

Opetusministeriö

Ministry of Education

Education

Research

Universities 2005

Annual Report

Ministry of Education publications 2006:31

Universities 2005

Annual Report

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MINISTRY OF EDUCATION

Ministère de l'Éducation

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The year 2005

The year 2005 was a time of lively debates, vigorous activity, major changes and development in Finnish universities. There were simultaneously reforms influencing university activities in depth, such as the degree reform, a new salary system, and the adoption of quality assurance systems. Many universities underwent an external evaluation of research and administration quality. These reforms were designed to enhance content, quality and impact to respond better to changing needs and to challenges currently facing university teaching and research.

Summer 2005 saw two amendments to the Universities Act. One of them introduced the two-cycle degree system, widened the mission of universities to include interaction with the surrounding society, including the utilisation of research findings, and provided for conditions conducive to internationalisation and for the structure of the highest university leadership. The other amendment provided for a normative duration of degree studies and for personal study plans. A provision of the Higher Education Development Act guarantees an annual increase of at least EUR 20 million in the university core funding appropriations on top of the rise in the salary expenditure. This made for a stable development in universities during the performance agreement period 2004–2006.

Based on an external evaluation of the Finnish research system in 2004, initiated by the Science and Technology Policy Council of Finland, the Government issued a resolution in April 2005 concerning structural development of the public research system. It provides guidelines for the steering and development of the university system in the coming years.

The Bologna process was implemented in Finland by means of an amendment to the Universities Act, under which the two-cycle degree system was adopted in August 2005, all degree programmes were redesigned and the conditions for international cooperation were improved. The construction of the European Higher Education Area highlights quality. The follow-up to the Bologna process in Bergen in May 2005 noted that the necessary reforms had progressed well in Finland. The success has been largely due to extensive and self-motivated development carried out by all the universities independently. All the universities developed their own quality assurance procedures and thereby are ready to demonstrate their quality in a manner required in international cooperation.

International cooperation made great strides in universities during 2005. The number of foreign students grew by 6 % from the previous year. Student exchanges increased to 4,552 incoming students and to 4,497 outgoing students. The fact that the incoming students exceeded the outgoing shows that Finnish universities are attractive to foreign students. English-language instruction was further expanded.

Universities were steered by means of performance management and the funding model included in it. Written feedback to universities was further improved. Feedback is given on strategic development, quality assurance, the utilisation of research findings, internationalisation, research and researcher training. Universities also received feedback on their preparations relating to the adoption of the new degree structure, the development of studies and student selection, and the implementation of lifelong learning. Feed-

back also touched upon the social dimension of university activities, the quality of the financial statements and other performance reports, and the standard of cost calculation. The performance management process was modified according to the objectives set for the development of state governance.

A committee looking into performance management in universities submitted its proposal for the further development of performance management and the funding model included in it. The proposed reforms will shift the focus to research, performance and rewards for quality. Based on the proposal, the Minister of Education and Science decided to reform the funding model between 2007 and 2009.

In 2005 Finnish universities awarded altogether 12,920 Master's degrees and 1,422 doctoral degrees, which is more than ever before. The targets set for doctorates were achieved well. This is due to the measures to step up researcher training, to growing university research and to the universities' input into improving the quality of their research. The number of Master's degrees was 92 % of the target figure. We have every reason to believe that the number of degrees will continue to grow. More efficient student guidance and learning processes and the introduction of personal study plans will step up study processes and graduation.

In 2005 the priorities in the development of the Finnish university system were to improve impact, to assure quality, to ensure effective learning processes and to secure favourable overall conditions for university activities. The Minister of Education and Science has initiated a review exploring possibilities to enlarge the economic powers of universities and to reform university management and administration. During 2005 it became ever more clear how important universities are for the welfare of citizens and society and for development. This was manifested in the lively debate on university policy during the year. The foreseeable increases in research funding and the ongoing and projected internal development in universities will enable us to uphold and further strengthen the important role of the universities in Finnish society.

Helsinki, 11 April 2006

Markku Mattila
Ministry of Education
Director of the University Division

Finnish Universities in 2006

Universities

Multi-faculty universities 10
Specialised universities 6
Art academies 4

Students

New students 20,800
New students relative to the 18-20 age group 32.2 %
Undergraduate students present 136,700
Postgraduate students present 20,600
Total students present 160,100

Degrees

Bachelor's degrees 2,900
Master's degrees 12,900
Licentiates 530
Doctorates 1,420

Staff

Teaching staff on budget funding 7,840
Teaching staff on external funding 610
Research staff on budget funding 1,250
Research staff on external funding 5,250
Students in graduate schools on budget funding 1,020
Students in graduate schools on external funding 580
Other staff on budget funding 9,650
Other staff on external funding 4,560

Funding

Budget funding and building
investments EUR 1,262 million
Supplementary funding EUR 694 million
Budget funding, 0.83 % of GDP

Funding decisions:

Academy of Finland funding
for universities EUR 128 million
National Technology Agency (Tekes)
funding for universities EUR 86 million

Premises

Space (in 1,000 square metres net) 2,030

Open university instruction

Students 80,100

Continuing education

Students 94,200

Some key figures from 2005*

New students per teacher 2.6
Undergraduate students present per teacher 17.4
Master's degrees per teacher 1.6
Doctorates per professor 0.6
Expenditure funded from budget (excl. cost of premises)
per student present EUR 6,250
**Relative to staff funded from budget*

Indicators of social impact :

Employment and placement in postgraduate education
(situation of 2001-2003 graduates at end 2004):

- 92.1 % of those with a Master's degree (2001-2003)
(previous year 92.4 %)
- 91.3 % of those with a doctorate (2001-2003)
(previous year 91.9 %)

Placement at university:

- An average of 36 % (2003) of new students were
upper secondary school graduates from
the same year

University drop-outs:

- 4.8 % of Bachelor's or Master's degree students
dropped out of degree programme (2004)
- 4.3 % of Bachelor's or Master's degree students (2004)
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 impact of education
- improving the effectiveness of the education system
- improving the retention rate
- closer ties with working life
- supporting children and young persons
- promotion of adult education
- strengthening of research activities
- development of teaching and learning environments
- advancement of international cooperation
- promotion of equality and prevention of exclusion and
- promotion of immigrant education and training.

In addition, the emphasis in university education and research will be on:

- renewal of the degree structure and development of teaching
- student selection
- regional impact
- quality enhancement in education and appropriate quality systems
- internationalisation in education and research
- postgraduate education
- quality enhancement in research and impact analysis.

Joint targets set for the university system

Impact and quality management

In their research, universities will highlight high quality, international competitiveness and ethical sustainability. Universities will improve conditions for research careers, and the graduate schools will be developed as the primary track to doctorates.

Universities will intensify and increase international interaction and networking. They will develop their cooperation with Russia and enhance Russia knowledge in Finland. They will increase the number of English-language courses and programmes in their own strong areas and pay more attention to the quality of instruction and teaching methods. The provision of courses on Finnish language and culture for foreign students will be expanded.

Universities will improve conditions for research and education by developing supportive library and information services and the ICT infrastructure. They will develop virtual education as part of the overall development of teaching.

Universities will adopt the system of personal study plans by 2006. They will prepare and implement the two-cycle degree structure and plan the extent of studies with a view to adopting the new structure flexibly as from the autumn term 2005. They will develop their supply of continuing professional education, degree education and open university provision geared to employed adults.

Universities will build up their contacts with business and industry through improved business knowledge, innovation services and the commercialisation of research findings. The regional impact of universities will be reinforced through networking with the foremost stakeholders in the regions.

Management and human capital

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

Efficient operations

Universities will improve the efficiency of their operations and structures in order to be able to reallocate resources to the development of teaching and research and strengthen their priority areas.

Universities will expand the financing base of their operations by supplementing the budgetary core funding from external sources. This supplementary funding must support the basic mission of the universities and the objectives set for them.

An action programme will be put in place to enable students to gain admission earlier, to lower the age at which students graduate, to reduce the number of admitting units and to streamline the admission procedures overall.

