

BIBLIOMETRIC ANALYSIS OF THE JOURNAL 'REVIEW OF EDUCATIONAL RESEARCH'

Author's Name: Dr. Poornima Devi

Affiliation: Assistant Professor, C.R. College of Education, Hisar, Haryana (India).

E-Mail: poornimalohan11@gmail.com

DOI No. – 08.2020-25662434

Abstract

Bibliometric analysis of a journal brings awareness about the key research areas, types of publications and the quality valuation of the papers published in the journal. The present study aims to provide an overview of publications trend during 20 years from 2001-2020 in the journal 'Review of Educational Research' through a bibliometric analysis. Data for the study was exported from Web of Science database. The study is focused on analyzing the publication growth per year, document types, top authors, institutions, countries and the citations received. The findings indicate that articles and review papers are the dominant document types published in the journal and the review papers are among the top-cited papers. The USA origin research dominate the publications of the journal. The papers published in the journal have received a good number of citations. Meta-analysis is the most common keyword of the papers published in the journal.

Keywords: Education, Research in Education, Bibliometrics, Citation analysis.

INTRODUCTION

Review of Educational Research is a leading journal in the Education discipline, that is published quarterly since the beginning (1931) under the Sage Publications. The journal provides a forum to publish high-quality papers with the main emphasis on publishing review papers that include conceptualization and interpretation of the literature in the field of education. The journal rarely publishes the new/ empirical research result unless the paper comprises a broad incorporated review. The journal encourages publishing paper on various aspects related to education such as sociology, psychology, history, economics, and political etc. The journal is indexed in many abstracting and indexing databases like as Scopus, Web of Science, Social SciSearch, ProQuest Education Journals, ERIC (Education Resources Information Center) etc. (RER, 2021).

Bibliometrics is the use of statistical methods to analyse books, articles and other publications (Wikipedia, 2021). It can be useful in identifying the research trends in a subject, authorship trends and research collaborations (Parmar, Siwach and Kumar, 2020). To reveal the objective performance and development of a journal, bibliometric study, based on statistical data is the broadly used technique. These studies help in identifying the knowledge structure, current trend and provide insights to improve the quality of the journal (Xu et al, 2018). Citations received by a paper or journal is one of the commonly used features in bibliometric analysis (Garfield, 1997; Wivherts, 2009). Bibliometric studies have been conducted for many journals like Journal of Social Sciences (Thanuskodi, 2010), Journal of Knowledge Management (Gaviria-Marin, Merigo & Popa, 2018), IFLA Journal (Siwach, 2013), British Journal of Educational Technology (Chen, Zou & Xie, 2020). Such studies have also been conducted on various subjects and areas.

OBJECTIVES

- To find out the types of papers published in the journal
- To study the yearwise distribution of papers published in the journal
- To identify the most prolific authors contributing publications in the journal
- To find out the top institutions and countries contributing in the journal
- To analysis the citation trend of the papers published in the journal
- To know the top-cited papers published in the journal
- To identify the most used keywords/ areas in which the most number of papers are published

METHODOLOGY

The present study, a bibliometric analysis of “Review of Educational Research” is conducted to analyze the research publication trend in the journal. The data of the study was extracted from the Web of Science database. The reason for selecting the database is the quality of indexing and its worldwide recognition.

To obtain the data for the study, the advance searching option was used with the help of a field tag (SO= Publication Name). To get the desired data a search string (SO= “Review of Educational Research”) was used and refined with the timespan of 2001-2020. This search retrieved 441 documents and this data was exported in and analyzed with the help of MS-Excel and using the Biblioshiny App of Bibliometrix.

ANALYSIS

Year-wise Distribution of Papers

The distribution of papers published per year in the journal and the citations received by these papers are shown in table 1. The table indicates that about 15 papers were published per year till 2005 after that a hike is seen in the number of papers published in the journal. The journal published 44 papers in the year 2008 and 34 papers each in the year 2016 and 2017.

