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Doctorates on the labour market

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- **Where do Doctorates work?**
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- **Sources:**
 - Career follow-up by Aarresaari-network
 - Sainio Juha (2010): Asiantuntijana työmarkkinoille. Vuosina 2006 ja 2007 tohtorin tutkinnon suorittaneiden työllistyminen ja heidän mielipiteitään tohtorikoulutuksesta
 - Statistic Finland
 - Ministry of Education and Culture
 - Ministry of Employment and the Economy



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Career follow-up by Aarresaari-network

Aarresaari Network, a Network of Academic Career Services representing 17 Finnish universities (www.aarresaari.net), is gathering information about higher education graduates' early careers in Finland.

There are separate surveys for master's degree and for doctorate holders. The time period between graduation and the survey is five years for master's degree and 2-3 years for doctorate holders.

There has been three surveys for doctorate holders. First was conducted in 2007, second 2009 and third 2011.





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General employment situation





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Source: Statistical Finland

At the end of 2008 the best employment situation was with doctorate level degrees, whose employment rate was over 90 per cent. The difference between the employment rate of women and men was small, only good one percentage point, while in total population it was three percentage points.

The employment rate was best in the fields of medical and health sciences and engineering and technology.

Sixty-two per cent of the personnel in the field of science and technology worked at specialist tasks and 19 per cent at management. There were great differences between men and women's employment. Nearly one third of men worked at management tasks, while only about every tenth of women.

Almost one third of the personnel in the field of science and technology worked as teachers or such.

