

# Universities 2006

## **Annual Report**

Ministry of Education publications 2007:19





# Universities 2006

## Annual Report

Ministry of Education publications 2007:19



OPETUSMINISTERIÖ

*Undervisningsministeriet*

MINISTRY OF EDUCATION

*Ministère de l'Éducation*

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## 2006 in review

In 2006, Finnish universities were the subject of lively public debate, major internal change and operational development. Universities continued several active reform projects, including the degree reform, the introduction of personal study plans, implementation of the new salary system and development of quality assurance. The aim of all these reforms is to develop the quality and operations of universities in order to meet changing needs and numerous challenges to education and research more effectively.

On 8th March 2006, Minister of Education Antti Kalliomäki published a memorandum entitled 'Principles of the Structural Development of Higher Education Institutions', which aims to increase operational quality and efficiency, improve the effectiveness of the public research system, promote internationalisation and contribute to implementation of the central government productivity programme. In terms of the Ministry of Education, structural development policies focus on implementation of the spring 2005 Government Resolution on the Structural Development of the Finnish Public Research System.

Universities prepared plenty of plans and actions in line with structural development policies. By the end of August 2006, the Ministry of Education had received about 200 project proposals; 50 of these were granted special additional funding for implementation. In addition, three major priority projects were launched with a view to creating university consortia, involving the Universities of Joensuu and Kuopio, the University of Turku and Turku School of Economics and Business Administration, as well as Helsinki University of Technology, Helsinki School of Economics and the University of Art and Design Helsinki within the Helsinki metropolitan area.

During 2006, a two-man committee comprising Niilo Jääskinen and Jorma Rantanen explored ways of reform-

ing the financial and administrative status of universities. The interim report submitted by the committee in the spring of 2006 resulted in an amendment to the Universities Act to allow all universities to have off-budget activities. Since the beginning of 2007, all universities have held the same status as the University of Helsinki and Åbo Akademi University have traditionally enjoyed in this respect.

The Ministry of Education Decree on University Master's Degree Programmes, relating to implementation of the new degree structure, was amended and its scope was extended during the year. These separate Master's programmes will lead to increasing provision of English-language and multidisciplinary study modules in particular. An amendment was also made to the provision included in the Universities Act governing the status of the National Library of Finland. In addition, Parliament passed a Bill for an Act on the Right in Inventions made at Higher Education Institutions, which will influence universities' activities in terms of the use and exploitation of inventions.

During the Finnish EU Presidency in the latter half of the year, modernisation of universities, the role of universities in innovation policy and the new financial instruments introduced in the European Research Area featured prominently on the European Union's agenda. European policies support the university policy line carried out in Finland.

The Science and Technology Policy Council of Finland adopted a policy report entitled 'Science, Technology, Innovations' in the summer of 2006. The proposals put forward in the report include continuing Finland's strategy based on a high level of competence, considerable increases in resources allocated to universities and science, as well as new models for promoting research, strategic

centres of excellence and a national system for financing infrastructures. Plans are now being prepared for these new initiatives.

2006 was the last year of the 2004–2006 performance agreement period. Universities were generally successful in achieving targets set for the period. The number of Master's degrees completed at universities during 2006 totalled 13,128, which is an all-time high. Actual figures for the whole university system were well within the target range, standing at 93%. The number of doctorates amounted to 1,409, which is close to the 2005 record number and 97% of the joint target. It is fair to say that degree targets have been at a very sensible level – realistic, but challenging for all concerned.

International co-operation progressed further during 2006. The number of foreign degree students was 5 434, equating to a 10 % increase on the previous year. Student exchanges increased to 4,875 incoming students and 4,683 outgoing students, which shows that Finnish universities are becoming more and more attractive to foreign students.

The performance management system between the Ministry of Education and the universities was developed in a more strategic direction in view of the new 2007–2009 performance agreement period, while research funding criteria were diversified and rewards for quality and performance were enhanced. The policies for developing

performance management were jointly agreed on the basis of the unanimous proposal made by a committee of university representatives.

The revised interactive KOTA information system was put in place in time for the spring performance negotiations, introducing very extensive electronic services.

The Ministry of Education issued its statement on final accounts in June 2006. The statement and its feedback for universities on their previous year's performance were developed according to the objectives set for development of state governance in terms of final accounts and performance management.

Development of Finnish universities has focused on further improvement of operational quality, internationalisation and efficiency. The stable development of public funding has been secured by a provision of the Higher Education Development Act, which guarantees an annual increase of at least EUR 20 million in university core funding appropriations on top of the increase in salary expenditure for 2005–2007. The aim is to support quality improvement through structural development by pooling existing resources and reallocating them to universities' priority areas and new needs. It would seem possible to strengthen the status of Finnish universities due to their positive internal developments and as measures planned to reinforce the prerequisites for research become reality.

Helsinki, 27th February 2007

Markku Mattila  
Ministry of Education  
Director of the University Division

# Finnish universities in 2006

## Finnish universities in 2006

Universities

Multi-faculty universities 10

Specialised universities 6

Art academies 4

## Students

New students 20,150

New students within the 18–20 age group 32.0%

Bachelor's and Master's degree students  
in attendance 137,500

Postgraduate\* students in attendance 20,400

Total students in attendance 160,400

\*In Finland, postgraduate degrees include licentiates and doctorates.

## Degrees

Bachelor's degrees 3,800

Master's degrees 13,100

Licentiates 490

Doctorates 1,410

## Staff

Teaching staff on budget funding 7,880

Teaching staff on external funding 530

Research staff on budget funding 1,200

Research staff on external funding 5,140

Students at graduate schools on budget funding 1,190

Students at graduate schools on external funding 570

Other staff on budget funding 9,610

Other staff on external funding 4,600

## Funding

Budget funding and building investments, EUR 1,260 million

Supplementary funding, EUR 698 million

Budget funding, 0.75% of GDP

## Funding decisions:

Academy of Finland funding for universities, EUR 126 million

National Technology Agency (Tekes) funding for universities, EUR 87 million

## Premises

Space (in 1,000m<sup>2</sup> net) 2,076

## Open University instruction

Students 74,000

## Continuing education

Students 89,000

## Some key figures from 2006\*

New students per teacher 2.6

Bachelor's and Master's degree students in attendance  
per teacher 17.4

Master's degrees per teacher 1.7

Doctorates per professor 0.6

Expenditure funded from budget (excl. premises expenses)  
per student in attendance EUR 6,514

\*Relative to staff funded from budget

## Indicators of social impact

### *Employment and placement in postgraduate education (situation for 2004 graduates at end of 2005):*

- 92.2% of those with a Master's degree (2001–2003) (previous year 92.3%)
- 88.9% of those with a doctorate (2001–2003) (previous year 91.1%)

### *Placement at university:*

- An average of 38% (2006) of new students had graduated from upper secondary school during that same year

### *University drop-outs:*

- 5.4% of Bachelor's or Master's degree students dropped out of degree programmes (2005)
- 4.7% of Bachelor's or Master's degree students (2005) dropped out of university altogether and did not continue in any other education sector.

## Universities

University of Helsinki

University of Joensuu

University of Jyväskylä

University of Kuopio

University of Lapland

University of Oulu

University of Tampere

University of Turku

University of Vaasa

Åbo Akademi University

Helsinki University of Technology

Lappeenranta University of Technology

Tampere University of Technology

Helsinki School of Economics

Swedish School of Economics and Business Administration

Turku School of Economics and Business Administration

Academy of Fine Arts

Sibelius Academy

Theatre Academy

University of Art and Design Helsinki





# Objectives

## **Priorities in the 2003–2008 Development Plan for Education and Research**

- ensuring the basic right to education for all
- improving the quality and effectiveness of education
- improving the efficiency of the education system
- improving the completion rate
- forging closer links between education and working life
- supporting children and young people
- promoting adults' opportunities for education and training
- strengthening research activities
- developing teaching and learning environments
- advancing international co-operation
- promoting equality and preventing exclusion
- promoting immigrant education and training.

## **In addition, the emphasis within university education and research will be on:**

- reform of the degree structure and development of teaching
- development of student selection
- enhancement of regional impact
- quality improvement in education and appropriate quality systems
- internationalisation in education and research
- promotion of researcher training
- development of quality and impact assessment in research.

## Joint targets for the university system

### Social impact

Universities play an increasingly significant role within the national and regional innovation system and in promotion of our culture, competitiveness and well-being. This calls for development of the prerequisites for internationalisation, research and innovation activities at universities.

The aim is to achieve a high international standard and quality of activities and to guarantee the supply of highly educated workforce and researchers. The content of university education and degrees will be developed to meet the changing needs of society more effectively both in qualitative and quantitative terms.

### Operational performance

Universities will increase international co-operation and networking, in the field of research in particular. They will expand foreign-language instruction and recruitment of foreign students and academic staff. Annually, a total of 5,400 Bachelor's and Master's degree students will study abroad for periods of three months or longer.

Universities will improve the quality of study processes by intensifying study planning, guidance and progress monitoring. They will develop their supply of continuing professional education, degree education and Open University provision geared to employed adults.

Universities will develop their contacts with business and industry and other sectors of society by enhancing their business competence, innovation services and commercial utilisation of research findings by means such as the opportunities provided by university-owned companies. The regional impact of universities will be reinforced through networking and increasing interaction with key stakeholders in the regions.

Universities will continue to develop their internal structures and procedures by defining their profiles so as to consolidate their priority areas and will expand financing for their operations by supplementing budgetary core funding from external sources. This supplementary funding must account for at least 36% of total funding and must support the basic mission of the universities and their related objectives.

Through development of university operations, the age for university admission and graduation will be reduced, degree completion rates will rise and drop-out rates will fall.

At least 75% of entrants in all fields of study will complete their Master's degree within the normative target period.

### Management and human capital

Universities will develop their working communities in order to improve their competitiveness as employers and enhance the working capacity and job satisfaction of their staff, promoting an egalitarian academic community and working environment.

