

■ UNIVERSITY OF HELSINKI CAREER MONITORING REPORT— DOCTORAL GRADUATES OF 2004–2019

Aki Hagelin

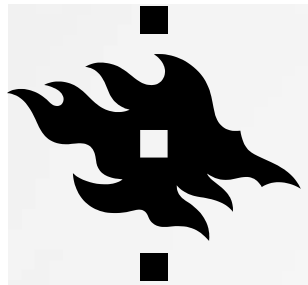
Institutional Research and Analysis

Antero Salminen

Strategic Services for Teaching

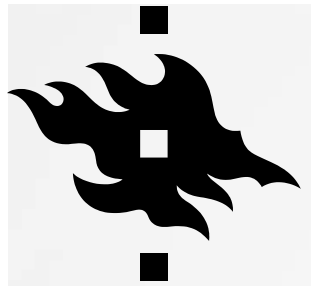
Jonas Lindholm

Institutional Research and Analysis



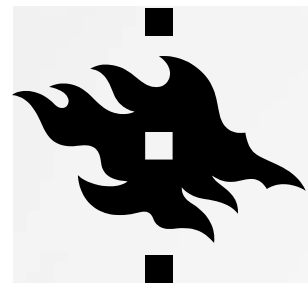
CONTENT

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 - Professional skills needs



ACCESSIBILITY OF THE REPORT

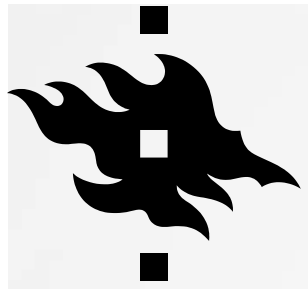
- The graphs in the report are not fully accessible. However, the key results and observations are explained in the report.



REVISED CAREER MONITORING REPORT OF DOCTORAL GRADUATES AT THE UNIVERSITY OF HELSINKI

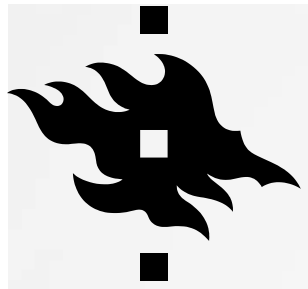
- The revised career monitoring report of the University of Helsinki reports on topics related to the employment and post-graduate careers of doctoral graduates thematically, utilizing both Statistics Finland's statistics and the answers to university career monitoring surveys.
- The table describes the data content of the report and the data sources used.

Theme	Doctoral career monitoring survey (2019 graduates, surveyed in 2022)	Statistics Finland statistics
Job market situation of doctoral graduates after graduation	3 years after graduation	1, 3 ja 5 years after graduation National job market situation of doctoral graduates 1 year after graduation (Vipunen)
Employer sector and main nature of duties	Employer sector and main nature of duties 3 years after graduation	See Vipunen (profession group)
Salary	Monthly salary 3 years after graduation	Average yearly income 1, 3 and 5 years after graduation
Correlation between education and employment	Requirements of current job matches well with academic qualifications?	See Vipunen (profession group)
	Able to use the knowledge and skills acquired at the University in the current job	
	Satisfied with the degree from a career perspective	
Factors affecting employment	Assess how the following factors have affected your employment after graduation	
Professional skills needs	How important are the following knowledge and skills in your current job? How did your university studies develop these working life capabilities?	
	How do you assess the development of the importance of the following skill sets within the five upcoming years?	



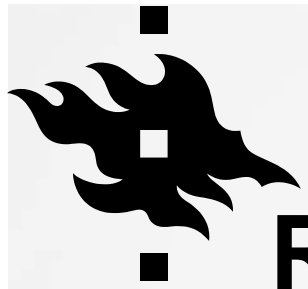
CAREER MONITORING AT FINNISH UNIVERSITIES

- Nationwide career monitoring surveys:
 - Surveys of master's graduates five years after graduation
 - Surveys of doctoral graduates two or three years after graduation (three years in the most recent surveys)
- The career monitoring group of the Aarresaari network of university career services is responsible for the surveys, while universities are responsible for utilising their data.
- The data on the töissä.fi website are based on career monitoring: <https://toissa.fi/home-en-us/>.
- Further information on career monitoring: https://www.aarresaari.net/career_monitoring
- The latest career monitoring data on master's graduates: 2017 graduates (responses October–December 2022)
- The latest career monitoring data on doctoral graduates: 2019 graduates (responses October–December 2022)



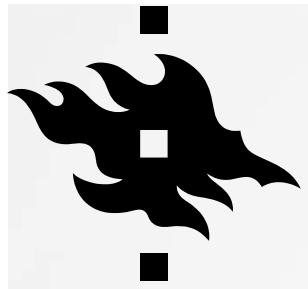
DATA COLLECTION IN CAREER MONITORING SURVEYS

- Career monitoring surveys are sent to all graduates in the relevant target group.
- The target group for master's graduate career monitoring includes all master's graduates as well as all those with a Bachelor of Science (Pharmacy) degree or a Bachelor of Arts (Education) degree in kindergarten teacher education.
- Doctoral graduate career monitoring surveys are sent to all graduates in the relevant target group.
- Information on the target group is obtained from the national VIRTa database (which combines data from the student records of Finnish universities).
- The background variables of respondents are supplemented with information from the student records (major subject, degree programme, department, faculty).
- Address details are retrieved from the Population Register.
- The 2022 surveys were sent to respondents by text message (to those whose phone number was known) or by mail (all others). Additionally, the universities distributed the survey by email to those in the target group whose details were found in alumni registers.
- The data were collected in a nationwide and central manner by Research Stats Service TUPA of the University of Tampere and CSC – the IT Centre for Science, in collaboration with the career monitoring group of the Aarresaari network.
- Responses are always processed confidentially and so that individual respondents cannot be identified.



RESPONSE RATES AND REPRESENTATIVENESS OF CAREER MONITORING SURVEY

- The survey answer rate for doctoral career monitoring surveys has been between 45-50% during the past years. 46% of doctoral graduates from the year 2019 answered the survey in the fall of 2022. Differences in response rates between faculties are significant.
- In European comparison, this response rate of about 44-50 % of Finnish universities is quite good for a career follow-up survey conducted 3 years after graduation.
- The following table describes the university and faculty surveys for the different survey years. The table first shows the absolute number of responses and the response rate in parentheses next to it.
- At the University of Helsinki, women and Finnish citizens are slightly over-represented and men and non-Finnish citizens are under-represented in the survey data. A comparison of respondents and graduates is provided in the table below. It is possible that the unemployed are underrepresented in the survey data.



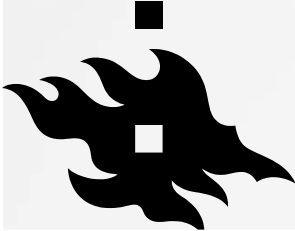
RESPONDENTS

- 61% of the respondents were women (60% of graduates).
- 81% of the respondents were Finnish citizens (70% of graduates).
- The average age of the respondents upon graduation was 39 (that of graduates was 39).



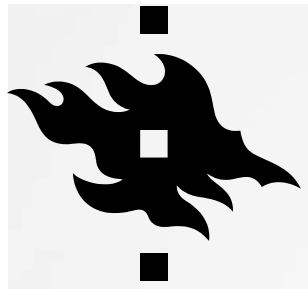
RESPONSE RATES 1/2

Year of graduation (survey conducted)	Biological and Environmental Sciences	Veterinary Medicine	Pharmacy	Medicine	Agriculture and Forestry	Science	University total
2019 (2022)	34 % (18/53)	64 % (7/11)	50 % (9/18)	42 % (69/166)	51 % (19/37)	47 % (33/70)	46 % (231/503)
2018 (2021)	48 % (20/42)	54 % (7/13)	35 % (6/17)	39 % (52/133)	42 % (14/33)	59 % (42/71)	47 % (208/444)
2017 (2020)	46 % (23/50)	56 % (9/16)	59 % (10/17)	39 % (48/124)	50 % (19/38)	48 % (35/73)	49 % (233/475)
2016 (2019)	45 % (27/60)	44 % (8/18)	19 % (3/16)	44 % (47/107)	45 % (21/47)	44 % (35/80)	47 % (237/508)
2015 (2018)	44 % (28/63)	40 % (10/25)	47 % (9/19)	51 % (67/132)	62 % (25/40)	43 % (38/89)	49 % (260/529)
2014 (2017/18)	27 % (14/51)	56 % (10/18)	46 % (6/13)	40 % (53/131)	39 % (19/49)	40 % (27/67)	42 % (200/480)
2012-13 (2015)	45 % (42/94)	50 % (10/20)	50 % (14/28)	52 % (135/262)	58 % (46/80)	47 % (60/129)	51 % (447/885)
2010-11 (2013)	47 % (44/93)	55 % (17/31)	36 % (9/25)	48 % (122/252)	45 % (29/64)	46 % (55/119)	50 % (435/876)
2008-09 (2011)	53 % (63/118)	61 % (14/23)	48 % (13/27)	52 % (143/273)	55 % (42/76)	46 % (56/123)	54 % (491/915)
2006-07 (2009)	51 % (61/119)	41 % (7/17)	53 % (9/17)	53 % (112/213)	68 % (41/60)	48 % (63/132)	51 % (421/823)
2004-05 (2007)	61 % (58/95)	73 % (16/22)	69 % (11/16)	61 % (129/212)	67 % (37/55)	46 % (57/123)	60 % (461/773)

