
Centrum für Hochschulentwicklung

Reinventing Higher Education

A German Perspective

Paper presented at the 10th International Meeting of University Administrators,
Cape Town, 1996.

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ABSTRACT

The fundamentally new way in which our society uses knowledge places new requirements on the higher education system. An increasingly knowledge-based society demands the education of broad segments of the population in a differentiated higher education system. Against this backdrop the demands resulting from the necessary re-orientation of the higher education system which are currently discussed very vigorously in Germany are specified more clearly.

In this context the following reform elements need to be given particular attention: the restoration of a well-balanced relationship between individual and corporate autonomy, a profiled mission of individual higher education institutions in connection with a more clear-cut orientation towards competition as well as the development of cost awareness. The objective of the Center for the Development of Higher Education established by the German Rectors' Conference and the Bertelsmann Foundation in 1994 is to accelerate and support this process of reform by the means of pilot projects and opinion leadership.

¹ Paper presented at the 10th International Meeting of University Administrators, Cape Town, 1996.

1. The knowlegde-based society - a challenge to the higher education system

In the Federal Republic of Germany we are currently seeing a lively discussion concerning the changing demands placed on the higher education system. However, in many respects it does not become clear what the discussion is all about. I personally see the really new challenge in a fundamental change in our society. It is not just the transition from the industrial society to the service society or the information society or in fact any other typologies based on individual economic or technical categories. Rather, it is a matter of a fundamentally new way in which knowledge is used and applied by our society. While in previous centuries personal experience - or the experience gathered personally by others and then passed on - was the guideline for professional, political and private action, scientific findings and methodologies have now become the basis of our decision-making processes on an unprecedented scale.

There is hardly a political decision taken today without a whole host of scientific expert opinions. Companies use scientific methods to analyse the wishes of consumers, market changes and market trends. Work places are designed in line with scientific findings.

But also our personal, our private actions are characterised by a need for scientific know-how. Who dares to sign a contract these days without legal advice? In the past this was done by way of a handshake and on the basis of personal trust. Who dares to declare himself fit for work without medical consultation? In the past this decision was taken by grandmother. Who can write a letter today without some rudimentary knowledge of computer science? At the very latest this scientific know-how will become necessary when the computer or the printer breaks down. All this shows: We live in a society that depends to an incredibly increased degree on the findings and methods of science in its political, personal and working life. The Federal Republic of Germany is on the verge of becoming a knowlegde-based society. This is the real reason for the vast demand for study places at our higher education institutions. We, the higher education institutions, are the only ones who can provide this basic knowledge of scientific methods and findings that is necessary in daily life today either for one's own use or for the assessment and classification of the scientific findings of others.

This is the real revolution and also the challenge which confronts higher education today directly with the demands and expectations of the knowlegde-based society:

Broad segments of society must be scientifically educated today.

It is no longer just the judge, the physician, the higher civil servant. It is also the salesman, the mechanic, the farmer or the member of a profession that we do not even know yet. To that extent, the importance of the high quality of our higher education system has becomes readily apparent. A knowlegde-based

society will only be efficient and competitive for as long as this is permitted by its higher education system which has to be designed for the needs and aspirations of broad segments of its population. At the same time there may, or even must, be differentiations in the higher education system.

According to this analysis, one may ask what the future model of the German university should look like bearing in mind that broad segments of the population have to be scientifically educated and a high level of quality has to be assured at the same time? In the following I will try to paint the picture of the university of the future more precisely, portraying my own ideas as well as the thinking that guides our work at the CHE.

2. Model of the new German university

First and foremost let me say this: The new German university must, like before, be a state institution, or at least a (predominantly) state-financed higher education establishment. This, incidentally, is something it will have in common with the US higher education system in which admittedly only 45 per cent of the institutions are state-owned but these educate 80 per cent of all students. In addition, the private institutions also receive public funding to a considerable extent.

On the basis of the state as a major stakeholder in higher education finance I would like to sketch the university of the future in a first step with a few characterizations and I will then fine-tune this model in the further course of my presentation.

The higher education establishment of the future must be

- o autonomous,
- o scientific,
- o competitive,
- o high-profile,
- o and economically viable.

2.1 Autonomous university

The autonomy of the university is almost a buzz word for us into which new life has to be injected. Autonomy does not mean that scientists can claim unlimited individual rights in the name of scientific freedom without any collective responsibility (individual freedom of science). Higher education must be more than an accumulation of users of a common central heating system. Autonomy, on the other hand, also includes a corporative element.