### Quantitative targets

The number of new university students will be kept at the 2003 level. The aim is to admit 22,500 new students annually, including special admissions. The annual quota for new degree students coming through the Open University is 1,240.

Over the 2004–2006 period, the average target number was 14,064 for Master's degrees and 1,450 for doctorates. Annually, a total of 5,415 Bachelor's and Master's degree students will study abroad for periods of three months or

longer. The annual target for Open University provision is 20,000 full-time equivalent student places.

### Resources

The 2006 State Budget allocated EUR 1.26 billion to cover the operating costs of universities. The level of university core funding was maintained and supplementary funding was targeted at national development projects, such as information society projects, development of learning processes and environments, and improvements in the prerequisites for research. In accordance with the Higher Education Development Act, appropriations for university core funding in 2006 rose by EUR 20 million in addition to the increase in salary expenditure. Overall, university operating costs in 2006 increased by EUR 32.3 million.

The universities also expanded their funding base by acquiring supplementary funding totalling EUR 698 million in addition to budgetary core funding. This external funding mainly comprises nationally competed research funding, co-funded operations, fee-charging operations, donations and sponsorship.



# Quality and quality assurance

International co-operation in terms of university quality assurance continued as part of the Bologna process. The universities' quality assurance systems and their international comparability were developed to ensure that they meet European standards by 2007. The universities continued to co-operate with the Finnish Higher Education Evaluation Council (FINHEEC) in developing their quality assurance systems.

Progress was made in audits of the quality assurance systems of higher education institutions during 2006. For the purposes of auditing, the Finnish Higher Education Evaluation Council produced an Audit Manual, which outlines the background, objectives, focus areas and methods of audits, the principles of signing up for audits and follow-up procedures. During 2006, the Council published an audit report on the quality assurance system of the University of Kuopio and initiated audits of the Swedish School of Economics and Business Administration and Tampere University of Technology. Two follow-up audits were made on the Council's initiative, based on earlier evaluations: media and communications (first audited in 2002) and Open University instruction (first audited in 2002). An international evaluation of doctoral education was completed and the evaluation report was published in January 2006. The results of the evaluations were useful in terms of developing university operations.

Quality assurance focused in particular on the learning process and the student's role. Several evaluations relating to these themes were carried out in co-operation with the Finnish Higher Education Evaluation Council, exploring areas such as the role of students in assessment of the quality of teaching, planning the extent of e-learning and curricular development processes at universities, along with a benchmark evaluation of teaching development activities carried out at the University of Lapland, Lappeenranta University of Technology and the University of Vaasa. In addition, centres of excellence in education, adult education and artistic activity were nominated for 2007–2009.

The committee for development of the evaluation system of education and training continued the work it started in late 2005. The committee aims to evaluate the current status of evaluation throughout the education

system and to make a proposal for organisation of external evaluation. The committee will continue its work up until the end of March 2007.

The country review of the Finnish tertiary education system commissioned by the OECD was completed in 2006, noting that the Finnish system was strong and provided a good foundation for future challenges. Publication of the review led to debates on implementation of its recommendations for Finland. Another OECD review completed in 2006 compared the regional contribution of higher education institutions in 12 countries, including the University of Jyväskylä and Jyväskylä University of Applied Sciences from Finland.

## **The centres of excellence in education nominated by the Finnish Higher Education Evaluation Council were as follows:**

### ***University of Helsinki:***

- Department of Finnish Language and Literature
- Department of Political Science
- Department of Slavonic and Baltic Languages and Literatures

### ***University of Joensuu:***

- Faculty of Forestry

### ***University of Jyväskylä:***

- Chydenius Institute, class teacher training for mature students
- Department of Physics

### ***University of Kuopio:***

- Degree Programme in Medicine

### ***University of Oulu:***

- Department of Biology
- Department of Dentistry
- Department of Process and Environmental Engineering

### ***University of Tampere:***

- Department of History

### ***University of Turku:***

- Faculty of Law
- Psychonet (in co-operation with the Universities of Helsinki, Joensuu, Jyväskylä and Tampere and Åbo Akademi University)

***University of Vaasa:***

- Department of Management

***Lappeenranta University of Technology:***

- Department of Industrial Management

***Helsinki University of Technology:***

- Basic Education in Computer Science

***Swedish School of Economics  
and Business Administration:***

- Management and Organisation

***Sibelius Academy:***

- Department of Folk Music

***Theatre Academy:***

- Department of Sound and Lighting Design

***University of Art and Design Helsinki:***

- Media Lab

**The centres of excellence in artistic  
activity nominated by the Arts Council  
of Finland were as follows:**

***University of Tampere:***

- Department of Acting

***Academy of Fine Arts:***

- Department of Media Studies

***University of Art and Design Helsinki:***

- Department of Interior Architecture and Furniture Design

**The universities of excellence in  
adult education nominated by  
the Finnish Higher Education  
Evaluation Council were as follows:**

***University of Helsinki***

***University of Jyväskylä***

***University of Oulu***

***University of Vaasa***

***University of Art and Design Helsinki***



## Finnish universities in international comparisons

Comparison between universities in different countries is challenging, because their university systems are heterogeneous entities of academic work and university governance.

International comparisons between universities apply different criteria. Two widely publicised comparisons, the ranking lists produced by the Shanghai Jiao Tong University and The Times Higher Education Supplement (THES), are largely based on measuring the standard of research through various quantitative indicators. By way of example, the THES 2006 ranking list included six Finnish universities among the top 200 European institutions.

Finnish universities participate in several international university networks. The University of Helsinki is a member of the League of European Research Universities (LERU), while the University of Turku and Åbo Akademi University are members of the Coimbra Group, an association of long-established European universities. In addition to these groups, universities participate in regional and disciplinary networks.

Individual universities have also commissioned international evaluation panels to evaluate their own research systems. Overall evaluations of research have been carried

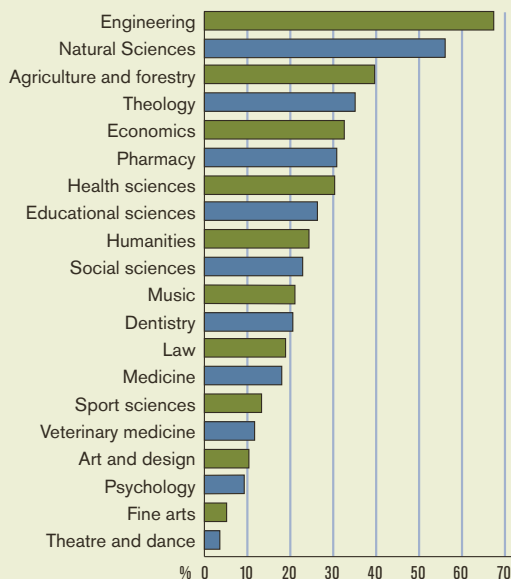
out by the University of Helsinki in 1999 and 2005, the University of Kuopio in 2000, the University of Tampere in 2004 and the University of Jyväskylä in 2005. The research system of the University of Oulu will be evaluated during 2007. These evaluations have ranked each university research system at a high international level.

The recent OECD country review of the Finnish tertiary education system cites a determined approach, a well-structured higher education system, an effective dual system and a good student financial aid system as being the strengths of Finnish higher education policy. Areas requiring improvement include the inflexibility of the higher education system, internationalisation and funding practices and levels. Finland's current higher education system provides a strong foundation for future development work.

The two-cycle degree system based on the Bologna process and the ECTS-based credit system, introduced at the same time, will facilitate comparability of Finnish degrees in Europe. The Bologna process aims to create a common European Higher Education Area by 2010 with a view to increasing the competitiveness and attractiveness of European higher education relative to other continents.

# Student selection and Bachelor's and Master's programmes

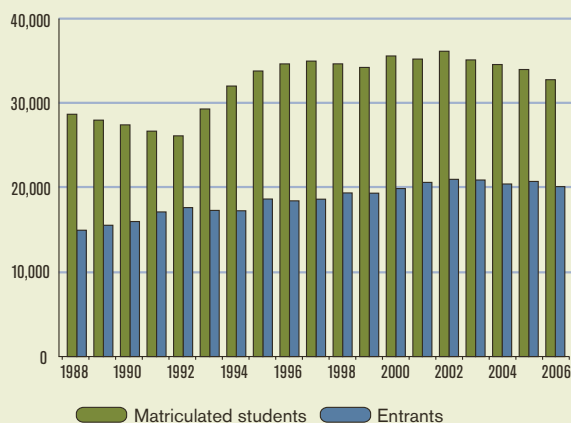
**Chart 1 Student selection in 2006 by field of study (percentage of applications accepted)**



\* Each applicant is entered under one field of study once only, however, an applicant may appear under different fields of study more than once.

Source: Finnish National Board of Education

**Chart 2 Matriculated students and university entrants, 1988–2006**



Source: KOTA, Statistics Finland and

## Changes in student selection

University student selection is being developed so as to promote effective placement in studies. The main measures being implemented include streamlining entrance examinations, harmonisation of scoring systems, increased admissions based on school reports, fewer units responsible for admissions and closer co-operation during the selection process. The Ministry of Education granted special project funding with this in mind.

Universities implemented joint application procedures in biology, engineering and architecture, English language, economics, educational sciences and computer science. They co-operated in student selection in environmental sciences and mathematics as well as psychology and social work and explored opportunities for co-operation in social sciences.

Study placement is being improved so as to raise the proportion of admissions of those graduating from secondary education during that same year to 50% by the end of 2006 and to 55% by the end of 2008. In the year under review, the percentage averaged 38%. There was considerable variation from sector to sector, with the best result being achieved in engineering and natural sciences.

Implementation of the joint university admissions system started in 2006. The aim is to introduce the new system in two stages: the electronic applications system will be in use in time for the 2008/2009 academic year and the full system will be in place as of 2010/2011.

The University of Helsinki co-ordinates the International Admissions Service (IAS) project involving 15 universities. The IAS provides Finnish universities with support services for recruiting international students.