The 441 papers published in the journal received a total of 56708 citations with an average of about 129 citations per paper. The paper published in 2004 received the highest average citation per paper (420.07), followed by the papers published in 2007 (ACPP= 358.05). The Average Citation per Paper per Year (ACPPY) was also calculated and found to be highest for the year 2007 (25.58), followed by the year 2004 (24.71).

Table 1: Year-wise Distribution of Papers

Year	No. of Papers	%age	Citations	ACPP	ACPPY
2001	18	4.08	2954	164.11	8.21
2002	14	3.18	2909	207.79	10.94
2003	12	2.72	2045	170.42	9.47
2004	14	3.18	5881	420.07	24.71
2005	15	3.40	4889	325.93	20.37
2006	20	4.54	3657	182.85	12.19
2007	19	4.31	6803	358.05	25.58
2008	31	7.03	5031	162.29	12.48
2009	44	9.98	5532	125.73	10.48

2010	22	4.99	2399	109.05	9.91
2011	20	4.54	3865	193.25	19.33
2012	15	3.40	1223	81.53	9.06
2013	16	3.63	2117	132.31	16.54
2014	18	4.08	1098	61.00	8.71
2015	20	4.54	1383	69.15	11.53
2016	34	7.71	2681	78.85	15.77
2017	34	7.71	1172	34.47	8.62
2018	23	5.22	696	30.26	10.09
2019	25	5.67	282	11.28	5.64
2020	27	6.12	91	3.37	3.37
TOTAL	441	100	56708	128.59	-

Document Types

The document types of the papers of the journal is shown in table 2. Based on the categorization of documents of the Web of Science, these papers are published under 5 different document categories. The articles and review papers are the dominating document types accounting for 47.62% and 46.94% respectively. The editorial material accounts for 4.31% while corrections and proceedings papers accounts for 1.13% and 0.68% respectively.

Table 2: Document Types

Document Type	No. of Papers	%age
Article	210	47.62
Review	207	46.94
Editorial Material	19	4.31
Correction	5	1.13
Proceedings Paper	3	0.68

Top Contributing Authors

Table 3 shows the authors contributing to the journal during the last two decades. It is observed that a total of 1091 authors appeared in the publication out of which 21 such authors have published at least 3 papers in the journal, 72 authors have two papers in the journal and 998 authors contributed only one paper. G Leinhardt from the University of Pittsburgh, United States has contributed the maximum number of publications in the journal (10 papers). J Hatti has the highest average citation per paper (ACPP) as the 3 papers of the author received 3682 citations with an average of 1227 citations per paper. Other authors having higher ACPP are RM Bernard and E Borokhovski (both having ACPP= 319), followed by PC Abrami (ACPP= 315), T Siedel (ACPP= 244) and M Crede (ACPP= 203).

Table 3: Top Authors

Author	Affiliation	No. of Papers	%age share	Citations
Leinhardt G	University of Pittsburgh, United States	10	2.27	167
Abrami PC	Centre for the Study of Learning and Performance, Canada	6	1.36	1889

Adesope OO	Washington State University Pullman, United States	5	1.13	920
Bernard RM	Centre for the Study of Learning and Performance, Canada	5	1.13	1597
Borokhovski E	Centre for the Study of Learning and Performance, Canada	5	1.13	1597
Cooper H	Duke University, United States	5	1.13	833
Patall EA	University of Southern California, United States	5	1.13	753
Polanin JR	American Institutes for Research - Headquarters, United States	5	1.13	228
Slavin RE	Johns Hopkins University, United States	5	1.13	676
Crede M	Iowa State University, United States	4	0.91	811
Peng P	The University of Texas at Austin, United States	4	0.91	60
Swanson HL	The University of New Mexico, United States	4	0.91	553
Valentine JC	University of Louisville, United States	4	0.91	215
Bus AG	Leiden University, Netherlands	3	0.68	378
Dowd AC	Pennsylvania State University, United States	3	0.68	49
Hattie J	University of Melbourne, Australia	3	0.68	3682
Lake C	Johns Hopkins University, United States	3	0.68	404
Roberts G	The University of Texas at Austin, United States	3	0.68	265
Seidel T	Technical University of Munich, Germany	3	0.68	733
Volman M	University van Amsterdam, Netherlands	3	0.68	283
Wexler J	University of Maryland, United States	3	0.68	271
72 authors have 2 papers each				
998 authors have one paper each				

Countries of Contributing Authors

A total of 441 documents in the sources are produced by the authors from 33 countries. The USA dominates in producing the most number of publications (319 papers) in the source and has a contribution of 72.336 % in the total publications. Other countries contributing more than ten papers are: Netherland (33 papers), Canada (28 papers), Australia (25 papers), England (14 papers) and Germany (13 papers).

