The Analysis of Chinese Authors' Papers in Library and Information Science

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Abstract. This paper analyzed the Chinese authors' papers in Library and Information Science (LIS) from 2003 to 2014. It analyzed the Chinese papers published in journals of JCR Social Sciences Edition-- INFORMATION SCIENCE & LIBRARY SCIENCE category. The papers' numbers and ranking in the world were listed and compared with high level countries in the world by years. Then the author's h-index, first author h-index and all papers' citations were studied.

Introduction

In recent years, more and more attention is attached to the scientific research in colleges and universities. The research of Library and Information Science (LIS) in university library has received more attention. The number of published papers in LIS has been growing rapidly in recent years.

Web of Science (previously known as (ISI) Web of Knowledge) is an online subscription-based scientific citation indexing service maintained by Thomson Reuters that provides a comprehensive citation search. It consists of SCI, SSCI, A&HCI, CPCI-S, CPCI-SSH, and so on a series of Citation Database. It includes more than 11000 kinds of the most influential and high quality journals in the world.

Journal Citation Reports (JCR) is an annual publication by ISI in two editions. JCR Science Edition contains data about more than 8,000 journals in science and technology. JCR Social Sciences Edition contains data about more than 2,600 journals in the social sciences.

In order to understand the situation of Chinese authors in the world, JCR Social Sciences Edition is as a source of high quality papers in this paper.

Research Methods and Ideas

All the journals of the category of INFORMATION SCIENCE & LIBRARY SCIENCE in JCR Social Sciences Edition were collected annually from 2003 to 2014. There were 55 journals in 2003, and up to 85 in 2014. All the Chinese (including Hong Kong and Taiwan, the same below) authors' papers were searched in Web of Science (WOS) and the number of papers was compared with the world's high level countries.

There were 2793 papers, among them, Chinese mainland and Hong Kong region had 1793 papers, Taiwan province had 1001 papers, and 54 papers were coauthored by Chinese mainland, Hong Kong and Taiwan. The first authors were obtained from 2793 papers and the numbers of first authors' papers were ranked from high to low. And the sample authors were selected from the high numbers of first authors. The sample authors' WOS papers, h-index, first author h-index, and all papers' citations were analyzed.

Statistical Analyses of the Paper Numbers, Journals Papers Published and the Authors' Organizations

The journals of the category of INFORMATION SCIENCE & LIBRARY SCIENCE in JCR Social Sciences Edition were collected annually from 2003 to 2014. All the papers in the above journals were searched in Web of Science, and the region was limited to PEOPLES R CHINA (China

mainland & Hong Kong) and TAIWAN was not included in the data of PEOPLES R CHINA, so the TAIWAN region was analyzed alone, and the statistics were divided into with and without TAIWAN for a better comparison.

Tab.1 The paper numbers and comparisons of Chinese authors from 2003 to 2014

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Number of LIS journals	55	54	55	53	56	61	66	77	83	85	84	85
The paper number of the whole world	10286	9866	9766	9534	9446	9255	8060	9205	9475	8808	9450	9670
China (without TAIWAN) papers	38	43	58	68	77	115	153	154	203	270	327	333
China (without TAIWAN) ranking	11	9	6	6	7	5	5	5	6	3	3	3
China (with TAIWAN) papers	81	75	99	124	134	191	234	244	318	386	447	460
China (with TAIWAN) ranking	4	4	4	4	4	4	4	4	3	2	2	2
Ranked first country & its ranking	USA (6,282)	USA (5,672)	USA (5,286)	USA (5,443)	USA (5,238)	USA (5,279)	USA (4,670)	USA (5,291)	USA (5,309)	USA (4,765)	USA (5,031)	USA (5,292)
Ranked second/third country & its ranking	ENGLAND (300)	ENGLAND (297)	CANADA (281)	ENGLAND (297)	ENGLAND (357)	ENGLAND (345)	ENGLAND (310)	ENGLAND (328)	ENGLAND (354)	ENGLAND (306)	ENGLAND (337)	ENGLAND (337)

NOTE: There were 47 papers coauthored by Chinese mainland, Hong Kong and Taiwan.