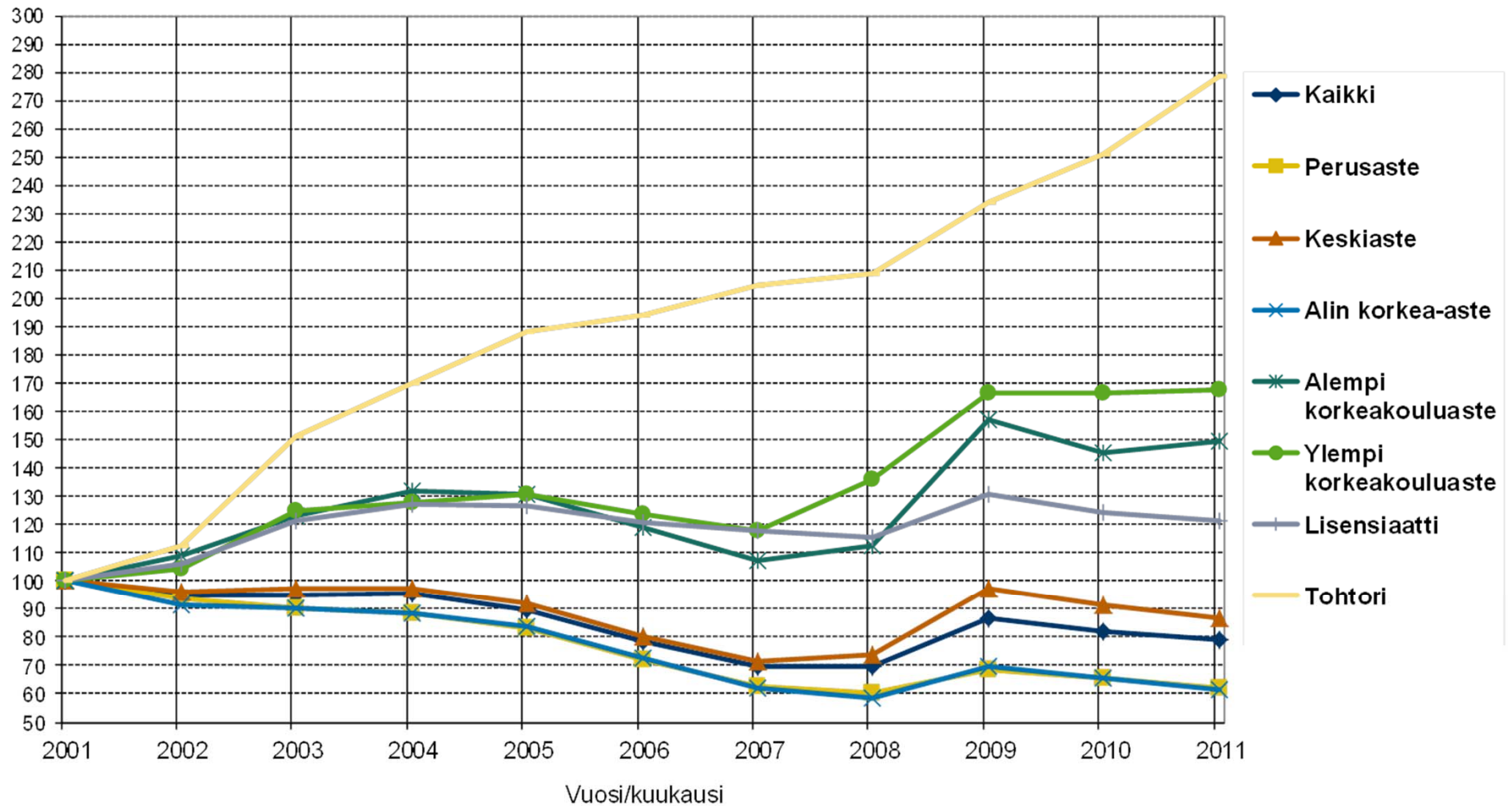




The change of unemployment between 2001-2011

Työttömien määrän muutos koulutusasteittain 2001/12 - 2011/12, 2001/12=100

Ind. 2001/12=100



Source: Ministry of Employment and the Economy



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Employment situation at the time of the survey (%)

<i>Gender/Discipline</i>	<i>Employed</i>	<i>On research scholarship</i>	<i>Unemployed</i>	<i>Family leave or full time study</i>	<i>Else for example pension</i>
Total	88	4	2	5	2
Men	90	4	2	1	3
Women	85	3	2	8	1
Health Sciences	98	0	2	0	0
Education	94	0	0	5	1
Economics	93	2	0	2	3
Psychology	93	0	3	3	0
Engineering	92	2	3	3	1
Medicine	90	2	0	6	1
Social Sciences	86	3	5	2	4
Agriculture and Forest	83	0	8	8	2
Natural Sciences	81	7	2	7	2
Humanities	78	11	4	4	4



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Principal employer at the time of the survey (%)

<i>Gender/Discipline</i>	University	Private enterprise	Government	Municipality	Association, foundation or the like
Total	37	23	13	20	7
Men	37	31	13	14	5
Women	38	16	13	26	8
Humanities	58	10	7	14	11
Natural Sciences	50	22	16	7	6
Social Sciences	47	11	17	15	11
Education	42	7	8	38	4
Economics	42	31	6	16	5
Engineering	31	48	16	3	1
Psychology	30	20	7	23	20
Agriculture and Forestry	26	20	43	4	8
Health Sciences	21	7	7	54	12
Medicine	12	14	8	63	3



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Where the job is located in?

Gender/Discipline	elsewhere		
	Uusimaa	in Finland	Abroad
Total	43	49	7
Men	45	46	9
Women	42	52	6
Agriculture and Forestry	63	31	6
Engineering	56	37	7
Psychology	53	47	
Social Sciences	48	49	4
Economics	47	42	11
Medicine	41	56	3
Natural Sciences	36	51	13
Health Sciences	33	63	5
Humanities	32	62	6
Education	25	72	3



Nature of respondents principal job (%)

<i>Gender/Discipline</i>	1	2	3	4	5	6	7	Total
Total	40	15	3	9	4	10	11	92
Men	42	12	3	10	4	8	13	92
Women	38	17	4	8	3	13	10	93
Natural Sciences	61	9	3	4	3	2	11	93
Agriculture and Forestry	54	10	8	8	4	0	8	92
Psychology	47	3	0	7	10	27	3	97
Engineering	46	5	3	10	4	1	23	92
Social Sciences	45	19	5	8	5	0	7	89
Humanities	41	34	3	6	2	0	6	92
Economics	31	24	5	14	8	0	7	89
Health Sciences	25	25	2	23	7	0	16	98
Education	17	44	4	12	4	0	15	96
Medicine	16	3	2	6	2	63	3	95

- 1 = Research
- 2 = Education or teaching
- 3 = Administrative tasks
- 4 = Leadership or managerial duties
- 5 = Consulting or training
- 6 = Customer service / patient work
- 7 = Planning or development





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Does job correspond to academic qualification?

Almost three respondents out of four estimated their job correspond to their academic qualification well and only five percent of the respondents experience the level of their job demands considerably lower than their qualifications.

54 percent of the respondent inform, that doctoral degree was prerequisite for their current job.

Almost two doctors out of three estimated, that they were able to utilize the skills and competencies that they acquired during doctoral studies in their current job.





Are Doctors satisfied with their current job?

