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The Use of Impact Factor in the Appraisal of Academic Librarians in Nigeria

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Introduction

In the past, librarians were not always categorized as faculty or academics. Presently, librarians in many universities world-wide are academics and are subjected to the same promotion criteria as their classroom colleagues. In any profession, there is always an index for some sort of ranking. In academia, one such measure used in assessment of academic performance is the impact factor, sometimes abbreviated IF. Chiejina (2006) citing Garfield, defines impact factor as an indirect bibliometric measure of the international standing of journals and the impact of articles published in them. Wikipedia (2007) defines IF as a measure of citations to science and social science journals, stating that it is a proxy for the importance of a journal to its field. Impact factor was originated by Eugene Garfield (Chiejina, 2006; Harnard, 2004; Wikipedia, 2007). Wikipedia (2007) states that Garfield is also the founder of the Institute for Scientific Information (ISI), now part of Thomson Scientific. It is a large worldwide, US-based publisher that calculates impact factor each year for those journals that it indexes, and publishes the factors and indices in *Journal Citation Reports* (JCR).

The present study explores the degree to which academic librarians accept the use of IF for assessing their academic performance. Its application to assessment of academic performance and reactions to it in developed and developing countries, with particular reference to Nigeria, are also articulated. There is no literature on impact factor on Nigerian universities. It is this gap that the current study addresses.

Background

A journal's IF is based on two elements, the numerator, which is the number of citations in the current year to any items published in a journal in the previous two years, and the denominator, which is the number of substantive articles (source items), published in the same two years. The IF could just as easily be based on the previous year's articles alone, which would give an even greater weight to rapidly changing fields (Shiwani, 2006; Wikipedia, 2007). IF has favourable properties and usages. It also has deficiencies that can be misused and manipulated. Manipulation can be done through a journal's editorial policies. Such policies may encourage publication of a large percentage of review articles since it is expected that these review articles could receive at least one citation each, within three years of publication, and could raise the IF of the journal. The review articles may not necessarily improve the quality of published scientific work.

Statement of the Problem

IF is used to assess the quality of journals. Recently, its use has been extended to performance appraisal of academics, including librarians. This development raises the question of whether IF should be used for appraisal of academic librarians in Nigeria.

Purpose of the Study

The study sought to discover:

- The merits of impact factor
- The demerits of impact factor
- Factors that militate against its use for academic assessment of librarians in Nigeria
- The percentage of respondents that would like to be assessed through impact factor guidelines

Research Questions

- What are the merits of impact factor?
- What are the demerits of impact factor?
- What are the factors that militate against use of impact factor for academic assessment of librarians in Nigeria?
- What percentage of respondents would like to be assessed through impact factor guidelines?

Scope of the Study

The study covers 2007 to 2008. It is limited to the University of Nigeria, Nsukka and Enugu Campuses. The University of Nigeria is the only university in Nigeria where impact factor was introduced as a parameter for assessment of academic performance at the beginning of 2007/2008 academic year.

Significance of the Study

The result will help determine the degree of acceptance of IF as a parameter for assessment of academic librarians in Nigeria. Research facilities which are needed by academic librarians to enable them publish in IF-rated journals will be identified. The need for more funds for the pursuit of higher standards of scholarship will be indicated.

Literature Review

Use of Impact Factor in Academic Appraisals Internationally

The use of IF for qualitative assessment of journal research and researchers has generated debate. Some pro-impact factor scientists like Hook (1999), Gunn (2004), and Neuberger and Counsel (2002) believe that use of IF has great value. They assert that despite valid concerns, IF is widely used and offers the best simple tool for comparison of output. Supporting the use of IF, Shiwani (2006) urges doctors and scientists from Pakistan working in developing countries to contribute to journals with high IF.

Other scientists believe that it is not right for institutions and committees of experts, and sometimes non-experts, to use IF to evaluate individual scientific achievement for the purpose of promotion, considering its flaws. In this school of thought are Harnard (2004), Eston (2004), Dong and Mondry (2005), Romon (2004), Sosteric (n.d.), Scully & Lodge (2005), Cathey & Kader (2004), and Chong (2004).

More worrisome is the fact that IF is now used as an index of the quality of the academic efforts of researchers, academics, and individual faculties (2003). Eston (2004) observes that although the United Kingdom's (UK) Research Assessment Exercise (RAE) of 2008 would be guided by IF alone, IF would unlikely be used to assess the quality of research. In Singapore, medical school deans and administrators have adopted IF as a measure of quality of the academic efforts of individuals faculty and the academic productivity of medical school departments, although there are already serious questions about the validity of the use of IF for these purposes (Rogers 2003). In Japan, promotion is aided by applicants listing journal IF beside the references in their citation list. It has been observed that IF is hindering advancement in Japan's academia for good clinicians with little basic science research experience (Abbasi 2004). Appointment committees at their universities are often heavily influenced by journal IF (Cameron 2005). He reveals that in the UK, some university administrators multiply the number of articles by the IF of the journal, and use this as a criterion for promotion. He also reports that administrators of the Institute of Nuclear Physics at University College, London asked that IF for each academic staff member be reported. These are policies that could affect promotion and tenure decisions. In Spain, the same practice obtains as in the UK (Abbasi 2004). In Italy, IF is advocated as a means to remedy "purported subjectivity and bias in appointments to higher academic positions." In Germany, Abbasi (2004) explains that "the Chief specialist is one notch below God or one notch above, with junior staff promoted on a whim or shunted to a deadend post in a flash of irritation."

