

BIBLIOGRAPHIC REFERENCES AS AN AID OF THE ASSESSMENT OF SCIENTIFIC
PAPERS BEFORE THEY ARE CITED

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The value of scientific papers is generally evaluated by the level of their cited: the citations evidence that they were used in research activity, the latter proving their value.

This mechanism enables also to use bibliographic references in papers for rough a priori evaluation of scientific value of citing papers collections because lists of references reflect the cognitive basis i.e. this very special intellectual background that predetermines their scientific value. Knowing the "quotas" ("standards") of the structure of reference lists in collection of papers of ordinary or undoubtedly outstanding level it is possible to assess rapidly, by a comparison with these "quotas" the potential value of collections of citing papers, created, e.g., in a certain institution, region etc.

Having analyzed a plenty of relevant conceptions in scientometrics, information science and bibliography science, the authors came to a conclusion that relevant indices of cognitive basis are: 1) disciplinary structure of cited papers, 2) mean number of references per a citing paper in a totality, 3) "age" structure of cited papers. For new scientific branches species structure of cited papers might be informative, too.

Several approaches to estimation of the "quotas" of these indices were proposed and aprobated, the corresponding "quotas" having been determined up to concrete periods of time for such research branches as magnetic fluids, bone marrow purging and processing and some others. Some mathematical problems referring to a more indirect and sophisticated way of assessment (that in case with normal citation analysis) and rather stochastic than causal relationship between the cognitive basis and scientific value of citing documents are still to be solved. However, the approach was applied to some collections of works created in authors' institutes.

The main advantage of the proposed approach is the rapidness of assessment.