English as the international language of science

Research Trends Editorial Board

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the GDR. As a consequence, there was a movement westwards: the German National Library moved from Leipzig to Frankfurt and Springer from Berlin to Heidelberg.

Dutch publishers took advantage of the situation and the Netherlands’ location between Western Europe and the English-speaking UK and US, which made it the perfect center of the new international science-publishing world that emerged after the war. Other international publishing houses also saw the opportunities the Netherlands offered and established offices there. This has resulted in a high concentration of publishing companies relative to the size of the country and number of researchers, and thus a high number of published journals attributed to it.

Many thanks to Professor Hans Roosendaal for his help with the historical aspects of this article.

Country trends

English as the international language of science

Since the end of the Second World War, English has become the established language of scholarly communication, but not without controversy. In this article we examine some of the reasons for the rise of English and its consequences in the context of national trends in English and local-language publishing.

The underlying reason for the rise of English as the language of science remains a topic of debate, but most frequently it is acknowledged as an accident of 20th century political and economic history (1). The British Empire, which spanned the globe from the late 16th to the early 20th century, was the largest empire in history and made English a truly international language. Today it is the first language of about 400 million people in 53 countries, and the second language of as many as 1.4 billion more. English was therefore well positioned to become the default language of science in the wake of the disruptive wars of the first half of the 20th century.

Figure 1 – Ratio of the number of journal articles published by researchers in English to those in the official language in six European countries, 1996–2007. Source: Scopus.
Country trends

Shifting language preferences

Whatever the reason, the use of English as the scholarly lingua franca has become self-reinforcing, with academic reward schemes in many countries placing great emphasis on publication in international (mostly English-language) journals. Figure 1 shows the ratio of the number of journal articles published by selected nations' researchers in English to those published in that nation's official language in three consecutive four-year periods.

The Netherlands has always had a strong tradition of publishing in English, and so the ratio of English to Dutch journal articles is quite high and shows no clear trend in this analysis. Conversely, Italy's ratio has risen dramatically over the period of analysis, suggesting a very strong impetus by Italian authors to publish in English. More modest, but equally important, trends away from local-language authorship are repeated in Germany, France, Spain and the Russian Federation.

Reference:

Expert opinion

The misuse of metrics can harm science

Professor David Colquhoun

When Eugene Garfield devised the Impact Factor (IF) in 1955 to help select journals for the Science Citation Index, he had no idea that 'impact' would become so controversial.

The IF ranks journals based on how many citations they receive over a particular period. However, in recent years, certain misuses of the IF have been brought to light, including its emergence as a performance-measurement tool. Garfield himself has noted that the IF was never intended to assess individuals (1).

Accessing individuals

In a letter to Nature, Professor David Colquhoun of the Department of Pharmacology, University College London, voiced his concerns about the way IFs are being misused to assess people (2). According to him, it is all part of a worrying trend to manage universities like businesses, measuring scientists against key performance indicators. "IFs are of interest only to journal editors. They are a real problem when used to assess people," he says.

This becomes clear when one looks behind the figures. Bert Sakmann may have won a Nobel Prize in 1991, but under some current assessment criteria, he would have been unemployed long before that happened. From 1976 to 1985, he published between zero and six papers per year (average: 2.6). Yet, despite this low output, during these years he produced scientifically important papers.

Problem of perception

The real problem may be one of perception. Colquhoun says, "No one knows how far IFs are being used to assess people, but young scientists are obsessed with them. Whether departments look at IFs or not is irrelevant; the reality is that people perceive this to be the case and work towards getting papers into good journals rather than writing good papers. This distorts science itself: it is a recipe for short-termism and exaggeration."

"People believe Impact Factors are being used to assess people, and work towards getting papers into good journals rather than writing good papers."

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