So, the question of autonomy touches upon the internal relationships in a university on the one hand, and upon the relationship between state and university on the other hand. It seems to me that individual autonomy in Germany in some instances has been extended to the point where it

borders on abuse while corporative autonomy has been largely undermined by the state.

2.1.1 Corporative vs. individual autonomy

It is beyond contention that science needs creativity and that this can only develop freely in an individualised space that is free of limits and constraints. This presupposes a high degree of freedom of the individual scientist.

The fact that in some instances the individual freedom of science was overemphasised did, however, lead to the generally bemoaned deficits in the organisation of our studies like uncoordinated courses and examination dates, overlaps in curriculum and content, to name but a few. This applies equally to research which has become so highly specialised that it is hardly capable any more of answering the holistic, interdisciplinary problems of mankind.

The freedom of research and teaching is often misunderstood as the freedom of the individual, yet it should be interpreted more emphatically as the freedom of the higher education institution or the department vis-à-vis the state to design its own study courses and research programmes. This undoubtedly also requires individual freedom - but clearly focussed on the common objectives. We cannot afford any academic individualism.²

From that point of view we must return to a well-balanced relationship between individual and corporative autonomy.

2.1.2 Autonomy vis-à-vis the state

The strong emphasis on individual scientific freedom is certainly also caused to some extent by the limitations imposed by the state on corporative autonomy. There is a clear interaction between the two. If we look at the intervention and control possibilities of the state - especially with reference to the issue of quality assurance - one can say the following: The characteristic feature of a university in the European tradition is a system of ex-ante controls operated by the state. Numerous measures taken in advance are designed to make sure that high quality work is produced. For example:

- o In the university as a state institution, or an institution recognised by the state, the state controls its own facilities or its recognition as a higher education establishment. This effectively precludes the establishment of a private institution that is allowed to call itself university. So, anyone attending a university can be sure that it is at least state-supervised.

² van Vught describes this as "academic individualism which brings along a disinterest in the welfare of the broader organisation", cf. van Vught, Frans, Management for Quality, paper presented at the CRE 10th Annual Assembly, Budapest, 31 August - 3 September 1994

- o Having the right to approve procedures within the university in the form of fixed bye-laws (e.g. the approval of examination bye-laws or course bye-laws) the state exerts an influence on the future actions of the members of the institution.
- o The organisation structure is laid down by law just like the provision of financial funds by means of the budget.
- o The appointment of professors is handled by the state, with the pertinent minister being the direct superior. Here it becomes most evident that ex-ante control is really a bill of exchange drawn on the future.

There is no doubt that this system of anticipated quality assurance has some distinct advantages. For example, it ensures

- o a high degree of homogeneity of quality without, however, necessarily guaranteeing high quality (the equality and uniformity of diplomas being a fiction for the benefit of which a great deal of coordination effort is made),
- o the extensive individual freedom of those who have been appointed,
- o a responsibility on the part of the state regarding the funding of higher education institutions.

The disadvantages of the system are

- o the high level of inflexibility:
Years go by before examination bye-laws are amended to be brought into line with new social requirements or European competition.
- o an individual abuse of freedom:
It is not that the law was actually broken, for example by teaching appointments being disregarded or by insufficient presence. The abuse is rather perpetrated in the form of a subject specialisation or niche policy by the teachers, so that the learners are no longer comprehensively educated (academic individualism).
- o the problems caused by the state no longer being capable of meeting its financial obligations.

Ex-ante control is no longer sufficient because

- o the arrangements made in the case of appointments for 25 years will no longer be up to the requirements of a rapidly changing environment, also performances tend to vary in the course of the life of a scientist or mistakes should not be perpetuated,
- o the liaison processes to coordinate homogeneity are too slow and
- o the state no longer meets its financial responsibilities to a

sufficient degree.

Increasingly, we are now confronted with a different control system used by the state - process control. Process control means that the work and decision-making processes are immediately determined with the help of guidelines, decrees and other stipulations. We are currently experiencing the direct interference into such processes very intensively in the universities, for example by way of the introduction of detailed benchmark figures for study courses, tutorial programmes, the control of teaching appointments or the ban on block teaching, the teacher appointment ordinance and interventions in the study organisation.

No organisation can survive without rules and regulations, but the extension of process control by the state is fundamentally the wrong approach because it will not be capable of solving the problems involved. Instead, there will just be the need for more new regulations to be supplied later. These remedial activities will be necessary because

- o general rules will always have to be accompanied by exceptions (e.g. block teaching may make a lot of sense for didactic reasons),
- o the effects of the rules and regulations on the behaviour of those involved are completely unpredictable,
- o creative performance cannot be enforced in the pre-defined functional work procedures and therefore
- o the higher education institutions do not have any tradition in managing fully controlled organisations which is why, quite rightly,
- o the universities develop a considerable amount of creativity in interpreting the rules and regulations.

