



State of the art of the methodologies for ranking higher education activities



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This project has been funded with support from the European Commission.
This publication reflects only the views of the authors, and the Commission cannot be held
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Grant Agreement Number: 2008 - 3599 / 001 – 001

Index

1. Introduction

2. University Rankings

2.1 INTERNATIONAL RAKINGS

- 2.1.1 Academic Ranking of World Universities
- 2.1.2 World University ranking
- 2.1.3 CEST- International Champions League of Research Institutions
- 2.1.4 Asia Week
- 2.1.5 Webometrics
- 2.1.6 Newsweek International
- 2.1.7 The Performance Ranking of Scientific Papers for World Universities by HEEACT

2.2 NATIONAL RANKINGS

- 2.2.1 CHE-Ranking
- 2.2.2 El Mundo
- 2.2.3 Wall Street Journal

2.3 INDICATORS' WEIGHTS

3. Methodology of E3M project

4. Annex

5. Project Participants

1. INTRODUCTION

University rankings have rapidly gained importance, playing an important role in decision making in higher education. They are widely used for many different reasons and by many different groups.

There are three key issues in the approximation to university ranking systems:

- Who ranks. Most of the university rankings have been elaborated by private and media-based entities (e.g., magazines). However, professional associations and governments are paying more and more attention to this question.
- Why rank. The main purpose is to give information to consumers in order to help them to make higher education choices. Other important purpose is to function as an institutional marketing strategy. A last purpose refers to the promotion of quality of education institutions, motivating competence among them.
- Who uses the rankings. Students are considered the most important consumers for rankings. Parents are other key collective since they pay the expenses of students' education. Other ranking consumers are academic entities and government institutions responsible for educational politics.

University ranking systems vary extensively since the type of indicators selected depends on the particular definition of academic quality adopted by their authors. Nevertheless, several guidelines on ranking elaboration process can be established. First, data are collected, either from existing data sources or from original sources specifically for the ranking. From the collected information, the type and quantity of variables to use is selected. Next, indicators are standardized and weighted. Lastly, calculations and comparisons are done in order to sort institutions in a ranking format.

There are different methodological offers that try to measure the quality of universities and to establish their hierarchical structure in rankings, with potential utility for students and policy-makers. In the next pages a review of such methodological offers is carried out.

The aim of this section is to analyze, under unified criteria, the different considered rankings. This will allow the observation of similarities and differences easily, identifying common or repeated patterns, in order to be able to extract some conclusions that can serve as a guide for subsequent studies. The same scheme will be applied to both national and international rankings.

International university academic rankings with major diffusion and impact (underlined in the following table) will be studied.

NATIONAL RANKINGS

GRADUATE STUDIES	POSTGRADUATE STUDIES	OTHER ISSUES
United States - US News & World Report (USNWR) United Kingdom - The Times - The Sunday Times - The Guardian University Guide Australia - Melbourne Institute - The Good University Guide Canada - The Maclean's Guide to Canadian Universities Germany <u>CHE-Die Zeit</u> France - Le Nouvel Observateur - Le Point Italy - Il Score 24 ORE Spain - Gaceta Universitaria <u>El Mundo (50 carreras)</u>	United States - Business Week - Gourman Australia - Hobsons Germany - B-School	United States - The Center - AUTM - Journal of Blacks in Higher Education - New Mobility Magazine United Kingdom - NUBS - EUGEN's Top Universities Germany - Center of Excellence Women and Science Spain - InternetLab 4iCU- 4 International colleges and universities- - COTEC - Ranking of research productivity in Spanish public universities (University of Granada)

INTERNATIONAL RANKINGS

GRADUATE STUDIES	POSTGRADUATE STUDIES	OTHER ISSUES
United Kingdom - The Guardian - The Philosophical Gourmet Asia-Pacific <u>Asia Week</u> Latin America - Qué pasa	United States <u>The Wall Street Journal</u> <u>NewsWeek International</u> United Kingdom - The Economist - The Financial Times Latin America - America Economía	China <u>University Jiao Tong of Shanghai (ARWU)</u> Taiwan <u>The Performance Ranking of Scientific Papers for World Universities</u> United Kingdom <u>Times Higher Education Supplement (THES) (World University Ranking)</u> Europe (Europe level) - Ranking of Leiden - CH Excellence Ranking - University System Ranking (Lisbon Council) Poland - Perspektywy France - Professional Ranking

		(ParisTech-Mines) Swiss • <u>CEST</u> Spain • Scimago (RI3) • <u>Webometrics</u> <u>(CIndoc, CSIC)</u>
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2. UNIVERSITY RANKINGS

In this report, the description of the rankings follows the typology of ranking systems proposed by Professor Jamie Merisotis:

<u>Publisher:</u>	Institution or newspaper who has made the ranking
<u>Type of ranking:</u>	• <u>Unified rankings</u>: disparate sets of weighted indicators are combined into a single score that reflects overall quality of a given institution • <u>Discipline-based rankings</u>: Institutions are ranked according to the specific programmes, specializations or subjects that are offered • <u>Other</u>: Rankings that are not easily characterized
<u>Structure:</u>	• <u>Numerical ranking</u>: Universities are classified with numbers: 1, 2, 3, 4... • <u>Clustering or grouped ranking</u>: Universities are ranked in tiers-top, middles, bottom, etc • <u>Top-level ranking</u>: Universities are ranked numerically but reporting only a fixed number at the top
<u>Frequency:</u>	Annual, biennial, triennial, or some irregular interval
<u>Sorting:</u>	Universities can be classified according to institutional control (public or private), geographic distribution, age, mission, etc
<u>Data sources</u>	The data are either collected from existing data sources (e.g., reported by an institution) or from original sources specifically for the ranking (e.g., surveys to students, staff or employers)
<u>Web page:</u>	Web page of the ranking if it is possible
<u>Description:</u>	A brief description and methodology of the ranking

Next, besides information according to this typology, additional details for each selected international ranking are presented.

2.1 INTERNATIONAL RAKINGS

2.1.1 Academic Ranking of World Universities

<u>Publisher:</u>	Shanghai Jiao Tong University
<u>Type of ranking:</u>	Unified approach
<u>Structure:</u>	Combination of numerical and top-level approach (top 500 universities)
<u>Frequency:</u>	Annual (2003; 2004; 2005)
<u>Sorting:</u>	Based on geographic distribution of universities (Top 100 North & Latin American Universities; Top 100 European Universities; Top 100 Asia Pacific Universities)
<u>Data sources</u>	Existing data
<u>Web page:</u>	http://ed.sjtu.edu.cn/ranking.htm
<u>Description:</u>	This ranking is the result of a detailed study of more than 2000 world universities, although only the top 500 universities are published. Indicators fundamentally based on scientific research are the following: • Total number of the alumni of an institution winning Nobel Prizes and Fields Medals (10 per cent of the total) • Total number of the staff of an institution winning Nobel Prizes and Fields Medals (20 per cent of the total) • Number of highly cited researchers in 21 broad subject categories (20 per cent of the total) • Number of articles published in <i>Nature</i> and <i>Science</i> between 2000 and 2004 (20 per cent of the total) (for institutions specialized in humanities and social sciences this indicator is not considered, and its weight is relocated to other indicators) • Number of articles cited in Science Citation Index-expanded (SCIE), Social Science Citation Index (SSCI) and Arts & Humanities Citation Index in 2004 (20 per cent of the total) • Size of institution: Total scores of the above five indicators divided by the number of full-time equivalent academic staff (10 per cent of the total) For each indicator, the highest scoring institution is assigned a score of 100, and other institutions are calculated as a percentage of the top score. Standard statistical techniques are used to adjust the indicators if necessary. Scores for each indicator are weighted according to

	percentages above indicated to arrive at a final overall score for each institution. The highest scoring institution is assigned a score of 100, and other institutions are calculated as a percentage of the top score.
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2.1.2 World University Ranking