From Tab.1, there were 112821 papers all over the world, and the number of Chinese authors was no more than 100 in 2003, and increased to more than 400 in 2014. There were a lot of improvement in amount, but the number of total papers was 2793 in 12 years, while the number of United States was about five, six thousand in one year, so the gap between China and the United States is still very large.

The above 2793 papers were selected as sample papers in this paper, and there were 76 journals that the 2793 sample papers published. There were 52 kinds of journals that published more than 10 papers, and the journals with more than 200 papers were SCIENTOMETRICS (432), JOURNAL OF THE AMERICAN SOCIETY FOR INFORMATION SCIENCE AND TECHNOLOGY (215), INTERNATIONAL JOURNAL OF GEOGRAPHICAL INFORMATION SCIENCE (201) and INFORMATION & MANAGEMENT (201).

Tab.2 The journals with more than 20 papers

Ranking	Journal	Papers	Ranking	Journal	Papers
1	SCIENTOMETRICS	432	11	TELECOMMUNICATIONS POLICY	72
2	JOURNAL OF THE AMERICAN SOCIETY FOR INFORMATION SCIENCE AND TECHNOLOGY	215	12	JOURNAL OF MANAGEMENT INFORMATION SYSTEMS	69
3	INTERNATIONAL JOURNAL OF GEOGRAPHICAL INFORMATION SCIENCE	201	13	INFORMATION SYSTEMS RESEARCH	52
3	INFORMATION & MANAGEMENT	201	14	GOVERNMENT INFORMATION QUARTERLY	48
5	INFORMATION PROCESSING & MANAGEMENT	146	15	JOURNAL OF GLOBAL INFORMATION MANAGEMENT	46
6	ONLINE INFORMATION REVIEW	130	16	INFORMATION TECHNOLOGY & MANAGEMENT	45
7	ELECTRONIC LIBRARY	124	17	MIS QUARTERLY	40
8	JOURNAL OF INFORMATION SCIENCE	113	18	JOURNAL OF ACADEMIC LIBRARIANSHIP	32
9	INTERNATIONAL JOURNAL OF INFORMATION MANAGEMENT	91	19	JOURNAL OF THE AMERICAN MEDICAL INFORMATICS ASSOCIATION	29
10	JOURNAL OF INFORMETRICS	83	20	LEARNED PUBLISHING	28

The first Chinese authors' organizations of 2793 sample papers were analyzed. There were 331 different organizations. Among them, City Univ Hong Kong had 152 papers and was ranked in the first. Wuhan Univ and Natl Taiwan Univ were ranked the second and third.

Tab.3 The organizations with more than 30 papers

Organizations	Papers	Organizations	Papers	Organizations	Papers	Organizations	Papers
City Univ Hong Kong	152	Chinese Univ Hong Kong	58	Dalian Univ Technol	47	Inst Sci & Tech Informat China	35

Wuhan Univ	145	Fudan Univ	58	Natl Chengchi Univ	47	Natl Taiwan Univ Sci & Technol	34
Natl Taiwan Univ	129	Peking Univ	57	Nanjing Univ	46	Sun Yat Sen Univ	31
Chinese Acad Sci	102	Hong Kong Univ Sci & Technol	54	Natl Chung Cheng Univ	45	Shanghai Jiao Tong Univ	30
Hong Kong Polytech Univ	73	Tsinghua Univ	52	Natl Cheng Kung Univ	44		
Univ Hong Kong	67	Natl Cent Univ	49	Natl Sun Yat Sen Univ	43		
Zhejiang Univ	67	Natl Chiao Tung Univ	49	Harbin Inst Technol	42		

The Sample Authors' Papers in WOS and H-Index Analysis

The first Chinese authors were extracted from 2793 sample papers, 1718 different first Chinese authors were counted after merging and duplicate removal. There were 76 authors that with more than 5 papers, and the 76 authors were selected as sample authors of this paper.

