Table 4: Percentage who answered “Yes” to questions about the future.

The vast majority of respondents believe that their doctoral studies have prepared them for a continued career as a researcher. A small percentage, 6 per cent, do not think so. Some comments from these respondents: “*Partially prepared me, but we didn’t discuss writing articles and applications*”, “*There was no education, just abuse of power and the oppression of doctoral students*”, “*Despite comments on the subject, no review of how applications for research funding or post doc positions should be written was included*”, and “*I have lots of ideas but no time or money*”.

More than half of those who have received their doctorate believe that their doctoral studies have prepared them for a working life outside academia. A few of the doctoral students already have employment outside academia, and some doctoral students feel that there was no discussion of what life would be like after leaving their doctoral student position.

Just under 30 per cent believe that their doctoral studies gave them sufficient knowledge about entrepreneurship and innovation. However, most do not believe this to be the case, and comment “*Haven’t even been mentioned*”, or “*Not relevant in my field*”.

## Description of the doctoral students

Half of the doctoral students who answered the survey are between 31 and 40 years of age (Figure 7). Only 17 per cent are younger than this age range.





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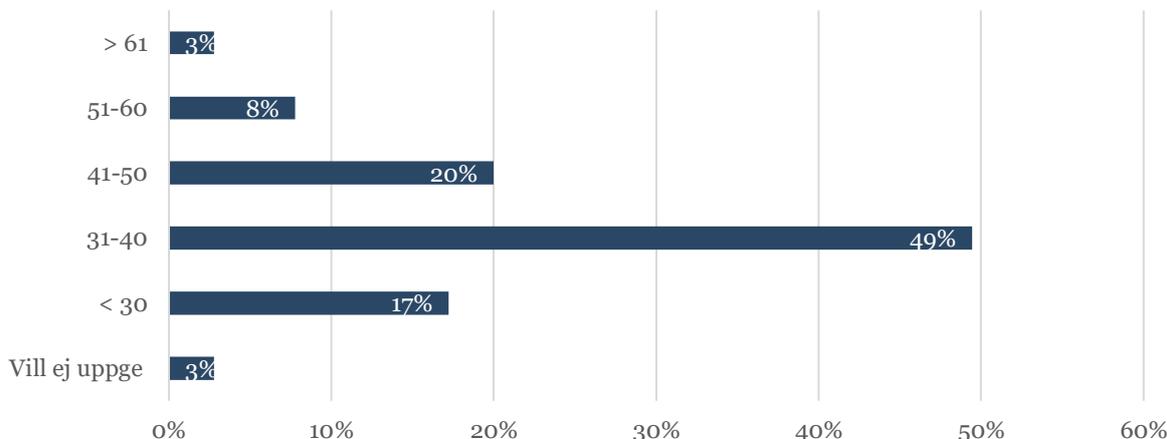


Figure 7: Age distribution of doctoral students

Of those who have received their doctorate, half have children under the age of 18 and just over 20 per cent have been on maternity/paternity leave for more than six months during their education. Nearly 60 per cent were full-time doctoral students, i.e. they obtained their degree within a maximum of five years. Among other things, parental leave and other work are cited as an explanation for more than five years of doctoral studies.

In response to the question “Have you been on sick leave for a period longer than 14 continuous days during your studies?”, 12 per cent answer in the affirmative. Of these, 17 are women and 4 are men. Just over 40 per cent consider themselves to be international doctoral students.

Doctoral studies and the conditions for these differ between the faculties. Half of respondents conducted their doctoral studies at the Faculty of Medicine, and these students often also have a clinical position.

