Measuring Quality by Quantity

Comments from a University

Prof. Dr. Hans Weder, President
University of Zurich
The Academic Ranking of World Universities…

- is a good ranking;
- ranks research universities by their research performance;
- is based on internationally comparable data (not on mere estimations);
- is published on the web;
- its methodology is continuously to be discussed.
Discussing the Ranking’s Methodology

The questions from which the discussions arise

- Can the quality of universities be measured by mere numbers?

- What are the indicators, how are they defined, what are the main problems with them, how can they be improved?
Comments on the Indicators

Nobel Prizes

• How to count prizes if they are shared?
• In the case of a migrating scientist: To which country shall the prize be given?
• Shall they be set in relation to the population of a country as a whole?
• The rankings can diverge.
• There are more good scientists than prizes.
Comments on the Indicators

Fields Medals

• Only mathematics are incorporated.

• How about other fields and other core prizes and medals?

• E. g., the Balzan Prize (humanities)
Comments on the Indicators

Articles published in Nature and Science

• Interesting, but highly selective results

• Expanding the list of core journals?
Comments on the Indicators

Science Citation Index-expanded and Social Science Citation Index

- For many subjects (e.g., humanities) the period of time taken into account is too short.

- The time window differs very much from the time windows for the other indicators.

- It is used what is available.
Comments on the Indicators

How about peer review?

• It is mostly used for ex ante evaluation of manuscripts.

• For university rankings: Quality can be measured by combining bibliometric analyses and peer review.
Post-publication filtering and evaluation: Faculty of 1000

- Focusing on the best papers regardless of the journal in which they are published.

- Redefining core journals within faculties?
### Table 2 Redefining ‘core’ journals within Faculties?

<table>
<thead>
<tr>
<th>Cell biology</th>
<th>Chemical biology</th>
<th>Developmental biology</th>
<th>Genomics &amp; Genetics</th>
<th>Immunology</th>
<th>Microbiology</th>
<th>Neurobiology</th>
<th>Plant biology</th>
<th>Structural biology</th>
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</table>

Journals are ranked within each Faculty according to the percentage of papers selected for Faculty of 1000 relative to their total content (i.e. a 'normalized' perspective). Data calculated for papers added to the site between Aug 2001 and May 2003.

Examining quality at the University of Zurich

- Integrated evaluation approach
- Informed peer review
Examining Quality at the University of Zurich

Evaluation objectives

• Assess, assure, and improve the quality of academic work in research, teaching, and services as well as assure the quality of management and administration

• Provide decision aids to support medium and long-term strategic planning

• Report to the public (accountability)
What is Evaluated?

Units
• Academic area: Departments, degree programs, institutes, sections, clinics, faculties
• Executive board of the university, university administration

Fields of activity
• Research, teaching, services, promotion of young academics / scientists, management and administration

General conditions
• Structures, surrounding fields / cooperation (e.g., ETH Zurich)
• Resources
Overview of the Evaluation Process

Informed peer review ➔ Follow-up / goal agreement (implementation of results) ➔ Monitoring of implementation of goal agreement ➔ Re-evaluation
Evaluation Procedures

Self-evaluation
- With report prepared by the unit under evaluation

Surveys / analyses
- Conducted by the evaluation office

External evaluation
- With site visit and report prepared by the team of experts and statement of response by the unit under evaluation

Comprehensive report
- Prepared by the evaluation office; statement of response by the unit under evaluation

Follow-up / goal agreements
- By the executive board of the university
- Monitoring of implementation of goal agreements
- By the evaluation office
Thank you for your attention.