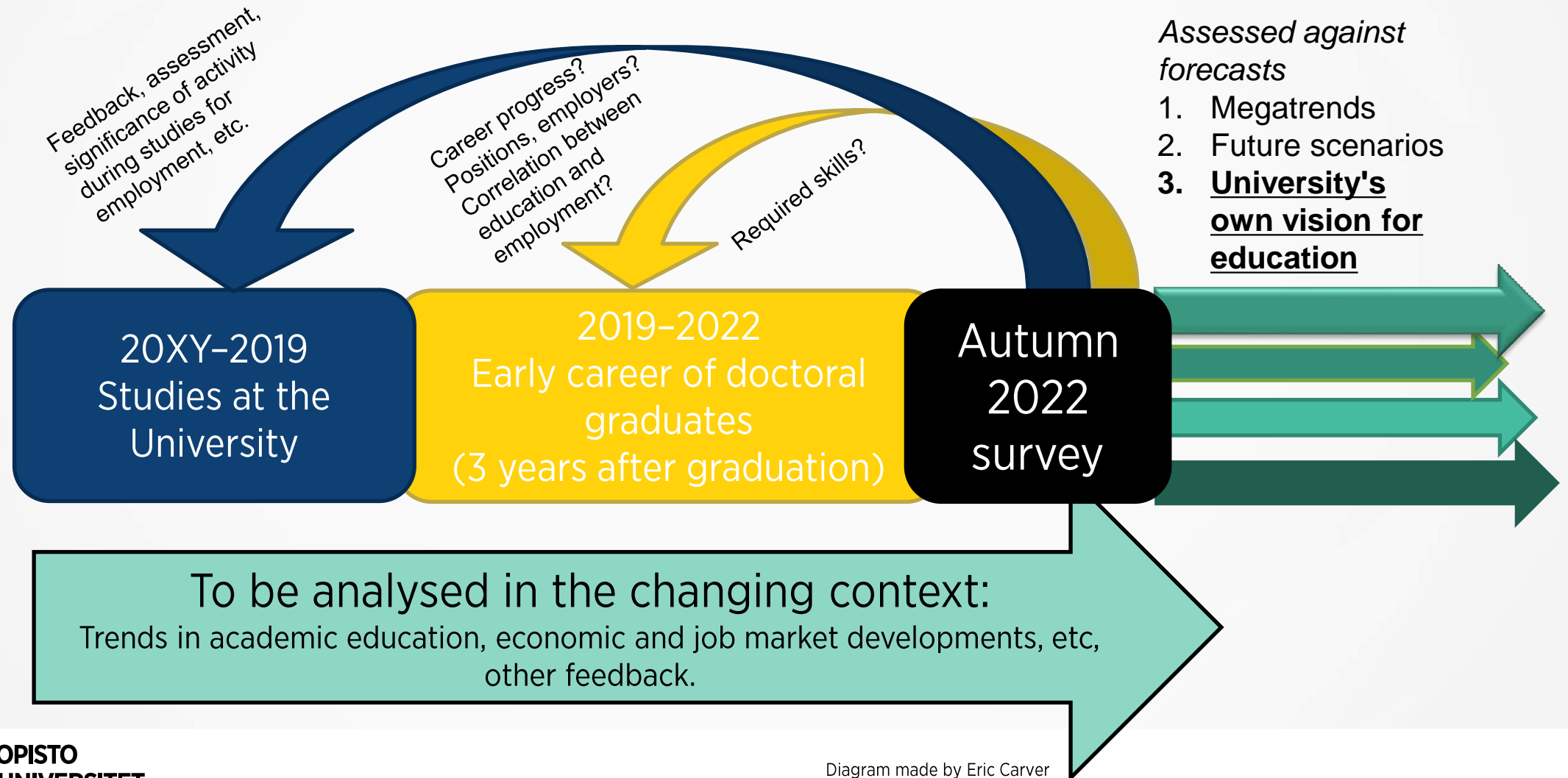


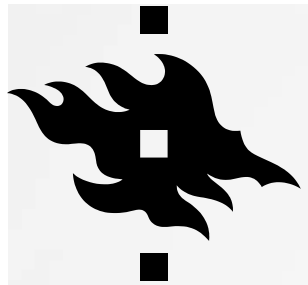
RESPONSE RATES 2/2

Year of graduation (survey conducted)	Arts	Educational Sciences	Law	Theology	Social Sciences	University total
2019 (2022)	53 % (28/53)	57 % (13/23)	13 % (2/15)	53 % (8/15)	60 % (25/42)	46 % (231/503)
2018 (2021)	45 % (20/44)	52 % (11/21)	38 % (5/13)	57 % (8/14)	53 % (23/43)	47 % (208/444)
2017 (2020)	66 % (37/56)	50 % (9/18)	53 % (10/19)	47 % (9/19)	53 % (24/45)	49 % (233/475)
2016 (2019)	47 % (28/60)	55 % (23/42)	56 % (9/16)	64 % (9/14)	56 % (27/48)	47 % (237/508)
2014 (2017/18)	53 % (31/59)	67 % (12/18)	32 % (7/22)	67 % (10/15)	49 % (23/47)	49 % (260/529)
2012-13 (2015)	46 % (31/67)	38 % (8/21)	17 % (2/12)	64 % (9/14)	57 % (21/37)	42 % (200/480)
2010-11 (2013)	52 % (56/108)	53 % (16/30)	45 % (10/22)	52 % (15/29)	52 % (43/83)	51 % (447/885)
2014 (2017/18)	49 % (55/112)	57 % (21/37)	53 % (16/30)	66 % (21/32)	57 % (46/81)	50 % (435/876)
2008-09 (2011)	57 % (61/107)	67 % (26/39)	57 % (12/21)	62 % (16/26)	55 % (45/82)	54 % (491/915)
2006-07 (2009)	43 % (38/88)	69 % (24/35)	68 % (13/19)	35 % (12/34)	46 % (41/89)	51 % (421/823)
2004-05 (2007)	56 % (45/81)	74 % (25/34)	57 % (13/23)	65 % (22/34)	62 % (48/78)	60 % (461/773) ₁₀



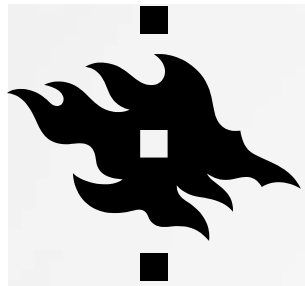
USE OF CAREER MONITORING IN THE DEVELOPMENT OF EDUCATION (E.G., DOCTORAL EDUCATION)





STATISTICS BY STATISTICS FINLAND

- **This report focuses on statistics by Statistics Finland on the employment of graduates from 2007 to 2020. The data cover the statistical years 2008–2021.**
- Every year, the University of Helsinki purchases statistics from Statistics Finland on the employment, salaries and continuing education of graduates of the University. The reporting on the statistics by Statistics Finland uses the same classification as the reporting on the responses to career monitoring surveys.
- Description of the ‘Transition from school to further education and work’ statistics (Statistics Finland, <https://www.stat.fi/en/statistics/documentation/sijk>)
 - The statistics examine the employment, transition to further studies and regional placement of attainers of qualifications in the year following graduation. The activity is described at the end of a certain year according to employment, unemployment, studies, conscription service or other activity.
 - Statistics Finland's individual-based Register of Completed Education and Degrees, employment and student data as well as population data are used in the production of the statistics. The data of the employment statistics have been produced by utilising existing administrative register data. The release of the statistics is compiled from the final data of the employment statistics from the statistical year 2021 and the main type of activity variable, which describes the situation in the last week of the statistical reference year. In the past, preliminary data was used.
- The results of career monitoring surveys and the transition statistics of Statistics Finland are partly available in the [Vipunen](#) – Education Statistics Finland portal. The classification used for reporting in Vipunen differs to some extent from that used by the University of Helsinki.



CAREER MONITORING AT THE UNIVERSITY OF HELSINKI

- The University of Helsinki uses the data obtained from career monitoring surveys, for example, to develop education, guide and counsel students, provide career guidance and conduct research.
- Since 2017, career monitoring surveys have been conducted at the University through cooperation between several units. Career Services was previously responsible for coordinating the surveys, but this responsibility shifted to Strategic Services for Teaching at the beginning of 2019.
- Composition of the University's project group for career monitoring in the 2022–2023 academic year:

Aki Hagelin, Institutional Research and Analysis

Suvi Holttinen, Digital Communications

Heini Hult-Miekkavaara, Career Services

Kirsi Korpiaho, Research Services

Jonas Lindholm, Institutional Research and Analysis

Elina Raukko, Communications

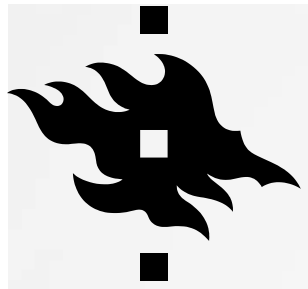
Asmara Riaz, Career Services

Antero Salminen, Strategic Services for Teaching

Kati Salmivaara, Communications

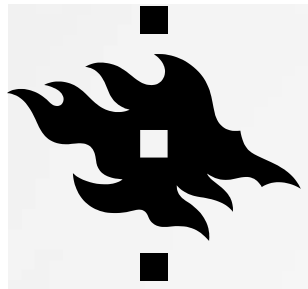
Tarja Tuononen, Centre for University Teaching and Learning

Minnis Vierikko, Alumni Relations



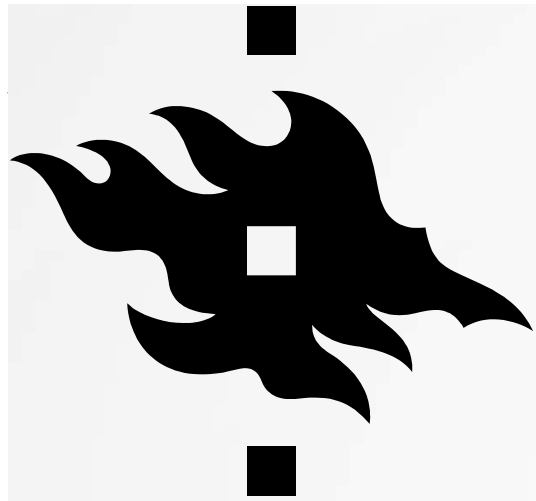
CONTENT OF THE CAREER MONITORING REPORT

- The report focuses on the latest career monitoring survey, conducted in autumn 2022.
- The target group of the nationwide survey consisted of doctoral graduates of 2019.
- The report also uses the results of previous career monitoring surveys (graduates of 2004–2018) to enable a temporal comparison.
- In comparing the results, it is important to note that the graduates of 2005, 2007, 2009, 2011 and 2013 took the survey two years after graduation, while others completed the surveys three years after graduation. Until 2015, career-tracking surveys were conducted by alternately targeting those who had graduated two or three years ago. Since 2017, the survey has been conducted annually by focusing on those who have graduated three years ago.
- Faculty-level results are often reported by adding up the results of several survey years.
- The results of the University of Helsinki are reported in accordance with the faculty structures that have been in place since early 2017. In practice, this means that psychology and logopedics graduates are included in the results for the Faculty of Medicine, and phonetics and cognition science graduates are included in the results for the Faculty of Arts.

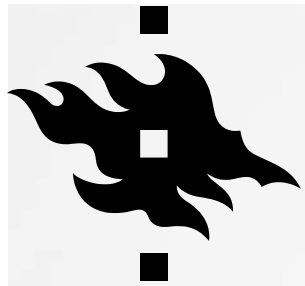


NOTES ON THE GRAPHS USED IN THE REPORT

- The graduates' employer sector and the primary nature of employment are reported using a model in which only the major response options 4–6 are displayed. All other responses are categorised under 'Other'. This solution makes it easier to interpret the graphs and identify the key response options.
- In the career-tracking report for doctoral graduates, the graphs for the University and doctoral school levels focus on the responses of the graduates of 2019. The reporting of faculty-level results mainly incorporates the responses of the graduates of 2018–2019.
- In the case of questions with six or seven response options, the responses are reported by classifying them so that options 4-6 (fully agree, agree, slightly agree) are added up. This same principle has also been used for the breakdown of responses to compare faculties and disciplines.



JOB MARKET SITUATION OF DOCTORAL GRADUATES

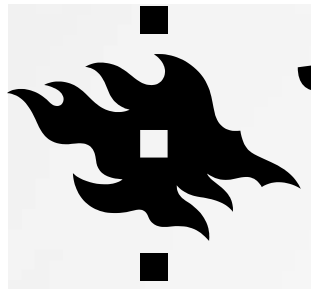


JOB MARKET SITUATION OF DOCTORAL GRADUATES (STATISTICS FINLAND)

- According to Statistics Finland statistics, the employment situation of doctoral graduates of 2019 and 2020 was good 1 year after graduation (situation at the end of 2020 and 2021). At the University level employment rate in Finland is relatively high (77% employed and employed students combined) and unemployment rate is low (3%). However, a quite high share of Faculty of Arts (10%), Faculty of Law (8%), Faculty of Social Sciences (7%), and Faculty of Agriculture and Forestry (5%) graduates were unemployed 1 year after graduation.
- Almost 20 percent of doctoral graduates have left Finland 1 year after graduation (the groups “emigrated” and “other or not known” combined, as most graduates in the “other and not know” group are in fact graduates who have emigrated). Non-Finnish citizens are 4.3 times more likely to have emigrated 5 years after graduation than Finnish citizens (graduates of 2013-16 combined).
- There is a big difference in the employment situation of doctoral graduates living in Finland based on nationality. The employment situation of doctoral graduates with Finnish citizenship in Finland is substantially better. The employment rate gap when comparing the share of employed in the workforce in Finland is 12 percentage points one year after graduation, 8 percentage points 3 years after graduation and 5 percent points 5 years after graduation.

