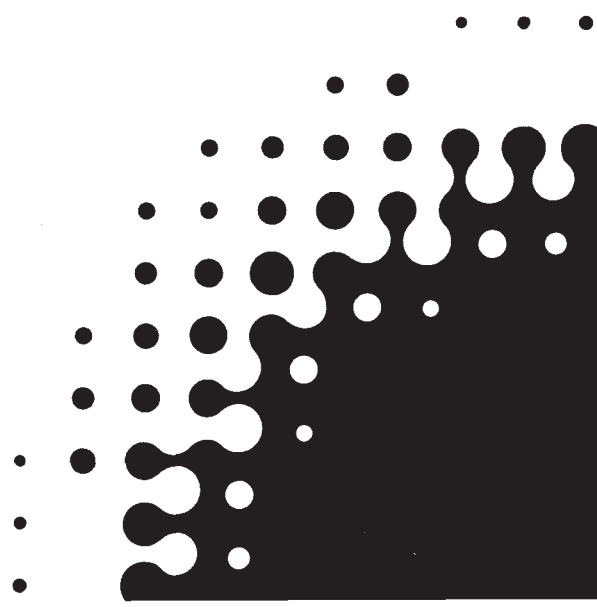# Institutional Evaluation of the University of Oslo

The external panel's report

norgesnettrådet

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This evaluation of the University of Oslo is the third in a series of institutional evaluations of Norway's four universities, commissioned by the Ministry of Education, Research and Church Affairs and conducted by the Network Norway Council. The evaluation has two main parts, each of which is recorded in separate documents:
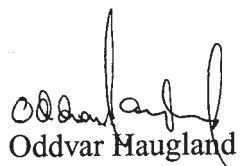
- The University of Oslo's self-evaluation report *Reality and Vision: The UiO – a University in an Age of Conflicting Interests*, (Oslo, December 2001), produced by the University's Steering Group for the self-evaluation. The Steering Group was chaired by the (then) rector of the University, Kaare R. Norum. The self-evaluation report is available from the University of Oslo, PO Box 1072 Blindern, NO-0316 Oslo and on the Internet: http://www.admin.uio.no/prosjekter/eva/rapport

- The present report by an external review panel: *Institutional Evaluation of the University of Oslo*. The review panel was led by professor Inge Jonsson, Stockholm, and the report is available from the Network Norway Council, PO Box 8150 Dep, NO-0033 Oslo and on the Internet: http://www.nnr.no

The Network Norway Council wishes to thank all those who have contributed to this evaluation: the members of the external panel, students and staff at the University of Oslo and all others who have given of their time and insight to the project.

It is hoped that the evaluation project as a whole and the assessments and recommendations of the external panel will

prove useful for the University of Oslo and for the entire higher education community in Norway.

Oslo, May 2002

Oddvar Haugland
Director

Tove Blytt Holmen
Deputy Director General

# Preface

Institutional evaluations are ambitious undertakings. To evaluate the whole of the University of Oslo in one process, for one external panel of six persons, may seem rather an impossible task, and the present report is presented with due humility, in the understanding that there will be many things we could not see, and other things we could not fully comprehend about such a large and complex institution. Still, institutional evaluations are also limited exercises in the sense that they are not supposed to assess every detail of the institution's activities, but rather to bring to light its larger features and to give assessments of these that may help the institution in its future choice of priorities, strategies and quality enhancement measures.

To say that a great amount of high quality research and teaching is taking place at the University of Oslo, would simply be to state the obvious, and many such positive aspects or activities are not explicitly mentioned in this report. For an evaluation to be of any use, it must not only be honest in its criticism, but it must also pay more attention to what is found to be the weaker points than to those aspects and activities that are commendable and of high quality. In following this line, the panel has been able to build on the approach and the standard that was set by the University of Oslo itself through its very thorough and critical self-evaluation report.

The panel is convinced that several of the comments, assessments and recommendations that are brought forward in this report, concern features that are shared by many other institutions of higher education in Norway. This should not take the edge off the message that the panel wishes to convey to the University of Oslo, but it means that the report should also be read with the understanding that what we found to be weaknesses may often be

typical rather than exceptional ones. It is our hope, therefore, that this report will also be of interest to a wider audience than the University of Oslo itself, i.e. to other higher education institutions, the University's cooperating partners and the institution's acting owner, the Ministry of Education and Research.

Inge Jonsson
Professor, leader of the panel

Jon Haakstad
Secretary

# Content

## INSTITUTIONAL EVALUATION OF THE UNIVERSITY OF OSLO

# 1. Introduction

## 1.1 Background

As decided by the Ministry of Education, Research and Church Affairs and the Network Norway Council (NNR), institutional evaluations of the University of Bergen, the University of Oslo and the Norwegian University of Science and Technology, Trondheim are being carried out during the period 2000 – 2002.

A *core plan* for the three evaluations was adopted by the Network Norway Council in the spring of 2000, defining a number of common aims and guidelines. All three evaluations should have the following aims:

- Through a process that emphasises institutional learning, to provide assessments and measures-oriented recommendations in central areas of activity that may contribute to the universities' qualitative and strategic development.
- To inform the public about the way in which the universities perform their tasks in society.

The 'central areas of activity' mentioned in the aims were defined to include at least the following topics:

- The university as an organisation
- Academic profile (teaching and research)
- Competence utilisation and competence development
- Providing for students
- Conditions relating to work and study
- Achievement of results and objectives

## 1.2 Evaluation plan

Under the core plan, the universities were free to add other topics, to decide on priorities and to organise their self-evaluation after separate plans for each evaluation, which were then negotiated with the Network Norway Council. For the University of Oslo (UiO) this resulted in an *evaluation plan* that was organised under three main topics:

- The UiO as a study organisation
- The UiO as a research organisation
- The UiO as a holistic organisation

The plan included the University's own definition of the main purpose of the project, expressed in two objectives:

- Based on a diagnosis of the institution's strengths and weaknesses, the UiO was to be evaluated in relation to their own quality ambitions, their challenges and their framework of conditions. More specifically, this meant an evaluation in relation to the Long-term Plan's ambition that the UiO shall be 'a research university of high international standard' and 'an attractive learning environment for students and staff on a level with the best European universities.'

- The evaluation was to be a learning process that would 'increase our ability to implement the changes that both the Long-term Plan and this evaluation point to as being necessary.'

Preparations for the evaluation of the University of Oslo started late in 2000, leaving the whole of 2001 for a very thorough self-evaluation process that resulted in the University's self- evaluation report.

## 1.3 External review panel and mandate

The Network Norway Council appointed the following members to the external review panel:

Professor *Inge Jonsson,* University of Stockholm (leader)
Professor *Ole Didrik Lærum,* University of Bergen
Rector *Torger Reve,* Norwegian School of Management BI, Sandvika
Professor *John L. Brennan,* Centre for Higher Education Research and Information, London
County Governor *Tora Aasland*, Rogaland County Authority, Stavanger
Student *Signe Sætra Aanby,* Agricultural University of Norway, Ås

Senior adviser *Jon Haakstad*, NNR was project coordinator and secretary to the review panel.

The panel was given the following mandate, which was drafted by the Network Norway Council and negotiated with the University of Oslo and the panel themselves:

*The work of the review panel will have the following two aims:*
- *To contribute to the strategic and qualitative development of the University*
- *To give an assessment – and to inform the public – of how well the University achieves its goals.*

*When making its assessments, the panel will take into account:*
- *existing economic and infra-structural preconditions,*
- *challenges, as these are perceived by the panel*
- *goals, as these are formulated in the University's own mission statements.*

*The panel will build its assessments on several sources of written documentation, including the University's self-assessment, and on its own site visit at the institution. The panel will hear the views of different groups of leaders, staff and students at the University, of external members of the University Board, of candidates and employers. The panel may also ask to have other specified documentation presented to it.*

*The panel will give assessments and recommendations on the main themes that are identified in the Network Norway Council's core plan for the three institutional evaluations and described in the plan that has been drawn up specifically for the evaluation of the University of Oslo.*

*The panel will present its findings, assessments and recommendations in a report to the Network Norway Council by 15 May 2002.*

## 1.4 The external evaluation process

The external panel met for the first time in June 2001 in connection with a 'process meeting' with the University and the Network Norway Council. The panel was then given an

introduction to the University and the self-evaluation process, which was then well under way. The panel had one more meeting - in January 2002 - before the site visit.

The University's self-evaluation was presented to the panel in early January 2002. In advance the panel had received various other written documentation from the University or the Network Norway Council, including strategy documents and a set of tables giving key quantitative data about the institution. The tables are presented as an appendix to the report. Unless a specific reference is given, figures that occur in the text are taken from these tables. Where comparisons are made with other universities, figures for these are taken from corresponding sets that were developed in connection with the evaluation of these universities. The panel also had access to various documentation that was developed by the University in connection with the self-evaluation.

The panel conducted its site visit at the University from 19 to 22 February 2002, holding interviews with the university leadership, with leaders, staff and students at all eight faculties and with representatives of external stakeholders, external board members, various research centres and other units like the museums, the University Library, the ICT unit, etc. The panel wishes to express its appreciation of the way in which documentation was presented and the site visit itself was organised. The plan for the site visit is presented as an appendix to this report.

## 2. The University of Oslo; a brief presentation

The University of Oslo (UiO) is Norway's oldest university, dating back to the years immediately before Norway gained independence from Denmark in 1814. Since then the UiO has retained its position as the nation's largest institution of research and higher education, in fact for nearly the first hundred years of its existence as the *only* one. Its heritage, its size and the fact that it is situated in the capital, explains the common perception of the UiO as having a special national responsibility. Only in 1946 was a second university established in Norway (the University of Bergen). This has meant that the UiO has kept up the profile of a 'breadth university', providing research and higher education programmes at all levels in all major subject areas except business and engineering.

In the autumn of 2000 the UiO had 31 837 registered students and 3 677 (full-time equivalent) staff, most of whom have their daily activities at the Blindern university campus just outside the city centre. With constant growth over four decades (the university had 5 900 registered students in 1960), new buildings and extensions have been added, the latest of which being the University Library building in the middle of the campus. The Blindern-Gaustad area is turning into a consolidated location for research- and knowledge-based activities, where a new State Hospital includes the University's Faculty of Medicine and a Research Park is quickly developing. But the university has also spread its activities all over the city of Oslo, with the Faculty of Law still residing in the 19<sup>th</sup> century university buildings in the city centre.

The UiO has eight faculties, two university museums, a university library (several locations) and a number of centres and programmes organised under faculties or departments or directly under the Senate (University Board). Of the faculties, Dentistry was transferred to the UiO from its independent status as a College of Dentistry in 1959, while the youngest one, Education, was established in 1996 from the amalgamation of two university units and a state college of special needs education. Throughout the faculty structure, one finds the traditional characteristics of academic-collegiate governance, with its vertical divisions between the institutional, the faculty and the department levels, each governed by boards and managed by elected academic leaders (Rector, Deans and department heads), who in turn are supported and advised by administrative management. Activities that are organised in alternative structures also have academic leaders (e.g. directors of studies, project managers), although these tend to be appointed rather than elected.

The UiO is nearly twice as large as the nation's second largest university, and has about 43 % of all students at Norway's four universities. In a number of academic fields it offers high academic competence and advanced research units. It benefits from being the university of the capital, where many people like to study and work and where there is a high density of economic, administrative and cultural activity. Still, the university struggles to be efficient in terms of outcomes. At the outset of this analysis some large features might be allowed to stand out as particularly interesting:

- Among the universities, it has the lowest average production of credits per student. The margins are fairly small, average production rates ranging between 10,6 (Oslo) and 13 (NTNU)
- The percentage of the total expenditure that is fetched from external sources is slightly lower than for the University of Bergen, but higher than for the two other universities. However, 81% of these external resources come from the public sector, which is markedly higher than for any other university. Consequently, the UiO fetches

the lowest percentage from private companies/industries. The UiO has a much higher relative income from sales than any other university.

- The UiO receives by far the lowest basic government grant per student of all four universities. The rationale for this was never documented or made clear to the panel. The low basic-rate funding has for years been a major issue for the UiO in their negotiations with the Ministry.
- True to its mission as 'nationally responsible' for a wide spectrum of disciplines, the UiO has kept up activity in a number of minor subjects that attract few students and few resources from outside the university.
- The variations among the faculties in their capacity – or motivation – to attract external resources are striking. These variations range from 2.5 % to 44% of total *faculty* expenditure.
- The same kind of extreme unevenness is seen in the number of students per faculty (academic) staff, where the highest faculty ratio is over ten times higher than the lowest one. While these figures obviously reflect different research volumes as well as subject-related needs in teaching, such differences still beg a lot of questions.
- As the only university in Norway, the UiO has a majority of its (full-time equivalent) staff (54%) in the administrative-technical sector. In relation to the university's overall size, however, it is not the size of the administrative-technical sector that is the most striking feature, but rather the relatively low number of academic staff. The average ratio of 19 students per academic staff is high compared to all the other universities.

# 3. The self-evaluation

The UiO presented its self-evaluation report (EVA) to the Network Norway Council in January 2002, after a process that lasted for more than a year. The panel wants to commend the University for a very thorough and well-documented self-investigation, in many ways a model exercise, also in its candid discussion of weaknesses and challenges and its open-minded and constructive attitude to change and reform. Structured around the University's chosen themes - teaching provision, research and organisation - the report also provides solid descriptions and assessments on each of the six themes of NNR's core plan for all three university evaluations. For the reader of the present external report, the University's self-evaluation report will provide much useful documentation and other background information. Here, in a summary that cannot do justice to the self-evaluation report itself, only the main findings and conclusions will be sketched.

## 3.1 Educational provision

While allowing for the considerable amount of development work that has taken place in course provision in recent years, the self-evaluation states that the possibilities for establishing new and untraditional interdisciplinary courses has not been well enough exploited, while also pointing at two other areas that need further development: "broader and more tailor-made provision within in-service training and continuing education, and broader and better provision for students from abroad."

Completion rates and the quality of studies are seen as generally good in the professional programmes, but less satisfactory across the board. Attention is drawn to the low production of credits and worrying drop-out rates in the general faculties, which represents a waste of talent and resources and is regarded as one of the University's main challenges. According to the report, 'the UiO is struggling with its reputation as a mass university that does not manage to create a really good student community.' Hopes are pinned on the restructuring of teaching activities that will result from the national 'Quality Reform' and particularly on the introduction of more effective first-semester courses in all programmes.

## 3.2 Research

The report states that the UiO is a leading national research institution, with a great breadth and volume of output, a general growth in external research funding and several research communities that must be regarded as excellent even by strict international standards. However, there is also concern about weaknesses and challenges. While admitting that today's result indicators for research are deficient, especially in the humanistic and social sciences, the self-evaluation argues that the UiO is far from realising its 'potential for high quality, relevance and scope' in the research field, that the distribution of research activity is uneven and that the volume of publishing is in fact declining.

Such weaknesses are put down to a variety of causes, most important of which are the organisational barriers between the various established units and the relatively weak academic management of these, which combine to create fragmentation as well as a lack of flexibility and firm priorities. It is also pointed out that there is little use of incentives in order to push research communities to adopt competitive and ambitious attitudes. Inadequate funding to cover running costs is part of this picture, and so are the working conditions of individual staff, with unsatisfactory provision for uninterrupted research time. The failure to invest adequately in equipment and technical assistance is also seen as a restricting factor in some

research communities, whereas there is general concern over the protection of young researchers from administrative and other tasks that divert their attention from academic work.

## 3.3 Resources and infrastructure

On the *human resource* side, the self-evaluation paints a positive picture. In academic posts, the subject-specific competence is regarded as high, but time pressure may endanger its efficiency. Warnings are also expressed on the topic of academic recruitment, for although (and partly because!) the UiO is a magnet inside the entire Norwegian academic community, the mobility among academic staff is alarmingly low, with a high average age (53 years) as the result. Contraction rather than growth and a tendency for people to remain in their posts – which in itself is a good sign – combine to stifle the inflow of fresh talent. It is also pointed out that the general level of administrative and technical competence is high and satisfactory in most areas.

Concerning *material resources* – or infrastructure - the self-evaluation report finds the UiO's systems and facilities for ICT satisfactory, but points at an equipment situation that is otherwise 'marked by a considerable need for investment'. The report is very critical about the general level of (state) funding, which is simply found to be 'inadequate'. Too much money is swallowed up by the pay budget, leaving meagre resources to cover running costs. As a result, equipment and technical facilities are not always conducive to first-rate research and teaching. Still, the report points at ways of improving the situation, even without higher basic funding. Greater effort could be made to increase the amount of external income and the present system of internal resource allocation ought to be revised. As it now is, defensive rather than offensive strategies in faculties and departments are encouraged. According to the self-evaluation, more widespread use of incentives should lie at the heart of all reforms in resource distribution.

## 3.4 Organisation, steering and management

According to the report, the UiO 'is a heterogeneous and complex organisation with a decentralised and collegiate structure of government and it is not easy to govern as a unitary organisation.' This is seen as a characteristic it shares with most other large universities. The report comments on how the UiO's great academic breadth is both a comparative advantage and a weakness: 'The University has only partly managed to exploit the possibilities breadth offers to bring about innovation and synergy through (untraditional) combinations, and at faculty level – and even more at department level – this ambition for great breadth stands in a problematic relationship to the desire to establish research communities with clout.' The report regards the 'national responsibility' for a great number of disciplines as the pride and hallmark of the UiO, but also as a source of possible overstraining at the expense of really forceful academic communities.

The report maintains that the basic organisational and governing structures, with their reliance on consensual academic leadership, should be assessed in relation to what is described as 'a need for strengthening the capacity to govern and (....) limited ability to implement adopted priorities'. The relative weakness of quality data and quality assurance systems is also seen as an obstacle to effective steering in an organisation that is not always flexible enough to make good use of competence across discipline boundaries. However, the establishment of new interdisciplinary units is a positive development that also demonstrates the organisation's capacity to adapt.

## 3.5 Overall assessment

The report draws a picture of the UiO as a large, solid and rather conservative institution, somewhat under-funded and slow to respond to steering signals, but academically sound throughout, with many discipline communities of high international standard in teaching and research. It is also seen as having 'high integrity as an academically independent body and as a place where the University's role in society as a critical mouthpiece is well maintained.' Other aspects of the UiO's role in society are more ambiguously described: 'In spite of the fact that the UiO has a very large interface, with extensive externally oriented activity, (....) the picture of the UiO as introvert and too closed still exists.' This is especially noticeable in a the University's relations with its rim-zone and its rather weak links with commerce and industry. One of the reasons for this is found in a widespread scepticism among faculty rank-and-file against the possible 'sell-out' of academic values, and a corresponding readiness to rely on the state to provide better funding.

The report reflects the pride that the UiO takes in its breadth of disciplines and views this feature as a danger at the same time. Maintaining such breadth provides unlimited possibilities for synergies, while also locking up resources that might be needed to see them materialise. The report points out that excessive breadth may make it difficult to establish priorities and may also lead to uneven standards in research and educational provision.

Educational provision is seen as the one of the University's core activities where improvements are most immediately needed. Low credit production, high drop-out rates, cramped study conditions and little student-teacher contact in several subjects are worrying features. So is the very uneven picture that a cross-faculty glance presents. The report still commends the University for having carried out several useful reforms and places a good deal of trust in the current 'Quality Reform' process.

The ambitions of the UiO are expressed in the Long-Term Plan (2000 - 2004), according to which the UiO shall be *'an attractive learning community for students and staff on a level with the best European universities'* and *'shall strengthen its position as a research university of a high international standard.'* The self-evaluation concludes that neither in educational provision nor in research does the University reach these goals and is unlikely to do so by 2004. According to the self-evaluation report, 'the institution will gain by differentiating its ambitions and making them precise.'

# 4. The Faculties

The external panel visited all eight faculties, both museums, the University Library, and talked to representatives of centres and strategic research programmes and representatives of administrative and support units. The panel regards its collected impressions from the site visit interviews as very important for its assessment of the university as a whole. As for each individual unit, however, the panel is insufficiently informed to make accurate and exhaustive judgements and the following short descriptions must not be regarded as such, either.

## 4.1 The Faculty of Social Science

The Faculty of Social Science consists of five departments: Psychology, Social Anthropology, Economics, Sociology and Human Geography, and Political Science, of which the Department of Psychology is the largest. In terms of student population (5 467), the faculty is the second largest at the University, but also the one that has the second largest number of students per teacher (19,5:1). The faculty also has the second lowest running costs per student (25 000). A fairly large proportion of the faculty's expenses (23%) are externally funded.

The faculty itself lists the following subject areas as particularly strong in research terms: epidemiological research, cognitive psychology and neuropsychology, globalisation, health economics, power and democracy studies, environmental economics, lassitude and burnt-out syndrome, social cleavage and the environment. The panel finds this an interesting list as a lot of mainstream social science teaching areas are missing from it. There are strong links to projects abroad, particularly in developing countries and the staff has a strong profile of external activity through extensive involvement in public committees, boards and councils and as commentators in the media, although this is more on an individual than a faculty basis.

The faculty's research activity is near the average for the entire UiO, but with a somewhat stronger profile of external funding than Arts and Education. It may be worth noticing that the faculty managed to increase its research income from private companies from 1 mill. in 1995 to 3 mill. in 1999, which is the last available figure. However, the failure to attract research money from abroad – e.g. from the EU – is equally striking. In its educational provision, the faculty's annual credit production is rather weak (31.8 ECTS credits per student), a feature it shares with several other faculties. The lower degree programmes seem to be the main problem here, whereas masters and other graduate programmes are more effective. The faculty offers several interdisciplinary programmes, among these two masters degree programmes in English. The production of new doctorates has risen from 26 in 1997 to 34 in 2000, but is still low in relation to the total number of students on doctoral programmes since 1997.

Although the student group we interviewed was rather heterogeneous and expressed diverse views, there emerged an impression of not satisfactory studying conditions at the undergraduate level, with little guidance and feedback and variable quality of teaching. To some extent, the teachers accepted this criticism, with a reference to staff shortage and a conscious, if painful, policy to give priority to graduate and doctoral students, who in turn expressed greater satisfaction with their situation and also gain better average results. Our interview with the students left us with some unease as to the standards and academic demands in some undergraduate courses. Opinions differed on the question of how much freedom the students should be left with in building their degrees. Most students wanted better teaching quality *and* the opportunity to pick and choose from optional modules both inside and outside their faculty, whereas the faculty is faced with the problem of balancing student

freedom against the need to build reasonably coherent programmes – in order to safeguard quality.

The faculty's academic staff and leadership, while stressing the faculty's research record and active relations with the outside world, were fairly unanimous in selecting two main problem areas: One is alleged under-funding in relation to student numbers and the harsh priorities this will entail when the quality reform is to be implemented. Good teaching quality is seen as essential anyway in a situation where resources are tied to student numbers in an increasingly competitive environment. The other problem is the need to build up compact research units in order to attract more external assignments and resources – e.g. from EU programmes. The filing of four applications for nomination as Centre of Excellence marks a good start to such ambitions. There is general agreement that the faculty is characterised by internal heterogeneity and individualism – or 'chair culture', as one staff member put it – with little communal policy and debate and a tendency for researchers to network and cooperate globally rather than at home. Recruiting policy often follows the rule of 'hiring the best', irrespective of what would best serve the needs of building a strong unit.

The faculty leaves an impression of being rather pressed between conflicting priorities, or perhaps between a value-laden conservatism and a need for innovation. Traditional egalitarian, discipline-oriented attitudes have a strong hold, but the faculty can also boast of having introduced a heavily result-based system of internal resource allocation.

## 4.2 The Faculty of Arts

The Faculty of Arts is made up of 12 departments and 7 smaller centres. It had 6 486 registered students in 2000, the highest number (by one thousand) than any other, and a student-teacher ratio of 12.8. Running costs per registered student was at 36 000, which is considerably higher than e.g. Social Science, while 20 % of the total budget was income from external activities.

The faculty has several strong subject areas and was quite successful in having three programmes nominated for national strategic research grants for 2003: Centre for Contemporary History; Contemporary Research on Converging Technologies & Societies; the Language and Culture of Antiquity. There were also four applications for status as Centre of Excellence. Externally, the faculty cooperates with the University of Gothenburg, while departments have several other cooperative partners abroad and in Norway. The academic staff are also active as experts and advisers in a broad spectrum of external contexts, like the media, on boards and councils, etc.

Relative to size, the Arts faculty spends about the same amount on R & D as Social Science, but receives a slightly smaller part of this revenue from external sources and less than 1 % from abroad. Over 90 % comes from Ministries and the Research Council of Norway (RCN). There is also a tendency for research in the humanities to go into textbooks and national journals, while the number of publications in international journals is significantly lower than for Social Science. In 2000 the production of new credits was 30.6 ECTS per student, which is slightly below the average, and there were 19 new doctorates. The latter figure is exceptionally low, but according to the faculty up again at a more 'normal' 31 for 2001. This is still rather weak in relation to the faculty's number of researchers and postgraduate candidates. Even more striking is the low female share (26%) of doctorates in a faculty with

68 % female postgraduate candidates, although this percentage has normally been much higher in previous years.

