The Value of 'Web of Science' for 'Gerontechnology'

As more academic institutions move to increasing their research activities, the qualifications for faculty promotion and tenure become more and more dependent on the esteem in which the journals of their publications are held. This journal esteem can be due to the position of the journal as a 'flagship journal' for a discipline or an organization, or the journal is recognized as a niche journal, which addresses the needs of a very specific research or practice community. A journal may also be identified as a significant journal based upon academic publishing patterns. It is common to find a list of the top ten journals in a field or in a specific content area.

Thus, how a journal is ranked will affect how a faculty's publications are viewed. Because the assessment of scholarship is central to the value with which faculty are perceived inside as well as outside the academy, it is essential that assessments of scholarship are fair, equitable, and reflect a 360 degree view of the journals concerned. This includes a review of publisher, status in the field based on comparisons with other journals, where a journal is indexed and abstracted, reviews of the journal, among other data.

For those of us who are based in the United States, one measure of the prestige of an American university is based on bibliometrics. The term bibliometrics can be defined as the study of the dynamics of how the literature produced by disciplines is used by scientists, researchers, practitioners, and academicians. Combined with scientometrics and informetrics, it is possible to track interrelationships among disciplines, emergence of new disciplines, notable scholars, and scholarly and organizational productivity[1-6]. Simply put, quantitative measurements of journal impact are based upon comparison with a defined 'citation universe', whether it is in 'Web of Science', 'Scopus', 'Google Scholar', or other constrained 'citation universes'. And the single metric that emerges, particularly in North America, is the journal impact factor (JIF) derived from the Journal Citation Reports (JCR), derived from the content within Thomson Reuters' 'Web of Science'.

Current impact of 'Gerontechnology'

As a researcher in North America, who reads 'Gerontechnology', I am familiar with the journal and the International Society for Gerontechnology. However, what else is there to learn about gerontechnology? Since I am in the United States, I search 'PubMed' in which the keyword GERONTECHNOLOGY produced 101 articles, with 8 published in 'Gerontechnology'. I also determine that there are 305 articles indexed in PsycINFO, the premier U.S. resource on things psychological, starting with volume 1 (2001) to current. I then want to see if the journal 'Gerontechnology' is found in 'Web of Science'. I conduct a cited reference search on the title of the journal, retrieving 226 cited references. This means that articles in the journal 'Gerontechnology' have been cited over two hundred times. Clearly, there is a presence in 'Web of Science' based on cited references, but there is no abstracting of articles in the journal itself.

The journals in 'Web of Science' are heavily weighted toward English-language journals from the United States and the United Kingdom, and are classed into three broad content areas, Arts & Humanities, Science, and Social Sciences. However, only the journals found in the Science and Social Sciences are tracked and ranked in JCR. The Science edition tracks 8,500 journals in 171 subject categories. The Social Sciences edition tracks over 3,000 journals in 55 subject categories[7]. Each journal is assigned to at least one subject category. Hence, Web of Science tracks almost 12,000 journals from 3,300 publishers in over 60 countries and tracks over 160,000 conference proceedings.

The European counterpart of 'Web of Science' is 'Scopus' of Elsevier. It is almost twice the size of 'Web of Science', indexing 21,915 journal titles from 5,000 publishers. In addition, it covers over 50,000 books and 420 book series, over 365 trade publications, 6.5 million conference papers, and 24 million patents[8]. 'Gerontechnology' has been indexed in Scopus since 2012.

Improving impact

Should 'Gerontechnology' be also indexed in 'Web of Science'? The answer is simply yes. Most academic institutions in the United States subscribe to 'Web of Science' as a core academic resource, and use the impact factor derived from JCR as the 'de facto' criterion for promotion and tenure.

The importance of finding 'Gerontechnology' in 'Web of Science' cannot be overstressed. As a subject, GERONTECHNOLOGY does not automatically 'link' back to the journal 'Gerontechnology'. I ran two additional searches on the term 'GERONTECHNOLOGY' in PubMed, which retrieved 34 additional articles. However, only 8 of 34 of the articles cited the journal 'Gerontechnology' as a source reference. A second search in 'Web of Science' on the term GERONTECHNOLOGY as a subject (topic) search retrieves no citations. However, the word GERONTECHNOLOGY in a title search retrieved 25 articles. Eighteen of the 25 citations were published after 2001, which was the year the journal was established. Only 6 of the 18 articles actually cite the journal 'Gerontechnology'. The references in those articles which cited the term GERONTECHNOLOGY included books published by Springer, Sage, C. C. Thomas, IEEE, Educational Gerontology (all U.S. imprints), IOS Press and Studies in Health Technology & Informatics (Netherlands). This is an indication that gerontechnology, as a field, is not being tracked back to the journal 'Gerontechnology' as a primary source.

Inclusion of 'Gerontechnology' in 'Web of Science' will encourage U.S. authors to trace back the term and the development of the field to the journal. It will also create a profile that may help substantiate the case to then include 'Gerontechnology' as a ranked journal in JCR.

