Regional Citation Indexes and the Global View

It was only in recent years since the 1990s that citation indexes and bibliometric research drew the attention of Asian countries. By that time, bibliometric applications had been widely exercised in Western countries for the purpose of measuring scientific output and research performance. The need for citation indexes to cover non-English literature was a natural response from Asian research communities, as the ISI citation indexes focused on internationally recognized "high-quality" journals, the majority of which were written in English. The lack of complete coverage of scientific literature was not necessarily an argument against the original citation index Garfield had envisioned. Rather, it was created as a "starting point" for virtually all researchers working on any given topic in any field.

When adopted for research evaluation purposes, however, the pressing need became obvious to adequately supplement what was already provided by ISI with locally collected materials. Especially in the regions where scholars publish not only in English but also in their local language, there has been a growing demand of indexing local journals to form their own citation indexes.

These regional citation indexes are available in China, Japan, Korea, and Taiwan. Recently, in those countries where English is more commonly used, such as India, there is discussion of the benefit of creating their own versions of citation indexes.

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Globalization of Scholarly Research

In 2005, ISI (then Thomson Scientific) reported the United States' declining share of the world's science output. This trend had been observed since the early 1990s and the US share has since been surpassed by the European Union countries' output share. The output share from the Asia Pacific region has shown a steady rise since the early 1990s, and it has been predicted that, at that prevailing rate, the Asia Pacific region would likely outstrip the share of the United States by 2011. In fact, by 2007 Asia Pacific accounted for 28.62 percent of the total number of papers published in the world, while the US share came down to 30.95 percent from what was once 39.14 percent in 1981.

The overall number of papers published in most countries has been increasing, even as the percentage share from each may have fluctuated. These fluctuations can be caused by many factors, each of which may have influenced another. One obvious pattern is an increasing frequency of research involving international collaboration, resulting in many authors contributing to a paper from diverse locations around the globe.

Conclusion

While having been motivated primarily to satisfy the research assessment needs of the local scientific community, regional citation indexes have now inspired a global audience to seek scientific collaboration with them. Garfield's citation index has stimulated many groups to create additional options to expand what was originally envisioned as the Web of Science.

Beyond the transformative role of citation indexes in information retrieval, the citation counts have ushered in a new era in research performance assessment. One that demonstrates quality, as implied by citation impact, is more important than mere quantity of output. The regional citation indexes will reveal which institutions, people, and papers have had an influential place in moving science forward at the local level. ■

Wolves in Chancellors' Clothing

George D. Gollin

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Software engineers realize that their new operating systems will be deployed into a perilous networked environment. Aerospace engineers build their jets with an eye toward unexpected thunderstorms and engine failures. These professionals understand that scrupulous attention to system integrity in hostile environments is part of the design process for any complex system.

The higher education community, however, has not yet evolved a similar professional culture: our organizational structures can be naïve, unintentionally opening new channels for substandard degree providers to misrepresent their legitimacy. We would do well to learn from our engineering colleagues who build systems that are expected to come under attack.

Pay-to-play and the US Medical Licensing Exam

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the exam. The directory is compiled from information provided by national ministries of health. But without an independent means to verify received information, the directory can be no more accurate than its input data.

The American owners of the "St. Luke School of Medicine" took advantage of the catastrophic civil war in Liberia to claim, without governmental challenge, to be training medical students in Monrovia. (They weren't.) In 2004 the Liberian government declared St. Luke to be operating illegally. In 2005 US embassy personnel in Liberia visited St. Luke and found "no evidence of anything resembling a functioning, credible medical school." Even so, St. Luke remained in the International Medical Education Directory database at least through 2005,

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entitling its customers to sit for the licensing exam.

The "University of Science Arts and Technology" pretends to teach medicine in Montserrat and sports an imaginary pseudopod named the "Medical College of London." The owner holds an MD from a diploma mill, while the "dean" also works for the St. Luke School of Medicine. In spite of this, the "university" retains its directory listing.

The International Medical Education Directory suffers the linked problems of unreliable input information and inadequate investigative capacity. The Foundation of International Medical Education and Research could develop an early warning system that would raise flags for further action. A mechanism to receive unsolicited expert information, in combination with sensible metrics for reliability ("is the country in the throes of a horrific civil war?") would improve the directory's accuracy.

FEAR OF LITIGATION

Accredited US universities host Web sites in the ".edu" top-level domain. The Colorado-based EDUCAUSE, a nongovernmental organization that focuses on information technology in higher education, has managed this domain under contract with the US Department of Commerce since October 2001. New .edu domains are only issued to accredited postsecondary institutions. However, domains issued before October 2001 are "grandfathered": registrants are not required to hold institutional accreditation. About 2,400 of the approximately 7,000 existing .edu domains belong to organizations that would not qualify for the domain today. One is held by a firehouse. Dozens belong to diploma mills.

