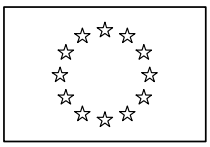

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COMMUNICATION FROM THE COMMISSION

Mobilising the brainpower of Europe:

enabling universities to make their full contribution to the Lisbon Strategy

{SEC(2005) 518}

COMMUNICATION FROM THE COMMISSION

Mobilising the brainpower of Europe:

enabling universities to make their full contribution to the Lisbon Strategy

"The search for knowledge has always been at the heart of the European adventure. It has helped to define our identity and our values, and it is the driving force behind our future competitiveness"[1].

1. UNIVERSITIES ARE CRUCIAL IN ACHIEVING THE LISBON GOALS

Within the next 20 years, Europe's economic paradigm will change fundamentally. Its manufacturing base will continue to shrink, future growth and social welfare will rely increasingly on knowledge-intensive industries and services, and ever more jobs will require a higher education qualification. Yet European universities[2], motors of the new, knowledge-based paradigm, are not in a position to deliver their full potential contribution to the re-launched Lisbon Strategy.

Europe must strengthen the three poles of its knowledge triangle: education, research and innovation. Universities are essential in all three. Investing more and better in the modernisation and quality of universities is a direct investment in the future of Europe and Europeans.

The present document sets out ways in which this could be achieved. It has its roots in the consultation of stakeholders launched by the Commission's 2003 Communication "The role of universities in the Europe of knowledge"[3], which led to a dual follow-up:

- outcomes of the consultation concerning research aspects were analysed[4] in the light of two reports dealing with higher education-research relations[5] and addressed at a major conference in Liège in April 2004[6]; the forthcoming Action Plan on University-based Research (a twin document to the present Communication) will deal with the research dimension of universities;

- outcomes on higher education aspects were analysed[7] within the framework of the "Education and Training 2010" work programme[8] and discussed at the conference "Enabling European universities to make their full contribution to the Lisbon Strategy" of February 2005[9];

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1 Mid-Term Review of the Lisbon Strategy - COM(2005) 24, 2.2.2005 (§ 3.3.2).
2 The term "universities" is used to mean all higher education institutions.
3 COM(2003) 58, 5.2.2003.
4 http://europe.eu.int/comm/research/conferences/2004/univ/pdf/univ_outcome_consult_en.pdf
5 From the STRATA-ETAN expert group, October 2002 and November 2003.
6 http://europa.eu.int/comm/research/conferences/2004/univ/index_en.html
7 http://europa.eu.int/comm/education/policies/2010/consultation_en.html
8 Council document 6365/02 of 20 February 2002.
9 http://europa.eu.int/comm/education/policies/2010/lisbon_en.html

This Communication is largely based on converging messages from the consultation process, which identified three main challenges for European higher education: achieving world-class quality, improving governance, and increasing and diversifying funding. Action suggested in these areas takes full account of the principle of subsidiarity whereby Member States are responsible for the organisation of their higher education.

2. INCREASING CHALLENGES

This section should be read together with the Commission staff working paper "European Higher Education in a worldwide perspective" which complements it by providing, explaining and analysing additional statistical data and indicators (mainly in its Section III and the Statistical Annex, tables 3, 4, 5 and 8).

2.1. Human capital and innovation gaps

Tertiary education attainment

While Europe is certainly a highly educated society, only 21% of the EU working-age population has achieved tertiary education, significantly lower than in the US (38%), Canada (43%) or Japan (36%), as well as South Korea (26%).

Access to higher education

While most of Europe sees higher education as a "public good", tertiary enrolments have been stronger and grown faster in other parts of the world – mainly thanks to much higher private funding. With an average gross enrolment ratio of 52%, the EU is slightly ahead of Japan (49%) but lags behind Canada (59%) and far behind the US (81%) and South Korea (82%).

Research performance

While the EU educates more graduates in science and technology and produces more PhDs overall, it employs only 5.5 researchers per 1 000 employees, which is marginally less than Canada and South Korea, but much less than the US (9.0) and Japan (9.7). Two recent surveys emphasising research found that apart from a handful in Britain, there are no European Union universities in the top 20 in the world and relatively few in the top 50[10]. The rapid growth of Asian universities, both public and private, is now also challenging Europe – and the US – in terms of doctoral candidates in science and engineering[11].