Additional benefits

There are additional arguments to be included in 'Web of Science'. The use of the 'Web of Science ResearcherID' can help 'Gerontechnology' authors manage their professional and research profiles. It has a unique identifier that is fully integrated with all 'Web of Science' products and is an easy way to find an author's body of work in 'Web of Science'. A ResearcherID allows you to generate citation metrics of your own work from 'Web of Science', and can also help create 'clusters' of research, with the eventual goal of creating a gerontechnology cluster that can show the evolution and growth of the field.

The ResearcherID can be associated with an author's ORCiD, a non-profit, community-based registry of unique persistent researcher identifiers that is integrated into both 'Web of Science' and 'Scopus'. The ORCiD is also used for a number of manuscript submissions, and U.S. grant and patent applications using its Authentication API. Linking an ORCiD to the ResearcherID leads people to your work within 'Web of Science' and to journals within the JCR.

ResearcherIDs and ORCids would also allow the creation of a 'cited publications' page for 'Gerontechnology' and ISG society websites, showcasing the journal and other seminal publications authored by leaders in the field of gerontechnology. In addition, such a future webpage should provide a better synthesis of the journal and its affiliations, as well as its rank in SCOPUS.

In summary

'Gerontechnology' is eminently suited as a niche domain, bridging gerontology and technology, for inclusion in 'Web of Science' and JCR. Adding 'Gerontechnology' to these products will also allow ISG to take advantage of the researcher/author tools available for their authors and to build a research cluster in the field of gerontechnology that is evident to U.S. researchers.

References

1. Hood WW, Wilson CS. The literature of bibliometrics, scientometrics, and informetrics. Scientometrics 2001;52(2):291-314; doi:10.1023/a:1017919924342
2. Holt BR, Conway S, Hulbert L, Eastwood R. Assessment of International Psychogeriatrics: the Journal of the International Psychogeriatric Association. International Psychogeriatrics 1997;9(4):373-80; doi: 10.1017/s1041610297004511
3. McKay DR. What's trending at the Medical Journal of Australia? The current top 10 most-cited articles. The Medical journal of Australia 2014;201(1):22; doi: 10.5694/mja14.00775
4. Bronswijk JEMH van. James L. Fozard's research impact scores, in particular for gerontechnology. Gerontechnology 2010;9(3):365-367; doi:10.4017/gt.2010.09.03.009.00
5. Graafmans JAM. Herman Bouma: foundation for gerontechnology. Gerontechnology 2001;1(1):83; doi:10.4017/gt.2001.01.01.021.00
6. Navarro A, Lynd FE. Where does research occur in geriatrics and gerontology? Journal of the American Geriatric Society 2005;53(6):1058-1063; doi:10.1111/j.1532-5415.2005.53311.x
7. Thomson Reuters. Journal Citation Reports® quick reference card. Philadelphia: Thomson Reuters; 2012
8. Elsevier. Scopus content coverage guide. Amsterdam: Elsevier; 2014

Ardis Hanson PhD, MLS
College of Behavioral and Community Sciences, University of South Florida, Tampa, USA
E: hanson@usf.edu

doi:10.4017/gt.2015.13.4.008.00

The Value of 'Web of Science' for 'Gerontechnology' (response)

The analysis of the academic esteem of the journal 'Gerontechnology' in U.S. eyes is extremely useful; I am thankful to its author, Ardis Hanson. With almost a third of the readership originating from the North American continent (*Figure 1*), the USA is important to the growth of gerontechnology as a field and an academic journal.

As its coverage is interdisciplinary, 'Gerontechnology' is indexed and abstracted in a number of different 'citation universes'. In addition to the ones mentioned above (PsycINFO and SCOPUS) this includes ASSIA, CINAHL, Crossref metadata search, Google Scholar, ICONDA, Inspec, and Thomson Reuters 'Web of Knowledge'. This recognition by major indexing and abstracting sources helped the continued growth of academic interest. But it is true; we are not included in Thomson Reuters' 'Web of Science'. In addition, as

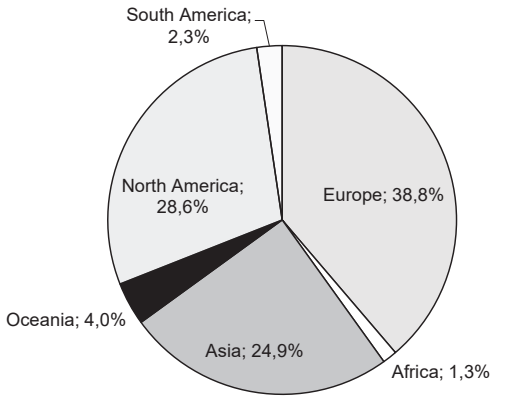

Figure 1. Geographical distribution of views of Gerontechnology journal's website in 2014

mentioned by Ardis Hanson (above) 'Gerontechnology' has not yet been recognized globally as the only periodical fully dedicated to the field.

