

# A follow-up ranking of academic journals

Nick Bontis and Alexander Serenko



Nick Bontis is based at DeGroote School of Business, McMaster University, Hamilton, Canada. Alexander Serenko is based at the Faculty of Business Administration, Lakehead University, Thunder Bay, Canada.

## Abstract

**Purpose** – The purpose of this paper is to develop a ranking of knowledge management and intellectual capital academic journals.

**Design/methodology/approach** – A revealed preference, also referred to as citation impact, method was utilized. Citation data were obtained from Google Scholar by using Harzing's Publish or Perish tool. The h-index and the g-index were employed to develop a ranking list. The revealed preference method was compared to the stated preference approach, also referred to as an expert survey. A comprehensive journal ranking based on the combination of both approaches is presented.

**Findings** – Manual re-calculation of the indices reported by Publish or Perish had no impact on the ranking list. The revealed preference and stated preference methods correlated very strongly (0.8 on average). According to the final aggregate journal list that combined stated and revealed preference methods, Journal of Knowledge Management and Journal of Intellectual Capital are ranked A + , and The Learning Organization, Knowledge and Process Management, and Knowledge Management Research & Practice are ranked A.

**Research limitations/implications** – This study was the first of its kind to develop a ranking system for academic journals in the field based on the journals' citation impact metrics. This list is vital for knowledge management and intellectual capital academics for tenure, merit, and promotion decisions. It may also help them achieve recognition among their peers and colleagues from other disciplines.

**Practical implications** – The proposed ranking list may be fruitfully employed by knowledge management and intellectual capital practitioners, librarians making journal subscription decisions, academics looking for best outlets, and various academic committees.

**Originality/value** – This paper represents the first documented attempt to develop a ranking of knowledge management and intellectual capital academic journals by using the h-index and the g-index that reflect journal citation impact.

**Keywords** Knowledge management, Intellectual capital, Serials

**Paper type** Research paper

## Introduction

This paper presents a ranking of knowledge management and intellectual capital (KM/IC) academic journals based on Hirsch's h-index and Egghe's g-index. These indices reflect the citation impacts of these journals and offer a supplemental perspective on the recent KM/IC journal ranking presented by Serenko and Bontis (2009) in this issue. The results indicate a high correlation between these ranking methods and demonstrate that both perceived and objective ranking approaches may be employed interchangeably.

KM/IC is a new academic discipline that has been dramatically growing for the past decade. On the one hand, KM/IC has become a popular domain that has its own academic outlets, conferences, leading scholars, theories, and preferred inquiry methods. On the other hand, researchers face various challenges when selecting KM/IC as their primary scientific domain. Recently, (Serenko and Bontis, 2009) developed a ranking of KM/IC academic journals by surveying 233 active researchers. During this project, the authors received

Received: 5 September 2008  
Revised: 19 September 2008  
Accepted: 29 September 2008

**“A current lack of a well-established KM/IC journal ranking system was cited as a major obstacle on the way to tenure, promotion and achievement recognition.”**

unsolicited yet very valuable feedback from many academic researchers whose major challenge was to gain recognition from their institutions, departments, and colleagues on their KM/IC scholarly works. Specifically, a current lack of a well-established KM/IC journal ranking system was cited as a major obstacle on the way to tenure, promotion and achievement recognition. Some frustrated respondents even wrote several blistering paragraphs, for example:

At my university, ranking is the number one reason for contributing to a particular journal (well, after relevance of course) and this makes our work – and tenure tracks – really quite difficult (Julie F.)

Do I go for the *Journal of Knowledge Management* again? Yes I will but it won't get me promoted . . . Do I go for the other journals you list? Doubtful cause . . . it doesn't rate for my career (Peter M.)

The *Journal of Intellectual Capital*, for instance, ranks based on our ranking as a third tier accounting journal. *The Electronic Journal of Knowledge Management* does not appear on the list at all. This is a critical issue for me professionally, as well as for several of my colleagues here (Loretta O.)

Currently, many KM/IC researchers are virtually forced by their institutions to submit their works to various non-KM/IC specific outlets that are preferred internally. Some academic institutions and departments establish their own journal ranking systems whereas others employ lists published externally. However, many tenure, promotion, and merit pay committees are comprised of individuals from various disciplines who are not familiar with each applicant's research domain and thus cannot objectively assess his or her quality of publications (Coe and Weinstock, 1984). As a result, they have to rely on internal or external journal lists in their decisions. Therefore, it is believed that the development of KM/IC-specific journal rankings may help scholars achieve recognition among their peers and improve careers. In addition, journal ranking is an important attribute of discipline identity. In fact, it is often useful to retrospectively analyze the evolution of a scientific field through various attributes, including journals that are targeted for publication.