2.2. The bottlenecks

Uniformity

A tendency to uniformity and egalitarianism in many national systems has ensured that the average quality of universities, while generally homogeneous, is comparatively good – at least academically. But there are also deficiencies stemming from insufficient differentiation. Most universities tend to offer the same monodisciplinary programmes and traditional methods geared towards the same group of academically best-qualified learners – which leads to the

[10] Surveys by Shanghai Jiao Tong University, http://ed.sjtu.edu.cn/ranking.htm and by the Times Higher Education Supplement, 5 November 2004.

[11] International graduate admissions survey, US Council of Graduate Schools, December 2004.

exclusion of those who do not conform to the standard model. Other consequences are that Europe has too few centres of world-class excellence, and universities are not encouraged to explain at home and abroad the specific value of what they produce for learners and society.

Insularity

European higher education remains fragmented - between and even within countries - into medium or small clusters with different regulations and, naturally, different languages. It needs to become "readable" in the world if it wants to regain its position as the leading destination of mobile students - a privilege lost to the US in the 1990s. It also remains largely insulated from industry, with limited knowledge-sharing and mobility. As a result, too many graduates – even at the highest level - lack the kind of entrepreneurship and skills sought on the labour market. Most universities are strongly dependent on the state and ill prepared for worldwide competition over talent, prestige and resources.

Over-regulation

The over-regulation of university life hinders modernisation and efficiency. Nationally defined courses and employment rules for academic staff tend to inhibit curricular reform and interdisciplinarity. Inflexible admission and recognition rules impede lifelong learning and mobility. Unattractive conditions encourage young talent to seek elsewhere for quicker access to independence and more rewarding salaries. Minute *ex ante* control hinders universities' capacity to react swiftly to changes in their environment. Where change is always a matter for legislation, reforms are bound to be few, disruptive and uniform.

Under-funding

Universities are at the crossroads of two huge investment deficits in the knowledge sector:

- on research, EU countries spend 1.9% of GDP while the US, Japan and South Korea are all close to 3%, thanks to much higher research investment from industry;

- on higher education, EU countries spend on average just 1.1% of GDP, on a par with Japan but far below Canada (2.5%), the US (2.7%) and South Korea (2.7%). This is almost entirely due to much lower investment levels from industry and households in Europe. If Europe were to match the US figure, it would need to spend an additional EUR 150 billion each year on higher education[12].

In policy terms, under-funding and dependency on state funding do not only lead to the relative poverty of the higher education sector. Consequences vary between countries, but extend from low enrolment rates to unmet demand, a failure to prepare students for the European labour market, too few jobs for teachers/researchers or difficulties in attracting and retaining top talent.

[12] Commission Staff Working Paper, § 44.

3. THE CORE MODERNISATION AGENDA: ATTRACTIVENESS, GOVERNANCE, FUNDING

The bottlenecks referred to above are more or less marked depending on the Member State, but for the EU it is crucial that they are overcome everywhere in the Union. The consultation process has shown that solutions exist and require action in three directions.

3.1. Attractiveness: the imperative of quality and excellence

Raising quality and attractiveness requires major transformations at universities. Those who drive these transformations within universities require specific support (including funding) from their environment. Universities failing to undertake these changes - for want of drive, power to act or available resources – will create a growing handicap for themselves, their graduates and their countries.

3.1.1. Differentiation in quality and excellence

Mobilising all Europe's brain power and applying it in the economy and society will require much more diversity than hitherto with respect to target groups, teaching modes, entry and exit points, the mix of disciplines and competencies in curricula, etc.

Outstanding quality can only emerge from a terrain with an across-the-board "culture of excellence". Excellence is never a permanent achievement: it always needs to be challenged. It can exist in a few entire universities, but much more widely in individual faculties or teams within institutions or networks. The nature and intensity of research (as of other activities) varies considerably between countries, types of institution and individual universities. Each university must achieve its full potential in the light of its own strengths and priorities, and it must therefore be capable of identifying and focussing on these.

