

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

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Abstract

Using the citation query function of Chinese Citation Database, this paper analyses the statistics of the highly cited papers of China's sports core journals from 2007 to 2016. According to the situation of the publication, Sports Science and Journal of Beijing Sport University are selected as important journals in the study of physical education in China; Beijing, Shanghai and Hubei are the concentrated production areas of high-cited papers in China. Shanghai Institute of Physical Education, Beijing Sport University, State Sports General Administration, Tianjin Sports Institute and Beijing Normal University are important institutions in China's sports research. Li Weidong, Mao Zhenming, Xiao Linpeng, Huang Wei, Ji Liu, Yang Hua and Bao Mingxiao have published two or more high-cited papers. They are prolific authors of high-cited papers in physical education. Research topics of high-cited papers mainly focus on the relationship between football, sports and other disciplines, physical education in colleges and universities, guidelines and policies, human body measurement, and mass sports activities, etc. This study aims to enhance the understanding and grasp of the state of sports research in China, and also provide reference and reference for the review and drafting of sports journals.

Keywords: *Physical education, core journals, highly cited papers, cited frequency.*

1. Introduction

Highly cited papers refer to academic papers with relatively high cited frequency and long citation cycle [1], which has important guiding significance for selecting topics, soliciting contributions and grasping the law of development for journals [2]. We conducted a statistical analysis on the highly cited papers which were published in 16 core sports journals [3] from 2007 to 2016 in 2017 edition, in order to understand the journals, authors, institutions and themes of these papers.

2. Research methods

2.1 Distribution of Highly Cited Papers

We got access to China Citation Database on 10 August 2021. The papers which were published earlier are more likely to obtain higher citation times [4]. Therefore, in this study, the top 20 papers with the most cited times in each journal are defined as highly cited papers, and those with the same citation frequency are included. We retrieved 202 highly cited papers in total for the past decade, and EXCEL2007 was used to analyze these papers.

3. Statistical results and analysis

The columns set up in "Education & Economy" in recent years mainly include education poverty alleviation and performance evaluation, education and economic and social development, education and labor market, education equity and education quality, education economics discipline construction, education finance, vocational and technical education research, Examination reform and education choices, student funding, population changes and education development, teacher team building, private education research, postgraduate forums, etc. In order to reflect the objective distribution of highly cited papers, the column names where the papers were published were used for statistics. The papers that did not indicate the column before 2007 are categorized by subject. The statistical results are shown in Table 1.

Table 1: Column Distribution of Highly Cited Papers

| Column | Number of papers | Total citations | Proportion (%) |
|--|------------------|-----------------|----------------|
| Research on the Basic Theories of Educational Economics | 33 | 3428 | 35.2 |
| Educational Investment and Educational Resource Allocation | 16 | 1770 | 18.2 |
| Education Finance and Education Funding Research | 11 | 1059 | 10.9 |
| Foreign Educational Economics Research | 5 | 380 | 3.9 |
| Discussion on Hot Issues of Education and Economy | 5 | 329 | 3.4 |
| Educational Econometrics Research | 5 | 358 | 3.7 |
| Educational Economics Survey Report | 4 | 306 | 3.1 |
| Research Column for Key Issues of National Educational Economy | 3 | 328 | 3.4 |
| Research on the Utilization Efficiency of Educational Resources and Educational Benefits | 2 | 196 | 2.0 |
| Education and employment | 2 | 144 | 1.5 |
| A Study on the Reasonable Distribution of Rural Primary and Secondary Schools | 2 | 379 | 3.9 |
| Forum of Famous Scholars in Educational Economics | 1 | 100 | 1.0 |
| Academic Controversy on Educational Economics | 1 | 97 | 1.0 |
| Special manuscript | 1 | 139 | 1.4 |
| Rural Education Research | 1 | 112 | 1.1 |
| Teacher labor and remuneration | 1 | 71 | 0.7 |
| China-Japan Higher Education Policy and Finance Comparison Column | 1 | 110 | 1.1 |
| Research on Major Theories and Practical Issues of Educational Economics | 1 | 60 | 0.6 |
| Education for International Students | 1 | 115 | 1.2 |
| Research on Educational Tutoring Problems | 1 | 82 | 0.8 |
| Research on Educational Supply and Demand | 1 | 59 | 0.6 |
| Vocational and Technical Education | 1 | 63 | 0.6 |
| Educational poverty alleviation and performance evaluation | 1 | 61 | 0.6 |