The quality of teaching and the system for planning, guiding and monitoring studies will be developed to raise retention rates and shorten study times especially in the fields of the humanities, mathematics and science, and technology.

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 period 2004-2006, the average target number is 14,064 for Master's degrees and 1,450 for doctorates. Annually, a total of 5,415 students will study abroad for three months or longer. The objective for open university provision is 20,000 full-time equivalent student places.

Resources

The 2005 State Budget allocated EUR 1.22 billion to the universities for operating costs. The level of core funding remained the same, and additional funding was allocated to national development projects, such as information society projects and the improvement of learning processes, study environments and research prerequisites. In accordance with the Higher Education Development Act, the appropriations for university core funding in 2005 rose by EUR 20 million on top of the increase in the salary expenditure. Overall, university operating costs in 2005 rose by EUR 23.9 million.

The universities also augmented their funding base by acquiring supplementary funding totalling EUR 694 million. This external funding mainly comprises nationally competed research funding, co-funded operations, fee-charging operations, donations and sponsorship.

Quality and quality assurance

The universities' quality assurance systems and their international comparability were developed to ensure that they meet European standards by 2007. With a view to improving the quality of university operations, support was targeted to units of excellence in education, adult education, research and artistic endeavour; evaluation and quality work were stepped up; and evaluation findings were used in the development of university operations.

International cooperation in university quality assurance was carried on in the monitoring of the Bologna process and within the scope of the ENQA network, which became an association in 2005. The European Association for Quality Assurance in Higher Education (ENQA) is a joint body of European organisations focusing on the evaluation of higher education. ENQA provides information about matters of current interest and good practices in quality assurance, publishes reports and a newsletter, and arranges seminars.

The universities continued to cooperate with the Finnish Higher Education Evaluation Council in developing their quality assurance systems. For instance, a pilot audit started at the University of Kuopio in 2005. Six follow-up audits were made on the Council's initiative, based on earlier evaluations (year in brackets): foreign language instruction (1999), study guidance (2001), mechanical engineering (2001), open university instruction (2002), university Master's programmes (2002), and media and communications (2002). Doctoral education was evaluated in 2004-2006: the report was published in January 2006.

The University of Jyväskylä and the Jyväskylä Polytechnic participated in an OECD review comparing the contribution of higher education institutions to regional economic development in 12 countries. The review started at the end of 2005 and the results are expected to be available in 2006.

The Finnish Higher Education Evaluation Council nominated the following as centres of excellence

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 cooperation with the Universities of Helsinki, Joensuu, Jyväskylä, Tampere and Åbo Akademi University)

University of Vaasa:

- Department of Management and Organisation

Lappeenranta University of Technology:

- Department of Industrial Management

Helsinki University of Technology:

- Degree programme in information processing 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 Academy of Finland designated the following units as centres of excellence in research:

University of Helsinki:

- Ancient and Medieval Greek Documents, Archives and Libraries
- Applied Microbiology Research Unit
- Centre for Activity Theory and Developmental Work Research
- Developmental Biology Research Programme
- Helsinki Bioenergetics Group
- The Metapopulation Research Group
- Plant Molecular Biology and Forest Biotechnology Research Unit
- Programme of Cancer Biology
- Programme of Molecular Neurobiology
- Programme on Structural Virology
- Research Unit for Variation and Change in English
- Research Unit on Economic Structures and Growth

University of Helsinki and University of Jyväskylä:

- History of Mind Research Unit
- Research Unit of Geometric Analysis and Mathematical Physics

University of Helsinki, Tampere University of Technology, Helsinki University of Technology, University of Kuopio and University of Oulu:

- Tissue Engineering and Medical, Dental and Veterinary Biomaterial Research Group

University of Helsinki and Åbo Akademi:

- Research Unit on the Formation of Early Jewish and Christian Ideology

University of Helsinki and Helsinki University of Technology:

- From Data to Knowledge Research Unit

University of Helsinki, University of Kuopio and the Finnish Meteorological Institute:

- Research Unit on Physics, Chemistry and Biology of Atmospheric Composition and Climate Change

University of Helsinki, Helsinki University of Technology, and Hospital District of Helsinki and Uusimaa:

- Helsinki Brain Research Centre (HBRC)z

University of Helsinki, National Public Health Institute and National Veterinary and Food Research Institute (EELA):

- Centre for Environmental Health Risk Evaluation

University of Helsinki, National Public Health Institute and Samfundet Folkhälsan:

- Center of Excellence in Disease Genetics

University of Joensuu:

- Research Unit for Forest Ecology and Management

University of Jyväskylä:

- Evolutionary Ecology
- Centre of Excellence in Nuclear and Condensed Matter Physics at the Department of Physics
- The Human Development and its Risk Factors Programme

University of Kuopio:

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

University of Oulu:

- Collagen Research Unit

University of Oulu and University of Helsinki:

- Centre of Population Genetic Analyses

University of Tampere and University of Helsinki:

- Finnish Research Unit for Mitochondrial Biogenesis and Diseases (FinMIT)

University of Turku:

- BioCity: Cell Surface Receptors in Inflammation and Malignancies
- Research Programme on Male Reproductive Health

Åbo Akademi University:

- Formal Methods in Programming
- Process Chemistry Group

Helsinki University of Technology:

- Computational Condensed Matter and Complex Materials Research Unit (COMP)
- Low Temperature Laboratory: Physics and Brain Research Units
- Neural Networks Research Centre
- Research Centre for Computational Science and Engineering
- Smart and Novel Radios Research Unit

Tampere University of Technology:

- Institute of Hydraulics and Automation
- Signal Processing Algorithm Group

Helsinki University of Technology, University of Helsinki and University of Turku:

- Bio and Nanopolymers Research Group

Technical Research Centre of Finland:

- Technical Research Centre of Finland, Industrial Biotechnology

**The centres of excellence
in adult education were:**

University of Helsinki

University of Jyväskylä

University of Oulu

University of Vaasa

University of Art and Design Helsinki

**The centres of excellence in artistic endeavour
nominated by the Arts Council of Finland were:**

University of Tampere:

- Actors' Training Department

Academy of Fine Arts:

- Department of Media Arts

University of Art and Design Helsinki:

- Department of Interior Architecture
and Furniture Design



Student selection and undergraduate studies

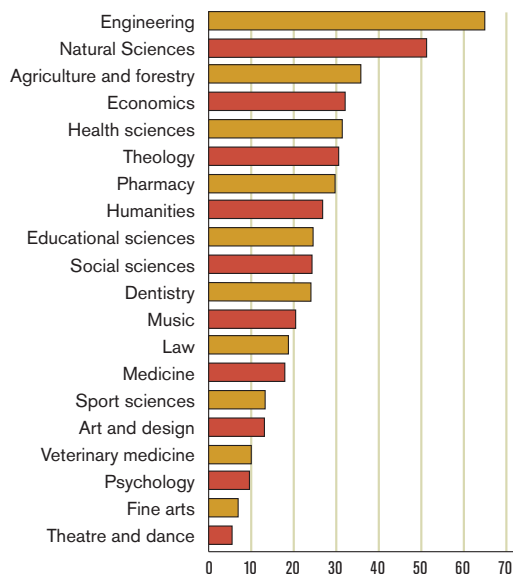
Changes in student selection

The object of the changes being made in student selection is more efficient study placements. The main measures include lighter entrance examinations, harmonisation of the points systems, increased admission based on school reports, fewer admitting units and closer cooperation in the selection process. Study placement will be improved so as to raise the proportion of the same year's secondary graduates in admissions to 50 % by the end of 2006 and to 55 % by the end of 2008. In the year under review, the percentage averaged 36 %. There was considerable variation from sector to sector, with the best result being achieved in engineering.

The universities, the National Board of Education and the Ministry of Education continued to construct a joint university admissions system. The new system will be introduced in two stages: the electronic applications system will be in use from the 2008-2009 academic year, and the full system as of 2010-2011.