This requires some concentration of funding, not just on centres and networks that are already excellent (in a particular type/area of research, teaching/training or community service) – but also on those who have the potential to become excellent and to challenge established leaders.

3.1.2. Factors to raise attractiveness to learners

More flexibility and openness to the world in teaching/learning

If universities are to become more attractive locally and globally, profound curricular revision is required - not just to ensure the highest level of academic content, but also to respond to the changing needs of labour markets. The integration of graduates into professional life, and hence into society, is a major social responsibility of higher education. Learning needs to encompass transversal skills (such as teamwork and entrepreneurship) in addition to specialist knowledge. European and interdisciplinary aspects need to be strengthened. The potential of ICT should be fully exploited in teaching/learning, including for lifelong learning. The bachelor-master divide allows more diverse programme profiles and learning methods (e.g. research-based learning and ICT delivery).

Broader access

With new types of learners, greater programme diversity and more mobility across Europe, improved guidance and counselling (before and during higher education), flexible admission policies and customised learning paths are of growing importance. They are key determinants for broadening access, supporting student commitment and increasing success and efficiency -

whether admission is competitive or not. Grant/loan systems, affordable accommodation and part-time work or assistantships are also important for universities to be attractive and accessible to a suitably wide range of learners – thus breaking the link between social origin and educational attainment.

Better communication

While academia tends to assume that good quality is its own advertisement, attractiveness is about perceptions. The development of a coherent structure of degrees, ECTS credits, the Diploma Supplement and trustworthy quality seals will enhance the recognition of European degrees. But it will not suffice: universities need better to communicate with society about the value of what they produce, and to invest more in their presence and marketing at home and abroad. Not all are well prepared for this.

3.1.3. Factors to strengthen human resources

Human resources are a core determinant of quality in higher education and research. Universities must therefore work to enhance their human potential, both qualitatively and quantitatively, by attracting, developing and keeping talent in the teaching/research career. Excellence can only emerge from a favourable professional environment based in particular on open, transparent and competitive procedures. Vacancies, at least for rectors, deans, professors and researchers should be advertised publicly, and where possible internationally. Researchers should be treated as professionals from the early stages of their career[13]. Physical and virtual mobility (whether across boundaries or between university and industry) and innovation leading e.g. to university spin-offs should be encouraged and rewarded[14]. Compensation should reward quality and achievement in the performance of all tasks, including a share of income from research contracts, consultancies, patents, etc. These measures would over time reinforce world-class excellence at European universities, thus reducing the attractiveness gap with other world regions and benefiting all of Europe - through highly qualified graduates moving or returning to more regional universities, whether immediately or later in their careers.

3.1.4. Diversity demands organisation at European level

European higher education is and needs to remain diverse with respect to languages, culture, systems and traditions. At the same time, sufficient compatibility between the different national regulations is indispensable in order to avoid breeding confusion rather than adding opportunities for citizen choice and mobility. Cross-recognition of qualifications and competencies demands a minimum level of organisation at European level in the form of common references and basic standards.

Creating a European framework for higher education qualifications has been a major objective of the Bologna process[15]. If adopted, the proposal submitted to Ministers at their forthcoming Bergen meeting will provide a common reference not only for all various types of bachelor, master and doctoral degrees, but also for "shorter" post-secondary qualifications around a notional level of 120 ECTS points. It would thus integrate into the comprehensive

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13 Cf. Commission Recommendation on the European Charter for Researchers and on a Code of Conduct for the Recruitment of Researchers - http://europa.eu.int/eracareers/europeancharter.

14 Cf. idem.

15 Cf. Ministers' Communiqué, Berlin, 19 September 2003 - http://www.bologna-bergen2005.no

European Qualifications Framework (EQF) called for within the Lisbon Strategy to cover all types and levels of qualifications[16].