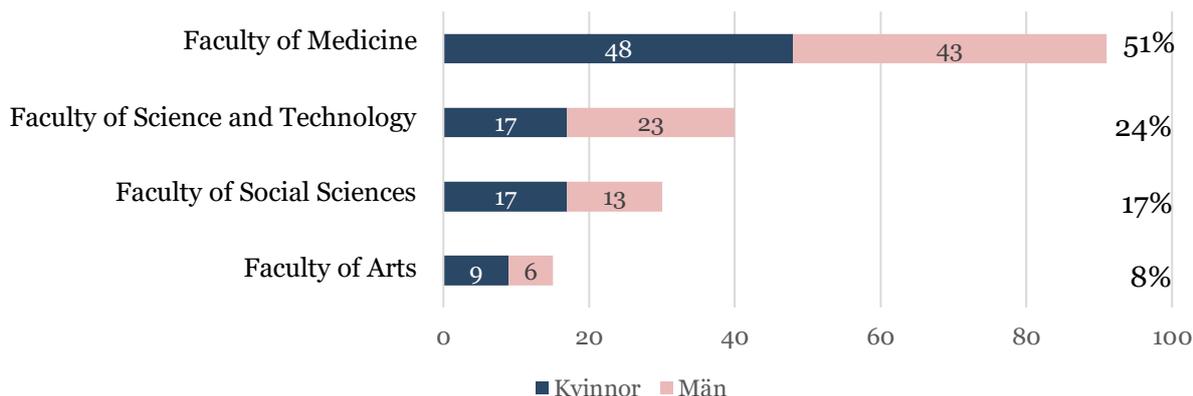


Figure 8: The number of graduates from the various faculties, divided by gender. Percentage of all respondents on the right.



A quarter received their doctorate from the Faculty of Arts or the Faculty of Social Sciences. Unlike the other faculties, there are more male graduates than female ones at the Faculty of Science and Technology (Figure 8).

At Umeå University, it is not common for doctorate recipients to have grown up in households where someone had a doctoral degree; 80 per cent of respondents answered “No” to this question.

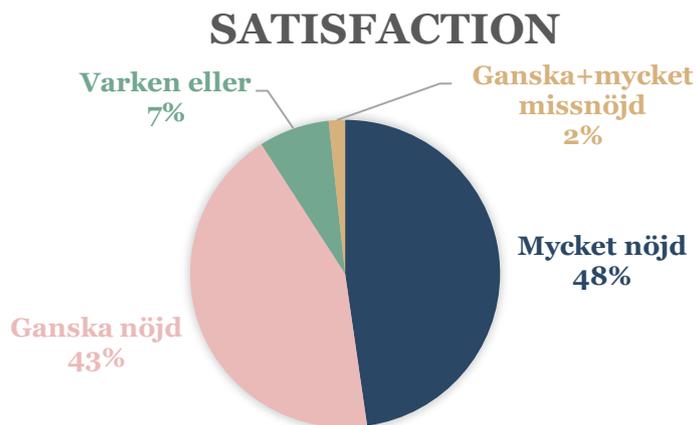


Figure 9: How satisfied are you with your doctoral studies? Unit, percentage.

Figure 9 shows that the vast majority are satisfied with their doctoral studies. Close to 90% are very or rather satisfied. *“I’ve worked hard for this, and I’m proud of myself”, “I haven’t enjoyed it, but I got to do it my way and now it’s over!”*, and *“Very satisfied with the supervision. Less satisfied with the courses”* are some of the comments about this question.

Of those who responded to the survey, 93 per cent are satisfied with their own performance and contributions. *“I carried off a project of questionable feasibility and questionable value. Good for me”, “I should have done better and finished sooner”, “I could have done better without my health problems”*. Many respondents – 89 per cent – would recommend doctoral studies at Umeå University to others. For details, see Annex 3.

## What changes can be made to improve the quality of doctoral studies?

Finally, the survey asks for the doctoral students’ viewpoints, in order to improve the quality of the university’s doctoral education programmes. One in three graduates provided their comments. Many comments concern the ISP and especially the web-based model, supervision, doctoral courses, the working environment and life after receiving one’s doctorate. The following sections summarise the comments; additional comments are presented in Annex 4.