A joint application system was used in Economics on a trial basis in 2005. The planning of the reform also started in education, in social and political sciences and in some foreign student admissions. The

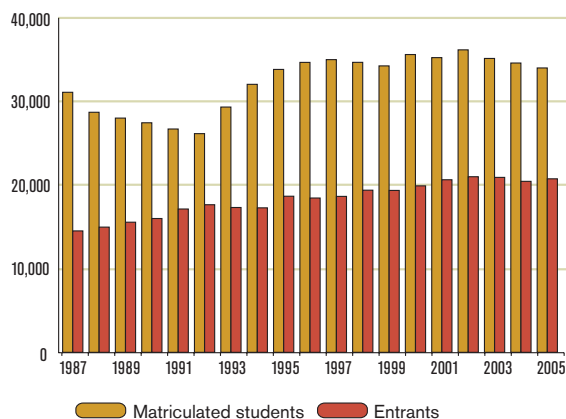
Chart 1 Student selection in 2005 by field of study (percentage of applications accepted)



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

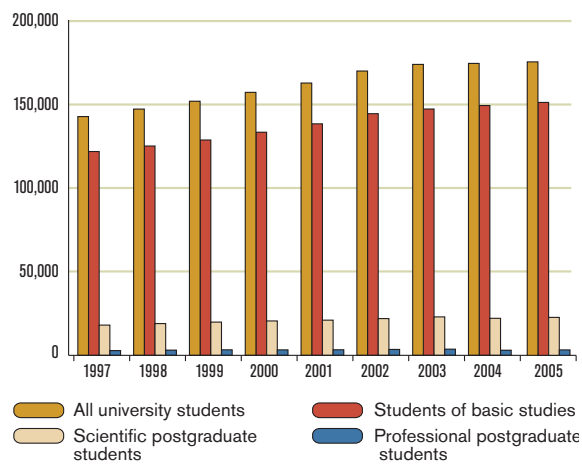
Source: Finnish National Board of Education

Chart 2 Matriculated students and university entrants, 1987-2005



Source: KOTA, Statistics Finland and the Matriculation Examination Board

Chart 3 Number of students, 1997-2005*



* 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

Ministry of Education granted special project funding for this work.

In 2005 the universities received over 163,600 applications. Some 96,500 applicants took entrance examinations, and over 28,200 were admitted, 56.5 % of them women. Nearly 20,800 new students started university in autumn 2005; 27 % of the entrants were 19 or younger.

Degree reform

An amendment to the Universities Act providing for the degree reform (715/2004) and a Government Decree issued by virtue of it (794/2004) came into force on 1 August 2005. The two-cycle degree structure was adopted in all fields except medicine and dentistry.

Another amendment (556/2005), also promulgated in August 2005, defines the normative duration for the lower (Bachelor's) degree (180 credits ECTS/3 yrs) and for the higher (Master's) degree (120 credits ECTS/2 yrs). Under the Universities Act, universities have a duty to arrange teaching in

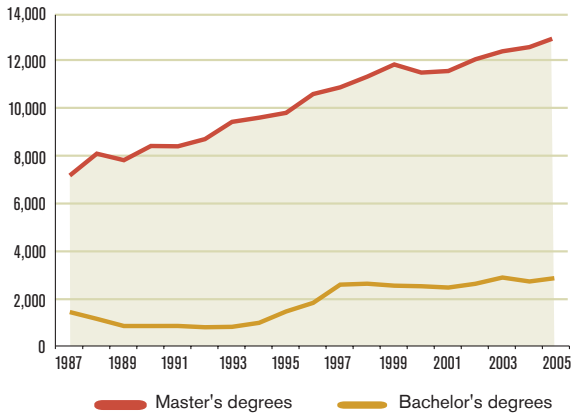
a way which enables students to graduate within the normative time.

The aim of the amendments is to improve the quality of teaching, degrees and study guidance and thereby maximise retention and shorten study times. The two-cycle degree structure improves the international comparability of Finnish degrees.

In June and December 2005, the Ministry of Education issued Decrees concerning separate Master's programmes beginning in 2005 and in 2006. The Decrees provide for 86 Master's programmes in all, including 56 with English as the language of instruction.

The action programme for shortening study times was extended. The degree reforms also addressed progress in studies by modifying the extent of studies and study periods and by introducing a system of personal study plans. Universities are conducting development projects with a view to promoting studies, notably a joint project of 12 universities called W5W (Graduation in five years). During the performance agreement period 2004-2006, an annual appropriation of six million euros will be targeted to

Chart 4 Bachelor's and Master's degrees, 1987–2005



Source: KOTA

the development of university teaching and student counselling. Universities were also granted performance-based funds on the basis of progress in studies.

Online teaching

The Finnish Virtual University continued developing virtual teaching and related services. Universities and their networks offered hundreds of web courses, in which students gained tens of thousands of credits. University personnel were offered pedagogical and technical support and in-service training. The Ministry of Education supported the implementation of the Virtual University and the development of information society skills with a total of nine million euros in 2005.

The service unit of the Virtual University developed tools, disseminated information and provided training in support of universities. The Virtual University devised a strategy for 2005-2010, and the establishment of the Virtual University on a permanent basis was initiated.

Degrees and students

The number of university students grew slightly from the previous year. Universities had a total of 160,100 students registered as present: 136,700 undergraduates, 20,600 graduate students and 2,800 other students. Including those temporarily absent, universities had a total of 176,000 degree students, of whom 53.7 % were women.

In 2005 universities awarded altogether 12,920 Master's degrees, which is 2.6 % more than in 2004. The target set for the number of Master's degrees for 2004-2006 (14,064) was not achieved, despite the positive development. The median duration of studies was six years. The number of Bachelor's degrees was over 2,900, which is 7 % more than in the previous year.

Postgraduate education

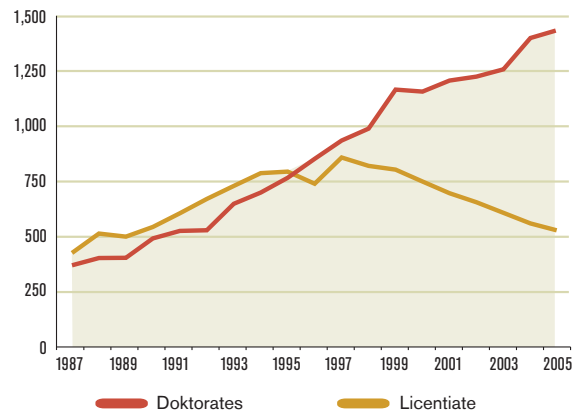
Postgraduate education developed

In 2005 ten years had passed since the start of the Finnish graduate school system. Considerable progress has been made in attainment of the goals set in 1995: to improve the quality of postgraduate education and make it more systematic, to reduce the time spent on a doctoral thesis and lower the age of new PhDs, to step up cooperation between research groups, and to increase international collaboration in education and research. Evaluations show that the graduate school system has made postgraduate education more systematic and efficient and increased international training events and researcher collaboration. About 30 % of new graduate school PhDs entering the labour force were under 30 year of age.

In 2005, there were 114 graduate schools financed by the Ministry of Education. These had about 4,500 full-time postgraduate students, 1,426 of them receiving funding via the Ministry of Education. Most of the graduate schools are networks involving several universities, with 15 universities acting as coordinators. All the universities participate in the graduate school network.

The eighth national application round for graduate schools was opened. In July 2005 the Ministry of Education made a decision on the schools which will start operating at the beginning of 2006, based on an Academy of Finland proposal.

