

Incentive policy and the quality of scientific publications in Brazil and around the world

The number of new *strictu sensu* post-graduate courses in Brazil has grown over time, since 1976, when such courses first came to be evaluated by the Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES). The CAPES evaluation criteria include infrastructure, the program proposal, analysis of teaching staff and students, and academic production. The results obtained by this evaluation are used to guide decisions of the Ministry of Education's National Education Board (CNE/MEC) regarding which courses will be receive renewed recognition and be allowed to continue.¹

Data for 2015 show that CAPES currently recommends and recognizes 5,812 courses, including 3,226 academic Masters, 589 professional Masters and 1,997 doctoral programs. In terms of the indicators CAPES uses to evaluate these courses, the academic production of postgraduate programs has seen an increase of 34% in articles published in scientific periodicals and the number of students earning a Master's degree or doctorate grew from 50,411 in 2010 to approximately 62,000 in 2013. But how good is the quality of the academic production in this new postgraduate scenario by researchers in Brazil?

With a robust policy of incentivizing scientific production and evaluation of postgraduate programs, mainly focusing on quantitative factors, in 2014, Brazil attained a ranking of 13th in the world for scientific production, according to data available in *SCImago Journal & Country Rank*. However, in terms of the impact or quality of this production as measured by *cites per document*, Brazil dropped from 117th to 182th in the world quality ranking in 2014. And this is not happening only in Brazil, but in most countries that lead the quantitative ranking.² This raises questions regarding the causes of this phenomenon and as to how to improve quality indices and ensure that such indices are the most adequate and reliable ones possible for measuring the quality of scientific production.

The pressure to increase the number of publications has opened up space for publishers around the world to launch more and more periodicals, many of them with a low impact factor, as profitable ventures.

So, in view of the clash between the need for authors to publish the famous "*publish or perish*" and the economic interests of publishing houses, the phenomenon of open access journals has emerged, whereby, in most cases, authors pay a fee to publish their work. The sum may vary according to the type of journal from US\$ 8 to US\$ 6,000. A publication by Van Noorden for *Nature* (2013) presented data obtained by a California consulting firm, Outsell, which showed that the publishing industry generated US\$ 9.4 billion in 2011 and published around 1.8 million articles, earning US\$ 5,000 on average per article. According to analysts who estimate the profit margin to lie between 20 and 30%, the average would be US\$ 3,500 to 4,000 per article.³

It should be noted that this kind of open access does no harm to the quality of the journal or its authors. However, with an eye on profit, new publishers have emerged and are producing journals, principally open access, that promise benefits that sometimes turn out not to be genuine. They adopt names similar to those of impact factor journals (*Journal Citation Reports*) and sometimes publicize some kind of impact factor in such a way as to lead researchers to believe that it is from the JCR. These journals are not indexed in the main databases, such as *PubMed*, *Scopus*, *Scielo* and *Embase* and actively seek out submissions by way of insistent "*calls for papers*".

Thus, until better methods for determining the quality of a journal or scientific article have been devised, we researchers must carefully consider the choice of journal in which to publish and discuss the matter with more experienced researchers. You should always distrust an invitation often sent directly to you by name or mentioning the title of one of your previous publications, soliciting the submission of a new article. Check out which databases the chosen journal is indexed in - a *WebQualis*⁴ search will help (qualis.capes.gov.br) - and do not believe any impact factor publicized--*Scimago* (www.scimagojr.com) and ISI - Information Sciences Insti-

tute (not available free) are reliable sources of information.

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