The purpose of this particular study was to extend the previous journal ranking study (published in this issue), and to validate the ranking list by using an alternative methodology. In the previous project (Serenko and Bontis, 2009), a stated preference (i.e. peer review or expert survey) technique was used to develop a journal ranking. In the current investigation, a revealed preference (i.e. citation-based) approach is employed. Specifically, the ranking is constructed based on Hirsch's h-index and Egghe's g-index, which reflect the citation impact of each outlet, by using Google Scholar (GS) data.

## Literature review

### *Two approaches to assessing scholarly journals*

There are a variety of techniques to assess journal quality and develop journal rankings (Lowry *et al.*, 2004, 2007) that may be broadly classified as stated preference and revealed preference approaches. Stated preference investigations survey current, active, or expert researchers in the field on their opinion on several qualities of each outlet (e.g. see Mylonopoulos and Theoharakis, 2001; Walstrom and Hardgrave, 2001; Bharati and Tarasewich, 2002). A major strength of this method is that academics are usually evaluated by committees comprised of their peers and senior scholars who form their subjective views about an overall quality of each journal. It is their perceptions, personal biases and preferences that affect their judgment when they evaluate a person's contribution to the field. This makes journal rankings obtained by a stated preference approach valuable since they

reflect an overall opinion of key decision makers. In fact, it is the perception of the quality and impact of the work that affects the evaluation process. Factors that influence journal quality perceptions include but not limited to: reputation of editor and review board, inclusion in citation indices, opinion of leading researchers, appearance in ranking lists, citation impact factor, opinion of colleagues, journal longevity, acceptance rates, and circulation (i.e. number of subscribers). Overall, it is the image of quality and journal prestige rather than its actual rigor, innovativeness, contribution, and value to the field that form journal ranking lists obtained by a stated preference method. Some potential weaknesses of this technique are a sampling problem, multiple submissions by the same survey participant, and a low response rate. Most importantly, academics have long memories and perceptions of journal quality that change over time very slowly (Tahai and Meyer, 1999). As a result, newer outlets that have already made a substantial contribution to the discipline may remain unnoticed or receive lower rankings.

The revealed preference technique reflects an actual contribution of each outlet measured through its citation impact. This approach was first documented by Gross and Gross (1927) in their investigation of reference trends in the *Journal of the American Chemical Society*. The citation impact method has gained momentum since 1961 when the Science Citation Index was published (Garfield, 1979; MacRoberts and MacRoberts, 1989). It assumes a positive relationship between a journal's citation impact, measured through a variety of factors and within specific timeframes, and its position in a ranking list (Garfield, 1972). Citation studies are well-recognized by a scientific community as a method for evaluating impact, contribution and dissemination of knowledge in a particular field and may be applied to individuals, institutions, countries, or publication outlets (Holsapple *et al.*, 1994; Howard and Day, 1995; Cheng *et al.*, 1999; Kleijnen and Van Groenendaal, 2000; Goodrum *et al.*, 2001; Harzing, 2005). Citation impact, expressed in terms of number of citations per paper, is often considered the only way by which non-field specialists may judge the quality of someone's research output (Meho, 2007). It is also generally believed that citation impact may help identify popular research topics, trends, classical works and inter-disciplinary connections, and it may also be used to determine an overall quality of scientific journals through their contribution to the body of knowledge.

On the one hand, Mingers and Harzing (2007) demonstrated that journal rankings obtained by stated and revealed preference techniques are highly correlated. On the other hand, in all well-established scientific disciplines, both methods are utilized interchangeably to obtain valid journal rankings and reduce the probability of mistakes. Barnes (2005) showed that these techniques may sometimes produce inconsistent results for specific outlets. In addition, it is always beneficial to re-validate previous findings through a different approach. Therefore, the purpose of this project is to present a ranking of KM/IC academic journals based on the revealed preference technique that is also referred to as citation impact. To obtain a list of citations for each outlet, Google Scholar is employed. The following sub-section describes the advantage of using GS in KM/IC citation analysis research in detail.

### *The value of Google Scholar for the KM/IC discipline*

The internet has had a dramatic impact on the popularity of citation metrics (Meho, 2007; Meho and Yang, 2007). Before the internet era, Thomson Scientific, formerly the Institute for Scientific Information had a 40-year monopoly on citation analysis reports and techniques. During the recent decade, several alternative databases, digital libraries, and indices have appeared. For example, Elsevier's Scopus, Google Scholar, arXiv e-print server (arXiv.org) and CiteSeer have been widely used by thousands of scholars. Thompson also launched its own online product Web of Science (WoS). Overall, the contribution that Thompson has made to the measurement, development, promotion and dissemination of scientific findings is unarguable. At the same time, Web of Science cannot be currently applied to the KM/IC field for the following reasons.

