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Scientometric Properties of Education in Medicine Journal

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Evaluating scientific quality of a journal is a notoriously cumbersome problem that so far no standard consensus (1). Preferably, scientific journals should be examined by real experts in the field and given scores on quality according to standard guidelines. Nevertheless, information scientists (i.e. scientometricians) have developed a diverse range of tools to examine scientific merits of scientific publications that mainly depending on various indexes that counting citations (2). The impact factor (IF) is commonly used to examine the visibility of a journal. It is the average number of citations a paper of a journal attracts in the two years following its publication (2). However, it has been shown to have numerous pitfalls such as 1) time window of impact factor that relatively short time for papers to reach a peak to attract citation, 2) self citations and active manipulation of impact factor, 3) coverage and English language preference by databases, 4) it is an arithmetic measure of the journal, can't predict quality of articles, 5) it is an incomplete journal-focused metric, 6) subject areas and categories of articles whereby articles in rapidly growing disciplines and subjects are cited more often than more traditional research fields, and 7) invalid articles such as retracted ones may still continue to be cited by other researchers as a valid work (2). Consequently, it alone cannot assess the quality of scientific publications. Alternatively, other indexes such as 5 year impact factor, h-index and quartile ranking are to be used to appraise the quality of scientific publication. Considering all these facts in mind, this editorial shared the scientometrics analysis of Education in Medicine Journal based on the reports produced by the Malaysian Citation Centre (3) and Google Scholar using the Harzing's Publish or Perish software (4). It is hoped that this article provides

useful information on the journal's visibility at local and international levels.

Based on the MyCite report (3), Education in Medicine Journal was classified under the Q1 journal either by overall or by discipline (Table 1 and Table 2). Apart from that, the journal was ranked 2/136 by overall (Table 1) and 1/22 by discipline (Table 2) based on the 5 year impact factor. These results indicate that the journal has made substantial impact at local level, thus may improve its visibility as a local scientific journal. Nevertheless, as expected, its h-index (Table 1 and Table 3) was lower compared to the more established journals such as Malaysian Journal of Medical Sciences, Medical Journal of Malaysia and Malaysian Journal of Nutrition. As a young journal (5), all these facts provide positive signs as an academic journal.

Internationally, based on the Google Scholar database (using the Harzing's Publish or Perish software for analysis), the journal seems to have a better visibility compared to local level since its h-index (Table 3) was more than the h-index reported by MyCite (Table 1 and Table 2). Similarly, the citation per paper was 0.54 (i.e. impact factor) which more than the reported by MyCite (impact factor = 0.195). The *hI,annual* value was 0.60 indicating that each year the journal's h-index increased by 0.60 point and this fact suggests the journal is progressing in positive direction (Table 3). Similarly, other indexes (Table 3) suggesting that the journal is paving its ways at international level and this could further increase its visibility internationally (6).

In a nutshell, the journal is paving its ways to ensure its visibility at local and international level. These results provide useful information to guide the editors on areas for further improvement, to encourage potential authors to submit papers and to guide reviewers on the journal expectations. It is worth noting that editors, reviewers and authors are the people who should be credited for the journal success to improve its visibility. Without their relentless support and commitment, this journal is nowhere.

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Table 1: Top 20 journals across disciplines ranked by 5 year impact factor (MyCite at December 2013, the total number of journals analysed was 136)

No	Journal	Discipline	5 year impact factor	Impact factor	h-index	Quartile*
1	GEMA Online Journal of Language Studies	Arts & Humanities	0.276	0.317	6	Q1
2	Education in Medicine Journal	Medical & Health Sciences	0.213	0.195	2	Q1
3	Sepilok Bulletin	Sciences	0.182	0.071	3	Q1
4	Asian Journal of Accounting and Governance	Social Sciences	0.095	0.125	1	Q1
5	Malaysian Journal of Learning & Instruction	Social Sciences	0.083	0.067	1	Q1
6	3L : The Southeast Asian Journal of English Language Studies	Arts & Humanities	0.063	0.048	2	Q4
7	Jurnal Komunikasi, Malaysian Journal of Communication	Social Sciences	0.060	0.064	3	Q2
8	Malaysian Journal of Nutrition	Medical & Health Sciences	0.060	0.014	6	Q3
9	International Food Research Journal	Sciences	0.059	0.063	5	Q1
10	Malaysian Journal of Medical Sciences	Medical & Health Sciences	0.059	0.032	4	Q1
11	International Journal of Economics and Management	Social Sciences	0.056	0.024	2	Q4
12	Malaysian Journal of ELT Research	Arts & Humanities	0.050	0.048	1	NA
13	Malaysian Journal of Library & Information Science	Social Sciences	0.047	0.042	4	Q2
14	Jurnal Syariah	Arts & Humanities	0.045	0	2	Q2
15	Wacana Seni: Journal of Arts Discourse	Arts & Humanities	0.045	0	1	NA
16	Malaysian Journal of Computer Science	Engineering & Technology	0.044	0	2	NA
17	ASEAN Journal of Psychiatry	Medical & Health Sciences	0.043	0.042	2	Q2
18	English Teacher	Arts & Humanities	0.037	0.042	2	Q2
19	Journal of Design + Built	Engineering & Technology	0.035	0	1	NA
20	Journal of Engineering Science and Technology	Engineering & Technology	0.026	0.033	3	Q1