The St. Luke School of Medicine uses www.stluke.edu, "Southern Pacific University" holds www.spuni.edu, "Adam Smith University" uses www.adamsmith.edu, and so forth. Sometimes diploma mills tout their .edu domains as attestations of legitimacy. In 2004, the St. Regis degree mill declared: "it is virtually impossible for a 'bogus' college or university to obtain a web address with an '.EDU' suffix. Colleges are thoroughly scrutinized before domain naming authorities will grant an EDU domain name." (But it should be noted that Saint Regis never obtained a domain through EDUCAUSE, instead using the Liberian domain, saintregis.edu.lr.)

EDUCAUSE will not review the grandfathered domains, eliminating those that do not meet the current standards. The organization's logic includes the complexity of the task and the potential cost of litigation from the owners of diploma mills. EDUCAUSE posts no meaningful disclaimer on its Web site explaining that an .edu domain is not a reliable indicator of legal authority to issue degrees. Even the vile St. Luke School of Medicine retains its .edu domain.

Perhaps a Department of Commerce directive to reevaluate (or eliminate) the grandfathered domains would give EDUCAUSE adequate legal cover. The current situation is unsatisfactory.

FRENCH PROBLEMS

French universities can award academic credit for life experience. The VAE (Validation des Acquis de l'Expérience) program is improperly identified by some diploma mills as legitimizing their degree-selling activities. Examples include "École Supérieure Universitaire Robert de Sorbon," as well as "École Supérieure Universitaire Adam Smith." These disreputable businesses incorrectly claim that French law grants them

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MISLEADING BUSINESS LICENSES

Some jurisdictions do not control use of the words "university" or "college" in the names of enterprises receiving business licenses. Diploma mills display images of these licenses on their Web sites, misidentifying them as guarantees of academic legitimacy. "Concordia College and University," run from Belgium, does this with its Mississippi business license. Southern Pacific University uses its Delaware papers to similar effect.

Higher education associations' government relations staff should discuss regulatory protection of the terms "university" and "accreditation" with legislators.

Open Lists into Which Bad Things Crawl

The United Kingdom's Department for Innovation, Universities, and Skills maintains "white lists" of recognized postsecondary institutions. But the department's Web site also directs visitors to the "UK Register of Learning Providers" with "information sources on education and training organizations. . . ." No quality assurance is implied by inclusion in the register, and no controls are imposed requiring legitimacy of entities listed.

Two years ago, "Marquess College London" announced it had "registered as a learning provider" with the Register of Learning Providers. However, Marquess (now called "St. Simon's College, London") is a diploma mill run by individuals with close ties to "École Supérieure Universitaire Robert de Sorbon" and "St. Regis University." Marquess/St. Simon's uses its insertion into an uncontrolled government-identified list to foster an illusion of legitimacy.

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National agencies that allow unrecognized entities to appear on their rosters, even when no recognition is implied, provide cover for degree mills. The UK Department for Innovation, Universities, and Skills should not associate itself with any unscreened list of postsecondary organizations.

Nongovernmental organizations make the same mistake, sponsoring unfiltered lists and community blogs. Sloan-C, an online learning consortium, opened its membership in 2005. The owners of St Regis immediately injected a half-dozen unsavory "schools" into Sloan-C and placed the Sloan-C logo on their Web sites. Sloan-C restricted its membership and removed the list of members from public display, eliminating the problem.

Concordia College & University penetrated unprotected blogs at the University of Illinois, EDUCAUSE, Syracuse University, Michigan Technical University, Boston College, and the Citadel. Concordia uploaded advertising material and then posted links to the blogs, identifying them as indicators of recognition. Most of the schools responded as soon as they became aware of the problem.

Paying Attention

Effective quality assurance is a complex challenge for international higher education, even in an ideal world of honorable participants. Attracted by the world's enormous annual expenditures on higher education, the wolves that masquerade as legitimate schools lie in wait in the shadows. Our planning must always include an awareness of these beasts. ■

The Bologna Process: A Weary Leap Forward

Rainer Hoell, Josef Lentsch, and Sebastian Litta

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The Bologna process, originated in 1999 by the secretaries of education of 29 European countries and joined later by 17 more, has included ambitious aims: a unified European higher education area with comparable bachelor's and master's degrees, enabling students to move freely and without bureaucratic hurdles between universities.

The goals appear laudable, and the efforts to reach them in the last decade proved enormous. The resulting gains in transparency and the move toward competence deserve the praise received by the Bologna process these days. At the same time, however, many Europeans will be disappointed with Bologna—particularly in self-perceived front-runner countries like Germany and Austria. Focusing on these two countries, this article will analyze issues of disappointment.

Implementation Management

To guarantee comparability of degrees across subjects and countries, Bologna's aim is to encompass all academic disciplines. However, some of the most popular study programs have refused to switch to the new bachelor's and master's degree system. The nonparticipating fields include law and medicine—in Germany and Austria as well as in other European countries. In France, the *grandes écoles*, the traditional cadre universities for the political and business elite, try to avoid Bologna entirely.

The official 2010 deadline for the implementation in all participating countries will by no means be met. As a case in point, in Germany, 35 percent of all freshmen still begin their studies in the "old" degree system (*Magister, Diplom*, or *Staatsexamen*). The Bologna process required universities to change their administrative and curricular structures fundamentally and to document these in tens of thousands of papers, reports, and module descriptions. Many universities, however, have not received significant additional funding, fac-