Tab4 The 76 sample authors

Ranking	Author	Papers	Ranking	Author	Papers	Ranking	Author	Papers	Ranking	Author	Papers
1	Huang, Mu-Hsuan	23	17	Wang, Eric T. G.	9	35	Gao, Xia	6	57	Jin, Yi	5
2	Tsay, Ming-yueh	17	17	Wang, Yi-Shun	9	35	Ho, Yuh-Shan	6	57	Lai, Jung-Yu	5
3	Yu, Guang	15	17	Zhang, Lin	9	35	Hong, Weiyin	6	57	Li, Aiguo	5
4	Guan, Jiancheng	14	23	Chen, Chuanfu	8	35	Kao, Chiang	6	57	Liao, Chechen	5
5	Li, Xia	13	23	Xia, Jun	8	35	Leydesdorff, Loet	6	57	Lin, Tung-Ching	5
6	Chu, Samuel Kai-Wah	12	23	Yu, Shien-Chiang	8	35	Liu, Xiaoping	6	57	Liu, Duen-Ren	5
7	Rousseau, Ronald	11	26	Chang, Hsin Hsin	7	35	Lowry, Paul Benjamin	6	57	Liu, Xuan Zhen	5
7	Yang, Christopher C.	11	27	Chen, Kuan-nien	7	35	Qiu, Junping	6	57	Ma, Feicheng	5
7	Ye, Fred Y.	11	28	Hung, Shin-Yuan	7	35	Tsai, Chih-Fong	6	57	Pei, Tao	5
7	Zhou, Ping	11	29	Li, Jiang	7	35	Vaughan, Liwen	6	57	Ting, I-Hsien	5
11	Davison, Robert M.	10	30	Liu, Rey-Long	7	35	Wu, Jen-Her	6	57	Tseng, Yuen-Hsien	5
11	Hu, Xiaojun	10	26	Wu, Ing-Long	7	35	Wu, Ming-der	6	57	Wang, Wei-quan	5
11	Liang, Liming	10	26	Yu, Liangzhi	7	35	Yan, Yalan	6	57	Wang, Yuandi	5
11	Lin, Hsiu-Fen	10	26	Zha, Xianjin	7	35	Yang, Chyan	6	57	Wei, Chih-Ping	5
11	Liu, Yuxian	10	26	Zhang, Jin	7	53	Zhao, Rongying	6	57	Wu, Dan	5
11	Wang, Xianwen	10	35	Chau, Michael	6	54	Cheung, Christy M. K.	5	57	Wu, I-Chin	5
17	Chen, Yen-Liang	9	35	Chen, Dar-zen	6	55	Chuang, Kun-Yang	5	57	Xu, Yan	5
17	Chen, Yu-Shan	9	35	Chou, Shih-Wei	6	56	Fu, Hui-Zhen	5	57	Zhao, Star X.	5
17	Chiu, Chao-Min	9	35	Chou, Tzu-Chuan	6	57	He, Tianwei	5	57	Zhou, Tao	5

The papers of 76 sample authors in WOS were collected and the h-index of each author was counted in WOS, too.