Chart 5 Licentiate and doctorate, 1987–2005



Source: KOTA

Field of research	Graduate schools	Percentage of doctoral students
natural sciences and technology	45	43.3
bio and environmental sciences	13	15.2
culture and social and political sciences	40	24.3
health sciences	16	17.2

Research

Encouraging rise in research funding

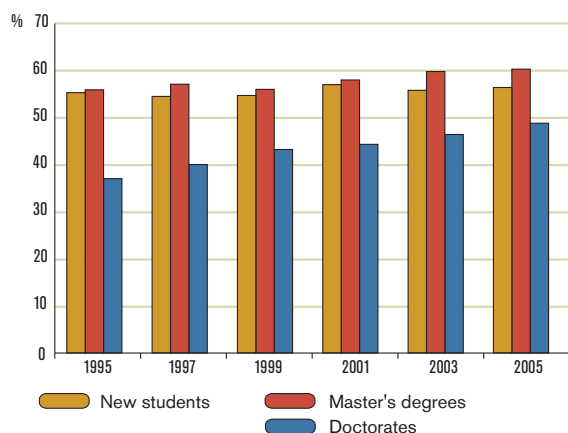
Research funding continued to rise. At around 2 %, Finnish research personnel represent the highest percentage of the employed labour force in the OECD. Long-term input into researcher training has ensured an adequate supply of competent researchers. The number of doctorates has nearly doubled in the last ten years: from 765 in 1995 to 1,422 in 2005.

The GDP share of R&D expenditure in Finland (3.51 % in 2004) is one of the highest in the OECD. Finnish public R&D funding as a share of the GDP is also among the highest in the world.

The Ministry of Education targeted the additional research funding decided on by the Government to competitive funding allocated by the Academy of Finland and to university core funding. These jointly accounted for 42 % of total public R&D funding in 2005.

The 2005 budget gave the Academy a total of EUR 175.6 million in authorisations for research projects, or EUR 3 million more than a year earlier. The Academy used its funding to support fields of great relevance to Finland, topical research projects and new growth fields, e.g. by launching two new fixed-term research programmes. Research funding

Chart 6 Percentage of women among new students, Master's degrees and doctorates, 1995–2005

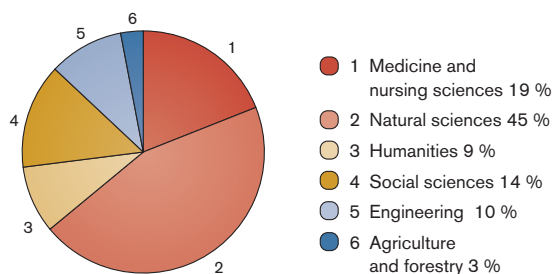


Source: KOTA

More doctoral dissertations

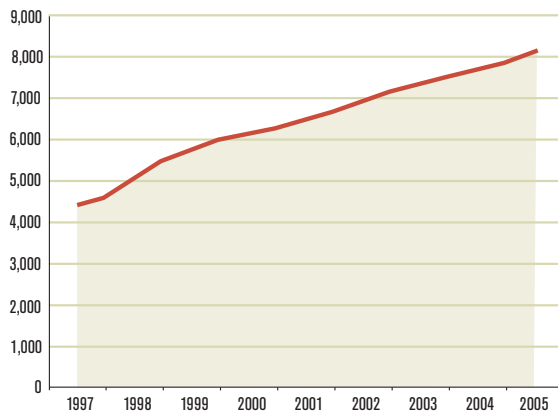
The number of doctorates kept growing. The 2005 figure was 1.6 % higher than the previous year and the annual goal of 1,450 set for 2004–2006 was almost achieved. Exactly 1,422 doctorates were completed, against 1,399 in 2004. In 2005 there were 533 licentiates, compared with 558 the previous year.

Chart 7 Academy of Finland decisions on research funding by field of research 2005



Source: Academy of Finland

Chart 8 Research personnel * 1997–2005



* Also includes graduate school research students Source: KOTA

was also used to promote the international activities of graduate schools and the development of post-doctoral careers and post-doctoral job structure.

In 2005 the Ministry of Education distributed EUR 9.8 million in discretionary government grants to promote science, increase the visibility of research findings, and promote interaction between science and society.

Altogether 42 centres received funding under the Academy of Finland's Centres of Excellence in Research programme in 2005. In 2002-2007 the total funding under the programme will come to EUR 33 million.

In 2005 the Academy of Finland launched three new four-year research programmes: the LIIKE2 Research Programme on Business Know-how, the NEURO Research Program in Neuroscience, and the KITARA Automatic Engineering Research Programme.

Funding for biotechnology was extended over 2004-2006 as proposed by a monitoring group appointed to follow up the 2002 evaluation. The Biotechnology 2005 committee preparing a biotechnology development programme submitted its report in December.

Action required as a result of the extended mission of the National Library, such as a legislation and management reform, was planned by a monitoring group. Financial support was granted to digitisation projects and the development of long-term electronic storage in research libraries and archives.

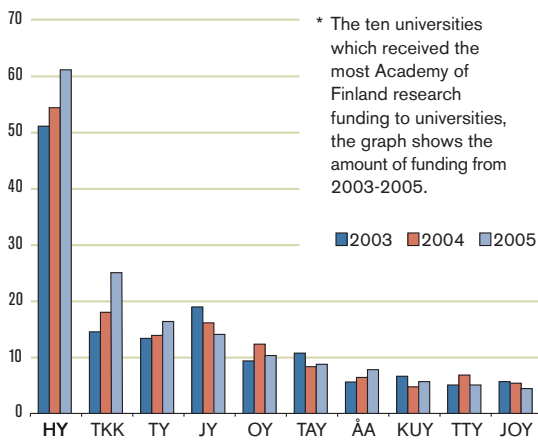
The publication of the 24-volume collected works of J.V. Snellman, a long-standing history project, was completed on the threshold of the Snellman bicentenary.

The Ministry of Education financed the scientific computing and Funet network services intended for all Finnish universities. The Centre for Scientific Computing (CSC), was responsible for the practical implementation. CSC increased its computing capacity appreciably by acquiring a new application server and enlarging its cluster capacity.

Research system evaluated

On April 7, 2005 the Government passed a Resolution on the structural development of the public research system. The aim is to develop the entire public research system holistically as

Chart 9 Academy of Finland research funding to universities, 2003-2005*, EUR million

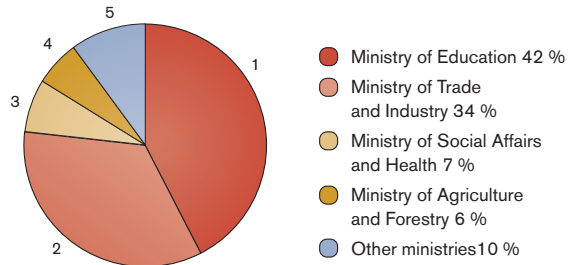


* The ten universities which received the most Academy of Finland research funding to universities, the graph shows the amount of funding from 2003-2005.

HY= University of Helsinki
 TKK= Helsinki University of Technology
 TY= University of Turku
 JY= University of Jyväskylä
 OY= University of Oulu
 TAY= University of Tampere
 ÅA= Åbo Akademi University
 KUY= University of Kuopio
 TTY= Tampere University of Technology
 JOY= University of Joensuu

Source: Academy of Finland

**Chart 10 R & D funding by administrative sector in 2005
 EUR 1,583 million in total**



Source: Statistics Finland

a functional entity, to make research activities more international, and to ensure constant quality enhancement. Work on the programme needed to implement the Resolution began, and a new Decree on the Science and Technology Council of Finland was issued on October 27, 2005.

The Academy of Finland carried out the following evaluations: the TERVE health promotion research programme, the SUNARE programme on the sustainable use of natural resources, the Interaction across the Gulf of Bothnia research programme, and an evaluation of Research in Business Disciplines in Finland. The follow-up report to the international evaluation of Finnish geosciences (2003) was published in June 2005. In the autumn, an international assessment was carried out on the Finnish National Archives Service.