In 2006, the universities received over 158,700 applications (KOTA), which is equivalent to 56,200 applicants (HAREK). Some 88,400 applicants sat entrance examinations and 27,600 were admitted, 56.3% of them women. Nearly 18,400 new students started at university in the autumn of 2006; 34% of the entrants were aged 19 or younger.

## Degree reform

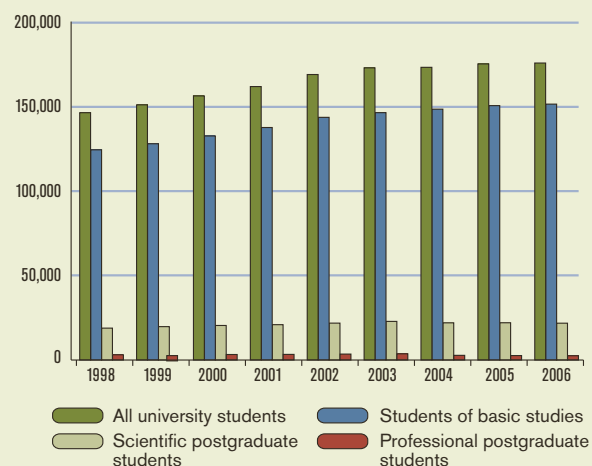
Since 1st August 2005, universities have started to provide education according to the two-cycle degree system (based on the first- and second-cycle degrees in the Bologna process). During the transition period, students may also complete their degrees according to the old system. Topical issues at universities included ensuring the effectiveness of the new degree system and introduction of personal study plans. Universities planned monitoring of degree reform, while also preparing for evaluation of the reform due in 2010. They also started developing their doctoral education (third-cycle degrees according to the Bologna process) during 2006.

Separate Master's programmes will be integrated as a natural part of the education system during the transition period of the degree reform. The Ministry of Education has requested that universities submit separate proposals for Master's programmes starting in 2005, 2006 and 2007. Those approved by the Ministry have been included in the Decree on University Master's Degree Programmes (1359/2006).

The University of Turku Research Unit for the Sociology of Education (RUSE) is conducting a follow-up study on the degree structure reform, funded by the Ministry of Education. The W5W support project (Graduation in Five Years), focusing on development of monitoring the degree structure reform and the third cycle, ended in 2006. The project will continue to receive project funding granted by the Ministry of Education to cover 2007–2009.

An amendment to the Universities Act concerning the right to study, effective as from 1st August 2005, defines target completion periods for Bachelor's and Master's degrees. The Act requires universities to arrange teaching and study guidance in a way which enables students to graduate within the normative time. Monitoring of normative times, as required by the Act, applies to students who started their studies on or after 1st August 2005. In 2006, universities developed monitoring of progress and study guidance. Introduction of personal study plans will support monitoring of students' progress.

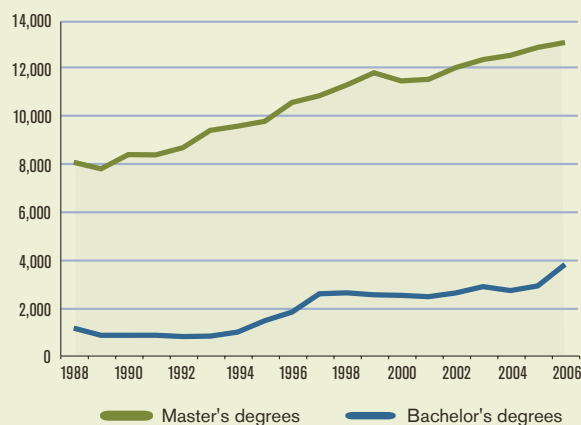
**Chart 3** Number of students, 1998–2006\*



\* Data includes students both present and absent. The number of students in 1997–2003, calculated on December 31. As of 2004, the number of students, calculated on September 20.

Source: KOTA and Statistics Finland

**Chart 4** Bachelor's and Master's degrees, 1988–2006



Source: KOTA

The Ministry of Education granted project funding to support universities in development of study processes. The Ministry also encouraged universities to adopt a so-called passive register system as a tool for monitoring students' progress.

### **Online teaching enhanced**

All universities have implemented online studies across university boundaries. These activities have been promoted with co-ordination from the Finnish Virtual University by building student mobility and support services for online teaching and learning. The Virtual University will become a permanent fixture at the beginning of 2007, when an independent service unit for the Virtual University will be established under the auspices of Helsinki University of Technology.

The Ministry of Education provided financing to the tune of EUR 9 million to cover Virtual University activities in 2006.

### **Increase in number of degrees**

The number of university students remained at the same level as the previous year. Universities had a total of 160,400 students registered as being in attendance: 137,500 Bachelor's and Master's degree students, 20,400 postgraduate students and 2,500 other students. Including those temporarily absent, universities had a total of 176,600 degree students, 53.8% of whom were women.

In 2006, universities awarded a total of 13,128 Master's degrees, which is 1.6% higher than in 2005. The target set for the number of Master's degrees for 2004–2006 (14,064) was not achieved, despite this positive development. The median duration of studies was 6 years in 2005. The number of Bachelor's degrees completed was over 3,800, which is 31% higher than the previous year.



# Postgraduate education

## Postgraduate education evaluated and developed

Considerable progress has been made in reaching the goals set in 1995 when the graduate school system was being established: to improve the quality of postgraduate education and to make it more systematic, to reduce the time spent on doctoral theses and to lower the age of new doctorates, to enhance thesis supervision, to step up co-operation between research groups and to increase international collaboration in education and research. Reports published during the year under review included the proposal by the Ministry of Education committee for development of researcher training for good practices and development of postgraduate education and the international evaluation of doctoral training co-ordinated by the Finnish Higher Education Evaluation Council. According to these reports, the graduate school system has resulted in more method, quality and efficiency in Finnish postgraduate education, although there is still room for further improvement. Additional efforts were made to promote internationalisation of graduate schools and co-operation between them and business and industry.

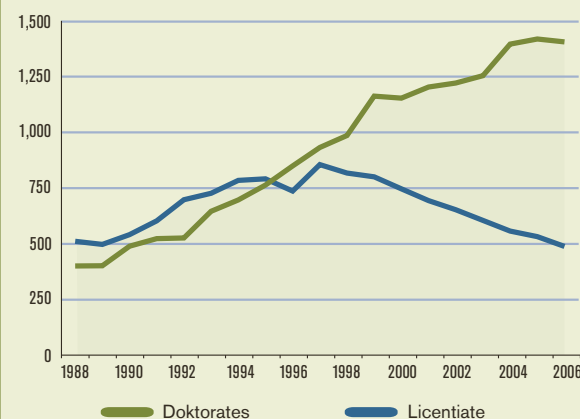
Universities operated 124 graduate schools financed by the Ministry of Education. These included about 4,500 full-time doctoral students, 1,458 of them receiving funding via the Ministry of Education. A significant proportion of graduate schools are networks involving several universities, with 16 universities acting as co-ordinators. All universities participate in the graduate school system.

The ninth national application round for graduate schools got underway. In June 2006, the Ministry of Education made a decision on the schools which will start operating at the beginning of 2007, based on a proposal by the Academy of Finland. The number of graduate school co-ordinators financed by the Ministry of Education increased considerably.

## Number of doctorates

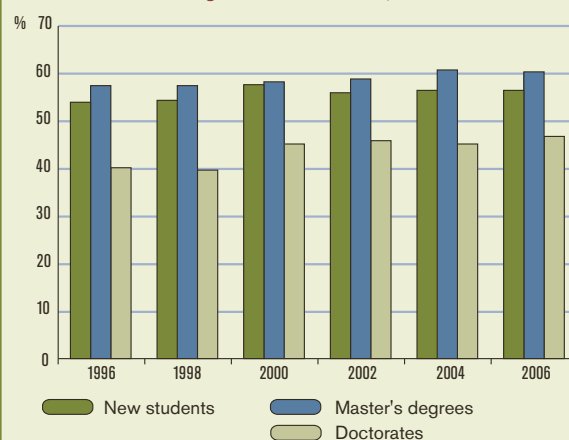
The number of doctorates remained almost unchanged from the previous year. The annual target of 1,450 set for 2004–2006 was almost achieved; 1,409 doctorates were completed, compared with 1,422 in 2005. There were 489 licentiates, compared with 533 during the previous year.

Chart 5 Licentiate and doctorate, 1988–2006



Source: KOTA

Chart 6 Percentage of women among new students, Master's degrees and doctorates, 1996–2006

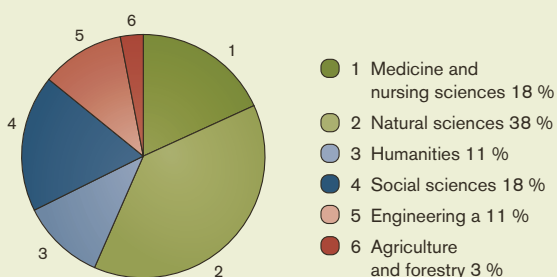


Source: KOTA

Field of research	Graduate schools	Percentage of doctoral students (%)
Natural sciences and technology	44	43
Bio and environmental sciences	14	14
Culture and social and political sciences	45	26
Health sciences	16	17

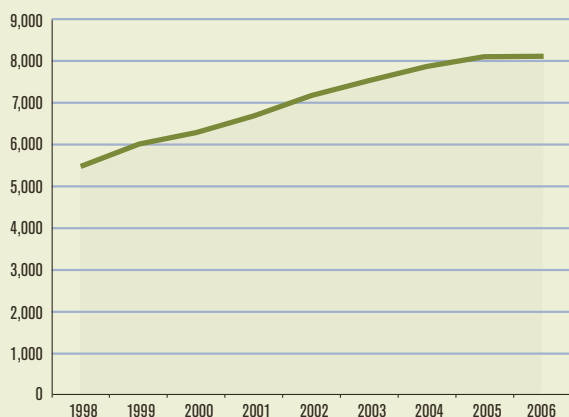
# Research

**Chart 7 Academy of Finland decisions on research funding by field of research 2006**



Source: Academy of Finland

**Chart 8 Research personnel \* 1998–2006**



\* Also includes graduate school research students

Source: KOTA

## Encouraging increase in research funding

Research funding continued to increase. At almost 2.5%, Finnish research staff represent the highest percentage of the employed labour force in the OECD countries. Long-term input into researcher training has ensured an adequate supply of competent researchers. The number of doctorates has nearly doubled during the last ten years: from 765 in 1995 to 1,409 in 2006.