First, journals indexed by Thomson Scientific are available to members of organizations that subscribed to the service (Harzing and van der Wal, 2008a). A unique distinction of the

KM/IC field is the number of practitioners (i.e. individuals not affiliated with an educational institution) who actively contribute to books, journals, and conference proceedings. For example, at the McMaster World Congress on the Management of IC and Innovation, practitioners' contribution was equivalent to that of all top ten academic institutions (Serenko *et al.*, 2008). Generally, non-academics and their organizations cannot afford expensive journal subscriptions; this forces them to read and cite papers freely accessible online that are often excluded from Thompson.

Second, WoS dramatically underestimates a citation impact of both individual academics and publication outlets. Overall, GS provides better citation coverage than WoS or Scopus (Kousha and Thelwall, 2007). The reason is that Google Scholar's identifies citations in refereed journals, books, book chapters, conference proceedings, theses, professional publications, reprint repositories, and various scholarly institutions. Most publishers of academics works have already subscribed to the service to get more exposure for their products. Since WoS and Scopus limit their databases to select journals only, many documents and citations appearing at GS would otherwise remain unnoticed. Nisonger (2004) empirically demonstrates that WoS captured only 29 percent of total citations, 42 percent of print citations, 20 percent of citations outside of the USA, and only 2 percent of non-English references. Compared to GS, WoS undervalued the citation impact of each author of this paper by five and ten times. In the field KM/IC, many works appear in forms of books, book chapters and conference proceedings that are excluded from WoS. In fact, the top three most frequently cited KM/IC publications are books (Serenko and Bontis, 2004), and the most complete list of references to these works is provided by Google Scholar only. Since GS has larger coverage, it may also generate more accurate results for journal impact measures. It also generates citation impact indices for conference proceedings.

Third, Thompson's database includes only select journals that have a long publication history. As such, only Thompson-listed journals are searchable. As of July 2008, none of the 20 KM/IC outlets ranked by Serenko and Bontis (2009) was indexed by WoS. This is also an issue for other disciplines; for instance, only 36 percent of all Information Systems journals were indexed (Fisher *et al.*, 2007). The "cited reference" search of WoS presents references to non-ISI listed journals with respect to the first author of a manuscript only and excludes publications where an author in question is not listed first (Harzing and van der Wal, 2008a). This in turn dramatically decreases the citation coverage. Gu (2004) conducted a bibliometric analysis of global KM research to identify sources of KM publications. Since the data was collected through a search restricted to articles appearing in WoS only, none of the pure KM/IC journals was identified. The exclusion of the body of research appearing in titles that are well-respected in the KM/IC research community, such as *Journal of Knowledge Management*, *Knowledge Management Research & Practice*, and *International Journal of Knowledge Management*, is regrettable. This, however, results from the exclusion of all pure-KM/IC journals from the Thompson databases, but not from the lack of these journals' contribution.

Fourth, GS has lower citation noise than WoS. Citation noise appears when a reference contains misspelled words or incomplete information. As a result, WoS presents these citations as references to independent works. In contrast, GS has a better aggregating mechanism to minimize the noise and offer more realistic results. This makes it easier for researchers to manually review and consolidate the results.

Fifth, WoS indexes very few journals in languages other than English. In the KM/IC field, academics from non-English speaking countries, such as Sweden, Spain, Germany, The Netherlands, Finland, Japan and Italy, have generated a substantial amount of the total

**“Journal ranking is an important attribute of discipline identity.”**

research output (Gu, 2004; Serenko and Bontis, 2004). It is assumed that many of them also publish in their native languages; these papers are more likely to appear on GS than on WoS.

Even though Google Scholar provides a larger coverage and higher citation count than WoS, these services generate highly correlated results (Pauly and Stergiou, 2005). Even though the correlations may potentially differ for individual researchers, this is not an issue for aggregated results (Meho and Yang, 2007), such as publication outlets. Overall, the discussion above provides the rationale for employing Google Scholar to develop a ranking of KM/IC journals. Currently, it is the only citation tool that may generate valid results. The following sub-section discusses the utilized metrics.

### *H-index and G-index*

Inclusion in various citation indices and a journal's citation impact factor are critical determinants of people's perceptions of an outlet's overall quality (Rogers *et al.*, 2007). The most popular measure frequently employed to develop journal ranking lists is the Thompson's Journal Impact Factor (JIF) which is reported annually in Journal Citation Reports for journals included in the Thompson's database. However, this measure cannot be currently utilized to rank KM/IC journals.