IF is not widely used in China and South Korea, since job promotion often depends largely on the number of published research papers (Abbasi 2004). Coelho (2003) made a proposal to rationalize the application of IF for evaluation of scientific publications in Brazil. In Singapore, Saudi Arabia, and South Asia, use of IF has been criticized (Kader & Cathey 2004; Rogers 2003). The Pakistan Medical and Dental Council (PMDC) went a step further, refusing to acknowledge any form of publication for promotion except the original articles (Farooq 2004). Ramanathan (2004) describes the bias which he observed from many western editors and referees against work from developing countries, in which editors were approached by authors from developed countries, especially the US and the UK, and were persuaded to accept their papers. Another developing country where IF is being introduced is Nigeria.

Nigeria is in West Africa and it has a population of 144.7 million people (The World Bank, 2008) There are eighty-one universities, including twenty-five federal, twenty-eight state, and twenty-eight federal government-approved private universities (Joint Admissions and Matriculation Board 2008) The oldest university is the University of Ibadan. It started in 1948 as a campus of the University of London. In 1962, it became a full- fledged university. Another university, the University of Nigeria, was established in 1960. It is the first indigenous and autonomous university in Nigeria. Other universities were established from 1962 onwards. Of all these universities, only the University of Nigeria, Nsukka uses IF to appraise academic performance. The university has a population of 1,384 academic staff. In 2006, the university administration tried to introduce an IF system. The idea was later suspended because of stiff opposition from majority of the academics. In December 2007, impact factor became incorporated into the "Yellow Book," which spells out guidelines for appointments and promotions of academic staff (University of Nigeria Yellow Book, 2007).

Another element called the weighting factor has been introduced in addition to the IF. There is also categorization of international and Nigerian journals using IF and weighting factor. The weighting factor is used to multiply the raw score of any publication or work arrived at from the Yellow Book. In addition, to be promoted to Senior Lecturer, Reader, or Professor, an academic should have a minimum of 2, 5, and 8 major journal articles, respectively. They should also be published in recognized, IF-ranked international journals (University of Nigeria Yellow Book, 2007). If IF is applied to promotion in the next year, it will be the first attempt in Nigeria.

A research project carried out at Liverpool John Morse University on the promotion of electronic information in Nigeria identified a skills gap amongst information professionals (Watts & Ashcroft, 2005). Broug's survey (2008) found that many Nigerian universities and their libraries were under-resourced, and did not have the equipment, the network, the bandwidth, or the budget allocation for electronic resources.

The skills gap, poor library, and poor research facilities militate against prolific publishing by many librarians in Nigeria. It also affects the rate at which they can publish in international and IF-ranked journals. These factors collectively affect their promotions. The same could be said of librarians in most developing countries.

Methodology

The study adopted the descriptive survey design. The area of study was the University of Nigeria Nsukka and Enugu Campuses. Population consisted of 50 academic librarians in the University of Nigeria. The instrument for data collection was a questionnaire structured on a four-point Likert rating scale of Strongly Agree 4, Agree 3, Disagree 2 and Strongly Disagree 1.

Face validation of the instrument was done by two experts in the Department of Library and Information Science, University of Nigeria Nsukka. The reliability of the research instrument was determined through a measure of internal consistency of the items. The Cronbach Alpha reliability coefficient was used to determine the reliability of the instrument and it yielded a coefficient value of 0.78.

Copies of the final instrument were personally administered to the librarians by the researcher. Out of 50 copies of the questionnaire administered, 41 were returned. The response rate was 82 percent. The data collected were analyzed using the mean and percentages. The criterion mean for acceptance (A) of any item was 2.5 and above, while any mean below 2.5 was not accepted.

Results

Table 1: Advantages of IF

S/NO	Items	\bar{X}	Decision	Percent
1	IF is an objective measure	2.73	A	63.41
2	It has wider acceptance than any other alternatives	2.21	U	65.85
3	It has wide international coverage	2.58	A	70.73
4	It encourages scholars to look beyond their locality in their academic publication	3.43	A	97.56
5	It encourages co-authorship	3.12	A	90.24
6	Application of its quality control increases the value of high quality publications	3.14	A	85.37
7	Application of its quality control reduces the value of poor quality publications	3.02	A	78.05

Table 1 shows that, apart from item number 2 (IF has wider acceptance than any other alternatives), respondents agreed that the rest are merits of IF.