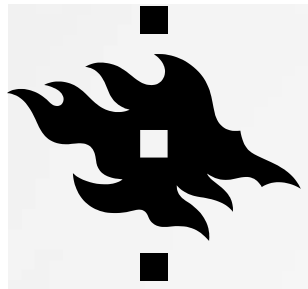
JOB MARKET SITUATION ONE YEAR AFTER GRADUATION BY FACULTY, GRADUATION YEARS OF 2019 AND 2020

Faculty (N)	Employed	Employed students	Unemployed	Full-time study	Other or not known	Emigrated
Agr & For (107)	72 %	6 %	5 %	2 %	7 %	8 %
Arts (106)	70 %	3 %	10 %	1 %	4 %	12 %
Bio & Env Sc (131)	61 %	4 %	3 %	0 %	8 %	24 %
Educ Science (63)	81 %	2 %	3 %	0 %	11 %	3 %
Faculty of Medicine (305)	76 %	11 %	0 %	1 %	5 %	7 %
Medicine/Dentistry (197)	81 %	14 %	0 %	1 %	2 %	2 %
Medicine (PhD) (86)	64 %	3 %	1 %	1 %	13 %	17 %
Psyc/speech ther. (22)	82 %	9 %	0 %	0 %	0 %	9 %
Law (37)	62 %	3 %	8 %	0 %	11 %	16 %
Pharmacy (46)	65 %	0 %	2 %	0 %	4 %	28 %
Science (150)	69 %	3 %	2 %	1 %	7 %	17 %
Soc Science (99)	73 %	3 %	7 %	1 %	7 %	9 %
Theology (33)	79 %	6 %	3 %	0 %	6 %	6 %
Vet Med (30)	63 %	17 %	0 %	3 %	3 %	13 %
UH total (1 107)	71 %	6 %	3 %	1 %	6 %	12 %



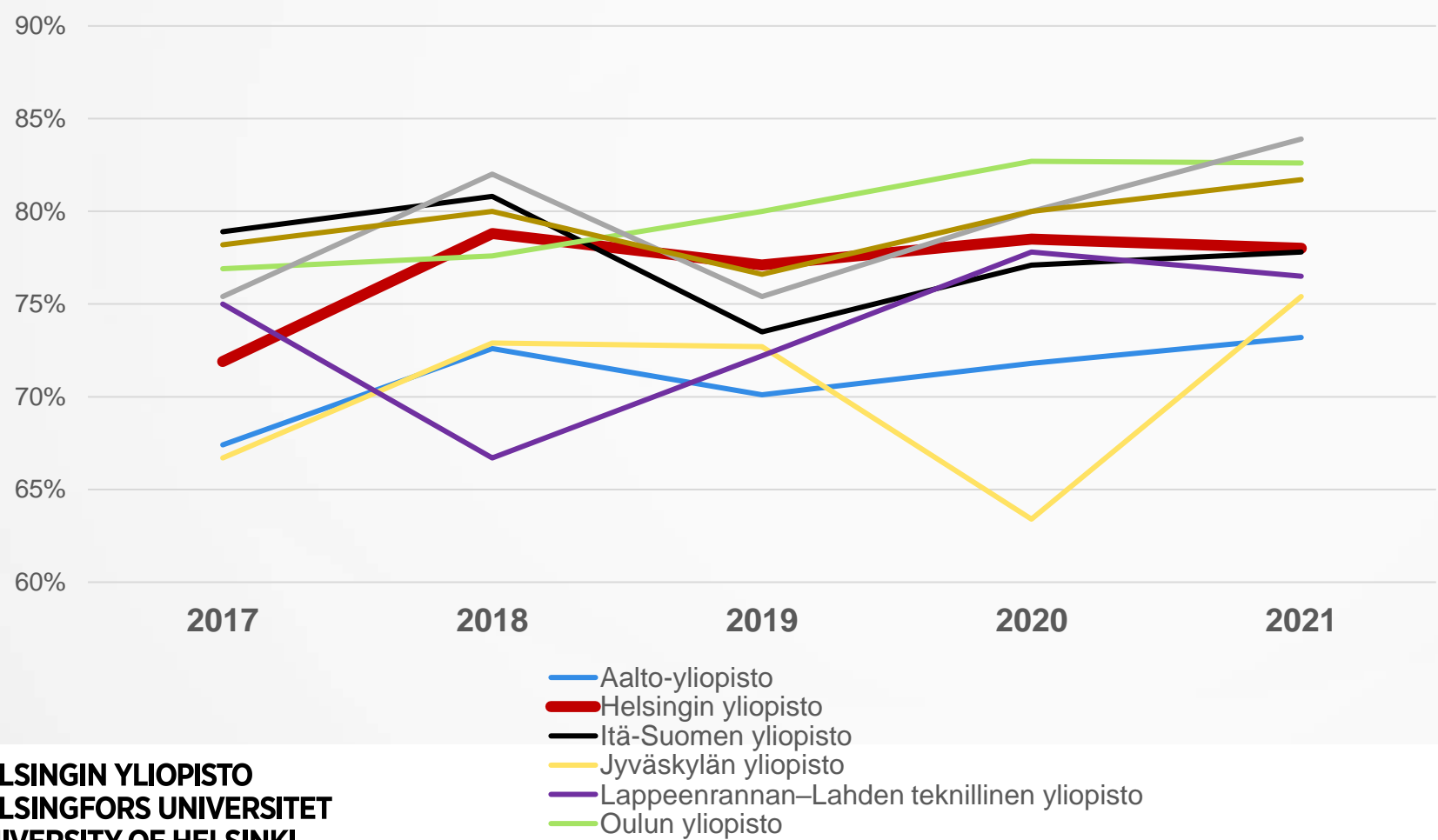
JOB MARKET SITUATION BY NATIONALITY, GRADUATES OF 2013–2016

Job market situation	One year after graduation		Three years after graduation		Five years after graduation	
Nationality	Finnish	Other	Finnish	Other	Finnish	Other
Employed	73 %	35 %	76 %	31 %	76 %	30 %
Employed students	6 %	1 %	5 %	0 %	6 %	1 %
Unemployed	5 %	8 %	3 %	4 %	3 %	3 %
Share of employed in the workforce	94 %	82 %	96 %	88 %	96 %	91 %
Full-time study	1 %	1 %	1 %	1 %	1 %	1 %
Other or not known	7 %	21 %	7 %	24 %	7 %	21 %
Emigrated	7 %	33 %	8 %	39 %	8 %	44 %
Number:	1 597	373	1 597	373	1 597	373

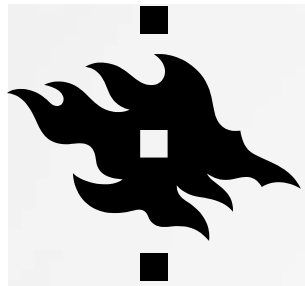


NATIONAL JOB MARKET SITUATION OF DOCTORAL GRADUATES 1 YEAR AFTER GRADUATION

Amount of employed one year after graduation, doctors, years 2017-2021



- The graph shows universities' share of employed graduates one year after graduation. For example, the figures for year 2021 look at the employment of graduates of the year 2020.
- In 2021, HY had an average share of employed graduates (78%) compared to its peer universities. HY's figure is in line with previous years (around 80% starting from 2018).
- Source: Vipunen. Figures do not have information of employment status of doctors who have emigrated outside of Finland.



KEY RESULTS/ OBSERVATIONS

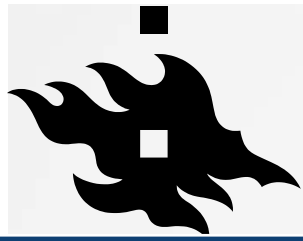
(CAREER MONITORING SURVEY. JOB MARKET SITUATION OF THREE YEARS AFTER GRADUATION)

- The job market situation of 2019 doctoral graduates in 2022 was excellent. 96% were employed, 1% unemployed and 3% outside of the workforce. The survey is also done for graduates living outside of Finland (when contact details are available). Share of employed in the workforce was really high: 99 %.
- The labor market situation of 2022 respondents is close to what it was in the 2020 and 2021 survey. The amount respondents with permanent full-time job and permanent part-time job has increased and respondents with fixed-term full-time job has decreased compared to previous surveys. There are also less respondents in the categories of scholarship researcher and self-employed/entrepreneur/freelancer.
- It is possible that the unemployed are underrepresented in the survey data.
- The university sector is the most important employer sector for doctoral candidates who have graduated 3 years ago, followed by private companies and municipal sector. Differences between faculties are substantial.
- Research is the leading nature of employment, with 44% of respondents reporting that their main duty is research. Most “research-intensive” faculties are Faculty of Educational Sciences, Faculty of Social Sciences, Faculty of Agriculture and Forestry and Faculty of Science. (faculty comparison done using data from 2018-19 graduates).



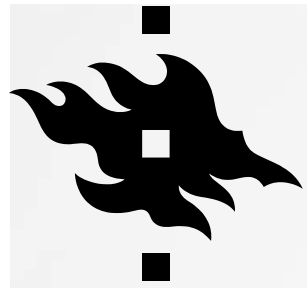
JOB MARKET SITUATION OF 2019 GRADUATES AT THE TIME OF THE SURVEY

Share [%]	UH 2022 (N = 230)	UH 2021 (N = 208)	UH 2020 (N = 232)	All universities 2022 (N = 821)
Permanent full-time job	54 %	52 %	47 %	55 %
Fixed-term full-time job	24 %	29 %	27 %	27 %
Permanent part-time job	4 %	1 %	3 %	2 %
Fixed-term part-time job	2 %	1 %	1 %	2 %
Self-employed/entrepreneur/freelancer	2 %	5 %	6 %	3 %
Scholarship researcher	7 %	8 %	6 %	5 %
Subsidised employment/practical training	0 %	0 %	0 %	0 %
Family leave (with employment contract)	4 %	3 %	4 %	2 %
Total employed	96 %	98 %	94 %	96 %
Unemployed jobseeker	1 %	1 %	1 %	1 %
Labour market training or equivalent	0 %	0 %	0 %	0 %
Total unemployed	1 %	1 %	1 %	1 %
Full-time study	0 %	0 %	1 %	0 %
Family leave (without employment contract)	0 %	1 %	0 %	0 %
Other	3 %	1 %	3 %	3 %
Total outside the workforce	3 %	1%	5 %	3 %



