

EDITORIAL

My earlier Editorial relating to the relative values of the impact factor (IF) for science, engineering and technology journals has elicited a large number of responses generally in agreement with my overly simplistic analysis. A subsequent literature search on the subject of IF has unearthed a large number of scholarly articles attesting to the various shortcomings of the IF even within a single discipline. Interested readers can refer to www.geocities.com/AS_Mujumdar for a selection of literature citations. Most deal with scientific and medical disciplines but not with engineering. The high volume of IF is shown to be correlated to the “degree of citedness” or the practice of a given discipline to cite a very large number of references (e.g. science and medicine) or only cite few references (e.g. engineering and technology journals). This clearly influences the volume of IF the way it is computed. Also, IF covers only those papers that appear in a two-year span following the publication year; this has further implications on the true value of the real impact of the published work.

The published IF values have also been shown to be affected by typographical errors in author’s citations. At least in one case one journal had an inflated IF as citations for a similarly titled journal were incorrectly credited to it over nearly two decades before the error was discovered!

What is the conclusion? Simply that IF values should be used with caution. Do not confuse IF values between disciplines – it is worse than comparing the proverbial apples and oranges! Some have proposed new measures to assess journal impact since they consider IF as a misnomer. (See, for example, S.P. Harter and T.E. Nisonger, *Journal of the American Society for Information Science*, Vol. 48, No. 12, 1997, pp. 1146-1148).

Journal quality assessments perhaps needs a combined subjective and objective approach as proposed by D. Zhou, J. Ma and E. Turban (*IEEE Transactions on Engineering Management*, Vol. 48, No. 4, 2001, pp. 479-490). Suitably computed IF could provide the objective input while expert judgements provide the subjective input. Zhou et al. propose a fuzzy set approach, which can also consider incomplete and imprecise information often inherent in any evaluation process.

The critical comments of Van Leeuwen et al. (*Journal of Information Science*, Vol. 25, No. 6, 2000, pp. 489-498) are particularly illuminating as they address a number of problems with conventionally accepted two-year IF. They conclude that often IF is used inappropriately by researchers for their publication strategy (e.g. engineering papers in applied physics or chemistry journals), by decision-makers to evaluate research and by libraries to evaluate their journal collections. Short term IF favours journals that reach their maximum citations in two years; there are important journals that achieve the peak between four to eight years after publication.

I would be happy to hear from the readers of this journal their views on this issue of considerable current interest particularly for engineering and technology journals.

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