The GDP share of R&D expenditure in Finland (3.48% in 2005) is one of the highest in the OECD countries. Finnish public R&D funding as a share of the GDP is also among the highest in the world.

The Ministry of Education channelled additional research funding agreed by the Government into competitive funding allocated by the Academy of Finland and into university core funding. These jointly accounted for 41% of total public R&D funding in 2006.

The 2006 budget gave the Academy of Finland a total of EUR 205.6 million in authorisations for research projects, representing EUR 30 million more than the previous year. The Academy used its funding to support fields of special relevance to Finland, topical research projects and new growth fields, by means such as launching six new fixed-term research programmes. Research funding was also used to promote the international activities of graduate schools and development of postdoctoral research careers and job structure.

In 2006, a total of 39 centres received funding as part of the Academy of Finland's two national Centres of Excellence in Research programmes, 16 within the 2002–2007 programme and 23 within the 2006–2011 programme. The total funding for the 2002–2007 programme will come to EUR 33 million.

**The Academy of Finland designated the following units  
as centres of excellence in research, listed by the co-ordinating university:**

***University of Helsinki***

- Applied Microbiology Research Unit
- Centre for Environmental Health Risk Assessment  
(with the National Public Health Institute and the National  
Veterinary and Food Research Institute (EELA))
- Centre of Excellence for Study of Variation, Contacts  
and Change in English (with the University of Jyväskylä)
- Centre of Excellence in Ancient Greek Written Sources
- Centre of Excellence in Cancer Biology
- Centre of Excellence in Computational Molecular Science
- Centre of Excellence in Global Governance Research  
(with the University of Turku)
- Centre of Excellence in Inverse Problems  
(with the University of Kuopio, Helsinki University of Technology,  
the University of Oulu, Lappeenranta University of Technology)
- Centre of Excellence in Metapopulation Research
- Centre of Excellence in Plant Signal Research  
(with the University of Turku)
- Centre of Excellence in Virus Research  
(with the University of Jyväskylä)
- Developmental Biology Research Programme
- From Data to Knowledge Research Unit  
(with Helsinki University of Technology)
- Helsinki Brain Research Centre (HBRC)  
(the University of Helsinki, Helsinki University of Technology,  
and Hospital District of Helsinki and Uusimaa)
- History of Mind Research Unit (with the University of Jyväskylä)
- Research Unit of Geometric Analysis and Mathematical Physics  
(with the University of Jyväskylä)
- Research Unit on Economic Structures and Growth
- Research Unit on Physics, Chemistry and Biology  
of Atmospheric Composition and Climate Change (with the  
University of Kuopio and the Finnish Meteorological Institute)

***University of Jyväskylä***

- Centre of Excellence in Evolutionary Research
- Centre of Excellence in Learning and Motivation Research
- Centre of Excellence in Nuclear and Accelerator Based Physics
- Centre of Excellence in Political Thought and Conceptual  
Change

***National Public Health Institute, University  
of Helsinki, Samfundet Folkhälsan and  
Stockholm Karolinska Institutet***

- Centre of Excellence in Complex Disease Genetics

***University of Kuopio***

- Centre of Excellence for Research in Cardiovascular Diseases  
and Type 2 Diabetes

***University of Oulu***

- Centre of Population Genetic Analyses  
(with the University of Helsinki)

***Tampere University of Technology***

- Centre of Excellence in Signal Processing

***University of Tampere***

- Finnish Research Unit for Mitochondrial Biogenesis  
and Disease (FinMIT) (with the University of Helsinki)

***Helsinki University of Technology***

- Bio- and Nanopolymers Research Group  
(with the University of Helsinki and the University of Turku)
- Centre of Excellence in Adaptive Informatics Research
- Centre of Excellence in Computational Complex Systems  
Research
- Centre of Excellence in Computational Nanoscience
- Centre of Excellence in Low Temperature Quantum Phenomena  
and Devices (with Technical Research Centre of Finland VTT)
- Centre of Excellence in Systems Neuroscience  
and Neuroimaging Research (with the University of Helsinki)
- Smart and Novel Radios Research Unit (SMARAD)

***University of Turku***

- Centre of Excellence in Evolutionary Genetics and Physiology  
(with the University of Helsinki)
- Research Programme on Male Reproductive Health

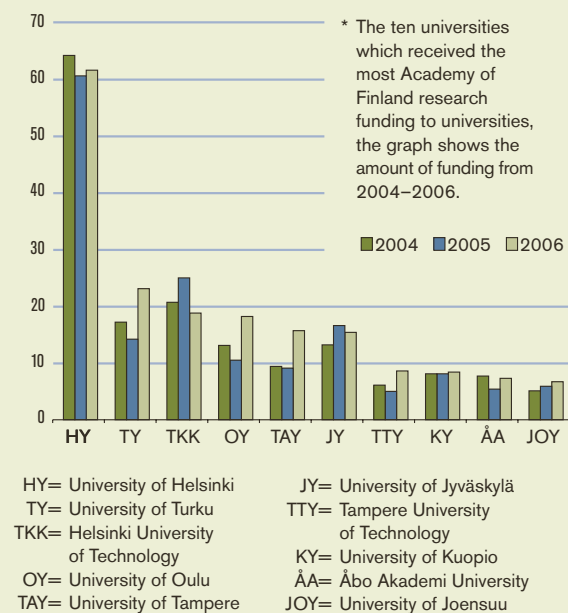
***Åbo Akademi University***

- Centre of Excellence in Process Chemistry
- Formal Methods in Programming

***Technical Research Centre of Finland,  
University of Turku and University of Helsinki:***

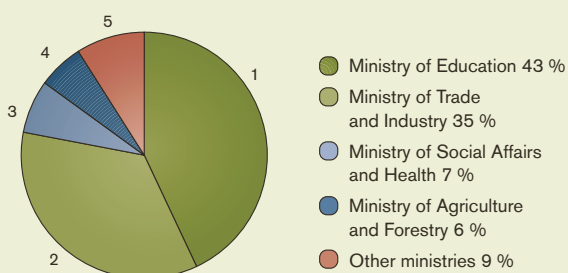
- Centre of Excellence in Translational Genome-Scale Biology

**Chart 9 Academy of Finland research funding to universities, 2004–2006\*, EUR million**



Source: Academy of Finland

**Chart 10 R & D funding by administrative sector in 2006 EUR 1,670 million in total**



Source: Statistics Finland

During the year under review, the Academy of Finland launched the following new four-year research programmes: Research Programme on Neuroscience, Power in Finland, Nanoscience Research Programme, Research Programme on Sustainable Production and Products, Research Programme on Substance Abuse and Addictions, and Research Programme on Nutrition, Food and Health.

The Academy and the National Technology Agency (Tekes) co-operated to launch a new Finland Distinguished Professor Programme to fund opportunities for top scientific and technological researchers to visit Finland for fixed periods of time.

In 2006, the Ministry of Education distributed EUR 14.4 million in discretionary government grants to promote science, increase the visibility of research findings and promote interaction between science and society.

A decision was taken during the year under review to establish a new international research centre for molecular medicine, the Institute for Molecular Medicine Finland, to operate under the auspices of the University of Helsinki. Universities with biocentres set up Biocenter Finland to drive forward the well-established co-operation between biocentres in research and researcher training. It was also decided to allocate EUR 20.5 million to nanosciences during the 2007–2009 performance agreement period.

The extended mission and name change of the National Library were established permanently. Financial support was granted to digitisation projects and to development of long-term electronic storage in research libraries and archives as well as to promotion of open scientific publishing.

The Ministry of Education initiated reform of the Finnish University Network (Funet). At the beginning of 2006, Finland decided to participate in establishing and funding a Nordic Grid organisation. The Ministry of Education authorised the Centre for Scientific Computing (CSC) to acquire a new super-computer.

## Research system developed and evaluated

Structural development of the public research system continued in line with the Government Resolution, with the aim of developing the entire public research system holistically as a functional entity, making research activities more international, and ensuring constant quality enhancement.

A joint foresight project between the Academy of Finland and the National Technology Agency, 'FinnSight – The Outlook for Science, Technology and Society', was completed during the year under review, along with committee reports on the effectiveness of the Academy's research funding. The Academy also carried out an evaluation of the Research Programme on Finnish Companies and the Challenges of Globalisation. Evaluation of food sciences and related research was completed, while Antarctic research in Finland was also evaluated. In addition, an international evaluation of energy research in Finland was completed during 2006.

The Ministry of Education's committee for development of research careers submitted its proposal for a new research career system with a view to developing postdoctoral research careers, in particular, and to improving their predictability and attractiveness. The committee report placed specific emphasis on strengthening the prerequisites for professional research careers. The Ministry of Education set up a committee to explore ways of making use of university research findings in March and another committee to look into development of research infrastructures in October 2006.