First, even though Journal Citation Reports include over 7,500 peer-reviewed journals from 200 disciplines, no KM/IC outlet analyzed in the present investigation is included. Second, JIF considers citations within a very short period only. It is calculated by dividing the number of citations in the current year (e.g. 2008) by the number of papers appearing in the previous two years (e.g. 2006 and 2007) for a specific journal. In fact, the value of some works may be realized years later. Third, high JIF scores for a particular outlet may result from only a few over-cited articles, with little or no citations received from remaining published works. At the same time, despite its widespread critique (Seglen, 1997; Hecht *et al.*, 1998; Meho, 2007), citation impact metrics is commonly utilized to develop journal ranking lists (Barnes, 2005).

With the appearance of the internet, other novel citation impact measures were introduced. Specifically, the h-index and g-index provide valid measures that may be used to rank KM/IC journals. The h-index was proposed by Hirsch (2005) who suggests that a "scientist has index  $h$  if  $h$  of his or her  $Np$  papers have at least  $h$  citations each and the other  $(Np - h)$  papers have fewer than  $h$  citations each" (p. 16,569). It immediately became popular after being described in a brief article in *Nature* by Ball (2005). A number of studies discussed, analyzed, extended and demonstrated the validity of the h-index (Liang, 2006). For example, Saad (2006) showed that the h-index of productive consumer researchers strongly correlates with their overall citation count and observed significant correlations between journals' h-indices and their citation impact scores. Banks (2006) argues that the h-index may be used to identify popular research areas. Harzing and van der Wal (2008b) concluded that the Google Scholar h-index is a more comprehensive and accurate journal citation impact measure than Thompson's JIF. The key advantage of the h-index is that it allows distinguishing between journals that attract a dramatically high number of citations from only several works that boosts its average citation scores (i.e. "one-hit wonder"), and journals with more consistently cited publications. A major limitation of the h-index is that it ignores the total number of citations as long as they exceed the  $h$  cut-off value; when a paper is included in the h-set of articles, its actual citation count has no effect on h-index (Egghe, 2008).

The g-index, developed by Egghe (2006), addresses this weakness by measuring the global performance of a set of publications. When all journal's articles are "ranked in decreasing order of the number of citations that they received, the g-index is the (unique) largest number such that the top  $g$  articles received (together) at least  $g^2$  citations" (p. 131). Therefore, it considers both over-cited outliers and overall citation consistency. Both the h-index and the g-index may be employed to measure citation impact of individuals, departments, institutions, and publication outlets (Harzing and van der Wal, 2008b; Tol, 2008). In contrast to Thomson's Journal Impact Factors, the h-index and, to a lesser degree, the g-index eliminate the effect of one highly cited publication, have an unlimited time span, and consider all papers published in a specific outlet. Therefore, the h-index and the g-index

**“A major finding of this study is the emergence of a clear tiering (i.e. clustering of top journals) in the field when both approaches are considered.”**

provide the best option to develop a ranking list of KM/IC journals and are utilized in this project.

### *Results interpretations*

Similar to all journal ranking studies that employ a revealed preference approach, extra care should be taken when interpreting the findings and the reader should be aware of this issue up front. First, journals with longer publication history and outlets that publish more articles per year may produce higher citation indices. Second, the number of citations does not always reflect the actual value of a publication. Third, some articles may influence the discipline in future and attract citations years later. Fourth, self-citations may also artificially inflate the indices. Although there is no reason to believe that KM/IC scholars who publish in a particular journal tend to self-cite more, self-citations may still confound the results. Fifth, negative references that are made to critique someone's work are still included. Sixth, Google Scholar offers little information on the article collection and indexing process. It is possible that it excludes some works or omits references; this may potentially undermine the citation metrics of particular outlets. Overall, it is not suggested that the contribution of one journal on the list is higher than those of other outlets; it is simply the development of a ranking list based on a particular methodology that is recognized in academic circles. It is totally up to the reader to interpret and utilize this ranking.

### **Methodology and results**

#### *Journal list and data collection*

The same journal list as presented by Serenko and Bontis (2009) was utilized in this project. Two minor adjustments were made. First, the *International Journal of Applied Knowledge Management* was excluded since it is a very new journal that was not able to attract a fair amount of citations to be utilized in the ranking. Second, the *Interdisciplinary Journal of Information, Knowledge and Management* was added to the list.

The data were collected by using Harzing's Publish or Perish (PorP) tool, version 2.5.2969 on July 21, 2008. No restrictions were placed on discipline field (i.e. all boxes for selected disciplines were checked) and publication years. "Lookup Direct" feature was employed since it extracts the latest data from the Google Scholar database directly. All journals were searched by their title only (i.e. no ISBN). General title keywords were used, and the words "international", "journal", and "management" were excluded. For instance, for *Journal of Universal Knowledge Management*, keywords "Universal Knowledge" were entered. For *The Learning Organization* journal, two independent searches on "Learning Organization" and "Learning Organisation" were conducted and the results were combined. All results were reviewed and adjusted manually.