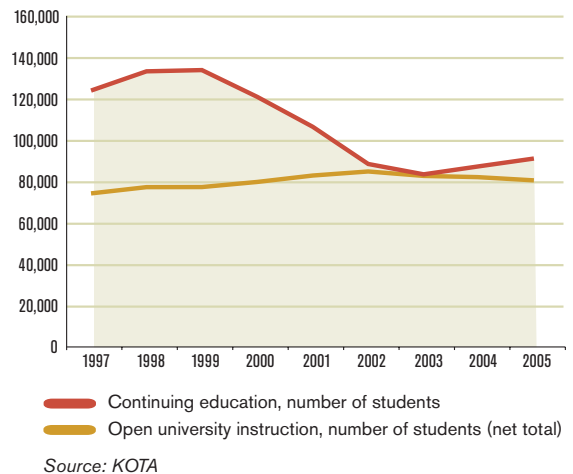
A committee made a proposal for good practices in postgraduate education. An extensive survey was carried out among doctoral students, which also contributed to an international review. The survey also contributed to an international evaluation of doctoral training coordinated by the Higher Education Evaluation Council.

Open university and continuing education

The universities continued to play a major role as providers of open university instruction, which was available in practically every sphere of education. However, the downward trend, which has been in evidence for some years now, continued. Nearly all the main indicators on open university instruction – student numbers and credits offered and completed – fell by 5-7 % from the previous year. The number of students admitted to university on the basis of open university studies remained at the former level. The figure was 682 in 2005, which is close to 55 % of the overall target set for this track. On the other hand, the popularity of the ‘University of the Third Age’ grew, with 10 % more participants than the previous year. The universities increased adult opportunities to complete a university degree by expanding the provision of Master’s programmes.

The downward trend witnessed in continuing education for several years now seems to be reversing. Nearly 4,000 courses were arranged (up almost 10 %), catering for some 95,000 participants, which is 7 % more than in 2004. The proportion of specialisation in the course provision has risen particularly fast, showing that long-term continuing education enjoys greater popularity.

Chart 11 Number of students in adult education, 1997–2005



Steering and structural development

Legislation amended

An act amending the Universities Act (556/2005) was passed, laying down normative durations of degree studies. At the same time the universities were required to arrange teaching in a way that makes these targets feasible.

Another new amendment of the Act (715/2004), which came into force on August 1, 2005, specifically states that the universities' third function is to interact with society and promote the social impact of scientific and cultural activity. Another new provision makes it compulsory to include an outsider on a university's board. Now, at least one and at most one third of the board members must be persons who are not members of the university body.

An act amending the State Budget Act (1111/2004) also came into force on August 1, 2005, making it possible for universities to set up either their own or joint 'university companies' and use the profits for their own purposes. The aim here is to enable the universities to fulfil their third mission of interacting with society and promoting the social impact of scientific and cultural activities.

The act amending the Universities Act (715/2004) also makes it possible for the universities to admit a student solely to complete a Master's degree and thereby to arrange separate Master's programmes. The amendment took effect on August 1, 2005.

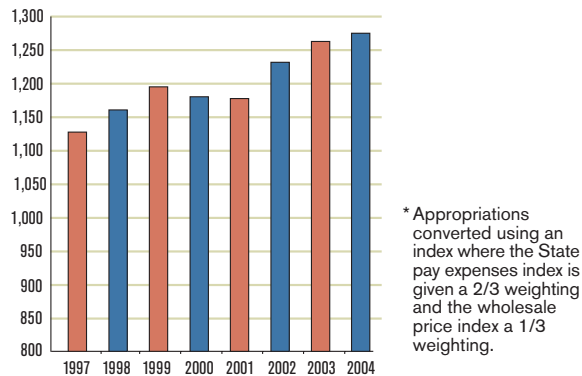
The act also revised the provision on the languages of teaching and research to allow the universities to award degrees taken in languages other than Finnish and Swedish.

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. As part of its productivity programme, the Ministry of Education has been preparing development of the structure of the university system and operations in order to enhance the productivity, quality and impact of university operations.

A committee developing the performance management system between the Ministry of Education

Chart 12 Operating expenses of universities (EUR million) per annual accounts data 1997-2004, appropriations in real terms*

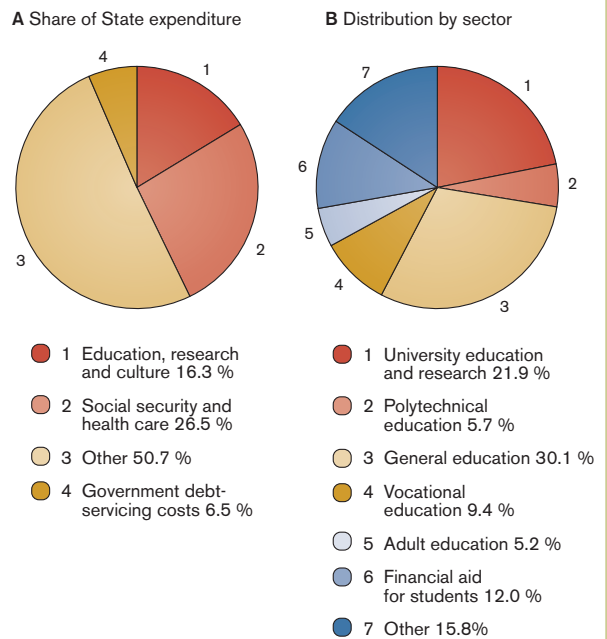


and the universities and the core funding formula for the agreement period 2007-2009 completed its task in September. Its proposal shifts the focus of the funding model to respond more closely to the needs of research, researcher training and internationalisation. Quality and impact are also more to the fore. As part of its work on the performance management system, the Ministry of Education continued to develop the statistical university database (KOTA) to support management and online services.

In April, the Ministry of Education and the universities discussed resources for 2006 and adjusted the targets for 2004-2006. The universities were given written feedback on their 2004 operations.

The level of university core funding was maintained and supplementary funding was targeted at national development projects, such as information society projects, the development of learning processes and environments, and improvements in the prerequisites for research. The universities' operating costs rose altogether by EUR 23.9 million in 2005. A total of EUR 29.5 million was allocated on the

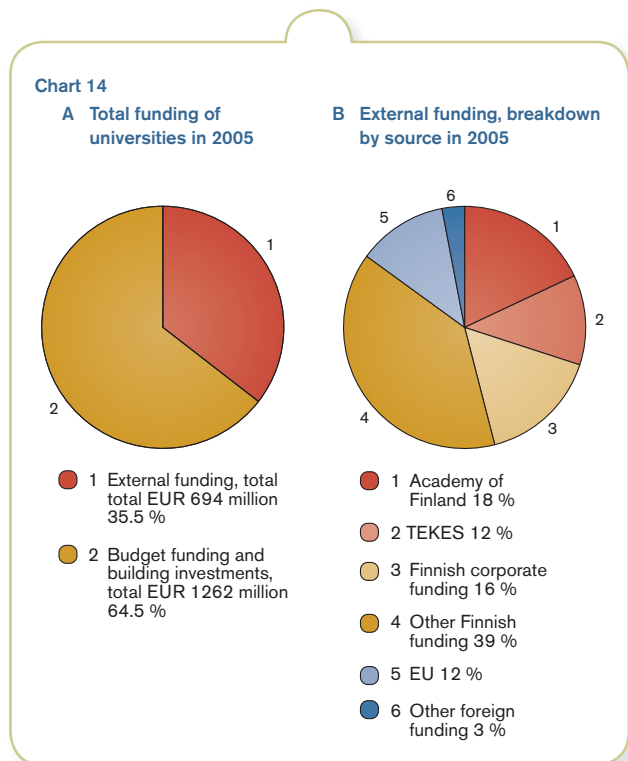
Chart 13 Educational, research and cultural appropriations in the State Budget and supplementary budgets and their distribution by sector in 2005 (%)



basis of performance, with EUR 21.7 million being distributed to centres of excellence in research, education, adult education and artistic fields. Project funding (EUR 51.9 million) was used to support areas of nationwide importance, such as information strategy projects in education and research (EUR 9.9 million), virtual university projects (EUR 9.2 million), teacher training projects (EUR 10.9 million), projects to promote learning processes (EUR 4.6 million) and projects related to business knowledge (EUR 1.8 million). The national health project received EUR 7.4 million.