Process control is bound to fail, not least because such complex entities as universities - just like states and large companies for that matter - simply defy central control in detail.

In our projects and initiatives we therefore come out in favour of a combination of ex-ante and ex-post control which focusses on the formulated objectives on the one hand and the degree to which these objectives are achieved (the results) on the other hand, as it is practised or currently introduced in almost all Western European countries.

To this end, however, the objectives must be made just as transparent as the achievements. The autonomous university therefore has the dual task of developing processes of objective formulation on the one hand and meeting its duties of accountability vis-à-vis society on the other hand. With reference to the formulation of objectives, however, the universities understandably have their problems especially because their objectives are so heterogeneous, often diffuse, and as a rule not very operational.³ For the higher

³ Cf. Müller-Böling, Detlef: Leistungsbemessung - Leistungstransparenz - Leistungsfolgen. Von der

education institutions this means building up decision-making structures that "organise anarchy".⁴ As far as accountability is concerned the universities will have to develop reporting systems that give an account of both the resources and the results.

The role of the state in a truly autonomous higher education establishment will then have to be redefined. Accordingly, the state will have to

- o secure the freedom of science,
- o provide funding for the universities,
- o set priorities within the framework of target agreements with the universities,
- o transfer responsibility for quality to the universities and, in the event of (alleged) poor quality hold those responsible accountable rather than interfere itself.

Certainly, there is a need for more organisational rules and regulations which I will, however, deal with in the context of the scientific nature of the university.

2.2 Scientific higher education institutions

Secondly the university of the future must be a scientific university. This implies that the university must be dominated by science and therefore needs different opinion-forming and decision-making structures than before. At the same time the possibility of individual development on the one hand and the development of joint objectives and approaches on the other hand must be assured so that individual and corporative autonomy are united in a mutually complementary fashion.

Gelehrtenrepublik zum Dienstleistungsunternehmen? in: Hochschulen im Wettbewerb, Annual General Meeting 1994 of the German Rectors' Conference, Addresses and Discussions, Halle, 5 - 7 May 1994; Dokumente zur Hochschulreform 96/1994; pp. 49 - 63

⁴ Cf. Cohen, M.D., March, I.G.: Leadership and Ambiguity, Boston, 1974

2.2.1 Management and organisational structures

What is therefore needed is an organisational structure that is capable of bringing the innovation potentials to joint fruition. To this end it does not make much sense to design a ready-made model around the conference table. Rather, it should be thrashed out in organisational development processes specifically for each university.

For example, it is not readily understandable why the periods of office of the deans or rectors or presidents should be prescribed by law. They could instead be linked to the different faculty or organisation cultures, the differentiated demands of different disciplines, the content profiles of different universities or the qualification and socialisation of different personalities. So, if no generally applicable model can be proposed from that point of view at least some general principles of organisational orientation can be formulated.

In this context the most important principle is this:

Decentralised responsibility with a centralised concept involving organised coordination.

Decentralised responsibility means that the decentralised units (chair, department, faculty) must be in charge of performance and results. However, these have to be integrated into the superior concepts in each case (i.e. the chair into the department, the department into the faculty, the faculty into the university). The determination of targets and the evaluation of results must take place within an organised, coordinated effort.

This principle can be implemented in a diversity of organisational models. Thus, the central concept can for example be represented on the faculty level by a dean or a faculty commission, on the university level by the rector, the rectorate, the senate or an administrative council, on the level above the university by the ministry or by a higher education council. Determining this issue bindingly for all universities and faculties does not seem to me to make any sense at all.

A second principle could be that the participation of members of the university in the decision-making processes be determined by the knowledge and the motivation of the people involved and not by their status.

A third principle might for example be that decision-makers - be they department heads, deans or university presidents - assume more personal responsibility, certainly more than the collegiate organs which tend to be totally devoid of responsibility.

A fourth principle worth considering is to actually professionalise the management on the institute, faculty and university levels.

However, this takes more than fixing periods of office or job descriptions currently laid down in the law. In addition, true professionalisation requires at least different selection mechanisms, different incomes, the delegation of responsibility including accountability as well as the development of professional perspectives and/or career prospects as a dean or president.