Misspelled references represent a challenge for Google Scholar, and they appear as two or more different articles in PorP. This may theoretically affect the h-index and the g-index that are automatically reported by PorP. Therefore, all references were analyzed manually and necessary adjustments were made. For example, an article published by Bontis *et al.* (2000) in the *Journal of Intellectual Capital* appeared in PorP four times with citation counts of 132, 5, 2 and 1. In this case, the citations were aggregated manually to equal a total of 140. This was done for each outlet. New data were tabulated in an Excel spreadsheet, and all the h-indices and g-indices were re-calculated based on adjusted numbers.

## Findings

The manual adjustment of the h-index and g-index reported by PorP had very little impact on these metrics. The h-index was increased only for *Journal of Intellectual Capital* (1 point), and the g-index was increased for three outlets: *Journal of Knowledge Management* (2 points); *Journal of Intellectual Capital* (2 points); and *Journal of Knowledge Management Practice* (1 point).

This had no impact on the final journal ranking.

Table I outlines Spearman correlations between stated preference scores reported by Serenko and Bontis (2009) and citation metrics obtained in this project. First, a very strong correlation between stated and revealed preference method was observed. Second, indices produced by PorP and their manually re-calculated counterparts correlated almost perfectly.

Table II presents the ranking of KM/IC journals based on a combination of both h-index and g-index.

The results reported by Serenko and Bontis (2009) and those obtained in the present study were combined to generate a single journal list that combines both the stated and revealed preference approaches. The following four-step process was followed:

<b>Table I</b> Spearman correlations for ranking metrics (note: all values are significant at $p < 0.000$ )				
Metrics	Stated preference score	h-index (PorP)	g-index (PorP)	h-index (adjusted)
h-index (PorP)	0.813			
g-index (PorP)	0.793	0.997		
h-index (adjusted)	0.813	1.000	0.997	
g-index (adjusted)	0.794	0.997	1.000	0.997

<b>Table II</b> KM/IC academic journals ranking – revealed preference (i.e. citation impact) method				
Revealed pref. rank	Title	h-index	g-index	Stated pref. rank
1	<i>J. of Knowledge Management</i>	47	70	1
2	<i>J. of Intellectual Capital</i>	36	56	2
3	<i>The Learning Organization</i>	28	39	5
4	<i>Knowledge and Process Management</i>	26	38	6
5	<i>Knowledge Management Research &amp; Practice</i>	13	25	3
6	<i>J. of Knowledge Management Practice</i>	10	13	8
7	<i>Electronic J. of Knowledge Management</i>	8	12	10
8	<i>VINE: The J. of Info. and KM Systems</i>	8	11	14
9	<i>Intl. J. of Knowledge and Learning</i>	7	10	12
9	<i>J. of Info. and Knowledge Management</i>	7	10	7
11	<i>Intl. J. of Knowledge Management</i>	6	8	4
12	<i>Knowledge and Innovation: J. of the KMCI</i>	5	8	15
13	<i>Intl. J. of Learning and Intellectual Capital</i>	5	7	9
14	<i>J. of Universal Knowledge Management</i>	4	7	19
15	<i>Interdisciplinary J. of Info., Knowledge and Management</i>	3	5	N/A
16	<i>Intl. J. of Knowledge, Culture and Change Management</i>	3	3	13
17	<i>Intl. J. of Knowledge Management Studies</i>	2	2	11
17	<i>Intl. J. of Nuclear Knowledge Management</i>	2	2	20
17	<i>Knowledge Management for Development J.</i>	2	2	17
17	<i>The Icfai J. of Knowledge Management</i>	2	2	18

1. the h and g-index data obtained in the present project were aggregated and standardized;
2. the journal scores from the stated preference technique (i.e. Serenko and Bontis (2009), Table IV) were standardized;
3. scores obtained from steps 1 and 2 were aggregated for each journal;
4. a new ranking was constructed (see Table III).

Since *Journal of Applied Knowledge Management* and *Interdisciplinary Journal of Information, Knowledge, and Management* were included in only one previous ranking list, their scores were multiplied by two. As suggested by Gillenson and Stafford (2008), in this ranking, there are approximately 25 percent of A, 50 percent of B, and 25 percent of C level journals. This is done to limit the number of top-tier journals to a reasonable number. At the same time, many scholars, especially junior academics and doctoral students, may want to publish most of their works in refereed journals of acceptable quality. It is for this purpose, the number of B journals was set at 50 percent.

### Discussion and conclusions

The purpose of this project was to develop a ranking of KM/IC academic journals based on the revealed preference approach. For this, Harzing's Publish or Perish tool was employed to obtain citation data for the list of 20 journals from Google Scholar. The journals were ranked based on a combination of the h-index and g-index. During the study, several issues emerged.

