

Pilot Project “Bibliometric Indicators” – Brief Description

The pilot project “Bibliometric Indicators” is part of the project “University Benchmarking – Comparison of Key Figures in Research and Teaching”. It is conducted by the Institute for Research Information and Quality Assurance (iFQ). Goal of the pilot project is the description of the research performance of the participating universities in the disciplines chemistry and physics. This will be achieved with publication, citation, and efficiency indicators.

There will be several sets of reference: First, the partner universities participating in the benchmarking project, second, discipline specific citation rates on a world and country level, as well as different appropriate sub-sets like all German university publications will be utilized. In order to assure a fair and transparent evaluation the study is conducted in close coordination with all participating universities. Appropriate key indicators will be integrated into the benchmarking report. Additional information and levels of analysis will be provided to the participating institutes.

In the first step, the iFQ has searched for your publication data in the public database *Web of Science* with the help of addresses and names. Although the iFQ attempted to collect your data with utmost care and diligence, there are a variety of different reasons that may have led to incomplete or even incorrect publication data. For this reason, we need your support in order to verify your publication list. As part of the project itself, the extent will be analyzed to which publications by members of the chemistry and physics institutes are generally covered in the *Web of Science* and *Scopus* databases. Furthermore, it will be scrutinized how the values might change if the current researchers’ publications from their predecessor institutions are included. Finally, the question, whether the publications you consider as your best will also be ranked best according to bibliometric indicators will also be addressed. This process will assure a most valid data basis and will enable answering further methodological questions. For example:

- What is the share of publications by the researchers at the chemistry and physics institutes that is covered by the databases *Web of Science* and *Scopus*, respectively?
- Do the self-assigned best five publications correspond to the best publications according to bibliometric indicators? If there are discrepancies between the two, what conclusions can be drawn concerning the topic of ‘quality instead of quantity’ of publications?
- How do indicator values change if the publications of currently employed researchers in previous affiliations are included?

In the actual analysis publication, citation, and efficiency indicators are calculated.

In the publication analysis the disciplinary specializations, the dynamic developments, and interdisciplinarity of the publication output will be made visible. It will be analyzed which are the most important cooperation partners (countries, institutions) as well as how the publications strategies of the three universities look like. Alternatives to the controversial journal impact factor are proposed and assessed.

Absolute (raw) citation scores are not particularly informative as the publication and citation behavior diverge largely between different scientific disciplines. Therefore, the citation analysis will be conducted on the basis of normalizations to averages in the *Web of Science* classification of Subject Categories and to the averages of the respective venues of publication. These normalized citation rates will then be compared across the partner universities in the benchmarking project, as well as to all German universities and other appropriate reference sets. Furthermore, the citation distribution will be analyzed, i.e. whether the citations are concentrated on a few highly cited articles or are more evenly distributed among many publications. The international visibility of the output will be assessed and analyzed also in relation to international collaborations involved.

In the efficiency analysis the average publication output per professor is calculated, but also further analysis levels using anonymized structural data will be investigated.

In the further course of the project, in accordance with our principle of transparency, and in order to gain insight into your view on the bibliometric outcomes obtained, we would like to discuss the results with respective departmental representatives. Please contact Katrin Behaghel, Ulm University, if you are interested in participating in that discussion.

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