<u>Publisher:</u>	Times Higher Education
<u>Type of ranking:</u>	Combination of unified and discipline-based approach. In addition to the main table that pulls together universities of different disciplines, tables that rank institutions according to specific discipline areas (science; technology; the arts and humanities; social sciences; biomedicine) are presented
<u>Structure:</u>	Combination of numerical and top-level approach (top 200 universities)
<u>Frequency:</u>	Annual (2004; 2005)
<u>Sorting:</u>	Based on geographic distribution of universities (Europe's top 50 universities; North America's top 50 universities; the rest of the world's top 50 universities)
<u>Data sources</u>	Existing and original data
<u>Web page:</u>	http://www.thes.co.uk/worldrankings/
<u>Description:</u>	In this ranking, corrections and indicators are introduced in order to improve the initiative of Shanghai Jiao Tong University. Authors state that some of the indicators used in that ranking confer a big advantage on universities dominated by sciences and they are omitted. In this ranking academic reputation of university judged by academics (i.e., peer review) is very important, weighting at almost half of the total score (40 per cent of the total). 2375 research-active academics are asked to name the top universities in the subject areas and the geographical regions in which they have expertise. Other original measure has been introduced in 2005 edition, consisting of data on opinion of 333 major international employers of graduates (i.e., recruiter review). Besides these original data, other indicators collected from external sources are included. Altogether it was chosen six indicators that are described next: • Peer review (40 per cent of the total) • Recruiters review (10 per cent of the total) • Citations per faculty member derived from the ISI databases (20 per

	cent of the total) • Faculty-to-student ratio (20 per cent of the total) • Percentage of international students (5 per cent of the total) • Percentage of international staff (5 per cent of the total) In order to provide a clearer presentation of data, the structure of main table has been altered on last edition. Each measure is now scored out of 100, following a similar methodology than Academic Ranking of World Universities. Thus, universities' performances on both the different indicators' scores and overall score are clearer.
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2.1.3 CEST- International Champions League of Research Institutions

<u>Publisher:</u>	Centre for Science and Technology
<u>Type of ranking:</u>	Discipline-based approach (Engineering, Computing and Technology; Clinical Medicine; Physical, Chemical and Earth Sciences; Social and Behavioral sciences; Agriculture, Biology and Environmental Sciences; Arts and Humanities; Life Sciences)
<u>Structure:</u>	Clustering ranking (quarters)
<u>Frequency:</u>	Irregular intervals (1994–1999; 1998–2002)
<u>Sorting:</u>	
<u>Data sources</u>	Existing data
<u>Web page:</u>	---
<u>Description:</u>	The ranking is based on exclusively the number of publications of research institutions belonging to the “International Champions League of Research Institutions” between 1998 and 2002. An institution is included in this international league when it has at least a so-called “qualified subfields” that is defined by two selection criteria: a minimum of 50 publications in a period of five years (1998–2002); a minimum impact of 120 in the same period of five years. Indicators included in the ranking are referred to both sub-discipline and institution. <u>Indicators concerning sub-discipline:</u> • Number of articles on ISI databases (100 per cent of the total) • Weighted impact of publications

	• Activity of publication • World share of publications <u>Indicators concerning institution:</u> • Degree of specialization of publications • Total publications Statistical techniques and scientometrics calculations are used to adjust the scores on the six indicators of the academic institutions in different subfields. Indicators in this ranking are not weighted and combined into an overall score. Institutions are ranked only according to one indicator referred to the number of articles on ISI databases, receiving a weight of 100%.
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2.1.4 Asia Week

<u>Publisher:</u>	Asiaweek
<u>Type of ranking:</u>	Combination of unified and discipline-based approach (science and technology schools)
<u>Structure:</u>	Numerical approach
<u>Frequency:</u>	Annual (1999; 2000). <i>Asiaweek</i> ceased publication as of December 2001; its online archives, including its university rankings, are still available
<u>Sorting:</u>	---
<u>Data sources</u>	Original and existing data
<u>Web page:</u>	http://cgi.cnn.com/ASIANOW/asiaweek/features/universities2000/schools/multi.overall.html
<u>Description:</u>	This ranking uses data from original questionnaires specifically designed for it as well as data from external sources. Indicators used are the following: • <u>Peer review:</u> Experts from Asian corporations and foreign universities (among them Columbia University, University of California Los Angeles and University of Leicester) were asked to give ratings concerning academic reputation of Asiatic universities (20 per cent of the total) • <u>Student selectivity:</u> Derived from 1) number of first-year students accepted compared with total applicants, 2) enrolled compared with accepted students, 3) median score of first-year students in the national or university entrance test. Schools whose educational systems or individual policies severely restrict the number of university

	applicants were awarded with an extra score (25 per cent of the total) • <u>Faculty Resources</u>: Derived from 1) full-time teachers/researchers with PhD degrees, 2) full-time teachers/researchers with master's and PhD degrees, 3) median pay, 4) per-teacher university spending, and 5) student-teacher ratio. Universities that grant non-monetary benefits such as free housing were awarded with an extra score (25 per cent of the total) • <u>Research</u>: Derived from 1) citations in academic journals as tracked by ISI databases, 2) articles in peer-reviewed journals, 3) papers presented in international conferences, 4) published books, 5) research funding, and 6) graduate students (20 per cent of the total). • <u>Financial resources</u>: Derived from 1) total spending per student, 2) library spending per student, 3) Internet bandwidth, 4) public computers and connection points, and 5) laboratory spending, only for science and technology schools (10 per cent of the total). Scores on indicators were ranked from highest to lowest, with the top university given 100 points. The others were assigned points as a percentage of the highest score. When a piece of data is not available, ratios from the 1999 survey or the lowest score of a school from the same country were used.
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2.1.5 Webometrics

<u>Publisher:</u>	Cybermetrics Lab, a research group belonging to the “Consejo Superior de Investigaciones Científicas” (CSIC)
<u>Type of ranking:</u>	Unified approach
<u>Structure:</u>	Combination between a numerical and top-level approach: • Top 6000 Universities (6000 universities) • Premier League (199 universities) • Top USA & Canada (100 universities) • Top Latin America (100 universities) • Top Europe (100 universities) • Top Eastern Europe (100 universities) • Top Asia (100 universities) • Top South East Asia (100 universities) • Top South Asia (100 universities) • Top Arab World (100 universities) • Top Oceania (100 universities)

	• Top Africa (100 universities) • Distribution by Country (Top 200, Top 500, Top 1000)
<u>Frequency:</u>	The "Webometrics Ranking of World Universities" is updated every 6 months (data collected in January and July and published one month later)
<u>Sorting:</u>	Based on geographic distribution of universities
<u>Data sources</u>	Existing data. Data are collected in two consecutive rounds for each strategy, being selected the higher value. Every website under common institutional domain is explored, but no attempt has been done to combine contents or links from different domains.
<u>Web page:</u>	http://www.webometrics.info/
<u>Description:</u>	The classification of this ranking is constructed from a database that includes 11,000 universities and more than 5,000 researching centres. The classification shows the 3,000 best institutions. The original aim of the Ranking was to promote Web publication, not to rank institutions. Supporting Open Access initiatives, electronic access to scientific publications and to other academic material are our primary targets. However web indicators are very useful for ranking purposes too as they are not based on number of visits or page design but global performance and visibility of the universities. As other rankings focused only on a few relevant aspects, specially research results, web indicators based ranking reflects better the whole picture, as many other activities of professors and researchers are showed by their web presence. The Web covers not only formal (e-journals, repositories) but also informal scholarly communication. Web publication is cheaper, maintaining the high standards of quality of peer review processes. It could also reach much larger potential audiences, offering access to scientific knowledge to researchers and institutions located in developing countries and also to third parties (economic, industrial, political or cultural stakeholders) in their own community. Webometrics Ranking intends to motivate both institutions and scholars to have a web presence that reflect accurately their activities. If the web performance of an institution is below the expected position according to their academic excellence, university authorities should reconsider their web policy, promoting substantial increases of the volume and quality of their electronic publications. <i>Methodology:</i> The unit for analysis is the institutional domain, so only universities and research centres with an independent web domain are

considered. If an institution has more than one main domain, two or more entries are used with the different addresses.

The first Web indicator, Web Impact Factor (WIF), was based on link analysis that combines the number of external in-links and the number of pages of the website, a ratio of 1:1 between visibility and size. This ratio is used for the ranking, adding two new indicators to the size component: Number of documents, measured from the number of rich files in a web domain, and number of publications being collected by Google Scholar database.