Gender/Discipline	1	2	3	4	5	6	7	8	9	10
Total	88	52	78	75	87	12	28	35	45	55
Men	86	52	76	71	86	9	25	32	48	54
Women	91	51	80	79	89	14	31	38	43	56
Medicine	90	60	84	84	92	15	32	19	46	69
Social Sciences	88	52	78	76	85	11	32	40	47	62
Economics	92	55	86	81	92	13	25	27	52	61
Psychology	100	37	87	83	97	17	27	33	40	60
Health Sciences	93	45	75	77	84	14	41	23	43	59
Education	86	42	76	73	87	13	38	29	34	53
Natural Sciences	87	58	79	71	85	12	24	49	46	51
Humanities	89	44	75	76	91	11	30	48	41	50
Engineering	86	50	75	70	82	9	22	30	52	50
Agriculture and Forestry	90	40	74	62	92	10	33	48	42	44

54 Per cent of Master degree holders think that they can keep balance between work and rest of their life.

1. My job is interesting.
2. My job offers possibilities of career advancement.
3. My job offers possibilities to develop myself.
4. I have varied job assignments.
5. I have an independent and responsible job.
6. My job is psychologically too demanding.
7. There is too much work.
8. It is uncertain whether my work contract will be renewed.
9. I can keep a balance between work and the rest of my life.
10. My career corresponds with my goals.





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Employment situation in the future

Forecasting and optimization are complex





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Career planning





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WHY?





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Motivational factors that have had influence on starting doctoral studies

<i>Gender/Discipline</i>	Research motivated	General motivated	Dirfters	Encouraged
Total	33	27	21	19
Men	33	29	18	20
Women	32	25	24	18
Health Sciences	44	32	12	12
Humanities	43	27	20	10
Education	39	33	12	17
Psychology	38	35	7	21
Engineering	35	27	18	20
Economics	33	25	21	22
Social Sciences	28	30	21	12
Medicine	26	24	17	33
Natural Sciences	25	29	33	14
Agriculture and Forestry	15	23	34	28



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Main benefits or advantages of PhD when finding a job

The advantage which has received most mentions is a degree itself in other words that the doctor's degree is a necessity or a proficiency requirement to certain tasks.

A one fourth of the respondents estimates that the doctor degree indicates certain know-how and validity and brings cogency.

12 per cent of the respondents estimate that the appreciation of the degree has benefited in the work search.





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Main disadvantages of PhD when finding a job

Almost half of those doctors, that has experienced disadvantages, estimate that they are overeducated in some job they have applied. This way they experienced that their work possibilities had narrowed.

37 per cent informed that they have encountered into negative attitudes and prejudices towards the doctors.

Some employers seem to be appreciating the master degree and longer work experience more than the doctor's degree.





Has the subject of your doctoral thesis strengthened your position as an expert in working life?

Gender/Discipline	Yes	To an Extent	No	Can't say
Total	40	38	17	5
Men	43	38	14	5
Women	37	38	20	5
Economics	50	38	7	4
Education	42	46	11	1
Health Sciences	49	36	13	2
Psychology	38	45	14	3
Agriculture and Forestry	43	35	15	7
Engineering	42	37	16	5
Humanities	33	42	17	8
Social Sciences	43	38	17	3
Natural Sciences	39	33	19	9
Medicine	33	42	21	3





After having completed my doctoral degree...

Gender/Discipline	1	2	3	4	5	6
Total	64	61	52	49	35	44
Men	61	58	51	49	35	44
Women	66	64	53	50	35	44
Agriculture and Forestry	70	61	39	43	22	26
Economics	64	66	58	58	36	59
Education	65	69	61	53	25	46
Engineering	56	58	52	44	38	43
Health Sciences	73	76	71	53	40	53
Humanities	69	62	56	48	27	42
Medicine	68	48	40	49	30	54
Natural Sciences	66	65	53	50	43	39
Psychology	63	57	47	57	37	47
Social Sciences	63	67	60	58	33	39

This does not mean that 65 per cent would stay in the university after PhD because only about 30 per cent of the respondents were before the doctor's degree in the employment to the university.

1. My salary has increased because of my doctoral degree.
2. My job assignments are more demanding.
3. My job assignments are more interesting.
4. I have gained a better position at my work.
5. I have received a job from a new employer.
6. My position at the labour market is better.





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About skills





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Competences required by the work

Gender/Discipline	Research	Substance	Management	Teaching	Communication	Organising	Other
Total	45	44	12	16	17	10	8
Men	42	46	13	13	16	8	8
Women	47	42	12	18	17	12	8
Social Sciences	66	27	10	19	16	4	5
Psychology	61	39	11	18	11	7	7
Natural Sciences	53	45	5	9	19	12	8
Humanities	53	35	16	27	20	8	15
Health Sciences	50	23	28	25	8	10	
Economics	48	22	21	21	22	9	14
Agriculture and Forestry	47	56	11	9	13	22	9
Engineering	41	47	13	10	17	12	10
Education	41	21	18	46	14	9	8
Medicine	20	75	6	7	15	6	4