Funding was also allocated to projects designed to implement the policy programmes of Prime Minister Matti Vanhanen's second Government (concerning the information society, employment, entrepreneurial policy, and civil participation). For instance, a joint project to promote teaching and research in entrepreneurship education coordinated by the University of Tampere was launched within university teacher training, and another to strengthen teaching and research in civil participation coordinated by the University of Helsinki.

One-person committees were called in to look into university administration and finance and their



reform. The report will be completed during 2006. The aim is to propose steps that would strengthen the universities' own financial powers.

Modern facilities boost operating potential

No new buildings were opened during the year under review. Construction continued, but the main focus was on renovations designed to update existing premises to meet modern teaching needs. The main renovation projects completed during 2005 were the chemistry and mechanical engineering departments at Helsinki University of Technology, Linnanmaa at the University of Oulu, the Borealis building at the University of Joensuu, and the forestry faculty premises on the University of Helsinki's Viikki campus.

The universities improved their administration of facilities and their building plans so as to promote

more efficient use of premises and save on costs. The Ministry of Education, the universities and the state real estate company Senate Properties started to draw up 5-10 year investment programmes for the universities' construction projects, placing the projects in order of urgency to guide their preparation. Guidance of the 'workplace process' required in the government premises strategy devised by the Ministry of Finance began, together with its application to university construction and renovation projects.

Talks on new university salary system

The aim of the universities' new salary system is to make pay more fair, boost the salary competitiveness of the universities as employers, encourage staff to develop their competencies and their input, and to improve staff management and direction. In the new system, salary comprises one component based on job grading and another based on the employee's own performance.

Agreement was reached on the new salary system on December 16, 2005, and it will take effect on January 1, 2006.

Educational provision focused to meet society's needs

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

The expansion programme in teacher training, launched in 2001 because of the high average age of newly-graduated teachers and the large number of unqualified teachers, continued. By the end of

2006, the programme will raise intakes in teacher training by a total of 2,500 at the ten universities involved in the programme. The biggest increases are in the training of mathematics and science teachers and language teachers, and in specialist and class teacher training. There have also been increases in teacher training in art subjects and physical education, and guidance counselling training. More opportunities are also being provided for teachers to take courses in pedagogics. The expansion programme concerns teaching in both Finnish and Swedish. In 2005, Statistics Finland was commissioned by the Ministry of Education to carry out a nationwide teacher survey, the results of which will be used to forecast future teaching needs.

Since 2002, the intake in medicine has been raised from 550 to 600. Graduate-entry medical training for nurses continued at the University of Turku. In addition, a decision was taken to increase the intake in dentistry. The need for additional training in other health and social care fields was assessed.

University projects were supported in line with the programme for enhancing business knowledge as part of an effective innovation system and developing services and business in general.

To back up structural development of the university system, surveys were made of the organisation of cooperation networks in business sciences, and of the present state and future development needs of university education in law. The Ministry of Education also appointed a one-person committee to explore ways to form a university cluster of 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 scrutinise the organisation of the University of Art and Design's Media Centre Lume with a view to clarifying its national status.

International and European cooperation

International competitiveness reinforced

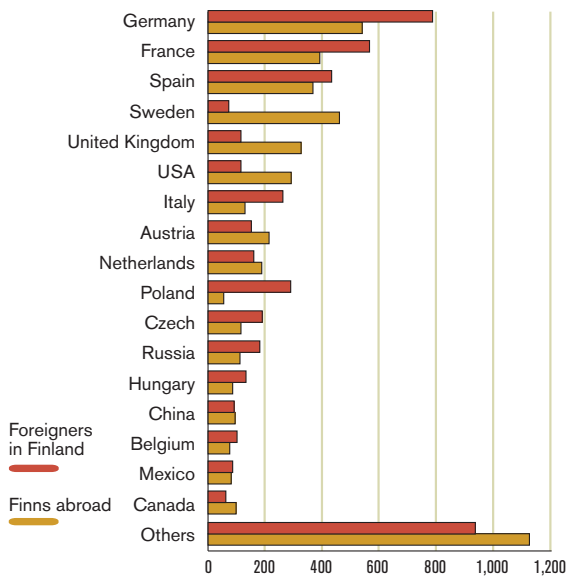
The degree reform gave the universities greater potential for international cooperation. They launched a large number of new Master's programmes in English in accordance with the new degree structure: the Ministry of Education Decree made provision for 56 such programmes.

Five universities took part in the Cross-Border University project, which is working on networked Master's programmes between universities in Finland and Russia. Cooperation and student and teacher exchanges with Russia, similarly based on networking, were increased through the FIRST programme administered by the Centre for International Mobility (CIMO).

The universities contributed to international development cooperation 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, also administered by CIMO.

The universities were active in application rounds within the EU's Sixth Framework Programme for Research and Technological Development (2002-2006). At the end of 2005, Finns were involved in over 800 projects within this programme. The universities accounted for 33 % of Finnish participation, research centres for 27 % and companies for 31 %.

Chart 15 Student exchanges in 2005



Source: CIMO

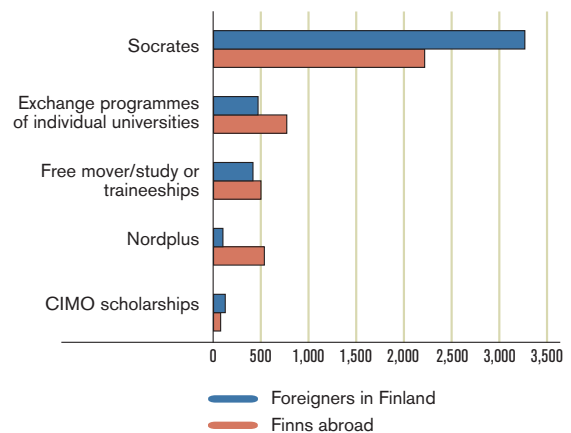
In spring 2005, the Commission put forward a proposal for the EU's Seventh Framework Programme (2007-2013). Finland's international science policy collaboration was intensified. The development of the European Research Area and preparations for the above-mentioned Seventh Framework Programme facilitated the attainment of science policy objectives. 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.

Increase in number of foreign students

The number of foreign students rose by 6 % from 2004, totalling 4,949. Nearly 1,500 of these were studying for a doctorate. Finnish students completed 559 degrees abroad (2004), compared with 509 in the previous year.

In 2005, 4,497 Finnish undergraduates took part in exchange programmes abroad, against 4,077 the year before. The number of foreign students coming to Finland rose by 7.3 %. Altogether 4,552 university students came to Finland in 2005 (4,242 in 2004). 3,050 Finnish teachers and researchers worked at foreign universities for at least two weeks.

Chart 16 Students entering and leaving Finland under exchange programmes 2005



Source: CIMO

Social function

Knowledge transfer

The third mission of universities, alongside education and research, was clarified in an amendment to the Universities Act (715/2004), which came into force on 1 August 2005. The amendment assigns universities a duty to interact with society and promote the impact of their scientific and artistic activities on society.

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

The utilisation of scientific and artistic university activities was facilitated by an amendment to the State Budget Act (1111/2004), which took force on 1 August 2005 and which makes it possible for universities to start up state companies. The universities can keep the profits of companies or own stocks in companies whose aim is to promote knowledge transfer or to commercialise innovations. Universities have submitted five proposals for such companies, but as yet no favourable decision has been made. Some universities invested their funds in research-driven companies, while others boosted their science and enterprise park cooperation.

Regional impact

During 2005 the universities implemented the regional development programme 2004-2006 geared to enhance the impact of universities on society. A number of projects were launched in

accordance with the universities' and polytechnics' joint regional strategies, which were devised in 2002. The universities and polytechnics updated their joint regional strategies, which consolidated cooperation and networking between higher education institutions. Four universities, together with polytechnics in their regions, launched feasibility studies with a view to starting educational cooperation and deepening other collaboration.