JOB MARKET SITUATION OF 2019 GRADUATES AT THE TIME OF THE SURVEY

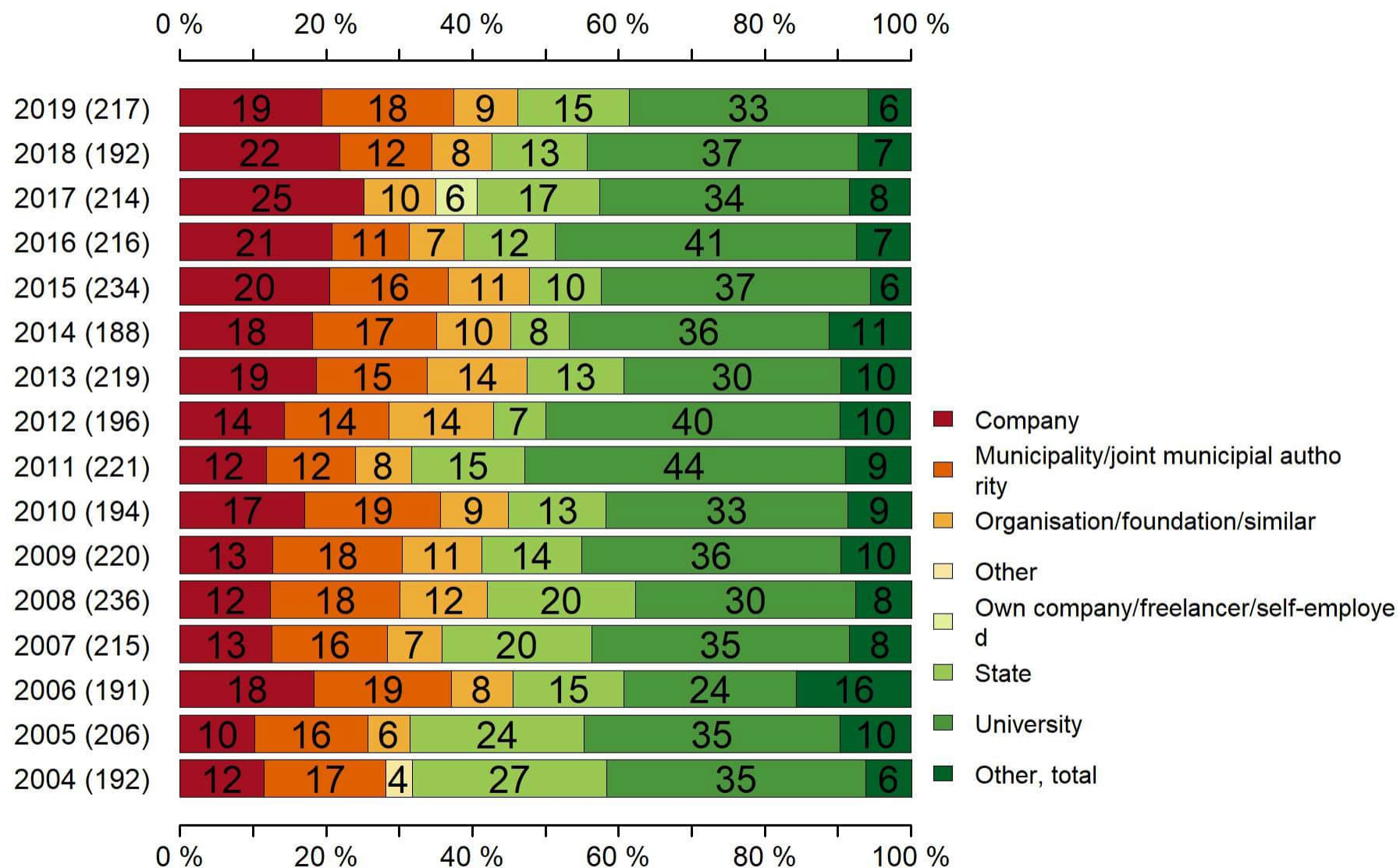
Share [%]	Biol & Env (18)	Vet Med (7)	Phar (9)	Arts (28)	Educ (13)	Med (69)	Agr & For (19)	Sci (33)	Law (2)	Theo (8)	Soc Sci (24)	UH (230)
Permanent full-time job	50%	71%	44%	50%	46%	55%	58%	49%	50%	75%	54%	53.5 %
Fixed-term full-time job	28%	0%	22%	18%	39%	20%	37%	33%	50%	13%	17%	23.9 %
Permanent part-time job	0%	14%	11%	4%	0%	7%	0%	0%	0%	13%	0%	3.9 %
Fixed-term part-time job	6%	0%	0%	4%	8%	0%	0%	0%	0%	0%	8%	2.2 %
Self-employed/entrepreneur/freelancer	0%	0%	0%	0%	0%	4%	0%	3%	0%	0%	0%	1.7 %
Scholarship researcher	11%	0%	11%	18%	0%	6%	5%	0%	0%	0%	17%	7.4 %
Subsidised employment/practical training	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0 %
Family leave (with employment contract)	0%	0%	0%	0%	0%	4%	0%	12%	0%	0%	4%	3.5 %
Total employed	95%	86%	89%	93%	92%	97%	100%	97%	100%	100%	100%	96.1 %
Unemployed jobseeker	6%	14%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0.9 %
Labour market training or equivalent	0%	0%	11%	0%	0%	0%	0%	0%	0%	0%	0%	0.4 %
Total unemployed	6%	14%	11%	0%	0%	0%	0%	0%	0%	0%	0%	1.3 %
Full-time study	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0 %
Family leave (without employment contract)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0 %
Other	0%	0%	0%	7%	8%	3%	0%	3%	0%	0%	0%	2.6 %
Total outside the workforce	0%	0%	0%	7%	8%	3%	0%	3%	0%	0%	0%	2.6 %



CAREER DESTINATIONS OF 2019 DOCTORAL GRADUATES THREE YEARS AFTER GRADUATION (CAREER MONITORING)

- Most common employer sectors
 - University 33 %
 - Private company 19 %
 - Municipality/joint municipal authority 18 %
 - State/Public enterprise 15 %
 - Organisation/foundation 9 %
 - Polytechnic 3 %
- Most common primary nature of work
 - Research 44 %
 - Working with customers/patients 16 %
 - Planning/development 10.3 %
 - Teaching/education 9 %
 - Managerial/executive functions 5 %
 - Consulting/training 5 %
- Median monthly salary: 4200 €

Employer sector five years after graduation by year of graduation

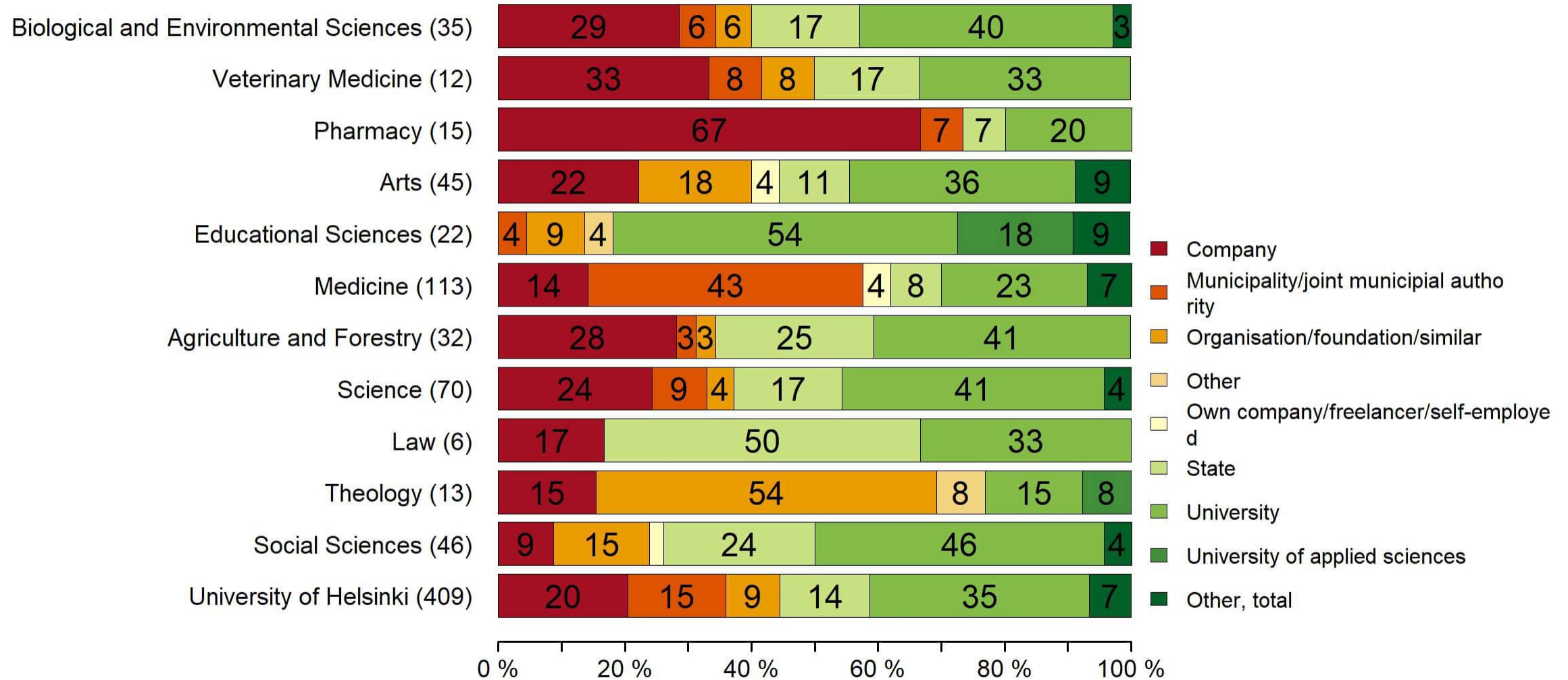


Number of respondents in brackets.

Maximum 5 options is shown. The rest are included in the category Others, total.

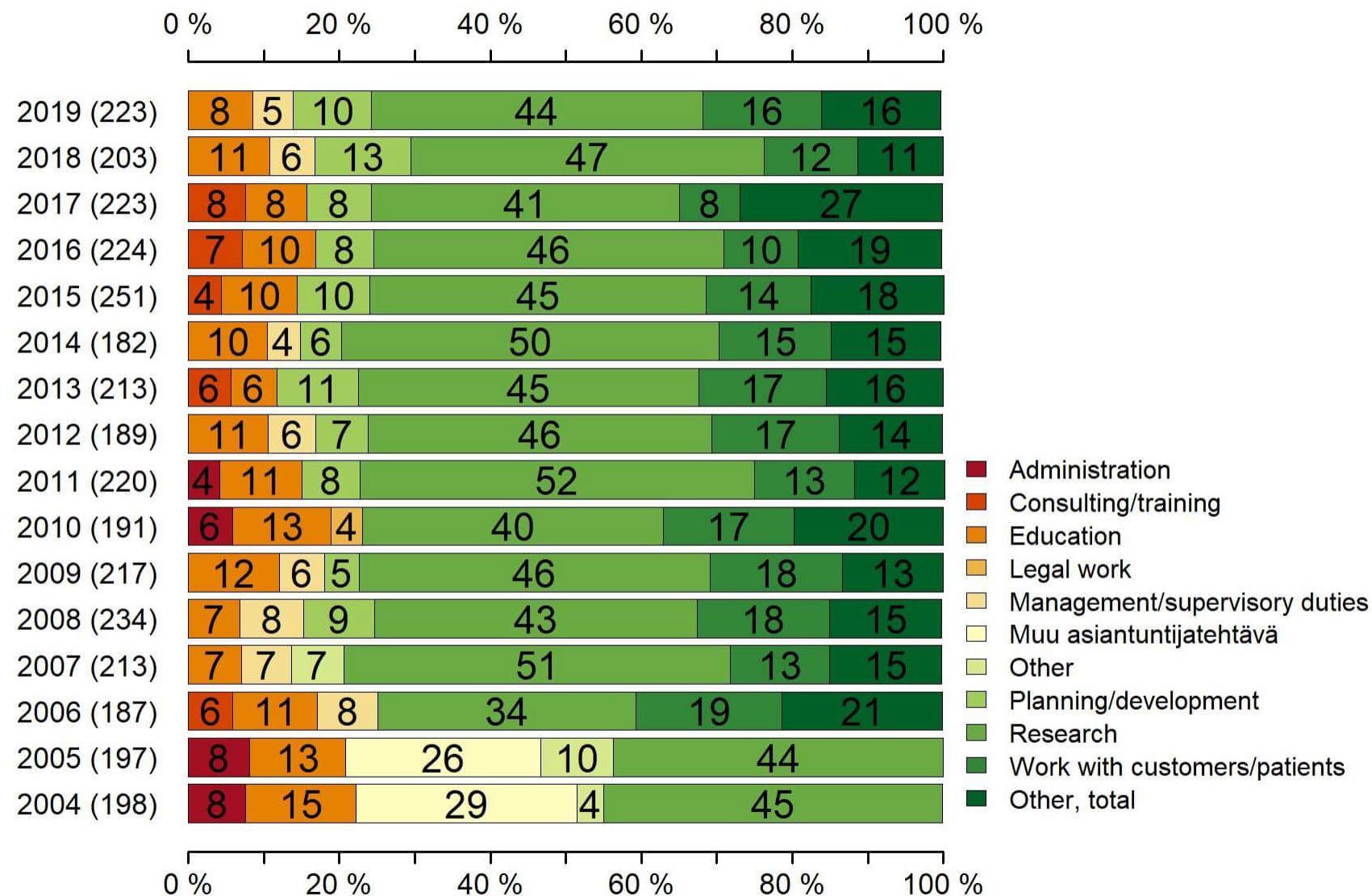
Employer sector five years after graduation

0 % 20 % 40 % 60 % 80 % 100 %



The graph displays information on the graduates of 2018-2019. Number of respondents in brackets. Maximum 5 options is shown. The rest are included in the category Others, total.