Quality depends primarily on a "culture of quality" and on an internal quality assurance (QA) within universities – all the more so when the university is close to the knowledge frontier. But the accountability of universities to society also requires an external system of QA. In Europe this should be done through a network of QA agencies - catering each for a country/region or a discipline/profession – agreeing on some basic criteria in order to facilitate the cross-recognition of quality seals throughout the Union[17]. Except for the few which have built up their own brand names, Europe's universities need quality seals with international credibility. Failure to develop such seals would perpetuate for them a competitive disadvantage.

3.2. Governance: the need for better system and institutional management

The call from universities for more autonomy is not a call for the withdrawal of the state: there is, on the contrary, a near-consensus in Europe that the state should retain or even strengthen its responsibility for higher education.

Universities are calling for a fundamentally new type of arrangement (or "contract") with society, whereby they are responsible and accountable for their programmes, staff and resources, while public authorities focus on the strategic orientation of the system as a whole.

3.2.1. Reinforcing public responsibility for higher education as a system

Focusing on the strategic orientation of the whole system would allow the state to reinforce its public responsibility for higher education in the knowledge era – mainly by defining a regulatory framework within which strategic orientation combined with autonomy and diversity results in wider access and higher quality.

In many countries this would mean a new approach in Ministries, with less *ex ante* checks and greater *ex post* accountability of universities for quality, efficiency and the achievement of agreed objectives. Neither can be achieved without extensive training, in order to enable university managers to plan and manage change in a strategic way and in a European/international perspective.

3.2.2. Enabling institutional modernisation strategies

A majority of universities feel that their national regulations do not currently allow them to undertake the changes necessary for their future. In an open, competitive and moving environment, autonomy is a pre-condition for universities to be able to respond to society's changing needs and to take full account for those responses.

Universities should be responsible for:

– setting specific medium-term priorities (including by defining types/areas of research, teaching and services in which they will achieve outstanding quality) and targeting the collective effort of their staff towards achieving these;

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16 Joint Interim Report, Council document 6905/04 of 3 March 2004, § 231.

17 The Commission's draft Recommendation on QA in Higher Education - COM(2004) 642, 12.10.2004 - builds on exactly this principle.

– managing and developing their human resources (cf. Section 3.1.3);

– defining their curricula - subject to internal QA and in accordance with the common principles of the European Higher Education Area;

– professionally managing their facilities (owning, running and developing them), financial resources (including budgets, investment and borrowing) and external communication (image building).

3.3. Funding: the need for higher and more efficient investment

Given overlong study durations, high drop-out rates and/or graduate unemployment, investing more in the current system could be perceived as unproductive, or even counter-productive. Yet combined under-funding and system rigidities are so acute in some countries that they impede the reform process at universities, who are thus trapped in a vicious circle.

To attract more funding, universities first need to convince stakeholders - governments, companies, households – that existing resources are efficiently used and fresh ones would produce added value for them. Higher funding cannot be justified without profound change: providing for such change is the main justification and prime purpose for fresh investment.

3.3.1. Investment priorities for the modernisation of higher education

A major message from universities is that reforms of the scope of those needed in Europe cannot be introduced in a sustainable way without (targeted) fresh resources[18]. These reforms require specific staff time, training, ICT development, etc. and hence specific funds - on top of those for ongoing activities.

Additional funding should primarily provide incentives and means to those universities (they exist in every system) and to those groups/individuals (they exist in each university) that are willing and able to innovate, reform and deliver high quality in teaching, research and services. This requires more competition-based funding in research and more output-related funding in education.

3.3.2. Contributions from students and industry

The debate on social and private returns from higher education has highlighted its role as an investment benefiting both the individual (through higher income and status) and society as a whole (through higher employment rates, lower social costs and later retirement[19]). It has been shown that free higher education does not by itself suffice to guarantee equal access and maximum enrolments. This casts the much debated issue of tuition fees in a fresh perspective. In the consultation, those universities arguing for higher fees suggested that a major benefit would be higher quality education. Some analysts also point out that tuition fees could in practice provide better access for students from lower income groups if the incremental funds were recycled into a sound student aid system[20]. Given the differences between national systems, there can be no uniform response to this issue: each Member State needs to choose the approach best suited to its circumstances.

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18 Cf. Stakeholders Consultation and *Trends IV* survey of Bologna reforms, EUA, March 2005.

