

Institut de France. Académie des sciences. Report presented to the Minister of Higher Education and Research.

Individual evaluation of researchers is still a subjective process that suffers from numerous potential biases. The Académie has examined the use of quantitative bibliometrics, which are considered to be more objective, and has made a number of recommendations on rigorous rules that should be followed when using bibliometrics to support qualitative evaluations. Such rules should be recognized internationally, at least at the European level. The issue of bibliometric evaluation is a complex one and is still being debated. Strong opinions have arisen for and against its use that depend greatly on the scientific field.

Recommendation 1: The use of bibliometric indices for evaluating individual researchers is of no value unless a number of prerequisites are met: - The evaluation should focus on the articles and not the journals. - Data quality, standardization, significance of deviation and robustness of indices must be validated.

Recommendation 2: Bibliometrics should not be reduced to numbers, it must be accompanied by an in-depth consideration of bibliometric and bibliographic data, and if possible the articles themselves

Recommendation 3: Bibliometric indices should be used differently depending on the purpose of the evaluation, such as recruitment, promotion, grants and distinctions.

Recommendation 4: Greater importance should be given whenever possible to the position of a researcher's name in the order of authors and the exact contribution of each author

Recommendation 5: Bibliometric evaluation should become an object of study in order to improve its value. France must participate in this process. All the recommendations above need to be further examined. In order to do so, the Académie recommends the creation of a Steering Committee to examine the use of bibliometrics in individual evaluations, for example within the framework of the Observatoire des Sciences et Techniques (OST) which is a public body with a long experience in bibliometrics. It would be composed of a small group of experts from various disciplines and agencies, whose task will be to study the limitations of indices and their use and suggest how to improve them. This committee should engage in research that will help refine existing indices and make practical suggestions to be validated at the European level. Its recommendations should be based on a number of tests and studies such as retrospective tests and the development of criteria to detect originality, innovation, dissemination and impact of a work.

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