2.2.2 Unity of research and teaching

Yet, the scientific element of the university requires more than just the question of internal opinion formulation and organisational structures. What has to be underlined as well - and this has increasingly been lost sight of recently - is that the principle of the unity of research and teaching must be preserved, at least for the universities. However, this principle also has to be further developed. The concept approved by the German Rectors Conference on the development of the higher education institutions does not - as many people, unfortunately even rectors incorrectly assert - reduce the universities to mere teaching establishments or vocational colleges. Rather, due consideration is given to the new societal demands placed on regular studies, advanced scientific studies leading to promotion, and continuing scientific education.

Especially in the interest of the unity of research and teaching, life has to be injected into this concept. This has to include research-oriented teaching designed to give students a methodological education that will enable them to keep up with the constantly advancing factual knowledge through the process of life-long learning.

2.3 Competitive higher education institutions

Turning now to the quality of competitiveness the first thing to note is that competition in the field of science is not exactly an invention of the last few days. Competition has always been a force of motivation for every single scientist, for example to research or to discover things earlier or better than others.

Between the higher education institutions in Germany there has therefore always been competition for staff and for research achievements. However, competition in this field will only come to full fruition if it also includes the teaching performance. This requires competition for university entrants on the one hand and competition for jobs by the university leavers on the other hand. Competition therefore has to take place at both the input end and the output end of the university.

Even though the higher education institutions do have some general educational tasks to perform that are not immediately geared to the labour market it is beyond any doubt that higher education in general, and to a large extent also the universities, fulfill an educational function for society. The difference in value of this education must be made

visible on the one hand, and it must be appropriately rewarded on the other hand by way of fund allocation, reputation and the ability to attract professors.

The competitive university will only succeed in this competition for students, successful university leavers, employees and research performance if it has a unique and unmistakable profile.

2.4 High-profile higher education institutions

When it comes to the high-profile higher education facility we have to relinquish the notion of universality in the sense of the unity of all sciences. This is something we do not find difficult to do. In fact, this separation has long since been completed - at the latest when the technical colleges (Technische Hochschulen) were founded at the end of the last century.

Yet, the notion of the high-profile higher education institution also requires us to discard another fiction that dominates our educational system like the fiction of the equality of the qualification of school leavers who successfully passed their final examination at the end of their secondary education - and that is the fiction of the uniformity and equality of the quality of the higher education institutions.

A great deal of coordination effort is currently being made to keep up this fiction. Framework examination bye-laws are prepared for all subjects in the Federal Republic of Germany requiring an incredible amount of work by a variety of official bodies to ensure uniform study courses in the different types of higher education institutions - universities on the one hand, polytechnics on the other hand - i.e. to secure a high level of identical quality. This system does not exactly prevent performance competition, but it does not do much to promote it, either.

Leaving behind the fiction of uniformity and equality of the higher education institutions, the profiling of these institutions will affect the following aspects:

2.4.1 Profiles

Higher education institutions have to find strategic positions within the environment of the community of national and international higher education. Both the faculties and the institutions as a whole have to shape distinct profiles by agreeing on objectives and strategies like, for example,

- o best graduate education on the national level,
- o supply of the region with cultural infrastructure,
- o internationally competitive research,
- o regional technology transfer,

- o internationalisation, integration, implementation, innovation.⁵

2.4.2 Transparency and evaluation

This profiling will, however, only have some effect on competitiveness if it is made transparent. This brings us back to the formulation of objectives on the one hand and accountability on the other hand. Transparency is assured firstly by a rather more qualitatively oriented evaluation and secondly by a rather more quantitatively oriented comparison on the national level, equivalent to intercompany comparisons in industry or high school rankings as they are common practice in the USA or in Great Britain.

We are finding that after some delay evaluations are now also tackled in German higher education. The Center for the Development of Higher Education is involved in a number of projects in this field.

2.4.3 Pay commensurate with performance

Differentiation must not, however, stop short of differences within higher education institutions. This includes much more widely spread remuneration systems coupled to performance elements for all university employees. Especially university teachers must not be an exception to this rule. Performance should also be rewarded in the main subject, not just be concentrated on the secondary subjects. To the extent that this remuneration lies within the autonomy of the university, and this is an absolutely indispensable requirement, then this will lead to people working *for* the university rather than just working *in* the university.⁶

2.5 Economically viable higher education institutions

The economically viable and economically acting university should of course not be forced to make a profit or be exclusively placed under the constraints of economic rationality. But it should all the same make an effort to optimise the ratio between expenditure and funding. Added to the input considerations that have marked (budget) behaviour until now we need an assessment of the output in the sense of an individual and societal evaluation of the performance. We cannot but view costs in relation to performance. To this end we need to develop cost awareness.