## The Individual Study Plan (ISP)

Many respondents find the ISP to be bureaucratic and time-consuming. The comments suggest that the web-based ISP needs improvement, because it takes more time to navigate the system than to actually reflect and plan the project. For part-time doctoral students, the follow-up of the ISP takes an unreasonable amount of time and should be reduced while maintaining quality. Furthermore, respondents believe that the ISP has a function, but that the importance of it is exaggerated, which makes it more important for the administration than for the doctoral student. It is reasonable to establish an ISP upon admission to doctoral studies, in order to ensure that all milestones are met. However, the ISP does not need to be followed up as often as is now required, unless problems arise in the course of the student's education. The halfway-point seminar is sufficient to evaluate whether the specific objectives are being met and whether the student's education is progressing at the desired pace.

## Supervision

In order to improve the quality of doctoral studies, the supervisor should also be evaluated, just as the doctoral student is evaluated every year. Some respondents say that certain supervisors are not qualified. It is also suggested that follow-ups relating to supervisory roles should be improved.

## Doctoral courses

Many graduates have comments about the doctoral courses. The courses should be better adapted and more relevant. It is also proposed that when it comes to the courses, the departments should increase their cooperation with each other and with other higher education institutions. Some believe that the volume of course points should be reduced. Based on the opinions provided by the doctoral students, doctoral courses that receive negative criticism have not been sufficiently improved. There is a demand for the review and follow-up of course evaluations. Some respondents wonder what the university does with the course evaluations, as courses that have been criticised have not been sufficiently improved.

New courses in applying for research funding, innovation and entrepreneurship are proposed, as are clearer guidelines and requirements regarding the writing of introductory chapters. More time to write research applications. More guidance on preparation and support in how to proceed with postdoc applications, etc. following one's public defence. Offer courses and workshops that prepare graduates for jobs outside academia.

## Working environment

The physical working environment also needs to be improved in certain environments, and such simple measures as replacing furniture are suggested in the survey responses. More efforts related to the working environment in general are also proposed. A clearer encouragement of interaction between doctoral students is proposed, in order to promote a more cohesive workplace. Doctoral students have sometimes not felt any affinity with other doctoral students, and graduate school membership can therefore be an important support for doctoral students. It is important to pay attention to the mental illness of doctoral students, even if the majority of doctoral students responded that they felt emotionally stable during their studies. We promote a culture where work is carried out in the daytime and where you do not have to work in the evenings and on the





weekends. A greater focus on promoting the social welfare aspects of doctoral studies is also called for.

### Life after doctoral studentship

The doctorate recipients call for more information on becoming independent researchers and better preparation for seeking funding. They want help with making international contacts and information about future career paths, such as post-doc work. They want to be better prepared for the labour market – not only in academia, but also in industry.

## The faculties

Many of the answers are consistent across the faculties, but certain differences exist that are specified in this section.

### Faculty of Arts

- “*my own interest*” is cited to the greatest extent as the main reason for commencing doctoral studies
- least satisfied with the range of courses and agree least with the statement that the requirements during the studies were reasonable
- are more likely than students at other faculties to have spent part of their studies at other universities, both in Sweden and abroad
- most likely to change supervisors
- all doctoral students have conducted teaching, and all of them recommend that other doctoral students get teaching experience
- one in three doctorate recipients is unemployed
- almost half have been on maternity/paternity leave

### Faculty of Medicine

- are more likely to have been involved in research prior to admission
- two out of three doctoral students teach
- nearly half of the doctorate recipients continue to work in public health care (in Swedish regions)
- more commonly engaged in part-time research





- the doctorate recipients are slightly older than at other faculties

### Faculty of Social Sciences

- nearly all (90 per cent), received their qualifying degree from Umu
- none participated in research prior to admission
- none have spent part of their studies at another higher education institution in Sweden
- virtually all of them teach
- all doctorate recipients wish to continue with research after graduation
- doctorate recipients at this faculty are more likely to continue to work at Umeå University than those at other faculties