The Ministry of Education carried on the development of the six university centres with the aim of further enhancing universities' regional impact. As well as having regional impact, university centres played an important role in intensifying inter-university cooperation. The centres were allocated altogether EUR 3 million for the development of learning and research environments.

Within the scope of their social service mission, universities participated in the 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 Pirkanmaa. The degree programmes and the networked HEIs responded to regional labour market needs, raised the level of education among the adult population and promoted networking between HEIs and business and industry.

Several universities were granted Structural Fund co-financing for constructing infrastructures especially in regional university centres, for arranging Master's and graduate entry programmes and for undertaking development projects in response to regional needs. As regards Structural Funds programmes, there were problems regarding the interpretation of the place of residence rule, which is why it was practically impossible to launch any Master's programmes towards the end of 2005.

Employment

The employment situation for graduates remained almost unchanged. According to Statistics Finland the unemployment rate of holders of a Master's degree aged 20 to 64 was 4.2 % in 2004, compared with 4.3 % the previous year. The rate for those who had completed graduate school or the like was 2.9 % (2.8 % the previous year). Success in finding employment among holders of a Master's or doctorate degrees or a place in postgraduate education among Master's graduates remained almost 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.

The universities stepped up advisory and guidance services and the use of student internships in order to promote graduate placement in employment.

Statistics

- Universities 2005
- Student selection 2005
- Continuing education at universities and in open university instruction 1997–2005
- Fields of study 2005
- State-funded research and development funding by recipient 1998–2005
- Academy of Finland funding decisions by university 2005
- University personnel working abroad and visits by foreign teachers and researchers to universities in Finland 1997–2005
- Teaching staff 1997–2005
- Proportion of women (%) among teaching staff 1997–2005
- Other personnel 1997–2005
- Main occupation of holders of Master's degrees following graduation 1994–2003
- Unemployment rate (%) among holders of Master's or postgraduate degrees 1992–2004

Universities 2005

	New students*		Students of basic studies*		Postgraduate students*		All students	Master's degrees		Doctor's degrees		
		%		%		%			%		%	
University of Helsinki	3,831	18.4	29,199	21.4	5,187	25.1	35,331	22.1	2,322	18.0	378	26.6
University of Joensuu	1,285	6.2	6,582	4.8	740	3.6	7,394	4.6	681	5.3	53	3.7
University of Jyväskylä	2,039	9.8	11,603	8.5	1,498	7.3	13,101	8.2	1,346	10.4	109	7.7
University of Kuopio	902	4.3	4,826	3.5	731	3.5	5,777	3.6	473	3.7	89	6.3
University of Lapland	754	3.6	3,925	2.9	347	1.7	4,272	2.7	381	2.9	18	1.3
University of Oulu	1,967	9.5	12,596	9.2	1,656	8.0	14,592	9.1	1,333	10.3	130	9.1
University of Tampere	1,558	7.5	11,660	8.5	1,753	8.5	14,043	8.8	945	7.3	105	7.4
University of Turku	1,816	8.7	12,346	9.0	1,985	9.6	14,889	9.3	1,085	8.4	137	9.6
University of Vaasa	638	3.1	4,070	3.0	341	1.7	4,411	2.8	358	2.8	16	1.1
Åbo Akademi University	805	3.9	5,254	3.8	784	3.8	6,087	3.8	504	3.9	70	4.9
Helsinki University of Technology	1,367	6.6	10,669	7.8	2,422	11.7	13,091	8.2	1,017	7.9	150	10.5
Lappeenranta University of Technology	764	3.7	4,284	3.1	479	2.3	4,763	3.0	491	3.8	35	2.5
Tampere University of Technology	1,302	6.3	8,631	6.3	1,693	8.2	10,324	6.4	742	5.7	65	4.6
Helsinki School of Economics	559	2.7	3,719	2.7	326	1.6	4,045	2.5	379	2.9	19	1.3
Swedish School of Economics and Business Administration	326	1.6	1,989	1.5	143	0.7	2,132	1.3	240	1.9	15	1.1
Turku School of Economics and Business Administration	318	1.5	1,882	1.4	215	1.0	2,097	1.3	226	1.7	8	0.6
Academy of Fine Arts	40	0.2	216	0.2	15	0.1	231	0.1	24	0.2	2	0.1
Sibelius Academy	180	0.9	1,298	0.9	126	0.6	1,424	0.9	133	1.0	11	0.8
Theatre Academy	70	0.3	358	0.3	35	0.2	393	0.2	82	0.6	2	0.1
University of Art and Design Helsinki	265	1.3	1,546	1.1	161	0.8	1,707	1.1	158	1.2	10	0.7
Total	20,786	100	136,653	100	20,637	100	160,104	100	12,920	100	1,422	100

* Data includes only students who are present ** Includes staff hired on both budget funding and external funding

Student selection in 2005

	Applications	Examinees	Admitted	Entrants*
Theology	1,101	868	314	275
Humanities	24,025	14,700	3,716	3,038
Art and design	3,467	3,143	417	385
Music	1,051	826	189	180
Theatre and dance	1,620	1,603	82	70
Educational sciences	24,674	7,700	2,584	1,994
Sport sciences	1,815	458	181	156
Social sciences	14,497	8,414	2,606	2,104
Psychology	2,773	2,004	148	155
Health sciences	2,522	1,236	506	441
Law	3,230	2,593	599	546
Economics	25,143	17,383	3,277	2,622
Natural sciences	25,175	13,798	6,864	3,499
Agriculture and forestry	2,475	1,818	483	413
Engineering	22,273	14,085	4,919	3,895
Medicine	3,953	3,262	627	463
Dentistry	498	403	114	72
Veterinary medicine	538	431	52	36
Pharmacy	2,190	1,680	513	402
Fine arts	629	66	42	40
Total	163,649	96,471	28,233	20,786

* First-time students admitted to the university to complete a Bachelor or Master's degree. Data includes students both present and absent.

Source: KOTA

	Teaching staff **		Research staff **		Students at graduate schools **		Other staff **		Expenditure 1,000 € (Budget funding)		Expenditure 1,000 € (External funding)		
	number	%	number	%	number	%	number	%	number	%	number	%	
	1,790	21.2	1,499	23.1	388	24.3	3,726	26.2	304,010	24.1	190,866	27.5	University of Helsinki
	425	5.0	194	3.0	51	3.2	567	4.0	56,809	4.5	20,710	3.0	University of Joensuu
	785	9.3	422	6.5	173	10.8	988	7.0	95,228	7.5	50,478	7.3	University of Jyväskylä
	367	4.3	323	5.0	81	5.1	752	5.3	51,339	4.1	47,501	6.8	University of Kuopio
	213	2.5	63	1.0	12	0.8	339	2.4	30,898	2.4	10,552	1.5	University of Lapland
	853	10.1	532	8.2	145	9.1	1,426	10.0	125,676	10.0	56,740	8.2	University of Oulu
	659	7.8	358	5.5	100	6.3	1,003	7.1	84,436	6.7	43,837	6.3	University of Tampere
	847	10.0	498	7.7	157	9.8	1,195	8.4	107,130	8.5	52,194	7.5	University of Turku
	191	2.3	43	0.7	7	0.4	221	1.6	21,972	1.7	6,105	0.9	University of Vaasa
	370	4.4	242	3.7	84	5.3	537	3.8	47,621	3.8	28,474	4.1	Åbo Akademi University
	487	5.8	1,134	17.4	214	13.4	1,425	10.0	116,020	9.2	91,134	13.1	Helsinki University of Technology
	247	2.9	300	4.6	25	1.6	297	2.1	35,063	2.8	21,543	3.1	Lappeenranta University of Technology
	365	4.3	674	10.4	122	7.6	745	5.2	68,222	5.4	44,271	6.4	Tampere University of Technology
	160	1.9	73	1.1	18	1.1	248	1.7	24,835	2.0	11,138	1.6	Helsinki School of Economics
	104	1.2	17	0.3	8	0.5	92	0.6	12,782	1.0	2,788	0.4	Swedish School of Economics and Business Administration
	118	1.4	74	1.1	6	0.4	131	0.9	15,020	1.2	6,236	0.9	Turku School of Economics and Business Administration
	31	0.4	0	0.0	0	0.0	29	0.2	3,758	0.3	169	0.0	Academy of Fine Arts
	221	2.6	8	0.1	4	0.3	145	1.0	23,357	1.9	2,457	0.4	Sibelius Academy
	58	0.7	1	0.0	1	0.1	88	0.6	10,673	0.8	648	0.1	Theatre Academy
	159	1.9	45	0.7	3	0.2	253	1.8	27,053	2.1	6,339	0.9	University of Art and Design Helsinki
	8,450	100	6,500	100	1,599	100	14,207	100	1,261,902	100	694,180	100	Total