19 Commission Staff Working Paper, Section II.

20 Conference of 10 February 2005, sessions on funding.

European universities also need to become more attractive partners for industry. Lasting partnerships are a condition for structured staff exchanges and for curricular development responding to industry's need for well trained graduates and researchers. But the development of commercially relevant training/retraining, research and consultancy services demands investment over some years before these activities start paying for themselves – all the more so if public subsidies are correspondingly reduced. This means that the development of sustainable partnerships with industry may well hinge (initially, at least) on the availability of tax incentives.

4. PRIORITIES FOR ACTION

The main directions for the modernisation of universities in Europe have been identified. Ministers will refine them at their upcoming meeting in Bergen within the Bologna process. Within the Lisbon Strategy, the priority must now be on immediate action consisting in a mix of university initiative, national enabling action and European support.

4.1. Unleashing universities' potential within the national context

Reforms of universities' status, internal organisation or funding have been undertaken already in several Member States. The Lisbon Strategy, however, challenges governments to go further by establishing a new partnership with universities, moving from State control to accountability to society, and investing in the modernisation of the knowledge sector.

4.1.1. Enabling universities to change

The Commission urges all Member States to take action ensuring that their regulatory frameworks enable and encourage university leadership to undertake genuine change and pursue strategic priorities.

Such frameworks should cover at least three essential aspects:

– regulations and incentives for system modernisation within the European context, such as the conjunct of Bologna reforms and the adjustment to the common references defined at EU level, e.g. for the EQF, the validation of non-formal learning, the European Charter for Researchers and the Code of Conduct for their recruitment or the building up of QA/ accreditation with European credibility;

– multi-annual agreements between the state/region and each university, setting out agreed strategic objectives, the commitment of university leadership to deliver on them, and the amount of fixed and contingent public funding that will be provided;

– empowering universities effectively to take and implement decisions by way of a leadership team with sufficient authority and management capacity, enough time in office and ample European/international experience. This is all the more important given the positive link between the quality of universities' leadership and output[21].

[21] Conference of 10 February 2005, sessions on governance.

4.1.2. Ensuring a sufficient level of total funding

Ensuring that no higher education system in Europe is left behind for want of sufficient total resources is a major public responsibility. The EU does not need to replicate the US system, where competition for academic stars has led to salary inflation. But the Commission estimates that even in a modernised university system, a total investment of some 2% of GDP (cf. US: 2.7%) is the minimum required for knowledge-intensive economies.

The Commission urges national decision makers in all ministries to acknowledge that closing the severe funding deficit in higher education is a core condition for achieving the Lisbon Strategy. The mix of public and private, and of basic, competitive and output-related funding, will, however, remain different between countries, given the great diversity of cultures, economies and university traditions.

Clearly, European universities need to attract a much higher share of funding from industry; but they must recognise that this will only happen in partnerships where both sides find an interest, and start preparing themselves for more of these.

The Commission therefore invites Member States to ensure that fiscal rules enable and encourage partnerships between business and universities, and that universities are able to use such funds in ways which will provide continuing strength.

A wide range of possibilities exists between the two poles of grant-supported free education and full-cost tuition fees. In any case the principle of equal opportunity must be ensured. Where tuition fees are introduced, a substantial part of the funds should be redistributed as income-contingent grants/loans aimed at guaranteeing access for all, and as performance-related scholarships aimed at encouraging excellence. Differential fees and grants systems can be used to ensure the attractiveness of courses with the highest social value, e.g. to prevent labour shortages in some areas and graduate unemployment in others; this should go as far as compensating certain categories by treating them as professionals in training, e.g. early career researchers completing a PhD.

The Commission invites Member States to consider whether their current funding model (with or without substantial tuition fees, grants and/or loans) effectively guarantees fair access for all qualified students to the maximum of their capacities.

4.2. Answering universities' call for more support from Europe

Reforms and funding are primarily the responsibility of the state, regions and universities within the national context. Nonetheless, the Commission intends to respond to the call from universities for more support from Europe in three main ways.