Four indicators were obtained from the quantitative results provided by the main search engines as follows:

- Size (S). Number of pages recovered from four engines: Google, Yahoo, Live Search and Exalead
- Visibility (V). The total number of unique external links received (in-links) by a site can be only confidently obtained from Yahoo Search, Live Search and Exalead
- Rich Files (R). After evaluation of their relevance to academic and publication activities and considering the volume of the different file formats, the following were selected: Adobe Acrobat (.pdf), Adobe PostScript (.ps), Microsoft Word (.doc) and Microsoft PowerPoint (.ppt). These data were extracted using Google, Yahoo Search, Live Search and Exalead
- Scholar (Sc). Google Scholar provides the number of papers and citations for each academic domain. These results from the Scholar database represent papers, reports and other academic items

The four ranks were combined according to a formula where each one has a different weight but maintaining the ratio 1:1:

WEBOMETRICS RANK		
VISIBILITY (external inlinks) 50%	SIZE (web pages)	20%
	RICH FILES	15%
	SCHOLAR	15%

The inclusion of the total number of pages is based on the recognition of a new global market for academic information, so the web is the adequate platform for the internationalization of the institutions. A strong and detailed web presence providing exact descriptions of the structure and activities of the university can attract

	new students and scholars worldwide. The number of external in-links received by a domain is a measure that represents visibility and impact of the published material, and although there is a great diversity of motivations for linking, a significant fraction works in a similar way as bibliographic citation. The success of self-archiving and other repositories related initiatives can be roughly represented from rich file and Scholar data. The huge numbers involved with the .pdf and .doc formats means that not only administrative reports and bureaucratic forms are involved. PostScript and PowerPoint files are clearly related to academic activities.
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2.1.6 Newsweek International

<u>Publisher:</u>	Newsweek
<u>Type of ranking:</u>	Unified rankings
<u>Structure:</u>	Combination between a numerical and top-level ranking in an analysis of 100 universities
<u>Frequency:</u>	Annual (Last edition: August 2006)
<u>Sorting:</u>	The ranking take into account openness and diversity universities, as well as distinction in research
<u>Data sources</u>	Existing data
<u>Web page:</u>	http://web.archive.org/web/20060820193615/http://msnbc.msn.com/id/14321230/site/newsweek/#storyContinued
<u>Description:</u>	In response to the same forces that have propelled the world economy toward global integration, universities have also become more self-consciously global: seeking students from around the world who represent the entire spectrum of cultures and values, sending their own students abroad to prepare them for global careers, offering courses of study that address the challenges of an inter connected world and collaborative research programs to advance science for the benefit of all humanity. To capture these developments, NEWSWEEK devised a ranking of global universities that takes into account openness and diversity, as well as distinction in research. This ranking evaluated schools on some of the measures used in well-known rankings published by <i>Shanghai Jiao Tong University</i> and <i>The Times of London Higher Education Survey</i>. <i>Methodology:</i> 50 per cent of the score came from equal parts of three measures used by <i>Shanghai Jiao Tong</i>: the number of highly-cited researchers in various academic fields, the number of

	articles published in Nature and Science, and the number of articles listed in the ISI Social Sciences and Arts & Humanities indices. • 40 per cent of the score came from equal parts of four measures used by <i>The Times</i>: the percentage of international faculty, the percentage of international students, citations per faculty member (using ISI data), and the ratio of faculty to students. • The final 10% came from library holdings (number of volumes)
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2.1.7 The Performance Ranking of Scientific Papers for World Universities (HEEACT)

<u>Publisher:</u>	Higher Education Evaluation & Accreditation Council of Taiwan
<u>Type of ranking:</u>	There are two types of rankings: • <u>Unified rankings</u> • <u>Discipline-based rankings.</u> The HEEACT ranking categorize all subject disciplines into six fields and rank each university's performance by fields.
<u>Structure:</u>	Combination between a numerical and top-level ranking: -Overall ranking: • Top 500 Universities • Top Universities by continents • Top Universities by countries -Ranking by fields: • Top 300 Agriculture; Agriculture by continents; Agriculture by countries • Top 300 Clinical Medicine; Clinical Medicine by continents; Clinical Medicine by countries • Top 300 Engineering; Engineering by continents; Engineering by countries • Top 300 Life Sciences; Life Sciences by continents; Life Sciences by countries • Top 300 Natural Sciences; Natural Sciences by continents; Natural Sciences by countries • Top 300 Social Sciences; Social Sciences by continents; Social

	Sciences by countries
<u>Frequency:</u>	Annual (2007; 2008; 2009)
<u>Sorting:</u>	Based on geographic distribution of universities and based on six fields that categorize all subject disciplines.
<u>Data sources</u>	Existing data. The field-based ranking utilized bibliometric data of 1998-2008 from ESI, WOS and JCR.
<u>Web page:</u>	http://ranking.heeact.edu.tw/en-us/2009/Page/Methodology
<u>Description:</u>	The 2007 ranking focused on the overall performance of each university in the quantity and quality of scientific papers. In 2008 the HEEACT began to provide subject field based rankings of world universities in addition to the overall performance based ranking. This project employs objective bibliometric indicators that evaluate both the quantity and quality of a university's scientific papers, and incorporates the assessment of long-term and short-term achievements in the composite measures. The performance measures encompass eight indicators to assess a university's overall scientific paper performance along three criteria: research productivity (accounting for 20%), research impact (30%), and research excellence (50%). The indicators used in this field-based ranking have the following characteristics: 1. Emphasize the quality of research in each field - the indicators assessing research quality (research impact and research excellence) account for 80% of the performance score 2. Take into account a university's short-term research performance (constituting 55% of the score), thus ensuring a fairer comparison between universities of various lengths of history

Criteria	Field-Based Performance Indicator	Weighting	
Research productivity	Number of articles in the last 11 years (1998-2008)	10	20
	Number of articles in the current year (2008)	10	
Research impact	Number of citations in the last 11 year (1998-2008)	10	30
	Number of citations in the last 2 years (2007-2008)	10	
	Average number of citations in the last 11 years (1998-2008)	10	
Research excellence	<i>H-index</i> of the last 2 years (2007-2008)	20	50
	Number of Highly Cited Papers (1998-2008)	15	
	Number of articles in high-impact journals in the current year (2008)	15	

Based on the measurement procedures, this project calculated a university's field-based scores by the eight indicators. For each indicator, the university with the highest number received the maximum points (100); the other universities' numbers were subdivided by the highest number and were converted decimally into their respective scores. For example, if University A had the highest number M for Indicator X, it received 100 for that indicator, while University B with a number of N received $(N/M \times 100)$ for that particular indicator. Finally, the project calculated the final score of each university by the indicator weightings presented in Table 2 and sorted the universities by their final scores for each of the six fields. Universities with the same scores were sorted alphabetically. It should be noted that many universities obtained similar scores, and the slight differences of the final scores must be interpreted carefully.

2.2 NATIONAL RAKINGS

2.2.1 CHE-Ranking

<u>Publisher:</u>	Centre for Higher Education Development
<u>Type of ranking:</u>	Combination of unified and the ranking approach based on a specific program that only have specific disciplines
<u>Structure:</u>	Clustering or grouped ranking: Universities are ranked in tires-top, middles, bottom, etc. The ranking is applied to the universities of each region of Germany, to the universities that offer a similar subject or to the universities that everyone choice. And within this classification are selected universities with the highest percentage of pupils entered per year
<u>Frequency:</u>	Annual (1998-2008). It is do a yearly control by CHE
<u>Sorting:</u>	Based on geographic distribution of universities or a classification which focuses on a specific subject
<u>Data sources</u>	As a CHE-ranking follows a multi-perspective approach, data are collected from different sources: • <u>Universities:</u> information on fees, accommodation, students, central services (to date, more than 300 universities have been included) • <u>Departments:</u> information on programmes, staff, research (to date, about 2,000 departments have been included) • <u>The professor survey:</u> each year, questionnaires are sent to all professors in the disciplines involved in that year. The survey refers to subjective judgments on their own university and asks for the names of the universities with the best reputations in their fields • <u>The student surveys:</u> a random sample of 300 students per programme is included. Many items are identical to those included in the professor survey in order to contrast opinions about a programme. In addition, students are asked for information on living conditions. • <u>A bibliometric analysis:</u> this procedure is carried out only in those subjects in which adequate data are available. • <u>An analysis of patents:</u> the CHE-ranking made the first comprehensive and comparative analysis of patents awarded to German universities. • <u>Graduates:</u> the CHE is aiming to carry out comparative graduate surveys.
<u>Web page:</u>	http://www.daad.de/deutschland/hochschulen/hochschulranking/06543.en.html