Tab.5: The papers and h-index of 76 sample authors

Author	H-index	Papers	Citations	Author	H-index	Papers	Citations	Author	H-index	Papers	Citations
Leydesdorff, Loet	32	197	3222	Chen, Dar-zen	10	89	313	Xu, Yan	5	24	48
Ho, Yuh-Shan	30	106	5056	Vaughan, Liwen	10	32	363	Xia, Jun	4	8	88
Guan, Jiancheng	18	76	873	Davison, Robert M.	9	33	275	Zhang, Jin	4	16	48
Li, Xia	16	72	798	Chau, Michael	9	40	276	Chou, Tzu-Chuan	4	21	99
Rousseau, Ronald	16	135	1152	Chou, Shih-Wei	9	19	256	Yan, Yalan	4	20	43
Yang, Christopher C.	16	116	780	Hong, Weiyin	9	13	359	Wang, Yuandi	4	25	33
Lin, Hsiu-Fen	16	29	862	Liao, Chechen	9	27	385	Li, Jiang	3	14	36
Chen, Yen-Liang	16	76	782	Wei, Chih-Ping	9	43	214	Liu, Rey-Long	3	20	28
Cheung, Christy M. K.	16	55	939	Zhou, Ping	8	16	183	Yu, Liangzhi	3	9	52
Liu, Duen-Ren	16	81	776	Yu, Guang	7	31	105	Zha, Xianjin	3	29	25
Chiu, Chao-Min	15	26	1276	Liang, Liming	7	22	359	Wu, Ming-der	3	7	21
Wang, Eric T. G.	14	35	1007	Fu, Hui-Zhen	7	17	118	He, Tianwei	3	7	37
Wang, Yi-Shun	14	34	1090	Lai, Jung-Yu	7	19	85	Li, Aiguo	3	5	16
Chang, Hsin Hsin	14	38	544	Lin, Tung-Ching	7	23	274	Ma, Feicheng	3	32	46
Kao, Chiang	14	49	892	Pei, Tao	7	38	215	Wu, Dan	3	22	28
Tsai, Chih-Fong	14	65	573	Ye, Fred Y.	6	38	155	Wu, I-Chin	3	12	37
Chen, Yu-Shan	13	51	657	Hu, Xiaojun	6	32	107	Zhao, Star X.	3	14	39
Liu, Xiaoping	13	52	489	Liu, Yuxian	6	18	125	Chen, Chuanfu	2	15	16
Wu, Jen-Her	13	31	1001	Wang, Xianwen	6	21	84	Chen, Kuan-nien	2	10	8
Zhou, Tao	13	43	487	Gao, Xia	6	10	83	Jin, Yi	2	5	16
Hung, Shin-Yuan	12	37	512	Chuang, Kun-Yang	6	15	166	Liu, Xuan Zhen	2	6	21
Lowry, Paul Benjamin	12	44	433	Tseng, Yuen-Hsien	6	20	231	Yu, Shien-Chiang	1	5	5
Huang, Mu-Hsuan	11	75	339	Tsay, Ming-yueh	5	22	105	Zhao, Rongying	1	14	15
Yang, Chyan	11	60	347	Chu, Samuel Kai-Wah	5	20	87	Ting, I-Hsien	1	19	7
Zhang, Lin	10	47	306	Qiu, Junping	5	31	61				
Wu, Ing-Long	10	27	353	Wang, Wei-quan	5	8	175				

The papers of 76 sample authors in WOS were analyzed and not first author papers were excluded. Then the papers of first authors were left, and the first author h-indexes were counted as corresponding.

Tab.6 The comparison of first and not first author

Author	Papers	Papers'	H-index	H-index'	Decrease in %	Author	Papers	Papers'	H-index	H-index'	Decrease in %
Leydesdorff, Loet	197	105	32	27	-15.63%	Wu, Jen-Her	31	21	13	12	-7.69%
Ho, Yuh-Shan	106	64	30	21	-30.00%	Liu, Duen-Ren	81	41	16	12	-25.00%
Lin, Hsiu-Fen	29	28	16	16	0.00%	Zhou, Tao	43	41	13	12	-7.69%
Guan, Jiancheng	76	40	18	15	-16.67%	Yang, Christopher C.	116	53	16	11	-31.25%
Chen, Yen-Liang	76	47	16	14	-12.50%	Chiu, Chao-Min	26	18	15	11	-26.67%
Chang, Hsin Hsin	38	37	14	14	0.00%	Li, Xia	72	17	16	10	-37.50%
Kao, Chiang	49	43	14	14	0.00%	Wang, Yi-Shun	34	20	14	10	-28.57%
Tsai, Chih-Fong	65	40	14	13	-7.14%	Hung, Shin-Yuan	37	27	12	10	-16.67%
Chen, Yu-Shan	51	43	13	12	-7.69%	Wu, Ing-Long	27	25	10	10	0.00%
Wang, Eric T. G.	35	19	14	12	-14.29%						