First, although some citation noise occurs by using Google Scholar, the system's aggregation mechanism is robust enough to provide very reliable citation metrics. During this project, manual re-calculation of the h-index and g-index for the select 20 journals resulted in only several minor adjustments, and had no impact on the actual journal ranking. In addition, perfect Spearman correlation coefficients (0.997 and 1.000) were observed between the initial Google Scholar and manually adjusted indices. However, future investigators are still encouraged to manually track each article that may be potentially included in the set of *h* or *g* articles. Even this was not observed in the present project, theoretically, some adjustments may affect the ranking of a particular outlet.

**Table III** Final KM/IC academic journal ranking – stated preference (i.e. expert survey) and revealed preference (i.e. citation impact) methods combined

No.	Tier	Journal title
1	A +	<i>J. of Knowledge Management</i>
2	A +	<i>J. of Intellectual Capital</i>
3	A	<i>The Learning Organization</i>
4	A	<i>Knowledge and Process Management</i>
5	A	<i>Knowledge Management Research &amp; Practice</i>
6	B	<i>Intl. J. of Knowledge Management</i>
7	B	<i>J. of Knowledge Management Practice</i>
8	B	<i>J. of Information and Knowledge Management</i>
9	B	<i>Electronic J. of Knowledge Management</i>
10	B	<i>Intl. J. of Learning and Intellectual Capital</i>
11	B	<i>Intl. J. of Knowledge and Learning</i>
12	B	<i>VINE: The J. of Information and KM Systems</i>
13	B	<i>Intl. J. of Knowledge Management Studies</i>
14	B	<i>Intl. J. of Knowledge, Culture and Change Management</i>
15	C	<i>Knowledge and Innovation: J. of the KMCI</i>
16	C	<i>Interdisciplinary J. of Info. and Knowledge Management</i>
17	C	<i>Intl. J. of Applied Knowledge Management</i>
18	C	<i>Knowledge Management for Development J.</i>
19	C	<i>J. of Universal Knowledge Management</i>
20	C	<i>The Icfai J. of Knowledge Management</i>
21	C	<i>Intl. J. of Nuclear Knowledge Management</i>

Second, the values obtained through a stated preference (i.e. expert survey) and revealed preference (i.e. citation impact) approaches correlated very strongly, over 0.8 on average. This demonstrates the validity of both techniques.

Third, the *Journal of Knowledge Management* and the *Journal of Intellectual Capital* still top the list. Out of five top journals identified by Serenko and Bontis (2009), four stayed in the top five list. The most dramatic move was observed for the *International Journal of Knowledge Management* that dropped from fourth to eleventh place. As discussed earlier in this study, the lower result of this particular journal may not necessarily reflect its contribution to the field and may result from the Google Scholar article collection process. This, unfortunately cannot be currently investigated since little information is available from Google.

Fourth, *Knowledge and Innovation: Journal of the KMCI* (Knowledge Management Consortium International) published only 19 articles and was discontinued in 2001 was ranked 12th and obtained good citation indices. It is likely that if this outlet was still in print, it would be ranked among the leading discipline journals.

In summary, the overall purpose of this particular research project was to extend an earlier study that ranked the top academic journals in the field of KM/IC. Whereas the original study surveyed authors and asked for their opinions, this study examined actual citations. A major finding of this study is the emergence of a clear tiering (i.e. clustering of top journals) in the field when both approaches are considered. This is a very important development for KM/IC academic researchers seeking promotion and recruitment in universities. Traditional lists of accepted journals do not contain KM/IC publication outlets due to the relatively young age of the field and its cross-disciplinary nature. The results of this study support a specialized ranking list of KM/IC journals that academic researchers may use for reward and recognition purposes. This list has been corroborated with two distinct methodologies and can therefore boast a certain level of validity for administrators who are reviewing the performance of candidates.

As the number of KM/IC publications and researchers increases over time, so must the field's ability to understand its identity. Identifying the top outlets of publication in KM/IC creates a strong momentum of academic pursuit for doctoral candidates and researchers who are seeking promotion or positions elsewhere. This momentum provides an important direction for researchers as it reveals a landscape of potential outlets for their important work.

