Statistics and Analysis of Highly Cited Papers in China's Archives Core Journals

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Abstract—**Using the citation query function of China Citation Database, this paper makes statistics on the highly cited papers in China's core journals of archival science from 2007 to 2016. According to the publication situation, five journals such as archival science communication and archival science research are selected as important journals for archival science research in China; Beijing, Shanghai and Jiangsu are the concentrated output places of highly cited papers in archival science; Renmin University of China, Shanghai University and Wuhan University are important institutions for archival research in China; Xu Yongjun, Feng Huiling, Ding Huadong, Ren Yue, Tan Biyong and other 28 people are prolific authors of cited papers of archival science; The research topics of Gao's cited papers mainly focus on the automation of archival work, China's archival cause, archival management, circulation and utilization, archival science and so on. This study aims to enhance the understanding and grasp of the research status of Archival Science in China, and also provide reference for the review and collection of archival journals.**

Index Terms—**Archives, Recognized kernel journals, Highly cited papers, Times cited.**

I. INTRODUCTION

Highly cited papers refer to academic papers with relatively high citation frequency and relatively long citation cycle [1]. It has important guiding significance for topic selection, manuscript collection and grasping the law of Journal Development [2]. We made statistical analysis on the highly cited papers of 8 core journals of Archival Science in 2014 [3] over the years from 2007 to 2016, in order to understand the journals, authors, institutions and themes of these papers.

II. RESEARCH METHODS

Access to China Citation Database on August 12, 2018. The earlier the papers are published, the easier it is to obtain a higher number of citations [4]. Therefore, we define the top 20 papers with the largest number of citations in each journal as highly cited papers, and those with the same citation frequency are included. A total of 205 highly cited papers are retrieved in 10 years, and these papers are analyzed by Excel 2007.

III. STATISTICAL RESULTS AND ANALYSIS

A. Distribution of Highly Cited Papers

205 highly cited papers are from 8 core journals of Archival Science (see Table 1). More than 10 highly cited papers have been published in 5 journals such as archives communication, archives research, China archives, archives management and Beijing archives. They have published 181 highly cited papers in 10 years, indicating that these journals have become important journals for archival research in China.

TABLE 1 NUMBER AND TOTAL CITED FREQUENCY OF HIGHLY CITED PAPERS PUBLISHED IN CORE JOURNALS OF ARCHIVAL SCIENCE FROM 2007 TO 2016

Title	Number of articles	Proportion (%)	Total cited frequency	Mean value of cited frequency
Archives communication	82	40.00	3527	43.01
Archival research	51	24.88	1935	37.94
Chinese Archives	24	11.71	927	38.54
file management	13	6.34	478	36.77
Beijing Archives	11	5.37	327	29.73
Shanxi archives	9	4.39	285	31.67
Zhejiang Archives	8	3.90	241	30.13
Archives and construction	7	3.41	215	30.71
Total	205	100	7935	38.71

B. Time Distribution of Highly Cited Papers

Table 2 shows that among the 205 papers, archives communication and archives research have high cited papers every year, while China archives and archives management have high cited papers almost every year except a few years, indicating that the papers published in these journals have high academic influence and are the focus of attention and research for a long time.

TABLE 2 CHRONOLOGICAL DISTRIBUTION OF HIGHLY CITED PAPERS PUBLISHED FROM 2007 TO 2016 (ARTICLES)

Journal name	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Title	0	6	3	6	9	11	2	8	6	5
Archives communica-t-ion	13	9	6	6	4	2	1	3	4	2

Archival research	2	5	5	4	1	3	7	0	2	1
Chinese Archives	2	0	0	1	0	2	6	2	4	5
file management	1	0	2	3	3	1	2	1	3	4
Beijing Archives	1	0	2	0	2	1	1	6	0	2
Shanxi archives	0	0	2	1	0	0	0	0	0	0
Zhejiang Archives	1	0	0	0	1	0	1	0	0	0
total	20	20	23	21	22	20	20	22	20	20

C. Statistics of The Top 30 Highly Cited Papers

In order to understand the research connotation of highly cited papers, table 3 makes statistics on the top 30 of 205 highly cited papers. The results show that the total cited frequency of 30 papers is 2121, accounting for 26.7% of the total cited frequency. Among the top 30 highly cited papers, Archival Science Newsletter and Archival Science research account for 15 and 9 respectively, with the largest number of selected papers, The most frequently cited paper is Feng Huiling's article "archival memory view, resource view and digital resource construction of" Chinese memory "published in the third issue of Archival Science Newsletter in 2012, which has been cited 165 times (see Table 3).