<u>Description:</u>	The Centre of Higher Education Development (CHE) began to rank Higher Education Institutions, after a two-year period of preparations in 1998. Since 1999 the ranking has been published in co-operation with the weekly news magazine <i>Der Stern</i>. The competencies of the two partners are strictly separated: the CHE is responsible exclusively for the concept and the data, whereas <i>Der Stern</i> is responsible only for marketing and distribution. The main target group of the ranking are university entrants, particularly school-leavers who need to make a decision relative to university studies and enrolment. In a similar situation are those transferring to other universities-the movers, and of course, the universities themselves. A 'decision model' was derived containing nine components relevant to the decision process: • City (e.g. mean rents), university (size, year of foundation, type) • Students • Outcomes • Internationalization • Teaching • Resources • Research • Labour market, employability • Overall assessment (students, professors) Each component comprises several indicators, all in all some thirty-five. The CHE-ranking follows a multi-perspective approach. First, each component comprises indicators from different data sources. Second, the set of indicators comprises hard facts as well as subjective judgments. The appropriateness of indicators is heavily dependent on national higher education systems. An indicator may have important meaning in one country and make no sense in another country. In the German higher education system, universities do not have the right to choose their students themselves. The number of places in a programme is determined by the given Land according to rather bureaucratic regulations that offer almost no scope to the universities. Recently, universities were permitted to select a percentage of students by themselves.
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2.2.2 El Mundo

<u><i>Publisher:</i></u>	El Mundo
<u><i>Type of ranking:</i></u>	Unified approach
<u><i>Structure:</i></u>	Combination between a numerical and top-level ranking in an analysis of 69 Spanish universities
<u><i>Frequency:</i></u>	Annual (2001-2002; 2002-2003; 2004-2005; 2005-2006; 2006-2007; 2007-2008; except 2003-2004)
<u><i>Sorting:</i></u>	Based on a specific subject
<u><i>Data sources</i></u>	Original and existing data
<u><i>Web page:</i></u>	http://aula2.elmundo.es/aula/especiales/2007/50carreras/index.html
<u><i>Description:</i></u>	The ranking of <i>El Mundo</i> is one of the developed rankings more recent and the most complete, being the most used Spanish ranking. <i>Methodology:</i> The classification of universities obtained by El mundo uses the following criteria: A) Questionnaire to teachers: 40 % of the final valuation. In a voluntary, anonymous and random survey, the university teachers value which are the best university centres to teach; which are the strong and weak points of the university; and they outline the principal lines of research of the departments that know or of which they are involved. B) Information of the university: 50 % of the total valuation. The Universities and their faculties and schools facilitate, in most cases, the following information. Of not doing it, these are analyzed in a more general way across the reports, which are public documents. The information is organized in different epigraphs: • University demand • Human resources • Physical resources • Study plan • Outcomes • Information of contexts C) Other indicators: 10% of the total score Besides the information of the university and her teachers, external studies are taken in account, as results in international rankings,

	reports of ANECA, reports of auto-evaluation of the proper centre, or results of reports of Spanish universities.
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2.2.3 Wall Street Journal¹

<u>Publisher:</u>	Wall Street Journal
<u>Type of ranking:</u>	Unified approach
<u>Structure:</u>	Combination between a numerical and top-level approach
<u>Frequency:</u>	Annual (The last edition of these ranking date from March 2007-Year 7 ranking-)
<u>Sorting:</u>	Based on geographic distribution of universities. There are three types of rankings: national, regional and international ranking
<u>Data sources</u>	Original data. The universe of U.S. schools was based on information from AACSB International, the major accrediting organization for business schools. The universe of non-U.S. schools was created through discussions with experts in the field of M.B.A. recruiting. To be eligible for the rankings, a school must receive at least 20 ratings from survey respondents who recently recruited there. What differentiates each ranking is the type of recruiters the schools attract. But the ratings of all 86 schools across the three rankings are based on how recruiters evaluated them on the same 21 attributes, as well as the recruiters' intention to return and hire a school's graduates over the next two years.
<u>Web page:</u>	http://blog.clearadmit.com/2007/09/wall-street-journal-rankings-released/
<u>Description:</u>	The Wall Street Journal's ranking of the national (US) MBA programs relies on feedback from corporate recruiters at key firms in order to rate the b-schools. More specifically, the results are based on the following criteria: 1. Recruiter feedback on each school (for 21 different attributes) 2. Recruiter plans to hire graduates from the schools in the future 3. Recent hiring patterns of corporate recruiters. While traditionally less popular than the Business Week or US News MBA rankings, the Journal has been gaining ground with increased fanfare surrounding their rankings each year. Their related hard-copy publication, WSJ Guide to the Top Business Schools, helps in

¹ The Wall Street Journal Ranking is in the national ranking section, but there are a regional and international ranking too as it is commented in the description of this ranking.

	this effort. In addition, a GMAC survey showed that the WSJ rankings were viewed as “most credible” by MBA applicants. NATIONAL RANKING This ranking is based on how recruiters rated each school on 21 attributes, their future plans to recruit at the school, and the number of survey respondents who said they had recruited recently at the school. These schools enjoy a national reputation and tend to draw recruiters from many of the same companies, usually large national and multinational firms that pay high starting salaries. REGIONAL RANKING This ranking is based on how recruiters rated each school on 21 attributes, their future plans to recruit there, and the number of survey respondents who said they had recruited recently at the school. These schools tend to draw many of their recruiters from their local regions. INTERNATIONAL RANKING This ranking is based on how recruiters rated each school on 21 attributes, their future plans to recruit there, and the number of companies hiring a high percentage of the school’s graduates for jobs outside the U.S. <i>Methodology of the three types of rankings:</i> The Wall Street Journal is based on the opinions and behaviours of 4,430 M.B.A. recruiters who took an online survey between Dec. 19, 2006, and March 23, 2007, and rated full-time M.B.A. programs on 21 different attributes. Only schools with traditional full-time programs that graduated at least 50 students from those programs in 2006 were eligible for the survey. The final sample included 184 U.S. schools and 81 non-U.S. schools, which were invited to submit lists and contact information of individuals who recruit their students. Schools that didn't send recruiter information but still met our eligibility criteria were ranked by recruiters submitted by other schools. These include Harvard Business School, the University of Pennsylvania and the University of Toronto. The Wall Street Journal and Harris Interactive contacted recruiters by email and/or regular mail. Recruiters were asked to identify all schools with which they had recruiting experiences since September 2005. Recruiters identifying more than three schools were randomly assigned three of those schools to rate, so that a single
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	recruiter could rate a maximum of three schools. Recruiters identifying three or fewer schools were asked, but not required, to rate all schools identified. In the last edition of the ranking, more recruiters than in years past rated all three schools they were eligible to rate: 30% of recruiters rated one school, 16% rated two schools and 53% rated three. As in previous years, business schools didn't have control over which schools recruiters chose to rate. To ensure that only qualified recruiters participated, it is conducted a detailed audit of the results. Recruiters who provided unusual ratings were removed from the overall sample. Ratings from those who didn't qualify as a recruiter were also removed from the results. Among the 4,430 recruiters, 81% were company employees or managers who engaged in M.B.A. recruiting, 16% were human-resources professionals, and 1% were either executive-search-firm recruiters or independent consultants. Of the 265 eligible schools, 86 received the necessary minimum of 20 recruiter ratings. We are publishing three separate rankings: National Ranking: 19 U.S. schools. Regional Ranking: 51 U.S. schools. International Ranking: 25 schools— 9 U.S. schools, 11 European schools, three Canadian schools and two Latin American schools. The National and Regional rankings group schools according to the recruiters they share, which is based on where recruiters say they tend to recruit. To create these two groups, we conducted a multivariate analysis known as hierarchical clustering based on the schools that recruiters said they had had contact with since September 2005. The International ranking comprises schools grouped according to the number of recruiters that placed graduates in positions outside of the U.S. or equally inside and outside the U.S. The ranking components for all schools measured in the survey include three elements: Perception: The perceptions of the school and its students on 21 attributes. Supportive Behaviour: Future plans to recruit at the school and hire its graduates based on two attributes.
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	Mass Appeal: • For National and Regional schools, the number of recruiters indicates that they recruit from the school • For International schools, the number of recruiters that place graduates in jobs outside the U.S. or equally inside and outside the U.S. Each of these three components accounts for one-third of a school's overall rank; its final Year 7 rank is based on an average of its Year 7 and Year 6 rank. For new schools -- American University, Tulane University, the University of Missouri-Columbia, Essec Business School and University of Oxford -- the final rank is based on Year 7 results only. <u>The Perception Attributes</u> All schools were rated on the following 21 student and school attributes that influence a recruiter's decision to visit particular college campuses or hire graduates: • Ability to work well within a team. • Analytical and problem-solving skills. • Career-services office at that school. • Commitment to corporate social responsibility, such as community service and environmental protection. • Communication and interpersonal skills. • Content of the curriculum. • Faculty expertise. • Fit with the corporate culture. • Incorporates experiential learning into the curriculum. • Leadership potential. • Likelihood of recruiting "stars" -- that is, graduates who are very likely to be promoted within the company. • Overall value for the money invested in the recruiting effort. • Personal ethics and integrity. • Strategic thinking. • Student chemistry -- that is, the general like or dislike a recruiter has of the students overall. • Students' average number of years of work experience. • Students' international knowledge and experience. • Success with past hires. • Well-roundedness. • Willingness of the school's students to relocate to the job location you require.
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	• Work ethic. <u>Supportive Behaviour Attributes</u> • Likelihood of extending an offer to a student at the school in the next two years. • Likelihood of making an effort to recruit at the school in the next two years. When interpreting the results of the entire sample to The Wall Street Journal/Harris Interactive Recruiter Year 7 Survey, differences of plus or minus three percentage points can be considered statistically different at the 95% confidence level. Ratings for each school, however, are based on smaller sample sizes. Though we believe the final sample of recruiters rating each school can be considered representative of recruiters for that school, the results based on these smaller sample sizes may prevent conclusions that include statements about statistically significant differences.
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2.3 INDICATORS' WEIGHTS

