Research Papers

A STUDY OF UNIVERSITY OF MYSORE PUBLICATION H-INDEX BASED ON WEB OF SCIENCE DATA BASE

Somashekara. Y. L

Selection Grade Assistant Librarian, Mysore University Library, Mansagangothri, Mysore.

Abstract :

The present paper explained the concept of H- index its calculations, and publication of University of Mysore. It is explained merits and demerits of H index. The Web of science contains 2959 records of University of Mysore under institutional address search(1999-2014March) . There are 14430 citations. The institutional h index is 40.

KEYWORDS :

science data base , merits and demerits , theoretical physicists .

INTRODUCTION

The *h*-index was developed by Professor Jorge E. Hirsch of the Department of Physics at the University of San Diego. It was published in the prestigious Proceedings of the National Academies of Science (Hirsch, 2005). It is a tool for determining theoretical physicists' relative quality. Hirsch meant the h-index to estimate the lifetime cumulative impact of a researcher, not just the combination of his or her productivity and cited in journals and other publications in the past decade. After that it called as Hirsch index or Hirsch number.

In Wikipedia defined h-index is an index that attempts to measure both the productivity and impact of the published work of a scientist or scholar. The index is based on the set of the scientist's most cited papers and the number of citations that they have received in other publications. The index can also be applied to the productivity and impact of a group of scientists, such as a department or university or country, as well as a scholarly journal.

In total the h index is influence of an individual's publications against the quantity of their output with a single measure.

2.HOW TO CALCULATE H INDEX

The h-index can be manually determined using citation databases or using automatic tools. Professor Jorge Hirsch's (2007) "H-factor" measures research output by citations. The higher the H-factor is more often the academic community based on cited the scientist's papers. An "H" factor of 1 means one paper has been cited once while 2 means two have each been cited twice and 20 means 20 papers have each been cited 20 times. The H-factor ignores the individual citations' significance and context. According to Hirsch, an H-factor of 18 merits full professorship. Upwards of 20 may merit a fellowship with the American Physical Society, while 45 may grant you entry to the National Academy of Sciences.

Kate Lane explained calculate of H index according to her compile a list of your papers from a database and that lists how often each has been cited. Sort the papers by how frequently each has been cited. Number the list, counting the papers, assigning "1" to the most cited paper, "2" to the second most cited one. The list now includes two sequences of numbers. An ascending sequence counts the papers. A descending sequence lists how often each paper has been cited. Rank the list of publications with number of citations in order from most cited to least cited. Count down the list until you reach the first publication that has been cited less than the number of publications you have counted. The scholar's H-index is the number of publications that come before that. That is, if his or her twelfth most-cited article has been cited 14 times and the thirteenth most-cited article has been cited 10 times, then the researcher's H-index is twelve.

Presently some of the software programs are calculate the h –index, which is the one Harzing's Publish or Perish program calculates the h-index based on Google Scholar entries.

3. MYSORE UNIVERSITY

University of Mysore is near to century old University in India and it is first accredited by National Assessment and Accreditation Council (NAAC) with Five Star status in the year 2000 and has been reaccredited in 2006 at A+ level again NACC reaccredited A grade in 2013. Current Science has ranked the University of Mysore as one of the top 20 Universities in Scientific and Research activities. In view of these scientific developments, academic achievement, Research production is very high in all subjects. World famous database Web of Science (2959), Google scholar (Include citation) (17800), JSTOR (1388) and J-Gate@UGC-Infonet (2027) scientific research paper are published in International peer reviewed International and National journals.

4 RESEARCH OUTPUT OF MYSORE UNIVERSITY

Table 1 Research publication of university researcher and faculty (1999-2014)

Serial No.	Type of Publication	Publication no.	Percentage
1	Articles	2791	93.16
2	Proceedings Paper	75	2.50
3	Meeting, Abstracts	59	1.97
4	Reviews	52	1.74
5	Editorial Materials	19	0.63
	Total	2996	100

Table 1 show that around 2791 (93.16 %) publication is journal article and the editorial materials 19 (0.63%). Drawback is Web of science less cover Indian journal publication. Indian edition Book and other publication material are not covered.
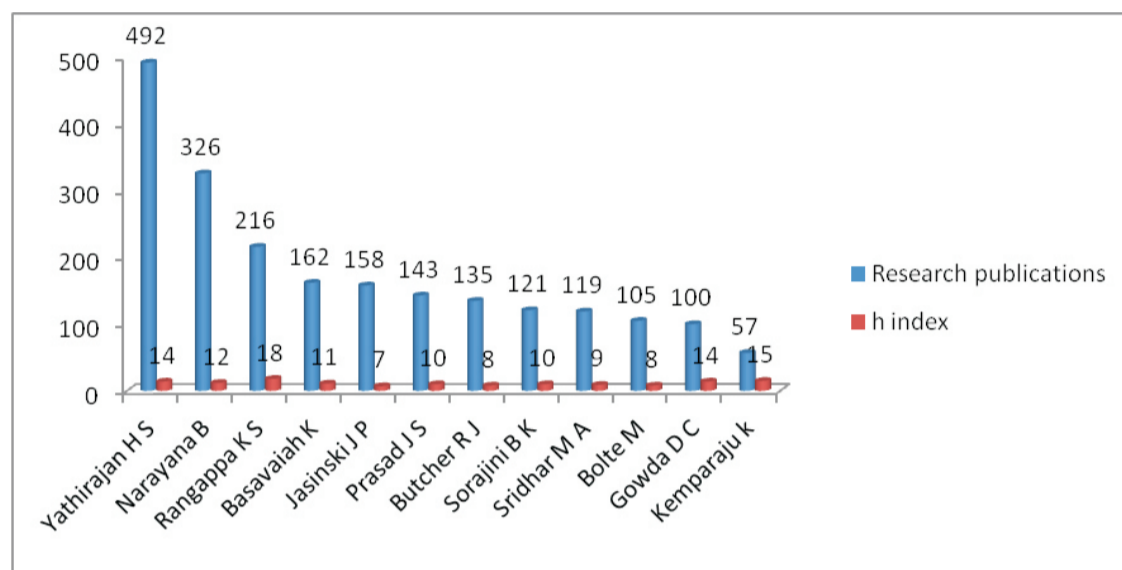
5. Analysis of Mysore University H index