TABLE 3 STATISTICS OF THE 30 MOST FREQUENTLY CITED PAPERS FROM 2007 TO 2016 (BASED ON THE STATISTICS OF THE FIRST AUTHOR)

Author	Thesis title	Source journal	Publication time	Times cited
Huiling Feng	Archival memory view, resource view and the construction of "Chinese memory" Digital Resources	Archives communic-ation	2012（03）	165
Xueping Wang	On the practice and development strategy of archives digitization construction in China[	Archives communic-ation	2011（06）	92
Yingwei Wang	Thoughts on the reform of personnel archives management in China	Archives communic-ation	2007（01）	88
Yunqing Wang	On the archives of intangible cultural heritage and its protection principles	Archives communic-ation	2008（01）	88
Li Te	Four paradigms: changes in the concept and strategy of European Archival Science	Archival research	2011（03）	85
Huadong Ding	The rise of archival memory view and its theoretical influence	File managem-ent	2009（01）	85
Qin Liu	Review and trend prospect of personnel file management research	Archival research	2011（05）	81
Xiaoyu Huang	Theoretical understanding and practical characteristics of socialization of archives utilization service in foreign countries	Archives communic-ation	2010（06）	81
Lijuan Ni	Research on University Archives Service Strategy under the background of informatization	Archives communic-ation	2011（05）	75
Meifang Zhang	Research on the construction of archives security system	Archival research	2010（01）	70
Ming Liu	Research on information service mode of Digital Archives	Archives communic-ation	2007（05）	69
Weidong Zhang	Research on personalized service model driven by Archives Users' needs	Archives communic-ation	2007（02）	69
Zhugang Lan	Archival work in the era of big data	Chinese Archives	2013（09）	68
Laiqing Yang	New prospects for the future development of Archives: smart archives	Chinese Archives	2013（02）	68
Guoqing Li	Rational thinking on the construction of public archives in China	Archival research	2007（01）	67
Yongjun Xu	Theoretical exploration of archives management mode based on Knowledge Service	Archives communic-ation	2011（02）	67
Zhang Ning	Investigation and Reflection on the current situation of electronic document management in China	Archives communic-ation	2008（06）	66
Zhen He	Research on government information resource sharing mechanism under Network Environment	Archives communic-ation	2007（03）	66
Hong Ge	Practice and thinking of enterprise archives information construction	Archives communic-ation	2011（01）	65
Wenxin Xiang	Research on the framework of archives information security system	Archival research	2010（02）	62
Youju Xiong	Challenge of information society to traditional archives information service mode	Archives communic-ation	2011（02）	60
Yongjun Xu	Research on the relationship between archives management and knowledge management[	Shanxi archives	2008（01）	59
Dong Hua	Urban Memory Project: a highlight project for	Archival research	2010（01）	58

	archives departments to inherit and construct social memory			
Bin Zhang	Reflections on the confusion of enterprise archives management in China	Beijing Archives	2007（02）	55
Yingxiang Yu	Cold thinking on the hot research of archival big data	Archives communic-ation	2015（02）	54
Feng Zhou	Resources, technology and Thinking -- three dimensional interpretation of archives in the era of big data	Archival research	2013（06）	53
Meijing Yin	On the relationship between archival consciousness and archival work	Archives communic-ation	2008（03）	53
Xiaoqin Peng	On the service and management of Digital Archives in cloud computing environment	Archival research	2010（06）	52
Hanzhong Ren	Archival culture: a very tangled topic on the research of Archival Culture	File managem-ent	2012（01）	50
Huiling Feng	Two way significance of family filing	Archival research	2007（10）	50

D. Regional Distribution of Highly Cited Papers

Table 4 shows that 205 highly cited papers come from 22 provinces, cities and autonomous regions in China.