The Faculty of Arts and the Faculty of Social Science – as 'open' and 'liberal arts' faculties - share many characteristics. We find the same discussions about teaching quality, with an emphasis on 'student freedom' versus the lack of feedback and counselling, the 'disorientation' of many students, the amount of time that academic staff spend on administrative functions, and the acute shortage of resources. Teachers often regard many students as too weakly prepared ('They cannot write!') and drifting rather aimlessly through their programmes, tying up resources in 'wasteful' teaching that could have been better spent on research and research training. It is obvious that the Faculty of Arts has to carry much of the burden associated with 'massification', but it also seems somewhat unfair to say that student numbers, which is in fact the chief source of revenue in the system, constitutes a waste problem when the density of teaching is not higher.

This faculty also has to carry heavy burdens associated with maintaining breadth. With so many (often internally heterogeneous) departments, the faculty harbours many asymmetries that have to be bridged: Research activity and credit production is unevenly distributed; departments vary greatly in size, and so do student-teacher ratios; small and vulnerable disciplines with low income potential must be hedged, or they will disappear from Norway's knowledge base. Although these challenges are very real ones, the 'breadth problem' is no different from what arts faculties in other large universities experience. In fact, in an international perspective, the faculty's (and the UiO's) educational provision does not appear to be particularly broad. It is an encouraging sign that the faculty is trying to deal with these challenges in a forceful manner. For instance, mergers of small departments are being considered as a means of creating stronger units, or one tries to achieve this through fewer and stronger discipline units on a Scandinavian basis through task-sharing agreements with other universities. This alone will hardly be enough, tough. The panel thinks there may also be a need to look at modifications in the course profile, not least in the language subjects, where other demands than those of 'pure philology' ought to be given greater priority.

The very department structure of the faculty has made it necessary to rely on a relatively strong central leadership. The Faculty of Arts therefore gives the impression of being less decentralised than Social Science. Doctoral programmes, for instance, are maintained at faculty level (although some department spokesmen would like to see that changed). Determined leadership may indeed be a critical factor when meeting the challenges that lie ahead. One of these is to improve the efficiency of doctoral programmes, another to attract more external research money and improve the faculty's research profile even further. The faculty has adopted a research policy, under which four disciplines are given priority during 2000 – 02. This involves small money and a limited time-perspective, but indicates a shift towards firmer faculty steering. The most demanding challenge, though, may be the implementation of the Quality Reform in teaching, with the designing of new bachelors and masters programmes and the general strengthening of teaching quality. Both academic staff and leadership seemed to rally behind the reform, but whereas teachers argued that the reform would cost about 30% extra resources, the faculty leadership were much more optimistic about the faculty's capacity to regroup and restructure and thus to carry through the reform anyway.

## 4.3  The Faculty of Mathematics and Natural Science

The Faculty has 11 departments, of which Biology, Chemistry and Physics are the three largest. There are also three research centres. There were 5 255 students in 2000 with, not unexpectedly, by far the lowest female percentage (39%) of all faculties. The student-teacher ratio is 8:1 and running costs per student 61 000, which is more than twice that of Social Sciences and on par with Medicine. 33% of total expenses are financed externally.

The faculty has a number of strong research communities and a high research profile all over. The Faculty of M&NS spends three times as much on research as for instance Social Science (which has a research activity near the UiO average and roughly the same number of students) and nearly 40% of this is externally funded. To a great extent, he faculty has managed to concentrate its research and was successful in getting three programme applications through to the final round for selection as national Centres of Excellence: Population Dynamics, Applied Mathematics and Solid Physics and Rock Geology. In addition, the faculty gives priority to FUGE (see Centres and Programmes, below), FUNMAT (same) and marine biology. The faculty also participated in five other successful first-round applications for Centre of Excellence with other faculties and departments, which is indicative of their willingness to enter into cross-disciplinary projects. There are strategic university programmes in many fields and the recent national evaluations of research gave favourable reports for several sub-communities. Externally, the faculty has a great number of national and international cooperating partners. It is the faculty that attracts most research money from abroad (22 mill. in 1999) and is also quite successful in obtaining funding from the private sector (20 mill.).

The high research profile is not reflected in teaching. The faculty has the lowest credit production per student of all faculties (27.6 ECTS) and the highest rate of failure at exams (12.8%). However, there is a dramatic difference between the undergraduate and postgraduate levels. At the higher level, the number of successful candidates compares well with any other faculty and in terms of new doctorates per year the M&NS faculty scores best of all (81 in 2000). Representing as it does an admittedly 'difficult' subject area, with demanding threshold levels, the faculty is faced with the challenge of recruiting students and designing undergraduate programmes in a way that gets more students successfully past their first degree, or even their first year, when the drop-out rate is highest. Since this is an acknowledged 'national' problem (the 'science crisis') with roots far down in the school system, the challenge has national proportions too. The panel got clear evidence of the seriousness with which the faculty addresses this problem area, e.g. through the developing of new study courses, a pioneering effort in outward-directed activity and close contacts with the school system

Although the students express general satisfaction with the teaching they receive, such complaints as they have touch on the same points as in other faculties: the lack of supportive student communities within the disciplines, difficult transition from secondary school and weak support and feedback from teachers. These problems may have graver consequences in the hard sciences, and particularly in the basic course in mathematics, where fundamental techniques – difficult to acquire on one's own - are introduced. If this fails, the students' foundation for further studies is seriously impaired.

Faculty members and leadership are concerned about the low mobility, the 'age problem' and the difficulties in recruiting fresh talent. They also see the importance of continuing the policy of building new research teams, inside as well as across disciplines, and of strengthening

international contacts and exchange. Like most other units, the faculty regards itself as under-funded, with special reference to the need for modern research equipment. The natural science community tends to see its activity as especially important for the development of the nation in the long term and express frustration that this is not well enough reflected in basic funding and student recruitment. Whereas some commented on this dilemma by asking rhetorically whether 'we need all these political scientists and social anthropologists', indicating a wish to have stricter dimensioning policies adopted, others see the only solution in even harder work to recruit students and to adapt and strengthen the teaching effort at undergraduate level.

## 4.4 The Faculty of Medicine

Both in terms of location and internal organisation the Faculty of Medicine is a decentralised unit. It consists of 7 'department groups' with a total of more than one hundred departments and service units, many of them very small. Clinical departments are located at the five university hospitals and various other hospitals and centres in the Oslo region.

The faculty has the highest total expenditure of all faculties, about 257 academic staff and 2269 students (in 2000). This makes for a low student-teacher ratio (5,5:1) and the highest running costs per student of all faculties (62 000). On the other hand, the faculty also has the highest relative level of external funding, with 50% of the total budget coming from outside the basic grant.

The Faculty of Medicine has the highest research profile in terms of expenditure, accounting for more than one third of the UiO total. 37 % of this is externally financed. The contribution from international sources (16 mill.) is fairly small as a percentage of the total, but second only to the Department of M&NS, and far above any other faculty. Also the faculty's publishing frequency, in international as well as national journals, is the highest at the UiO, with nearly twice as many citations as M&NS. The faculty was successful in having three proposals for status as Centres of Excellence accepted for the final round, while a high number of research teams/networks receive support from the Research Council of Norway, the EU or private organisations. The faculty's research strategy stresses the importance of thematic organisation, cooperation with external partners, participation in the EU's 6th framework programme, the interface with industry and increased concentration around topics of high priority. Not all of these have yet found satisfying solutions.

In spite of the good quantitative results, there are considerable obstacles to the faculty's ambition to be a first-class agent in the international research arena. By the faculty's own assessment, not all of the research volume is qualitatively at the forefront (50 % is thesis work) and the scarcity of new posts creates the same recruitment bottleneck as in most other faculties, while cutbacks on running costs drive researchers into new loyalties that will tempt them to dissociate themselves completely from the university. The current policy of strengthening research teams around fewer priority areas – some of these in collaboration with other disciplines - may help making the faculty more consolidated and visible, while there is also a demand for better infrastructure on the technical and administrative side. A conscious policy of chasing resources from EU programmes will require a support function for the development of applications, which the faculty does not now possess.

The medical programme dominates the educational side, with about one half of all students, while doctoral programmes and courses to supplement qualifications obtained abroad make up more than half of the rest. Like other professional programmes, medical education

provides a compact and carefully planned course of study, fairly identical for all students and with clinical practice integrated. This coherent framework is offset by a complex programme structure, with 200 teachers contributing in 30 sub-disciplines, which makes it a challenge to avoid fragmentation. Students express some criticism against what they sometimes feel is a lack of coherence and sequence. Otherwise, critical discussion focuses on two areas: the use of problem-based learning (PBL) and the position of communication and ethics in the curriculum. It is not many years since teaching was thoroughly reformed along PBL lines, and there is still uncertainty and disagreement about its success. There is widespread worry that more student-oriented learning processes and the strong emphasis on ethics and practitioner-patient relations will erode the robustness of basal knowledge and skills. Failure rates of 30% in some disciplines are indications that the right mix of study methods has not yet been found.

However, student satisfaction is generally high and completion rates good, with an annual credit production of 47 ECTS per student. Also, the doctoral programme is one of the most productive in the University, with 77 new doctorates in 2000. Teachers are praised for taking an active interest in their students, who are easily 'socialised' into the faculty. In terms of contact with teachers and active follow-up, medical students are privileged, and this closeness between students and teachers is reinforced by a systematic course evaluation practice that seems to be working better than in many other faculties. The faculty boasts the highest percentage of professors with formal pedagogical competence.

Through its pragmatic approach and its innovative attitude, the Faculty of Medicine may function as a model for other faculties in many ways. On the other hand, critics would maintain that the faculty's low student-teacher ratio and its strategic position when it comes to cooperating with other disciplines and attracting resources make it easier for Medicine to achieve these things. Also, the completion of the new State Hospital at Gaustad has greatly improved the conditions for medical research. The medical community, on their side, would like to see more incentive-driven and competitive mechanisms in the allocation of resources among the faculties.

## 4.5 The Faculty of Law

In more than one sense, the Faculty of Law is a 'world of its own' inside the UiO. For one thing, it is the only faculty that still resides in the old University buildings in the city centre. Also, the faculty shows a diverging profile in several interesting respects. It has 4 114 students (in 2000) in 6 departments, including the Institute of Human Rights.

Of a total of 221 posts, exactly one half are in academic positions and of these more than one third are contracted externally, which is an exceptionally high percentage. The faculty has the highest total expenditure per academic man-year (for instance twice that of Arts), but - on the other hand – also the lowest running costs per student: 20 000. The explanation for this is to be found in a rather dramatic student-teacher ratio, which is as high as 33:1, or 70% higher than in any other faculty. External funding pays for 35 per cent of the total expenses, which is second highest after Medicine and slightly above M&NS.

Relative to the number of staff – and particularly to the number of students – the faculty has a rather weak research profile in terms of expenditure, which is not strange perhaps when the high student-teacher ratio and the low running costs per student are taken into consideration. Another obstacle is the difficult recruitment situation, where the University competes in an outside market of much higher salary levels to keep the best talents. The high level of external

funding may indicate that a certain room of manoeuvre is exploited for other types of external assignments than research, but it may also be argued that this is not really a matter of choice, since the extremely low basic grant forces the faculty into a policy of 'commercialism' in order to support its budget. Anyway, this hampers the development of a strong research culture and it is rather worrying that a faculty with such close relations to public affairs manages to obtain only 10 mill. annually in research funding from the RCN and the Ministries. On the other hand, the faculty shows better than average results in publication, considering the low number of academic employees. It also emerged that the faculty staff conduct a considerable amount of professional work externally on a more personal basis. Much of this is activity that ideally ought to have been registered and priced by the faculty.

The faculty does not formulate any strong profiling strategy for research. A national responsibility for the science of law in breadth is emphasised, but criminology and the sociology of law are mentioned as particularly important fields, as no other law faculty in the country has academic communities in these disciplines. Obviously, research has been rather based on individual initiative and effort in small and vulnerable sub-discipline communities, but there is a growing awareness of the importance of creating teams that involve more researchers. Some such team projects are now developing.

About 80 % of the students are in professional studies, qualifying for a law degree. The high student numbers have slowed the process of modernising teaching methods, which are still largely based on lectures, although the programme has been reformed recently. Students experience a pressure to obtain good marks and work through long study periods towards final exams without receiving much feedback and follow-up in the process. Student satisfaction with individual teachers is reasonably good, in particular with externally contracted teachers, in fact, but there are also complaints about the lack of contact with teachers, few practical assignments between exams, too few rooms for group discussions and a generally weak subject community culture, characterised by competitive attitudes among students. The panel finds it strange that the PBL has not been more widely introduced in a subject that is so obviously case-oriented. On the whole, the teaching situation gives the impression of being rather old-fashioned, where students read in isolation for their exams. To some extent, this can be explained from the thin resources that are made available for teaching, but it may also be partly due to a tradition-bound culture. On this background, however, it is rather encouraging that the faculty is quite successful in getting their students through in time. The annual average credit count per student is 39 ECTS, which compares well with many other faculties. On the other hand, the low number of doctorates (9 in 2000) reflects back on the rather weak research profile.

The student-teacher ratio and the low level of funding are obviously features of this faculty that restrict further development. At the same time, the faculty gives an impression of being dominated by an individualistic, decentralist culture at the expense of central management, who have few strategies for cohesion or priorities. There are frequent and strong contacts with the external world, which also goes for international contacts, but few on a large scale, or involving several persons. This hampers the faculty's efforts to increase its research base and to modernise its teaching. Although the faculty obtains acceptable results in its educational programmes, there are considerable challenges ahead, which some of them will require better funding.

## 4.6 The Faculty of Dentistry

The Faculty of Dentistry, which was an autonomous institution until 1959, still gives an impression of being relatively isolated from the rest of the University. Since there are no other major clinical communities in Norway, clinical activities are conducted inside the faculty itself. This makes Dentistry a self-relying unit and it explains the high running costs per student (259 000, or four times as much as Medicine, the second highest). Largely for the same reason, the faculty employs nearly twice as many technical-administrative staff as academics (152 and 84 respectively). With a low number of students (367) and only two departments (Oral Biology and Clinical Odontology), the faculty can act as a coherent unit, where responsibility for educational programmes, research training and research is kept at the faculty level. The student-teacher ratio is 3:1, by far the lowest at the UiO, and the faculty has one of the highest levels of expenditure per academic staff, although significantly lower than Law and Medicine. Most of this revenue comes from the basic grant, as external sources provide only 2.5%. By comparison, no other faculty has a lower share from external sources than 11%.

Dentistry may be viewed as an 'instrumental' discipline, anchored in technical themes, and the Faculty's profile is dominated by the teaching mission. When the resources that go into equipment and technical support are excluded, the faculty's relative expenditure on research is fairly average. In terms of research expenditure per academic employee, Dentistry is higher than e.g. the Arts and Social Sciences departments, although this cannot be taken directly to represent the level of activity. Research in Dentistry is probably on the whole more expensive than in the humanities. The faculty's research strategy seeks to give priority to projects that bring together basic and clinical research, while the faculty's geographical location is seen as a hindrance to participation in interdisciplinary research communities. In fact, its chief cooperation partners are the Faculty of Dentistry at the University of Bergen and various health authorities. Neither staff nor leadership are satisfied with Dentistry's research culture and largely explain this by referring to a lack of resources and little will to differentiate resource allocation through incentives. The need to build more consolidated research units around selected themes is acknowledged but not followed up to any great extent yet. An annual average of 4 doctorates over the years 1996 – 2000 is fairly high compared to the number of students. The Faculty also has a consistently good record for international publication.

All the faculty's students are educated to become dentists, which makes it possible to design an identically sequenced programme for all. Like in other professional studies, the programme is a constant pendulum between theory and clinical practice and we registered no complaints about the way the two components are integrated. Following a tight schedule, students of dentistry believe they work harder than most other students and seem generally satisfied with the way in which they are followed up by their teachers. The clear professional goal and the good job situation for dentists are solid factors of motivation and may explain why Dentistry can boast an annual credit production per student of 63.6 ECTS, which is far above any other faculty at the UiO. The faculty has recently introduced PBL, and like at Medicine, opinion varies as to its success. It is seen as costly and cumbersome, but also rewarding when it works well. Both teachers and students seem to suspend their judgement until more experience has been gained and the best approaches found.

The Faculty of Dentistry is most remarkable for its high teaching efficiency. A main challenge in the future will be to make it more dynamic as a research community too, particularly in order to attract more external funds and to heighten its level of internationalisation and its

participation in cross-disciplinary projects. A way forward here might be to opt more wholeheartedly for incentive-driven resource allocation, which may help get some inflow of research funds from outside sources. As it is, the faculty seems a bit complacent in its 'splendid isolation' and its reliance on the basic-rate funding. Staff mobility, too, has for a while been a problem, which is not strange, considering Norway's tiny academic community in Dentistry. Anyway, it has resulted in the University's highest average age among academic staff, for which reason the mobility problem may soon change into one of recruitment.

## 4.7 The Faculty Of Theology

Theology is the University's smallest faculty and organised as one unit, without departments. The number of students (376) is fairly equal to that of Dentistry, but the number of staff is much smaller (38, compared to Dentistry's 236, with only 8 administrative-technical positions). The budget allows for expenses per academic man-year (847 000) and running costs per student (51 000) that are below those of Law, Medicine, Dentistry and Mathematics and Natural Science, but highest among the 'humanistic' faculties. The faculty also has the lowest student-teacher ratio (10:1) outside the 'hard science' faculties. Most of the revenue comes from the basic grant: its 11% from external sources is second lowest, against a University average of 28%.

Relative to its number of academic staff, Theology's expenditure on research compares well with e.g. the Arts and Education faculties. With its modest volume in absolute figures and many sub-disciplines to cover, however, there are problems with concentrating resources for larger projects. Although there are examples of research team projects, like in ethics and in antiquity, that both received funds from the Research Council of Norway, most of the research is individually driven, as one-man projects. Researchers and leadership agree that the Faculty could do with a support unit for research in order to be able to compete for external funds, for instance from the EU. In fact, all external research funding today comes from the Research Council. The profile of the Faculty's research is heavily biased towards the writing of textbooks, while there were only 4 refereed articles in international journals during the years 1997 – 99. The Faculty is following a research strategy that gives priority to the areas 'ethics' and 'religion in a globalised age'.

The backbone of the Faculty's educational provision is the professional programme in theology, which educates ministers for the Church of Norway. This has however lost the dominant position it had only a few years ago, as there are now as many students (undergraduate as well as postgraduate) on other religious studies programmes. The Faculty is also rather active in the 'continuing education' field, providing an increasing number of shorter courses aimed at the church, the schools or health care. The Faculty is very conscious of the competitive situation that exists between themselves and their close neighbours, the Lutheran College of Theology. On the whole, educational activities are characterised by relative homogeneity. Students share a sense of belonging to the Faculty and express their satisfaction with teachers, student-teacher contact and the teaching programmes. The Faculty has developed a system of course evaluations based on informal discussions between students and teachers, which all parties seem to be satisfied with. Students praise their teachers for taking an active interest in their work and for their general willingness to adapt their teaching to student wishes. On this background of relative 'affluence', homogeneity and harmony, however, it is a bit disappointing that the Faculty does not produce more than about 30 credits per average student annually, which is one of the lowest for the entire University.

Recently a debate occurred in the newspapers on the likelihood – or desirability – of the Faculty eventually merging with the (private) Lutheran College, in spite of their different organisational bounds and traditions. After all, their traditional differences over theological orientation seem to have become less marked, or less relevant, in recent years. Moreover, both units are rather small and they share the tasks of training ministers for the Norwegian Established Church and conducting theological research. The debate showed that a merger will not be on the agenda for a long time - if ever, but it still seems obvious that theological research in Norway would benefit from a more systematic cooperation between the two units.

For its size, the Faculty of Theology maintains a large interface with society and with international partners and networks. There are a number of cooperative agreements with outside institutions and organisations, especially with such as are associated with the Established Church. Even more typical, though, is individual or discipline-based participation in numerous networks. A particular priority is given to relationships with churches of the South.

## 4.8 The Faculty of Education

The youngest faculty of the University has only existed since 1996, but builds on long academic traditions all the same. Two of its departments, the Department of Educational Research and the Department of Teacher Education and School Development, go back to established UiO units, while the third (the Department of Special Needs Education) was formerly an independent college with a postgraduate programme and considerable research activity. On its constitution, the new faculty could move into a brand new building on the main campus.

With 2220 students Education is a medium size faculty for the UiO. It is not among the most expensive ones, with running costs per student at 41000 and total expense per academic man-year at 762000. The former is higher than for Law, Arts and Social Science, the latter second lowest after Arts. External sources contribute a relatively small share (13%) of total expenditure, or about the same as Theology and considerably less than any other faculty except Dentistry. Nearly all revenue from external sources comes from government ministries or the Research Council, in fact over 80% from ministries.

The research activity is spread thematically over the entire educational field, perhaps with especially strong points in the fields of special needs education and socialisation and education. The university didactics group, while doing ordinary research in its field, also acts as a special competence unit to other subject communities in the University. In terms of national and international citations and resource input, of which 20% is externally funded, the faculty scores quite well if measured against other 'soft science' faculties, but research is still quite unevenly distributed among the academic staff. Another characteristic feature is the dominance of small-scale projects, often individually driven, although examples of team-based projects are also beginning to emerge. The ability to compete effectively for external research funds is limited, as the faculty has not yet established a firm research strategy. The really hard choices of priority still have to be made, which would mean the formalising and empowerment of research units from what are still looser groupings. The faculty is open to ideas of connecting doctoral students to larger research projects, which may make good sense economically as well as educationally. These ideas are still waiting for their realisation, though.

The Faculty gives the impression of being a dynamic and forward-looking teaching community, where student satisfaction and loyalty is high. Students were especially satisfied with the introduction of more varied learning methods, involving PBL and case-based teaching, small group discussions, much written work and good feedback from teachers. According to some, the right balance would now be achieved by providing some more lectures and more time to read. Students give the faculty credit for investing resources in undergraduate teaching, claiming that the good foundation they are given in the first years makes it easier to find one's way at postgraduate level without too intensive coaching. The high priority that is given to teaching yields results in the production of credits per student, which at 42.7 is surpassed only by Medicine and Dentistry, and in one of the University's lowest failure rates. The student-teacher ratio is 12:1, which is lower than Arts, Social Science and Law. In the years to come a main challenge will be to increase the number of doctorates, which is lagging somewhat with an annual average of only about 5. This is among the lowest of all faculties in relation to the number of higher degree candidates. There may be a relationship between this fact and the average age of students on doctoral degree programmes, which at 43 is the highest for any faculty.

The vision statement of the Faculty of Education stresses their openness towards other subject areas and ambition to engage in interdisciplinary work. With a large part of their portfolio directed towards teacher education, school-related topics and special needs education, the faculty maintains close and busy contact with the practice field, with educational authorities and with research communities elsewhere in Norway and abroad. The faculty also hosts InterMedia, an interdisciplinary centre of the University, and the Education Ministry's Research and Competence Network for ICT in Education (ITU).

# 5. Academic profile and strategy: teaching

## 5.1 Teaching in the mass university
The institutional evaluation of the UiO follows a period of numerous, if rather uncoordinated moves to improve the various discipline communities' educational provision. It also coincides with the University's beginning efforts to accommodate its degree programmes and teaching practice to the national 'quality reform'. Consequently, the evaluation takes place at a time of great flux; a time of uncertainties and opportunities. The quick rate of change that most academic communities now experience creates extra stress and anxieties, and a real danger of people retreating to defensive trenches. The panel's general impression, though, is that staff and students at the UiO support the proposed reform measures and expect that the university's efforts to implement them will produce tangible improvements. A concern remains, however, that increased emphasis on teaching may limit the University's ability to strengthen research.

The UiO, like other universities, has been struggling to respond adequately to the so-called massification of higher education. The challenge from massification entails more than the need to organise for a dramatically increased number of students. Qualitative changes in the student population are equally demanding, like a wider spread of motivation and entrance qualifications and a more 'instrumental' attitude to studying. Today's students show an increased tendency to 'wander' across faculty (and even institution) borders, picking and choosing their courses without much sense of belonging. On average, there is also an alarmingly low input of study hours, as students devote more time to money-earning jobs. Changes in secondary schools may also affect this picture: an asymmetry seems to have developed in the interface between 'school' and 'academy' and the universities have struggled to adapt starting levels and teaching methodologies to their present-day clientele. The students we talked to in most of the faculties agreed that the transition from school to university is tough and that first-year students ought to be taken better care of. When course teachers fail to provide contact and follow-up, students will tend to spend their first years at the university in relative disorientation about ends and means. It takes strong motivation and drive to succeed as a student under such conditions. Unsatisfactory study results may not be the only worry that this situation creates; the University and its staff may have as much reason to be concerned about the danger of falling academic standards. ·

The UiO may have had more than its fair share of these challenges. Due to its very size, the dominance of the free faculties in terms of student numbers, and perhaps also the fact that the capital's university will attract students with more diverse motivations, the UiO has suffered from a Janus-like reputation: as the nation's largest and dominant university in terms of academic standards across the board and, on the other hand, as the university with the largest proportion of students who are dissatisfied, weakly committed and drifting. Recently the University launched an advertisement campaign that profiled the UiO as an institution that is tough and demanding, and where your mentors would not be 'teachers', but 'researchers'. This symbolic downgrading of teaching was probably the right signal to send out for some prospective recruits, but hardly for all.