The results show that the basic theoretical research of educational economics (33 pieces of articles), education investment and educational resource allocation (16 pieces of articles), education finance and education funding research (11 pieces of articles), foreign education economics research (5 pieces of articles), education and economic hot issues Discussion (5 pieces of articles), Educational Economics Research (5 articles), Educational Economics Survey Report (4 pieces of articles). This proves that these columns have contributed more than 4 highly cited papers, which brings relatively far-reaching academic influence.

4. Time distribution of the citation frequency of highly cited papers

This article takes the top 100 highly cited papers as a research sample, and examines the citation status of a single paper year after year.

Due to space limitations, Table 2 only lists the title, first author, year of publication, total number of citations of a single article (N), and number of citations (Ni) each year (Ni) of the top 40 highly cited papers. Statistics show that the top 100 highly cited papers were mainly distributed between 2000 and 2007, including one each in 2008, 2011, 2014, 2015, 2017 and 2018, two each in 1994 and 2012, 3 each in 1997, 1998, 1999, 2009, 2010 and 2016, 4 in 2006, 5 in 2007 and 2013, 6 in 2001, 7 in 2002, 9 in 2000, 11 in 2005, and 12 in 2004. In 2003, it reached the highest of 13 articles. In terms of the number of citations of a single paper each year, these papers can be divided into two types: (1) The number of citations presents a parabolic distribution, which is determined by the timeliness of the paper, and the frequency of citations will naturally decrease after the optimal period; (2) The number of citations is distributed in a zigzag pattern, such as the papers of Yuan Liansheng (2003), Lei Wanpeng (2005), Fan Xianzuo (2006), Wang Shanmai (1997), Cui Yuping (2001), etc. The citation frequency reflects these types of papers have been the focus of attention and research of academia in a relatively long period of time. Judging from the average value of the citation frequency, the peak period of citation appears within 4-9 years after the publication of the paper.