TABLE 4 REGIONAL DISTRIBUTION OF HIGH CITED PAPERS

Issuing agency	Number of papers / piece
Beijing	65
Shanghai	22
Jiangsu	21
Hubei	11
Shandong	10
Henan	9
Tianjin	7
Heilongjiang	7
Hunan	7
Guangdong	6
Anhui	6
Jiangxi	6
Zhejiang	4
Hebei	4
Fujian	4
Liaoning	4
Sichuan	4
Shanxi	2
Jilin	2
Guangxi	1
Inner Mongolia	1
Yunnan	1
Canada	1

There are 12 provinces and cities with 5 or more highly cited papers, including 65 in Beijing, 22 in Shanghai, 21 in Jiangsu, 11 in Hubei, 10 in Shandong, 9 in Henan, 7 in Tianjin, Heilongjiang and Hunan, and 6 in Guangdong, Anhui and Jiangxi, A total of 177 highly cited papers have been published in these 12 regions, indicating that the development of archival research in China is uneven, and the high-level achievements mainly come from a few economically and culturally relatively developed regions.

E. Distribution of Institutions of Highly Cited Papers

According to the survey, 205 highly cited papers came from 116 institutions, including 102 universities and archives institutions, 14 other institutions including Yixing High Speed Railway New Town Construction Management Office, Nanyang forestry science and Technology Promotion Station of Henan Province and China Mobile Communication Group Guangdong Co., Ltd., indicating that universities are important institutions for archival research in China. See Table 5 for the document issuing institutions.

TABLE 5 DISTRIBUTION OF INSTITUTIONS PUBLISHING MORE THAN 2 HIGHLY CITED PAPERS

Issuing agency	Number of papers / piece
Renmin University of China	38
Shanghai University	17
WuHan University	9
Shandong University	8
Heilongjiang University	7
Beijing Municipal Archives Bureau	6
Nanjing University	6
Xiangtan University	6
Nanchang University	5
Suzhou University	5
State Archives Administration	4
Fujian Normal University	4
Shanghai Normal University	4
Zhengzhou University	3
Zhengzhou aviation industry management college	3
Anhui University	3
Hebei University	3
Nanjing Institute of Political Science	3
Tianjin Polytechnic University	3
Liaoning University	2
Shanxi University	2
Archives Bureau of Zhejiang Province	2
Sichuan University	2
Hebei University	2
Sun Yat-sen University	2

F. Overview of Prolific Authors in Highly Cited Papers

According to the publishing situation, we call those who have published more than 2 (inclusive) as prolific authors. Table 6 shows that there were 31 prolific authors of archival science from 2007 to 2016. These authors published 85 highly cited papers, accounting for 41.5% of the total number of highly cited papers, including 9 papers published by Xu Yongjun of Renmin University of China, which is far ahead. The academic level of these prolific authors is high, It has had a great impact on the research of Archival Science in China.

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TABLE 6 DISTRIBUTION OF PROLIFIC AUTHORS AND INSTITUTIONS OF HIGHLY CITED PAPERS (STATISTICS BY THE FIRST AUTHOR)

Serial number	First author	Mechanism	Total documents issued
1	Yongjun Xu	Renmin University of China	9
2	Huiling Feng	Renmin University of China	4
3	Huadong Ding	Shanghai University	4
4	Yue Ren	Heilongjiang University	4
5	Biyong Tan	WuHan University	4
6	Zhen He	Renmin University of China	3
7	Xiaoyu Huang	Renmin University of China	3
8	Bo Jin	Shanghai University	3
9	Xiezhou Wang	Xiangtan University	3
10	Shuilong Tao	Beijing Municipal Archives Bureau	3
11	Yunqing Wang	Shandong University	3
12	Wenxin Xiang	Suzhou University	3
13	Bin Zhang	Renmin University of China	3
14	Xiaomi An	Renmin University of China	2
15	Hang Cao	Shanghai University	2
16	Yongsheng Chen	Sun Yat-sen University	2
17	Zhonghai Chen	Zhengzhou University	2
18	Hua Li Ming	State Archives Administration	2
19	Xincai Wang	WuHan University	2
20	Renjie Ma	Anhui University	2
21	Menghua Liang	Shanghai Normal University	2
22	Lijuan Ni	Heilongjiang University	2
23	Yumin Pan	Shanghai University	2
24	Wei Tian	Tianjin Polytechnic University	2
25	Yingwei Wang	Renmin University of China	2
26	Yunbin Wang	Fujian Normal University	2
27	Jianhua Wu	Nanjing University	2
28	Zhang Ning	Renmin University of China	2
29	Weidong Zhang	Jilin University	2
30	Feng Zhou	Shanghai University	2
31	Yaolin Zhou	WuHan University	2