INDICATORS	2.1.1	2.1.2	2.1.3	2.1.4	2.1.5	2.1.6	2.1.7	2.2.1	2.2.2	2.2.3
Total number of the alumni of an institution winning Nobel Prizes and Fields Medals	10									
Total number of the staff of an institution winning Nobel Prizes and Fields Medals	20									
Number of highly cited researchers in 21 broad subject categories	20					(50/3)				
Number of articles published in <i>Nature</i> and <i>Science</i>	20					(50/3)				
Number of articles cited in Science Citation Index-expanded (SCIE), Social Science Citation Index (SSCI) and Arts & Humanities Citation Index	20					(50/3)				
Number of articles published in journals indexed by SCI and SSCI in each field in the last 11 years (1998-2008)							10			
Number of articles published in journals indexed by SCI and SSCI in each field in the current year (2008)							10			
Number of citation in each field from ESI in the last 11 years (1998-2008)							10			
Number of citation in each field from SCI and SSCI at WOS							10			
Average number citations in the last 11 years (number of articles in the last 11 years divided by the number of citations in the last 11 years)							10			
H-index from SCI and SSCI of the last 2 years (2007-2008)							20			
Number of Highly Cited Papers (SCI/SSCI-							15			

indexed papers that are cited most) from 1998 to 2008										
Number of articles in high-impact journals (data from JCR) in the current year							15			
Size of institution: Total scores of the above five indicators divided by the number of full-time equivalent academic staff	10									
Peer review		40		20						
Recruiters review		10								
Citations per faculty member derived from the ISI databases		20				10				
Faculty-to-student ratio		20				10				
Percentage of international students		5				10				
Percentage of international staff		5				10				
Number of articles on ISI databases			100							
Student selectivity				25						
Faculty Resources				25						
Research				20						
Financial resources				1		10*				
Size					20					
Visibility					50					
Rich Files					15					
Scholar					15					
¹ City, university								-		
¹ Students								-		
¹ Outcomes								-		
¹ Internationalization								-		
¹ Teaching								-		
¹ Resources								-		
¹ Research								-		
¹ Labour market, employability								-		
¹ Overall assessment								-		
Questionnaire to teachers									40	
² Information of the university									50	
³ Other indicators									10	
⁴ Perception										-
⁴ Supportive Behaviour										-
⁴ Mass Appeal										-

*Is the 10% of the Financial resources, but only from library holdings

¹ They are components and not indicators. Each component comprises several indicators that use the CHE ranking.

² That component includes the following indicators:

- University demand
- Human resources
- Physical resources
- Study plan
- Outcomes
- Information of contents

³ Other indicators refer to results in international rankings, reports of ANECA, reports of auto-evaluation of the proper centre, or results of reports of Spanish universities.

⁴ They are components of the Wall Street Journal Ranking.

3. METHODOLOGY FOR RANKING THIRD MISSION ACTIVITIES (E3M PROJECT)

The main objectives of this project are:

- To improve the quality, efficiency and effectiveness of education and training systems in Europe.
- To encourage and improve Higher Education Institution's contribution to society.
- To foster the creation of a European area of higher education
- To stimulate excellence and improve the visibility of university activities focused on services to society and industry.

The first step of the project is the development of a conceptual and working framework for measuring Third Mission activities. It must have a clear definition of the main three dimensions of Third Mission: Continuing Education, Technology Transfer and Innovation and Social Engagement.

Secondly, we have to define the processes of each dimension. A process is the set of steps performed in a sequential way in order to produce products or services (outputs) based on specific inputs.

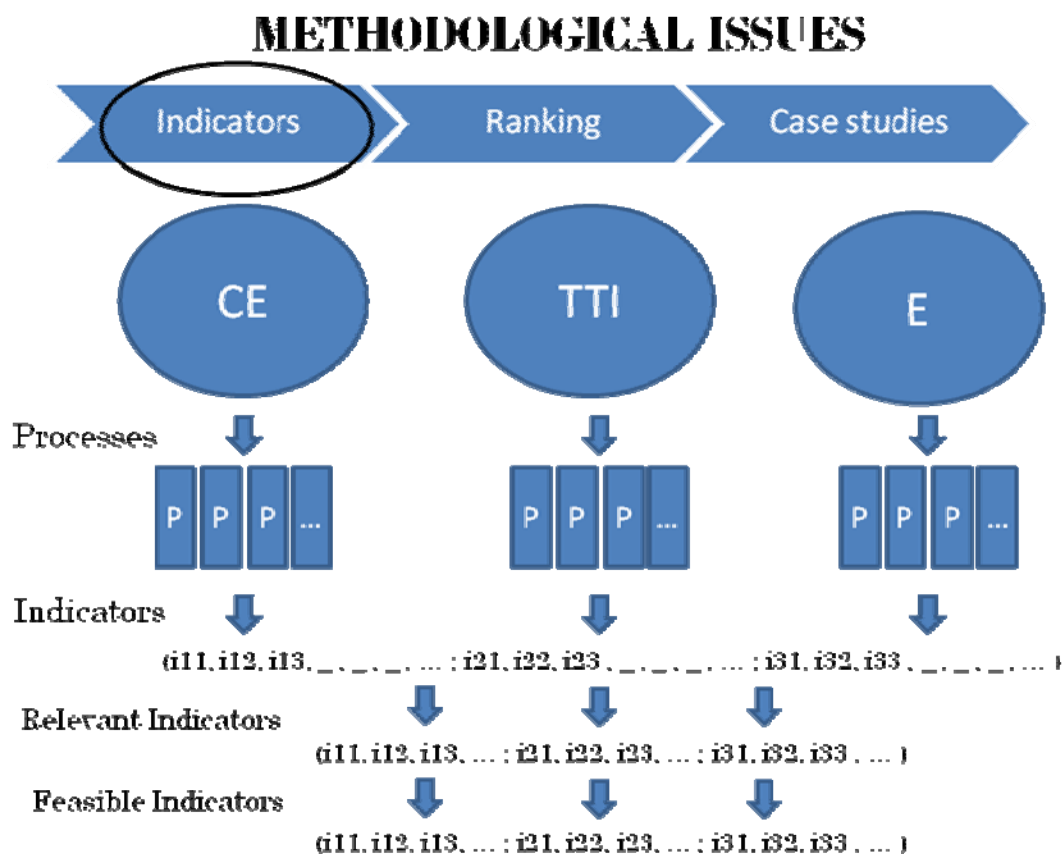
The next step of the project is producing a set of processes' indicators assessing performance and quality in the three different areas. An indicator is an instrument that allows us to measure processes quality or performance and to assess their level of achievement. In the project we will use two types of indicators, objective indicators to measure activity and performance and subjective indicators to measure perception according to stakeholders.

