

A Bibliometric Study of the Scientific Publications by the Peking University Health Science Center Faculty Accepted by SCIE from 1998 to 2003

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Introduction

In this paper we attempt to apply bibliometric indicators to evaluate scientific research work and analyze the situation of published literatures written by the populations in the Center in SCIE indexed journals from 1998 to 2003 so as to give a revelation profile of scientific research work in the Center. The results presented here are not only an academic survey, but also a little reference for the future strategy of the development of the Center

Methodology

Retrieval Objects

The sources used were the data based on ISI Web of Knowledge and its related products: Web of Science Journal Citation Report etc databases where we search our data according to our objects includes all units in the Center. We find such databanks are very well organized and easy to retrieval. We viewed address of author (AD) as the communication author, was initially recorded.

The Words and Tactic Used in Retrieval

Since the English names of The Center have different formats in the database, e.g. Beijing University, Peking University, Beijing Medical College, Beijing Medical University etc, which added difficulties to search. Records were filtered out those "Beijing Med Coll PLA, Beijing Union Med Coll" from the search results. The searching time-span of the publications of the Center is from 1998 to 2003 .

We developed a kind of technique to convert a large amount of data into interchangeable database formats such as Word 2000 and Microsoft Excel 2000, so that we may analyze the data easily. Once the raw data are converted into database formats, they are linked to other databases, for example, the version of Journal Citation Report (JCR) (1998-2003) for the impact factors (IF) of journals and the Chinese name list of the SCI indexed journals.

Results and Discussion

The number of articles written by the authors of the Center published in SCIE journals amounted to

1204. Among them 979 (accounting for 81% of the total) were research papers, 199 (17%) conference papers and 26 (2%) papers on communication, reviews and the like. The searched results showed in Table 1 suggested that the number of the papers in the Center increased dramatically from 145 in 1998 to 333 in 2003 (including research papers and conference papers). The growth rates of international publications of the Center in SCIE journals in 2002 and 2003 were 65% and 68%, respectively, which were higher than those of the whole country's level in the same years (20% and 22%, respectively) (ISTIC.2004). This situation indicated that the academic plane and the quality of the papers in the Center have been improved, which might be due to the merged universities (Peking University and Beijing Medical University), increase investment to scientific research work, and prompt cross-subject and basic research of Peking University.

Table 1 Annual number of international publications of the Center in SCIE from1998-2003

	1998	1999	2000	2001	2002	2003	Total
Research Article	126	153	127	120	178	275	979
Conference Article	16	16	45	24	44	54	199
Other Article	3	9	5	2	3	4	26
Total	145	178	177	146	225	333	1204

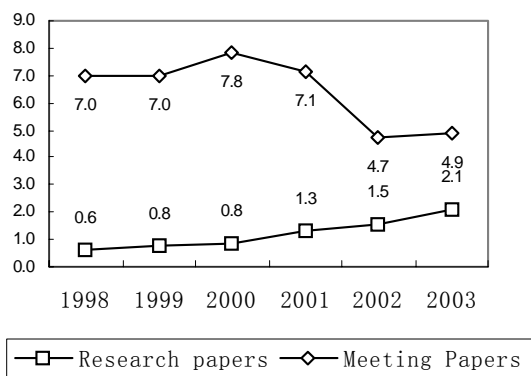
IF Distribution of Journals Carrying the Papers

The mean IF status of the research papers and conference papers of the Center in SCIE journals from 1998 to 2003 is showed in Graph 1. The graph revealed that the average number of IF of the journals carrying academic papers had increased year by year. The mean number of IF in 2003 was 0.596 higher than that in 2002 and the mean IF of conference papers was higher than that of the research papers

The Distribution of Journals Carrying the Papers

Among 1204 literatures produced by the Center in the SCIE journals from 1998 to 2003, 979 research

papers were published by 287 sorts of journals home and abroad. There were 18 journals (accounting for 6%) carrying more than 10 papers. The 18 journals releasing 475 papers making up 49%. Nine journals carrying majority of the papers were sponsored domestically. That means 42% of the papers of the Center are still released in domestic journals. One hundred ninety-nine conference papers were published in 39 journals.



Graph 1. The Mean IF of international publications of the research and conference paper of the Center in SCIE from 1998-2003

The Distribution of Language the Research Papers Published in

The number of papers in English amounted to 911, while that in other languages was 68 constituting 93% and 7%, respectively, which suggested that researchers and scholars communicated on their scientific findings mainly in English.

The National Distribution of Publishing Papers

The nation distribution of the journals the research papers published in the Center. Apart from China, the United States of America published the most papers, in turn were the United Kingdom and Holand. While conference papers were published more likely in the United States.

The Subject Distribution of the Journals the Research Papers Published on

The subject distribution of the journals the research papers published in by the Center. In terms of the scope of subjects, chemistry ranked No 1, followed in turn by biochemistry & molecular biology chemistry, medicine, general & internal and so on. The journals carrying more than 10 papers. The scopes focused mainly on clinical medicine, biochemistry and pharmacology & pharmacy.

Dispersion distribution of journals carrying the papers

The dispersion distribution of the journals carrying the papers produced by the Center. 979 papers were published in 287 journals, among which 173 journals, accounting for 60% published 1 paper. Journals carrying ten or more than 10 papers were

18, accounting for 6%. But the number of papers the 18 journals published accounted for 49% of the total.

The Cited Situation of the Literatures

In this study, among 126 papers in SCIE journals in 1998, 83 literatures were cited which accounted for 66%. The total times of citation were 422. Times of citation of single piece was as high as 38. The average times of a paper were 3.35. The citations came from scholars in 37 different countries and areas. Among which self-citations amounted to 100 times, accounting for 25% of the total. Of all the citations, domestic and international citations accounted for 35% and 65%, respectively. Among the 83 cited papers, 32 were published in 7 domestic journals, which were cited 71 times including 14 international citations, 29 domestic citations and 28 self-citations. The average cited times were 2.22. 51 papers published in 28 international journals were cited 351 times including 268 times of international citations, 11 domestic citations and 72 self-citations. The mean cited times were 6.88, which is higher than that of the domestic journals. Literatures published abroad were cited by international scholars more frequently than those published domestically, which accounted for 76% and 20%, respectively. The average number of international citations was 8.65 while the domestic was 3.24 from 1993 to 2002. Therefore, it is crucial to improve the innovation of the research activities in order to enhance the international influence of the sci-tech research findings. After statistical analyzing Chinese journals indexed by SCI, REN, et al found that the citations (in 1998) of 18 Chinese chemistry and physics journals indicated that citations to these journals came mainly from other Chinese authors. It was found that 24% of all citations received by a Chinese physics or chemistry journal are actually first author self-citations; counting all national self-citations (Chinese first authors citing Chinese first authors) accounts for 81% of all citations (REN, et al. 2002).

Conclusions

As a result, 1204 articles were written by the authors of the Center published in SCIE indexed journals, including 979 research papers (accounting for 81%) and 199 conference papers (17%). 93% of the papers published in English, and 58% in international journals with USA, UK and Holland dominating. However, a third of all the papers has not been cited and the proportion of self-citation is high.

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