## 5.2 Educational provision: outcomes by quantitative indicators
An institutional evaluation must to some extent deal in generalities and cannot aspire to give authoritative judgements on the educational provision in single faculties or disciplines. But even general assessments may be hard to make, since educational practice as well as given

conditions and restrictions vary considerably. A natural point of departure will be *outcomes*: Statistics for the years 1996 – 2000 show that the UiO has the lowest average credit score per student of all four Norwegian universities, with only marginally above 30 ECTS credits for each of the last three years. The margins are fairly small, but the UiO shares with the University of Tromsø a slight falling tendency that is less noticeable in the other two universities. By comparison, the Norwegian University of Science and Technology (NTNU) produced an average of 36 credits per student in 2000, but it is not unreasonable to argue that this is a natural effect of this university's higher proportion of 'professional' – i.e. more structured – programmes. Basically, the low credit score is a common concern to all four universities. There are no significant deviations among the universities when it comes to productivity in candidates for the higher degrees, except for a markedly higher number of doctorates at the NTNU, relative to the student population. The UiO's annual number of doctorates nearly doubled during the 1990s, however without quite keeping up with the increase in the number of research fellows, and may be regarded as low in relation to the total number of doctoral students (1710).

Behind the UiO averages, there are great variations among the faculties. The most obvious ones reflect the differences between 'professional' and 'free' programmes, showing the faculties of Dentistry and Medicine as the most efficient ones in this sense. Law and Education, as 'semi-professional' departments (in different ways), make up a middle category, while the 'free' faculties have clearly lower credit-counts. Two faculties – in fact the two smallest ones - stand out as particularly interesting in this respect: the Faculty of Dentistry with its annual credit production of more than 60 per student and Theology with only 30.9. Such differences are rather staggering, keeping in mind that Theology too has a favourable student-teacher ratio and few programmes, of which the dominant one is 'professional'. The Ex. phil. first semester introductory course also deserves a special comment. As a compulsory course for all students, it regularly has the largest number of students and is as such the most obvious 'mass' programme of all. It also has the highest failure rate (about 1/3). It is worth asking whether a course of this kind offers the best introduction to the University for new students, unless it gets a much better pedagogical form.

## 5.3 The crucial issue: educational quality for today's students

As can be expected, the three 'free' faculties (Arts, Social Science and Mathematics and Natural Science) are facing the most serious challenges in order to make their educational programmes more effective. It is difficult to assess exactly to what extent this is a direct or an indirect quality problem, i.e. whether the explanation is chiefly to be found in weaknesses in the programmes as such, or in the student's starting qualifications and/or in 'willed' student behaviour. 'Student behaviour' may be more prominent as a cause in Arts and Social Science, while the lack of basic pre-knowledge may be the main problem in the science subjects. From the point of view of utilising teaching resources, however, neither of these causes is acceptable. There is little doubt that the efficiency problem in these faculties is best addressed through the introduction of more structured study situations, with clearly formulated demands, more teacher-student contact and better incentives for the (reasonably) efficient student. It is precisely such features in the professional programmes that can explain the higher efficiency that we see there.

In mathematics and science, problems of recruitment and the high incidence of student failure are intimately connected in a vicious circle that amplifies existing myths and fears about the exclusiveness and forbidding difficulty of science subjects. To assert that the problems are due to the failure of secondary education, and then remain firm on academic standards, is

hardly a solution and the Faculty is making conscious efforts to bridge the transition gap. The only way out is to build trust and attractiveness, which might perhaps be best achieved by offering first-year science students, or those who need it, a course that will take them in a guided manner through the basics of their discipline, after which they might be in a better position to judge whether science studies is something for them. Swedish universities have introduced such a 'basis year', apparently with good results. Courses like these should not be a non-credited 'waste' for those who take them without continuing their science studies and students must be guaranteed a place after having completed them. It might also be worth investigating the possibilities of attuning them to mathematics and natural science in general teacher education, so as to make them qualify for teaching these subjects in schools.

Although the problem seems to be most acute in science subjects, the panel has the impression that most faculties pay too little attention to the needs of their undergraduate – and particularly their first-year – students. A feeling of isolation and disorientation, both in relation to academic activities and career aims, seems to be widespread and is obviously one of the main causes of student dissatisfaction. Particularly in the large faculties many students feel left to themselves instead of as parts of a discipline community. Admittedly there are also many students, perhaps the most vocal and visible ones, who thrive 'like fish in the water' and manage well without close follow-up, but universities can hardly base their pedagogical approach exclusively on an 'ideal' student type who is no longer quite representative.

These are of course features that the UiO shares with the other universities, and that are now widely acknowledged in connection with the introduction of the quality reform. By and large, staff and leadership in all faculties point to their intentions of strengthening undergraduate teaching. Still, the panel is a bit uncertain about the University's *internal* motivation. We heard of *conscious* choices to give priority to postgraduate students, with reference to restricted means and undergraduates' lack of commitment. To regard student support at the higher level as more useful and economic than at the lower level, however, is rather to turn the issue upside-down. Just like any building will be better and safer in its higher storeys if the foundations are solid, there is every reason to believe that students who have learnt study techniques and the basics of their discipline at an early stage in a good environment, will be equipped to solve their tasks at postgraduate level with less detailed guidance. In fact, the Faculty of Education provides an example of how this may work to the general satisfaction of everybody.

It may be unfair to generalise, since practice obviously varies – between individuals as well as between faculties – but broadly speaking the UiO's approach to teaching has been rather conservative and suffers from the fact that teaching affords less merit than research for the academic staff. Also, it is explainable in terms of a cultural tradition that lingers on in the image of universities as elite institutions. Faculties consist of members who themselves once 'cracked the code' and succeeded in the academic world and who may therefore be inclined to have less understanding for the situation of today's average undergraduate. Sometimes the ability to find one's own way through the wilderness is even associated with the hallowed ideal of 'academic freedom', although the ability to think critical and innovative thoughts is probably better stimulated in a good discipline community.

University didactics has not yet become the forceful tool for quality it might have been, although this is formally mentioned and promoted in action plans and is gradually gaining acceptance. There are certain cultural obstacles to be overcome here, first and foremost the ingrained belief that expert discipline knowledge is the best guarantee of good educational

quality and a corresponding scepticism in discipline communities against being 'told' by pedagogues. However, the UiO possesses a leading academic community within this field. It might be a good idea for the institutional leadership to further formalise and strengthen the university didactics unit and use it with more determination within the institution. Only by showing that this is a policy of priority and even necessity, will the obstacles be overcome. When the panel discussed this with the Faculty of Education, the faculty 'protected' the university didactics unit as an academic and research unit in its own right, rather than a 'task force' to be used by the University at will. The panel, though, fail to see why it couldn't be both – and strengthened!

Taking good care of first-year students *will* cost resources. But even the cost argument works both ways, having as it does a credit side as well, and some academic leaders were more willing than others to see both sides of the account. For one thing, resources will be freed as the result of less costly examination regimes and shorter lower degree programmes. But more important in this connection is the introduction of new parameters to decide the flow of state grants, particularly the increased weighting of credits and candidate numbers at the expense of student numbers. This will make the students' successful completion of their programmes within reasonable time more economically important to the institution, which is an argument for ploughing heavy resources into undergraduate teaching. In any case, the issue of making resources available for teaching is related to the institution's general attitude to its teaching mission, for instance whether sufficient recognition and incentives are invested in this field. The panel is not convinced that this is quite the case at present.

Several departments seem to question the importance of undergraduate programmes altogether, focusing their academic resources on graduate teaching and research. Here the UiO should consider the necessity of making a strategic choice: Should undergraduate programmes in some subject areas be left to other higher education institutions or should the UiO continue as an integrated undergraduate, graduate and research university the way it is today? Or – if it is considered a necessity that the whole post-secondary school column be preserved in all subjects – could this structure have more of a true *column* shape, rather than that of a pyramid that is very thick at its base? In view of the University's mission in the totality of Norwegian higher education, this might make more sense, if it can also be made to make sense economically.

## 5.4 New programmes – new orientations

As a consequence of the quality reform, all faculties are now redesigning their degree programmes and it is obviously the free faculties that are faced with the toughest challenges here. In these faculties the discussion very much revolves around the questions of how many identifiable programmes there should be, and to what extent the new programmes should be whole, sequenced units, as opposed to 'open' and widely modularised ones. Students expressed anxiety that programmes might be too narrowly defined, leaving little room for individual choice of course components, but a too liberal solution may in fact run against their own best interests. The students' concern that the new arrangements may restrict their freedom to build interesting course and discipline combinations is worth paying attention to, but from a learning point of view it is one of the weaknesses of today's system that students tend to roam too much in a horizontal landscape of modules instead of building their competence vertically. A balance will have to be struck here through the defining of a limited number of programmes that – while acknowledging experience-based competence and allowing room for options and cross-discipline combinations – have a certain degree of coherence and built-in progression. Whichever way the faculties now arrange their

programmes, though, the most important thing is to secure that students get appropriate pedagogic and tutorial support. Students need feedback and a chance to talk to their teachers.

With programmes that demand higher levels of student commitment, the question still remains how to accommodate students who study part-time or intermittently, or who do not aim at a full degree. The measures of the quality reform must apply to these students as well and the University has an interest in making them as 'efficient' as others, although in relation to their own study aims. The UiO has already made good progress in designing plans for the building of programmes and 'module packages', where a plan of study for the individual student works as a contract and commits the student to the units he or she has signed up for. Part-time or absentee students will then not be counted as full-time students any more and the University will achieve a better – and more realistic – count of credits per student. The eventual success of this, though, will also depend on the system of rewards and punishments that accompanies it.

The idea of 'contracting' students and thus committing them more to an organised learning process is at odds with traditional values of 'academic freedom' and the supposed 'right' of any person who is formally qualified to be a student to sit for university exams and take university degrees. Of course this right has for a long time not applied in the many programmes where students must also be given practical training, for instance in laboratories or in professional practice. Under the philosophy that underpins the quality reform, however, it may seem equally unreasonable that students of purely theoretical subjects should still be allowed the freedom to abstain from organised learning settings. If the so-called 'privatist' right to university exams is legally maintained in the future, the panel would therefore advise the University to arrange their programmes in such a way as to minimise this opportunity.

With the re-designing of degree programmes and a higher density of teaching for undergraduates, there will also be more scope for varied teaching and learning methods. In most faculties the development of differentiated teaching methodologies is still a challenge. The preconditions for this to happen seem quite good, though. The panel has the impression that the infrastructure for learning is very well developed at the UiO, although the physical space for teachers' and students' activities are occasionally too restricted and some departments need investments for new equipment. No other higher education institution in Norway has better library facilities and services and much the same can be said for the ICT and computing facilities that are available for staff and students alike. The UiO here obviously possesses resources that may take them to the very forefront of computer-based and distance teaching, which however is far from the case at present. The institution would benefit from a more efficient use of these ready resources for learning purposes, both in order to recruit students through distance learning courses and in order to enhance educational quality for on-campus students.

A number of faculties, particularly those that educate for professions, have introduced PBL as a basic methodology, and although the experience is so far summed up as somewhat mixed, most communities who have tried it are convinced of the value of this approach, which of course need not be applied in all learning contexts. The panel would recommend a more widespread – if still discriminate - use of PBL in the University, not least in view of the increasing importance that is now being attached to the so-called 'generic' – or transferable – skills for *all* graduates in an age when the curriculum content of a given education may be obsolete after a few years. Under the Bologna process, work is now being conducted to define generic 'descriptors' for all bachelors and masters programmes on a European basis. Surveys

also show that employers tend to value such qualities more and more in the candidates they recruit.


## 5.5  The educational profile

In our interviews with various representatives of the UiO, the University's breadth of provision frequently came up as a topic. The traditional image of the UiO is one of 'the complete university', where you may expect to find educational provision in any major academic discipline except engineering and business studies. The self-evaluation, while highlighting the breadth of the present course portfolio, also stresses the need for continually adapting the course provision to society's changing demands and argues that this will become even more important in the future. Also, the self-evaluation points at specific areas that are too weakly developed at present, particularly the provision of 'continuing education' courses, where there is likely to be an increasing market. But the University cannot expand forever. It cannot stretch its resources to cover a lot of new ground without scaling – or even closing - down other provision. The University leadership is clearly aware of these problems and deliberate policies that would lead to sharper and more selective profiles. The UiO, while remaining a 'broad' university, must therefore give priority to those fields where it has strength, or the capacity to build strength, and where student recruitment can be expected. The national responsibility for vulnerable (but valuable) disciplines must be tackled through a set of mechanisms, e.g. the concentration of very small units into more consolidated ones, new types of cross-disciplinary provision, task-sharing agreements among several institutions on a national or a Nordic basis, or even direct contract assignments from the authorities, who are the owners of the institution and as such co-responsible.

The panel supports the idea of making the course provision more profiled. The situation in Norwegian higher education is very different today from what it was only twenty years ago, when the UiO not only regarded itself as a 'national' university, but also as the chief protector of national standards in most academic disciplines. The need for that role has disappeared now, although some would still argue that academic standards are threatened through the proliferation of higher education up and down the country. Clinging to such a role, however, would in fact be counter-productive - for the UiO's own development as well as for the growth and development of younger and smaller institutions. This means, of course, that the UiO has to define its identity through an academic profile that is more exclusively based on an understanding of what its own strengths and opportunities are, and where high quality – or excellence – can be achieved. Although the concept of the 'Network Norway' of the 1990s is now more or less dead as a national steering tool, its dual mechanism of task-sharing and competition may ironically be more relevant than ever, in a situation where autonomous institutions are acting out of self-interest in a more market-like environment, and where the challenge from foreign universities also becomes more tangible.

For the UiO, that basically recruits its students and staff from the Oslo and Eastern Norway region, this would mean – among other things – that it should see itself more as a regional than a 'national' university. A reappraisal of the institution's identity along these lines might even be conducive to increased and more responsive contact with society, not least in the arena of continuing education. There is probably a substantial market for in-service courses for the employees of companies and institutions, as well as more general courses under the umbrella of 'lifelong education'. The provision of distance learning courses is not very well developed either. Without a strong central unit for the selling and running of this type of provision, much of the initiative will remain as 'privatised' with individuals or with faculties

and departments that are too hard pressed with other tasks to be able to act forcefully in this arena.

The panel talked to representatives of several cross-disciplinary centres and programmes at the UiO, and will come back to these in connection with research. In a teaching context, these centres are more interesting for what they do *not* do, although they seemed to be very alive and vital as academic communities. In response to society's shifting demands there is a constant search for new and innovative combinations of disciplinary knowledge. Although the initiative to create such units usually originates in new research orientations, it would enrich the educational portfolio of the University if these orientations were also reflected in new courses to greater extent. There is little doubt that cross-disciplinary units will increase in number in the future, as the compartmentalisation of knowledge inside traditional department boundaries becomes more and more problematic. It would be a pity if educational provision is then going to lag seriously behind knowledge production in this respect, although there is of course a limit as to how flexible educational provision can be in response to shifting combinations in (perhaps) ephemeral centres and programmes. On the whole, cross-disciplinary activity in educational provision should be encouraged and increased, also where no specific unit has been set up. Good examples of such activity across faculty (or unit) boundaries are the cooperation between Medicine and Dentistry in basic disciplines and the increasing use of the University Museums for educational purposes.

Many university subject communities have been rather hesitant to modify their educational provision in response to changing demands. This is partly due to traditionalism and partly because the disciplines have been relatively protected from market preferences. But it is also due to the failure of society to formulate new demands, and after all it is only logical that the University's links with society will be strongest at the point where it touches its chief source of funding: the Ministry. Admittedly, provision in individual disciplines has been inflated and scaled down in accordance with student demand, but usually without much structural change. The problem of educational responsiveness may affect the Faculty of Arts more than any other, where for instance the language disciplines - that are not really disciplines at all but fixed constellations of several ones – have had negative recruitment trends for a long time. It is not obvious that all the students who want to study foreign languages will be equally interested in linguistics, literature and socio-cultural studies. Finnish universities have had success with their Language Centres, where language proficiency is emphasised at the expense of traditional philological studies, and this type of provision may be more in line with what many students want today. Some of the language departments have experience with 15-credit proficiency courses for students from other faculties, but might also consider the idea of building these out to even larger courses, preferably with 'special purpose' options.

## 5.6 Quality assurance

The Universities and Colleges Act states that institutions of higher education are themselves responsible for the quality of their educational provision. Amendments in the same law, due to pass Stortinget (Parliament) this spring, will also demand of the institutions that they have a 'satisfactory system of quality assurance' and that this will be evaluated regularly by a new agency for accreditation and evaluations.

The panel has not been in a position – and neither has it the competence – to evaluate educational quality across the extensive portfolio of courses and programmes at the UiO. Our impression, though, is that such quality is predominantly solid and decent, not least thanks to

the high levels of qualifications and competence one finds in nearly all disciplines. This positive picture, however, has to be modified by a number of negative features that have been accounted for in the previous pages, of which one is the uneven pedagogical quality of teaching that was mentioned in the self-evaluation and by many informants.

The self-evaluation report refers to the University Senate's 3-year old strategy on educational quality, which states that 'it is the faculties and departments themselves that bear the responsibility for ensuring that the quality of their studies is satisfactory and that it is developed', while the role of the central level is more to act as coordinators and to stimulate and support the communities in their efforts. The report then goes on to ask 'whether the decentralised model of work on study quality has shown itself to be sufficiently effective in relation to the challenges the UiO is facing. On the basis of EVA there seems to be a need for further measures and incentives and more management.' The panel supports this conclusion and would like to emphasise its importance. Beyond the indications that are provided by hard quantitative facts, there is little evidence of *systematic* knowledge about educational quality in spite of the fact that local course evaluations seem to be conducted regularly. Consequently there is much *assuming* about quality. This view is also expressed in the self-evaluation and by the institutional leadership, who argue that the available tools for assessing quality simply are not good enough. While allowing for the fact that the assessment of educational quality is a complicated task indeed, and one on which there may not even be consensus over criteria, the panel would like to stress the need for a more systematic, coordinated approach at the institutional level.

Since new legal demands will make it necessary for the University to make these adjustments anyway, there is little point in stressing this recommendation any further here. As to the question of *how* a system of quality assurance ought to be designed, the University will have few developed models to look at in Norway, whereas there might be more valuable information to gather from British universities, most of which have operated internal quality assurance systems for several years. In any case, the quality of such a system will depend on its ability to transport quality data (which means both quantitative and qualitative data) in a meaningful way from the levels of activity and on to the decision-making units of the institution.

In many ways, the weaknesses and uncertainties that have been pointed at in this chapter are related to the decentralised structure of monitoring and decision-making that characterises the University of Oslo. Such decentralisation is particularly problematic in an institution of this size, where the enormous amount of detail and variation makes transparency difficult. At the same time, an institution of this size may find it easier to provide resources for building central units for strategically crucial functions, which has already been achieved within the sphere of technical infrastructure. In connection with the University's educational provision, the panel sees at least four areas where a more resolute institutional effort is called for. These are the promotion of course provision under the 'continuing' or 'lifelong' education umbrella, the promotion of interdisciplinary programmes, the promotion of methodological innovation and quality development in ordinary provision and, finally, systematic quality assurance. Obviously, there are several possible organisational solutions to how these functions can be combined.

# 6. Academic profile and strategy: research

An institutional evaluation cannot make quality assessments of research itself, but must limit itself to study preconditions, organisation, resources and outcomes in order to establish an overall picture. Such a task requires good data, however, which is a problem with research. Bibliometric data and indicators like expenditure volumes, amounts of external funding and the number of doctorates say more about quantity than quality; also, they are confounded by methodological ambiguities and the existence of different preconditions and research cultures. Indications of quality and relevance can be had from previous evaluations of research, from the ability to attract external funding and nominations for status as Centre of Excellence Research (CoEs), although such information speaks little of quality in breadth. Combined with information from our interviews, however, these various indicators will provide a rough picture and allow for some considered conclusions about the UiO as a whole.

## 6.1 Research in quantitative terms

The University of Oslo spends slightly more than 1.5 bill. NOK on research and development (1999), which is more than one half of the institution's total expenditure. There has been a tendency for R&D's share of the total budget to rise slightly since the mid-90s. Although R&D is a wider term than 'research', this figure in itself indicates that the UiO takes its research mission seriously. Another sign of the increased prioritising of research is the development towards higher percentages of external funding, as such funding is heavily biased towards R&D. Whereas external funding accounted for 10% of the total budget in 1992, this figure is now at over 20%, which not only tells of an expansion in terms of R&D volume, but also demonstrates the university's increased economic reliance on its research as well as on income from outside sources. Out of the total expenditure on R&D, 34% comes from external sources. By comparison, the University of Bergen has an external share of 42% and the Norwegian University of Science and Technology (NTNU) 37%. More than 20% (or 60 % of all *external* resources) come from government ministries or the Research Council of Norway. To the extent that the ability to attract external funds is seen as an indicator of research vitality, the dominance of government and RCN funds is less uplifting, as these are often resources for which there is less competition, or that are actually *meant* for the University, like the funding of 50% of the UiO's research fellows in the doctoral programmes.

Money from commercial companies and international sources is more indicative of competitiveness. Slightly less than 20% of the UiO's *external* research funding – or 7% of all research funding - in 1999 came from these sources. If this is still a moderate share, there are signs of a promising development, particularly in international funding, which rose from a very modest 15 mill. in 1995 to 47 mill. in 1999. Income from companies shows a slower curve of growth, with an increase of 30 % over the same four years. Again, comparisons with Norway's two second largest universities are interesting: Relative to overall size, the UiB has roughly the same ability to attract funds from private companies, but scores much better on the international arena, with exactly the same funding *in absolute figures* as the UiO in 1999. The NTNU, on the other hand, is slightly weaker than the UiO on international funding (relative to overall size) but succeeds in attracting much more external private funding, with nearly three times the volume of the UiO in absolute figures. These comparisons provide interesting information on profile differences between the three universities, but they also show that Norway's two medium-size universities are better than the UiO at getting at the

'hard money'. Admittedly, the lack of recent figures gives us a situation that prevailed up until three years ago and may have changed since then.

The other traditional method of quantifying research activity – with greater focus on outcomes – is bibliometric counting. Here too we must make allowance for the lack of recent figures. Citation indexes show the UiO as having the best record of all universities in terms of publishing, but it is rather surprising to discover that there has been a falling trend during the latter half of the 1990s. The number articles in journals (national as well as international) as well as chapters in academic books was at a lower level in 2000 (the latest available figures) than in 1995, with only international articles showing a slight rise again from 1999 to 2000. The only category that has shown a clear rise over the five-year period is in fact textbooks. Admittedly, the same period has also seen a decline in the number of academic man-years of 3%, but the decline in publication is much sharper, with 12% for all types of publications and 20% for articles in journals with a refereeing arrangement. This development is largely determined by the two faculties that totally dominate publishing in journals, the Faculty of Medicine and the Faculty of Mathematics and Natural Science. In absolute numbers, Medicine fell from roughly 1550 to 1150 articles and Math&NS from 900 (via 1050 in 1997) to 800 over the same period. The third and fourth largest contributors, the Faculty of Arts and the Faculty of Social Science, also show a declining tendency, albeit a much less dramatic one. It may seem a little worrying that publishing activity in the faculties with the highest research profiles has declined so much, although Math&NS's recent rise from a bottom 700 articles in 1999 may indicate the beginning of a new trend.

Still, the UiO compares very well with the other universities on publishing. Relative to overall size (total funding; number of academic staff), the UiO has a significantly higher rate of publishing than the UiB and the NTNU when all types of publications are included and is roughly on par with the UiB and clearly ahead of the NTNU when it comes to articles in international journals. The UiB too has seen a marked decline in publishing over the last five years, while the NTNU, admittedly from a lower starting point, is the only university with an increasing production in this period.