## References

- Ball, P. (2005), "Index aims for fair ranking of scientists", *Nature*, Vol. 436 No. 7053, p. 900.
- Banks, M.G. (2006), "An extension of the Hirsch index: indexing scientific topics and compounds", *Scientometrics*, Vol. 69 No. 1, pp. 161-8.
- Barnes, S.J. (2005), "Assessing the value of IS journals", *Communications of the ACM*, Vol. 48 No. 1, pp. 110-2.
- Bharati, P. and Tarasewich, P. (2002), "Global perceptions of journals publishing e-commerce research", *Communications of the ACM*, Vol. 45 No. 5, pp. 21-6.
- Bontis, N., Keow, W. and Richardson, S. (2000), "Intellectual capital and business performance in Malaysian industries", *Journal of Intellectual Capital*, Vol. 1 No. 1, pp. 85-100.
- Cheng, C.H., Kumar, A., Motwani, J.G., Reisman, A. and Madan, M.S. (1999), "A citation analysis of the technology innovation management journals", *IEEE Transactions on Engineering Management*, Vol. 46 No. 1, pp. 4-13.
- Coe, R. and Weinstock, I. (1984), "Evaluating the management journals: a second look", *Academy of Management Journal*, Vol. 27 No. 3, pp. 660-6.
- Egghe, L. (2006), "Theory and practise of the g-index", *Scientometrics*, Vol. 69 No. 1, pp. 131-52.
- Egghe, L. (2008), "The influence of transformations on the h-index and the g-index", *Journal of the American Society for Information Science and Technology*, Vol. 59 No. 8, pp. 1304-12.

- Fisher, J., Shanks, G. and Lamp, J. (2007), "A ranking list for information systems journals", *Australasian Journal of Information Systems*, Vol. 14 No. 2, pp. 5-18.
- Garfield, E. (1972), "Citation analysis as a tool in journal evaluation", *Science*, Vol. 178 No. 4060, pp. 471-9.
- Garfield, E. (1979), *Citation Indexing: Its Theory and Application in Science, Technology, and Humanities*, Wiley, New York, NY.
- Gillenson, M. and Stafford, T. (2008), "Journal rankings 2008: a synthesis of studies", *Proceedings of the 14th Americas Conference on Information Systems*, Toronto, Canada.
- Goodrum, A.A., McCain, K.W., Lawrence, S. and Giles, C.L. (2001), "Scholarly publishing in the Internet age: a citation analysis of computer science literature", *Information Processing & Management*, Vol. 37 No. 5, pp. 661-75.
- Gross, P.L.K. and Gross, E.M. (1927), "College libraries and chemical education", *Science*, Vol. 66 No. 1712, pp. 385-9.
- Gu, Y. (2004), "Global knowledge management research: a bibliometric analysis", *Scientometrics*, Vol. 61 No. 2, pp. 171-90.
- Harzing, A.-W. (2005), "Australian research output in economics and business: high volume, low impact?", *Australian Journal of Management*, Vol. 30 No. 2, pp. 183-200.
- Harzing, A.-W. and van der Wal, R. (2008a), "Google Scholar as a new source for citation analysis", *Ethics Science Environmental Politics*, Vol. 8 No. 1, pp. 61-73.
- Harzing, A.-W. and van der Wal, R. (2008b), "A Google Scholar H-Index for journals: a better metric to measure journal impact in economics & business?", *Proceedings of the Academy of Management Annual Meeting*.
- Hecht, F., Hecht, B.K. and Sandberg, A.A. (1998), "The journal 'impact factor': a misnamed, misleading, misused measure", *Cancer Genetics and Cytogenetics*, Vol. 104 No. 2, pp. 77-81.
- Hirsch, J.E. (2005), "An index to quantify an individual's scientific research output", *Proceedings of the National Academy of Sciences of the United States of America*, Vol. 102 No. 46.
- Holsapple, C.W., Johnson, L.E., Manakyan, H. and Tanner, J. (1994), "Business computing research journals: a normalized citation analysis", *Journal of Management Information Systems*, Vol. 11 No. 1, pp. 131-40.
- Howard, G.S. and Day, J.D. (1995), "Individual productivity and impact in developmental psychology", *Developmental Review*, Vol. 15 No. 2, pp. 136-49.
- Kleijnen, J.P.C. and Van Groenendaal, W. (2000), "Measuring the quality of publications: new methodology and case study", *Information Processing & Management*, Vol. 36 No. 4, pp. 551-70.
- Kousha, K. and Thelwall, M. (2007), "Google Scholar citations and Google Web/URL citations: a multi-discipline exploratory analysis", *Journal of the American Society for Information Science and Technology*, Vol. 58 No. 7, pp. 1055-65.
- Liang, L. (2006), "H-index sequence and h-index matrix: constructions and applications", *Scientometrics*, Vol. 69 No. 1, pp. 153-9.
- Lowry, P.B., Humphreys, S., Malwitz, J. and Nix, J. (2007), "A scientometric study of the perceived quality of business and technical communication journals", *IEEE Transactions of Professional Communication*, Vol. 50 No. 4, pp. 352-78.
- Lowry, P.B., Romans, D. and Curtis, A. (2004), "Global journal prestige and supporting disciplines: a scientometric study of information systems journals", *Journal of the Association for Information Systems*, Vol. 5 No. 2, pp. 29-77.
- MacRoberts, M.H. and MacRoberts, B.R. (1989), "Problems of citation analysis: a critical review", *Journal of the American Society for Information Science*, Vol. 40 No. 5, pp. 342-9.
- Meho, L.I. (2007), "The rise and rise of citation analysis", *Physics World*, Vol. 20 No. 1, pp. 32-6.
- Meho, L.I. and Yang, K. (2007), "Impact of data sources on citation counts and rankings of LIS faculty: Web of Science versus Scopus and Google Scholar", *Journal of the American Society for Information Science and Technology*, Vol. 58 No. 13, pp. 2105-25.

