Research evaluation in the Netherlands: a library perspective

Wouter Gerritsma, Library Wageningen UR
Introduction

- Research evaluation in the Netherlands
- Bibliometric evaluation
- Impact factors
- Citation analysis
Research evaluation in the Netherlands

- Based on a 6 year cycle
  - Supervised by Quality Assurance Netherlands Universities (QANU).
  - Standard Evaluation Protocol (SEP) ([http://www.vsnu.nl/web/show/id=53923/langid=43/](http://www.vsnu.nl/web/show/id=53923/langid=43/); in English)
  - Self assessments and external reviews
SEP criteria

- Quality
- Productivity
- Relevance
- Vitality
Procedures

- External reviews are internally prepared
  - Productivity is extracted from publication databases (repositories play an important role)
  - Relevance, bibliometric analyses do play a role
  - Vitality, SWOT analyses are popular.
Bibliometrics analyses

- Bibliometric analysis is not stipulated by the SEP
- It is valued by the preparing committee
  - Used internally to judge researchers and research groups
  - Not always used by the peer review committee
Bibliometric analysis

I've cited me myself and I.
A word of warning: Impact factors

- Measure for the quality of journals
  “... it is also used for assessment of the quality of individual papers, scientists and departments. For the latter a scientific basis is lacking, as we will demonstrate in this contribution” (Opthof, 1997)

http://dx.doi.org/10.1016/S0008-6363(96)00215-5
50% of articles generate 90% of citations

Bibliometric analysis

Citation data can be derived from many resources
The main question is: How do we compare numbers?

- Scientist Z. Math has a publication from 1996 with 17 citations
- Scientist M. Biology has a publication from 2003 with 24 citations
Baseline mathematics

Years after publication

Cumulative no. citations

Baseline

Top 10%

Top 1%
Baseline Molecular Biology

![Graph showing cumulative citations over years after publication](image)

- Baseline
- top 10%
- top 1%
Essential Science Indicators (ESI)

- Database that presents analyses of the most recent (10 years + year building) data from SCI
- Comparisons between countries, institutes, researchers en journals
- Hot papers
- Research fronts
- Baselines
Steps in citation analysis

- On the basis of authors names, all publications are checked for citations in WoS, downloaded to EndNote, subsequently to Access
- Baselines are retrieved from ESI
- Journals categories are checked in ESI
- The three tables are linked by ISSN and category names
- Analyses are made for authors, research groups and Institutes
Relations in Access

**Articles FMA**
- ID
- Citation
- ISSN
- Year
- LSG
- Citations

**WIAS journals**
- ISSN
- Abrev Journal Title
- Journal Title
- IF
- Categorie ESI

**Baselines**
- Id
- ESI Categories
- Year
- Average
- Best 1
- Best 10
## Evaluation of a research institute

<table>
<thead>
<tr>
<th></th>
<th>All groups</th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural Sciences</td>
<td>3.82</td>
<td>3.86</td>
<td>3.87</td>
<td>3.60</td>
</tr>
<tr>
<td>Biology &amp; biochemistry</td>
<td>0.91</td>
<td>1.55</td>
<td>0.44</td>
<td>1.09</td>
</tr>
<tr>
<td>Chemistry</td>
<td>1.76</td>
<td></td>
<td>1.76</td>
<td></td>
</tr>
<tr>
<td>Clinical medicine</td>
<td>1.73</td>
<td>1.81</td>
<td>1.11</td>
<td></td>
</tr>
<tr>
<td>Microbiology</td>
<td>1.70</td>
<td>0.57</td>
<td></td>
<td>1.73</td>
</tr>
<tr>
<td>Overall impact</td>
<td>2.06</td>
<td>2.08</td>
<td>2.26</td>
<td>1.84</td>
</tr>
</tbody>
</table>
## Evaluation of candidates

<table>
<thead>
<tr>
<th>Author</th>
<th># Papers 1994-2003</th>
<th># Citations</th>
<th>Relative Impact</th>
<th>RI 1994-1998</th>
<th>RI 1999-2003</th>
<th># papers top 10%</th>
<th># papers top 1%</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>80</td>
<td>1565</td>
<td>1,64</td>
<td>1,76</td>
<td>1,52</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>b</td>
<td>65</td>
<td>498</td>
<td>1,93</td>
<td>1,84</td>
<td>1,95</td>
<td>17</td>
<td>1</td>
</tr>
<tr>
<td>c</td>
<td>93</td>
<td>972</td>
<td>1,15</td>
<td>1,39</td>
<td>0,9</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>d</td>
<td>88</td>
<td>1886</td>
<td>1,86</td>
<td>1,69</td>
<td>1,94</td>
<td>16</td>
<td>3</td>
</tr>
<tr>
<td>e</td>
<td>57</td>
<td>346</td>
<td>0,75</td>
<td>0,58</td>
<td>0,83</td>
<td>3</td>
<td>0</td>
</tr>
</tbody>
</table>
Tools at hand

- Subscription citation products
  - Web of Science (WOS) (= Science Citation Index)
  - Essential Science Indicators (ESI)
  - Scopus (new, Elsevier product)

- Free available Web services
  - Google Scholar http://scholar.google.com/
  - Citeseer http://citeseer.ist.psu.edu/
  - Smealsearch http://smealsearch2.psu.edu/
Scopus has some important advantages

- Comprehensive citation reports
- Substantially larger journal base
- Author disambiguation
- Cooperation with third parties
- Institute disambiguation
Thank you for your attention