Doctoral programmes account for a large proportion of the University's research production and are at the same time its chief source of new researchers. Both aspects are equally important: For one thing, recruitment demands will be growing in the future, but equally interesting is the tendency for much innovative research to be performed by young research trainees. Like the other universities, the UiO reformed its training of researchers in the early 1990s, providing 3- or 4-year programmes for eight different doctoral degrees. From being totally dominant in this field twenty-five years ago, the UiO's national share of new doctorates is now down to 36%, which is fairly consistent with its overall size as an institution. The reform has caused the number of new doctorates annually to double since 1990, but this rise mainly took place until 1997, after which year there has been stagnation. The highest intakes on doctoral programmes so far were made in the years 1997 – 2000, which ought to mean a rising number of new degrees again for the years 2001 – 2005. As for distribution among the faculties, the pattern is similar to the one for publications: Medicine and Math&NS dominate with around 400 doctorates each during 1996 – 2000, but whereas Medicine was highest on publications, Math&NS had slightly more doctorates. Social Science and Arts made up the next group with around 125 new degrees each, while no other faculty had more than 50. The University estimates an average age of 34 for research fellows, a non-completion rate of 25% and assesses that the majority of their doctorate students spend much more than the standard 3-4 years on their degree. It is obvious that the University must make

an effort to overcome the present stagnation, particularly in some faculties that have a very low production today. This means that both recruitment and the efficiency of the programmes have to be addressed.

## 6.2 Institutional research quality

Any evaluation of research will have to take into account the existence of what may be called 'two cultures' in the academic world: one for the 'hard sciences' of medicine and the natural sciences, and another for more 'humanistic' research. The 'hard' sciences have an established tradition for working in teams, they have a more competitive, international publishing practice, they are internationally uniform (or 'a-cultural') by nature, and they are more closely related to the applied sphere, where concepts like 'use' and 'advance' are more relevant. Finally, the latter feature ties them more directly to the economic world, and consequently to other and bigger sources of funding, not only private ones. For example, the EU framework programmes are heavily biased towards economically 'useful' research. For these reasons, research communities in the 'hard' sciences will tend to be more prominent in terms of participation in international programmes and citations in international journals. To make the picture even more one-sided, all the national subject evaluations of research that were recently carried out by the Research Council concerned 'hard' sciences. For our purpose, this has two effects: firstly, the 'hard' sciences may appear more dominant and advanced than they actually are in comparison with the humanistic side; secondly, that we have fewer ways of knowing about the quality and level of research in what makes up two thirds of the UiO. In spite of the growth of 'crossover' disciplines and cross-disciplinary combinations, this cultural divide is still relevant and must be kept in mind when looking at success factors in the UiO's research activity.

The national research evaluations of the RCN were conducted in the fields of chemistry, geo-subjects, physics and biology. On the whole, the University came out of these evaluations with good results. A majority of the ratings were in the categories 'good', 'very good' or 'outstanding' and few communities were assessed as 'poor'. As a whole subject area, chemistry achieved the best overall assessments, whereas physics showed greater variation with some poorer results. Within these four areas, assessment as 'outstanding' was given to two communities in General Physiology and several communities in Basic Medical Subjects in the biology group, while several chemist communities, the Department of Geology and the Section for Zoology were rated as between 'very good' and 'outstanding'. There was considerable debate in the aftermath of these evaluations, including criticism of allegedly unsound methodologies from communities that did less well than expected. Anyway, these evaluations seem to document a general solidity of research in the subjects that were examined, with some outstanding communities.

An impression of the UiO's relative success as an elite research organisation can also be gained from the results of the first round of applications for status as Centre of Excellence (CoE) under a new national scheme operated by the Research Council. The fact that the UiO managed to file as many as 31 applications illustrates the university's breadth of high quality research and a high level of motivation. The high number of applications from the three faculties of arts, education and social sciences (10 altogether) was particularly promising, as these communities have less tradition for doing research in consolidated networks. Only one of the applications from these faculties went through to the second round, but the very fact that this scheme caught on so well, and the work that went into the application process, ought to inspire increased research cooperation in humanistic studies. The UiO got ten applications

nominated for the second round, which may be regarded as a moderate result in comparison with the smaller universities of Bergen and Trondheim, that got nine each. The panel supports the view that is emphasised in the self-evaluation report about the importance of taking good care of the networks and the experiences from this round of applications, whether the applications as such were successful or not. The ability to organise for larger research assignments must be an increasingly important part in all the faculties' total strategy. It is for example a sine qua non for competing for EU funds under the 6th framework programme.

The incidence of international research cooperation is still another indicator, not so much perhaps of research *quality*, as of the motivation to act in a more demanding arena. The UiO has numerous cooperation agreements with institutions abroad, but more important in the research area is the activity that takes place inside broader programmes. There is considerable activity in the Nordic NUFU and NorFA programmes, and in a variety of subject-specific European programmes. We see the pattern of the 'two cultures' repeating itself here, as most such programmes are in the 'hard sciences' sphere. Otherwise, the impression is that much research cooperation abroad is based on individually made contacts. According to the *NIFU Universities Survey 2001*, roughly one fourth of all researchers at the UiO stated (in 2000) that they had been engaged in research cooperation abroad. Of course it is difficult to gauge what this means in terms of actual research and the same uncertainty applies to the information that 48% of researchers at the UiO had made at least one visit abroad for research purposes during the last year (2001). A comparison with the other three universities shows the UiO with the lowest figure, but also that differentials are small, with the University of Bergen's 54% as the highest.

The most significant information may come from the University's participation in the EU framework programmes. For the last four years, the UiO has started an average of 24 new EU projects annually, with a tendency of stability rather than growth, and with the Faculty of Medicine and the Faculty of Mathematics and Natural Science accounting for 77% of these. For the three last years (i.e. the 5th framework programme) a comparison with the NTNU shows 66 new projects for the UiO and 72 for the NTNU, which may seem very negative for the UiO, but may in part be explained in terms of the subject profiles of the framework programmes and of the NTNU. Still, whereas the UiO has been stagnant at a stable level for several years, the NTNU shows significantly rising figures and it must therefore be a challenge for the UiO to increase its number of participating projects again.

## 6.3 Research centres and programmes

The University has established several centres for research and the dissemination of knowledge in specific areas. At present there are 11 such centres of varying size, ranging from the Ibsen Centre with four academic employees to the Centre for Materials Sciences with 49. The oldest centre is the Centre for Women's Studies and Gender Research from 1987. Although some of the centres also do some teaching, the main activity is research. Nearly all of them are interdisciplinary, involving typically three or four different department or faculty units, but two small ones are exclusively under the Faculty of Arts, while the Centre for Women's Studies has participation from all faculties. Taken together, the centres represent a sizable proportion of the UiO's research activity, with 218 (full-time equivalent) academic staff and budgets adding up to 170 mill. In addition to the Centre for Materials Sciences, the largest ones are the Biotechnology Centre and the Centre for Technology, Innovation and Culture (TIK) with about 40 academic posts each. A middle group is made up by the Centre

for Development and the Environment, the Norwegian Institute of Human Rights, InterMedia and the Centre for Women's Studies, with academic staffs ranging from 12 to 29.

As the centres' production in terms of publications is registered under each constituent department or faculty, the panel has no exact documentation of the efficiency of the centres' research other than budget figures. A useful indicator here may be the extent to which the centres' activities have attracted external funding. This proportion is considerable, ranging from 50% (TIK) via percentages of 72 and 73 to 95 (Materials Sciences) for the big centres. For the smaller ones, the percentage varies, but 40% is rather typical. This shows that the interdisciplinary centres are important agents for attracting external research contracts, although it should be kept in mind that most of this funding comes from the RCN.

The usefulness of centres as vehicles for 'budding' and making alliances is evident from their ability to build large research programmes that become 'units' in their own right and then enter into strategic partnerships with outside agents. Particularly the centres that cover the University's priority areas demonstrate this. In the area of ICT, TIK continues the UiO's earlier role as agenda-setter for RCN investments and now collaborates with InterMedia and several different subject communities through the Research Park (in which the UiO owns 34% of the shares). The Biotechnology Centre has budded into EMBIO as an umbrella for cooperating subject communities in three faculties and the Biotechnology Centre itself, comprising about 270 man-years and a budget of 170 mill. Through EMBIO the University participates in the NRC-administered programme for functional genomics (FUGE) that involves several research institutions with a budget of 100 mill. for the second half of 2002. Similarly, the Centre for Materials Sciences is behind another major project, FUNMAT, which cooperates closely with the NTNU, SINTEF and the Institute for Energy Technology.

The Centres provide interesting input in a debate about the future administration of research at the UiO. Representatives of the centres that we spoke to were generally enthusiastic about the centre model and regarded it as a suitable tool for developing the institution's research profile and potency. According to these, centres have the incentives and motivation to go for external funding, they have greater mobility of staff, they keep their focus on priorities and targets, they are more willing to adapt, they promote interdisciplinarity and they provide better platforms for applying for participation in EU framework programmes and for internationalisation generally. The panel follows this argument a good bit of the way. The centres – or at least the bigger ones – can document good results over a relatively short span of years and have shown their capacity as promoters of research-driven change. As such, they could well be the embryo of tomorrow's way of organising research at the UiO. In any case, we are convinced that the policy of establishing and empowering research centres should be further developed, in spite of possible reactions from faculties who might feel that they are being drained, in terms of authority as well as money.

## 6.4 The University of Oslo as an institution for research

In addition to presenting an overall assessment of the institution's research activity in terms of output and quality, an institutional evaluation must look at the University's chosen areas of priority to see if there is a correspondence between goals and actual performance. In the area of research, the UiO has selected four specific institutional priorities:
- Communication, Technology and Culture
- Molecular biology, bio-technology and bio-informatics
- Functional Materials

- Ethics

In all of these the University has established major research programmes, which all of them – with minor variations of degree – can demonstrate impressive activity and good results. This is evident from the fact that a large number of communities that are involved in these programmes did particularly well in the national evaluations, have experienced success in getting into EU framework programmes and maintain a high profile in their cooperation with external institutions. To the extent that the UiO reaches the 'high international standard' that is formulated as a goal in the Long-term Plan, this mainly applies to several of these priority areas, probably along with a limited number of other discipline communities. In view of the fact that such profile-building is a fairly recent strategy, with roots in the early establishment of centres between 1987 and 1992 and with many powerful units created during the last few years, the UiO has reason to be pleased with what has been achieved in its chosen areas of priority. Also, this may provide some sort of recipe for future action in order to develop the University further as a research institution.

In many other respects, the panel's impression is more qualified. The priority areas cover just a small part of the subject portfolio and judged from averages, the UiO does not seem to stand out among Norway's universities. By some criteria (e.g. publishing frequency), it shows better overall figures than the other universities; by others (external research funding; development of rim-zone activities), it seems to perform less well. Because of its size and breadth, the UiO has 'nationally leading' academic communities in more disciplines than any other institution, but the panel has also noticed a trend of stagnation and even decline in large and average figures. This trend has parallels in the other three universities as well and may therefore reflect a change in the preconditions for research nationally, but they seem to be taking strongest effect at the UiO. Although this may have some obvious causes, e.g. an unfair funding pattern, there is every reason for the UiO to take heed of these developments. In today's climate, the most dangerous thing would be for the institution to cling to a notion that 'we are the University of Oslo, after all.'

Another feature that may cause some concern is the uneven distribution of research productivity internally. Even 'insensitive' macro-level figures give significant evidence of such differences. If we compare the faculties after the number of refereed articles in Norwegian or foreign journals, we find that Medicine dominates completely with more than 5 citations per academic employee, while Law has 2.4 and Math&NS 1.6. At the other end of the scale, Theology, Education and Arts all have around 0.4. Similar differences are reflected in the number of doctorates that the various faculties produce annually, varying from 30 per 100 academic employees in Medicine, via slightly under 20 in Math&NS and Social Science, around 10 in Law and Theology, to around 6 in Arts and Dentistry and 4 in Education. Although there are deviations (like Theology's good figure for doctorates), the familiar pattern of research-effective 'hard' sciences and less effective humanistic ones – with law and social science as a mean and a middle – is fairly consistent.

If these differences may be expected, they may not necessarily acceptable in the long term, at least not to the present degree. While some unevenness must be regarded as the natural consequence of different access to external funding, part of it is obviously due to the differences in 'culture', which in the humanistic sciences has always been more individualistic. Probably – but there is no way of knowing very exactly – the humanistic subject communities are producing research of very high quality. However, they must produce more. This goes for the humanities, the social and educational sciences and law. In the panel's view, the reason why the 'hard' sciences are so much more productive is not *only*

to be found in their higher 'market value'; but this fact (and other subject-inherent factors, of course) has made them organise for more large-scale research, which in turn attracts more assignments. This is not to say that the softer sciences will have the same kind of 'market' at their doorstep as soon as they organise themselves differently, but the tendency towards fiercer competition for research money that is getting more and more tied up in large-scale national and international programmes will probably necessitate the formation of tighter research groups in *all* disciplines, if only to stay afloat in the future. We are convinced that this would be beneficial to research in any case, as it would in fact give more opportunity for all staff to get involved in aims-directed projects in different capacities. Also, it would reduce the incidence of 'random' research activity, by which of course we do not mean the element of free and 'random' thinking that characterises all good research. Such free reflection, however, is probably better stimulated in tightly cooperating research communities, anyway. We know that the need for organising a greater part of the research activities in teams is now being widely discussed in the faculties and among the leadership of the UiO, and give our strong support for such a policy.

## 6.5 Reforming the governing of research

There are several measures that the University might contemplate in order to increase the productivity and quality of research. One might be to isolate research even more from teaching and other activities organisationally, in order to obtain more concentration in terms of time and effort. This might also benefit teaching, and it would make it easier for the institution to monitor and direct the two activities in terms of resource input and outcomes. Academic staff, whose profession is both to teach and research, would then – even more than now – be doing *either* research *or* teaching over given periods of time. Although this might also mean that some will do much research and others much teaching, it should not prevent anybody from doing both in the long term. In keeping with this view, the panel is also critical of the '50/50-rule' that supposedly guarantees all academic employees the right to devote 50% of their working time (outside administrative work) to research. We are aware that such a suggestion runs counter to nationally entrenched 'rights' for academic staff and will be contested. We think, though, that while a fixed resource per individual for staying up-dated on research development is reasonable, resources for research should otherwise and basically go to projects that are approved and accounted for.

The University regulates its teaching activities in much greater detail than its research and the present wave of higher education reform may mean that this focus on teaching will continue. But the need to address the problems of insufficient, partly even falling, productivity in research is equally urgent and calls for regulating measures. To some extent, this is a question of academic leadership, which is sometimes claimed to be too weak. Academic leaders, whom we found to be enthusiastically committed people with good ideas, have only limited means at their disposal for the strategic leadership of research, and many internal obstacles to overcome. With most of their resources tied up in wages, their governing repertoire is typically reduced to the formulation of strategic *goals,* minor rationalising measures and the handing out of small – often symbolic - incentives.

The building of an effective strategic leadership of research must be based on conscious *priorities*. The UiO has already come a long way towards selecting top priorities for the institution and can show good results in these fields. All the same, one of the main characteristics of the research field at the UiO is its weak and decentralised organisation. For a strategy to apply more broadly across the University – and for it to be implemented, it must be driven by the institutional leadership and channelled into more structured forms. A first

step would then be to establish *general success criteria* for all research, in all units, although such criteria must subsequently be negotiated with individual units in view of their specific 'nature' and situation. Then, *research plans with targets* should be negotiated for individual units in accordance with the established criteria and *incentives* should be made available. Finally, as a feed-back loop for evaluation, a *monitoring and quality assurance mechanism* must be developed in a system that covers the whole institution and reflects activity in relation to criteria and targets. The UiO does not yet have a steering mechanism in this sense.

In the end, much will depend on what kind of *support* can be made available for research. This is of course a question of priorities, but resources spent on this function may turn out to be one of the best investments the University can make. The interdisciplinary centres have demonstrated how important the organising of support is for the successful search for external funding and that such support can be organised without an extensive bureaucracy. On the other side of it, several academic communities outside the centres claim that the lack of a support unit for developing programme applications is the chief obstacle to the expansion of *their* research. When addressing these challenges, the University may consider the question whether the steering and support of research should remain inside traditional governing units, i.e. faculties and/or departments, or whether this function should be organised separately in an alternative structure. This, however, is not as important as the establishing of a unified and robust policy in itself.

The UiO shares with other Norwegian universities certain features that inhibit effective research activity. These features have received considerable publicity recently and were last highlighted in a NIFU report (2002) on recruitment for research. According to the report, a much too large proportion of Norwegian research is actually research training – or doctoral thesis – work, while established researchers find little time to develop their research careers in their ordinary posts. Time pressure on researchers also seems to affect the follow-up of research trainees and leads to weak completion rates and too many years spent on the programmes for those who complete their doctoral degrees. When the high average age of research trainees is taken into consideration, this paints a bleak overall picture of the conditions for conducting high quality basic research in the universities. The panel heard evidence of these features in our interviews, which are also borne out by statistics. We also noticed that there are wide differences among the faculties when it comes to fulfilment rates in research training. However, we have no indications to compare the UiO with other universities in this respect and can only state that the university – along with the rest of the Norwegian higher education community – has a great challenge in overcoming these problems.

# 7. The University in Society

## 7.1 The 'authoritative' or the 'responsive' university?

Norway's oldest and largest university, situated in the nation's capital, obviously has numerous and complex links with society around, touching most areas of public life. In addition to the formal publishing of research, perhaps the heaviest impact on society takes place through the transfer of knowledge that its candidates bring to their various jobs and that academic staff disseminate in the form of popularising articles, participation in debates in the media, representation on public and private boards and councils, consultancy activity and contributions to public reports. There is little exact knowledge about the quantity of these activities, which are often conducted in a semi-formal border-zone between regular job duties and private commitments. But because of its size, its breadth of expert competence and its strategic vicinity to Ministries, national broadcasting and press, national organisations, etc., it is reasonable to think that the UiO is one of the heaviest contributors among higher education institutions concerning the dissemination of information and knowledge to society in this broad sense.

This is all very much in the traditional pattern of academia's relations with society, where the university plays the part of the 'authority' and where the knowledge that is developed is defined by academia. Obviously, it is a part that the university likes well, and one that can be played in decentralised contexts by individual subject communities or, perhaps even more often, in the form of personal contacts, based on informal networks or individual reputation. However, the demands on academia's participation in the world outside are not only increasing; they are also gradually shifting the focus of attention to what is often labelled '*the responsive university*'. Behind that term is the expectation that the knowledge and competence of universities should be developed in more intimate relations with the demands of the larger society, both in order to serve society more directly and in order to secure that academia's knowledge-base is developing in directions that are relevant to society's needs. In order to obtain this, however, a university must create organisational structures that allow it to address these new challenges forcefully. Models for such structures will tend to be taken from the Anglo-Saxon rather than the Humboldt university tradition, whereas developments in the Finnish universities provide an interesting example in the Nordic countries.

Over the last decade, and particularly since the late 1990s, the University of Oslo has taken several steps to organise for a more 'responsive' attitude, motivated among other things by the need to extend its funding through contributions from external sources. Today the University can be seen as standing at a crossroads, where impending decisions in this area will have an impact on the institution's very nature and future orientation. This begs several important questions: Is the University of Oslo at present too exclusive and 'remote'? How 'responsive' can it become without compromising basic academic values? Will it affect the University's role of providing a free and critical voice in society? Will 'responsiveness' upset the balance between basic and applied, and between 'free' and 'contract' research, and if so, with what consequences? How will teaching be affected? How can the UiO best realise its ambitions of being a university in the international top class? Is the right external profile for the UiO to give priority to servicing public sector activities, keeping in mind the institution's lack of a business and an engineering school? Or is the way forward to differentiate more consciously? The questions concerning responsiveness are not answered by a simple 'yes, more of it'; the University's choice of strategy must be rooted in an understanding of the correspondence between outside demands and its own values, nature, strengths and needs.

## 7.2 External profile

Even when the extensive informal interactions with society are kept apart, the UiO's external relations are considerable. These range from cooperation in the national and international higher education arenas via public-oriented services in museums and collections, various publicising channels, interaction with rim-zone institutions that concentrate on applied and contract research, to collaboration with business and industry in a variety of fora.

The UiO has always played a vital role inside the network of Norwegian higher education. Always considered the 'senior' (and sometimes even a somewhat arrogant!) partner in this arena, the University has been active in the Universities and Colleges Council (formerly the Universities Council) and its national discipline councils. The University has entered into a formalised cooperative agreement with the university colleges in the Oslo area, a bilateral agreement with the Norwegian College of Management BI and is a cooperating partner in UNIS (the University Studies at Svalbard) and in several joint academic institutes abroad. Further, the UiO takes care of certain specific functions for the entire higher education sector: USIT (the University's Centre for Information Technology) has for a long time operated the national Student Register (FS) and the Norwegian Coordinated Admissions System. The National Academic Information Centre (NAIC) was also located at the University until 1999, when it was transferred to the Network Norway Council.

A main component of the external profile is one of providing public service through the 'popularised' dissemination of knowledge to the world outside. This goes for the museums and collections, of which there are ten altogether, recently merged into two units, the University's Cultural History Museums (UKM) and the University's Natural History Museums and Botanical Gardens (UNM). These units have the huge responsibility of taking care of collections of great national (an international) value and are visited by one million people annually. They put a lot of resources into exhibition activities and other strategies in order to increase their visibility and they cooperate closely with schools. The recent merger seems to be beneficial in that it creates better strategic conditions for developing research as well as dissemination. In varying degrees, the same kinds of outward-directed activities are conducted by faculties and departments in their subject fields, and not least by the centres, whose very existence largely depends on good external relations. There are popular scientific arrangements and lectures (over 500 and 1000 respectively in 2001!), 'open days', education fairs, conferences, a prize-winning popular research magazine (*Apollon*) and internal newspapers that are circulated externally and often quoted in the national press. The University has recently taken steps to let a public relations firm work out a profiling concept for the entire institution.

The University's ambitions to see its research better utilised commercially was behind the institution's engagement as a major partner in the development of the Oslo Innovation Centre (the Research Park) in the Gaustadbekk Valley, adjacent to the university campus. The Centre consists of about 100 knowledge-based companies, independent research institutes and research centres under the University (e.g. the Biotechnology Centre) with more than 1000 employees altogether. In terms of volume, the Centre has been a success, continually expanding into new buildings without keeping pace with demand. With the completion of a new building in 2003, the centre will comprise 38 000 m$^2$ of floor space. The mission of the Centre is to promote industrial innovation, to help commercialise ideas from research and to act as an incubator for new businesses. The UiO's other chief rim-zone institution is UNIK,

the research and higher education foundation at Kjeller, where the UiO's cooperating partners are the Institute for Energy Technology, the Defence Research Institute and Telenor FOU, all of them research units with a strong 'applied' and/or commercial orientation. In many ways, UNIK can be seen as a 'satellite faculty' of technology for the UiO and the Oslo area, although the NTNU also became a member of the foundation a few years ago. A third major priority is the Simula Research Laboratory for ICT research, where the UiO cooperates with the other three universities, SINTEF and the Norwegian Computing Company.

Other commercialising advances are made through contacts and project contracts with other major research institutions. The Faculty of Medicine has good research links with pharmaceutical and other medical institutes and companies, while the information science community has close cooperation with major agents like Telenor and ABB. The medical and information science communities have been among the most successful ones in nurturing good external links, which is not surprising considering the rate of growth and innovation in those two areas. Other research communities with strong external links are mainly to be found in the Faculty of Mathematics and Natural Science. Among cooperating partners are SINTEF, Statoil and other petroleum companies. Many of the University's cooperative projects with the commercial world have originated in the centres, like EMBIO and FUGE in the Biotechnology Centre, FUNMAT in the Centre for Materials Sciences and several large projects in TIK/InterMedia.

The UiO's contacts with the life of work and commerce include regular contact meetings with strategic public and private bodies and participation in many other outward-directed projects. There is cooperation with the Norwegian School of Management BI over Partnerforum, a platform for the exchange of knowledge among government ministries and public institutions. The UiO participates in FORNY, the Research Council's programme for knowledge-based business innovation, while the RITTS project, for which EU funding has been secured, has a similar purpose, as have several Scandinavian cooperation projects. The School of Entrepreneurship (Gründerskolen) and the University's Careers Centre are other examples of the University's recent efforts to promote links with the commercial world.

## 7.3 Handling external relations

The University's ability to communicate its knowledge to society at large is frequently subject to debate and criticism. There are complaints from representatives of the media about the system's inaccessibility and the lack of an efficient public relations function, while many representatives of industry and commerce will maintain that it is difficult to find their way to the knowledge they specifically need. Keeping in mind that a university cannot possibly function as a streamlined information service, the UiO's outward-directed activities are probably still too much of a one-way street, and therefore lacking in real communicativeness. Much more could be done to organise the dissemination tasks to greater effect, for example by putting together 'packages' of knowledge that would lend themselves to professional and commercial use. This, however, depends equally much on external clients' willingness to take an active interest in what the University is doing and may therefore be hard to achieve without the extensive use of permanent contact fora. In any case, the UiO has taken great strides in its relations with outside users of its competence and knowledge, working as they do with limited resources, a decentralised type of organisation, and with their *basic* tasks lying elsewhere.