The following step is to obtain the relevant set of indicators which measures in a valid, precise and 'universal' way 3M activities. These indicators must be as simple as possible; they have to measure what needs to be measured with the minimum error. The set of relevant indicators is based on processes' indicators list. They are selected through a mix of statistical and qualitative methods: numerical analysis to reduce the number of variables using available information and the use of Delphi method to reach a consensus on the set with experts.

The last set of indicators that we must have at the end is called feasible indicators and they are a sub-set of relevant indicators according to information accessibility.

During the survey implementation stage we will implement this methodology, and collect the resulting data which will be used to validate both the methodology and the indicators. Data will be collected by the use of a website, and target groups will be reached through the networks and association that will be subcontracted for this work.

Once that we have collected all the data we will analyze it, and perform several statistical tests as a preliminary validation of the methodology and the indicators. Next, we will select those institutions that have been identified as excellent third mission providers and we will prepare study visits. The Study visits will carry out a second validation of the indicators and of the methodology. They will also be used to create several case studies in each of the 3 areas that we will concentrate on and will be published and disseminated to the relevant target groups.



4. ANNEX

a. ACADEMIC RANKING OF WORLD UNIVERSITIES

Top 100 European Universities 2008

CONTINENT RANK 2008	UNIVERSITY	COUNTRY	WORLD RANK 2008
1	Univ Cambridge	UK	4
2	Univ Oxford	UK	10
3	Univ Coll London	UK	22
4	Swiss Fed Inst Tech - Zurich	Switzerland	24
5	Imperial Coll London	UK	27
6	Univ Manchester	UK	40
7	Univ Paris 06	France	42
8	Univ Copenhagen	Denmark	45
9	Univ Utrecht	Netherlands	47
10	Univ Paris 11	France	49
11	Karolinska Inst Stockholm	Sweden	51
12	Univ Zurich	Switzerland	53
13	Univ Edinburgh	UK	55
13	Univ Munich	Germany	55
15	Tech Univ Munich	Germany	57
16	Univ Bristol	UK	61
17	Univ Oslo	Norway	64
18	Univ Heidelberg	Germany	67
19	Univ Helsinki	Finland	68
20	Moscow State Univ	Russia	70
21	Uppsala Univ	Sweden	71
22	Ecole Normale Super Paris	France	73
23	Univ Leiden	Netherlands	76
24	Univ Sheffield	UK	77
25	King's Coll London	UK	81
26	Univ Nottingham	UK	82
27	Stockholm Univ	Sweden	86
28	Univ Basel	Switzerland	87
29	Univ Goettingen	Germany	90
30	Univ Birmingham	UK	91
31	Aarhus Univ	Denmark	93
32	Univ Freiburg	Germany	96
33	Lund Univ	Sweden	97

CONTINENT RANK 2008	UNIVERSITY	COUNTRY	WORLD RANK 2008
59-79	Univ Barcelona	Spain	152-200
59-79	Univ Bern	Switzerland	152-200
59-79	Univ Durham	UK	152-200
59-79	Univ East Anglia	UK	152-200
59-79	Univ Grenoble 1	France	152-200
59-79	Univ Hamburg	Germany	152-200
59-79	Univ Kiel	Germany	152-200
59-79	Univ Koeln	Germany	152-200
59-79	Univ Leicester	UK	152-200
59-79	Radboud Univ Nijmegen	Netherlands	152-200
59-79	Univ Padua	Italy	152-200
59-79	Univ Paris 05	France	152-200
59-79	Univ Southampton	UK	152-200
59-79	Univ Turin	Italy	152-200
59-79	Univ Vienna	Austria	152-200
59-79	Univ Wageningen	Netherlands	152-200
59-79	Univ Warwick	UK	152-200
80-124	Chalmers Univ Tech	Sweden	201-302
80-124	Charles Univ Prague	Czech	201-302
80-124	Ecole Polytechnique	France	201-302
80-124	Ecole Super Phys & Chem Industry	France	201-302
80-124	Gothenburg Univ	Sweden	201-302
80-124	London Sch Economics	UK	201-302
80-124	London Sch Hygiene & Tropical Med	UK	201-302
80-124	Med Univ Vienna	Austria	201-302
80-124	Norwegian Univ Sci & Tech	Norway	201-302
80-124	Queen's Univ Belfast	UK	201-302
80-124	Royal Inst Tech	Sweden	201-302
80-124	Swedish Univ Agr Sci	Sweden	201-302
80-124	Tech Univ Aachen	Germany	201-302
80-124	Tech Univ Berlin	Germany	201-302
80-124	Trinity Coll Dublin	Ireland	201-302
80-124	Umea Univ	Sweden	201-302

33	Univ Bonn	Germany	97
35-58	Cardiff Univ	UK	101-151
35-58	Free Univ Amsterdam	Netherlands	101-151
35-58	Swiss Fed Inst Tech - Lausanne	Switzerland	101-151
35-58	Univ Amsterdam	Netherlands	101-151
35-58	Univ Frankfurt	Germany	101-151
35-58	Univ Geneva	Switzerland	101-151
35-58	Univ Ghent	Belgium	101-151
35-58	Univ Glasgow	UK	101-151
35-58	Univ Groningen	Netherlands	101-151
35-58	Univ Leeds	UK	101-151
35-58	Univ Leuven	Belgium	101-151
35-58	Univ Libre Bruxelles	Belgium	101-151
35-58	Univ Liverpool	UK	101-151
35-58	Univ Louvain	Belgium	101-151
35-58	Univ Mainz	Germany	101-151
35-58	Univ Milan	Italy	101-151
35-58	Univ Muenster	Germany	101-151
35-58	Univ Paris 07	France	101-151
35-58	Univ Pisa	Italy	101-151
35-58	Univ Roma - La Sapienza	Italy	101-151
35-58	Univ Strasbourg 1	France	101-151
35-58	Univ Sussex	UK	101-151
35-58	Univ Tuebingen	Germany	101-151
35-58	Univ Wuerzburg	Germany	101-151
59-79	Delft Univ Tech	Netherlands	152-200
59-79	Erasmus Univ	Netherlands	152-200
59-79	Queen Mary, Univ London	UK	152-200
59-79	Tech Univ Denmark	Denmark	152-200

80-124	Univ Aberdeen	UK	201-302
80-124	Univ Antwerp	Belgium	201-302
80-124	Univ Athens	Greece	201-302
80-124	Univ Autonoma Madrid	Spain	201-302
80-124	Univ Bath	UK	201-302
80-124	Univ Bochum	Germany	201-302
80-124	Univ Bologna	Italy	201-302
80-124	Univ Bordeaux 1	France	201-302
80-124	Univ Complutense - Madrid	Spain	201-302
80-124	Univ Duesseldorf	Germany	201-302
80-124	Univ Dundee	UK	201-302
80-124	Univ Erlangen Nuernberg	Germany	201-302
80-124	Univ Florence	Italy	201-302
80-124	Univ Halle - Wittenberg	Germany	201-302
80-124	Univ Karlsruhe	Germany	201-302
80-124	Univ Lancaster	UK	201-302
80-124	Univ Lausanne	Switzerland	201-302
80-124	Univ Leipzig	Germany	201-302
80-124	Univ Liege	Belgium	201-302
80-124	Univ Lyon 1	France	201-302
80-124	Univ Marburg	Germany	201-302
80-124	Univ Mediterranee	France	201-302
80-124	Univ Montpellier 2	France	201-302
80-124	Univ Newcastle- upon-Tyne	UK	201-302
80-124	Univ Reading	UK	201-302
80-124	Univ St Andrews	UK	201-302
80-124	Univ Stuttgart	Germany	201-302
80-124	Univ Toulouse 3	France	201-302
80-124	Univ York	UK	201-302

b. WORLD UNIVERSITIES RANKING

Top 200 World Universities 2009

WORLD RANK 2009	UNIVERSITY	COUNTRY
1	HARVARD University	United States
2	University of CAMBRIDGE	United Kingdom
3	YALE University	United States
4	UCL (University College London)	United Kingdom
5=	IMPERIAL College London	United Kingdom
5=	University of OXFORD	United Kingdom
7	University of CHICAGO	United States
8	PRINCETON University	United States
9	Massachusetts Institute of Technology (m...)	United States
10	California Institute of Technology (calt...)	United States
11	COLUMBIA University	United States
12	University of PENNSYLVANIA	United States
13	JOHNS HOPKINS University	United States
14	DUKE University	United States
15	CORNELL University	United States
16	STANFORD University	United States
17	AUSTRALIAN National University	Australia
18	McGill University	Canada
19	University of MICHIGAN	United States
20=	ETH Zurich (Swiss Federal Institute of T...)	Switzerland
20=	University of EDINBURGH	United Kingdom
22	University of TOKYO	Japan
23	KING'S College London	United Kingdom
24	University of HONG KONG	Hong Kong
25	KYOTO University	Japan
26	University of MANCHESTER	United Kingdom
27	CARNEGIE MELLON University	United States
28	Ecole Normale Supérieure, PARIS	France
29	University of TORONTO	Canada