# Open University education, continuing education and lifelong learning

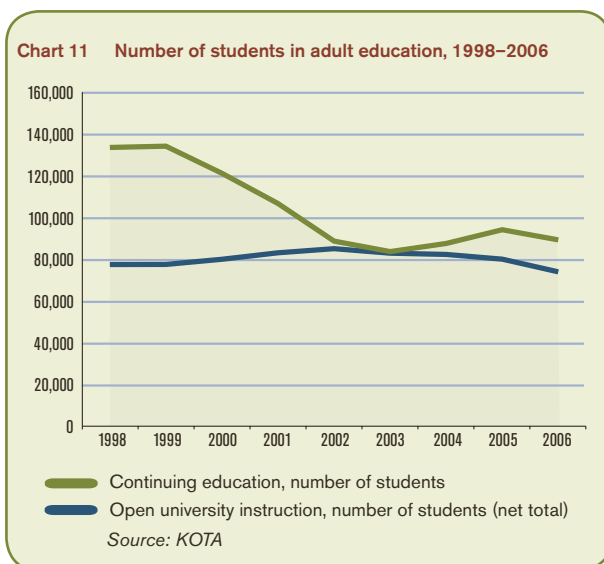
## Student numbers fell in Open University and continuing education

Open University education was provided in all fields of study and the number of credits available increased, but the total number of completed credits decreased by just under 13%. The amount of completed credits only increased in the fields of theology, engineering and architecture, law and music, theatre and dance. The net number of Open University students decreased by just under 8% from 80,000 in 2005 to 74,000 in 2006, meaning a drop from 15,800 to 11,500 full-time equivalent students. The number of students in the University of the Third Age fell from 16,000 to 15,100, after an increase in 2005.

The amount of studies provided in continuing education increased by just under 100 courses, equivalent to about 2%, but participant numbers dropped by about 5% on the previous year. There were 89,000 participants in continuing education in 2006, compared with 94,200 in 2005. Provision of and participation in short-term courses and specialisation studies increased, whereas provision of and participation in other courses decreased by one fifth and one quarter respectively. This development reflects the focus of continuing education specifically on long-term programmes, on the one hand, and short-term courses, on the other.

## Recognition of prior learning and lifelong learning

On 31st March 2006, the Ministry of Education set up a committee to promote recognition of prior learning at higher education institutions. The committee was assigned the following tasks to be completed by 15th December 2006: to review practices used at different higher education institutions in recognition of prior learning and credit transfer; to assess the effectiveness of current practices and processes and their conformance to European policy guidelines; to highlight and disseminate national and international good practices in recognition



of prior learning and credit transfer; and to make recommendations for common principles and for a process to be used in recognition of prior learning at higher education institutions. The committee completed its work on time and submitted its memorandum to the Minister on 23rd January 2007.

In late 2005, the committee on lifelong learning at universities, set up by the Ministry of Education, made recommendations for development of adult education at universities (Reports of the Ministry of Education 2005:38). To support implementation of the recommendations, the Ministry's University Division and Division for Adult Education and Training prepared a plan for further actions based on the proposals. Actions initiated during 2006 on the basis of the recommendations included drawing up university strategies for lifelong learning, updating the relevant payment decree, upgrading the payment decision of the Ministry of Education governing Open University provision into a decree, measures to consolidate co-operation between universities and partner institutions, and measures to support the structural development of continuing education at universities.

# Steering and structural development

## Legislation amended

An amendment (586/2006) to the Universities Act, effective as from 1st August 2006, changed the name of Helsinki University Library to the National Library of Finland and laid down provisions on its mission and Board.

Another amendment (1453/2006), which entered into force on 1st January 2007, provided for the rights of universities to accept donations and bequests as well as funds transferred from foundations and private corporations to a specific university fund independent of the State Budget. This amendment was based on a more extensive report by the Jääskinen and Rantanen Committee, commissioned by the Ministry of Education, on increasing the financial autonomy of universities.

The amendment increased universities' financial autonomy by allowing all universities to have their own off-budget assets and related status as legal entities. For historical reasons, this had formerly only been available to the University of Helsinki and Åbo Akademi University. In other respects except for their off-budget activities, universities retained their status as accounting offices as part of central government on-budget entities. The amendment also provides that resources from university funds may be used for university operations, to hire State civil servants and to establish public offices.

The Act on the Right in Inventions made at Higher Education Institutions (369/2006) laid down the rights of people employed by Finnish higher education institutions or holding a research post funded by the Academy of Finland to inventions that they have come up with during their employment and can be patented in Finland. The new Act promoted recognition and exploitation of such inventions by clarifying related rights and compensation practices. An amendment (370/2006) to the Act on the Right in Employee Inventions (656/1967) extended the provision excluding researchers from its scope of application to cover all people employed by higher education institutions in order to ensure that the same rules apply to all such people.

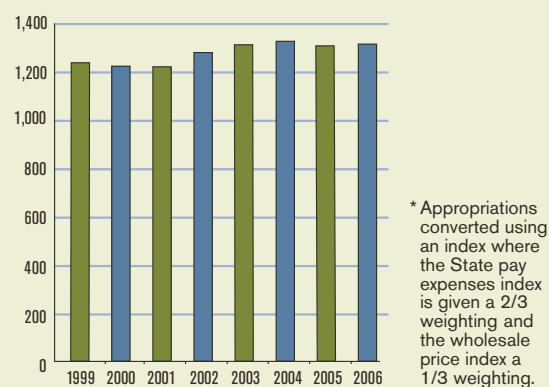
## Prerequisites for teaching and research strengthened

The Government Resolution on the Structural Development of the Public Research System will guide university development over the next few years. In April 2006, the Ministry of Education published the principles of structural development of higher education institutions, which aim to organise the structure of the university system and operations so as to enhance the quality, efficiency and effectiveness of university operations and their level of competence.

The Ministry of Education and the universities also agreed on their operational policies in April 2006, along with the core funding formula for the 2007–2009 performance agreement period. The new funding model shifts the focus to respond more closely to the needs of research, researcher training and internationalisation. Quality and effectiveness also become more significant. As part of its work on the performance management system, the Ministry of Education continued to develop the statistical university database (KOTA) in support of management and online services.

In April 2006, the Ministry of Education and the universities discussed resources for 2007 and the targets

**Chart 12** Operating expenses of universities (EUR million) per annual accounts data 1999–2006, appropriations in real terms\*



set for 2007–2009. The Ministry also gave universities written feedback on their 2005 operations.

The level of university core funding was maintained and supplementary funding was targeted at national development projects, such as information society projects, development of learning processes and environments and improvements in the prerequisites for research. The universities' operating costs increased during 2006, totalling EUR 1,258 million. A total of EUR 31.5 million was allocated on the basis of performance, with EUR 23.7 million being distributed to centres of excellence in research, education, adult education and artistic activity.

Project funding (EUR 83.6 million) was allocated to projects designed to help implement the Government's policy programmes (concerning the information society, employment, entrepreneurship policy and civil participation). Funding was also used to support national priority areas, such as information strategy projects (EUR 19 million), teacher training projects (EUR 11 million), projects to promote learning processes (EUR 10 million) and projects related to business knowledge (EUR 3 million) and to regional and social impact (EUR 6 million). The national health project received EUR 9 million.

### **Record number of new and renovated university buildings opened**

Several new buildings and completely renovated university premises were completed in 2006. The following facilities were inaugurated during the year: the University of Helsinki Veterinary Teaching Hospital, the University of Joensuu Aurora 2 building, the joint ICT Library of the University of Turku, Åbo Akademi University and Turku University of Applied Sciences, the extended and renovated administrative building of Tampere University of Technology, the new Linna Library at the University of Tampere, and the new building for the Faculty of Art and Design at the University of Lapland. Several extensive renovation projects were also launched.

The universities continued to improve their facilities management according to their facilities strategies so as to promote more efficient use of premises and reduce costs.

The Ministry of Education, the universities and the state real estate company Senate Properties continued drawing up 5–10-year investment programmes dealing with the universities' construction projects. In order to

assist in preparation of these plans, the projects are listed in order of priority; the list will be jointly updated on a regular basis, taking account of changes in situations.

The 'workplace process' required by the government premises strategy devised by the Ministry of Finance has been launched as part of several universities' facilities projects. Lappeenranta University of Technology was the first university to initiate a workplace process covering the entire university's operations and facilities.

### **New university salary system in place**

The new salary system has been implemented within the administrative sector. The new system was mainly introduced at universities at the beginning of 2006 and for the entire staff by the beginning of 2007 at the latest. In terms of teaching staff at university training schools, the system became effective as from 1st August 2006.

The aim of the universities' new salary system is to make pay more fair, boost the salary competitiveness of universities as employers, encourage staff to develop their competencies and their input, and to improve staff management and direction.

As part of the new system, salary comprises one component based on job grading and another based on the employee's own performance.

### **Educational provision and structures developed to meet society's needs**

Educational provision at universities remained largely unchanged. It was mainly re-targeted in teacher training and medicine. Universities also launched new, multi-disciplinary Master's programmes designed to meet the needs of working life.

The expansion programme in teacher training, launched in 2001 because of the high average age of teachers and the large number of unqualified teachers, continued. Between 2004 and 2006, the programme increased the total intake in teacher training by about 2,500 students at the ten universities involved in the programme. The biggest increases focused on training for mathematics, science and language teachers, and in special needs and class teacher training. There were also increases in teacher training in arts subjects and physical education, and guidance counsellor training, while

more opportunities were also provided for completion of teachers' pedagogical studies. The expansion programme covered teacher training provided both in Finnish and Swedish.

Reports on development needs in higher education and R&D within the transport and logistics field and in the examination system for higher education for authorised translators were published in 2006. In terms of development of education in social and health care fields, attention focused on the attractiveness of the public sector as an employer and on improving degree completion rates by means such as promoting recognition of prior learning.

In addition, the one-man committee (Turo Virtanen) appointed by the Ministry of Education published its report during 2006, putting forward proposals to intensify co-operation between the three art academies in the Helsinki metropolitan area – the Academy of Fine Arts, the University of Art and Design and the Theatre Academy – and to organise the University of Art and Design's Media Centre Lume with a view to clarifying its national status. The Ministry of Education appointed a committee (Kansanen, Pohjolainen and Ropo) to review teaching practice for student teachers (Report 2007:19).