In spite of its success as a commercial concept on the participant companies' own terms, the results of the Oslo Innovation Centre (the Research Park) as a knowledge-broker for the

University seem more ambiguous. People from both the University and the Innovation Centre who the panel spoke to expressed misgivings about the way the relationship worked. There is not the open mobility of experts back and forth between the University and the Centre and not as much regular contact as there should have been. Consequently, the expected flow of ideas and the synergies that should result from this are also slow to materialise. Representatives of the Centre wondered if the University knows what exactly it wants to achieve with the Centre, once it has been established; they claim they have resources and expectations – and are waiting. University representatives, on the other hand, tend to see the Centre as equally much of an obstacle. The panel heard similar opinions about the relation with UNIK, which also seems to have stagnated as a dynamic meeting place between academic research and industry.

It is difficult for the panel to evaluate the validity of such assessments, but they seemed to us rather consistent through our interviews and correspond well with other, more general, utterances to the effect that the University has not yet been able to design as effective tools as desirable for its interrelations with external institutions, whether these are research-funding agencies or commercial companies. We heard that in spite of the increased emphasis that is now being put on commercialising and outward-directed activities, the UiO has a 'weak interface with industry', that its follow-up of the School of Entrepreneurship is rather feeble, that they acted in a counter-productive fashion on the IT Fornebu issue and that other universities - particularly the NTNU, but also the UiB – on the whole are better agents in the external arena, particularly when relating to the private sector. In connection with the Oslo Innovation Centre it was maintained that a much more effective SINTEF is 'getting in the way' and swallowing the money. A similar picture emerges for the UiO's relations with the Research Council. Although the UiO maintains good strategic relations with the RCN and is a leading research institution in many fields, particularly within the humanistic and social sciences, there were assessments of the UiO's application performance as being weaker than what might be expected. The impression was that too many applications are individually handled and that applicants often fail to build up a sufficiently strong team of researchers behind it. These are all indications that the UiO has some way to go before it has developed satisfactory tools and strategies for handling its external relations. To some extent this may be explained as the lingering effects of a 'traditionalist' culture with its roots in the UiO's special discipline profile and its orientation towards the public sector. Evidence of promising results in the relations with the school sector in connection with in-service courses for teachers underlines rather than contradicts this impression. Another obvious reason is the fact that so far the incentive for the University to create sharp tools for external activities has been weak, as the immediate problem facing institution, departments and employees alike has rather been one of too many commitments - 'too much to do'. It then boils down to a question of priorities: whether the institution is always doing the right things.

## 7.4 A more entrepreneurial university?
It may seem unfair to have to advise the University to improve its capacity for external and entrepreneurial activity, when the institution is entertaining so many productive external relations and so many positive measures have been implemented in the last few years. But it seems that the UiO was a late starter in its orientation towards increased responsiveness, its weight and importance considered, and that a much more competitive climate is developing very quickly. A new funding formula, the increasing importance of external funding - even income - and changing preconditions for doing well in a world of research that is more and more dominated by large-scale programmes and internationalisation: all speak in favour of a more 'entrepreneurial' university. In order to develop and utilise such entrepreneurial

competence, though, the UiO should first go through a process of strategic thinking and choice. In view of our assessment that the institution is probably trying to do too much, and that success in external relations depends on organised and concentrated action, strategic aims for the external activity must be developed that clarify aims and limitations: What should be the balance between 'home' and 'external' activities – in nature and quantity? Building on existing research strategies, which parts of the discipline (and cross-discipline!) portfolio should be given priority as objects of commercialisation? What areas do *not* lend themselves to commercialisation and should therefore not be given priority for this purpose?

The panel is not in a position to hand out easy advice on what the priorities should be. Nor can we offer a prescription on how the UiO should build its organisational tools for this purpose. But we would like to emphasise the following general points:

- The University must clarify its aims and strengthen its strategic power in this area in order to achieve long-term consistency. The Contracts Division in the central administration may be a useful tool for achieving this, but the unified governance of external relations must be more than an administrative function.
- A strategy on external activity will be closely related to – although not overlapping with - the University's research strategy. Barriers between the governing of research and external activity must therefore be avoided. For instance, powerful and efficient support of project applications is vital for both.
- The University should make better use of already existing tools, particularly the relations between the University and the Oslo Innovation Centre. There is considerable room for improvement in the way the UiO utilises its network of external cooperating partners, which calls for a more forceful policy in this field.
- Concerning the choice of priorities – on which the panel does not wish to have any specific opinion – *teaching* must not be forgotten, particularly the servicing of a large public sector, with which the university already has good relations.

## 7.5 Internationalisation

The University's performance within the area of internationalisation was never a central theme in the panel's interviews, but cropped up as a side-topic in several connections. The self-evaluation report, likewise, discusses internationalisation in several contexts without treating it as a main theme. On this background, the panel's impressions are somewhat loose, and its assessments tentative. However, for student exchange there are figures.

In many ways the UiO pioneered the international exchange of students in Norway through its International Summer School that goes back to the 1960s. The Summer School is still very much alive, attracting around 650 students for 6-week courses annually. However, when students who stay at the institution for less than three months (e.g. Summer School students) are excluded, the number of foreign students at the UiO is very low. 700 foreign students, compared to 800 for both the University of Bergen and the NTNU and 400 for the University of Tromsø, is clearly the lowest number relative to size of all four universities and far below the UiO's ambition that 10% of its student population should come from other countries. The situation is very much the same for UiO students going abroad on study visits, with the only exception that the University of Tromsø scores even lower here. Both Bergen and the NTNU have much better relative figures.

It is not easy to understand why the UiO should do so badly on international student exchange. There are reasonable counselling services and a large number of programmes and countries to choose from, while Oslo, as the capital and the largest and most easily accessible city in Norway, ought to attract more students from abroad. In this situation, the University must address the challenge of providing new course modules as well as entire bachelors and masters degree programmes in English in chosen disciplines, to which the institution's own students also are given access. With the Bologna process as a backdrop and political motor, the rate of internationalisation is now speeding up all over Europe, creating more and more international competition in higher education. In order to increase the number of the UiO's own students going for exchange visits abroad, it might help if the curriculum descriptions of more subject communities included at least the *expectation* (if not the requirement) that their students visit a foreign university – and the department then worked more actively through existing programmes and agreements to find places for them.

The picture looks slightly better for internationalisation among the academic staff. The panel has no information to contradict the self-evaluation report when it sums up the performance of the UiO on this point: '*Our international cooperation is developing positively. There are great differences between the faculties and from department to department (....) In many communities the research fellows and researchers do not have sufficient funds to maintain and further their international contact. (......) The sabbatical system can be used more optimally to increase international co-operation.*' International research funding and the participation in international research programmes have been described earlier. The total picture to emerge, then, is one of the UiO as an institution with a wide range of international contacts and exchanges, but all the same one that is under-performing in relation to its size and potential.

# 8. Material and human capital

## 8.1 Funding

One of the recurring themes in the panel's interviews with people at or connected with the University of Oslo was funding. Many informants regarded the lack of adequate funding as the chief obstacle to real advances in qualitative development. The self-evaluation report also makes a point of this. By comparing the basic grant of the UiO with that of the other Norwegian universities, and by referring to the findings in an investigation carried out by the ECON centre in 1999, it is claimed that the UiO is significantly under-funded in comparison with Norway's three other universities. The bare figures seem to indicate that this is true: whereas there is 71 000 NOK of basic grant funding behind every student at the UiO, the corresponding figure for the UiB is 77500 and for the NTNU 96500. The figure for the University of Tromsø is even higher, but for more obvious reasons of size and location. The same level of funding per student as the UiB would have increased the UiO 's basic grant by 200 mill., or 9%. Of course such overall comparisons conceal the more specific parameters that influence the basic grant and that may vary from one institution to the other.

The panel is not in a position to give an authoritative analysis of these features, which go a long way back, but will nevertheless venture to suggest one factor that has contributed to aggravate this situation: During the 'expansion crisis' in Norwegian higher education, i.e. the period between (roughly) 1991 and 1996, when higher education institutions were persuaded to accept greatly inflated numbers of students in return for added grants, the University of Oslo accepted the challenge and took more than its fair share of the extra burden. In spite of the universities' clear warning that students must be channelled into disciplines for which there was a great demand, like medicine, natural science and technology, the new study places were mainly in the 'cheaper' disciplines of the arts, the social sciences and law. With a radically expanded number of students and some fresh income, the UiO achieved a temporary boost, but also had to take heavy teaching burdens and reinforced a funding base profile that already relied too much on study places with weak financial support. Strategically, this was an unfortunate development for the institution, the effects of which became more evident when the student market dropped and the cuts in funding came from about 1998. If there is anything to this analysis, some of the blame for the present state of affairs must be taken by the University for its own lack of foresight. But basically it falls to the regulating and appropriating authorities: for their 'coercion' of the University into accepting the student bulge and for the fairly insensitive funding cuts that were later imposed. The indications are that the Ministry ought to reconsider the institution's basic funding rate. In any case – and irrespective of causes – the UiO finds itself at a financial disadvantage at the point when more incentive-based budgeting is being introduced, as a competitive edge will be more difficult to achieve from a weak platform.

## 8.2 The physical infrastructure

In physical infrastructure, the UiO shares many of the characteristics of most other larger, well-established institutions: Several of the main buildings are fairly unmodern and show the sign of wear and tear, but growth and expansion has also meant the gradual addition of new buildings of high quality. The Blindern campus now presents itself as a reasonably well-functioning and aesthetic whole and with the Research Park and the new State Hospital University Clinic within the distance of one kilometre, the UiO has the advantage of working inside a compact area for teaching, research and research-based industry. The University claims that it cannot properly modernise and keep up the standard of its buildings with the

money that is available, but from a visual impression, average standards did not strike the panel as uncommonly low. Still, there are many unmet demands in laboratory buildings, several of which fail to comply with public regulations for health and safety. The least attractive part may now be the central building for student welfare services in the middle of the campus, in spite of several rounds of restructuring and 'modernisation'. This is too weakly dimensioned for today's student numbers and also gives a less positive welcoming signal to visitors and new students. In some sections of the University the main problem is one of sheer space for the students and staff who study and work there, but the situation varies considerably and has been much alleviated with the decline in the number of students over the last five years or so. The self-evaluation report assesses that there are now – generally speaking - enough canteens, offices, teaching rooms and reading places for students, although the standard of rooms and equipment varies. The overall impression is that there is still a lot of 'consolidation' work to be done on physical infrastructure and that this is one reason why the student number should not be allowed to grow in the near future.


## 8.3 Core services and equipment

With 'core services' is here meant services and equipment that are especially crucial for research and teaching purposes, i.e. library and IT services, research equipment and teaching facilities.

The University Library has undergone several important changes in recent years. It functioned as the National Library for Norway until the late 1990s, when this function was taken over by a newly established institution that also took over the 'historic' library building in the city centre. Instead, an impressive library building was opened on the campus in 2000, servicing the Social Science and Arts faculties and providing offices for the central library administration. The building also gives a valuable addition of reading rooms, larger auditoriums and seminar rooms and its spacious entrance hall functions as a congenial meeting place on the campus and a suitable venue for various social and cultural activities. Other recent changes have included a reduction in the number of library units, with the transfer of some collections to larger and better-serviced premises. Such centralisation is not always uncontroversial, but seems to have taken place without too much protest. The mode of operating for libraries has of course changed dramatically in later years, with massive digitalisation and customer 'self-service'. The University Library, with its size and its central position, has been at the forefront of this development and presents itself as modern and functional in most respects. Surveys reveal general satisfaction with the way it operates among staff and students alike and this impression was confirmed in our interviews. There are however great challenges in the field of user-friendliness and user training when systems are computerised and made to rely on customer competence to such a degree.

A feature that may seem worrying is the tendency for new acquisitions and journal subscriptions to decline. For journals this may be a natural development in the wake of the centralisation measures and the increased use of digitalised publications, but it also reflects a negative tendency in the relationship between funding and the increasing costs of published material. Particularly the acquisition of new books may be a problem, as the state of the book collections is the one point where a noticeable dissatisfaction is registered from several subject communities. To some extent this development has been offset through staff reductions (from 188 to 121 between 1996 and 2000), allowing for a greater share of the money to be spent on books and journals, but staffing levels can hardly be reduced forever

and the University has a challenge here in order to maintain the Library's position as a nationally leading institution.

The panel's impression of the University's IT functions and services is generally very good. This is however a field that is developing with extreme speed and becoming more and more central to all types of operations inside the institution. There is therefore no occasion to feel complacent on the background of the results that have been achieved so far. The core functions are well developed, with good and powerful equipment and systems, and the unit has even been capable of undertaking major external tasks for the Ministry and local school authorities. The external operations are running with a profit margin, which is ploughed back into local infrastructure, showing the unit as a competitive asset for the University. To maintain and develop that situation must be an obvious ambition for the future.

The IT unit also gets much credit for the way internal and local tasks are solved, although the picture is a bit more varied here. As for servicing research, much effort has so far gone into the establishing of capacity within heavy calculating, whereas other specialist needs have been less focused and call for increased attention in the future. The creation of a good digital library for research is also some way off and a challenge. On the teaching side, there has been a great expansion in the students' access to PCs, to a point where the supply of machines can be assessed as nearly adequate. But the situation is still much better for graduate students than for undergraduates and changing student needs as a consequence of the quality reform may increase the demand. Much the same applies to the area of user support, where the overall standard is assessed by users as adequate but variable, but where increased reliance on digitalised student work may 'force' even the less technically inclined students to make use of this technology – and for a greater variety of purposes. The fact that the UiO still has some way to go in order to perform among the best institutions in the areas of computer-based teaching and distance education, on the other hand, reflects more back on other sections of the University than the IT unit.

Increasingly sophisticated administrative systems are also a continuing challenge. This concerns the many detailed administrative operations within budgeting and accounts, archives, personnel administration, student registers and general planning. In these areas new systems are introduced and established ones are up-dated at an accelerating speed, which heightens the needs of user training and user support. Most critically, however, it concerns the development of new strategic steering tools that will rely on a much more detailed and systematic registration of performance and quality indicators in the main activity areas, research and educational provision.

The self-evaluation report shows that the University is very much aware of the situation in the field of physical and technical infrastructure and competence and that the quality of these functions is increasing in relative importance. The University Library and the IT functions have achieved good results and reached high standards in most vital fields but must nevertheless be constantly at the focus of the University leadership's attention. A third strategically important area is the provision of high quality research equipment, where it is particularly important that investment follows demand in the University's own priority areas. There has been some discussion about the adequacy of the UiO's situation here, particularly after Medicine and Dentistry got a good deal of new equipment in connection with new building activity. However, claims that there are still basic needs to be filled seem well documented and for the third equipment-intensive faculty, Mathematics and Natural Science, the existence of such needs is even more obvious. In connection with the processes of

securing new equipment, the self-evaluation report points to an organisational weakness that corresponds to what we found in the field of applications for external research funding: a too decentralised structure may get in the way of strategic priorities, while it also makes it more difficult to build satisfactory capacity for making complex and demanding applications, i.e. for equipment in the multi-million bracket.

## 8.4 Human resource

More than most types of institutions, universities depend on the competence and efficiency of their employees, of whom the academic staff will always be at the focus of attention. Academic staff are supposed to be good researchers and good teachers, with favourable conditions for preparing and executing their tasks. For a university with high ambitions, a large number of them must even be what we would call 'top researchers' inside their various subject communities. Increased competence demands also characterise the administrative and technical functions, while management and leadership have become more demanding in an age of increased institutional autonomy and competition. A university's ability to recruit, 'nurture' and keep high quality personnel is therefore of vital importance, and a particular challenge in view of the fact that the same people are often in high demand in other types of institutions that can offer higher pay and better working conditions.

### Students

The largest group of people in any university are the students, for whose benefit universities partly exist. Several aspects concerning their conditions at the UiO are closely associated with the teaching provision and study facilities and are commented on in those contexts. Other aspects, like their recruitment and their contribution to the institution as such are more relevant to the discussion of 'human resource'. The general recruitment situation is good, with roughly twice as many applicants who have studies at the UiO as their first priority as there are places, which is a better differential than at any other university. This average, however, conceals great variations, with particular recruitment problems for many disciplines in the Mathematics and Natural Science, Education and Arts faculties. The UiO and the UiB experienced the same relative decline in the total number of applicants between 1996 and 2000, i.e. to 71% of the 1996 level, which contrasts dramatically with the development for the NTNU, where the number *increased* by 9% in the same period. The overall development in the number of applicants to higher education in Norway is much closer to the tendency that we see for the UiO than for the NTNU, but the decline for the UiO (and the UiB) is steeper than the average.

With a fall in the all-over recruitment to higher education, the competition for students increases. But keeping in mind the high number of people who still want to study at the UiO, it is highly questionable how much resources the University ought to spend on recruitment measures. Our advice is that such measures should concentrate on a few priority areas, and particularly the natural sciences, where there is a special challenge to recruit more female students. Otherwise, resources are better spent on the provision itself. The main factors that may discourage young people from coming to the UiO are probably certain results and scores that are widely publicised in the newspapers (e.g. the Stud. mag. survey), like the high level of general student dissatisfaction, the high drop-out rate and the low credit count. Improving these factors would probably support recruitment more than anything else – *and* increase the students' contribution to academic life. Therefore, the University's ambition of 'recruiting the best students', which we heard several times, should rather be changed into one of educating the best candidates. The most talented students tend to seek out the best provision inside their

chosen field, anyway. We would also like to draw attention to the fact that the UiO, particularly in terms of its student population, is more than anything else a regional university for the large and populous Eastern Norway area, where it has a solid recruitment base. Another advantage of the UiO is a rather efficient student welfare system, which also includes opportunities to be active within a number of sports, cultural and other leisure activities. It is the panel's impression that student satisfaction with the University Foundation for Student Life (SIO) is generally high, whereas criticism is more often directed against factors that are regulated by the political authorities, particularly the level of study grants in relation to the high costs of living in the capital and the shortage in student accommodation.

**Administrative and technical staff**
The growth of the administrative and technical staff over the last 20 years is a common feature for all our universities. It now balances around 50-50 with academic staff, but with the highest relative share - 54% - at the UiO, while the NTNU has 48% and the UiB 46%. However, in relation to the overall size of the institution, the UiO does not have an overlarge administrative-technical staff; the most significant deviation appears to be the *academic under-staffing* of the UiO, which also largely explains the percentage. For instance, in 2000 the NTNU had roughly the same number of full-time equivalents in academic posts as the UiO, with only a little more than three fifths of Oslo's student population. The technical staff of the UiO (particularly USIT) also performs tasks outside the university.

Other trends are the relative growth and specialisation of the technical staff and the shift inside the administrative category from secretarial posts to posts that have a more advisory function or more formal responsibility. This is of course due to changes in the technical infrastructure and makes the technical-administrative arena more important than before in a recruitment perspective. Higher and/or specialist education is now required for a large proportion of these jobs and the competence that is developed in the administrative units becomes more and more valuable for the institution. Although there seems to be reasonable job satisfaction among technical-administrative staff, the low levels of pay and the lack of a system of staff mobility were mentioned on the negative side. Such factors can make the University less competitive when it comes to recruiting and holding on to qualified personnel.

Neither the self-evaluation nor the panel's interviews went very deeply into the functioning of the technical-administrative functions. A possible problem area is the decentralised nature of many administrative operations, with weak links between the central and the faculty and department administrations, and the danger of personnel in the decentralised units 'going native' rather than act as the parts of one, consolidated administration. Another is the tradition of academic leadership that easily breeds a culture of subservience among administrative personnel. These features were touched on in our discussion with the leaders of administrative departments, but our impression from these and other interviews is that there is general satisfaction with the way the administration works and respect for its high qualifications.

**Academic staff**
According to the self-evaluation report, the UiO is 'strong on academic and social capital'. Indeed, this may be among the chief assets of the institution: that it attracts leading Norwegian (and a considerable number of foreign) academics across the whole spectrum of disciplines to create powerful communities where people generally enjoy their work and their job environment. As far as we can judge, there is much general satisfaction, and no small element of pride, when academic employees assess their institution as a place to work. This is

so in spite of economic and practical shortages and constraints, like moderate pay, cramped offices and insufficient funds to support individual research projects or for travelling.

We find little reason to go into a detailed analysis of competence levels in research and teaching in the different units. As obviously as the fact that there will be differences, the UiO possesses 'human capital' in its academic staff that compares well with any other university in Norway. Also, any quantitative measures in this area will yield very imprecise indications of real qualifications and competence, nor are they available to the panel in any detail. An interesting difference between the UiO and the universities in Bergen and Trondheim, however, is the relatively high percentage of professors at the UiO. In 2000 it was 42%, while the corresponding figure for the UiB was 28% and for the NTNU 29%. Also if we compare the percentage of academics who are either professor or associate professor ('førsteamanuensis'), we find a higher figure for the UiO: 66%, as compared with 55% for Bergen and 51% for the NTNU. On the other hand, the UiO has a much lower relative number of research fellows. A much more urgent question is whether the relatively low number of academic staff at the UiO is a natural reflection of its specific subject profile, or whether it actually tells of academic under-staffing.

The self-evaluation report makes a very thorough and honest analysis of the personnel situation in academic posts, with special emphasis on the recruitment issue, the question of gender distribution and institutional culture in general. The conclusions that the report arrives at are well documented and were also confirmed in our interviews. Of these, the general recruitment problem is the most serious one, as contractions in the total number of students the last five or six years have aggravated a situation that was difficult in the first place. This has resulted in a serious lack of new available posts, with career bottlenecks for talented young researchers and an estimated average age of 40 on researchers' first appointment at the UiO. For the staff as such this has meant 'fossilisation', with people remaining in their posts 'for life'. Hence, there is little mobility of staff in and out of the institution and an age distribution that bulges between 51 and 65, with the average age steadily rising. From the perspective of values like 'hungry' ambition, innovation, exchange and external contact, this is far from ideal. What may be even more worrying, though, are the prospects of a protracted recruitment crisis in some years' time, when a large section of the staff will have to be replaced, although this situation will also bring the opportunity of increasing new recruitment and mobility.

It will require a great effort to turn a situation where a stagnating number of doctoral candidates are de-motivated by the lack of prospects to one where an increasing number of well-prepared candidates are ready to fill the gaps that will arise in a matter of years, especially as the outside society's demand for doctoral candidates is also rising. This is both a question of demand and timing, and one that the institution will have difficulties in handling without the sympathetic cooperation of the authorities and the Research Council. We have no similar analysis of the situation at the other universities, but assume that it is largely the same, although the Oslo-as-academic-end-station syndrome may have made the situation even more critical at the UiO. The only possible way to resolve this predicament is to escalate the dimensioning, attractiveness and efficiency of the doctoral programmes at the university. This is no simple task, though, and one that will require at least two heavy measures: First, the University must be able to manoeuvre itself into making priorities that may shift its profile somewhat from the undergraduate to the postgraduate and doctoral levels. If this can somehow be arranged in a way that makes economic sense for the institution, it will make very good sense also in terms of the division of tasks inside the wider network of Norwegian

higher education, while making a decisive contribution to the academic profile of the UiO. The second measure must address the question of job prospects and job careers for the increased number of trained researchers. This is definitely a problem that the UiO cannot afford to solve on its own, as it will require extra funding for a much higher number of post doc. and other research positions to cover up the deficit in demand in ordinary posts, until such demand eventually catches up with the supply. From the Ministry's point of view, though, this might also make good sense in relation to its effort to realise the short-term target for Norwegian research, which is the OECD average.

The recruitment of women to academic posts is an issue that is frequently discussed in public debate and one that is relevant for all higher education institutions. Women now make up more than half of Norway's student population and at the UiO the female share has been rising steadily, reaching 59% in 2000. The pattern is then one of falling percentages from one rung to the other on the academic ladder, with women making 55% of all higher degree graduations and 41% of all doctoral graduations in 2000. The latter figure was 3 percentage points up on 1996. And although the supply of good female applicants for academic posts is reported to be 'good' or 'satisfactory' by more than one half of the departments (not varying significantly from men), only 31% of the appointments are women. The most drastic fall, however, occurs from 'all appointments' to 'professor': 17% of appointments as professor are women. The UiO can take some limited pride from being consistently the university with the highest percentages for female appointments in all the major categories. The UiB has 29% and 13% and the NTNU 23% and 8% for 'all appointments' and 'professor' respectively. In spite of foreseeable controversy over ends and means, the University must keep up its efforts to recruit women into senior academic and administrative posts. Such policies will probably be needed for several years to come, until a more balanced gender distribution may come about naturally as the result of the sheer number of female new doctors and better recruitment openings generally.