Using SCImago

Still it is possible for U.S. universities to rank 'Gerontechnology' journal through the freely available service SCImago[2]. From all journals incorporated in Elsevier's SCOPUS database SCImago computes both its own impact measure SJR (Scientific Journal Raking: the scientific influence of the average article) and the Thomson Reuters JCR metrics (JIF: cites/document over 2 years) but covering a much larger 'citation universe' and made freely available to the public (in contrast to the paid subscription-based JCR).

SCImago places 'Gerontechnology' in three different categories: biomedical engineering (domain: engineering), gerontology (domain: nursing), and geriatrics and gerontology (domain: medicine). In 2014 Gerontechnology figured in the 2nd quartile of biomedical engineering and gerontology, and the 3rd one of geriatrics and gerontology. The 1st quartile is the most central in scientific discourse.

Since the category gerontechnology is not available in indexing services, I asked the editors of 'Gerontechnology' to select from the three SCImago categories those journals that have regular gerontechnology contributions, and searched the SCImago database further for journals with at least 10 articles devoted to a combination of technology / engineering and gerontology in the 21st century, a criterion used earlier[1]. In the resulting 'gerontechnology category' of December 2014 our journal ranks 15 of 34, being again in the 2nd quartile of impact (*Figure 2*).

This being said, I understand that to capture the U.S.A. market of gerontechnology the journal should endeavor to be included in 'Web of Science'. I hope that we can realize this together.

Acknowledgement

I thank Gerontechnology's associate editors for completing the journal questionnaire.

References

1. Bronswijk JEMH van, Brink M, Vlies RD van der. The gerontechnology engineer. Gerontechnology 2011;10(3):125-128; doi:10.4017/gt.2011.10.3.011.00
2. SCImago journal & country rank (SJR); http://www.scimagojr.com/; retrieved August 13, 2015

J.E.M.H. van Bronswijk PhD, editor-in-chief
E: j.e.m.h.v.bronswijk@gerontechnology.info
doi:10.4017/gt.2015.13.4.009.00

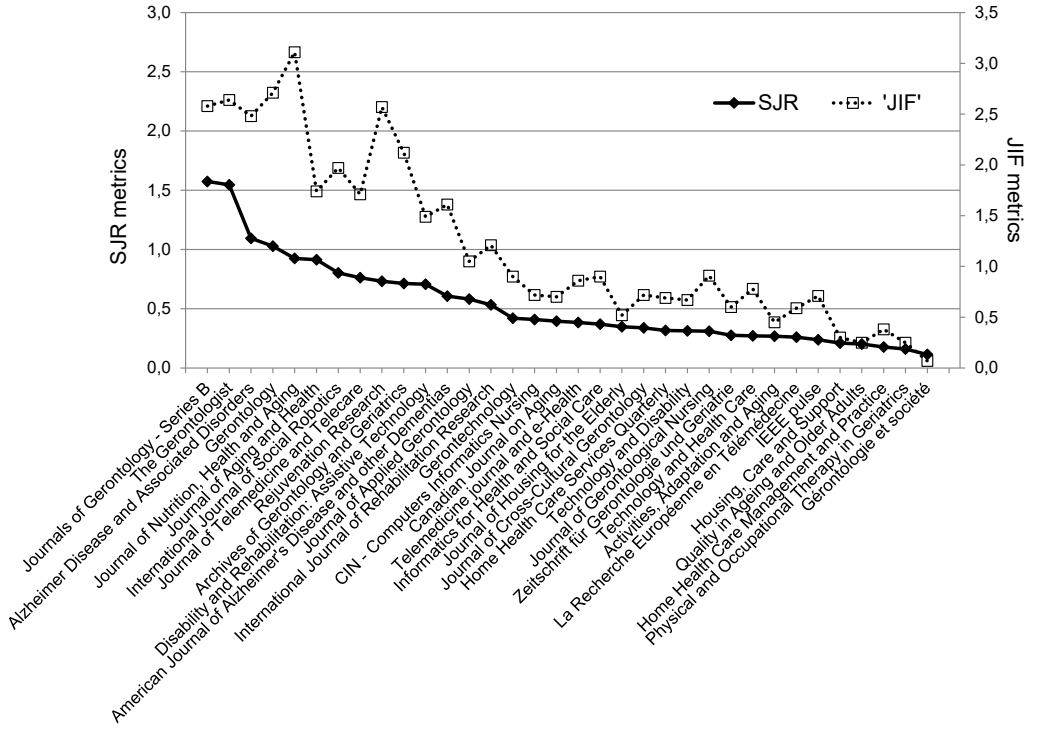

Figure 2. Journals in the SCImago[2] database with at least 10 articles devoted to (technology or engineering)+gerontology in the 21st century; the journals are ranked with the 2014 SJR (Scientific Journal Ranking) indicator and a pseudo JIF (Journal Impact Factor), calculated with the same algorithm as the JIF of Thomson Reuters