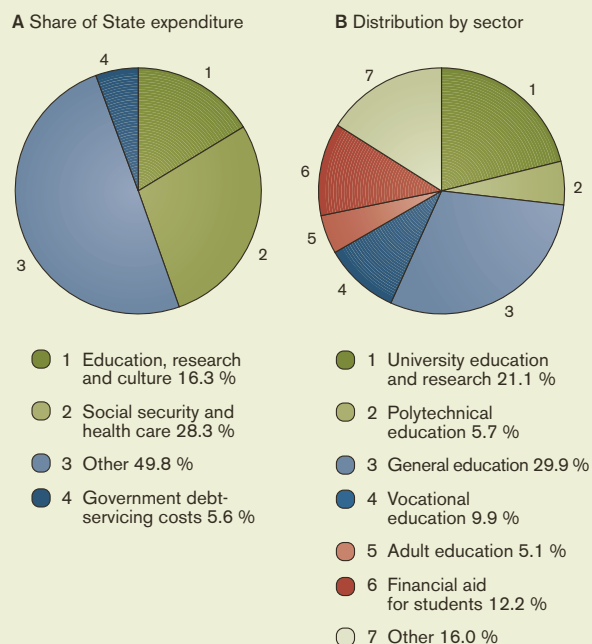
In addition, several projects were launched in accordance with the principles of structural development of the university system:

In the autumn of 2006, three pilot projects were set up to look into enhancing co-operation between the University of Turku and Turku School of Economics and Business Administration (Report 2007:14), the Universities of Kuopio and Joensuu (Report 2007:15), as well as Helsinki University of Technology, Helsinki School of Economics and the University of Art and Design Helsinki within the Helsinki metropolitan area (Report 2007:16). The committees preparing the pilot projects published their reports in February 2007.

Consortium projects exploring opportunities for co-operation between universities and polytechnics (universities of applied sciences) were launched between the University of Kuopio and Savonia University of Applied Sciences, Lappeenranta University of Technology and South Carelia Polytechnic, as well as the University of Oulu and Oulu University of Applied Sciences.

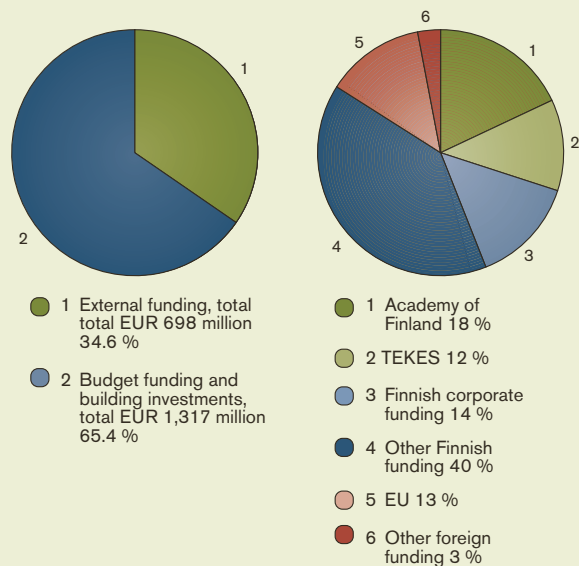
In addition, universities initiated several internal structural development projects with a view to developing their unit structures and administration.

**Chart 13 Educational, research and cultural appropriations in the State Budget and supplementary budgets and their distribution by sector in 2006 (%)**



**Chart 14**

**A Total funding of universities in 2006**      **B External funding, breakdown by source in 2006**



# International and European co-operation

## International competitiveness and co-operation reinforced

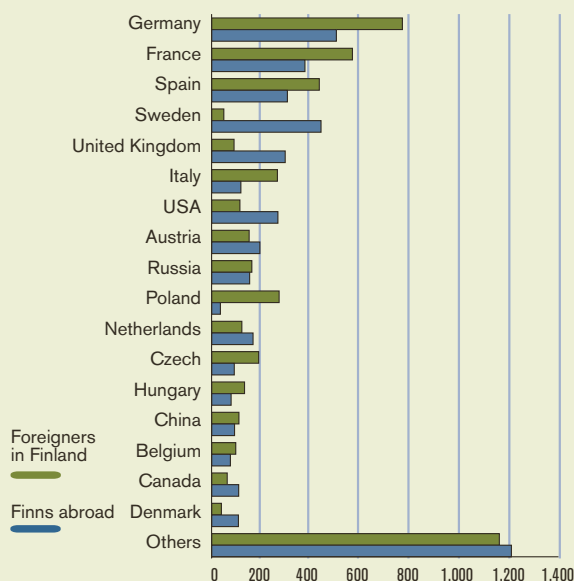
The 2005 degree reform gave the universities greater potential for international co-operation. Universities have launched numerous international Master's programmes and several Erasmus Mundus programmes, while they have also designed provision at Master's and doctoral level in particular to be more suitable for international students. In 2006, universities launched a large number of new Master's programmes in English in accordance with the new degree structure: the Ministry of Education Decree made provision for 78 such programmes. They also paid more attention to marketing these programmes internationally and made preparations for international joint degrees and related agreements.

The Ministry of Education's Action Programme entitled 'Finland, Asia and International Co-operation' was completed and started to be implemented with a view to supporting internationalisation relating to Asia. The Africa and Russia Action Programmes have been launched, along with the Nordic Masters Programme. The Ministry of Education granted universities project funding for development of international recruitment and application procedures. The aim is to create a single nationwide network to co-operate in international recruitment and application procedures. In addition, universities' international co-operation and responsibilities were dealt with in reports on global education and sustainable development published in the spring of 2006.

Universities contributed to international development co-operation through, for instance, the UniPID network, working with the Ministry for Foreign Affairs and the sub-Saharan Africa organisations CSIR, SADC and NEPAD. They also took part in development policy collaboration within the North-South programme, administered by CIMO.

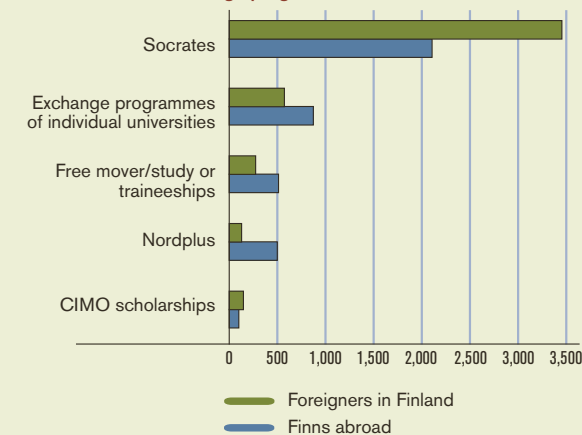
The universities were actively involved in application rounds within the EU's Sixth Framework Programme for

Chart 15 Student exchanges in 2006



Source: CIMO

Chart 16 Students entering and leaving Finland under exchange programmes 2006



Source: CIMO

Research and Technological Development (2002–2006). At the end of 2006, Finns were involved in over 1,000 projects as part of this programme. Universities accounted for 34% of Finnish participation, research centres for 27% and companies for 30%.

Decisions on the EU's Seventh Framework Programme for Research and Technological Development (2007–2013) were made during the Finnish EU Presidency in December 2006, when the first application rounds were also launched for the new programme. From the universities' point of view, the most significant new element in the Framework Programme is its 'Ideas' programme and the European Research Council implementing it. The Council will finance high-quality basic research in Europe. In the autumn of 2006, the Commission made a proposal on the European Institute of Technology (EIT), with a view to strengthening Europe's scientific education, research and innovation.

### **International exchanges remained lively**

The number of foreign degree students increased by 10% from 2005, totalling 5434 in 2006. Of these 1,641 were studying for a doctorate. Foreign students completed a total of 617 degrees at Finnish universities in 2005.

In 2006, 4,498 Finnish Bachelor's and Master's degree students took part in exchange programmes abroad, compared with 4,497 during the previous year. The number of foreign students coming to Finland increased by 5.4%. A total of 4,796 university students came to Finland in 2006 (4,552 in 2005). Finnish teachers and researchers made visits to foreign universities lasting two weeks or more at a rate equivalent to a total of 2,907 months, whereas the figure for visits to Finnish universities equalled 5,677 months. These amounts were somewhat down on the previous year.



# Social function

## Knowledge transfer

The third or societal service mission of universities, alongside education and research, was clarified in an amendment (715/2004) to the Universities Act, which came into force on 1st August 2005. Universities took this new provision into account in their operations by means such as determining different forms of interaction with society as part of strategic development. They also appointed external members to their Boards, such as representatives from business and industry.

In addition to their role in research and development, universities influence Finnish society and the international community through the professional workforce that they educate. The universities reviewed their knowledge and defined their priorities. In regional terms, their profiling system is especially evident in terms of targeting their R&D projects to their strong knowledge areas.

Utilisation of scientific and artistic university activities was facilitated by an amendment to the State Budget Act (1111/2004), which came into force on 1st August 2005 and which makes it possible for universities to start up state companies. Universities can keep any profits from companies or from their own shares in companies whose aim is to promote knowledge transfer or to commercialise innovations. The universities submitted two proposals to the Ministry of Education on the use of funds allocated to operating expenditure to subscribe for shares and both proposals were approved.

The Science and Technology Policy Council of Finland made a proposal on establishing strategic centres of excellence. These centres would make it possible for universities and research institutes to participate in long-term strategic R&D work and to create and consolidate contacts with companies and corporate research.

## Regional impact

During 2006, the universities implemented the 2004–2006 regional development programme aimed at enhancing the impact of universities on society. Several projects were launched in accordance with the universities' and polytechnics' joint regional strategies, which were devised in 2002 and updated in 2005. These consolidated co-operation and networking between higher education institutions. Four universities implemented pilot projects together with polytechnics operating within their region to explore initiation of co-operation in terms of educational and support services and other collaboration opportunities, with support from the Ministry of Education.

The Ministry of Education continued to develop the six university centres with the aim of further enhancing the universities' regional impact. As well as having regional impact, university centres played an important role in intensifying co-operation between universities. The centres were allocated a total of EUR 3 million for development of learning and research environments, with emphasis on their role in adult education.