## 8.5 Human resource management

A remark that we heard frequently in our interviews was the assertion that the UiO has a weak – or even 'no' – human resource policy. In a loose organisation, freedom in the performing of teaching and research tasks is reinforced by other 'freedoms' that make for a culture of individualism and a 'distant employer'. Although the prescribed regulations governing appointments, pay, rights and duties, health and safety, etc. are all in place, these impinge less on the job experience in academic posts, which may be convenient as well as practical in the everyday run of things, but it may also be a strategic drawback in relation to decision-making and the distribution of tasks and resources. The democratic 'gains' that can be reaped from a loose and decentralised policy are always in the danger of being offset by informal power structures and hidden agendas, while undue rivalry and conflicts may tend to become personalised and not surface to the attention of the formal leadership, who may also lack an adequate apparatus for addressing them.

The panel received the impression that there is a high degree of job satisfaction and work morale among the University's staff, academic as well as administrative and technical. The possible weaknesses of a loose policy must therefore be weighed against the benefits of autonomy and self-regulation. All the same, we are convinced that the University should try to increase its resources in personnel management and create a more consistent, top-governed policy in this field. While other aspects of the administration seemed to run smoothly, there are indications that the personnel division, while praised for its general handling of running

business, is working under great stress. This division also has several challenges that ought to be addressed. There seems to be an increase in the number of personal conflict cases (a trade union representative estimated an average of two per week) and although most of these are solved in a satisfactory manner, others drag on for far too long. There are problems in connection with personnel getting worn out (physical ailments or burnt-out syndrome), or experiencing failure in the handling of job tasks; there are conflicts with leaders and instances of harassment or other un-collegial behaviour, and although these problems are probably far from typical, a large organisation like a University should have good mechanisms for addressing them. The University could also do more to follow up its employees in the form of annual career dialogues, where each employee and the immediate leader(s) discuss and negotiate past achievements and orientations and aims for the next year. Such dialogues should result in a formal document – or 'contract' – between the employee and the employer's representative. Special provision for senior staff and shorter courses for competence development also seem to be in demand. The latter measure is particularly wished by administrative staff, who often feel neglected in terms of opportunities for career development and internal job mobility.

A key question is how to recruit academic talent and then to utilise their competence in the best possible way. The panel is fairly convinced that the UiO, in spite of ambitions of creating more mobility in posts, must to a large extent rely on self-recruitment. The UiO is after all the dominant producer of researchers in Norway – except in fields where it does not participate – and it is hard to see how the institution can establish economies that will enable it to compete in the race for the most attractive researchers on the international market. A possible way of attracting such persons that might be looked into, and that is frequently employed elsewhere in Europe, is to try to contract 'adjunct professors' in cooperation with industry for a fixed number of years. Otherwise, instead of paying large sums for top international 'stars', whose contributions to the University may turn out to be less than expected anyway, a sounder policy would be prioritise research training intensely at home in the belief that this will stimulate the emergence of fresh and ambitious talent. Which takes us back to the importance of giving priority to the doctoral programmes.

At the same time there is obviously a need for more incentives and stimulants, which of course are not so easy to provide. Just as the economy of Norwegian universities makes it difficult to recruit in the top echelon internationally, it also prevents them from applying too wide pay differentials, which in any case is restricted by national regulations and often opposed by staff unions. It is not likely, though, that it is the prospect of a huge professorial income some time in the future that basically motivates young researchers in their most creative phase. But if incentives cannot be big, they must be real, and based exclusively on performance rather than seniority. In this context, the proposal made by the Norwegian Academy of Science and Letters, mentioned in the self-evaluation report, is of interest, as it may give a better framework for providing an incentive mechanism, as pay and as 'appraisal', for the staff. Nor should it be forgotten that indirect incentives are of great importance, i.e. the rewarding of subject communities or research groups for their performance, as academics are often as much stimulated by the results they achieve, and the conditions they are offered for trying to achieve them, as by personal remuneration.

The question of utilising the academic competence more effectively is intimately connected with the organising of time. It is claimed that academic staff spend too much time on administrative tasks, but there is no reason for the panel to give advice on a point that the University is so well aware of and working hard to address. Some of these factors are even

determined from the outside and hard to influence. For instance, academics spend an unreasonable amount of time on assessing each other in connection with appointments and promotions. It is worth asking if this is a profitable way of using professors' time and if it would not be possible to create more efficient procedures through the use of set indicators, without compromising fairness. With several of the faculties we discussed the question whether posts ought to be advertised less 'generally', i.e. with the view of recruiting the competence that is most in demand rather than 'the best person' in a broader subject area. Such flexibility would make it easier to avoid any appointment from becoming a national prize contest, but would also require great clarity as to what the institutional and subject demands are.

A more intricate issue is the use of time as seen in the triangle of research, teaching and administrative tasks. As was argued in the chapter on research, it is worth considering if the division between teaching and research ought to be organised in larger, more clearly separated blocks of time, and with a somewhat higher threshold (in terms of a documented and approved program) for taking on research tasks for the institution. If this would lead to clearer differentiations between individual work profiles, there is probably something to gain from that too, as people would direct themselves towards areas where their talents lie. Outside plain research and teaching, there are interesting areas of meta-research and research presentation/dissemination to external clients and the public at large that could be further developed.

A policy on human resource that would differentiate more and apply incentives more systematically will depend on its fairness and therefore also on the University's tools for monitoring and measuring the activity. We feel that such measuring tools are not good enough yet and will advice the UiO to give priority to the further development of these in connection with their work on quality assurance mechanisms. This does not mean in any way that academic freedom, in its present meaning, will have to go, but it would mean that each individual employee will be followed a bit more closely by the institution. There is another positive aspect about that too, which concerns the part of the human resource policy that provides fairness, support and the ability to resolve conflicts in a rational manner, in other words the 'caring' side of personnel management. After all, 'invisibility', lack of appraisal and the tendency for some conflicts to live on for too long, were mentioned by several informants and in the self-evaluation report as one of the less attractive features of an academic culture dominated by competitive individualism.

# 9. The UiO as an organisation

The self-evaluation report refers to an 'unresolved tension' between two images of the University: as an 'academy' or a 'knowledge business'. 'Academy' here stands for a traditional way of organising activities, characterised by the autonomy of subject communities and individuals, and 'knowledge business' for a more consolidated, corporate-like organisation. Without calling the UiO the one or the other, the panel has an agreed understanding that it will have to become a somewhat more consolidated organisation in the future, but without sacrificing academic values and traditional strengths.

One of the reasons why we think so is related to the general development of higher education and changes in the environment in which institutions operate, in Norway and internationally. These new developments are taking the universities, and in particular the big, sector-dominating UiO, out of what resembled a monopoly situation and exposing them to a more competitive climate. In the future, more will depend on strategic decisions, the ability to implement these and – ultimately – on strengths and successes in terms of measurable outcomes.

The other main reason is to be found in indications that the University of Oslo is performing less well at present than one might expect, and that this is probably related to organisational features. Although this is only a very general and average impression it corresponds with the University's own findings in its self-evaluation report. The UiO, if it is going to reach its ambitious goals, will have to make choices of direction and priorities that may be hard to achieve without a more consolidated organisation.

## 9.1 The university: 'institution' or 'confederation'?

A traditional definition of a university might be that it *is* its constituent units and academic communities. This is where the essential work is carried out and, more importantly in this philosophy, this is where the competence and insight resides that is necessary for making informed decisions inside a particular unit's operating field. In such a definition, the central bodies, leadership and administration become more of a protective roof over the units, providing support and coordination internally and symbolic representation and bargaining power externally. At the UiO we could see how this traditionalist view is fighting a silent battle with proponents of a stronger central leadership, albeit under a gloss of consensus and unity. The same argument may in fact be turned round to support both positions: Seen from the units' angle, the UiO may be thought to need a decentralised structure, simply because it is so big, whereas the very lack of transparency that follows from its size may also be an argument for a stronger element of central governance.

In the present structure, decision-making power is divided among the three levels in a pyramid that comprises 8 faculties and 52 departments. 'Asymmetrical' units in this structure are the museums (that might be said to have faculty status) and the 11 centres that are placed directly under the Senate (University board). The faculties – and the departments under them to a somewhat lesser extent – exercise a large measure of autonomy, including appointments (not top positions), internal resource allocation, task allocation and important aspects of personnel management and they provide internal budgets and strategic plans. In matters that concern their activities, but where they do not have the power to decide, a proposal from a lower level unit will typically prevail as long as it does not contradict or compete with the

interests of other units. In many ways, the organisation has placed its practical decision-making power as de-centrally as the Universities and Colleges Act allows it to do.

The distribution of administrative resources offers an indication of how the governing power is distributed. The present pattern dates back to developments in the 1980s and early -90s, after faculty administrations were formally transferred to the faculties themselves and when the administrations of all universities had their biggest growth. Most of the new posts were then assigned to the faculty administration, or further on to quickly developing department administrations. In later years the growth in the number of administrative personnel has stopped and there has also been a reversal of the drift towards decentralisation. In spite of this new development, though, the UiO has a significantly weaker central administration than other universities, in terms of personnel and relative to size. In fact, the UiO, the UiB and the NTNU have very nearly the same number of staff in their central administrations, which gives a 25% share of the total for the UiO, compared with 38% at the NTNU and 40% at the UiB. When this distribution of administrative power is seen in relation to the governing structure, the UiO presents itself as more 'decentralised' than most higher education institutions. As a result of this, well-known features of university governance may be more entrenched at the UiO. We are then thinking particularly of the tendency for institutional policies to come about only after having been 'negotiated' and modified through numerous influencing and decision-making nodes, where proposals of binding and forceful measures may be blocked or watered down in their encounter with sector interests.

The panel heard little criticism of the way the administration is organised and there is general satisfaction with the way it operates. This may indicate that the University is fairly happy with the present situation and that there is no reason for drastic redistributions. A decentralised administrative structure has the benefit that operations are conducted near the units that are most directly dependent on them, and by persons who are familiar with the academic tasks and the work culture they are supporting. This may be effective and time-saving and it may have a harmonising effect on academic-administrative relations, much more so than a 'distant' central bureaucracy. Still the University ought to consider a strengthening of its central functions. Not necessarily – or even preferably - in the full breadth of operations, but rather in those relatively few areas where greater strategic power is needed, of which we have already pointed at some: larger research projects and the research profile, the profile of educational provision, external relations and quality monitoring and assurance. Such developments might stimulate a modest restructuring of the central administration itself in order to make it more dynamic. The panel may be 'on thin ice' here, as most indications point towards an assessment that the central administration is performing its tasks to everybody's satisfaction (and, as we have seen, very efficiently in view of the manpower it has at its disposal). At the same time we have an impression that there is rather too much 'decentralisation' even in the central structure, with each administrative department operating its own line of jurisdiction in relative isolation.


## 9.2 Leadership and governance
The room for executing leadership is naturally circumscribed by the constraints that the organisational structure imposes. In the academic tradition, and at the UiO no less than elsewhere, there are peculiar cultural features at play that are obviously related to this type of structure, where administrative management is deferential to academic management and academic management is diplomatically deferential in a downward line to the lower units and ultimately to the academic rank and file. This all makes for a climate where effective

leadership is difficult to execute and where great sensitivity to 'the voice of the organisation' is demanded. In order to increase the power and coordination of leadership we were told that links between top academic (rector and deans) and top administrative management meet regularly for strategic discussions, but as it was also pointed out, these meetings are basically for mutual information and uncommitted consultations, contrary to 'fears' that they constitute the forum 'where everything is decided'.

There are particularly two important features of governance that seem to be adversely affected by a too decentralised structure. One of these is strategic planning, which easily gets less coordination than it should. The more a planning process works its way 'upwards' in the organisation, the more bulky and less unified it will tend to be, with dangers even of becoming blurred or contradictory. Or it may come to consist of the 'wishful thinking' of more than 80 different units. Only a deeper analysis will reveal if this is actually the case at the UiO, but the self-evaluation seems to have revealed a weakness in the hierarchical organisation of the plans and a tendency for many departments (one third) to see little value in, or to put little effort into the planning process. The other main problem has to do with the allocation of resources. Incoming resources tend to be sent on to faculties and departments in block grant packages, the sizes of which are largely determined by historical tradition, some key indicators and the application of a 'mathematical' justice. Although there must always be a systematic fairness at the bottom of resource allocation, the procedures must also be able to accommodate incentives, priorities and necessary changes, and there may be little room for that when all units are struggling to protect 'their' share of the lump sum. But we *have* seen examples of result-driven allocation systems and there has been a tendency in later years for the central leadership to reserve a larger share of the budget for strategic purposes.

For faculty and department leaders, two problem areas stand out: One is the difficulty that a smaller unit may have in providing the necessary support for its activities when vital support units are also weakly developed in the central organisation. When resources for support functions are too thinly spread out through the entire institution, the capacity for handling more demanding cases, like research applications, becomes weaker all over. Faculty and department leadership are then faced with the task of making the best out of modest means, which requires tough, but well-founded choices of priority. This touches directly on to the other main challenge, which is to overcome the inherent inhibitions to effective decision-making that go with collegiality and proximity to the academic community. When it comes to cases involving cuts, priorities or even the merging or discontinuing of activity, it may be harder for elected deans and department heads to relate independently and dispassionately to their decision-making boards, since their authority rests on being elected as 'primus inter pares'. We do not wish to take a definite stand in the debate about elected or appointed leaders, but although we are very much aware of the merits of collegial leadership, we also want to point out that we support the argument that academic leadership should be strengthened at faculty and department levels. Appointed leadership may be one way of achieving this, which is in fact the solution that has now been chosen in the Swedish law of higher education; another might be to 'purify' the academic leader's role as chairperson of the board, with wider powers bestowed on the faculty directors and department managers. This would probably require that top managers possess relevant academic qualifications.

At the institutional level one of the challenges is to carve out the right unified practices of decision-making and administration and to create a top-down line that sees to it that these institutional policies are actually binding. The University is now making a great effort to act in a unified manner over the implementation of the quality reform of teaching and the panel

would like to see the same consolidated attitude transferred to other areas as well. We think there is a certain scope for extending the role of the institutional level, not least in the fields of performance monitoring, quality assurance and human resource policy. The other main challenge, as we see it, is to build a good platform for priorities, incentives and other aspects of strategic action, while simultaneously developing the central support functions for the chosen priorities and for the organisation of research in general. The present tendency here is that the University is moving in the right direction, with a greater will to increase its funding for strategic purposes.

The rector and his leadership team must carry their policies through the decision-making process of the Senate before they become effective. In this respect they are in the same position as the faculty and department leaderships, and although the problems of proximity are less pertinent here, the challenge of defensive opposition from the operative units is much the same. It is not for nothing that universities have their roots in feudal society and it is easy to resort to the image of the struggles between the king and his barons in that age to give a (somewhat exaggerated) description of what goes on in the University Senate, at deep structure level. We heard reports of a Senate that regularly blocks its own opportunities for decisive action and instead gets bogged down in trivial detail, to some extent the result of exhaustive piles of documents on the issues of the agenda rather than brief and clarifying presentations. The positive side to this is of course stability and caution, but it limits the institution's flexibility and capacity for change.

Amendments in the University and Colleges Act will increase the number of external members of the Senate from today's two to at least four, which may help in opening up the forum. The University might even contemplate a larger external representation, without necessarily going for an external majority and an external chairman of the board, which is now the arrangement in Sweden. In order to reflect the fact that this is actually the *governing board* of the institution, the UiO might also consider changing the name of the forum from 'Senate' ('Kollegium' in Norwegian), which signals exactly the kind of collegiate inwardness that the University should now be extricating itself from. More important, though, is the way in which the rectorship and the top management prepare the ground for the board 's effective execution of its business. A possible way of doing this might be to make room in the central administration for a small, cross-departmental 'think tank' unit, consisting of top central management *and* a few experienced academics, whose chief task would be to furnish the board with the best possible background for taking decisions of strategic importance.

## 9.3  A new type of organisation?
The traditional, monolithic organisational structure of the UiO is gradually being modified through a growth in the number of centres and specific units that are established in order to support the big priority areas in research. With the number of such large programmes probably increasing in the future, the beginnings of a matrix structure is emerging, with these units crossing the faculty and department lines of responsibility. The relative success of the centres, with their result-orientation and reasonably un-bureaucratic modes of operation, seems to stimulate thoughts along these lines. A fully developed matrix structure would mean that research boards would have to be established across the entire portfolio, with research deans as leaders. While the panel wholly supports the idea of relying more on centres and a matrix-like organisation in the future, we also see a number of problems that have to be solved before this can be realised for the entire University.

The main problem here is to avoid moving from one bureaucratic and cumbersome structure to one that may become even more so. If the 'centre' dimension in a matrix is going to be effective, it must be extended in breadth, which will probably require research boards and research deans and more resources. It will meet an opposite dimension consisting of not one, but two lines: the faculty and the department, and at present these are split up into between eighty and a hundred single threads. In connection with the introduction of a new degree structure it would also make perfect sense to include educational provision in the horizontal dimension through programme boards and programme deans, which in fact has been practiced for many years by the NTNU for its civil engineering degree. In other words, by just adding new steering mechanisms one stands the risk of simply creating too much organising, and perhaps organising that is cross-purpose and counter-productive. The introduction of a matrix structure will therefore imply the hard task of tidying up the vertical faculty/department line and to strip it of some of its functions. A radical solution might be to do away with the faculties altogether and create fewer and bigger departments. This has been done at the Royal College of Technology in Sweden, for instance. Another possibility would be to make the faculties more exclusively governing bodies, with *academic* responsibility for educational programmes and 'home' research activity, and few administrative tasks. Anyway, the challenge as we see it is twofold: one is to actually design a structure that is rational, flexible and effective in relation to the tasks the UiO will have in the future; the other is to have this implemented when there is reason to expect resistance from the faculties and departments, that of course must lose some of their power and functions. Still, the panel will advice the University to prioritise the question of organisational development and to keep the 'centre' concept at the heart of its deliberations. We are also convinced that the UiO must take at least some steps in the direction of making its organisation more 'corporate-like', without, as we see it, necessarily compromising its academic qualities and identity.

# 10. Final comments and recommendations

The University of Oslo today presents itself as a thoroughly solid and competent university, with a broad discipline portfolio. As the largest higher education and research institution in Norway, it possesses key academic competence in a wide range of subject areas and provides a large share of the nation's research and teaching provision in the same areas. It plays a central role inside the wider Norwegian higher education community and makes a comprehensive, in many respects even crucial, contribution to society at large. However, in a national context, the UiO's role and position have changed during the last decades. From being the undisputedly leading institution and the chief setter of standards inside most general academic fields, the growth of other universities and strong discipline communities in some colleges has turned the position of the UiO more into that of 'any' university. While still the largest and in many ways the dominant one, we can now see the UiO being overtaken by the other universities in important respects.

An evaluation is basically an attempt to assess the condition of the studied object at a given point in time, with limited attention given to historical causes and explanations. All the same, we feel that it is relevant to add a brief note on the UiO's recent history in order to highlight two specific points that both touch on what we perceive to be the institution's *relative decline* inside the national university community: One is the problem that the UiO may have had in adjusting to the new higher education environment, or rather a lack of motivation for doing so. The University may seem to have been rather caught up in its own great tradition, with the result that a certain academic and institutional conservatism has held it back from properly playing its role as a locomotive of Norwegian higher education. The other – and related - point concerns more directly a noticeable change that occurred in several performance indicators around the middle of the 1990s. The UiO did a very commendable job in handling the 'student explosion' in the early –90s and as long as a growth situation prevailed most results were satisfactory. For instance, the number of doctoral candidates doubled and the number of higher degree candidates more than doubled between 1990 and 1997, and there was little sign of falling rates in publishing. Then from around 1997 we see a gradual deterioration in results by indicators that goes beyond what one might expect from falling student numbers. We cannot offer an exhaustive explanation for this, but see it as being linked to at least three factors: the sheer wear that the handling of over-large student groups caused on organisation and personnel, the misdirection of profiling priorities that took place as a consequence of this situation and the further erosion it caused of an already weak funding structure. As to the latter factor, the panel is convinced that the UiO has a public funding rate that is unfairly low, whatever the causes are.

The University of Oslo has very ambitious aims. In the basic activities of research and teaching it looks more to top Scandinavian and European levels than to its Norwegian counterparts. However, the University's own self-evaluation came to the conclusion that the UiO at present fails to reach such standards over a broad spectrum of disciplines and that it is unlikely to do so in several years. The panel agrees with this conclusion. In spite of the very high quality that prevails in many areas, and in spite of the lack of adequate tools to assess the quality with any accuracy in several others, we find it safe to conclude that the quality profile is too uneven to compare with the best European universities. It will take the UiO much effort, and probably increased resources, to cultivate excellence in a sufficient range of disciplines to enter that category of institutions.

On the other hand, it must be stressed that the UiO, in the panel's general assessment, gives a positive and commendable impression as a large institution of research and higher education. Further, the panel were convinced of the determination of the University leadership, and the motivation among large sections of the academic community, to search for a clearer and somewhat more differentiated set of aims, as well as the right tools to take the University closer to them. We are likewise convinced that when such a reorientation gains momentum, the University possesses a sound and solid academic and administrative platform for moving closer to its overriding ambition of being a university of high international quality all over. Finally, it should be borne in mind that many of the features that are addressed in the recommendations are such as the panel believe are shared by other Norwegian institutions of higher learning. Our assessments and recommendations must therefore be read in this context, as they will concentrate on points where we think that the University has a potential for improvement and where it – due to its vast resources – can point the way forward for other institutions as well. In very broad terms, the features that may be in need of change and improvement are the following:

- The quality of the educational provision appears to be uneven and often rather poor. With certain exceptions, undergraduate programmes seem consistently to be most in need of improvement. To some extent this concerns the pedagogical quality of teaching as such, but more basically it concerns the functions relating to the students' work procedures and the feedback, tutoring and other support that is offered to them. The University lacks a system of quality assurance that can function as a steering tool.
- The UiO has been lagging behind the leaders of the field when it comes to various applications of e-learning. This concerns the use of PC-based learning for internal students as well as the use of information techniques for distance learning purposes, where the UiO has yet to develop a strong profile. On the background of the institution's physical and competence resources, one might have expected to see the UiO more at the forefront of these developments.
- The University's research performance, although very good in a number of communities, is also uneven and plainly too weak in several faculties. The total activity and output is rather low for a university of the UiO's size and ambitions and the University has not succeeded in developing good organisational tools for achieving the necessary concentration of resources. The panel finds the general approach to be lacking in incentives and result-orientation, and would have liked to see better monitoring instruments and better support functions for applications to the RCN, international research programmes and other external sources.
- The UiO has not quite managed to keep pace with the way in which external relations have developed in some other universities and colleges, or produced results from such contacts at a rate that one might expect from an institution of this size and position. The University is positively engaged in a great number of cooperative projects, but several of the largest or major commitments have been characterised by hesitancy, scepticism, feeble action and a lack of strategic ability to utilise new and favourable platforms. This concerns i.a. the relations with the Research Park. In the fields of relating generally to the wider public and of setting the agenda for public debate, the UiO is modestly successful and visible, but perhaps less so than its ambition ought to be, its size and collective competence considered.
- The UiO seems to suffer from an economic situation that gives the institution little room to manoeuvre. The panel has already commented on what we perceive to be an unfairly low level of basic funding, but we also find that the University has been slow to develop solid foundations and strategies for augmenting its income from external

sources. As a consequence, the UiO has a fairly low share of external financing, particularly in view of the opportunities that exist for cooperation with commercial companies in the Oslo area. More external resources could be generated from teaching as well as research, which in today's climate would seem to be necessary in order to meet the institution's ambitions of excellence.

- The UiO gives an impression of hanging on to a model of governance that the panel thinks will prove too protective and inefficient in the future. The rather extreme decentralist power-structure and organisation that have traditionally characterised most universities, and that are very much a feature of the UiO, may be well suited for the preservation of standards and values, but less so for change and responsiveness to new demands. The new situation that prevails in higher education and research will require such adaptability and capacity for change and the recent tendency towards falling performance indicators for the UiO may even suggest that this has already been the case for some time.

## 10.1 Recommendations

The panel's recommendations are extensive and have a varying sense of urgency. They are meant for the University's own consideration and the University must make priorities among them. Other recommendations on points of detail are given – or indicated – in the preceding chapters without being repeated here.

The most general recommendation is that the University – in order to develop the levels of excellence it aims at - must create a stronger organisational base for making choices and priorities of profiling among a portfolio of tasks and activities for which there seem to be diffuse aims at present. The panel agrees with the self-evaluation report's conclusion that aims should be more differentiated. In that way they may also become more precise.

**Teaching**

- In connection with its work to implement the quality reform, the UiO must make sure that its courses and programmes provide students with varied teaching methods, a reasonable measure of contact with teachers and continuous feedback and support. In some faculties, there is a particular need to increase the attention given to students on undergraduate programmes.

- The UiO must develop an institutional system of quality assurance that provides the leadership at various levels with an instrument for adequately assessing the quality of their educational provision. Such a system must be 'anchored' in the institution's top leadership and documentation must be presented to the board as an integral part of its strategic assessment and planning of the institution's activities.