Source: KOTA and Statistics Finland

Continuing education at universities and in open university instruction 1997–2005

	1997	1999	2000	2003	2005
Continuing education, number of courses	4,923	5,382	4,764	3,636	3,841
- short courses (5 days or less)	2,389	2,677	2,495	1,729	1,650
- special studies*	56	600	485	272	372
- other courses	2,478	2,105	1,784	1,635	1,819
Students	124,296	134,227	106,726	83,685	94,159
Course days (1 day = 6 classroom hours)	69,137	66,642	46,918	41,788	35,029
Open university instruction Students	74,440	77,522	83,106	82,918	80,058

*From 1998 onwards

Source: KOTA

Fields of study 2005

	New students		Students present total		Bachelor's degrees		Master's degrees		Licentiates	
		%		%		%		%		%
Theology	275	1.3	2,602	1.6	26	0.9	208	1.6	5	0.9
Humanities	3,038	14.6	24,761	15.5	787	27.0	1,704	13.2	80	15.0
Art and design	385	1.9	2,574	1.6	103	3.5	219	1.7	0	0.0
Music	180	0.9	1,424	0.9	20	0.7	133	1.0	4	0.8
Theatre and dance	70	0.3	424	0.3	13	0.4	82	0.6	0	0
Educational sciences	1,994	9.6	13,688	8.5	475	16.3	1,583	12.3	38	7.1
Sport sciences	156	0.8	785	0.5	7	0.2	91	0.7	3	0.6
Social sciences	2,104	10.1	16,704	10.4	320	11.0	1,253	9.7	69	12.9
Psychology	155	0.7	1,770	1.1	6	0.2	228	1.8	20	3.8
Health sciences	441	2.1	2,808	1.8	16	0.5	336	2.6	9	1.7
Law	546	2.6	4,384	2.7	19	0.7	414	3.2	30	5.6
Economics	2,622	12.6	17,675	11.0	321	11.0	1,734	13.4	19	3.6
Natural sciences	3,499	16.8	24,165	15.1	438	15.0	1,558	12.1	118	22.1
Agriculture and forestry	413	2.0	3,341	2.1	13	0.4	247	1.9	8	1.5
Engineering	3,895	18.7	32,488	20.3	10	0	2,450	19.0	125	23.5
Medicine	463	2.2	7,345	4.6	0	0	460	3.6	0	0.0
Dentistry	72	0.3	637	0.4	0	0	54	0.4	0	0
Veterinary medicine	36	0.2	526	0.3	0	0	48	0.4	0	0
Pharmacy	402	1.9	1,772	1.1	322	11.1	94	0.7	5	0.9
Fine arts	40	0.2	231	0.1	16	0.5	24	0.2	0	0
Total	20,786	100	160,104	100	2,912	100	12,920	100	533	100

* specialist degrees in medicine, dentistry or veterinary medicine

State-funded research and development funding by recipient, 1998–2005, at current prices, EUR million

	1998	1999	2000	2001	2002	2003	2004	2005	%
Universities	313.5	323.3	346.4	349.8	377.7	393.3	407.9	416.7	26
University hospitals	60.5	60.5	59.4	56.7	56.7	48.7	48.7	40.7	3
Academy of Finland	142.9	155.5	153.8	187.1	184.9	188.6	214.6	223.5	14
Technology Development Center	374.9	410.8	390.8	399.4	398.5	412.7	430.0	448.4	28
State owned-research institutes	204.3	208.0	215.8	219.8	234.4	239.5	250.0	259.4	16
Other public funding	153.5	117.0	129.7	139.6	136.5	169.9	183.9	208.0	13
Total	1,249.6	1,275.1	1,295.9	1,352.4	1,388.7	1,452.7	1,535.1	1,596.7	100

Source: Statistics Finland

Doctorates	%	Other* degrees	%
25	1.8	0	0
113	7.9	0	0
12	0.8	0	0
11	0.8	0	0
2	0	0	0
83	5.8	0	0
5	0.4	0	0
119	8.4	0	0
19	1.3	0	0
40	2.8	0	0
15	1.1	0	0
89	6.3	0	0
272	19.1	0	0
39	2.7	0	0
277	19.5	0	0
248	17.4	869	96.9
20	1.4	25	2.8
11	0.8	3	0.3
20	1.4	0	0
2	0	0	0
1,422	100	897	100

Source: KOTA and Statistics Finland

Academy of Finland funding decisions by university in 2005*, EUR million

University	EUR Million	%
University of Helsinki	61.1	36.8
University of Joensuu	5.9	3.5
University of Jyväskylä	16.6	10.0
University of Kuopio	8.1	4.9
University of Lapland	1.2	0.7
University of Oulu	10.5	6.3
University of Tampere	9.1	5.5
University of Turku	14.2	8.5
University of Vaasa	0.4	0.2
Åbo Akademi University	5.4	3.2
Helsinki University of Technology	25.2	15.2
Lappeenranta University of Technology	0.9	0.5
Tampere University of Technology	4.8	2.9
Helsinki School of Economics and Business Administration	1.1	0.7
Swedish School of Economics and Business Administration	0.6	0.4
Turku School of Economics and Business Administration	0.8	0.5
Sibelius Academy	0.02	0.0
University of Art and Design Helsinki	0.3	0.2
Total	166.2	100.0

* 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, 1997–2005 (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
1997	939	4.1	1201	4.2
1998	912	4.1	1108	4.6
1999	825	4.3	1177	4.6
2000	741	4.6	1153	4.9
2001	735	4.2	1030	5.2
2002	664	4.1	1076	5.0
2003	578	4.3	1088	4.9
2004	633	4.1	1060	5.2
2005	706	3.8	1064	5.3

Source: KOTA

Teaching staff 1997–2005*

	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

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

Source: KOTA

Proportion of women (%) among teaching staff 1997–2005

	Professors	Senior assistants	Assistants	Lecturers	Full-time untenured teachers
1997	17.7	30.0	39.2	54.9	66.7
1998	18.4	30.1	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

Source: KOTA

Other personnel 1997–2005*

	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

* 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

Main occupation of holders of master's degrees following graduation 1994–2003*

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	...

Source: KOTA

Unemployment rate (%) among holders of Master's degrees or postgraduate degrees, 1992-2004* (population aged 20-64)

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004*
Master's degree	3,7	5,1	4,9	4,3	5,4	4,5	4,0	3,9	3,6	3,6	3,7	4,3	4,2
Men	3,6	4,8	4,4	4,0	4,9	4,0	3,6	3,5	3,2	3,3	3,5	4,1	4,0
Women	3,8	5,5	5,4	4,7	6,0	5,0	4,5	4,3	3,9	3,9	3,8	4,4	4,4
Postgraduate or comparable degree	1,4	1,8	1,9	2,0	2,7	3,0	2,5	2,5	2,2	2,2	2,4	2,8	2,9
Men	1,4	1,7	1,9	2,0	2,6	2,8	2,3	2,2	2,0	1,9	2,2	2,7	2,7
Women	1,5	2,2	2,1	2,1	2,9	3,4	3,0	3,1	2,8	2,7	2,9	3,1	3,1

*) Preliminary figures

Source: Statistics Finland

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