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Research Trends Editorial Board

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The value of bibliometric measures



Adding perspective to US higher education rankings

The Carnegie Classification meets an important need in US higher education. Without ranking colleges or universities, it compares a broad range of criteria, and publishes data that enable researchers, policymakers and even prospective students to perform further qualitative analysis of US higher education institutions.

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Research trends



Is nanoscale research slowing down?

The compound growth rate of papers published in nanoscience and nanotechnology increased 16% between 1996 and 2006. This growth now seems to be slowing down. Éric Archambault, President of Science-Metrix, examines the data to find out why.

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Country trends



United States research output continues to decline

The US has long led the global knowledge economy, but the last decade has seen its dominant position weakening. What is causing this decline?

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Expert opinion



The h-index and its variants: which works best?

Numerous variants of the h-index have been developed since Jorge Hirsch first proposed the h-index in 2005. Yet, while increasingly refined bibliometric tools can only be a good thing, are so many indices necessary and valuable, or just confusing?

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Why did you cite...?



Why was I TopCited...?

In this section, we ask authors about what motivates citation patterns. This issue we talk to four authors whose papers were highly cited to discover the ingredients of success.

Welcome to issue 5 of Research Trends, which focuses on the United States. The US remains the world's dominant scientific nation, but research has demonstrated that its share of scientific articles published in peer-reviewed journals has been in decline over the past decade. We examine what might be causing this decline and how it could be reversed.

We also look at the Carnegie Classification, which compares – rather than ranks – US higher education institutions. Based on a broad range of criteria, the data produced by the classification is useful for researchers and policymakers in carrying out further qualitative analysis.

In a stand-alone article, Dr. Lutz Bornmann expands on research he conducted into the h-index and nine of the variants that have been developed since 2005. How valuable are they?

If you would like to comment on any of the topics covered, please use our [feedback](#) facility.

Kind regards,

The Research Trends Editorial Board

Did you know?

Researchers are surprised by their own findings

Discovery is the watchword of scholarly research, and new observations serve to propel scientific knowledge ever forward. Yet the lay observer might be interested to learn just how often the authors of research papers are surprised by their own findings. A search of the Scopus database for articles containing the word root 'surpris*' in the title, abstract or keywords retrieves almost 6,000 articles published in 2006, more than 0.5% of all articles that year. In fact, looking at this proportion over the last decade, authors appear to be about 3% more surprised by their own research every year!

A disciplinary breakdown of the 'surprising' articles identified in 2006 shows that the greatest proportion are published in Economics, Econometrics and Finance (1.25% of articles), while the least are found in the Energy and Engineering fields (0.11% and 0.17% respectively). Authors in the Agricultural and Biological Sciences are surprised at the average rate of 0.51% of articles.

Researchers should take heart, as one recent example of such a 'surprising' research finding was reported by Andrew Fire and Craig Mello in 1998 [1] and led to the 2006 Nobel Prize in Physiology or Medicine. It has been cited almost 3,400 times to date.

[1] Fire, A. (1998) "Potent and specific genetic interference by double-stranded RNA in *Caenorhabditis elegans*", *Nature*, Vol. 391, No. 6669, pp. 806–811.