- The general awareness and recognition of the pedagogical quality of teaching should be strengthened. Work must continue to find formal ways of increasing the academic merit attached to good teaching and suitable incentives for achieving it. The University has the embryo of an effective tool for developing teaching quality in its university didactics unit. This unit should be strengthened so as to be able to increase its interaction with the rest of the university. A strong research-based didactics unit may also be a resource for the University to 'sell' externally.

- With a weakened national dimensioning of higher education, there is an increasing need for the UiO itself to develop internal dimensioning and profiling policies. The University must continually reassess the relative size of educational provision within the different disciplines and science areas and promote the development of new provision in response to changing needs.

- Particular attention must be given to those disciplines that have recruitment problems with the view of designing programmes and courses that are more in line with student wishes and needs. For example, different types of foreign language courses and a reformed first year of mathematics and natural science studies should be considered. The UiO should also make efforts to promote more cross-disciplinary provision.

- The University should consider a change in the present balance between undergraduate and graduate provision. It would be more supportive of the UiO as an outstanding research institution if a larger proportion of the students were graduate or doctoral students and it would address the rather acute problem of providing a sufficient number of doctoral candidates, for the UiO itself and nationally. A shift like this might also make it easier for subject communities to develop systematic programme support for postgraduate students so as to make a larger majority of them complete their degree. It is important that thesis requirements in the old higher degree programmes are not 'automatically' transferred to the new masters degree programmes.

- The UiO should consider whether the introductory course for the Examen philosophicum should continue in its present shape, and particularly whether it should still be the first course that students take. New students need to be met with the best teaching that the University can offer, in programmes that socialise them to academic work and introduce them to their chosen field of study. The Ex. phil. course ought to be reformed, not least in terms of pedagogical teaching quality, and integrated in the totality of undergraduate programmes.

- The UiO should consider new strategies and efforts to increase its commitment in the combined area of continuing education, distance education and e-learning.

**Research training and academic recruitment**

- The University should increase its efforts to make the production of new doctorates more effective. Doctoral programmes must be stepped up in faculties that presently have a weak production.

- In particular it is important to provide sufficient support so as to make a larger proportion of candidates finish on time. Although we have no certain indications of it, the panel suspects that the old dr. philos. standard is still hovering above doctoral programmes. Standards must be made realistic in relation to preconditions and the time that is estimated for the programmes. If a large proportion of candidates have problems in completing their programmes, priorities must be made in the programme designs.

- The UiO should consider the creation of 'research schools', for which there are models in several European countries. These can be organised internally through a more conscious use of cross-disciplinary arrangements, or they can be organised nationally, with different universities taking responsibility for specific science areas. The latter option would of course involve cooperation with the other universities and the RCN, to which the UiO might take the initiative.

- The panel realises that really good solutions to the challenge of making research training more efficient will partly depend on the constructive contribution of the Ministry, the RCN and the other universities. Most of all this concerns the provision of research positions for newly trained researchers. The University must not stop pressing for improved national solutions in this field.

**Research**

- The University must make efforts to increase the total volume of research, and particularly in the faculties that have a low research profile today. One way of achieving that is to give increased priority to doctoral programmes, that provide a considerable proportion of the University's research production. It is even more important, however, to remove obstacles that prevent established researchers from remaining active and productive throughout their research careers.

- In several of the faculties, and particularly outside the 'hard sciences', research needs to be more concentrated. This is not only necessary in order to obtain more resources for research from external funding agencies, but also for increasing the volume and quality of basic and internal research. The University must build on its collective experience in creating research teams in order to achieve such concentration.

- The organising of support for research must be improved. This includes several functions, but most critical of these is the support that can be given in connection with applications for external research funding. To obtain more successful applications to the RCN and other external sources is another aim that the University must set for itself.

- The University might want to consider the creation of an internal research organisation, that need not be large and bureaucratic, but should have academic leadership and thus be more than a department or section of the administration. A central research organisation might make the support function more effective and facilitate the development of research strategies. It might also be in a better position to make well-founded and prioritised applications for improved research equipment and to nurture good links with the RCN, with EU programmes and with other external contacts.

- The general approach to research must be more based on incentives and outcomes. A necessary precondition for a more result-driven policy is the existence of better monitoring, measuring and quality assurance mechanisms for research. It also includes the clarification of aims, the definition of success criteria and the setting of targets.

- The University's research policy must aim at having good mechanisms for promoting cross-disciplinary research. The University should keep up its policy of developing

centres and large research programmes that are flexible in response to changing demands. The success of ambitions to obtain EU funding and a high number of Centres of Excellence will depend on such policies.

## External relations

- There is a need for the UiO to improve its general capacity for relating with the larger society and the panel will recommend that the UiO consider the creation of a special organisation to deal with external relations. The Contracts Division of the central administration may be a good foundation to build such an organisation from, but the organisation must be more than just a part of the administration. Good ideas may be had from the UNIFOB organisation at the University of Bergen, but the panel would recommend that a corresponding organisation for the UiO include not only research contracts but also educational and other provision for external agents. In view of our other recommendation of a central research organisation, the interface and relation between the two organisations is a challenge and must be worked out carefully.

- A specific recommendation concerns the way the UiO utilises, or fails to utilise, its rim-zone, particularly the Research Park. The UiO must attempt to devise new methods and mechanisms in order to obtain the synergies and the flow of personnel and ideas that are the basic rationale behind the University's engagement. This recommendation could be extended to several other cooperative arrangements as well, and we are convinced that a strong strategic unit for external operations would be of help in this respect.

- Although some sections of the University have developed productive relations with the school sector and public administration (municipal and national), the panel sees a solid potential for extending such contacts by other subject communities, and for organising and coordinating such contacts through more consistent institutional policies.

- An institutional policy on external relations must include choices and priorities, supported by a system of incentives and rewards for participating subject communities, e.g. that a substantial part of overheads are directed back to these communities.

- The UiO must improve its performance in the field of internationalisation. Most of all this concerns the exchange of students in and out of the institution, which is best addressed through a more systematic use of exchange visits abroad in ordinary programmes and an increase in the number of programmes in English. The latter type of programmes must also be available to the institution's own (Norwegian) students, which would help secure recruitment to the programmes and would also promote internationalism among the student population.

## Human resource policy

- The University is advised to strengthen its procedures for following up its personnel. This concerns several functions, like career dialogues, opportunities for internal job mobility, support from and contact with leaders in the execution of jobs, competence-raising courses, stimulating career scales, incentives and rewards, conflict solving,

health and safety issues. These functions and issues are important for all job categories, but probably most so for the administrative-technical staff, who do not enjoy 'academic freedom', and whose career options inside the institution are often more limited.

- For academic personnel in particular, there is a need to create greater incentives for high quality work and productiveness. This can partly be done through pay differentials, but economic resources and institutional culture will limit this possibility. More may be achieved through a conscious policy of job differentiation in relation to research and teaching (and other) tasks, which presupposes an upgrading of – and increased incentives for – good quality teaching at research-based level. Work tasks may be organised in larger, more consolidated units of time. The panel is critical of an arrangement that leads academic employees to expect spending equal amounts of time on research and teaching, irrespective of the nature of that research.

- With the present recruitment situation, the best way of achieving more mobility in academic jobs in the short term would be to 'recruit out' more successfully, i.e. to make more personnel contract out for external projects, thus leaving room for internal replacements. Such a policy will depend on the institution's ability to utilise and extend its external contacts and rim-zone and to compete successfully for participation in external research projects.

## Physical infrastructure

- The physical environment for students might benefit from improvements in several respects, but much has been done in recent years and the panel sees no *obvious* area where action is needed more than elsewhere, except in the central catering and service facilities on the main campus, that are badly in need of improvement.

- Concerning the infrastructure for academic work, the panel will point the University's attention to two specific areas. One is the need for investments to replace and improve some of the research equipment; the other is the functioning of the University Library, which – although satisfactory in most respects – is a critical necessity for good research, and where the cost of published material may endanger its future standards.

## Organisation and governance

- The University ought to reconsider its extensive delegation of decision-making powers to the faculty and department levels. For the University to set and reach targets in teaching and research, the institutional level will need stronger mechanisms of monitoring and steering activities in the entire organisation. In the panel's view, too many decisions affecting strategic needs are now made in the lower units, whose powers to block central initiatives are also too great. This means that robust policies are difficult to make and implement from the institutional level, while a variety of standards, criteria and strategies are allowed to operate throughout the institution. The present existence of a feeble human resource policy is an argument that points in the same direction.

- The relationship between academic and administrative leadership must be resolved and clarified in such a way that leadership is strengthened altogether. A more

'purified' academic leadership, relieved of most administrative concerns, may be one way out; another is to go for appointed, unified leadership, the way it is done in the centres. A third, which may be combined with any of the other two, would be to shift some governing functions from the administrative line of faculties and departments and over to more special purpose units. A research organisation would be an example of this.

- The panel recommends that the University continue its policy of establishing research centres, programmes and teams. But the University must consider how far it wants to go down this path. With many such units, these may provide one of the dimensions in a more flexible matrix structure that is already beginning to emerge. A decisive development in this direction, though, will require that the ordinary structure of governance be redefined in terms of powers and functions. Simply to cultivate a new line of governance on top of old structures will result in over-bureaucratisation and inefficient decision-making.

- The strengthening of the central functions of governance ought to include the introduction of more cross-disciplinary, special-purpose units or committees, where the element of vested interests on behalf of faculties is avoided. Such units would ideally consist of experienced members of both the academic and administrative communities, to be picked directly by the institutional leadership. In particular, we would recommend a central 'think tank' committee to suggest and prepare policies of strategic importance for the board.

- We would also recommend that the University Senate (Det Akademiske Kollegium) be renamed 'the University Board' and that it include more external members, as the law will in fact now require. This will open up the board's discussions more to issues concerning the University's inter-relations with the larger society, and it will reduce the element of 'representative democracy' that has tended to mute its efficiency. In view of what we heard about the board getting absorbed in small detail, it is important that its work gets more geared towards the vital issues and decisions. This can be helped i.a. through a conscious policy of making the documents for its meetings brief and focused, but more essentially by strengthening the governing tools of the central leadership.

# Appendices

## Appendix I: Program for the external panel's site visit February 2002

**TUESDAY 19 Feb.**

|  |  |
|---|---|
| 09.00 | Welcome by the rector |
| 09.30 | The self-evaluation steering group |
| 10.45 | Central administration leadership |
| 12.00 | *Panel meeting* |
| 12.30 | Lunch with the deans |

|  | **GROUP I** | **GROUP II** |
|---|---|---|
| 13.30 | The Faculty of social Science | The Faculty of Math & Nat. Science |
|  | 17.30 *Panel meeting* |  |

**WEDNESDAY 20 Feb.**

|  | **GROUP I** | **GROUP II** |
|---|---|---|
| 09.00 | The Faculty of Arts | The Faculty of Law |
| 11.30 |  | The Faculty of Theology |
| 13.00 | Lunch with Strategic Programmes | Lunch with Faculty of Law Leadership |
|  | 14.00 *Panel meeting* |  |
| 14.30 | The Centres | The Museums |
| 16.00 | The University Library | ICT at the University |
|  | 17.15 *Panel meeting* |  |

**THURSDAY 21 Feb.**

|  | **GROUP I** | **GROUP II** |
|---|---|---|
| 09.00 | The Faculty of Education | (08.30) The Faculty of Dentistry |
| 12.00 | The University Foundation for Student Life | (10.15) The Faculty of Medicine |
| 13.00 | Lunch | Lunch with Faculty of Med. leadership |
| 14.30 | External board representatives | Representatives of Research Park, &c |
| 16.00 | Representatives of cooperating institutions | Trade unions and Student Parliament |
|  | 17.00 *Panel meeting* |  |

**FRIDAY 22 Feb.**

|  |  |
|---|---|
| 09.00 | *Panel meeting* |
| 11.15 | The University meets Parliament's Educ. Committee |
| 12.30 | *Lunch and panel meeting* |
| 14.00 | Panel's oral report to University leaders and Senate |