Table 4: Publication Countries

Countries/Regions	No. of Papers	%age
USA	319	72.34
Netherlands	33	7.48
Canada	28	6.35
Australia	25	5.67
England	14	3.18
Germany	13	2.95
China	9	2.04
New Zealand	8	1.81
Belgium	5	1.13
Israel	4	0.91
Singapore	4	0.91
Colombia	3	0.68
Norway	3	0.68

Scotland	3	0.68
Taiwan	3	0.68
7 countries with 2 papers each		
11 countries with 1 paper each		

Top Contributing Organizations

The organizations that have contributed at least 10 papers are listed in table 5. The University of Texas System is the most productive organization which produced 23 papers, followed by The University of California System (20 papers) and University of Texas Austin (19 papers).

Table 5: Top Contributing Organizations

Organization	No. of Papers	%age
University of Texas System	23	5.22
University of California System	20	4.54
University of Texas Austin	19	4.31
Pennsylvania Commonwealth System of Higher Education PCSHE	15	3.40
State University System of Florida	15	3.40
State University of New York SUNY System	13	2.95
University of Minnesota System	13	2.95
University of Minnesota Twin Cities	13	2.95
University of Wisconsin System	13	2.95
University System of Georgia	13	2.95
University of Illinois System	12	2.72
University of North Carolina	12	2.72
University of Southern California	12	2.72
University of Wisconsin Madison	11	2.49
University System of Maryland	11	2.49
Vanderbilt University	11	2.49
University of Amsterdam	10	2.27
University of Maryland College Park	10	2.27

Citation Profile and Top Cited Papers

Citation profile of the papers published in 'Review of Educational Research' from 2001-2020 is shown in table 6. Out of the total 441 papers, 19 papers (4.31%) didn't receive any citations and most of these documents are editorial notes. 41.5% of the papers received upto 50 citations while more than half of the papers (54.2%) received more than 50 citations. The maximum citation share (53.83%) is for the papers which have received citation between 101- 500. There are 4 review papers that have received more than 1000 citations and accounts for 16.95% of the citation share.

Table 6: Citation Profile

No. of citations	TP	% of TP	Citations	% of Citations
Zero	19	4.31	0	0.00
1-10	60	13.61	285	0.50
11-20	40	9.07	599	1.06
21-30	40	9.07	1004	1.77
31-40	21	4.76	742	1.31

41-50	22	4.99	1006	1.77
51-100	82	18.59	5796	10.22
101-500	141	31.97	30523	53.83
501-1000	12	2.72	7143	12.60
>1000	4	0.91	9610	16.95
Total	441	100.000	56708	100.000

The 16 top cited papers receiving more than 500 citations are listed in table 7. Out of these 16 papers, 11 are review papers and 5 are articles. Four documents have received even more than 1000 citations. The review paper by Hattie J, entitled “The power of feedback” published in 2007 has enjoyed the maximum number of citations (3523) in the journal and also received the most citations per year (271). The second top cited paper in the list is by Fredricks JA, entitled “School engagement: Potential of the concept, state of the evidence” published in 2004, receiving 3038 citations. This is followed at third position by “Socioeconomic status and academic achievement: A meta-analytic review of research” by Sirin SR, published in 2005 which has received 1652 citations.