Table 2: Analysis of the annual citations of the first 40 highly cited papers

| Title of the Paper | First Author | Year of Publication | N | N ₀ | N ₁ | N ₂ | N ₃ | N ₄ | N ₅ | N ₆ | N ₇ | N ₈ | N ₉ | N ₁₀ | N ₁₁ | N ₁₂₋₂₁ |
|---|----------------|---------------------|---------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|--------------------|
| On the Product Attributes of Education, the Market Operation of Schools and the Marketization of Education | Liansheng Yuan | 2003 | 32 7 | 0 | 16 | 15 | 22 | 28 | 30 | 27 | 20 | 27 | 27 | 19 | 11 | 53 |
| Expenditure on Educational Tutoring of Senior High School Students: Influencing Factors and Policy Implications | Wanpeng Lei | 2005 | 32 3 | 0 | 4 | 3 | 6 | 11 | 7 | 11 | 18 | 30 | 26 | 31 | 32 | 144 |
| Reasons, Motive Forces and Ways of Adjusting the Distribution of Rural Primary and Secondary Schools | Xianzuo Fan | 2006 | 27 7 | 1 | 18 | 21 | 8 | 21 | 24 | 32 | 36 | 42 | 22 | 14 | 11 | 27 |
| Contribution of China's higher education to economic growth rate | Yuping Cui | 2001 | 21 7 | 1 | 5 | 1 | 3 | 4 | 11 | 9 | 17 | 15 | 16 | 27 | 18 | 90 |
| The Allocation of Educational Resources under the Condition of Socialist Market Economy | Shanmai Wang | 1997 | 20 3 | 6 | 5 | 0 | 2 | 3 | 9 | 5 | 9 | 13 | 15 | 12 | 19 | 105 |
| On the Financial Unfairness of Compulsory Education in my country | Liansheng Yuan | 2001 | 17 2 | 0 | 3 | 3 | 5 | 7 | 19 | 17 | 7 | 16 | 13 | 12 | 10 | 60 |
| Research on the Burden Rate of Urban Household Income and Educational Expenditure in China | Xin Wei | 1998 | 17 2 | 0 | 1 | 7 | 6 | 7 | 5 | 3 | 3 | 8 | 9 | 6 | 16 | 101 |
| On the Relationship between the Reasonable Allocation of Educational Resources and the Reform of Educational System | Xianzuo Fan | 1997 | 16 5 | 0 | 0 | 0 | 2 | 1 | 3 | 0 | 0 | 3 | 1 | 7 | 9 | 139 |
| An Empirical Study on Educational Consumption of Chinese Urban Households | Hongwei Li | 2000 | 15 0 | 0 | 1 | 7 | 4 | 8 | 4 | 9 | 9 | 15 | 11 | 10 | 6 | 66 |
| On the Fair Orientation and Realization of Our Country's Early Childhood Education Policy | Yingqi Cai | 2004 | 14 9 | 0 | 2 | 3 | 4 | 9 | 11 | 9 | 17 | 15 | 27 | 10 | 12 | 30 |

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|--|---------------|------|---------|---|----|----|----|----|----|----|----|----|----|----|----|-----|
| Research on the Causes and Countermeasures of the Structural Unemployment of College Graduates | Ting Wang | 2009 | 14 4 | 2 | 13 | 12 | 15 | 9 | 21 | 19 | 14 | 16 | 12 | 8 | 2 | 1 |
| Main Problems Existing in my country's Compulsory Education Funding | Lei Wang | 2002 | 14 1 | 2 | 13 | 11 | 15 | 15 | 13 | 13 | 3 | 7 | 8 | 6 | 4 | 31 |
| A Regional Comparative Study of China's Provincial Local Education Investment | Baifu Shen | 1994 | 14 1 | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 1 | 2 | 5 | 4 | 6 | 118 |
| The Main Problems Existing in the Management Policies and Systems of Scientific Research Funds in Chinese Universities and Their Countermeasures | Yonglin Huang | 2013 | 13 9 | 0 | 5 | 19 | 36 | 33 | 29 | 10 | 5 | 2 | ✓ | | | |
| The Influence of Regional Differences in the Level of Economic Development on the Allocation of Educational Resources | Changjun Yue | 2003 | 13 7 | 0 | 3 | 8 | 8 | 19 | 10 | 10 | 8 | 12 | 7 | 8 | 6 | 38 |
| Analysis of Regional Differences and Influencing Factors of Investment in Compulsory Education at County Level in my country | Tianshu Pan | 2000 | 13 5 | 0 | 1 | 3 | 6 | 3 | 7 | 6 | 16 | 15 | 13 | 10 | 13 | 42 |
| Re-discussion on the relationship between education fairness and education efficiency | Hui Li | 2000 | 12 8 | 0 | 2 | 2 | 6 | 1 | 3 | 9 | 14 | 10 | 12 | 15 | 13 | 41 |
| Research on the Difference of Compulsory Education Expenditure of Urban Households in my country | Xiaohao Ding | 2005 | 12 8 | 0 | 2 | 7 | 6 | 13 | 4 | 10 | 12 | 6 | 10 | 16 | 7 | 35 |
| The Design Principle, Method and Application of Performance Evaluation Index of Higher Education | Guoyong Liu | 2007 | 12 7 | 0 | 6 | 10 | 7 | 6 | 4 | 12 | 14 | 11 | 11 | 14 | 15 | 17 |
| Financial Expenditure Evaluation and Analysis of the Efficiency of Running Higher Education Institutions in my country | Yarong Liu | 2001 | 12 6 | 0 | 1 | 3 | 3 | 4 | 10 | 5 | 8 | 8 | 7 | 9 | 10 | 58 |