### Faculty of Science and Technology

- “*research career*” is as important a motivator as “*my own interest*” when it comes to starting doctoral studies
- the doctoral students are more likely to have decided to study at the doctoral level during their cycle two (master’s) studies, compared to those at other faculties
- it is more common for doctoral students to have frequent supervisory discussions, i.e. once a week
- at this faculty, two out of three doctoral students teach.
- half do not wish to teach after receiving their doctorate
- doctoral students at the faculty are more likely to be interested in working in the private sector after graduation than those at other faculties; just over 60 per cent
- every third doctoral student has no employment lined up for the months immediately after they receive their doctorate
- more men have defended their thesis than women





## How the university intends to work to improve its doctoral education programmes

High-quality doctoral education is a matter of importance for the entire university, i.e. at the university, faculty and departmental level. The operational responsibility for doctoral studies lies mainly at faculty level, as does responsibility for actions to improve the education programmes. The Strategic Council for Research and Doctoral Education (FOSTRA) conducts university-wide discussions on quality improvements in doctoral education.

The survey is sent out from the central level, and this report constitutes a comprehensive summary for the university. Each faculty can read “their” results in order to be able to work on more targeted improvement and quality enhancing actions.

In particular, at the university-wide level, two areas have been identified where efforts must be made to prepare doctoral students for the future. In the survey responses, questions related to *entrepreneurship and innovation* and *seeking funding for further research* have indicated that these are areas where there is development potential. One area of development during the study period where improvement efforts are needed is the *Individual Study Plan (ISP)*. The university management also agrees that these areas need to be strengthened. Discussions on how to address these issues will be conducted in FOSTRA.





## Annex 1 The survey

# GRADUATION SURVEY FOR DOCTORAL STUDENTS

## THE PATH TO DOCTORAL EDUCATION

**1. Where did you graduate in cycle two (receive your master's degree)?**

Umeå University

Other higher education institution/country; indicate which \_\_\_\_\_

Year of degree \_\_\_\_\_

**2. At what point in time did you decide to apply for doctoral studies?**

Before beginning higher education

During undergraduate studies

During master's studies

After master's studies

**3. Did you take part in doctoral studies before you were formally admitted?**

Yes, 1-6 months before

Yes, 7-12 months before

Yes, for more than 12 months before

No

**4. Did you know what was expected of you as a doctoral student when you started doctoral studies?**

Yes

In part

No

Comments: \_\_\_\_\_

**5. What was the main reason you started doctoral studies (Multiple-choice question)**

- My own interest

- Research career

- Other

## EDUCATIONAL & SCIENTIFIC ASPECTS

**6. To what extent do you agree with the following statements about your doctoral studies?**

What follows are alternative responses on a 6-point scale, where 1 means "do not agree at all" and 6 means "completely agree" as well as the option "no opinion":

I read information about the educational objectives for the programme

I read information about the rights and obligations of doctoral students while a part of the programme

I read information about rules and regulations for the programme





The courses were relevant to the programme  
The requirements during the programme were reasonable  
The programme has provided me with relevant knowledge in preparation for a future career  
The programme has provided me with relevant skills in preparation for a future career

**7. To what extent do you agree with the following statements about the national education objectives?**

What follows are alternative responses on a 6-point scale, where 1 means “do not agree at all” and 6 means “completely agree” as well as the option “no opinion”:

I have broad expertise and a systematic understanding of my research domain  
I have in-depth and up-to-date knowledge in my own specific research domain  
I have knowledge of scientific methodology in general  
I have knowledge of my own specific research domain’s methods in particular  
The programme has provided me with the knowledge specified by the objectives

**8. To what extent do you think the following areas have been satisfactory in promoting your doctoral studies?**

What follows are alternative responses on a 6-point scale, where 1 means “do not agree at all” and 6 means “completely agree” as well as the option “no opinion”:

The academic environment  
The physical environment at work  
The social environment at work  
The courses  
The supervision  
Other, namely \_\_\_\_\_

**9. To what extent do you agree with the following statements about the academic environment at Umeå University?**

What follows are alternative responses on a 6-point scale, where 1 means “do not agree at all” and 6 means “totally agree” as well as the option “no opinion”:

The academic environment was creative and inspiring  
The academic environment provided support for me in my doctoral project  
The academic environment was stimulating and encourage me to commit to a long-term research career  
The academic environment provided an opportunity for interaction and discussion with other researchers

**10. I have participated in one or more international conferences & workshops**

Yes, please indicate how many  
No

**11. Part of my studies (at least 1 month) have been spent at another university (Multiple-choice question)**

Yes, in Sweden





Yes, abroad

No

**12. I have co-published with researchers at other higher education institutions and/or other people outside the university (Multiple-choice question)**

Yes, in Sweden

Yes, abroad

No

## SUPERVISION

**13. Are you satisfied with the supervision you received?**

Yes, please indicate why

No, please indicate why

**14. A. Estimate how often you have had supervisory discussions during your studies**

At least once a week

At least once a month

Less than once a month

A few times per year

**B. Has an assistant supervisor been present at the supervisory discussions?**

Yes, all of them

Yes, most of them

Yes, some of them

No

**15. Have you changed supervisors during your doctoral studies?**

Yes, please indicate why

No

**16. Are you satisfied with the follow-ups of the individual study plan for third-cycle studies?**

Yes

No, please indicate why

## EDUCATIONAL QUALIFICATIONS AND TEACHING

**17. During your time as a doctoral student, have you been teaching at the undergraduate and/or master's level?**

Yes

No

**18. If yes on question 17, Was your doctoral education affected by the teaching?**

Yes, positively





Yes, negatively

No

**19. If yes on question 17, Would you recommend that other doctoral students teach during their studies if afforded the opportunity?**

Yes

No

**20. During your time as a doctoral student, have you had assignments other than teaching? (Multiple-choice question)**

No

Yes, clinical employment

Yes, student union assignments

Yes, other \_\_\_\_\_

**21. If yes on question 20, Were your doctoral studies affected by other assignments?**

Yes, positively

Yes, negatively

No

## FUTURE PROFESSIONAL FOCUS

**22. Do you agree with the following statements about your future professional focus?**

Responses should be Yes or No

I have discussed my future career with my supervisor or other senior researchers

I want to continue conducting research after receiving my degree

I want to teach in higher education after receiving my degree

I want to work in the public sector after receiving my degree

I want to work in the private sector after receiving my degree

I want to work in my own company

Other \_\_\_\_\_

**23. What does your occupation situation look like during the next few months?**

Employment at Umeå University

Employment at another higher education institution in Sweden

Employment at another higher education institution outside Sweden

Employment at one of the four Norrland county councils

Employment at another county council

Employment \_\_\_\_\_ in the private sector

In my own company

Another occupation

I have no employment

Comments \_\_\_\_\_

**24. Have your doctoral studies prepared you for a continued career as a researcher?**

Yes





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No

If you answered no, why not \_\_\_\_\_

**25. Do you feel prepared to seek funding for further research?**

Yes

No

If you answered no, why not \_\_\_\_\_

**26. Have your doctoral studies prepared you for a working life outside academia?**

Yes

No

If you answered no, why not \_\_\_\_\_

**27. Have your doctoral studies given you sufficient knowledge about entrepreneurship and innovation?**

Yes

No

If you answered no, why not \_\_\_\_\_

## BACKGROUND QUESTIONS

**28. Are you**

Female

Male

Another gender identity

**29. How old are you**

≤ 30

31-40

41-50

51-60

≥61

Do not wish to specify

**30. Do you have children under age 18 living at home?**

Yes

No

**31. Have you grown up in a household where others had a doctoral degree?**

Yes, all of them

Yes, one of them

No

Do not know



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**32. At which faculty have you been a doctoral student?**

- Faculty of Arts
- Faculty of Medicine
- Faculty of Social Sciences
- Faculty of Science and Technology

**33. What type of doctoral student have you been?**

- Full-time, a maximum of 5 years, a maximum of 20% teaching or other employment
- Part-time, <5 years
- Part-time, >5 years, other employment to varying degrees
- Comments \_\_\_\_\_