Table 7: Top Cited Papers

Authors	Title	Year	Citations	Citation per year	Document Type
Hattie J	The power of feedback	2007	3523	271	Review
Fredricks JA	School engagement: Potential of the concept, state of the evidence	2004	3038	189.88	Review
Sirin SR	Socioeconomic status and academic achievement: A meta-analytic review of research	2005	1652	110.13	Review
Shute VJ	Focus on formative feedback	2008	1397	116.42	Review
Jennings PA	The Prosocial Classroom: Teacher Social and Emotional Competence in Relation to Student and Classroom Outcomes	2009	844	76.73	Review
Roorda DL	The Influence of Affective Teacher-Student Relationships on Students' School Engagement and Achievement: A Meta-Analytic Approach	2011	708	78.67	Article
Spillane JP	Policy implementation and cognition: Reframing and refocusing implementation research	2002	664	36.89	Review
Akkerman SF	Boundary Crossing and Boundary Objects	2011	645	71.67	Article
Thapa A	A Review of School Climate Research	2013	600	85.71	Review
Kuncel NR	The validity of self-reported grade point averages, class ranks, and test scores: A meta-analysis and review of the literature	2005	565	37.67	Review
Bernard RM	How does distance education compare with classroom instruction? A meta-analysis of the empirical literature	2004	538	33.63	Review
Peugh JL	Missing data in educational research: A review of reporting practices and suggestions for improvement	2004	527	32.94	Review
Yeager DS	Social-Psychological Interventions in Education: They're Not Magic	2011	527	58.56	Article
Deci EL	Extrinsic rewards and intrinsic motivation in education: Reconsidered once again	2001	522	27.47	Article
Cornelius-White J	Learner-centered teacher-student relationships are effective: A meta-analysis	2007	502	38.62	Review

Remillard JT	Examining key concepts in research on teachers' use of mathematics curricula	2005	501	33.4	Article
--------------	--	------	-----	------	---------