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|---|----------------|------|---------|---|----|----|----|----|----|----|----|----|----|----|----|----|
| Research on the Unbalanced Utilization and Allocation of Compulsory Education Resources in China | Manchao Zeng | 2005 | 12 5 | 0 | 3 | 8 | 8 | 6 | 13 | 13 | 7 | 10 | 10 | 3 | 9 | 35 |
| The Impact of Cost Compensation on the Equal Opportunity of Higher Education | Xiaoyu Chen | 1999 | 12 0 | 0 | 2 | 7 | 3 | 7 | 7 | 9 | 10 | 14 | 4 | 10 | 10 | 37 |
| The “B&R” Strategy and Education of International Students in China: Based on 2004-2014 Data Analysis | Gang Zheng | 2016 | 11 5 | 3 | 22 | 42 | 29 | 15 | 4 | ✓ | | | | | | |
| The Choice of Fiscal Policy in the Process of Popularization of Higher Education in China | Liansheng Yuan | 2002 | 11 1 | 2 | 11 | 7 | 10 | 11 | 17 | 12 | 9 | 10 | 4 | 4 | 5 | 9 |
| The Balanced Development of Compulsory Education and the Construction of the Contingent of Teachers in Rural Primary and Middle Schools | Xianzuo Fan | 2013 | 11 1 | 0 | 4 | 8 | 24 | 22 | 18 | 18 | 15 | 2 | ✓ | | | |
| China's Basic Education Fiscal Policy from a Fair Perspective | Yuping Zhong | 2002 | 10 8 | 1 | 6 | 4 | 6 | 10 | 15 | 8 | 8 | 4 | 11 | 7 | 10 | 18 |
| Theoretical Discussion and Empirical Analysis of National Student Loan | Wenli Li | 2004 | 10 5 | 1 | 12 | 13 | 12 | 14 | 13 | 11 | 10 | 4 | 5 | 0 | 2 | 8 |
| A Preliminary Study of School Efficacy | Miantao Sun | 1994 | 10 3 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 01 | 3 | 3 | 2 | 91 |
| Adjustment of layout of rural primary and middle schools and construction of boarding schools | Xin Liu | 2006 | 10 2 | 2 | 5 | 7 | 1 | 6 | 14 | 17 | 11 | 10 | 7 | 6 | 8 | 8 |
| Research on the Influence of Education Level on Residents' Consumption | Xuemin Zhang | 2006 | 10 1 | 0 | 3 | 9 | 8 | 8 | 4 | 10 | 7 | 8 | 5 | 8 | 9 | 22 |
| An Analysis of the Educational Issues of Migrant Workers' Children | Xiaoming Li | 2005 | 10 0 | 0 | 9 | 21 | 16 | 9 | 11 | 6 | 8 | 5 | 2 | 4 | 1 | 8 |
| The Financial Problems and Countermeasures of "Migrant Children" Education | Xianzuo Fan | 2004 | 10 0 | 0 | 1 | 3 | 6 | 9 | 16 | 9 | 11 | 13 | 7 | 6 | 4 | 15 |
| An Analysis of the | Yuming | 2004 | 97 | 4 | 6 | 10 | 7 | 12 | 6 | 7 | 10 | 4 | 5 | 4 | 7 | 15 |

