

Ranking of Top European Research Universities
Workshop with willing universities to participate in
EUSID – Ranking of top European research universities

Berlin

21 November 2006

Ladies and Gentlemen,

Welcome in Berlin.

At first let me thank you for coming to this – as I think very important meeting – for European Higher Education system.

Today, throughout Europe and the world, we find a number of different kinds of university rankings with different methodologies, scopes and target groups and – as most of you know – of different quality!

In May the CHE hosted the second meeting of the “International Ranking Expert Group” (IREGroup) and was involved in the formulation of some basic principles and standard for the methodology of rankings.

Let me start with some background information on the CHE-Ranking and its development, because this is part of the – from my point of view – success-story. The Centre for Higher Education Development was founded in May 1994 by the German Rectors' Conference and the Bertelsmann Foundation. The Centre's purpose is to initiate and to assist reform in institutions of Higher Education. The CHE defines itself as a "think tank" and consulting group for Higher Education. As a non-profit institution, the CHE formulates non-partisan political objectives, develops integrated concepts, and explores through pilot projects existing options for future development in close cooperation with academic and government institutions. It is important that the Centre is

part of the university system and highly connected with the German Rectors Conference but also has a highly independent status.

Creating transparency about German universities by means of a ranking was one of the major founding tasks of the CHE. The first ranking was published in 1998, since 1999 we published it in cooperation with the big German magazine “stern” and since last year with the well-known weekly newspaper DIE ZEIT which has a high reputation within the academic community.

Since the beginnings of our ranking we extended the scope of subjects included from two to 36. In addition, since 2002 we publish a “Research ranking of German universities” that gives a more detailed analysis into the research indicators included in our ranking. Different from the university ranking that is aimed primarily towards students the research ranking is directed towards - and perceived by - the higher education system itself. As most of you know in 2004 we started internationalising our ranking: in a first step by including the Austrian universities; in 2005 and 2006 the Swiss universities followed – and the ETH Zürich still does. Recently we got a funding by the EU-Commission for a pilot project to include the Dutch and Flemish universities (and “hogescholen”, their “Fachhochschulen”) into the ranking. The EU appreciated our ranking approach as a possible “European alternative to the Shanghai ranking”.

Now for us there are two different approaches to internationalisation – or better “Europeanisation” - of our ranking.

The first approach is what you know about the extension of our existing ranking to additional countries – that is what we started with. This approach tries to include all universities in the participating countries and a broad range of subjects and study programmes. Up to now and in medium-term we will and can not include all European countries. Still the different higher education systems and cultures

within Europe are still too diverse – and our claim is to produce a ranking that takes into account the particularities of different national systems in order to avoid systematic biases that are inherent in the existing world rankings.

In addition a complete European ranking would have to define clusters of institutions according to their mission or function – also to avoid ranking lists with some three thousand institutions! So - in my view - a European classification of higher education institutions would be a good prerequisite for a ranking of whole Europe. But this is not the case today.

Another, intermediate, perspective for a Europe-wide ranking could be something like a consortium of regional rankings adopting a comparable approach and method. So users that know one ranking can easily understand the other rankings and get an idea of institutions even without a direct comparison in one ranking. The existing CHE ranking of Germany, Austria, Flanders, the Netherlands and Switzerland could be the core of such a consortium. My impression is that the EU-Commission might be interested in such an approach if the pilot project proves to be successful.

But all this, is not the basis of today. **Our approach in EUSID is a different one.** Instead of comparing whole countries we try to **rank top European research universities.** This will be a selective ranking of top institutions. It will definitely not include universities from all countries and countries will be represented by different numbers of universities.

In all our rankings it is our aim to serve for an informative, fair and valid ranking. So we developed, what I will call CHE-methodological principles, that distinguish CHE-Ranking from most other ranking approaches: This has been accepted by a lot of peers. Two Examples:

„The system used by CHE to evaluate universities is probably the best model available today in the world of higher education.“

Prof. Dr. Francois Tavenas
Rector Emeritus of Université Laval (Quebec)
Founding Rector of Université de Luxembourg
Quality Assurance: A Reference System for Indicators and
Evaluation Procedures, Brüssel April 2004

„ The German system of institutional ranking is nothing short of brilliant.“

Alex Usher, Vice-President
of the Educational Policy Institute, Canada,
2006

What are these principles?