WORLD RANK 2009	UNIVERSITY	COUNTRY
51	University of COPENHAGEN	Denmark
52=	NEW YORK University (nyu)	United States
52=	PEKING University	China
54	BOSTON University	United States
55=	Technical University of MUNICH	Germany
55=	TOKYO Institute of Technology	Japan
57	HEIDELBERG University	Germany
58	University of WARWICK	United Kingdom
59	University of ALBERTA	Canada
60	LEIDEN University	Netherlands
61=	The University of AUCKLAND	New Zealand
61=	University of Wisconsin-madison	United States
63=	AARHUS University	Denmark
63=	University of Illinois, Chicago (uic)	United States
65	Catholic University of LEUVEN	Belgium
66	University of BIRMINGHAM	United Kingdom
67=	London School of Economics And Political...	United Kingdom
67=	LUND University	Sweden
69	Kaist - Korea Advanced Institute of Scie...	Korea, South
70=	University of YORK	United Kingdom
70=	UTRECHT University	Netherlands
72	University of GENEVA	Switzerland
73=	Nanyang Technological University (NTU)	Singapore
73=	WASHINGTON University In St. Louis	United States
75	UPPSALA University	Sweden
76=	University of CALIFORNIA, San Diego	United States
76=	University of TEXAS At Austin	United States
78	University of NORTH CAROLINA, Chapel Hil...	United States
79	University of GLASGOW	United Kingdom

30	National University of Singapore (NUS)	Singapore
31	BROWN University	United States
32=	NORTHWESTERN University	United States
32=	University of California, Los Angeles (u...	United States
34	University of BRISTOL	United Kingdom
35	HONG KONG University of Science And Tech...	Hong Kong
36=	École Polytechnique	France
36=	University of MELBOURNE	Australia
36=	University of SYDNEY	Australia
39	University of California, BERKELEY	United States
40	University of BRITISH COLUMBIA	Canada
41	University of QUEENSLAND	Australia
42	Federal Polytechnic School of LAUSANNE	Switzerland
43=	OSAKA University	Japan
43=	TRINITY College Dublin	Ireland
45	MONASH University	Australia
46	The Chinese University of HONG KONG	Hong Kong
47=	SEOUL National University	Korea, South
47=	University of NEW SOUTH WALES	Australia
49=	TSINGHUA University	China
49=	University of AMSTERDAM	Netherlands

80	University of WASHINGTON	United States
81	University of ADELAIDE	Australia
82	University of SHEFFIELD	United Kingdom
83	DELFT University of Technology	Netherlands
84	University of WESTERN AUSTRALIA	Australia
85	DARTMOUTH College	United States
86	GEORGIA Institute of Technology	United States
87=	PURDUE University	United States
87=	University of ST ANDREWS	United Kingdom
89	University College DUBLIN	Ireland
90	EMORY University	United States
91	University of NOTTINGHAM	United Kingdom
92=	NAGOYA University	Japan
92=	University of ZURICH	Switzerland
94	Free University of BERLIN	Germany
95=	NATIONAL TAIWAN University (NTU)	Taiwan
95=	University of SOUTHAMPTON	United Kingdom
97	TOHOKU University	Japan
98	Ludwig Maximilian - University of MUNICH...	Germany
99	University of LEEDS	United Kingdom
100	RICE University	United States

c. WEBOMETRICS

Top 100 European Universities 2009

CONTINENT RANK 2009	UNIVERSITY	COUNTRY	WORLD RANK 2009
1	University of Cambridge	United Kingdom	22
2	University of Oxford	United Kingdom	42
3	Swiss Federal Institute of Technology ETH Zurich	Switzerland	46
4	University College London	United Kingdom	51
5	University of Helsinki	Finland	52
6	Norwegian University of Science & Technology	Norway	54
7	University of Oslo	Norway	55
8	Universität Wien	Austria	68
9	Universidad Complutense de Madrid	Spain	69
10	University of Edinburgh	United Kingdom	71
11	Università di Bologna	Italy	72
12	University of Southampton	United Kingdom	74
13	Utrecht University	Netherlands	79
14	Uppsala University	Sweden	80
15	Université Catholique de Louvain	Belgium	81
16	Freie Universität Berlin	Germany	84
17	Université de Geneve	Switzerland	88
18	Linköping University	Sweden	92
19	University of Groningen	Netherlands	94
20	Charles University	Czech Republic	97
21	Universität Hamburg	Germany	99
22	Royal Institute of Technology	Sweden	103
23	Technische Universität Wien	Austria	106
24	Lund University	Sweden	108
25	University of Amsterdam	Netherlands	111
26	Rheinisch Westfälische Technische Hochschule Aachen	Germany	113
27	Masaryk University	Czech Republic	116
28	Ludwig Maximilians Universität München	Germany	122
29	University of Warwick	United Kingdom	123
30	University of Copenhagen	Denmark	128
31	Université Paris 6 Pierre and Marie Curie	France	129
32	Humboldt Universität zu Berlin	Germany	130

CONTINENT RANK 2009	UNIVERSITY	COUNTRY	WORLD RANK 2009
51	Universitat Autònoma de Barcelona	Spain	174
52	Universität Freiburg	Germany	178
53	Technische Universität Dortmund	Germany	180
54	Göteborg University	Sweden	184
55	Universidad del País Vasco	Spain	186
56	University of Birmingham	United Kingdom	187
57	Lomonosov Moscow State University	Russian Federation	188
58	Stockholm University	Sweden	191
59	Universitat de Barcelona	Spain	192
60	Friedrich Alexander Universität Erlangen Nürnberg	Germany	195
61	Università degli Studi di Padova	Italy	198
62	Università degli Studi di Roma La Sapienza	Italy	200
63	University of Ljubljana	Slovakia	201
64	Rheinische Friedrich Wilhelms Universität Bonn	Germany	203
65	Eindhoven University of Technology	Netherlands	205
66	Technische Universität Chemnitz	Germany	206
67	Technische Universität Darmstadt	Germany	210
68	Universität Bremen	Germany	211
69	University of Nottingham	United Kingdom	212
70	London School of Economics and Political Science	United Kingdom	215
71	Delft University of Technology	Netherlands	216
72	Aarhus University	Denmark	218
73	Johann Wolfgang Goethe Universität Frankfurt am Main	Germany	219
74	Technion Israel Institute of Technology	Israel	221
75	Open University UK	United Kingdom	222
76	Universidad de Sevilla	Spain	223
77	Imperial College	United Kingdom	225
78	Universität Regensburg	Germany	226
79	Universidad Politécnica de Valencia	Spain	228
80	University of Bristol	United Kingdom	232
81	Budapest University of Technology and Economics	Hungary	235
82	Free University of Amsterdam	Netherlands	237

33	University of Glasgow	United Kingdom	131
34	Universität Leipzig	Germany	132
35	Università di Pisa	Italy	133
36	University of Bergen	Norway	135
37	University of Twente	Netherlands	139
38	École Polytechnique Federale de Lausanne	Switzerland	141
39	Technische Universität München	Germany	148
40	Universidade do Porto	Portugal	149
41	Technische Universität Berlin	Germany	150
42	Ruprecht Karls Universität Heidelberg	Germany	159
43	University of Manchester	United Kingdom	160
44	Universitat Politècnica de Catalunya	Spain	161
45	Universidad Politécnica de Madrid	Spain	165
46	Universität Karlsruhe	Germany	166
47	University of Leeds	United Kingdom	167
48	Universität Munster	Germany	168
49	University of Dublin Trinity College	Ireland	169
50	Hebrew University of Jerusalem	Israel	171