| | | | | | | | | | | | | | | | | | |
|--|--------------|------|----|----|----|----|----|----|-----|----|----|-----|----|-----|-----|------|--|
| Correlation between China's Regional Educational Competitiveness and Regional Economic Competitiveness- A Reply to Professor Hu Yongmei | Wu | | | | | | | | | | | | | | | | |
| Research on Student Loan Repayment System | Donghua Xu | 2000 | 95 | 0 | 4 | 5 | 1 | 8 | 8 | 8 | 10 | 11 | 13 | 8 | 4 | 15 | |
| A Comparative Analysis of the Structure of Funding Sources for Chinese and American Universities | Fuhua Li | 2002 | 95 | 2 | 8 | 7 | 8 | 4 | 12 | 5 | 11 | 5 | 7 | 7 | 4 | 15 | |
| An Empirical Study on the Relationship between Higher Education Level Structure and Economic Development | Jingming Chi | 2010 | 94 | 0 | 8 | 5 | 10 | 10 | 12 | 12 | 11 | 10 | 11 | 5 | ✓ | | |
| Analysis of the Differences Between Junior High School Students' Extracurricular Tutoring in Urban and Rural Areas- – Based on the Survey of Junior High School Students' Extracurricular Tutoring in Gansu, Hunan and Jiangsu Provinces | Manchao Zeng | 2010 | 90 | 0 | 3 | 4 | 1 | 2 | 9 | 8 | 10 | 13 | 20 | 19 | 1 | ✓ | |
| Discussion on Several Issues of Educational Property Rights | Lijuan Yang | 2000 | 89 | 0 | 4 | 4 | 6 | 13 | 10 | 8 | 11 | 7 | 5 | 3 | 3 | 15 | |
| Current Distribution of Educational Opportunity and Educational Equity in China | Hongchao Wu | 2003 | 88 | 0 | 4 | 10 | 13 | 9 | 11 | 11 | 6 | 5 | 3 | 4 | 4 | 8 | |
| Deviation and Balance: Research on the Allocation of Financial Resources in Urban and Rural Compulsory Education | Jiahong Ma | 2006 | 88 | 0 | 0 | 9 | 4 | 10 | 5 | 11 | 10 | 9 | 9 | 3 | 6 | 12 | |
| Average | | | 13 | 0. | 5. | 8 | 8. | 9. | 10. | 10 | 10 | 10. | 9. | 8.6 | 7.7 | 37.9 | |
| | | | 8 | 7 | 4 | | 5 | 7 | 8 | | | 5 | 6 | | | | |

Note: N is the total cited frequency of the paper, Ni is the cited times in the first year after publication, i=0, 1, 2, ..., 0 is the published year, and the latest cited year is 2021. ✓ is the ending symbol.

5. Analysis of Authors of Highly Cited Papers

There are 165 authors of the top 100 highly cited papers, sorted according to the number of papers published by the first author, and the authors who published more than 2 papers are listed in Table 3.

The 8 authors in Table 3 have published a total of 21 highly cited papers, resulting in a total of 2652 citations, and their contribution to the total citation frequency is huge. Further statistics show that the authors of the top 100 highly cited papers have a cooperation rate of 1.65 (person/paper), and the cooperation rate is 49%. It can be seen that the highly cited authors of the journal have a high degree of cooperation and cooperation rate. Institutions with more than 3 highly cited papers include Central China Normal University (16 papers), Beijing Normal University (14 papers), Peking University (12 papers), Xiamen University (6 papers) and Capital Normal University (3 papers); From the perspective of regional distribution, the authors of highly cited papers come from a wide range of sources, including 17 provinces, cities, and ethnic autonomous regions, and 2 papers from the United States. The top 5 regions are Beijing (38 papers) and Hubei (27 papers).), Fujian (6 papers), Guangdong and Shanghai (4 papers). These institutions and regions have formed obvious advantages in the field of educational economics research. Therefore, "Education & Economy" should actively tap the potential of these high-yield regions, institutions and authors in terms of author team building, and form a high-yield and highly cited author team around them.