G.Analysis of Research Topics of Highly Cited Papers

There is a certain scientific basis for the subject analysis of papers according to the classification number of China Library Classification [5]. The classification number of 205 highly cited papers is extracted, and the papers containing multiple classification numbers are also included. In this way, a total of 236 classification numbers are counted, and the classification numbers of more than 2 papers are listed in Table 7.

TABLE 7 ANALYSIS OF SUBJECT WORDS IN HIGHLY CITED PAPERS

Theme	Classification No. / piece	Proportion (%)
Archives automation	79	33.47
Archives in China	21	8.90
File management	19	8.05
Circulation and utilization	18	7.63
Archives	17	7.20
Other files	8	3.39
Special archives work	8	3.39
Storage and utilization	8	3.39
Special research on Culture	6	2.54
Local archives	5	2.12
Management of Higher Education Institutions	5	2.12
Administrative law	3	1.27
Communication theory	3	1.27
Various types of archival work	3	1.27
Buildings and equipment	3	1.27
Archival undertakings all over the world	3	1.27
State organ work and personnel management	2	0.85
Custody and collection	2	0.85
Data backup and recovery	2	0.85

Statistics show that the themes of 205 highly cited papers on archival science are relatively concentrated, including 79 papers on "automation of archival work", "21 papers on" China's archival cause "," 19 papers on "archival management", "18 papers on" circulation and utilization "and 17 papers on" Archival Science ". These research topics are important topics or hot issues in the field of archival research at present, It has certain guiding significance for the research and development of archival science.

IV. CONCLUSION

To sum up, we can draw the following conclusions: archives communication, archives research, Chinese archives, archives management and Beijing archives have published more than 10 highly cited papers, which are important journals for archival research in China; More than 5 highly cited papers have been published in Beijing, Shanghai, Jiangsu, Hubei, Shandong, Henan, Tianjin, Heilongjiang, Hunan, Guangdong, Anhui and Jiangxi, which is the centralized output place of highly cited papers in archival science; Renmin University of China, Shanghai University, Wuhan University, Shandong University, Heilongjiang University, Beijing Municipal Archives Bureau, Nanjing University, Xiangtan University, Nanchang University and Suzhou University have all produced more than 5 highly cited papers, which are important institutions for archival research in China; 28 people, including Xu Yongjun, Feng Huiling, Ding Huadong, Ren Yue, Tan Biyong, he Zhen, Huang Xiaoyu,

Jin Bo, Wang Xiezhou, Tao Shuilong, Wang Yunqing, Xiang Wenxin, Zhang Bin and an Xiaomi, have published more than 2 highly cited papers and are prolific authors of highly cited papers in Archival science; The research topics of Gao's cited papers mainly focus on the automation of archival work, China's archival cause, archival management, circulation and utilization, archival science and so on. Therefore, in the future work, the editorial department of archival journals in China should strengthen the selection and cultivation of productive areas, high-yield institutions, advantageous topics and backbone authors, and it is believed that there will be more highly cited papers with better quality.

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Author's biography with Photo

Zhongming Wei was born in October 1969 in Tai'an, Shandong province, China. He is an associate research librarian of Wanli Library of Taishan University. From August 1991 to July 1994, he graduated from the Chinese language and literature specialty of Tai'an Teachers College, and from July 2005 to July 2007, he graduated from the education management specialty of China Central Radio and Television University, mainly engaged in literature measurement and periodical evaluation research.