The nature of duties five years after graduation

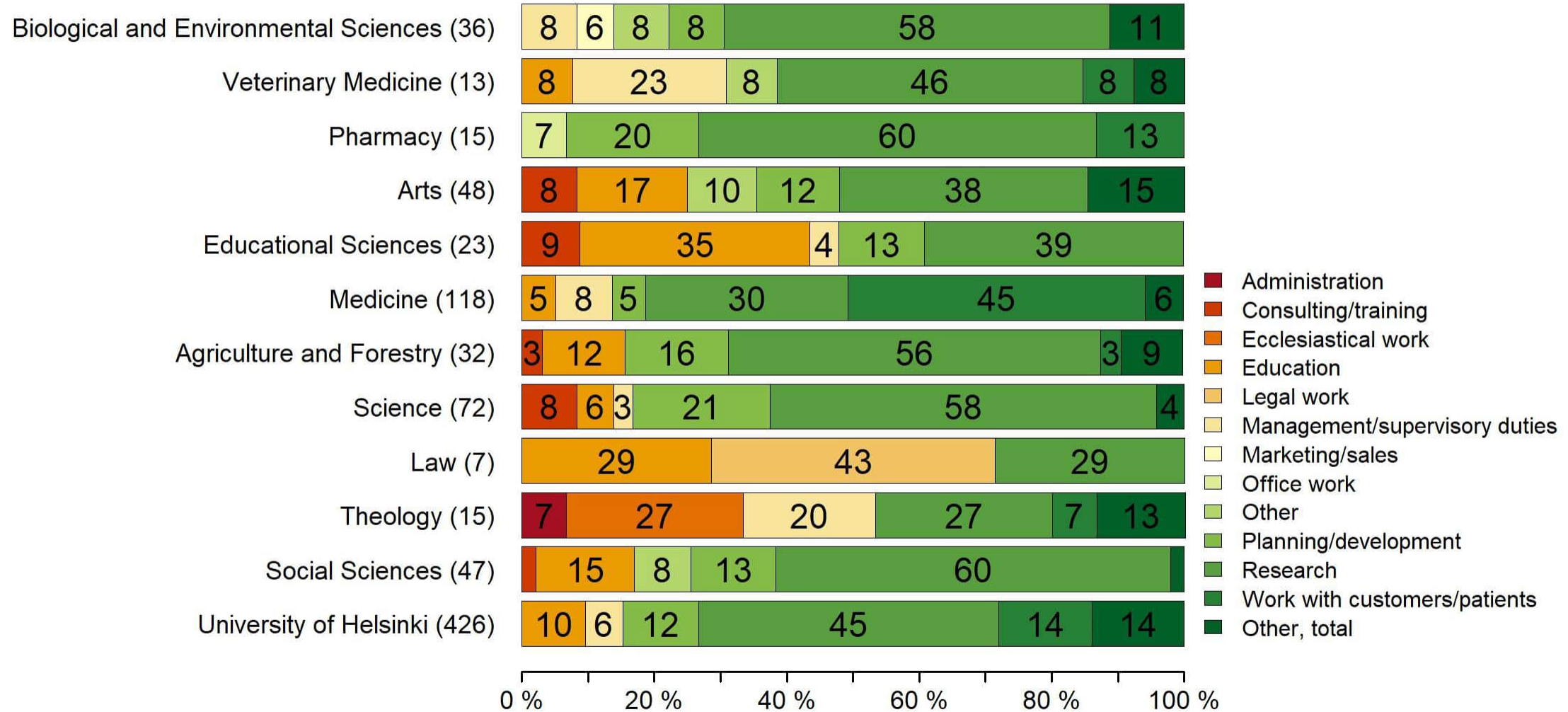


Number of respondents in brackets.

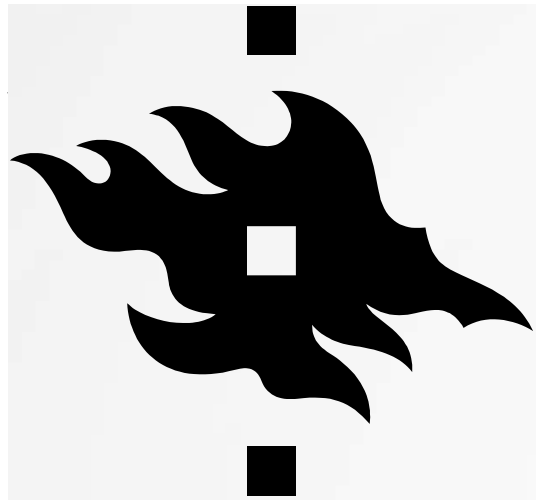
Maximum 5 options is shown. The rest are included in the category Others, total.

The nature of duties five years after graduation

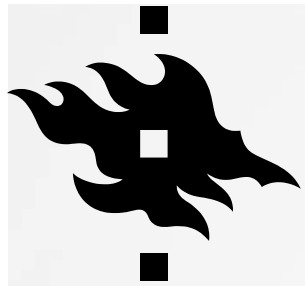
0 % 20 % 40 % 60 % 80 % 100 %



The graph displays information on the graduates of 2018-2019. Number of respondents in brackets. Maximum 5 options is shown. The rest are included in the category Others, total.

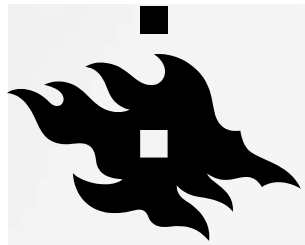


SALARIES



SALARIES

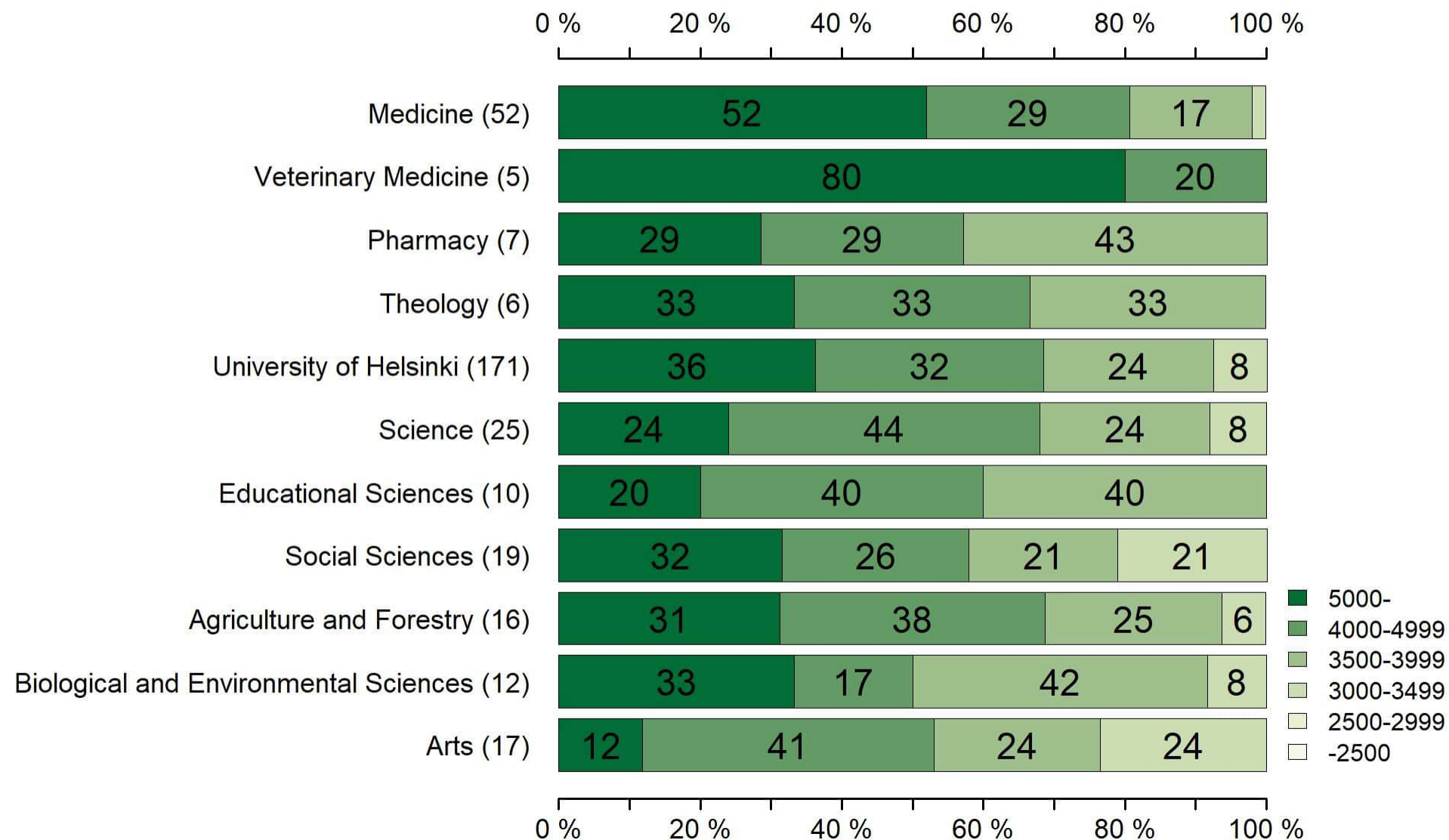
- There are significant differences in the income level of doctoral graduates from different faculties after graduation. The difference is seen both in Statistics Finland's annual earnings statistics and in the monthly earnings statistics of the career monitoring survey.
- Statistics Finland's statistics describe average annual earnings. The highest average earnings are for graduates of the Faculty of Medicine (Doctors of Medicine and Dentistry) and Faculty of Law, the lowest for graduates of the Faculty of Arts, Faculty of Theology and Faculty of Biological and Environmental Sciences
- The career monitoring survey asks for a monthly salary. In the report, salary information is reported by monthly salary groups. At the forefront of the median comparison of monthly salaries are the Faculty of Medicine, Faculty of Law, Faculty of Pharmacy and the Faculty of Veterinary Medicine and the Faculty of Medicine.
- All faculties, including those at the lower end of the faculty salary comparison, have members at the top of the pay scale (5,000 euros and more per month).

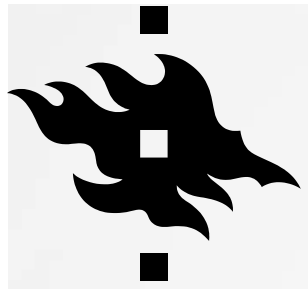


ANNUAL INCOME (AVERAGE), BY FACULTY, GRADUATES OF 2015–2016

Faculty	One year after graduation	Three years after graduation	Five years after graduation
Agriculture and Forestry (N = 63-67)	41 000	49 000	53 000
Arts (N = 76-86)	35 000	38 000	45 000
Biological and Environmental Sciences (N = 73-77)	37 000	40 000	46 000
Educational Sciences (N = 44-49)	40 000	49 000	55 000
Law (N = 27-29)	71 000	84 000	79 000
Faculty of Medicine (N = 180-183)	69 000	77 000	85 000
Medicine/Dentistry (N = 101-107)	88 000	99 000	108 000
Medicine (PhD) (N = 60-64)	41 000	47 000	58 000
Psychologist/speech therapist (N = 16-18)	49 000	51 000	56 000
Pharmacy (N = 19-25)	47 000	48 000	62 000
Science (N = 100-111)	41 000	49 000	56 000
Social Sciences (N = 72-78)	46 000	47 000	55 000
Theology (N = 21-25)	36 000	46 000	46 000
Veterinary Medicine (N = 30-31)	50 000	57 000	64 000
UH total (N = 724-752)	49 000	55 000	62 000

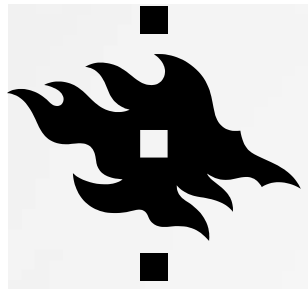
Salary classification organised according to the median





HAS THE PROPORTION OF DOCTORS EXPERIENCING UNEMPLOYMENT INCREASED?