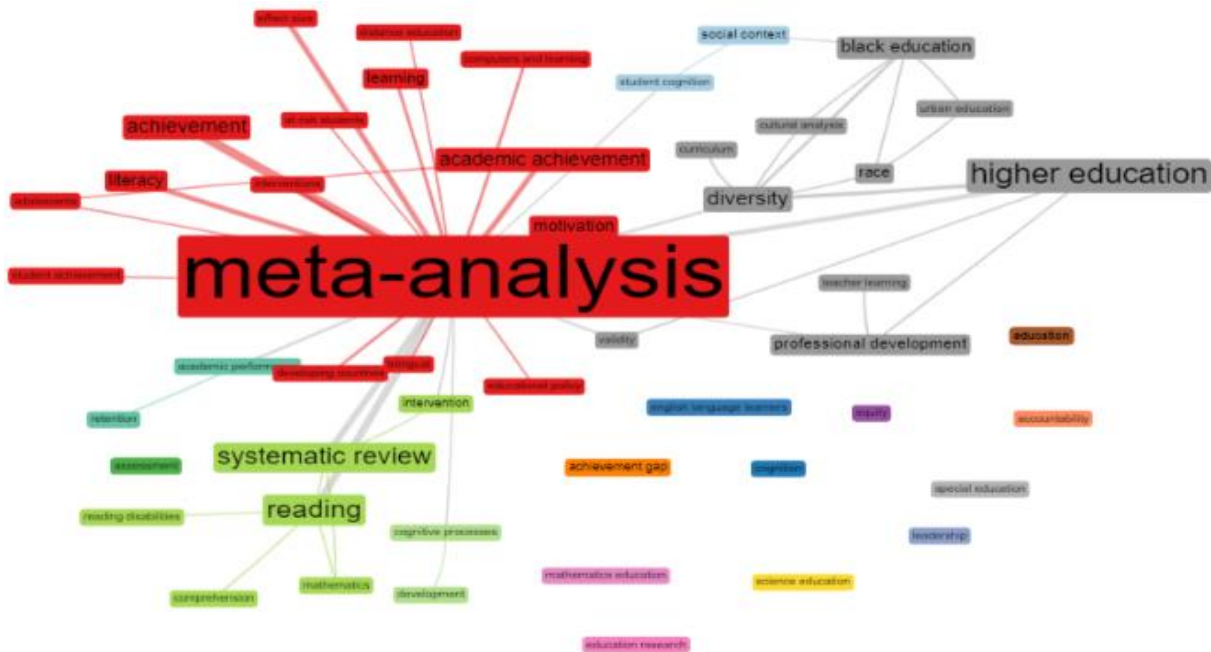


Figure 1: Keyword co-occurrence network

Keywords co-occurrences network

The analysis of Keyword co-occurrence provides an insight into the research areas on which there is main emphasis of research in the journal. It is observed that 1292 authors’ keywords are used in 441 papers published in the journal. The keyword co-occurrence network in figure-1 shows the maximum co-occurred authors’ keywords in the papers published in the journal. It is observed from the figure, 18 such keyword clusters are there which have at least two edge points. The largest cluster has 16 keywords, the papers in this network are on meta-analysis studies on various aspects such as achievement, learning, motivation, literacy, etc. The second cluster has 9 keywords such as diversity, higher education, race, black education. The third-largest network consists of 5 keywords, focused on studies based on systematic review on reading, reading disability etc. Among all clusters meta-analysis, diversity, and systematic review are the most interlinked keywords with other keyword clusters.

SUMMARY AND CONCLUSION

This study is designed to analyze the research output of the journal “Review of Educational research” from 2001 to 2020 in context of various bibliometric indicators such as annual production, citation structure, the origin of intellect, most prolific authors, most cited papers, most frequently used keywords etc. The results of the study show that the journal has produced 441 papers in this 20 year period receiving 56,708 citations with an average of about 129 citations per paper. Production of scientific literature per year has grown over time; in 2009 the journal has published the maximum number of papers (44). As regards to citations, the maximum number of citations received per paper (420) is for the papers published in 2004. G. Leinhardt has produced a maximum (10) papers among all the authors but 9 of those are editorial notes which received no citations, meanwhile, J. Hattie is the top-cited (3682) author with only 3 papers. The University of Texas System has produced the most number of papers

(23) among all other institutions. The USA is the origin of 319 papers published in the journal. Nearly one-third of the papers received citations in between 100-500. Out of 16 top-cited papers, 11 were review papers. A review paper by J Hattie entitled 'The power of feedback' has received the maximum (3523) number of citations.

REFERENCES

- Aria, M., & Cuccurullo, C. (2017). Bibliometrix: An R-tool for comprehensive science mapping analysis. *Journal of Informetrics*, 11(4), 959-975. doi:10.1016/j.joi.2017.08.007.
- Chen, X., Zou, D., & Xie, H. (2020). Fifty years of British Journal of Educational Technology: A topic modeling based bibliometric perspective. *British Journal of Educational Technology*, 51(3), 692-708.
- Garfield, E. (1997). Dispelling a few common myths about journal citation impacts. *Scientist*, 11(3).
- Gaviria-Marin, M., Merigo, J. M., & Popa, S. (2018). Twenty years of the Journal of Knowledge Management: A bibliometric analysis. *Journal of Knowledge Management*, 22(8), 1655-1687.
- Parmar, S., Siwach, A. K., & Kumar, A. (2020). Fifty years research output in oral submucous fibrosis: A bibliometric analysis of publications from 1967 to 2016. *DESIDOC Journal of Library and Information Technology*, 40(2), 470-478. doi:10.14429/djlit.40.02.14727
- Review of Educational Research. <https://journals.sagepub.com/metrics/RER> (Accessed on Feb 20, 2021)
- Siwach, A.K. (2013). IFLA journal: A bibliometric analysis. *e-Library Science Research Journal*, 1(11).
- Thanuskodi, S. (2010). Journal of Social Sciences: A bibliometric study. *Journal of Social Sciences*, 24(2), 77-80.
- Wikipedia (2021). Bibliometrics. <https://en.wikipedia.org/wiki/Bibliometrics> (Accessed on Feb 20, 2021).
- Xu, Z., Yu, D., & Wang, X. (2019). A bibliometric overview of international journal of machine learning and cybernetics between 2010 and 2017. *International Journal of Machine Learning and Cybernetics*, 10(9), 2375-2387. doi:10.1007/s13042-018-0875-9