## SOME CONCLUDING QUESTIONS

**34. How satisfied are you with your doctoral studies?**

- Very satisfied
- Rather satisfied
- Neither nor
- Rather dissatisfied
- Very dissatisfied

**35. Are you satisfied with your own performance/contributions?**

- Yes
- No
- If you answered no, why not \_\_\_\_\_

**36. Would you recommend doctoral studies in your subject at Umeå University to others?**

- Yes
- No

**37. Have you been on sick leave for a period longer than 14 continuous days during your studies?**

- Yes
- No
- Do not wish to answer
- Do not know

**38. Have you had maternity/paternity leave for longer than 6 months during your doctoral studies?**

- Yes
- No

**39. Do you consider yourself an international doctoral student?**

- Yes
- No





**40. What changes can be made to improve the quality of doctoral studies?**

Free text field

**41. I also would like to state the following**

Free text field





## Appendix 2: Compilation of a selection of questions

Short description of the question	percentage	number (tot)	men	women
Cycle two (master's) degree from Umeå University	73%	132	64	68
Decided to apply for doctoral studies after completing their master's (cycle two) studies	50%	90	37	53
Participated in doctoral studies prior to formal admission	40%	72	35	37
Were fully aware of what was expected of them when their doctoral education began	43%	77	41	36
Personal interest was the main reason for starting doctoral studies	75%	135	68	67
Read information about the educational objectives for the programme	62%	111	49	62
Read information about the rights and obligations of doctoral students while a part of the programme	50%	90	37	53
Read information about rules and regulations for the programme	55%	99	43	56
The courses were relevant to the programme	56%	100	40	60
The requirements during the programme were reasonable	66%	118	58	60
The programme has provided relevant knowledge in preparation for a future career	79%	142	64	78
The programme has provided relevant skills in preparation for a future career	77%	139	64	75
Have broad expertise and a systematic understanding of their research domain	85%	153	74	79
Have in-depth and up-to-date knowledge in their own specific research domain	89%	161	79	82
Have knowledge of scientific methodology in general	74%	133	66	67
Have knowledge of their own specific research domain's methods	88%	158	77	81
The programme has provided the knowledge specified by the objectives	76%	137	67	70
The academic environment has been satisfactory	62%	111	58	53
The physical environment has been satisfactory	57%	102	53	49





Short description of the question	percentage	number (tot)	men	women
The social environment has been satisfactory	56%	100	50	50
The courses have been satisfactory	48%	86	33	53
The supervision has been satisfactory	76%	137	72	65
The academic environment was creative and inspiring	53%	95	47	48
The academic environment provided support for me in my doctoral project	57%	103	54	49
The academic environment encouraged commitment to a long-term research career	41%	73	35	38
The academic environment provided an opportunity for interaction and discussion with other researchers	59%	106	53	53
Participated in one or more international conferences & workshops	96%	173	85	88
Spent part of their studies (at least 1 month) at another university	31%	56	25	31
Have not co-published with researchers at another higher education institution and/or other actors outside the university	33%	59	23	36
Are satisfied with the supervision	89%	161	83	78
Supervision at least once a week	31%	55	32	23
Supervision at least once a month	46%	82	33	49
Supervision less than once a month	16%	29	14	15
Supervision once a year	8%	14	9	5
Assistant supervisor has participated in most supervisory discussions	34%	61	31	30
Have changed supervisor during their time as a doctoral student	17%	30	11	19
Are satisfied with the follow-ups of the individual study plan	74%	133	61	72
Have taught at the undergraduate and/or master's (cycle two) level	73%	131	62	69
Doctoral studies were positively affected by teaching	58%	83	40	43
Recommend that other doctoral students teach during their studies	94%	134	62	72
Have not had assignments other than teaching during their time as a doctoral student.	40%	72	32	40
Doctoral studies were positively affected by other assignments	46%	67	37	30