2.5.1 Cost transparency

⁵Thus rub the objectives of the Columbia Business School, New York, where every scientist has to gear his research programme and teaching curriculum to these "4 Is". Cf. Rühli, Edwin: Wie erhält eine Hochschule Schwung? in: Neue Zürcher Zeitung, dated 27 July 1994.

⁶The former President of the Johns Hopkins University, Stephen Muller, once characterised at least one major difference between the American and the German higher education system like this: "The American professor works for the university while the German professor works in the university."

The economically aware higher education establishment will have to call everything into question, for example

- o the costs of its own administration and services from photocopying via workshops to transfer and press offices with a view to establishing whether these things cannot be bought at lower costs from the outside (outsourcing),
- o the costs of real-life experiments as opposed to simulations the natural sciences, as is common practice in the cost evaluation concerning third party funding,
- o the costs of self-administration processes regarding the benefits of better qualified or better accepted decisions.

2.5.2 Budget flexibilisation

The existing budget legislation does not permit any independent economic action but rather relies on the un-empowered employee in conjunction with very detailed ex-ante and process control. So, from that point of view it is not enough - as practised in previous approaches - to simply make funds interchangeable and allow them to be shifted to other budget years. Higher education institutions must be given full freedom over their expenditures in the areas of personnel, investments and current operating expenses irrespective of the criteria according to which the funds were allocated. In saying this I do not ignore the approaches taken so far towards budget flexibilisation. They must simply be seen as steps along the way.

2.5.3 Financing

This brings me to the most important point - financing. Allegedly, the state withdraws more and more from its financial responsibility through the globalisation of the university budgets. This globalisation is admittedly to be welcomed for reasons of economy and autonomy, and perhaps it is not all that important what the precise motivation for its introduction has been. But on the other hand it is also an admission that the state-operated ex-ante control has failed. To that extent the linking of the globalisation of the budgets to a success-oriented allocation of funds (in whatever shape or form) is only logical and consistent because that will automatically constitute a shift to ex-post control. This alone is, however, not enough. The financing of higher education as a whole must be placed on a new footing with the objective not so much to open up new sources of funding but to make possible an effective, competition-oriented control of the higher education institutions by way of the funding models.⁷ The income side of the universities

⁷ The former President of the Johns Hopkins University, Stephen Muller, once characterised at least one major difference between the American and the German higher education system like this: "The American professor works for the university while the German professor works in the university."

should therefore consist of the following:

- o lump-sum funding from the state that will be determined by volume criteria like number of students, number of scientific staff, catchment area within the region on the one hand as well as performance criteria like number of final exams, third party funding generated or the achievement of pre-defined targets on the other hand,
- o third-party funds in the area of research, as a function of research and development on the one hand and the utilisation of research results (patents, prototypes, etc.) on the other hand,
- o fees for students that may be linked to the subsidies of the state by way of the voucher system; here again the main objective is not to open up new financial sources but rather to channel the flow of money to the points where it can best be utilised and gives students a completely new weight in the balance of power between universities,
- o fees for community services, as for example the renting out of rooms, continuing education, laboratory services, etc.
- o donations, foundations, sponsoring.

3. Outlook

The profile elements of autonomous, competitive, high-profile and economically-acting perhaps fail to describe in sufficient detail the higher education establishment of the next century. But to my mind they do offer plenty of indications as to the points at which our quality assurance system of the past no longer suffices and needs to be replaced by new mechanisms. Most importantly, it seems to me to be a holistic model where certain details still need to be filled in but where essentially well-coordinated measures will make possible the further development of the German higher education system.

Supporting and accelerating this development is the mission of the Center for the Development of Higher Education. The Center for the Development of Higher Education was founded in 1994 by the German Rectors' Conference and the Bertelsmann Foundation to support systemic reform in Germany. During our first year of existence we have received over 200 requests for assistance or offers of cooperation by institutions of higher education. This interest has been an encouraging sign. Lump-sum funding, institutional strategy setting, boards of trustees, controlling and other modern methods of management are being discussed more openly today. There is a much more receptive atmosphere than even two or three years ago. The forces of the status quo are still strong in Germany, but Germany is catching up. Germany, once the leader in higher education, has much to learn from Britain, the United States, Australia and the Netherlands, among others. The Center for the Development of Higher Education has been systematically studying the applicability of innovative concepts from countries outside Germany. Many of these have now found their

way into the public discussion. As long as we continue to benchmark our system against the best international practise this learning process will continue.