Table -2 Mysore university faculty research publication and h index (Web of science)

Serial no	Contributors Name (web of Science Result)	Records	Sum of the times Cited	Sum of times cited without self-citations	Citing Articles	Citing Articles without self Citations	Average citations per Item	h-Index	Ranking
1	Yathirajan H S	492	1356	607	786	503	2.76	14	3
2	Narayana B	326	900	340	433	231	2.76	12	4
3	Rangappa K S	216	1208	975	949	849	5.59	18	1
4	Basavaiah K	162	504	365	333	270	3.11	11	4
5	Jasinski J P	158	227	155	176	126	1.44	7	8
6	Prasad J S	143	516	471	459	423	3.61	10	5
7	Butcher R J	135	278	172	207	153	2.06	8	7
8	Sorajini B K	121	487	285	255	174	4.02	10	5
9	Sridhar M A	119	404	373	360	333	3.39	9	6
10	Bolte M	105	323	221	205	155	3.08	8	7
11	Gowda D C	100	674	444	410	344	6.74	14	3
12	Kemparaju k	57	579	411	352	309	10.16	15	2

The table 2 and figure 2 reveals that according to web of science database the highest research output is Prof. Yathirajan H S (492) from Chemistry Department the h index is 14. The research output of Prof. Rangappa K S, our Honorable Vice chancellor published 216 papers, the h index is 18 he is the top of our university faculties, based on web of

science citation report. Fallowed by Prof. Kemparaju from Biochemistry department he published 57 papers and h index is 15. The Mysore university staffs articles are highly (10.16%) cited in different research work. Our university other researcher are contribute several article in different channels, their h index is near to ten.

Figure -2 Mysore university faculty research publications and h index (Web of science)

6.MERITS OF H INDEX

.
a.The h-index is intended to measure simultaneously the quality and sustainability of scientific output, as well as, to some extent, the diversity of scientific research.
b.The h-index is much less affected by methodological papers proposing successful new techniques, methods or approximations, which can be extremely highly cited.
c.The h-index was intended to address the main disadvantages of other bibliometric indicators.
d.The index can also be applied to the productivity and impact of a group of scientists, departments or universities or countries
e.A successive Hirsch-type-index for institutions has also been devised. A scientific institution has a successive Hirsch-type-index of an individual, then at least researchers from that institution have an h-index.

3.Demerits of h index

The h-index does not account for the number of authors of a paper. In the original paper, Hirsch suggested partitioning citations among co-authors.

a.The h-index does not account for the typical number of citations in different fields. Different fields, or journals, traditionally use different numbers of citations.
b.The h-index gives books the same count as articles making it difficult to compare scholars in fields that are more book-oriented such as the humanities.
c.The h-index can be manipulated through self-citations.
d.It ignores the number and position of authors on a paper.
e.The excess citations each paper not included in the h-index.

4.CONCLUSIONS:

The h-index is intended to measure simultaneously the quality and quantity of scientific output. The quantity and impact of publications are taken into account when calculating the h-index, but the number of publications plays a very important role for researchers. The h-index tends to underestimate the achievement of scientists. with a "selective publication strategy", that is, those who do not publish a high number of documents but who achieve a very important international impact. The h-index has been applied to Internet Media, such as YouTube channels. The h-index is defined as the number of videos with $h \times 105$ views. When compared with a video creator's total view count and calculate the h index in same way web pages also and OPAC of our library usage also can calculate but it is not worth while we will get the usage the output is most important for the study. The h-index and g-index better capture both productivity and impact in a single metric. Anyhow Mysore university publications not reach the top level of h index an average is 10 to 20 level of h index of individual authorship. The institutional level Mysore university h index is 40.

5.REFERENCES

1.Egghe, Leo (2006) Theory and practice of the g-index, Scientometrics, vol. 69, No 1, pp. 131–152
2.Hirsch, J. E. (15 November 2005). "An index to quantify an individual's scientific research output". PNAS 102 (46): 16569–16572.
3.Hirsch J. E. (2007). "Does the h-index have predictive power⬚" PNAS 104 (49): 19193–19198.
4.Hirsch J. E. (2005) "Not-so-deep impact". Nature 435 (7045): 1003–4. 2005
5.Retrieved from http://www.ehow.com/how_8353749_calculate-hindex.html#ixzz2qvAyWxxs, on 08/012014
6.Retrieved from http://en.wikipedia.org/wiki/H-index retrieved on 10/01/14 on 08/012014
7.Retrieved from,http://www..com/2011/04/23/calculating-my-h-index-with-free-available-tools/ on 10/ 01/2014
8.Retrieved from http://code.google.com/p/citations-gadget/ on 10/01/2014
9.Retrieved from http://www.inflibnet.ac.in/econ/eresource.php# on 10/01/2014
10.Retrieved from http://jgateplus.com/search/index/ on 16/1/2014
11.Retrieved from   http://www.uni-mysore.ac.in/library/E-Databases.html on 10/01/2014

Somashekara. Y. L
Selection Grade Assistant Librarian, Mysore University Library, Mansagangothri, Mysore.