

English Proficiency and Time to Publication: The Case of Brazilian Science

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Introduction

Brazilian science has gained visibility in the last 25 years (Zanotto, 2002). This increase is seen in Brazil's percentage share of all publications in ISI-indexed journals, which has increased from 0.4 to 1.3 % in this period. Among the variables shown to correlate with Brazilian scientific output are international collaborations, number of active scientists and research funding. These variables reflect Science & Technology trends and are good indicators of government policies towards science. In addition, they alone may account for the increase in Brazil's share of scientific papers in the ISI database. However, one cannot overlook the fact that a paper published in an ISI-indexed journal is expected to be a readable text in English as well as to show sound research. Readability may be a minor hurdle for English-speaking authors, whereas for their non-English-speaking counterparts it may play an important role in getting published. P. Man et al (2004) have recently reported on the relationship between the publication output of some European countries and their TOEFL scores, with particular focus on highly ranked medical journals, and they discuss the importance of English proficiency in getting published. For Brazil, our study is the only one thus far that compares English proficiency and publication output. English teaching in Brazil emphasizes General English, which is taught at regular English courses all over the country. Although there is a trend towards the teaching of English for Academic Purposes (EAP), especially at the university level, these programs are mostly focused on reading. Accordingly, The Brazilian ESP (English for Specific Purposes) National Project developed in 1980-1990 was meant to "improve the use of English of Brazilian researchers, science teachers and technicians, especially with regard to *reading* [our emphasis] specialist and technical publications." (Celani, 1998) Our hypothesis is that this may be having a negative effect on the productivity of a significant number of active scientists. As most Brazilian science is concentrated in public universities (Carneiro Jr. & Lourenço, 2003) and the most productive scientists are at these universities, this policy may be affecting Brazilian scientific output. Our aim is to investigate the relationship between the English proficiency of Brazilian authors and time leading to publication.

The outcome of this work may help policy-makers to develop more "scientists-friendly" language policies.

Research Methodology

We are collecting data from editors of ISI-indexed journals, Brazilian scientists, doctoral students and The National Research Council (CNPq), which is building a database on Brazilian authors' publication trends and on their proficiency in foreign languages (especially English). We began by surveying the editors of physics journals, as physics has been the most productive field in Brazil. We intend to cover at least physics, agricultural sciences, microbiology, biology, and biochemistry, some of the most representative fields of the country's science. We will work on a limited sample of authors, those of the Federal University of Rio de Janeiro (UFRJ) who publish in these specific areas. They will be sent a questionnaire concerning language problems mentioned in rejection letters and time involved in the writing of manuscripts. A sample of doctoral students enrolled in physics, agricultural sciences, microbiology, biology, and biochemistry graduate programs of UFRJ will be surveyed. We aim to show the students' view of the language policy of their departments and collect data on these students' four language skills. This information is relevant because these students play a major role in the country's science. In addition, there has been a significant increase in the number of PhDs granted in Brazil, which is associated with the increase in number of publications.

Preliminary Results

In 2004, during the pilot for this research project, a randomized sample of science editors were sent a letter about language problems in submitted manuscripts. They did not provide statistics, but their comments encouraged us to develop this question. Some of these comments deserve special attention:

"... poorly written articles are extremely difficult to referee and cost the journal a lot of time and difficulty... Most nonnative speaking people do not bother to work on the English in their articles and are upset and insulted when the referee simply cannot understand the explanations." (Carl Bender, editor of *Physics Letters A*)

“A lot of the time and expense of running my editorial office goes into correcting grammar and polishing the work of non English speaking authors. It is hard to find good science in a poorly written article.” (Joan W.Bennett, editor of *Mycology* and co-editor of *Advances in Microbiology*)

“There is absolutely no doubt that language is a significant barrier to publication, and I often feel badly about this, because the scientific content may be strong, but the language is too poor for the paper to be properly understood... I wouldn't mind betting that the time to publication is strongly influenced by the native language of the author.” (Graeme Bonham-Carter, editor of *Computers & Geosciences*)

“Of all the papers that I handle in my office, which include all papers published from South, North, and Central America, at least 90% of papers written by non-English speaking authors require English revision... at least 50% requires substantial English revision.” (Harold H.Kung, editor of *Applied Catalysis A*)

“All articles written in bad English are rejected in the process of peer review because if the English is bad, the engineering and science cannot be understood at the level required for the journal. (Robert McMeeking, editor of *Journal of Applied Mechanics*)

“There should be greater emphasis on English as a tool for scientific communication in both schools and universities. This may be in the form of formal

courses...” (Raymond Coleman, editor of *Acta Histochemica*).

Conclusion

The preliminary results suggest that English proficiency of scientists is not a minor issue when it comes to getting published in ISI-indexed journals. We believe language may be an important factor to be considered in the assessment of the scientific output of non-English-speaking countries and should be better investigated. Our study is intended to raise policy-makers and educators' awareness of this problem. Also, the outcome of this research may contribute to the adoption of more “scientists-friendly” language policies in Brazil. We hope our results may encourage other non-speaking-countries with an English teaching policy similar to that of Brazil to investigate this problem.

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