Table 3 Analysis of the authors of the top 100 highly cited papers

| Author's Name | Number of Papers | Citations per Paper |
|----------------|------------------|---------------------|
| Xianzuo Fan | 4 | 163.3 |
| Liansheng Yuan | 3 | 203.3 |
| Xiaoyu Chen | 3 | 86 |
| Haiping Xue | 3 | 68.7 |
| Wanpeng Lei | 2 | 192 |
| Manchao Zeng | 2 | 107.5 |
| Yuming Wu | 2 | 89.5 |
| Xiangyun Li | 2 | 73.5 |

6. Analysis of research directions of highly cited papers

After researching the first 100 highly cited papers, it is found that these papers have strong innovation and practical value, and their research directions are mainly concentrated in 15 aspects (see Table 4). (1) Educational Equity, (2) Educational Economics, (3) Empirical Research and Analysis, (4) Educational Resource Allocation (5) Various Educational Research (6) Educational Funds, (7) Educational Expenditure, (8) College student loan, (9) research on college graduates, (10) education costs, (11) human capital, (12) education investment, (13) preschool education, (14) education for children of migrant workers, (15) education expenses. There are 27 papers related to education fairness, the most cited is Yuan Liansheng's "Discussion on Financial Inequity of Compulsory Education in my country" (172 times); 11 papers related to educational economics, and the most cited one is Yuan Liansheng's "On the Product Attributes of Education, School Marketization Operation and Education Marketization" (327 times); 11 papers involving empirical research and analysis, and the most cited one is Li Hongwei's "Empirical Research on Educational Consumption of Chinese Urban Households" (151 times); 10 papers related to the allocation of educational resources, and the most cited one is Wang Shanmai's "The Allocation of Educational Resources under the Condition of a Socialist Market Economy" (203 times); 9 papers involving various types of educational research, and the most cited is Fan Xianzuo's "The Reasons, Motive Forces, and Choice of Ways to Adjust the Distribution of Rural Primary and Secondary Schools" (277 times); 9 papers involving education funding, and the most cited one is Wang Lei's "Main Problems Existing in my country's Compulsory Education Funding" (142); 7 papers related to education expenditure, the most cited is Lei Wanpeng's "High School Student Educational Tutoring Expenditure: Influencing Factors and Policy Enlightenment" (325 times); 5 papers concerning student loans for college students, and the most cited one is Xu Donghua's "Student Loan Repayment System" (95 times).

In general, educational equity, educational economics, empirical research and analysis, educational resource allocation, various types of educational research, educational funding, educational expenditures, student loans for college students, and research papers on college graduates are the mainstream themes, which contribute the most highly cited papers.

Table 4: Analysis of the research directions of the top 100 highly cited papers

| Research Direction | Number of Papers | Research Direction | Number of Papers |
|-------------------------------------|------------------|---|------------------|
| Educational Equity | 12 | University Graduate Research | 4 |
| Educational Economics | 11 | Education Cost | 3 |
| Empirical Research and Analysis | 11 | Human Capital | 2 |
| Educational Resource Allocation | 10 | Education Investment | 2 |
| Various Types of Education Research | 9 | Preschool Education | 2 |
| Education Funding | 9 | Education for Children of Migrant Workers | 2 |
| Education expenditure | 7 | Educational Expenses | 2 |
| College student loan | 5 | | |

7. Topic analysis of highly cited papers

There is a certain scientific basis for the subject analysis of the papers according to the classification number of the Chinese Library [5]. The top 100 highly cited papers have extracted 108 classification numbers. The subject terms appearing in more than 2 papers are listed in Table 5.