Within the scope of their societal service mission, universities participated in the national centre of expertise programme, in the regional centres programme and in projects included in regional strategies. The regional networked higher education institutions continued to work on a trial basis in Lapland and North Ostrobothnia. Several universities were granted Structural Fund co-financing for constructing infrastructures in regional university centres in particular, for arranging Master's and graduate entry programmes and for undertaking development projects in response to regional needs.

## Employment

The employment situation for graduates remained almost unchanged. According to Statistics Finland, the unemployment rate of those holding a Master's degree aged between 20 and 64 was 4.0% in 2006, compared with 4.2% during the previous year. The rate for those who had completed graduate school or equivalent postgraduate education was 2.9% (2.9% in the previous year). Success in finding employment among those holding a Master's or a doctorate degree or a place in postgraduate education among Master's graduates remained more or less at the previous year's level. Some 92% of those who had completed their degree within the last three years found jobs or were admitted to postgraduate education.

Universities stepped up counselling and guidance services and the use of student internships in order to promote graduate placement in employment.

## Statistics

- Universities in 2006
- Student selection in 2006
- Continuing education at universities and in Open University instruction, 1998–2006
- Fields of study in 2006
- State-funded research and development funding by recipient, 1999–2006
- Academy of Finland funding decisions by university in 2006
- University staff working abroad and visits by foreign teachers and researchers to universities in Finland, 1998–2006
- Teaching staff, 1998–2006
- Proportion of women (%) among teaching staff, 1998–2006
- Other personnel, 1998–2006
- Main occupation of those holding Master's degrees after graduation, 1995–2004
- Unemployment rate (%) among those holding Master's or postgraduate degrees, 1993–2005

## Universities 2006

	New students		Students of basic studies*		Postgraduate students*		Bachelor's degrees		Master's degrees		Doctor's degrees	
		%		%		%		%		%		%
University of Helsinki	3,777	18.7	29,460	21.4	5,294	26.0	1,217	31.9	2,358	18.0	377	26.8
University of Joensuu	1,270	6.3	6,547	4.8	677	3.3	420	11.0	676	5.1	53	3.8
University of Jyväskylä	1,813	9.0	11,499	8.4	1,517	7.4	416	10.9	1,345	10.2	108	7.7
University of Kuopio	866	4.3	4,857	3.5	726	3.6	225	5.9	469	3.6	86	6.1
University of Lapland	706	3.5	4,126	3.0	293	1.4	100	2.6	377	2.9	16	1.1
University of Oulu	1,746	8.7	12,712	9.2	1,599	7.8	127	3.3	1,287	9.8	143	10.1
University of Tampere	1,503	7.5	11,826	8.6	1,795	8.8	263	6.9	1,067	8.1	103	7.3
University of Turku	1,789	8.9	12,634	9.2	1,965	9.6	378	9.9	1,104	8.4	126	8.9
University of Vaasa	666	3.3	4,118	3.0	305	1.5	50	1.3	385	2.9	19	1.3
Åbo Akademi University	710	3.5	5,207	3.8	756	3.7	190	5.0	502	3.8	67	4.8
Helsinki University of Technology	1,395	6.9	10,477	7.6	2,363	11.6	5	0.1	1,007	7.7	158	11.2
Lappeenranta University of Technology	783	3.9	4,312	3.1	466	2.3	30	0.8	517	3.9	23	1.6
Tampere University of Technology	1,278	6.3	8,603	6.3	1,614	7.9	5	0.1	809	6.2	72	5.1
Helsinki School of Economics	565	2.8	3,745	2.7	323	1.6	190	5.0	346	2.6	20	1.4
Swedish School of Economics and Business Administration	364	1.8	2,004	1.5	148	0.7	7	0.2	237	1.8	9	0.6
Turku School of Economics and Business Administration	401	2.0	1,953	1.4	193	0.9	31	0.8	220	1.7	10	0.7
Academy of Fine Arts	44	0.2	217	0.2	20	0.1	9	0.2	30	0.2	1	0.1
Sibelius Academy	166	0.8	1,288	0.9	113	0.6	52	1.4	178	1.4	8	0.6
Theatre Academy	61	0.3	386	0.3	39	0.2	20	0.5	32	0.2	1	0.1
University of Art and Design Helsinki	247	1.2	1,562	1.1	185	0.9	79	2.1	182	1.4	9	0.6
<b>Total</b>	<b>20,150</b>	<b>100</b>	<b>137,533</b>	<b>100</b>	<b>20,391</b>	<b>100</b>	<b>3,814</b>	<b>100</b>	<b>13,128</b>	<b>100</b>	<b>1,409</b>	<b>100</b>

\* Data includes only students who are present.

## Student selection in 2006

	Applicants*	Applications	Examinees	Admitted
Theology	964	1,107	857	380
Humanities	12,215	22,407	13,466	3,424
Art and design	2,319	3,178	2,933	408
Music	848	910	714	179
Theatre and dance	1,532	2,168	2,064	82
Educational sciences	7,889	22,062	6,709	2,441
Sport sciences	873	1,343	491	140
Social sciences	9,302	15,586	8,502	2,653
Psychology	2,169	3,215	2,239	159
Health sciences	1,219	2,655	1,441	506
Law	2,765	2,819	2,198	555
Economics	6,948	24,448	15,444	3,249
Natural sciences	8,584	24,622	11,966	6,565
Agriculture and forestry	1,370	2,646	1,920	566
Engineering	5,277	21,813	12,921	4,959
Medicine	3,430	4,048	2,762	638
Dentistry	540	555	467	112
Veterinary medicine	473	473	374	56
Pharmacy	1,332	2,023	865	463
Fine arts	473	610	52	45
<b>Total</b>	<b>70,522</b>	<b>158,688</b>	<b>88,385</b>	<b>27,580</b>

Source: KOTA

\* Single applicants, who may have made more than one application or participated on more than one examination.

Teaching staff**		Research staff**		Students at graduate schools**		Other staff**		Expenditure € 1 000 (Budget funding)		Expenditure € 1 000 (External funding)		
%		%		%		%		%		%		
1,722	20.5	1,481	23.4	503	28.6	3,658	25.7	311,832	23.7	190,933	27.4	University of Helsinki
419	5.0	174	2.7	66	3.8	569	4.0	60,817	4.6	22,700	3.3	University of Joensuu
757	9.0	440	6.9	172	9.8	996	7.0	101,625	7.7	49,992	7.2	University of Jyväskylä
370	4.4	340	5.4	64	3.6	802	5.6	58,474	4.4	47,065	6.7	University of Kuopio
221	2.6	74	1.2	12	0.7	331	2.3	33,277	2.5	11,226	1.6	University of Lapland
875	10.4	496	7.8	145	8.3	1,417	10.0	127,672	9.7	57,641	8.3	University of Oulu
644	7.7	322	5.1	110	6.3	1,004	7.1	86,634	6.6	45,066	6.5	University of Tampere
859	10.2	465	7.3	180	10.3	1,203	8.5	114,115	8.7	51,557	7.4	University of Turku
186	2.2	44	0.7	11	0.6	223	1.6	23,165	1.8	5,692	0.8	University of Vaasa
368	4.4	218	3.4	77	4.4	543	3.8	49,833	3.8	27,952	4.0	Åbo Akademi University
527	6.3	1,063	16.8	231	13.2	1,404	9.9	118,998	9.0	90,712	13.0	Helsinki University of Technology
232	2.8	359	5.7	23	1.3	309	2.2	37,287	2.8	24,562	3.5	Lappeenranta University of Technology
357	4.2	658	10.4	108	6.2	748	5.3	71,507	5.4	41,424	5.9	Tampere University of Technology
164	1.9	78	1.2	17	1.0	248	1.7	25,258	1.9	11,887	1.7	Helsinki School of Economics
103	1.2	5	0.1	18	1.0	90	0.6	13,483	1.0	3,423	0.5	Swedish School of Economics and Business Administration
124	1.5	65	1.0	9	0.5	140	1.0	15,428	1.2	6,206	0.9	Turku School of Economics and Business Administration
31	0.4	0	0.0	0	0.0	34	0.2	4,783	0.4	94	0.0	Academy of Fine Arts
236	2.8	8	0.1	4	0.2	143	1.0	24,190	1.8	2,790	0.4	Sibelius Academy
58	0.7	1	0.0	2	0.1	87	0.6	10,835	0.8	661	0.1	Theatre Academy
161	1.9	42	0.7	4	0.2	262	1.8	27,997	2.1	5,940	0.9	University of Art and Design Helsinki
8,412	100	6,333	100	1,756	100	14,211	100	1,317,210	100	697,523	100	Total

\*\* Includes staff hired on both budget funding and external funding.