Short description of the question	percentage	number (tot)	men	women
Have discussed their future career with supervisors or other senior researchers	84%	151	75	76
Wish to continue researching after graduation	88%	159	80	79
Wish to teach in higher education after graduation	75%	135	69	66
Wish to work in the public sector after graduation	72%	130	64	66
Wish to work in the private sector after graduation	43%	77	45	32
Wish to work in their own company	27%	49	28	21
Employed at Umeå University	39%	70	34	36
Employed at another higher education institution in Sweden	6%	10	6	4
Employed at another higher education institution outside of Sweden	5%	9	4	5
Employed in the northern regions of Sweden	13%	24	12	12
Employed in other regions of Sweden	8%	15	9	6
Employed in the private sector	1%	1	0	1
Work in their own company	2%	4	4	0
Have another occupation	7%	12	4	8
Have no employment	19%	34	15	19
Have your doctoral studies prepared you for a continued career as a researcher	94%	169	85	84
Consider themselves prepared to seek funding for further research	70%	126	58	68
Believe their doctoral studies have prepared them for a working life outside academia	54%	98	53	45
Believe that their doctoral studies have given them sufficient knowledge about entrepreneurship and innovation	28%	50	26	24
Have children under age 18 living at home	51%	91	43	48
Grew up in households where others had a doctoral degree	18%	33	19	14
Were full-time doctoral students (max 5 years)	58%	104	47	57
Are satisfied with their doctoral studies	89%	160	78	82
Are satisfied with their own performance/contributions	93%	168	81	87





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Short description of the question	percentage	number (tot)	men	women
Would recommend doctoral studies in their subject at Umeå University to others	89%	161	80	81
Have had a sick leave period lasting longer than 14 consecutive days during their studies	11%	21	4	17
Have been on maternity/paternity leave for more than 6 months during their doctoral studies	23%	42	18	24
Consider themselves to be international doctoral students	42%	75	38	37





## Annex 3 Selection of questions, by faculty

	Faculty of Arts	Faculty of Medicine	Faculty of Social Sciences	Faculty of Science and Technology
Total number/percentage	15/8	92/51	30/17	43/24
Women	9/60	48/52	17/57	17/40
Men	6/40	44/48	13/43	26/60
Age (31–40 years)	9/60	37/40	17/57	26/60
Have children under age 18 living at home	8/53	51/55	16/53	16/37
Grew up in households where others had a doctoral degree	2/13	17/18	6/20	8/9
Were full-time doctoral students (max 5 years)	12/80	37/40	20/67	35/81
Are satisfied with their doctoral studies	11/73	83/90	28/93	38/44
Are satisfied with their own performance/contributions	13/87	90/98	27/90	38/88
Would recommend doctoral studies in their subject at Umeå University to others	13/87	83/90	25/83	40/93
Have had a sick leave period lasting longer than 14 consecutive days during their studies	5/33	7/8	5/17	4/9
Have been on maternity/paternity leave for more than 6 months during their doctoral studies	7/47	17/18	8/27	10/23
Consider themselves to be international doctoral students	7/47	36/39	9/30	23/53

All variables reflect the number (ppl)/percentage (%)





## Annex 4 Additional Comments

The following are a number of additional comments.

*“I think Umeå University has done a fantastic job of increasing job security and quality in doctoral education. I also think it’s fantastic that doctoral students are represented or have the opportunity to be represented in most (all) committees at the faculty level; it really means that as a doctoral student, you have the opportunity to influence matters related to your education.”*

*“I would like to see more clear instructions and good examples for the implementation of certain ‘standard elements’, such as introductory chapter seminars, practice public defences, etc. Disseminate good examples within and between faculties!”*

*“It’s been an amazing experience, of great importance to my academic maturation. So fantastic that I had the chance to work as a doctoral student at Umeå University”*

*“The transition from working full-time as a doctoral student to suddenly being unemployed is quite difficult. It would be great to get some information on either how to apply for funding or how to break into the labour market (CV preparation, etc.)”*

*“I’m very happy and grateful for the commitment and time invested in me by my department during my time as a doctoral student. I’ve learned a lot and been inspired to continue researching in my field.”*

*“I’ve been researching while working clinically. For my part, I would have appreciated more time for the research that the clinic had promised from the beginning.”*