1. Comparison of disciplines, not Universities

The main target group of rankings are prospective students. They decide – at least in the German and European context - for a specific subject or programme at a university, rather than for a university as such. Therefore the ranking does not rank whole universities, but strictly refers to single subjects. This approach is supported by the theoretical argument that universities comprising many disciplines and programmes are far too complex to be ranked as a unit. In addition empirical evidence suggests that there are great differences in performance between different subjects within a university. A university may be ranked high in physics and at the same time ranked very low in literature. The information, that this university is ranked in the middle, which inevitably will be the result of ranking the whole university, would not have any relevance to a freshman in physics. For this reason, we only rank single subjects or subject areas, as you can see on the screenshot

from the English version of the internet. This means that we only compare physics at University A to physics at university B, but we do not compare university A as a whole to university B as a whole. We believe that this principle takes into account the variety we encounter at our universities and which in most cases do not form a coherent picture. So - the 'subject or discipline' is the unity we rank. We started in 1998 with Economics, Business Management and Chemistry. Every year after additional disciplines followed. Since 2002 we have organized a three-year-cycle, thus most subjects will be ranked three times with the ranking 2007. In total, in a three year cycle, we are updating 36 disciplines covering the subjects of about 80 % of all students in 260 universities, more than 4.000 study programmes and some 200.000 single data.

2. No league table but rank groups

Most rankings order universities in league tables with individual rank positions. This approach suggests that each difference in the numeric value of an indicator marks a difference within the entities ranked. This inevitably involves the danger to misinterpret small differences in the numeric value of an indicator in terms of differences in performance or in quality. For example in the 2005 edition of the Times Higher Education World Ranking the difference between the rank 57 and rank 132 is only 8 points on a 100 point scale. In many cases, data are not precise enough to establish clear cut and unambiguous table positions in a reliable way. Or, to put it in statistical terms, such a procedure ignores the existence of standard errors. Instead the CHE-ranking orders universities in three groups: The best universities are ranked into the top group with the colour green, the worst into the bottom group with red colour and the rest is considered to be intermediate with the colour yellow attached, which can be seen in the screenshot for five selected indicators. Grey points signify: no data. In all our publications, within one group universities are ordered alphabetically.

3. No overall score, but multidimensional ranking

Moreover, even within a single subject, the CHE-ranking does not calculate an overall value out of single - and necessarily - weighted

indicators. According to research on rankings, there is neither a theoretical nor an empirical basis for such weighting procedures. With regard to the orientation towards the students as our main target group as well as the labour market we have to consider the heterogeneity of decision preferences within the target groups. Some students are looking for a university with high research activities (as measured e.g. by research grants, publications etc.) while other students may look for a university with close contacts between students and teachers, good mentoring and short duration of study. Calculating an overall score means to patronise the target group.

Calculating an overall score furthermore ignores the fact that also within a single subject area, universities have different profiles and specific strengths and weaknesses -as I showed you in the last screenshot- that will be overlooked by an overall score. That is why we opted for a multidimensional ranking: We collect a great number of indicators which we rank separately one from another in order to give a realistic and differentiated impression of programs and courses. Thus we leave the decision about the relevance of an indicator to the user's individual preference. The internet with its interactive features offered us new opportunities for individual choices: In the CHE-ranking users can make their own personal ranking by choosing and weighting indicators by their own. We call it "My Ranking".

And by the way: The results of all our rankings and all the data that we have analysed are accessible completely free of charge for everybody in the internet.

Those basic principles will be guiding the EUSID ranking, too. – The idea behind the project is to contribute to evolving European Higher Education Area by giving information those groups of students who have probably the highest mobility in Europe: potential Master and PdD-students in the sciences. Selecting this target group implies to take into account research at the core of the ranking – combined with data and indicators on post-graduate programmes. And of course, one idea is to show the potential of European universities who are

disadvantaged by the biases of the existing world rankings (may be with the exception of the British universities).

According to our general ranking methodology the ranking will be subject-based and lead to groups of universities instead of league tables. Focussing on top European research universities we have to be aware of the fact, that those universities ranked lowest are ranked lowest among the *best* European universities!

The subjects in this pilot phase will be mathematics, physics, chemistry and biology. To identify the top universities a pre-selection was made mainly based on research performance. The selection was based on bibliometric analysis – the number of publications between 1997 and 2004, citations (normalized against the international standard in a field), highly cited researchers, participation in the Marie Curie programme and active Nobel price or Field price winners.

On this basis a pre-selection of 20-25 universities in each field was made. According to this procedure universities from 12 European countries have been selected to participate in this ranking. While only a few universities will be top in in each field the majority will be in the ranking only in a smaller number of fields.

Today we want to discuss the results and especially the weaknesses of the existing questionnaires for departments and students. Again I express my deep thanks for coming. You will help us in developing a scientifically based ranking, which is focusing on academic values in Europe.