Table 2: Disadvantages of IF

S/NO	Items	X	Decision	%
8	IF can be manipulated	2.95	A	68.29
9	It is limited to comparison of journals in the same field	2.8	A	63.41
10	It is wrongly applied to measure productivity of scientist instead of quality of journals	2.9	A	70.73
11	It is often misused to predict the importance of an individual publication based on where it is published	3.24	A	92.68
12	Very few publications from languages other than English are included	3.09	A	85.37
13	Few journals from less developed countries are included	3.26	A	85.37
14	It recognizes the number of citations to articles in a particular journal as a measure of true quality of that journal	3.12	A	85.37
15	Journals with low circulation, regardless of the scientific merit of their contents will never obtain IF	3.17	A	85.37
16	Book publications cannot be assessed through IF	3.34	A	90.21

Table 2 shows that respondents agree that all items are disadvantages of IF.

Table 3: Factors Militating Against Use of IF for Academic Assessment In Nigeria

S/NO	Items	X	Decision	%
17	Poor infrastructural facilities	3.36	A	87.8
18	Poor research facilities	3.51	A	97.56
19	Poor library facilities	3.29	A	87.8
20	Non-conducive environment for research	3.19	A	85.37
21	Poor funding	3.6	A	97.56
22	Quality research costs money	3.43	A	95.12
23	Discrimination by foreign/Western journals and editors against research work carried out on purely local issues	3.29	A	82.93
24	Researches on local issues may be of no interest to foreign/western journals and editors.	2.85	A	65.85
25	The primary focus of Nigerian scholars is to address and solve local problems	3.21	A	80.49
26	The focus of Nigerian scholars is to use available local facilities	3.07	A	78.05
27	Many Nigerian scholars are reluctant to publish in international journals	2.48	U	53.66
28	International journals demand much higher standards of scholarship	3.36	A	87.8

Respondents agree that all items except item 27 are factors militating against use of IF in academic assessment in Nigeria.

Table 4: Respondents' Reaction to Application of IF to Their Appraisals

S/N	Item	Yes	No	% (Yes)
29	Would you like IF guidelines to be applied to your appraisal?	4	37	9.76

Discussion

Of the twenty-nine items, respondents disagreed with three. The first was item 2 in Table 1. It states that IF has wider acceptance than any other alternatives. Their view is consistent with that of Harnard (2004), Eston (2004), Dong and Mondry (2005), Romon (2004), Sosteric (n.d.), Scully & Lodge (1987), Cathey and Kader (2004), Chong (2004), and Rogers (2003). The literature review shows that most authors as well as respondents (65.85 percent) do not support the view that IF has wider acceptance than any alternatives. IF is always imposed from the outside and not requested by the majority of academia wherever it is practiced, in Singapore (Rogers 2003), Japan (Abbasi 2004), the UK, and Spain (Abbasi 2004). The pattern holds true for Nigeria.

Respondents (53.66 percent) also disagreed with item 27, which states that many Nigerian scholars are reluctant to publish in international journals. This view is supported by Broug's (2008) survey, which found that at least a thousand submissions are made annually to Emerald journals by Nigerian authors. This shows that a considerable number of articles are submitted annually to international journals by Nigerian academics. However, according to Broug (2008), a majority of them are rejected.

Respondents largely agreed on the things that militate against the use of IF in academic assessment in Nigeria. Among these are poor infrastructure, such as electricity, poor research facilities such as Internet connectivity, lack of broad bandwidth to facilitate fast and easy access to online information, poor library facilities, environment not conducive to research, and poor funding. This view is corroborated by Broug (2008). Less than 10 percent of respondents would choose to be assessed through IF guidelines. This corroborates the views of authors in the literature review.

Conclusion

It can be inferred from this study that many authors believe that IF could be used to gauge the importance of a journal to an institution and the journal's collection and mission, but should not be used to assess the quality of research/publications. IF is understood by few people. Its value and use in assessment of academic performance is questionable, even though the advocates defend themselves by saying that there is no better alternative. In addition, Garfield, the originator, issued repeated warnings that IF is an inappropriate and misleading measure of individual research, especially if used for tenure and promotion (Cameron, 2005).

Finally, the biases against publication from developing countries, coupled with the high rejection rate of 40-45 percent of many journals (Shiwani, 2006; Hernon & Schwartz, 2005) and the fact that there are few IF-ranked journals in Africa, other developing countries, and none in Nigeria (Chiejina, 2006) cause authors from these areas to be shortchanged. Beleaguered by the constraints already discussed, use of IF in appraising researcher's academic performance in Nigeria is disadvantageous. This is also confirmed in this study.

Recommendations

To overcome hindrances posed by IF in academic appraisals the researcher recommends as follows:

- Nigerian universities should provide adequate Internet access on campus. There should be enough bandwidth to make searching, downloading, and accessing full text fast and easy.
- University libraries should prefer electronic journals in their respective subjects. This will enable faster communication between Nigerian authors and journal editors.
- Nigerian university libraries should provide current facilities to ensure a conducive environment for research.
- There is need to hold interactive author workshops by international academic journal publishers in Nigerian universities.
- The unreliable power supply in the country must be addressed.
- More funds should be provided for research and human capital development.

In view of the controversy surrounding the use of IF in assessment of academic performance, it should not be used for this purpose. Articles from researchers should be sent to at least three assessors who are experts in the researchers' field of specialization. The papers should be given double-blind assessment by the assessors, who should be chosen nationally, internationally, or both. Positive reports from two of three assessors should be recognized for promotion of the researcher.

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