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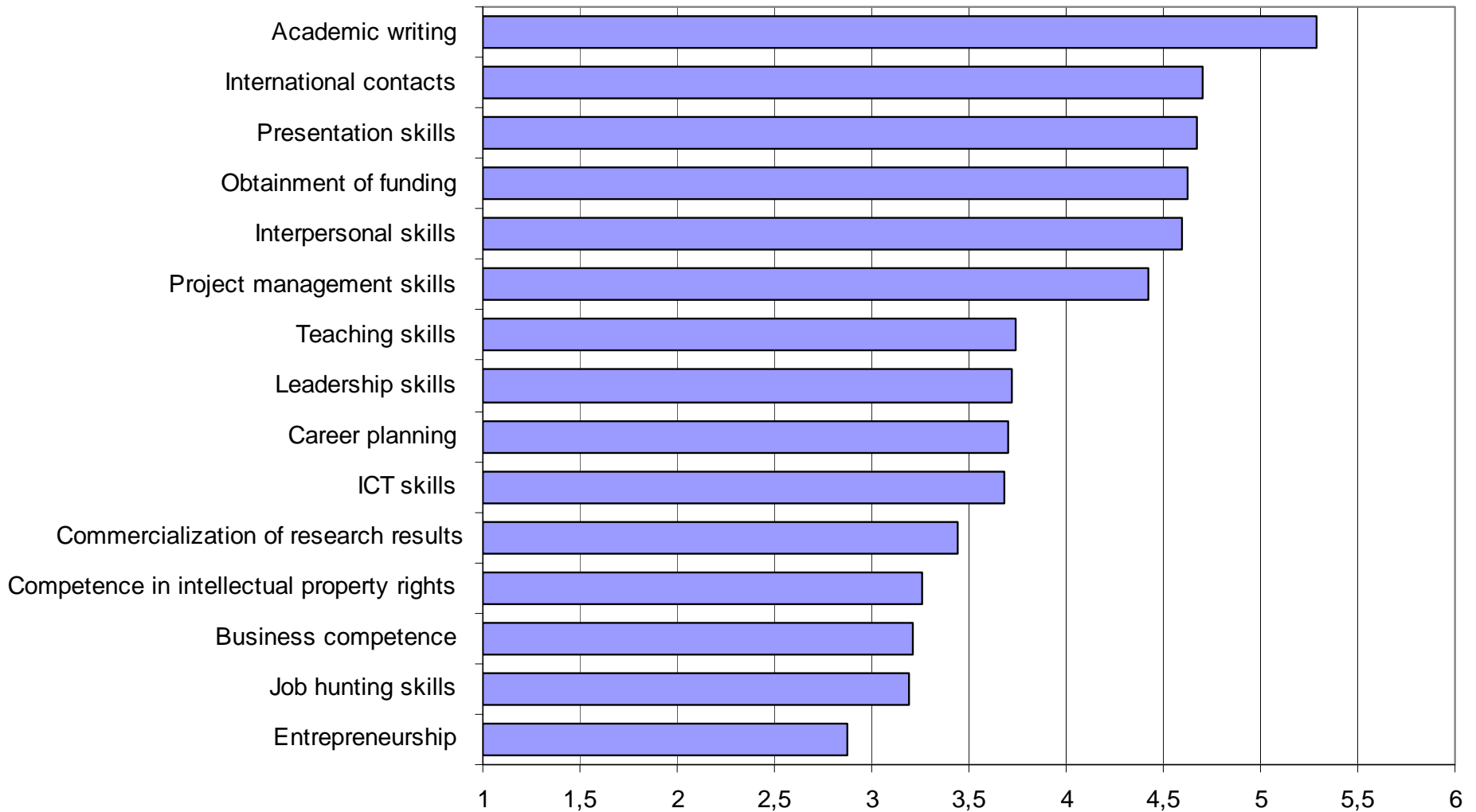
Transferable skills:

1. Working with others/team working
2. Communication/presentation skills, both written and oral
3. Communication/dialogue with non-technical audiences (public engagement)
4. Project and time management skills
5. Problem solving
6. Research management -- research leadership
7. Creativity and the ability for abstract thought
8. Knowledge of research methods and technologies beyond the Doctoral project
9. Teaching skills
10. Research ethics
11. Enterprise skills (entrepreneurship, commercialisation, innovation, patenting and knowledge transfer)
12. Use of science in policy-making

Source: Research Careers in Europe Landscape and Horizons. 2009. A report by the ESF Member Organisation Forum on Research Careers. <http://www.esf.org/publications.html>



How much emphasis should be placed on the acquisition of the following skills and competencies when planning doctoral education?





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Summary

**At the moment employment situation of PhDs is good,
but not totally without problems.**

**Everyone should give a thought about their career
plans as early stage as possible.**

**PhD brings mainly benefits regarding employment
and work.**





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