Source: KOTA and Statistics Finland

### Continuing education at universities and in open university instruction 1998–2006

	1998	2000	2002	2004	2006
Continuing education, number of courses	5,209	5,198	4,079	3,515	3,917
- short courses ( 5 days or less)	2,597	2,690	1,870	1,554	2,057
- special studies	1,519	566	328	280	295
- other courses	1,093	1,942	1,881	1,681	1,565
Students	133,622	121,221	88,709	87,579	89,046
Course days (1 day = 6 classroom hours)	66,791	55,484	42,151	37,370	33,165
Open university instruction Students	77,477	80,002	85,075	82,318	73,972

Source: KOTA

## Fields of study 2006

	New students	%	Students present total	%	Bachelor's degrees	%	Master's degrees	%	Licentiates	%
Theology	323	1.6	2,639	1.6	58	1.5	210	1.6	5	1.0
Humanities	2,804	13.9	24,772	15.4	1,044	27.4	1,784	13.6	73	14.9
Art and design	383	1.9	2,651	1.7	111	2.9	260	2.0	0	0.0
Music	166	0.8	1,401	0.9	52	1.4	178	1.4	3	0.6
Theatre and dance	71	0.4	458	0.3	20	0.5	44	0.3	0	0.0
Educational sciences	1,980	9.8	13,435	8.4	591	15.5	1,630	12.4	30	6.1
Sport sciences	119	0.6	772	0.5	7	0.2	102	0.8	3	0.6
Social sciences	2,060	10.2	16,952	10.6	468	12.3	1,261	9.6	67	13.7
Psychology	167	0.8	1,846	1.2	26	0.7	225	1.7	15	3.1
Health sciences	438	2.2	2,910	1.8	59	1.5	342	2.6	7	1.4
Law	506	2.5	4,438	2.8	48	1.3	386	2.9	27	5.5
Economics	2,644	13.1	17,961	11.2	361	9.5	1,773	13.5	22	4.5
Natural sciences	3,359	16.7	24,121	15.0	499	13.1	1,496	11.4	122	24.9
Agriculture and forestry	415	2.1	3,379	2.1	33	0.9	268	2.0	4	0.8
Engineering	3,770	18.7	32,025	20.0	23	0.6	2,537	19.3	110	22.5
Medicine	494	2.5	7,470	4.7	0	0.0	415	3.2	1	0.2
Dentistry	67	0.3	694	0.4	0	0.0	49	0.4	0	0.0
Veterinary medicine	39	0.2	546	0.3	0	0.0	52	0.4	0	0.0
Pharmacy	301	1.5	1,675	1.0	405	10.6	86	0.7	0	0.0
Fine arts	44	0.2	237	0.1	9	0.2	30	0.2	0	0.0
<b>Total</b>	<b>20,150</b>	<b>100</b>	<b>160,382</b>	<b>100</b>	<b>3,814</b>	<b>100</b>	<b>13,128</b>	<b>100</b>	<b>489</b>	<b>100</b>

\* specialist degrees in medicine, dentistry or veterinary medicine.

## State funding for research and development funding by receiving organization, 1998–2007, at current prices, MEUR

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	%
Universities	313.5	323.3	346.4	349.8	377.7	393.3	407.9	416.7	427.5	446.4	26 %
University hospitals	60.5	60.5	59.4	56.7	56.7	48.7	48.7	40.7	48.7	48.7	3 %
Academy of Finland	142.9	155.5	153.8	187.1	184.9	188.6	214.6	223.5	257.4	275.8	16 %
Technology Development Center	374.9	410.8	390.8	399.4	398.5	412.7	430.0	448.4	478.2	504.3	29 %
State owned-research institutes	204.3	208.0	215.8	219.8	234.4	239.5	250.0	259.4	272.6	282.0	16 %
Other public funding	153.5	117.0	129.7	139.6	136.5	169.9	183.9	208.0	185.6	172.7	10 %
<b>Total</b>	<b>1,249.6</b>	<b>1,275.1</b>	<b>1,295.9</b>	<b>1,352.4</b>	<b>1,388.7</b>	<b>1,452.7</b>	<b>1,535.1</b>	<b>1,596.7</b>	<b>1,670.0</b>	<b>1,730.0</b>	<b>100 %</b>

Source: Statistics Finland

### Academy of finland funding decisions by university in 2006\*, MEUR

Doctorates	%	Other* degrees	%
17	1.2	0	0
107	7.6	0	0
10	0.7	0	0
8	0.6	0	0
2	0.1	0	0
77	5.5	0	0
3	0.2	0	0
95	6.7	0	0
24	1.7	0	0
42	3.0	0	0
18	1.3	0	0
79	5.6	0	0
308	21.9	0	0
45	3.2	0	0
302	21.4	0	0
228	16.2	522	93.5
12	0.9	27	4.8
11	0.8	9	1.6
20	1.4	0	0
1	0.1	0	0
1,409	100	558	100

Source: KOTA and Statistics Finland

University	Milj. €	%
University of Helsinki	61.6	31.6
University of Joensuu	6.7	3.4
University of Jyväskylä	15.4	7.9
University of Kuopio	8.4	4.3
University of Lapland	1.4	0.7
University of Oulu	18.3	9.4
University of Tampere	15.7	8.0
University of Turku	23.1	11.8
University of Vaasa	0.2	0.1
Åbo Akademi University	7.3	3.7
Helsinki University of Technology	18.8	9.6
Lappeenranta University of Technology	3.1	1.6
Tampere University of Technology	8.6	4.4
Helsinki School of Economics and Business Administration	3.2	1.6
Swedish School of Economics and Business Administration	0.1	0.1
Turku School of Economics and Business Administration	1.9	1.0
Academy of Fine Arts	0.2	0.1
Sibelius Academy	0.8	0.4
Theatre Academy	0.2	0.1
University of Art and Design Helsinki	0.3	0.2
<b>Total</b>	<b>195.2</b>	<b>100.0</b>

\*Including estimates of the costs associated with research posts. Source: Academy of Finland

### University personnel working abroad and visits by foreign researchers and teachers to universities in Finland, 1998–2006 (working over one month)

	Researchers/ teachers abroad, number of persons	Length of stay (mean), months/person	Foreign researchers/ teachers, number of persons	Length of stay (mean), months/person
1998	912	4.1	1,108	4.6
1999	825	4.3	1,177	4.6
2000	741	4.6	1,153	4.9
2001	735	4.2	1,030	5.2
2002	664	4.1	1,076	5.0
2003	578	4.3	1,088	4.9
2004	633	4.0	1,060	5.2
2005	706	3.8	1,064	5.3
2006	621	4.1	1,064	5.0

Source: KOTA

### Teaching staff 1997–2006\*

	Total	Professors	Senior assistants	Assistants	Lecturers	Full-time untenured teachers	Calculated hours of teaching
1997	7,706	2,126	686	1,721	1,947	330	896
1998	7,290	2,011	649	1,530	1,891	312	897
1999	7,270	2,048	672	1,489	1,870	298	893
2000	7,387	2,106	689	1,473	1,913	277	929
2001	7,562	2,175	677	1,405	2,027	257	1,021
2002	7,849	2,195	695	1,375	2,210	238	1,136
2003	7,933	2,217	673	1,319	2,362	219	1,143
2004	7,939	2,249	643	1,230	2,488	217	1,112
2005	7,839	2,255	630	1,182	2,606	202	964
2006	7,881	2,268	692	1,135	2,667	199	920

\*1998 onwards: number of person work years, before 1998: number of posts and positions.

Source: KOTA

### Proportion of women (%) among teaching staff 1997–2006

	Professors	Senior assistants	Assistants	Lecturers	Full-time untenured teachers
1997	17.7	30.0	39.2	54.9	66.7
1998	18.4	30.0	42.7	51.0	59.6
1999	17.9	33.3	45.3	53.9	59.7
2000	20.1	36.9	52.3	58.4	81.2
2001	20.4	33.7	47.5	54.1	66.9
2002	21.2	36.8	48.9	54.1	65.5
2003	21.7	36.6	49.7	56.8	78.5
2004	22.1	39.3	55.4	58.6	72.8
2005	22.2	38.4	49.7	51.1	56.9
2006	23.4	36.7	51.6	51.6	59.8

Source: KOTA

### Other personnel, 1997–2006\*

	Total	Budget posts	Academy of Finland	Other sources
1997	17,514	9,040	1,296	7,178
1998	19,043	9,852	1,709	7,482
1999	19,800	10,167	1,896	7,737
2000	19,502	10,031	2,064	7,407
2001	20,377	10,550	2,228	7,599
2002	21,043	10,892	2,344	7,807
2003	21,484	11,284	2,330	7,870
2004	21,954	11,624	2,348	7,982
2005	22,306	11,915	2,297	8,094
2006	22,300	11,994	2,226	8,080

\* The budgeted number of full-time equivalents (FTEs) in 1997 includes vacancies at graduate schools. As of 1998, the number of FTEs at graduate schools is based on the source of funding.

Source: KOTA

### Status of holders of master's degrees following graduation 1994–2004

Year of graduation	Master's degree	STATUS ONE YEAR AFTER GRADUATION (%)					Unemployed two years after graduation (%)
		Employees	Entrepreneurs	Students	Other	Unemployed	
1994	9,616	61.1	1.6	19.2	3.6	14.6	5.3
1995	9,784	77.6	1.5	7.5	7.2	6.2	4.5
1996	10,227	81.8	1.3	7.7	3.8	5.3	3.5
1997	10,661	83.2	1.7	6.0	4.9	4.2	3.5
1998	11,306	83.3	1.1	5.1	5.1	3.7	3.0
1999	11,834	84.5	1.2	4.2	4.5	3.5	2.8
2000	11,489	84.7	1.2	3.9	3.5	3.3	2.8
2001	11,556	83.5	1.1	5.2	3.2	3.7	3.4
2002	12,038	82.3	1.2	4.9	3.1	4.8	3.6
2003	12,279	82.1	1.3	5.7	3.3	4.5	3.6
2004	12,469	84.2	1.4	4.7	3.4	4.7	...

Source: KOTA

### Unemployment rate (%) among holders of master's degrees or postgraduate degrees, 1993–2005 (population aged 20–64)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Master's degree	5,1	4,9	4,3	5,4	4,5	4,0	3,9	3,6	3,6	3,7	4,3	4,2	4,0
Men	4,8	4,4	4,0	4,9	4,0	3,6	3,5	3,2	3,3	3,5	4,1	4,0	3,7
Women	5,5	5,4	4,7	6,0	5,0	4,5	4,3	3,9	3,9	3,8	4,4	4,4	4,2
Postgraduate or comparable degree	1,8	1,9	2,0	2,7	3,0	2,5	2,5	2,2	2,2	2,4	2,8	2,9	2,9
Men	1,7	1,9	2,0	2,6	2,8	2,3	2,2	2,0	1,9	2,2	2,7	2,7	2,7
Women	2,2	2,1	2,1	2,9	3,4	3,0	3,1	2,8	2,7	2,9	3,1	3,1	3,1

Source: Statistics Finland

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