4.2.1. Mobilising all sources of EU funding for the modernisation of universities

Higher education is not just the sum of its education, training and research activities. It is also a fundamental economic and social sector in its own right, in need of resources for redeployment. The EU has supported the conversion process of sectors like the steel industry or agriculture; it now faces the imperative to modernise its "knowledge industry" and in particular its universities.

But higher education is not currently among the main beneficiaries of European structural funds and European Investment Bank loans. Yet, co-funding or long-term loans would make it possible to reduce or spread over time the cost of investment in higher education, whether for tangible and intangible infrastructures, training programmes or regional knowledge clusters.

The Commission therefore invites Member States to make the fullest possible use of the EU's financial instruments to develop their knowledge sector. Structural and rural development funds offer possibilities to stimulate the modernisation of higher education via sectoral measures. Higher education is also a priority sector for the EIB and further expansion of its lending is desirable.

4.2.2. Strengthening cooperation within "Education & Training 2010"

The "Education & Training 2010" work programme recognises the extreme importance of modernisation in higher education[22] - over and above the reforms called for in the Bologna process which, *a fortiori*, are also important for achieving the Lisbon Objectives.

The Commission will make full use of all tools available in the work programme to underpin Member States' efforts to modernise their universities, e.g. by supporting exchange of best practice, surveys and studies, mutual learning between policy makers, etc. Indicator analysis can also help measure performance in terms of funding and outputs[23], but the Commission does not propose specific European benchmarks in higher education.

The proposed Integrated Lifelong Learning Programme[24] for 2007-2013 will also be linked more closely to the Union's policy priorities, in particular by stimulating mobility and university-industry cooperation.

Two major objectives for 2006 are to adopt the planned European Qualifications Framework (EQF) and to begin implementing the Recommendation on quality assurance (once adopted) which introduces important new tools, such as a European register of agencies meeting standards defined at European level[25]. The Commission also plans to support a number of new EU-wide accreditation initiatives in specific disciplines in 2005.

4.2.3. Investing in outstanding quality/excellence

The Commission aims to respond to the call to invest more efforts and money in outstanding quality, while at the same time ensuring that the terrain from which excellence emerges remains open and fertile throughout the Union. Two key conditions for success are to overcome insularity and to support less-advanced regions to build up high quality in specific types/areas of activities.

A main priority will be postgraduate/doctoral schools and networks of European and worldwide calibre, in their dual function as the peak of higher education and the first career stage for researchers. The Commission will examine the possibility of providing more support to such schools and their students/researchers, provided they meet certain criteria such as:

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22 Joint Interim Report, § 1.1.2.
23 Commission Staff Working Paper, Section IV.
24 Cf. COM(2004) 474, 14.7.2004.
25 Cf. COM(2004) 642, 12.10.2004.

critical mass; interdisciplinarity; a strong European dimension; backing from regional/national authorities and direct involvement of industry; identified and declared areas of excellence. Specific support may be envisaged for joint or "European" doctorates and for quality assurance or accreditation at doctoral level.

The Marie-Curie programme for the career development and mobility of researchers[26] or the European University Institute in Florence (where the Commission will support a pilot post-doctoral programme) already provide significant support at this level.

The Commission is exploring ways to take forward its proposal for a European Institute of Technology. It needs to combine a clearly world-class reputation with a European identity and to underpin knowledge as a key to growth and jobs. It should be based on a network bringing together the best minds and companies and spreading innovation throughout Europe.

4.3. Backing needed for urgent action

This Communication will be complemented by the Commission's forthcoming Action Plan on University-based Research[27]. Together, these two documents will create a timely opportunity for ensuring that the modernisation of universities receives adequate priority in the EU's financial and policy instruments for the period 2007-2013.

The Commission invites the Council to adopt a Resolution backing its call for a new type of partnerships between state and universities and for sufficient investment to enable the modernisation of higher education. The Commission also hopes that the European Council and the European Parliament will explicitly support the agenda for change outlined in this Communication.

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[26] http://europa.eu.int/comm/research/fp6/mariecurie-actions/action/fellow_en.html

[27] Action Plan on University-based Research, mostly based on the Report from the Forum on University-based Research.