Table 5: Analysis of the themes of Top 100 Highly Cited Papers

| Theme | Number of Papers | Citations Per Paper |
|---|------------------|---------------------|
| Educational Economics | 20 | 97.2 |
| School Management | 14 | 90.2 |
| Higher Education | 11 | 79.6 |
| Educational Reform and Development | 9 | 83.6 |
| Education System | 8 | 83.9 |
| Education Finance | 5 | 83.8 |
| Educational Administration | 5 | 125.4 |
| General Situation of Secondary Education in China | 4 | 147.5 |
| Overview of China's Labor Economy | 3 | 95.7 |
| General Situation of Preschool Education and Early Childhood Education in China | 3 | 115 |
| Pedagogy | 2 | 115.5 |
| China's Education Guidelines ,Policies and Elaboration | 2 | 142.5 |
| Agricultural Income and Distribution | 2 | 61.5 |

Statistics show that there are 20 papers on "Education Economics"; 14 papers on "School Management"; 11 papers on "Higher Education"; 9 papers on "Education Reform and Development"; 8 papers on "Education System"; "Education Finance" and "Education Administration" 5 papers for each; 4 papers on "General Situation of Secondary Education in China". These research topics are all important topics or hot issues in the current research field of educational economics, which reminds journal editors that when selecting topics and composing manuscripts, they can appropriately tilt toward the hot research content of the subject.

Disciplinary hotspots and research frontiers are relatively easy to receive attention and their citation frequency is generally high. It can be seen from Table 5 that the number of highly cited papers on the topics of "China's Preschool Education and Early Childhood Education", "Pedagogy" and "Chinese Educational Policies, Policies and Explanations" is relatively small, but all of their citations are relatively high, especially the papers on "Chinese Educational Guidelines, Policies and Explanations" have been cited 142.5 times, indicating that these topics have received extensive attention and attention from researchers, and the journal can further focus on publishing articles on such topics.

8. Funding for highly cited papers

Funded paper is the main output form of scientific research activities. It reflects the level and quality of research to a certain extent, and also the ability of journals to report the latest research results in their professional field. It is the one of the most important objective indicator to evaluate the quality of journals and papers[6]. The statistics of the fund are shown in Table 6.

Table 6: Funding status of the top 100 highly cited papers

| Type of fund | Number of papers | Proportion/% | Cited frequency | Average number of citations |
|--|------------------|--------------|-----------------|-----------------------------|
| National Natural Science | 3 | 10 | 232 | 23.2 |
| National Social Science | 7 | 23.3 | 533 | 76.1 |
| Other National Funds | 5 | 16.7 | 582 | 116.4 |
| Ministry-Level Funds | 8 | 26.7 | 581 | 72.6 |
| Provincial Fund | 1 | 3.3 | 61 | 61 |
| Municipal Fund | 1 | 3.3 | 63 | 63 |
| Funds of Higher Education Institutions | 2 | 6.7 | 186 | 93 |
| Other Funds | 3 | 10 | 194 | 64.7 |
| Total | 30 | 100 | 2432 | 81.1 |

Among these top 100 highly cited papers, there are 30 funded papers, among which 23 are funded papers at the national, provincial and ministerial levels, accounting for 77% of the total funded papers. This shows that the funding for research projects in the field of education economics in China mainly comes from various government departments such as the national, provincial and ministerial levels. These funds play a very important role in the research of this subject area. It also proved that the journal is easier to attract high-level fund papers.

In terms of average citation frequency, 30 funded papers have been cited 2432 times, and each of them has been cited 81.1 times. However, 70 non-funded papers have been cited 7314 times, each of which has been cited 104.5 times, which is higher than that of funded papers. It shows that the editorial department of “Education & Economy” did not blindly pursue fund papers, but paid more attention to the academic value of the papers.

9. Conclusion

The research on the frequency, column, time, author, institution, region, research direction, theme, and funding of highly cited papers in “Education & Economy” from 1985 to 2021 reveals that as an important journal in the field of educational economics, its highly cited papers have the characteristics of high citation frequency, high cooperation rate and deep degree of cooperation, wide geographical distribution, comprehensive research topics which covering research hotspots and frontiers in the subject field and strong ability to absorb high-level fund papers. It is hoped that the journal editorial department can continue to strengthen the selection and cultivation of key columns, advantageous topics and key authors in its future work. Also it is believed that there will be more highly cited papers of better quality in this journal in the future.

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Author’s biography with Photo



Zhongming Wei was born in October 1970 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.