◆ English-as-an-International-Language Authors (Formerly Non–Native-Speaking Authors) in Science Deserve Programmatic Assistance

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More than 60% of manuscripts submitted to today's journals are by "English-as-an-International-Language" (EIL) authors, according to moderator John Benfield. What challenges do those authors face? Benfield, a thoracic surgeon, noted that EIL authors are asked for many more editorial revisions and have a much lower acceptance rate at the *Annals of Thoracic Surgery*. Linguist Christine Feak noted that many EIL students know English grammar rules but have little experience in writing. In Japan, according to J Patrick Barron, a Scot who has lived in Japan for almost 40 years, a major problem is that English classes are generally taught by native Japanese or by English speakers who have no medical background. Furthermore, in the Asian system, students proceed directly to medical or professional school from high school, so they have no postsecondary classes in writing in their native language or in English. All agreed that the problem is not limited to medicine or biomedical science but also occurs in business, government, and other fields.

If those are the problems, what are the solutions? Feak discussed two linguistic approaches to assist EIL authors in going beyond rules and learning how a language is actually used. One approach, discourse analysis, is concerned with language use throughout a single text and among a set of related texts. She showed how discourse analysis can help with a paper's organizational structure. Another method, corpus analysis, can be used to assist with vocabulary and grammar choices. Word-frequency lists can be constructed with specialized computer programs, such as WordSmith Tools. A corpus is established for each discipline, such as dentistry or dermatology, by incorporating texts of journal articles in that discipline. The author can then analyze the corpus by using the computer program to determine whether a word is suitable in a particular context for the discipline. For example, corpus analysis can tell you whether *findings* or *results* is the better word choice for a given field. It can also suggest what verb works best with the noun selected (for example, *results show* versus *results reveal*).

In the early 1990s, Japan recognized the need to improve English writing skills for physicians, and the first medical school communication center was established. Its primary purpose was to edit manuscripts before their submission to international journals. The International Medical Communications Center at Tokyo Medical University has seen an 800% increase in papers accepted by peer-reviewed journals since its inception in 1991. Four years ago, the center added a teaching arm; staff teach "English for Medical Purposes" in the medical school curriculum. The interactive course is available free of charge on the Web (*www.emp-tmu.net*) and covers development of critical reading and analytic and communication skills. Barron pointed out that in-house medical communications centers are essential, but classes must be taught by personnel who are familiar with medical content.

Benfield proposed a different approach to the problem, suggesting that medical peers and language professionals can work together in the context of professional societies. For example, he and Feak taught a course at the Society of Thoracic Surgeons annual meeting. The course consisted of three interactive workshops based on selected problem areas (introduction, discussion and conclusion, and abstract). Participants paid a fee to attend. Benfield stressed that "courses can, and should, be done by professional societies" and pointed out the need for team teaching. The peers (physicians and scientists) provide the subject editing, and the language professional provides help with flow, syntax, grammar, and organization. Benfield also suggested an untapped source of peer editors: retired, but active, senior members of the clinical medical societies.

Benfield closed the session with the reminder that "professional organizations, editors, and publishers should mount programs to minimize the English-language burden and to meet their ethical responsibilities to enhance science." We should all spread the word to our fellow clinical and scientific societies. ☙