- In 2021, the career monitoring survey changed the way respondents were asked about experiencing unemployment after graduation.
- Previously, it was asked whether the respondent had been unemployed and, if so, for how long. The respondent was asked for information in years and months. In 2021 and onwards, ready-made response options were provided for the duration of unemployment. For this reason, the results of the annual surveys are not directly comparable (see next slide).
- It is possible that the previous way of asking questions led to non-reporting of very short periods of unemployment, such as less than a month or 1-3 months.
- When the quantitative unemployment period responses of previous surveys are classified according to the classification of the 2021 and 2022 survey, it seems that the share of graduates who have been unemployed for less than 6 months has increased. The share of those who have experienced unemployment for more than 6 months has decreased.
- It is also possible that the increase in short-term unemployment after graduation is a real phenomenon, and changing the survey is not the only explanatory factor. The increase in unemployment after short-term graduation could be explained, among other things, by the coronavirus pandemic, because many, including graduates of the University of Helsinki, had furloughed for some time, especially in spring 2020 (see University of Helsinki Career Monitoring Reports 2021).
- It is also entirely possible that the change is explained by both the change in the survey and the coronavirus pandemic.



HOW WAS THE QUESTION CHANGED?

Previous years

Have you been an unemployed job seeker after completing your doctorate?

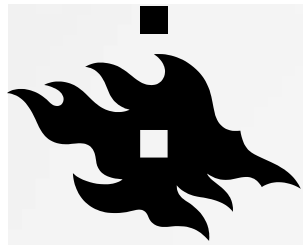
- 1 I have not been unemployed
- 2 Yes, in total _____years
_____ months

change

2021 & 2022 survey

Have you been an unemployed job seeker after completing your doctorate?

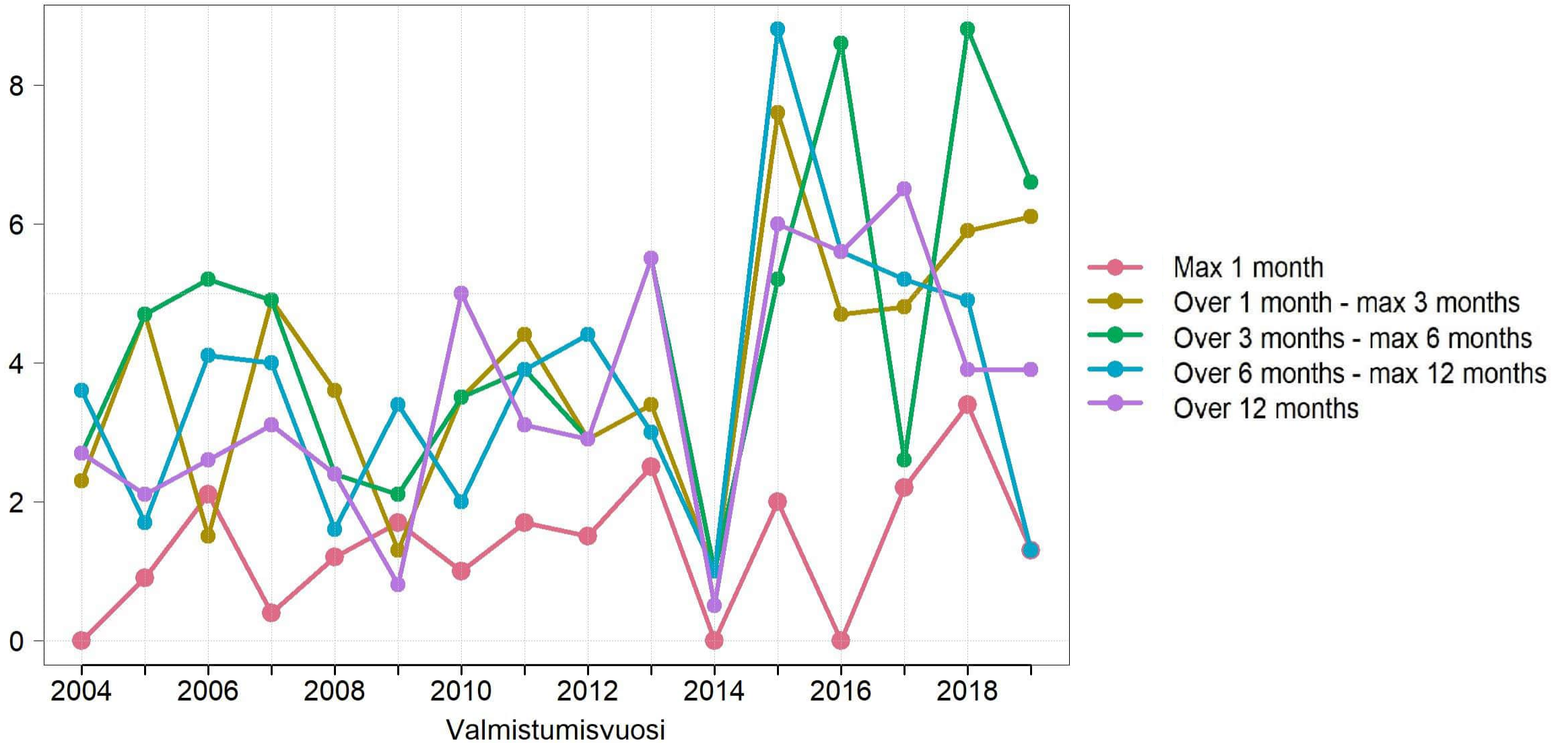
1. I have not been unemployed
2. Max 1 month
3. Over 1 month - max 3 months
4. Over 3 months - max 6 months
5. Over 6 months - max 12 months
6. Over 12 months

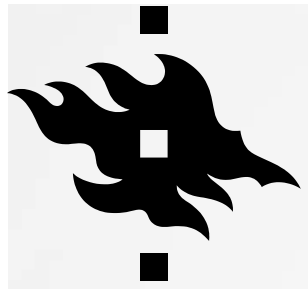


HAS BEEN UNEMPLOYED AFTER GRADUATION, CATEGORIZED BY THE LENGHT OF UNEMPOYMENT, SHARE OF RESPODENTS (%), UNIVERSITY OF HELSINKI DOCTORAL GRADUATES 2018-2019

	Has not been unemployed	Has been unemployed				
		Max 1 month	1-3 months	3-6 months	6-12 months	Over 12 months
Biological and Environmental Sciences (18)	53%	5%	13%	26%	3%	0%
Veterinary Medicine (7)	71%	0%	7%	0%	14%	7%
Pharmacy (9)	67%	0%	20%	13%	0%	0%
Arts (28)	73%	6%	2%	8%	4%	6%
Educational Sciences (13)	87%	0%	0%	4%	4%	4%
Medicine (69)	91%	3%	2%	1%	1%	3%
Agriculture and Forestry (18)	69%	0%	0%	16%	6%	9%
Science (33)	72%	1%	13%	7%	5%	1%
Law (2)	57%	0%	29%	0%	0%	14%
Theology (8)	87%	0%	0%	0%	0%	13%
Social Sciences (24)	81%	0%	4%	11%	0%	4%
University of Helsinki (229)	77%	2%	6%	8%	3%	4%

**HAS BEEN UNEMPLOYED AFTER GRADUATION,
CATEGORIZED BY THE DURATION OF UNEMPLOYMENT,
SHARE OF RESPONDENTS (%),
UNIVERSITY OF HELSINKI
DOCTORAL GRADUATES 2004-2019**

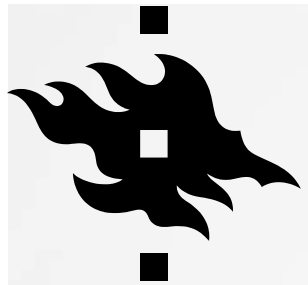




CORRELATION BETWEEN EDUCATION AND EMPLOYMENT AMONG 2019 GRADUATES

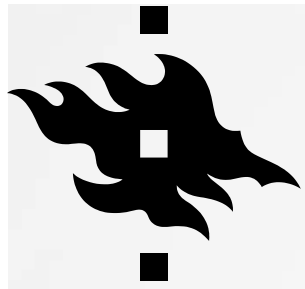
- Respondents used a six-level scale. The figures show response options 4–6 (slightly satisfied-very satisfied/somewhat agree-fully agree).
- Requirements of current job matches well with academic qualifications: 85 %
- Able to use the knowledge and skills acquired at the University in current job: 89 %
- Satisfied with the degree from a career perspective: 88 %

Symbol	Meaning	Symbol	Meaning
	Increase, statistically significant		Decrease, statistically insignificant
	Increase, statistically insignificant		Decrease, statistically significant
	No change (change less than 1% unit)		



KEY RESULTS/ OBSERVATIONS

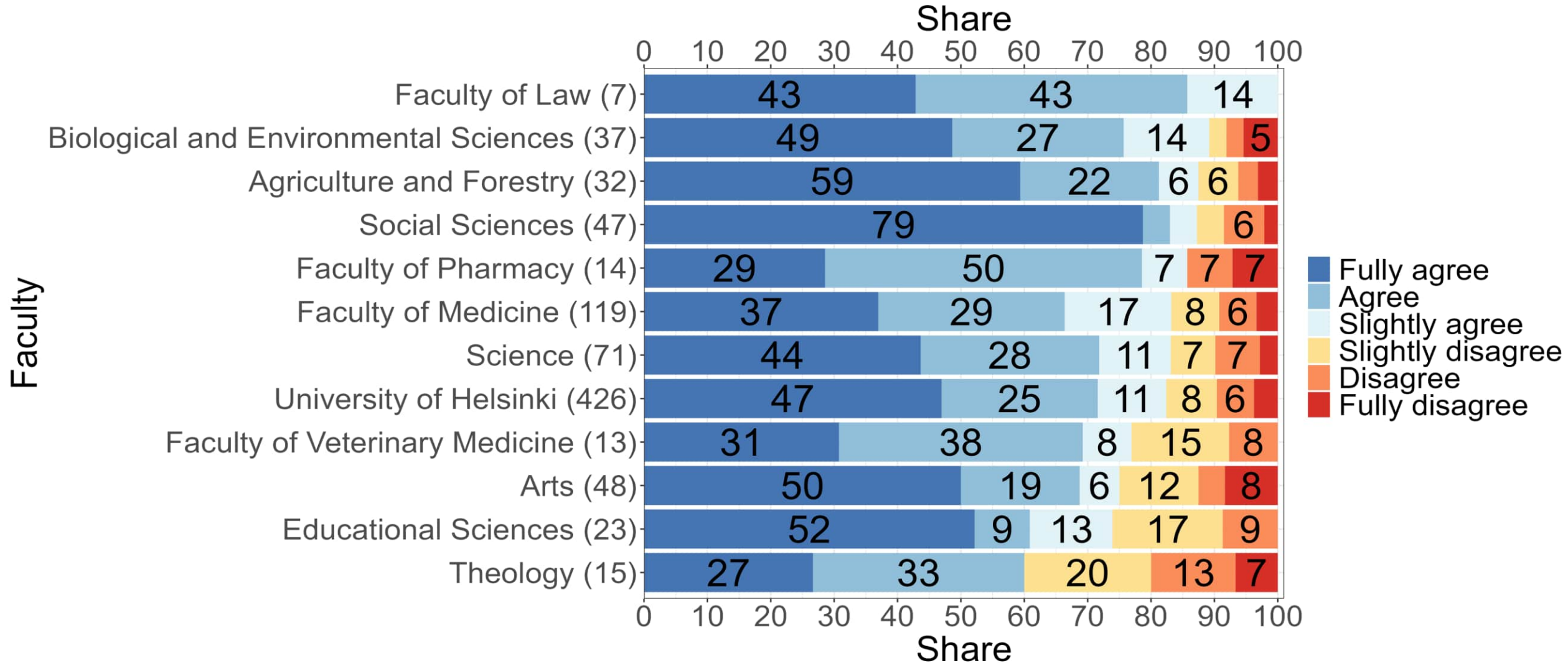
1. Degree satisfaction remains high. 88% are satisfied with their doctoral degree from a career perspective. This assessment is more positive than in the previous survey, but the change is not statistically significant. There are significant differences between faculties.
2. 85% assess that the requirements of their current job matches well with academic qualifications. This assessment is more positive than in the previous survey, but the change is not statistically significant.
3. Faculty level assessment of answers from years 2022 and 2021 (2018-19 graduates) shows some worrying signs of career polarization between doctoral graduates in some faculties.
 - Over 20% Faculty of Arts, Faculty of Educational Sciences, Faculty of Theology and Faculty of Veterinary Medicine doctoral graduates report that they their work does NOT match well with their academic qualifications. Faculty of Theology graduates are the most critical: only 60% think that their job matches well with the level of their education.
 - Only 73% of Faculty of Theology and 79% of Faculty of Arts doctoral graduates see that they are able to use the knowledge and skills acquired at the University in the current job.