83	Tel Aviv University	Israel	238
84	University of York	United Kingdom	239
85	Universidad de Murcia	Spain	242
86	Jyväskylä University	Finland	244
87	Universität Tübingen	Germany	246
88	Università degli Studi di Torino	Italy	250
89	Technical University of Denmark	Denmark	251
90	Universidad de Granada	Spain	252
91	Newcastle University	United Kingdom	253
92	Technische Universität Dresden	Germany	256
93	Universitat d'Alacant	Spain	258
94	Leiden University	Netherlands	259
95	Universität zu Köln	Germany	260
96	Lancaster University	United Kingdom	261
97	Universidade de Vigo	Spain	262
98	Universität Stuttgart	Germany	264
99	University of Sheffield	United Kingdom	265
100	Universidade do Minho	Portugal	267

d. NEWSWEEK INTERNATIONAL

Top 100 Global Universities 2006

WORLD RANK 2006	UNIVERSITY
1	Harvard University
2	Stanford University
3	Yale University
4	California Institute of Technology
5	University of California at Berkeley
6	University of Cambridge
7	Massachusetts Institute Technology
8	Oxford University
9	University of California at San Francisco

WORLD RANK 2006	UNIVERSITY
51	University of Colorado at Boulder
52	Utrecht University
53	University of Melbourne
54	University of Southern California
55	University of Alberta
56	Brown University
57	Osaka University
58	University of Manchester
59	University of California at Santa Barbara

10	Columbia University
11	University of Michigan at Ann Arbor
12	University of California at Los Angeles
13	University of Pennsylvania
14	Duke University
15	Princeton University
16	Tokyo University
17	Imperial College London
18	University of Toronto
19	Cornell University
20	20. University of Chicago
21	Swiss Federal Institute of Technology in Zurich
22	University of Washington at Seattle
23	University of California at San Diego
24	Johns Hopkins University
25	University College London
26	Swiss Federal Institute of Technology in Lausanne
27	University Texas at Austin
28	University of Wisconsin at Madison
29	Kyoto University
30	University of Minnesota Twin Cities
31	University of British Columbia
32	University of Geneva
33	Washington University in St. Louis
34	London School of Economics

60	Hong Kong University of Science and Technology
61	Wageningen University
62	Michigan State University
63	University of Munich
64	University of New South Wales
65	Boston University
66	Vanderbilt University
67	University of Rochester
68	Tohoku University
69	University of Hong Kong
70	University of Sheffield
71	Nanyang Technological University
72	University of Vienna
73	Monash University
74	University of Nottingham
75	Carnegie Mellon University
76	Lund University
77	Texas A&M University
78	University of Western Australia
79	Ecole Normale Super Paris
80	University of Virginia
81	Technical University of Munich
82	Hebrew University of Jerusalem
83	Leiden University
84	University of Waterloo

35	Northwestern University
36	National University of Singapore
37	University of Pittsburgh
38	Australian National University
39	New York University
40	Pennsylvania State University
41	University of North Carolina at Chapel Hill
42	McGill University
43	Ecole Polytechnique
44	University of Basel
45	University of Maryland
46	University of Zurich
47	University of Edinburgh
48	University of Illinois at Urbana Champaign
49	University of Bristol
50	University of Sydney

85	King's College London
86	Purdue University
87	University of Birmingham
88	Uppsala University
89	University of Amsterdam
90	University of Heidelberg
91	University of Queensland
92	University of Leuven
93	Emory University
94	Nagoya University
95	Case Western Reserve University
96	Chinese University of Hong Kong
97	University of Newcastle
98	Innsbruck University
99	University of Massachusetts at Amherst
100	Sussex University

e. WALL STREET JOURNAL

Top 25 International Universities 2007

WORLD RANK 2007	UNIVERSITY (BUSINESS SCHOOL)
1	ESADE
2	IMD
3	London Business School
4	IPADE
5	Massachusetts Institute of Technology (Sloan)
6	Columbia University
7	Essec
8	Tecnológico de Monterrey (EGADE)
9	HEC Paris
10	Thunderbird
11	York University (Schulich)
2	University of Western Ontario (Ivey)
13	University of Chicago
14	Instituto de Empresa
15	Insead
16	University of Pennsylvania (Wharton)
17	Bocconi University
18	Erasmus University (Rotterdam)
19	IESE
20	Northwestern University (Kellogg)
21	Harvard University
22	New York University (Stern)
23	University of Oxford (Saïd)
24	University of Toronto (Rotman)
25	Stanford University

f. THE PERFORMANCE RANKING OF SCIENTIFIC PAPERS FOR WORLD UNIVERSITIES BY HEEACT

Top 100 European Universities 2009

CONTINENT RANK 2009	UNIVERSITY	WORLD RANK 2009
1	University of Cambridge	15
2	University of Oxford	17
3	University of London - University College London	20
4	Imperial College London	22
5	Karolinska Institutet	34
6	Ludwig Maximilians University of Munich	42
7	University of Helsinki	48
8	University of Paris VI: Pierre et Marie Curie	50
9	Swiss Federal Institute of Technology - Zurich	53
10	Universito of Copenhagen	54
11	The Universito of Manchester	55
12	Utrecht Universito	56
13	Universito of Edinburgh	61
14	University of London - King's College London	63
15	Lund Universito	64
16	Universito of Zurich	65
17	Ruprecht Karl University of Heidelberg	66
18	Leiden Universito	67
19	Katholieke Universiteit Leuven	68
20	Universito of Amsterdam	69
21	Universito of Milan	77
22	Erasmus Universito Rotterdam	81
23	University of Paris XI: Sud	88
24	University of Rome La Sapienza	91
25	Universito of Bristol	92
26	Uppsala Universito	95
27	Universito of Geneva	98
28	Universito of Aarhus	101
29	Technical Universito of Munich	103
29	Universito of Groningen	103
31	VU Universito Amsterdam	106

CONTINENT RANK 2009	UNIVERSITY	WORLD RANK 2009
51	Georg-August University of Göttingen	150
52	University of Hamburg	152
53	University of Bonn	153
54	University of Naples Federico II	154
55	University of Leeds	157
56	University of Würzburg	158
57	University of Oslo	159
58	University of Paris V: René Descartes	164
59	Universito of Münster	166
60	Swiss Federal Institute of Technology - Lausanne	167
61	Universito of Cologne	171
62	Universito of Bern	172
63	Universito of Turin	173
63	Universito of Vienna	173
65	Universito of Lausanne	175
66	University Louis Pasteur (Strasbourg I)	176
67	Universito of Liverpool	177
68	University of Paris VII: Denis Diderot	180
69	Durham Universito	181
70	Université Libre de Bruxelles	183
71	Heinrich Heine University of Düsseldorf	184
72	Cardiff Universito	187
73	RWTH Aachen Universito	188
74	Universito of Florence	190
75	Universito of Dundee	192
76	Wageningen Universito	193
77	Stockholm Universito	195
78	Autonomous Universito of Madrid	197
79	Universito of Leicester	202
80	Maastricht Universito	203
81	Université catholique de Louvain	205

32	Universito of Birmingham	107
33	Humboldt Universito of Berlin	108
34	Universito of Barcelona	109
35	Universito of Padua	111
36	Ghent Universito	114
36	Universito of Glasgow	114
38	Universito of Bologna	121
39	Eberhard Karls University of Tübingen	122
40	Universito of Basel	124
41	Universito of Nottingham	127
42	Radboud Universito Nijmegen	128
43	Friedrich Alexander University of Erlangen Nuremberg	131
44	Universito of Sheffield	136
45	Johannes Gutenberg University of Mainz	137
46	Johann Wolfgang Goethe-University of Frankfurt am Main	139
47	Albert Ludwigs University of Freiburg	140
48	Free University of Berlin	141
49	University of Southampton	146
50	University of Newcastle upon Tyne	149

82	Université Claude Bernard Lyon 1	209
83	Université Joseph Fourier	210
84	Göteborg Universito	215
85	Autonomous Universito of Barcelona	217
86	Ruhr-University Bochum	219
87	Universito of Pisa	221
88	Complutense Universito of Madrid	223
89	Charles Universito in Prague	226
90	Lomonosov Moscow State Universito	227
91	Hannover Medical School	230
92	Technical Universito of Denmark	232
93	Universito of Leipzig	235
94	University of London - Queen Mary College	237
95	Delft University of Technology	238
96	University of Ulm	240
97	University of Kiel	242
98	Trinity College, Dublin	243
99	Umeå University	244
100	University of Valencia	246

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