

Scientific Metrics

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1 Introduction

- Impact factor
- Bibliographic Databases

Assessing the quality and impact of research outputs is necessary

Every Metric has its limitations

No easy way exists to measure scientific performance

The original purpose of scientific publishing was to enable the global sharing of scientific results, ideas, and discussions within the academic society for more effective scientific achievements.

Influence of a publication is used for :

- allocation of funding resources
- industrial and economic growth priorities
- education policies,
- the hiring of personnel academics

Bibliographic Databases

Scopus®



What is a bibliographic database?

bibliographic databases are the main sources of publication metadata and citation metrics

A bibliographic database provides an index of journal articles from multiple journals and includes citations, abstracts, and often a link to the full text.

Frequently used biomedical databases include

Web of Science

Scopus

Google Scholar

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Scientific Metrics Types

Journal-level metrics are used to determine the impact a journal has on the scientific community

Impact Factor

Article Metrics and Altmetrics are used to quantify the impact of published articles-how published papers are being discussed and shared.

Citation Counts

Attention Score

Author-level metrics assess the impact an author makes on the scientific community or field of the study.

H-Index

G-Index

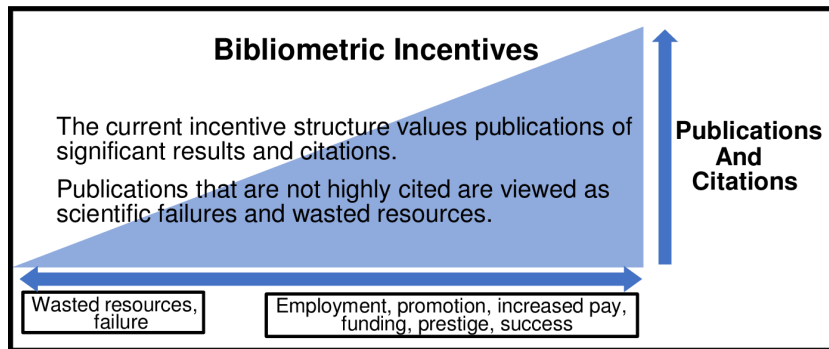


Figure 2: Bibliometric incentives model. ¹

¹<https://doi.org/10.1371/journal.pone.0195321.g001>

Altmetric Attention Score

Altmetric Attention Score tracks online shares and conversations relating to a piece of published research.

It is calculated using data collected around research articles such as mentions on social media, news outlets, blogs, patents, etc.

The Colors of the Donut

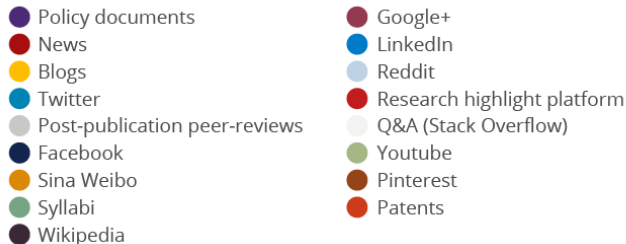


Figure 3: The colors of different sources of attention

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