*Q1 denotes the top 25% of the IF distribution, Q2 for middle-high position (between top 50% and top 25%), Q3 middle-low position (top 75% to top 50%), and Q4 the lowest position (bottom 25% of the IF distribution) (7)
h-index is defined as a scientist has index h if h of his/her N_p papers have at least h citations each, and the other $(N_p - h)$ papers have no more than h citations each (8).

Table 2: Journal in Medical & Health Sciences ranked by 5 year impact factor (MyCite at December 2013)

No	Journal	5 year impact factor	Impact factor	h-index	Quartile*
1	Education in Medicine Journal	0.213	0.195	2	Q1
2	Malaysian Journal of Nutrition	0.060	0.014	6	Q3
3	Malaysian Journal of Medical Sciences	0.059	0.032	4	Q1
4	ASEAN Journal of Psychiatry	0.043	0.042	2	Q2
5	Malaysian Journal of Community Health	0.024	0	2	NA
6	International Medical Journal Malaysia	0.017	0	2	NA
7	Medical Journal of Malaysia	0.014	0.014	5	Q3
8	International e-Journal of Science, Medicine & Education	0.013	0.023	2	Q2
9	Jurnal Sains Kesihatan Malaysia	0.013	0	1	NA
10	Tropical Biomedicine	0.009	0.012	4	Q4
11	Malaysian Journal of Psychiatry	0.009	0	2	NA
12	Biomedical Imaging and Intervention Journal	0.006	0	1	NA
13	Malaysian Journal of Pathology	0	0	2	NA
14	Journal of the University of Malaya Medical Centre (currently JUMMEC : Journal of Health and Translational Medicine)	0	0	1	NA
15	Annals of Dentistry	0	0	1	NA
16	Malaysian Family Physician	0	0	2	NA
17	Archives of Orofacial Sciences	0	0	2	NA
18	Malaysian Journal of Public Health Medicine	0	0	1	NA
19	Medicine & Health	0	0	1	NA
20	Malaysian Journal of Pharmaceutical Science	0	0	1	NA
21	Malaysian Orthopaedic Journal	0	0	1	NA
22	Buletin Persatuan Genetik Malaysia	0	0	1	NA

*Q1 denotes the top 25% of the IF distribution, Q2 for middle-high position (between top 50% and top 25%), Q3 middle-low position (top 75% to top 50%), and Q4 the lowest position (bottom 25% of the IF distribution) (7)
h-index is defined as a scientist has index h if h of his/her N_p papers have at least h citations each, and the other $(N_p - h)$ papers have no more than h citations each (8).

Table 3: Scientometrics analysis of Education in Medicine Journal from 2009 to 2014 based on the Harzing's Publish or Perish software version 4 (at 25 July 2014).

Papers: 156	h-index: 4
Citations: 85	g-index: 5
Years: 5	e-index: 3
Cites/year: 17.00	h5-index: 4
Cites/paper: 0.54 (mean)	h5-median: 6
Cites/author: 52.11	hc-index: 5
Cites/author/year: 10.42	hI,annual: 0.60

h-index is defined as a scientist has index h if h of his/her N_p papers have at least h citations each, and the other $(N_p - h)$ papers have no more than h citations each (8).

g-index refers to [Given a set of articles] 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 g2 citations (9).

e-index is the (square root) of the surplus of citations in the h-set beyond h^2, i.e., beyond the theoretical minimum required to obtain a h-index of 'h'. The aim of the e-index is to differentiate between scientists with similar h-indices but different citation patterns (10).

h5-index is the h-index for articles published in the last 5 complete years. It is the largest number h such that h articles published in 2009-2013 have at least h citations each (11).

h5-median for a publication is the median number of citations for the articles that make up its h5-index (11).

hc-index is the contemporary h-index adds an age-related weighting to each cited article, giving (by default; this depends on the parametrization) less weight to older articles (12).

hI,annual refers to the average annual increase in the individual h-index and is meant as an indicator of an individual's average annual research impact (4).