The first author h-index more than 10 was listed in Tab.6 with 19 authors. The papers of Lin, Hsiu-Fen; Chang, Hsin Hsin; Kao, Chiang and Wu, Ing-Long are all first author papers, so the h-indexes' were not decreased in these four authors. But the difference of papers and first author papers of Ho, Yuh-Shan; Yang, Christopher C and Li, Xia were more than the others, so the h-indexes' decreased significantly, about 30%. The h-index' of other 12 authors also decreased in varying degrees.

The Sample Papers Citation Analysis in WOS

There were 2227 papers in 2793 papers that cited by papers in WOS. The papers' citation times more than 100 times were listed in Tab.7. There were 29 papers in Tab.7, in which the first Chinese authors were all from Hong Kong or Taiwan. This showed that the high cited papers in the sample papers were all from Hong Kong or Taiwan.

Tab.7 The citation times more than 100

Author	Citaions	The first Chinese author	Organization	Author	Citaions	The first Chinese author	Organization
1	707	Lee, JN	City Univ Hong Kong	16	142	Tseng, Yuen-Hsien	Natl Taiwan Normal Univ
2	529	Wei, KK	City Univ Hong Kong	17	136	Shang, Rong-An	Soochow Univ
3	473	Ho, Yuh-Shan	Taipei Med Univ	18	135	Chow, Wing S	Hong Kong Baptist Univ
4	361	Wu, Jen-Her	Natl Sun Yat Sen Univ	19	133	Sher, PJ	Natl Chung Hsing Univ
5	344	Hsu, CL	Natl Taiwan Univ Sci & Technol	20	131	Yang, ZL	City Univ Hong Kong
6	286	Hsu, Chin-Lung	Da Yeh Univ	21	130	Lin, Hsin-Hui	Natl Taiwan Inst Technol
7	207	Thong, James Y. L.	City Univ Hong Kong	22	128	Lee, Jae-Nam	City Univ Hong Kong
8	179	Thong, James Y. L.	Hong Kong Univ Sci & Technol	23	128	Wu, Jen-Her	Natl Sun Yat Sen Univ
9	178	Lee, MKO	City Univ Hong Kong	24	127	Xu, Sean Xin	Hong Kong Univ Sci & Technol
10	170	lin, Cathy S.	Natl Univ Kaohsiung	25	121	Theodore H.K. Clark	Hong Kong Univ Sci & Technol
11	162	Lin, Hsiu-Fen	Natl Taiwan Ocean Univ	26	117	Davison, Robert M.	City Univ Hong Kong
12	158	Ong, Chornng-Shyong	Natl Taiwan Univ	27	115	Hsieh, J. J. Po-A	Hong Kong Polytech Univ
13	154	Shih, Hung-Pin	Hsuan Chuang Univ	28	103	Thong, James Y. L.	Hong Kong Univ Sci & Technol
14	146	Wang, Yi-Shun	Natl Changhua Univ Educ	29	102	Tam, Kar Yan	Hong Kong Univ Sci & Technol
15	145	Hong, Se-Joon	Hong Kong Univ Sci & Technol				

Conclusions

The Chinese authors' papers in Library and Information Science (LIS) from 2003 to 2014 were analyzed in this paper. The papers of Chinese authors in the category INFORMATION SCIENCE & LIBRARY SCIENCE of JCR were increasing rapidly from 2003 to 2014, but there was still a large gap compared with USA. The h-index of the sample authors were discussed, and the highest h-index was 32 and the author was Leydesdorff, Loet, H from Univ Amsterdam, his first author paper was 105. The first author h-index was related with the author's first author papers, and it decreased a lot if most of his papers were not first author papers. Otherwise, if the authors' papers were all first author papers, the h-index was equal with the first author h-index of him. Most of the 2793 papers were cited in WOS, and the first Chinese author of high cited papers were all from Hong Kong or Taiwan.

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