CORRELATION BETWEEN EDUCATION AND EMPLOYMENT, 2018–2019 GRADUATES BY FACULTY

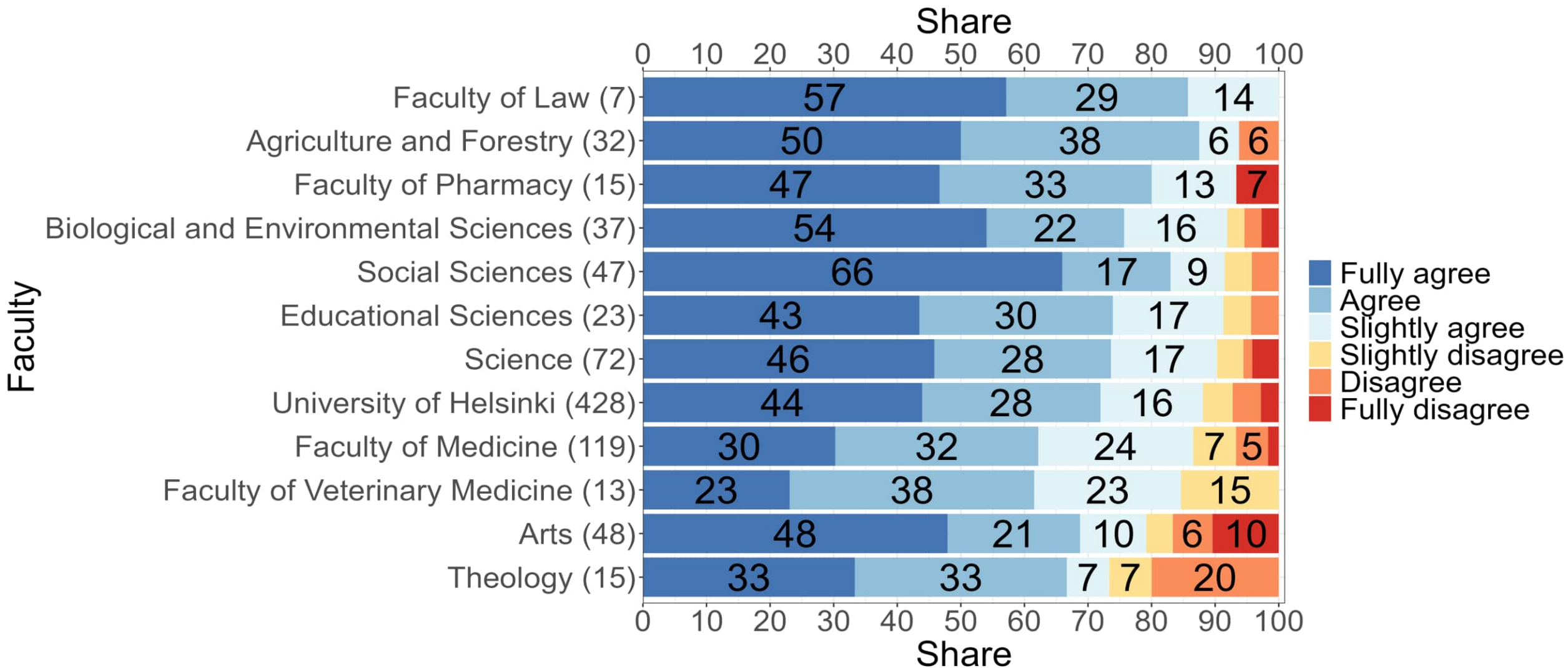
Faculty, number of respondents in brackets	Requirements of current job matches well with academic qualifications*	Able to use the knowledge and skills acquired at the University in the current job*	Satisfied with the degree from a career perspective*
Biological and Environmental Sciences (37-38)	89 %	92 %	95 %
Veterinary Medicine (13-14)	77 %	85 %	86 %
Pharmacy (14-15)	86 %	93 %	87 %
Arts (47-48)	75 %	79 %	79 %
Educational Sciences (23)	74 %	91 %	83 %
Medicine (119-120)	83 %	87 %	90 %
Agriculture and Forestry (32-33)	88 %	94 %	91 %
Science (71-75)	83 %	90 %	89 %
Law (7)	100 %	100 %	71 %
Theology (15)	60 %	73 %	80 %
Social Sciences (47)	87 %	91 %	91 %
University of Helsinki (426-434)	82 %	88 %	88 %

The requirements of current job correspond well with academic qualifications



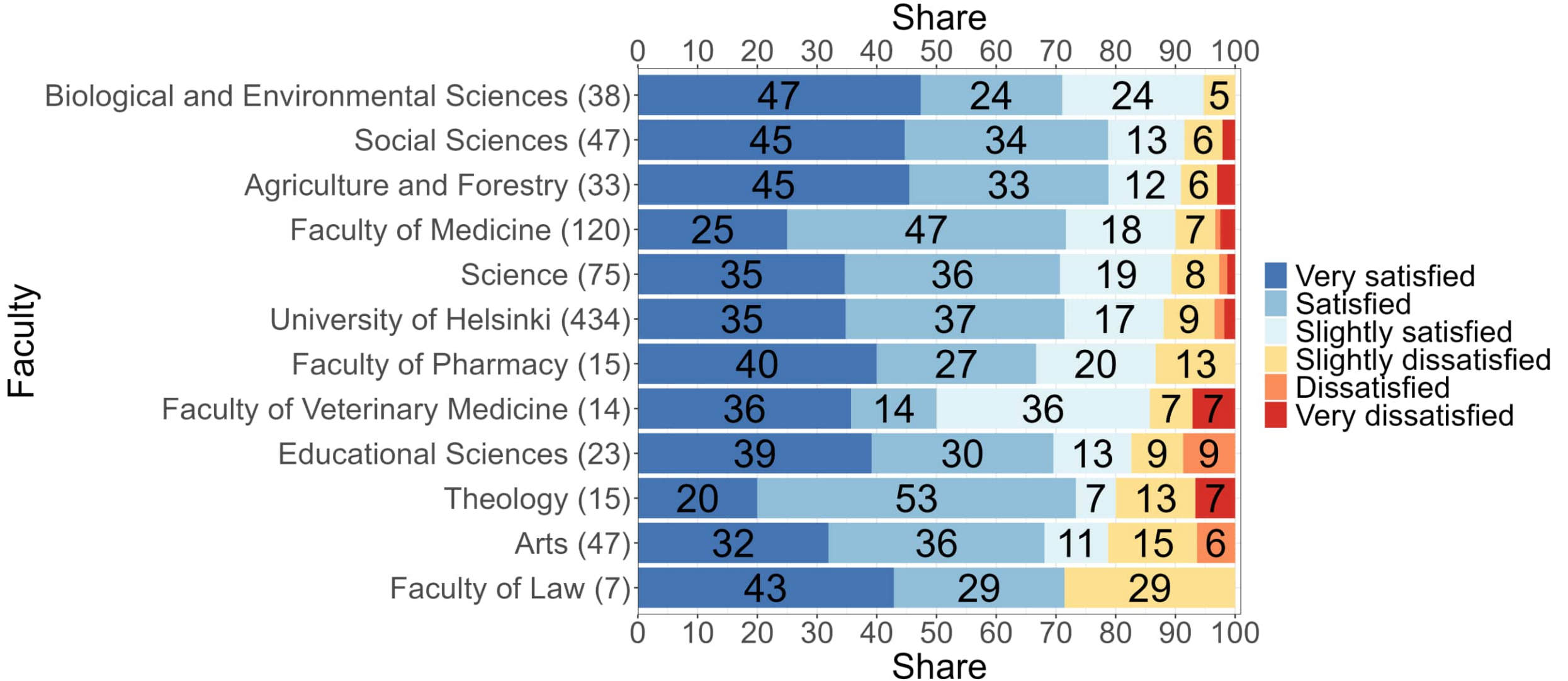
The graph displays information on the graduates of 2018, 2019
In brackets number of respondents

The skills and knowledge I learned at the university can be applied well in my current job

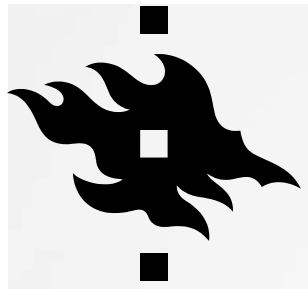


The graph displays information on the graduates of 2018, 2019
In brackets number of respondents

Overall satisfaction with the degree in terms of career

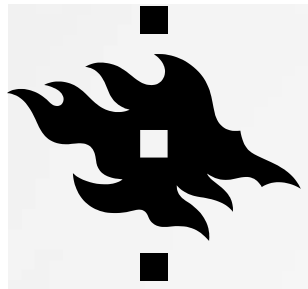


The graph displays information on the graduates of 2018, 2019
In brackets number of respondents



FACTORS AFFECTING EMPLOYMENT AND PROFESSIONAL SKILLS NEEDS, 2019 GRADUATES

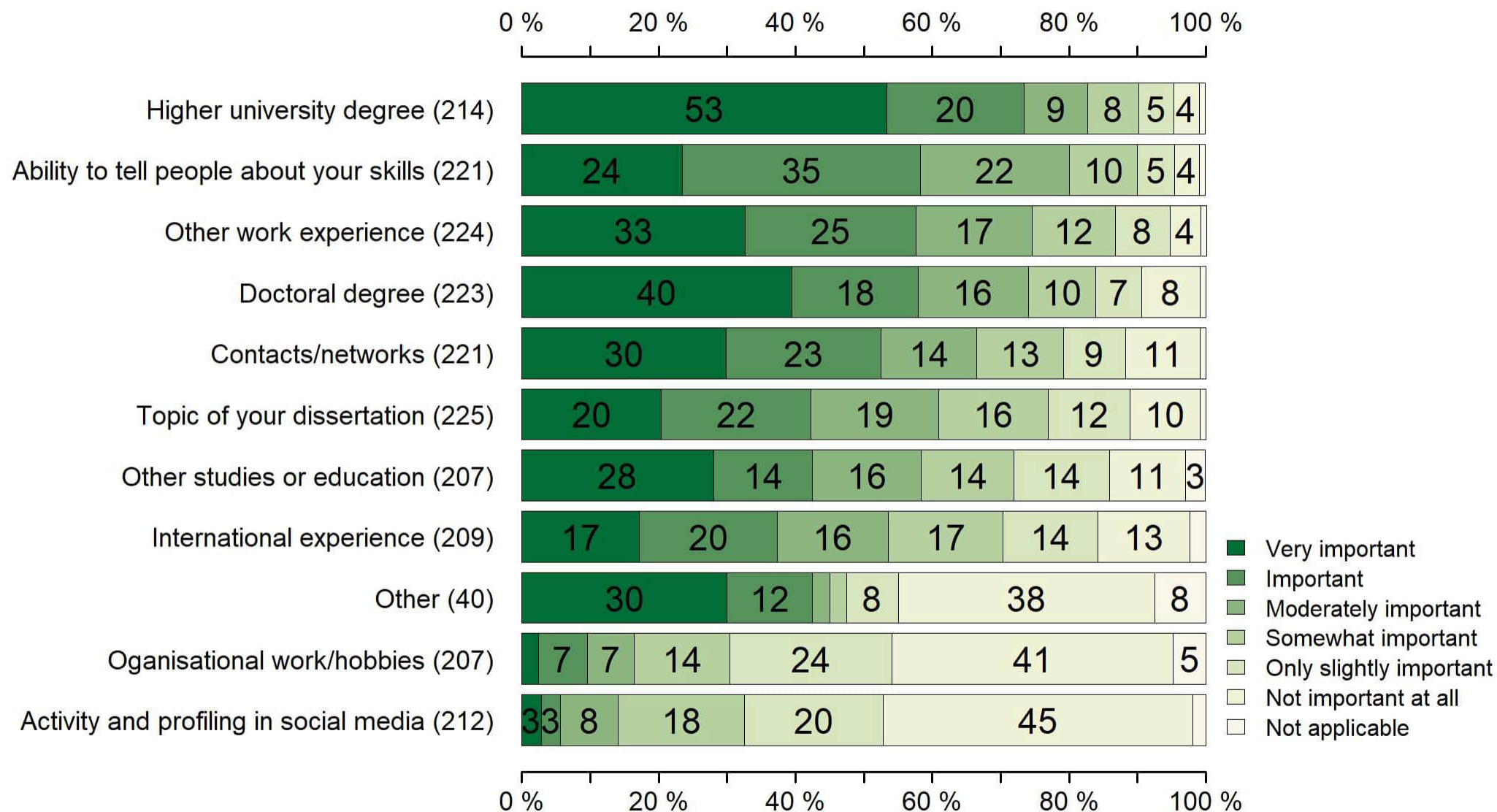
- Most important factors affecting employment*
 - Higher university degree 83 %
 - Ability to describe one's knowledge and skills 80 %
 - Other work experience 75 %
 - Doctoral degree 74 %
 - Contacts and networks 67 %
 - Dissertation topic 61 %
 - Other studies or training 58 %
 - Other 57 %
 - International experience 54 %
 - Experience related to NGO activities or hobbies 16 %
 - Activity and profile on social media 14 %