- Mingers, J. and Harzing, A.-W. (2007), "Ranking journals in business and management: a statistical analysis of the Harzing data set", *European Journal of Information Systems*, Vol. 16 No. 4, pp. 303-16.
- Mylonopoulos, N.A. and Theoharakis, V. (2001), "On site: global perceptions of IS journals", *Communications of the ACM*, Vol. 44 No. 9, pp. 29-33.
- Nisonger, T.E. (2004), "Citation autobiography: an investigation of ISI database coverage in determining author citedness", *College and Research Libraries*, Vol. 65 No. 2, pp. 152-63.
- Pauly, D. and Stergiou, K.I. (2005), "Equivalence of results from two citation analyses: Thomson ISI's Citation Index and Google's Scholar service", *Ethics Science Environmental Politics*, Vol. 5, pp. 33-5.
- Rogers, P.S., Campbell, N., Louhiala-Salminen, L., Rentz, K. and Suchan, J. (2007), "The impact of perceptions of journal quality on business and management communication academics", *Journal of Business Communication*, Vol. 44 No. 4, pp. 403-26.
- Saad, G. (2006), "Exploring the h-index at the author and journal levels using bibliometric data of productive consumer scholars and business-related journals respectively", *Scientometrics*, Vol. 69 No. 1, pp. 117-20.
- Seglen, P.O. (1997), "Why the impact factor of journals should not be used for evaluating research", *British Medical Journal*, Vol. 314 No. 7079, pp. 498-502.
- Serenko, A. and Bontis, N. (2004), "Meta-review of knowledge management and intellectual capital literature: citation impact and research productivity rankings", *Knowledge and Process Management*, Vol. 11 No. 3, pp. 185-98.
- Serenko, A. and Bontis, N. (2009), "Global ranking of knowledge management and intellectual capital academic journals", *Journal of Knowledge Management*, Vol. 13 No. 1, pp. 4-15.
- Serenko, A., Bontis, N. and Grant, J. (2008), "A scientometric analysis of the proceedings of the McMaster World Congress on the Management of Intellectual Capital and Innovation for the 1996-2008 period", *Journal of Intellectual Capital*, Vol. 10 No. 1, pp. 8-21.
- Tahai, A. and Meyer, M.J. (1999), "A revealed preference study of management journals' direct influences", *Strategic Management Journal*, Vol. 20 No. 3, pp. 279-96.
- Tol, R.S.J. (2008), "A rational, successive g-index applied to economics departments in Ireland", *Journal of Informetrics*, Vol. 2 No. 2, pp. 149-55.
- Walstrom, K.A. and Hardgrave, B.C. (2001), "Forums for information systems scholars", *Information & Management*, Vol. 39 No. 2, pp. 117-24.

### About the authors

Nick Bontis is Associate Professor of Strategy at the DeGroote School of Business, McMaster University. He received his PhD from the Ivey Business School, University of Western Ontario. His doctoral dissertation is recognized as the first thesis to integrate the fields of intellectual capital, organizational learning and knowledge management and is the number one selling thesis in Canada. He was recently recognized as the first McMaster professor to win four teaching awards plus researcher of the year simultaneously. He is recognized the world over as a leading professional speaker and consultant in the field of knowledge management and intellectual capital. Nick Bontis is the corresponding author and can be contacted at: nbontis@mcmaster.ca

Alexander Serenko is Associate Professor of Management Information Systems at the Faculty of Business Administration, Lakehead University. Dr Serenko holds a MSc in computer science, an MBA in electronic business, and a PhD in Management Science/Systems from McMaster University. His research interests pertain to knowledge management, user technology adoption, and innovation. Alexander's articles have appeared in various refereed journals, and he has received awards at numerous Canadian, American, and international conferences. He recently received the Lakehead Contribution to Research Award that recognized him as one of top three university researchers.

---

To purchase reprints of this article please e-mail: [reprints@emeraldinsight.com](mailto:reprints@emeraldinsight.com)  
Or visit our web site for further details: [www.emeraldinsight.com/reprints](http://www.emeraldinsight.com/reprints)