# Appendix II: University of Oslo - Organisational Chart

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                                    ┌─────────────────────────┐      ┌──────────────┐
                                    │   The Senate            │      │ Senate's     │
                                    │   (Governing board)     │──────│ Advisory     │
                                    │                         │      │ Council      │
                                    │   The Rector            │      └──────────────┘
┌──────────┐   ┌─────────────┐      │                         │
│ Central  │   │ University  │      │                         │      ┌──────────────┐
│ admin.   │───│ Director;   │──────│                         │──────│ Student      │
│ depts.   │   │ Central     │      └─────────────────────────┘      │ Represent.   │
│          │   │ admin.      │                                       │ Council      │
└──────────┘   └─────────────┘                                       └──────────────┘
```

| Faculty of Arts | Faculty of Social Science | University Cultural History Museums | 11 Centres |
|---|---|---|---|
| Faculty of Mathem. and Natural Science | Faculty of Education | University Natural History Museums | |
| Faculty of Medicine | Faculty of Dentistry | | |
| Faculty of Law | Faculty of Theology | | |

Faculty administrations

Dept. administrations

52 depts. under the Faculties

10 museum units

# Appendix III:    The University of Oslo in key figures

Source is indicated in the upper left corner of each table. The abbreviation DBH stands for "Database for Higher Education" – a centrally operated register. Categories marked with an * are supposed to be filled in by the institution. Categories with 1999 figures are used where data from 2000 are not available.

## ECONOMY DATA

1)    *

| Main figures, expenditure ( mill. NOK). Source: DBH and the institution. | 1996 Acount | 1998 Account | 1999 Account | 2000 Account | 2001 Budget* | 2002 Budget* |
|---|---|---|---|---|---|---|
| Total expenditure | 2,484 | 2,600 | 2,923 | 2,970 | 2,624 | |
| Total expenditure under Chap. 026X | 2,355 | 2,459 | 2,772 | 2,789 | 2,576 | |
| Expenditure on salaries (Chap. 026X, post 01) | 1,814 | 1,874 | 2,046 | 2,081 | 1,987 | |
| Externally funded activities (Ch. 026X, post 21) | 442 | 485 | 528 | 528 | 498 | |

Accountancy data for the institution are collected from "Expenditure after accountancy", budget data from "Expenses, budget proposal". Working expenses in the basic grant budget are calculated like this: Expenses under Chap. 026X *minus* externally funded activities.
Student numbers are collected from Table 7 for the years 1996-1999; For 2000 and 2001 the Ministry's student target figures are used (Parliamentary Budget Proposal).
Transition to net budgeting means that figures for 2002 are not directly comparable with older figures.

2)

| Economy data by faculty. Accountancy figures 2000, NOK. 1 000 Source: DBH and the institution. | Overall running costs. Bas. gr. budg. per student | Running costs, basic grant budget | Expenses, externally funded activity (026X, post 21) | External income* (Chap. 326X) | Income from commiss.* (Ch. 326X) | Income from sales* (Ch. 326X) |
|---|---|---|---|---|---|---|
| Central administration / shared expenses | | 727 000 | 60 300 | | | |
| Social Science | 25 | 139 000 | 40 800 | | | |
| Math. And Natural Science | 61 | 321 000 | 157 400 | | | |
| Theology | 51 | 19 000 | 2 300 | | | |
| Law | 20 | 82 000 | 45 200 | | | |
| Medicine | 62 | 141 300 | 145 000 | | | |
| Arts | 36 | 235 500 | 56 600 | | | |
| Dentistry | 259 | 95 000 | 2 900 | | | |
| Education | 41 | 91 000 | 13 200 | | | |
| Total, by NKR 1 000 | | 1, 850 000 | 528 300 | 715 400 | 526 300 | 128 700 |

Expense data collected from "Expenditure after accountancy". Income data by faculty are collected from the institution's accounts. Student data are collected from Table 7.
Total figures do not necessarily equal the sum of faculty figures.

**3)**

| External income by kind.<br>By NOK 1 000.  Source: DBH. | 1996 | 1998 | 1999 | 2000 | 2001 |
|---|---|---|---|---|---|
| | Acc | Acc | Acc | Acc | Budget |
| In relation to total expenses  (share) | 0,23 | 0,25 | 0,27 | 0,30 | |
| From commissions (post 01) | 426 082 | 483 162 | 526 266 | 551 756 | 482 936 |
| From sales (post 02) | 67 265 | 80 370 | 128 670 | 155 383 | 84 379 |
| From course fees (post 11) | 1 606 | 12 410 | 14 352 | 9 706 | 11 506 |
| Other, specify in note if desirable | 65 443 | 61 063 | 46 117 | 60 351 | |
| Total, by NKR 1 000  (Chap. 326X) | 560 396 | 637 005 | 715 405 | 777 196 | 602 864 |

Accounts data are collected from "Income after accountancy", budget data from "Income, budget proposal".

**4)      ***

| Externally funded activity, by type of<br>commissioning agent.<br>Source: The institution. | 1996 | 1998 | 1999 | 2000 | 2001 |
|---|---|---|---|---|---|
| | Acc | Acc | Acc | Acc | Budget |
| The state (government, etc.)  (Share of total) | | 24% | 21% | 39% | |
| The Research Council (share) | | 41% | 46% | 42% | |
| Organisations (share) | | 1% | 7% | 1% | |
| Private companies (share) | | 12% | 10% | 12% | |
| Foreign, incl. EU (share) | | 12% | 12% | 6% | |
| Other funding (share) | | 10% | 6% | 0 | |
| Total, by NKR 1 000 | 442 000 | 483 000 | 547 000 | 606 000 | 498 000 |

Data for these categories do not exist in DBH (except for 1999).

STUDENT DATA

## 5)

| Applicant data, undergraduate Autumn term. Source: SO (National Coordinated Entrance) | Student places | | | Primary applicants (1st priority) | | |
|---|---|---|---|---|---|---|
| | 1996 (Jul) | 1998 (May) | 2000 (May) | 1996 (Nov) | 1998 (Aug) | 2000 (Nov) |
| Education | | 440 | 430 | | 640 | 602 |
| Theology | open | open | open | 85 | 71 | 41 |
| Mathematics and Natural Science | 1 360 | 1 210 | 1 030 | 1 469 | 1 538 | 1 258 |
| Medicine | 180 | 180 | 210 | 1 135 | 1 006 | 934 |
| Dentistry | 65 | 65 | 65 | 222 | 158 | 153 |
| Law | 475 | 500 | 500 | 2 006 | 1 334 | 1 286 |
| Arts | 1 900 | 1 500 | 1 425 | 3 692 | 2 843 | 2 420 |
| Social Science | 1 835 | 1 260 | 1 200 | 3 596 | 2 520 | 2 418 |
| Total | 6 106 | 5 454 | 5 157 | 13 543 | 11 082 | 9 671 |

The table only shows data for nationally coordinated intake (SO), not local intake.
Ex. phil. and some minor programmes are not included (not given by SO).

## 6)

| Intake data, all students Full year. Source: DBH and Parl. Budget Proposal. | Admitted | | | Applicants | | |
|---|---|---|---|---|---|---|
| | 1996 | 1998 | 2000 | 1996 | 1998 | 2000 |
| Social Science | 3178 | 2 363 | 2 112 | | 9 687 | 8 256 |
| Arts | 2733 | 2 467 | 2 176 | | 8 541 | 7 516 |
| Law | 915 | 874 | 1 166 | | 7 473 | 5 943 |
| Dentistry | 53 | 85 | 115 | | 1 537 | 1 174 |
| Medicine | 290 | 510 | 975 | | 3 142 | 3 671 |
| Mathematics and Natural Science | 1931 | 1 913 | 1 880 | | 7 022 | 5 928 |
| Theology | 231 | 91 | 131 | | 499 | 427 |
| Education | 467 | 1 173 | 1 427 | | 5 193 | 4 360 |
| Ex.phil. | 1278 | 588 | 1182 | | 8 108 | 7 168 |
| Total | 11 110 | 10 124 | 11 225 | | 51 289 | 44 529 |

"Admitted" are number of students who are admitted and then registered at the university.

## 7)

| Registered students. Autumn term. Source: DBH. | Student per academic man-year, 2000* | Registered students by October (female share in parenth.) | | | | Of these: Doctoral students | Target figures |
|---|---|---|---|---|---|---|---|
| | | 1996 | 1998 | 1999 | 2000 | 2000 | 2000 |
| Social Science | 19,5 | 5 960 (0,60) | 5 869 (0,60) | 5 688 (0,61) | 5 467 (0,62) | 265 (0,46) | 6 018 |
| Arts | 12,8 | 7 593 (0,63) | 7 202 (0,63) | 6 885 (0,63) | 6 486 (0,62) | 208 (0,49) | 6 336 |
| Law | 33,2 | 5 004 (0,54) | 4 768 (0,55) | 4 564 (0,55) | 4 114 (0,57) | 46 (0,41) | 4 125 |
| Dentistry | 3,0 | 298 (0,52) | 377 (0,58) | 390 (0,58) | 367 (0,62) | 24 (0,58) | 365 |
| Medicine | 5,5 | 1 364 (0,61) | 2 035 (0,59) | 2 156 (0,59) | 2 269 (0,59) | 479 (0,53) | 1 445 |
| Mathematics and Natural Science | 8,1 | 5 594 (0,38) | 5 755 (0,37) | 5 564 (0,38) | 5 255 (0,39) | 593 (0,38) | 5 954 |
| Theology | 10,4 | 422 (0,52) | 401 (0,54) | 358 (0,55) | 376 (0,53) | 23 (0,57) | 430 |
| Education | 12,1 | 2 175 (0,76) | 2 056 (0,77) | 2 126 (0,77) | 2 219 (0,78) | 72 (0,63) | 2 496 |
| Ex.phil. | | 6 326 (0,62) | 5 616 (0,66) | 5 219 (0,64) | 5 152 (0,64) | | 5 000 |
| Total | | 35 240 (0,57) | 34 299 (0,58) | | 31 837 (0,59) | 1 710 (0,46) | 32845 |

Registered students: only ordinary students, exclusive of persons who register for open exams and the category "others" in DBH.

Academic man-years are calculated dividing total costs by an average salary of 250 000.

Students registered at more than one faculty are distributed according to specific rules in DBH, which may lead to some faculties showing slightly too low or too high registration figures.

Target figures are collected from the Ministry (Parliamentary budget proposal).

\* **Registered students per academic man-year** has also been calculated differently by DBH:

Registered students (exluding doctoral students and Ex. phil. students) divided by the number of academic employees (excluding supplementary teachers). This gives the following picture:

| | |
|---|---|
| Social Science: | 30 |
| Arts | 18 |
| Law | 63 |
| Dentistry | 5 |
| Medicine | 9 |
| Math & NS | 12 |
| Theology | 13 |
| Education | 16 |

8)

| Examination data. Number of credits (Full year = 20). Source: DBH. | Registered | | | Candidates | | | Failure rate | | |
|---|---|---|---|---|---|---|---|---|---|
| | 1996 | 1998 | 2000 | 1996 | 1998 | 2000 | 1996 | 1998 | |
| Arts | 12495 | 10466 | 9386 | 9922 | 7873 | 6909 | 13,6 | 9,5 | 9,0 |
| Law | 8229 | 6005 | 5529 | 7033 | 4691 | 4456 | 15,5 | 9,3 | 7,1 |
| Math & Nat Sc | 16410 | 15795 | 14883 | 13754 | 12396 | 11779 | 11,0 | 13,5 | 12,8 |
| Medicine | 4663 | 5314 | 6587 | 4499 | 5277 | 6291 | 3,6 | 3,9 | 5,7 |
| Dentistry | 1269 | 1139 | 1189 | 1224 | 1104 | 1172 | 5,9 | 6,1 | 9,0 |
| Social Science | 9396 | 10535 | 9304 | 7935 | 7881 | 6887 | 7,9 | 8,2 | 7,7 |
| Theology | 555 | 537 | 544 | 452 | 429 | 415 | 17,0 | 9,1 | 4,8 |
| Education | 3259 | 3131 | 2985 | 2940 | 2571 | 2484 | 5,7 | 5,1 | 5,3 |
| Ex.Phil | 15600 | 15805 | 14842 | 11142 | 10805 | 9785 | 32,5 | 33,4 | 32,2 |
| Total | 71876 | 68727 | 67561 | 58901 | 53027 | 52541 | 12,5 | 10,9 | 13,2 |

| | Students (excl. doctorates) | | | New credits per student | | |
|---|---|---|---|---|---|---|
| | 1996 | 1998 | 2000 | 1996 | 1998 | 2000 |
| Arts | 8104 | 7379 | 6278 | 10,9 | 10,8 | 10,2 |
| Law | 5861 | 5100 | 4068 | 15,9 | 12,2 | 13,7 |
| Math & Nat Sc | 5388 | 5208 | 4662 | 10,6 | 9,3 | 9,2 |
| Medicine | 1487 | 1687 | 1790 | 15,5 | 14,5 | 15,7 |
| Dentistry | 318 | 354 | 343 | 19,3 | 15,3 | 21,2 |
| Social Science | 6179 | 5854 | 5202 | 12,2 | 11,0 | 10,6 |
| Theology | 429 | 481 | 353 | 12,1 | 10,7 | 10,3 |
| Education | 2490 | 2067 | 2147 | 15,8 | 14,5 | 13,9 |
| Ex.Phil. | 6618 | 5616 | 5152 | 7,7 | 6,4 | 6,4 |
| Total | 36874 | 33746 | 30127 | 11,6 | 10,4 | 10,6 |

The number of modularised programmes and courses varies over time and among faculties. As a consequence, the numbers of exam registrants and exam candidates do not reflect student numbers at individual faculties in an identical way.

The sum of faculty figures does not necessarily equal the total number.

The figure for exam registrants does not include those who withdrew inside the deadline.

Exam candidates are all those who received a mark for the exam (Number of passes + fails).

Failure percentage is calculated from the number of candidates under the above definition.

Credits statistics: Based on the number of credits and students in 1996, -98 and 2000 Doctorates are not included.

| Completed degree programmes beyond bachelor level. Full year. Source: DBH. | New degree holders (female share in parenthesis) | | |
|---|---|---|---|
| | 1996 | 1998 | 2000 |
| **Faculty of Social Science** | | | |
| Professional degree | 155 (0,53) | 120 (0,53) | 115 (0,64) |
| Masters degree | 0 | 15 (0,53) | 31 (0,39) |
| Hovedfag (Postgraduate degree) | 226 (0,62) | 238 (0,56) | 282 (0,61) |
| Doctoral degree | 33 (0,36) | 24 (0,25) | 34 (0,32) |
| **Faculty of Arts** | | | |
| Professional | 0 | 0 | 0 |
| Master | 0 | 14 (0,57) | 11 (0,45) |
| Hovedfag | 336 (0,63) | 336 (0,63) | 342 (0,68) |
| Doctoral | 31 (0,48) | 25 (0,40) | 19 (0,26) |
| **Faculty of Law** | | | |
| Professional | 589 (0,53) | 654 (0,49) | 605 (0,55) |
| Master | 0 | 0 | 10 (0,60) |
| Hovedfag | 8 (0,38) | 10 (0,50) | 10 (0,70) |
| Doctoral | 7 (0) | 7 (0,57) | 9 (0,33) |
| **Faculty of Odontology** | | | |
| Professional | 55 (0,60) | 52 (0,48) | 58 (0,41) |
| Master | 0 | 1 | 0 |
| Hovedfag | 0 | 0 | 0 |
| Doctoral | 5 (0,60) | 5 (0,80) | 2 (0,0) |
| **Faculty of Medicine** | | | |
| Professional | 183 (0,62) | 191 (0,51) | 209 (0,52) |
| Mastergrad | 0 | 0 | 9 0,67) |
| Hovedfag | 0 | 32 (0,59) | 47 (0,81) |
| Doctoral | 58 (0,38) | 58 (0,31) | 77 (0,53) |
| **Faculty of Math. and Natural Science** | | | |
| Professional | 45 (0,80) | 48 (0,83) | 42 (0,79) |
| Master | 0 | 0 | 0 |
| Hovedfag | 418 (0,41) | 365 (0,38) | 316 (0,36) |
| Doctoral | 80 (0,36) | 92 (0,36) | 81 (0,38) |
| **Faculty of Theology** | | | |
| Professional | 24 (0,54) | 27 (0,56) | 18 (0,56) |
| Mastergrad | 0 | 0 | 3 ( 0,67) |
| Hovedfag | 8 (0,50) | 7 (0,43) | 20 (0,50) |
| Doctoral | 0 | 5 (0) | 4 (0,25) |
| **Faculty of Education** | | | |
| Professional | 38 (0,71) | 43 (0,81) | 86 (0,81) |
| Master | 0 | 0 | 14 (0,57) |
| Hovedfag | 38 (0,79) | 44 (0,82) | 46 (0,72) |
| Doctoral | 4 (0,50) | 8 (0,38) | 3 (0,33) |
| **Total** | | | |
| Professional | 1 089 (0,57) | 1 135 (0,53) | 1 133 (0,57) |
| Master | 0 | 30 (0,57) | 78 (0,50) |
| Hovedfag | 1 034 (0,54) | 1 032 (0,53) | 1 063 (0,57) |
| Doctoral | 218 (0,38) | 224 (0,35) | 229 (0,41) |

Data for lower degree (First 3 – 4 years; cand. mag.) diplomas are not registered by DBH.

| Candidate employment data. Candidates in the spring term. Source: NIFU*. | Total number of candidates | | | Candidates who answered the form | | | Fully employed | | | Not adequately employed | | | Unemployed | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1995 | 1997 | 1999 | 1995 | 1997 | 1999 | 1995 | 1997 | 1999 | 1995 | 1997 | 1999 | 1995 | 1997 | 1999 |
| Social Science | 214 | 174 | 220 | 177 | 127 | 168 | 157 | 113 | 154 | 21 | 22 | 27 | 10 | 6 | 5 |
| Arts | 139 | 199 | 203 | 99 | 148 | 151 | 74 | 130 | 138 | 23 | 39 | 27 | 9 | 8 | 4 |
| Law[1] | 301 | 359 | 375 | 223 | 271 | 275 | 164 | 228 | 233 | 50 | 43 | 47 | 33 | 20 | 18 |
| Dentistry | 46 | 54 | 49 | 39 | 40 | 41 | 32 | 37 | 39 | 1 | 4 | 4 | 1 | - | - |
| Medicine[2] | 2 | 18 | 31 | 2 | 14 | 27 | 2 | 14 | 26 | - | - | 2 | - | - | - |
| Math & Nat Sc[3] | 217 | 247 | 219 | 175 | 203 | 168 | 141 | 175 | 150 | 27 | 25 | 22 | 11 | 9 | 6 |
| Education[4] | . | 49 | 64 | . | 43 | 48 | . | 39 | 45 | . | 5 | 1 | . | 2 | 1 |
| Theology[5] | 8 | 11 | 15 | 6 | 7 | 11 | 4 | 5 | 7 | 1 | - | - | - | - | - |
| Total | 927 | 1111 | 1176 | 721 | 853 | 889 | 574 | 741 | 792 | 123 | 138 | 130 | 64 | 45 | 34 |

* The NIFU (Norwegian Institute for Studies in Research and Education) candidate survey is conducted every two years. Respondees are the candidates of that year's spring term, half a year after graduation.
"Not adequately employed" includes unemployed persons, persons who have irrelevant (after education) employment and persons who involuntarily work part-time. Groups like military conscripts and students are not explicitly included in the figures, but may be so in case they (also) are employed.
The table gives absolute figures.
[1] Cand.jur. (law), cand.polit. (criminology), and cand.polit. (managemant informatics).
[2] Cand.scient. (nutrition), nursing science candidates, cand.san. (medical care/rehabilitation).
[3] Cand.scient., siv.ing., cand.pharm.
[4] Established 1996. Educational subjects were formerly organised under the Faculty of Social Science.
[5] Cand.theol. og cand.philol. (religious instruction), cand.san. (nursing).

## RESEARCH DATA

| Running costs for R&D By main source of funding. Source: NIFU. | Basic grant budget | | | Other funding | | | Total | | |
|---|---|---|---|---|---|---|---|---|---|
| | 1995 | 1997 | 1999 | 1995 | 1997 | 1999 | 1995 | 1997 | 1999 |
| Social Science. | 82 | 71 | 79 | 17 | 13 | 33 | 99 | 84 | 112 |
| Law | 32 | 32 | 32 | 18 | 15 | 16 | 51 | 47 | 47 |
| Medicine[1] | 260 | 283 | 374 | 138 | 150 | 224 | 398 | 433 | 598 |
| Arts | 119 | 132 | 133 | 25 | 28 | 32 | 143 | 160 | 165 |
| Math & Nat Sc | 213 | 217 | 228 | 89 | 125 | 137 | 302 | 342 | 365 |
| Dentistry | 50 | 47 | 48 | 3 | 4 | 4 | 53 | 50 | 52 |
| Theology | 8 | 9 | 9 | 3 | 3 | 4 | 10 | 11 | 13 |
| Education[2] | | 37 | 60 | - | 21 | 18 | - | 58 | 77 |
| Gov. board/Central admin. | 47 | 21 | 56 | 60 | 53 | 60 | 107 | 74 | 117 |
| Total (by mill. NKR ) | 810 | 848 | 1 018 | 353 | 411 | 527 | 1 163 | 1 259 | 1 545 |

| Sources of funding outside basic grant. Source: NIFU. | Ministry etc. | | | Research Council | | | Foreign | | | Private companies | | | Other | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1995 | 1997 | 1999 | 1995 | 1997 | 1999 | 1995 | 1997 | 1999 | 1995 | 1997 | 1999 | 1995 | 1997 | 1999 |
| Social Science | 1 | 3 | 7 | 14 | 8 | 21 | - | 0,3 | 1 | 1 | 2 | 3 | 0,3 | 0,1 | 2 |
| Law | 5 | 2 | 2 | 5 | 6 | 8 | 4 | 2 | 2 | 3 | 3 | 1 | 1 | 1 | 2 |
| Medicine[1] | 14 | 19 | 31 | 48 | 43 | 57 | 3 | 6 | 16 | 18 | 21 | 25 | 55 | 61 | 95 |
| Arts | 3 | 9 | 5 | 19 | 17 | 24 | 1 | 1 | 1 | 1 | 0,2 | 1 | 1 | 1 | 1 |
| Math & Nat Sc | 10 | 9 | 7 | 57 | 77 | 83 | 4 | 12 | 22 | 13 | 16 | 20 | 4 | 10 | 6 |
| Dentistry | 1 | 2 | 1 | 2 | 2 | 2 | 1 | - | 0,2 | 0,1 | 0,4 | 0,2 | 0,1 | 0,1 | 1 |
| Theology | - | - | - | 3 | 3 | 4 | - | - | - | - | - | - | - | - | - |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Education² | | 15 | 14 | | 5 | 2 | | 1 | 1 | | 1 | 0,2 | | 1 | 0,2 |
| Gov. board/centr. adm. | 28 | 21 | 24 | 26 | 20 | 23 | 2 | 2 | 4 | 4 | 6 | 2 | 1 | 3 | 7 |
| Total (by mill NKR) | 62 | 80 | 91 | 174 | 181 | 224 | 15 | 24 | 47 | 40 | 49 | 52 | 62 | 77 | 114 |

Other sources include means from various funds and legacies, in addition to own income (course fees etc.).
The NIFU statistics on R&D gives figures for every two years.
[1] The Faculty of Medicine includes for 1999 the Institute for Cancer Research, which was earlier registered outside the university as an independent institution.
[2] The Faculty of Education was established 1.1.1996. Departments under this faculty can be found for 1995 under the governing board and the Faculty of Social Science.

**13)**

| Running costs, R&D. By activity area. Source: NIFU | Basic research | | | Applied research | | | Development work | | | Total | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1995 | 1997 | 1999 | 1995 | 1997 | 1999 | 1995 | 1997 | 1999 | 1995 | 1997 | 1999 |
| Social Science | 65 | 61 | 70 | 26 | 18 | 34 | 8 | 5 | 9 | 99 | 84 | 112 |
| Law | 16 | 15 | 17 | 29 | 29 | 28 | 6 | 3 | 3 | 51 | 47 | 47 |
| Medicine | 162 | 156 | 268 | 161 | 189 | 244 | 76 | 88 | 87 | 398 | 433 | 598 |
| Arts | 118 | 127 | 127 | 17 | 23 | 22 | 8 | 10 | 16 | 143 | 160 | 165 |
| Math & Nat Sc | 242 | 266 | 299 | 50 | 62 | 52 | 10 | 13 | 13 | 302 | 342 | 365 |
| Dentistry | 16 | 20 | 21 | 24 | 20 | 24 | 12 | 10 | 7 | 53 | 50 | 52 |
| Theology | 8 | 6 | 6 | 2 | 6 | 6 | - | - | - | 10 | 11 | 13 |
| Education | | 28 | 33 | | 18 | 26 | | 12 | 18 | - | 58 | 77 |
| Gov. board/centr. adm. | 49 | 36 | 74 | 40 | 32 | 35 | 19 | 6 | 8 | 107 | 74 | 117 |
| Total | 676 | 715 | 914 | 348 | 396 | 471 | 139 | 148 | 160 | 1 163 | 1 259 | 1 545 |

NIFU statistics available only for every two years.

14)

| Scientific publications.<br>Source: FORSKDOK / the<br>institution. | Articles in international<br>scientific periodicals with<br>referee arrangement | | | Articles in national<br>scientific periodicals with<br>referee arrangement | | | Scientific books<br>and textbooks | | | Contribution in<br>scientific books<br>and textbooks | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1997 | 1998 | 1999 | 1997 | 1998 | 1999 | 1997 | 1998 | 1999 | 1997 | 1998 | 1999 |
| Theology | 3 | 0 | 1 | 16 | 17 | 9 | 17 | 12 | 6 | 17 | 32 | 23 |
| Law | 20 | 29 | 35 | 83 | 85 | 128 | 35 | 40 | 35 | 81 | 83 | 56 |
| Medicine | 1077 | 1020 | 1076 | 313 | 246 | 267 | 74 | 45 | 40 | 219 | 183 | 144 |
| Arts | 118 | 84 | 82 | 222 | 154 | 119 | 74 | 96 | 75 | 313 | 321 | 271 |
| Math & Nat Sc | 991 | 869 | 666 | 86 | 71 | 31 | 22 | 24 | 14 | 90 | 341 | 102 |
| Dentistry | 67 | 69 | 68 | 18 | 11 | 15 | 3 | 1 | 2 | 16 | 9 | 0 |
| Social Science | 98 | 113 | 132 | 91 | 71 | 64 | 33 | 40 | 43 | 180 | 103 | 123 |
| Education | 14 | 19 | 20 | 51 | 48 | 27 | 21 | 32 | 29 | 35 | 42 | 59 |
| Other units | 82 | 23 | 20 | 33 | 39 | 22 | 6 | 9 | 13 | 70 | 35 | 21 |
| Total | 2470 | 2226 | 2099 | 913 | 742 | 682 | 285 | 299 | 257 | 1021 | 1149 | 799 |

Categorisation is taken from the institution's reporting of budgeting data to the Ministry.

# EMPLOYEE DATA

**15)**

| Employees. Full year equivalents. Source: DBH. | Total number of employees | | | Academic employees | | | Administrative,technical and library employees | | | Proportion academic/ total number of employees | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1996 | 1998 | 2000 | 1996 | 1998 | 2000 | 1996 | 1998 | 2000 | 1996 | 1998 | 2000 |
| Central admin. | 447,80 | 440,31 | 449,6 | 0 | 4 | 3,6 | 382,55 | 376,99 | 426,11 | 0,0 | 0,0090% | 0,0073 |
| Social Science. | 287,68 | 281,02 | 282,19 | 196,83 | 188,80 | 192,12 | 89,85 | 89,97 | 90,07 | 0,68% | 0,67% | 0,68 |
| Arts | 630,63 | 623,47 | 560,86 | 434,16 | 442,69 | 441,30 | 196,47 | 180,78 | 149,56 | 0,62% | 0,71% | 0,73 |
| Law | 147,57 | 135,66 | 147,38 | 77,38 | 70,60 | 68,05 | 70,19 | 65,06 | 79,33 | 0,52% | 0,52% | 0,46 |
| Math & Nat Sc | 833,59 | 795,72 | 691,53 | 515,98 | 483,13 | 437,12 | 311,86 | 304,14 | 252,96 | 0,62% | 0,61% | 0,63 |
| Medicine | 500,46 | 526,52 | 477,86 | 262,81 | 282,32 | 257,07 | 237,35 | 242 | 220,79 | 0,53% | 0,54% | 0,54 |
| Dentistry | 251,46 | 237,58 | 236,25 | 90,30 | 85,53 | 83,73 | 128,79 | 131,52 | 130,35 | 0,36% | 0,36% | 0,35 |
| Theology | 38,10 | 37,28 | 38,35 | 29 | 27,48 | 30,40 | 9,10 | 9,80 | 7,95 | 0,79% | 0,74% | 0,79 |
| Education | 173,13 | 193,21 | 207,71 | 114,18 | 130,80 | 139,90 | 58,95 | 62,41 | 67,81 | 0,66% | 0,68% | 0,67 |
| Total | 3 816,40 | 3 789,03 | 3 677 | 1 741,34 | 1 739,38 | 1 690,52 | 1 969,79 | 1 824,31 | 1 812,72 | 0,46% | 0,46% | 0, |

Total figures may differ from the sum of faculty figures.

**16)**

| Non-academically employed. Full year equivalents Source: DBH. | Administrative employees | | | Technical and academic assistants | | | Librarians | | | Other employees | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1996 | 1998 | 2000 | 1996 | 1998 | 2000 | 1996 | 1998 | 2000 | 1996 | 1998 | 2000 |
| Central administration | 235,10 | 233,21 | 281,34 | 146,20 | 143,43 | 143,77 | 1,25 | 0,25 | 1 | 65,25 | 59,32 | 64,89 |
| SU | 72,10 | 73,72 | 74,55 | 17,15 | 16,25 | 15,52 | 0 | 0 | 0 | 1 | 2,25 | 0 |
| Arts | 168,66 | 152,13 | 116,29 | 26,81 | 26,65 | 31,27 | 1 | 2 | 2 | 0 | 0 | 0 |
| Law | 51,77 | 49,85 | 63,08 | 17,92 | 14,71 | 14,75 | 0,5 | 0,5 | 1,5 | 0 | 0 | 0 |
| Math & Nat Sc | 130,42 | 132,09 | 138,50 | 181,44 | 172,05 | 114,46 | 0 | 0 | 0 | 5,75 | 8,45 | 1,45 |
| University Library | 116,30 | 129,69 | 85,05 | 69,53 | 46,35 | 11,77 | 180,20 | 180,75 | 117,25 | 0 | 1,80 | 0,20 |
| Medicine | 119,06 | 131,69 | 122,64 | 117,64 | 109,94 | 98,15 | 0,65 | 0,40 | 0 | 0,30 | 2,20 | 22,17* |
| Dentistry | 34,29 | 30,27 | 29,09 | 94,50 | 101,25 | 101,26 | 0 | 0 | 0 | 32,37 | 20,53 | 0 |
| Theology | 9,10 | 8,80 | 6,95 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Education | 50,35 | 58,41 | 58,08 | 4,60 | 4 | 9,73 | 4 | 0 | 0 | 0 | 0 | 0 |
| Governing board | 29,72 | 44,24 | 20,69 | 9 | 6,80 | 7,60 | 0 | 1 | 0 | 0,60 | 0,5 | 0 |
| USIT | 54,93 | 54,70 | 72,10 | 24 | 27,80 | 40,10 | 0 | 0 | 0 | 0 | 0 | 0 |
| UKM | | | 41,55 | | | 19,35 | | | 0 | | | 0 |
| UMN | | | 18,88 | | | 38,50 | | | 0 | | | 0 |
| UiO | | | | 0 | | | 0 | | | 0 | | |
| Total | 1073,4 | 1098,9 | 1128,79 | 708,79 | 670,23 | 647,23 | 187,6 | 184,9 | 121,25 | 105,27 | 95,05 | 88,71 |

Total figures may differ from the sum of faculty figures.

17)

| Academic employees. By 30/9 2000. Full years. Female share in parenthesis Source: DBH | Total | Professor 2 | Professor | Ass. professor | Amanuensis | University lecturer | Researcher |
|---|---|---|---|---|---|---|---|
| Arts | 411(141) | 5(1) | 154(38) | 115(41) | 17(4) | 47(23) | 1(1) |
| Law | 69(18) | 1(0) | 38(6) | 10(3) | 4(1) | 0 | 2(0) |
| Math & Nat Sc | 432(94) | 8(1) | 215(21) | 102(23) | 4(1) | 6(4) | 2(0) |
| Medicine | 248(84) | 21(2) | 112(15) | 36(18) | 6(4) | 15(10) | 2(1) |
| Dentistry | 84(26) | 1(1) | 41(6) | 20(6) | 2(0) | 1(0) | 0 |
| Social Science | 192(58) | 4(1) | 85(13) | 54(23) | 2(0) | 7(3) | 4(1) |
| Theology | 31(10) | 0 | 15(3) | 2(0) | 0 | 3(1) | 1(1) |
| Education | 140(60) | 1(0) | 38(11) | 38(20) | 12(6) | 11(4) | 5(1) |
| Univ. Museum of Cult. His. | 21(11) | 0 | 8(4) | 8(3) | 1(1) | 1(1) | 1(1) |
| Univ. Museum of Nat. His. | 28(6) | 0 | 12(2) | 13(3) | 1(0) | 2(1) | 0 |
| | | | | | | | |
| Total | 1656(508) | 41(6) | 718(119) | 398(140) | 49(17) | 93(47) | 18(6) |

| | Post-doc | Scholarship | Others |
|---|---|---|---|
| Arts | 5(4) | 58(26) | 9(3) |
| Law | 1(1) | 13(7) | 0 |
| Math & Nat Sc | 6(4) | 87(38) | 2(2) |
| Medicine | 4(4) | 52(30) | 0 |
| Dentistry | 3(3) | 16(10) | 0 |
| Social Science | 3(3) | 30(13) | 3(1) |
| Theology | 1(1) | 7(4) | 2(0) |
| Education | 1(1) | 31(16) | 3(1) |
| Univ. Museum of Cult. His. | 0 | 2(1) | 0 |
| Univ. Museum of Nat. His. | 0 | 0 | 0 |
| | | | |
| Total | 24(21) | 296(145) | 19(7) |

Total figures may differ from the sum of faculty figures.

# INTERNATONALISATION

**18)** *

| Exchange and guest students, teachers and researchers, per faculty. 1999. Source: the institution. | Oslo Univ. students abroad | Foreign students to Oslo U. | Oslo U. researchers abroad | Foreign researchers to Oslo U. | Oslo U. teachers abroad | Foreign teachers to Oslo U. |
|---|---|---|---|---|---|---|
| Social Science | 186 | 128 | 23 | 11 | 61 | 69 |
| Math & Nat Sc | 59 | 71 | 71 | 137 | 60 | 170 |
| Arts | 155 | 195 | 16 | 40 | 54 | 119 |
| Theology | 11 | 13 | 2 | 2 | 4 | 7 |
| Dentistry | 11 | 10 | 6 | 8 | 13 | 14 |
| Medicine | 60 | 61 | | 1 | | |
| Education | 9 | 66 | 7 | 6 | 27 | 16 |
| Law | 179 | 145 | 2 | 9 | 19 | 32 |
| Centres[1] | | 7 | 13 | 58 | 11 | 29 |
| Sum | 670 | 696 | 140 | 272 | 249 | 456 |

For students and researchers, only exchange periods lasting three months or more are registered; for teachers: 1 week.

**19)** *

| Exchange and guest students, teachers and researchers, per program and exchange agreement. 1999. Source: the institution. | Oslo Univ. students abroad | Foreign students to Oslo U. | Oslo U. researchers abroad | Foreign researchers to Oslo U. | Oslo U. teachers abroad | Foreign teachers to Oslo U. |
|---|---|---|---|---|---|---|
| **EDUCATIONAL PROGRAMMES:** | | | | | | |
| Socrates/Erasmus | 204 | 229 | | | 7 | Unknown |
| NUFU[2] | | | | | Unknown | Unknown |
| Nordplus[3] | 29 | 109 | | | | |
| Eastern Europe prog. | | | | | | |
| Quota prog. | | 170 | | | | |
| NORAD | | 10 | | | | |
| Bilateral agreements | 26 | 4 | | | | |
| Other programmes | 411 | 174 | | | | |
| UiO's Summer Schools[4] | | 674 | | | | |
| Total | 670[5] | 1370 | 140 | 272 | 249 | 456 |
| **RESEARCH PROGRAMMES:** | | | | | | |
| Total | | | | | | |
| **OTHER PROGRAMMES:** | | | | | | |
| EU's 5. framework programme | | | | | | |
| Total | | | | | | |
| Total, all programmes | 670 | 1370 | 140 | 272 | 249 | 456 |

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[1] A considerable part of research exchange takes place at research centres that are not organised under a faculty.

[2] Departments/faculties have trouble finding figures for this activity, because a student's exchange visit may include teaching at one institution and field work somewhere else. Therefore there are no entries for this programme.

[3] There is no register of UoO students who visit foreign higher education institutions. Funding and administration of the several subject-related networks is located at various institutions all over Scandinavia. Therefore, there is considerable under-reporting of students going out. The Unit for International Programmes estimates that there are at least as many students going out as coming in in this programme. For students coming in, the quality of data is good.

[4] There are three different Summer School Programmes at the University of Oslo. The Faculty of Law has summer teaching as part of a cooperation agreement with the University of North Dakota. The number of students is 15. The Facullty of Social Science has one course at doctoral level of four weeks' duration. The number of students is 100. International Summer Schools (ISS) offers a variety of courses over 6 weeks every summer. The number of students is 559 (2000).

[5] See note 2