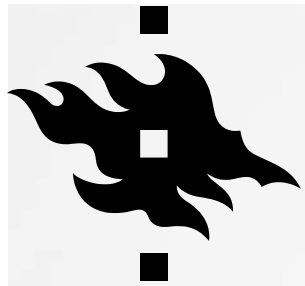
KEY RESULTS/ OBSERVATIONS

- According to the respondents, Higher university degree/ second-cycle (master´s level) degree and the ability to describe one´s knowledge and skills are the has been most important factors that affected their employment after graduation. Doctoral degree, work experience and contacts and networks are also very important.
- Doctoral degree and second-cycle (master´s level) degree are both seen as important for employment. Their relevance differs based on the type of position and organization doctoral graduates have sought to work in. Doctoral graduates working in the university sector and in research positions (in all sectors) see their doctoral degree as highly important, while graduates working outside the university sector and in other expert positions than research tend to highlight the importance of their second-cycle degree more than their doctoral degree (please see the 2020 [doctoral career monitoring report](#), Kangas, Carver, & Sarasjärvi 2020).
- The significance of doctoral degree is especially highlighted by doctoral graduates from Faculty of Agriculture and Forestry, Faculty of Social Sciences, Faculty of Law and Faculty of Biological and Environmental Sciences. International experience is especially important for Faculty of Law, Faculty of Veterinary Medicine, Faculty of Biological and Environmental Sciences, Faculty of Social Sciences graduates.

The factors that have affected employment

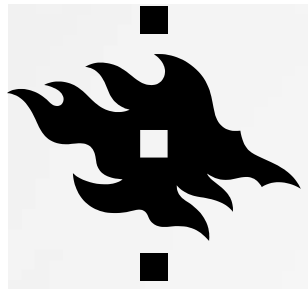


The graph displays information on the graduates of 2019 Number of respondets in brackets.



FACTORS AFFECTING EMPLOYMENT, 2018-2019 GRADUATES, BY FACULTY

	Bio & Env	Vet Med	Phar	Arts	Educ	Med	Agr & For	Sci	Law	Theo	Soc Sci	UH
Higher university degree	82 %	85 %	71 %	79 %	80 %	90 %	88 %	71 %	86 %	73 %	80 %	82 %
Ability to describe one's knowledge and skills	100 %	93 %	79 %	80 %	76 %	70 %	88 %	81 %	86 %	86 %	78 %	80 %
Doctoral degree	86 %	71 %	85 %	65 %	77 %	68 %	91 %	80 %	86 %	47 %	87 %	76 %
Other work experience	50 %	71 %	57 %	80 %	64 %	81 %	73 %	67 %	71 %	73 %	73 %	72 %
Contacts and networks	71 %	64 %	79 %	72 %	80 %	54 %	70 %	66 %	57 %	86 %	73 %	66 %
Dissertation topic	65 %	36 %	57 %	48 %	68 %	46 %	73 %	64 %	86 %	60 %	76 %	59 %
International experience	68 %	69 %	58 %	54 %	60 %	44 %	61 %	54 %	71 %	54 %	67 %	56 %
Other	53 %	77 %	38 %	55 %	40 %	59 %	54 %	47 %	43 %	80 %	45 %	54 %
Other studies or training	50 %	85 %	38 %	45 %	45 %	61 %	48 %	40 %	43 %	73 %	45 %	52 %
Experience related to NGO activities or hobbies	11 %	7 %	43 %	20 %	5 %	13 %	19 %	17 %	0 %	60 %	26 %	18 %
Activity and profile on social media	16 %	23 %	14 %	11 %	10 %	11 %	27 %	17 %	29 %	14 %	18 %	15 %



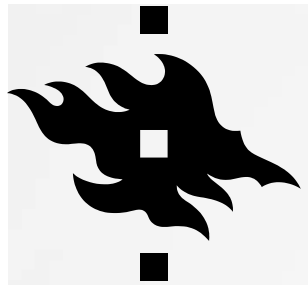
MOST IMPORTANT SKILLS (AUTUMN 2022)

Most important skills needs in work

- Ability to learn and adopt new information 97 %
- Problem-solving skills 96 %
- Analytical, systematic thinking skills 95 %
- Self-management / taking the initiative 94 %
- Resistance to stress 93 %
- Information acquisition skills 91 %
- Cooperation skills 91 %
- Organizational and coordination skills 88 %
- Performing skills 86 %
- Language skills 85 %
- Knowledge and skills related to the research area 84 %
- Project management skills 84 %
- Creativity 83 %
- Methodology and research methods 82 %
- Scientific communication skills 81 %
- Teaching, training and guidance skills 77 %
- Negotiating skills 70 %
- International contacts and networks 70 %
- Operating in a multicultural environment 69 %
- Interdisciplinarity/working in multidisciplinary groups 68 %
- Popularising scientific results 65 %
- Funding applications 58 %
- Supervisory or leadership skills 58 %
- Knowledge of legislation 45 %
- Basic knowledge of business/financial administration 31 %
- Commercialising research results 29 %
- Intellectual property rights competence 27 %
- Entrepreneurial skills 23 %

Most important skills areas in the future (within the five upcoming years)

- Knowledge-integration 75 %
- Self-regulation skills 73 %
- Thinking skills 70 %
- General skills 68 %
- Social competence 65 %
- Language skills and cultural competence 53 %



KEY RESULTS/ OBSERVATIONS

- Most important skills needs in current work for doctors are metacognitive skills like ability to learn, self-management skills and high level cognitive skills like Analytical and systematic thinking skills and problem-solving skills. The same skills are also going to be important in the future.
- Skills needs differ according to work tasks and fields of science. There is, however, a high level of consensus about the most important skills like the metacognitive and high level cognitive skills.
- Interdisciplinarity and working in multidisciplinary groups is especially important for Faculty of Bio and Environmental Sciences and Faculty of Pharmacy. Operating in a multicultural environment is highlighted especially by Faculty of Agriculture and Forestry and Faculty of Science graduates.

SKILLS AND COMPETENCES NEEDED IN CURRENT WORK, SKILL AT LEAST QUITE IMPORTANT, SHARE OF RESPONDENTS (%), 2022 AUTUMN

	Bio & Env	Vet Med	Phar	Arts	Educ	Med	Agr & For	Sci	Law	Theo	Soc Sci	UH
Ability to learn and adopt new information	100 %	100 %	100 %	92 %	100 %	97 %	94 %	99 %	86 %	100 %	100 %	97 %
Problem-solving skills	97 %	100 %	100 %	90 %	96 %	97 %	97 %	99 %	86 %	100 %	98 %	97 %
Analytical, systematic thinking skills	95 %	93 %	93 %	92 %	96 %	96 %	97 %	96 %	100 %	100 %	98 %	96 %
Self-management / taking the initiative	97 %	100 %	100 %	94 %	100 %	92 %	97 %	93 %	100 %	100 %	100 %	95 %
Resistance to stress	97 %	100 %	100 %	88 %	100 %	96 %	97 %	91 %	86 %	93 %	100 %	95 %
Information acquisition skills	92 %	93 %	93 %	88 %	91 %	93 %	97 %	91 %	100 %	100 %	93 %	93 %
Cooperation skills	97 %	93 %	87 %	88 %	87 %	94 %	97 %	89 %	71 %	87 %	100 %	92 %
Organizational and coordination skills	84 %	100 %	93 %	90 %	96 %	88 %	97 %	92 %	83 %	93 %	91 %	91 %
Language skills	97 %	100 %	87 %	83 %	87 %	82 %	97 %	86 %	86 %	80 %	91 %	87 %
Project management skills	87 %	79 %	93 %	85 %	91 %	83 %	97 %	88 %	86 %	93 %	87 %	87 %
Performing skills	79 %	86 %	80 %	85 %	91 %	83 %	94 %	87 %	71 %	87 %	94 %	86 %
Creativity	84 %	86 %	73 %	85 %	100 %	76 %	94 %	89 %	100 %	87 %	94 %	85 %
Knowledge and skills related to the research area	79 %	85 %	87 %	72 %	91 %	81 %	91 %	92 %	100 %	67 %	94 %	84 %
Methodology and research methods	81 %	79 %	87 %	75 %	87 %	78 %	91 %	84 %	71 %	60 %	83 %	81 %
Scientific communication skills	74 %	71 %	67 %	75 %	83 %	85 %	91 %	79 %	86 %	73 %	85 %	81 %
Teaching, training and guidance skills	76 %	57 %	73 %	81 %	96 %	79 %	66 %	72 %	86 %	93 %	79 %	77 %
International contacts and networks	82 %	93 %	80 %	71 %	61 %	62 %	79 %	79 %	86 %	73 %	74 %	73 %
Interdisciplinarity/working in multidisciplinary groups	82 %	64 %	87 %	62 %	61 %	70 %	91 %	71 %	71 %	67 %	72 %	72 %
Negotiating skills	58 %	71 %	73 %	67 %	78 %	77 %	82 %	64 %	43 %	73 %	76 %	71 %
Operating in a multicultural environment	74 %	71 %	60 %	65 %	61 %	66 %	79 %	79 %	43 %	80 %	64 %	69 %
Popularising scientific results	53 %	64 %	80 %	62 %	78 %	63 %	79 %	59 %	71 %	80 %	74 %	66 %
Supervisory or leadership skills	66 %	79 %	73 %	46 %	57 %	62 %	78 %	59 %	71 %	53 %	52 %	61 %
Funding applications	66 %	50 %	47 %	48 %	65 %	47 %	70 %	65 %	43 %	33 %	62 %	56 %
Knowledge of legislation	34 %	64 %	64 %	40 %	52 %	56 %	42 %	31 %	100 %	47 %	40 %	46 %
Basic knowledge of business/financial administration	34 %	36 %	53 %	31 %	30 %	31 %	42 %	35 %	43 %	47 %	24 %	34 %
Commercialising research results	37 %	29 %	60 %	23 %	9 %	27 %	45 %	40 %	14 %	7 %	17 %	29 %
Intellectual property rights competence	47 %	7 %	40 %	38 %	35 %	23 %	33 %	28 %	14 %	13 %	9 %	27 %
Entrepreneurial skills	16 %	21 %	27 %	29 %	23 %	22 %	24 %	25 %	14 %	20 %	22 %	23 %