

# **The Trend of Leadership Research in Higher Education: A Bibliometric Overview and Visualization**

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*This study examines leadership research in higher education from 2008 to 2022. A total of 268 important publications were systematically retrieved and bibliometrically analyzed from the Scopus database. The present study employed Bibliometrix to analyse leadership research trends. To represent the general pattern and structure of leadership research in higher education, the final analysis incorporates bibliometric indicators, e.g., annual scientific production, most prolific journal, most prolific author, country and institutions, most influential articles, co-citation, and author's keywords. This bibliometric investigation revealed that the US, Australia, and the UK produce the most relevant publications. It is also observed that there is still a severe manque of leadership research in higher education, and there is no appreciable growth in this field from 2008 to 2022. To give more in-depth information about the trend topics and important fields of leadership research in higher education, co-citation, and the author's keyword analysis are also employed. The study offers valuable insight into leadership research in higher education for theoretical and practical advancements for further studies.*

*Keywords: leadership, higher education, bibliometric analyses, co-citation*

## **INTRODUCTION**

Over the past several decades, significant growth has been observed in higher education in studying leadership. This is because the idea of leadership has changed according to changes in the workforce, globalization, technology, and demography. This interest has been sparked by the higher education

institutions' influence on the development of learners who later become leaders in broader society and the evolving nature of higher education leadership in response to sector-wide global challenges (Black, 2015). However, despite the growing interest and plethora of literature available on leadership, there has been no consistent definition of leadership. Reviewing the trends in leadership research makes it clear that the definition of leadership is influenced by the need for time, environment, and perspective. The majority of literature emphasizes concepts such as transformational leadership (Al-Husseini & Elbeltagi, 2016; Al-husseini & Elbeltagi, 2018), distributed leadership (Bolden et al., 2009; Jones et al., 2012, 2017), shared leadership (Vogel, 2022) and sustainable leadership development (Iqbal & Piwowar-Sulej, 2022), etc.

However, the leadership paradigm in higher education is still relatively new, with little empirical research. For instance, Rayner et al. (2010) pointed out that there was little empirical study on academic leadership after critically reviewing the literature on academic leadership. Similarly, Macfarlane (2011) observed that the leadership roles of professors had received little attention in research on leadership in higher education, which is primarily concentrated on senior managers like department heads and faculty deans. Ladyshevsky & Flavell (2012) explore the sacristy and need for academic leadership development programmes for the success of higher education institutions. The finding reveals that initiating a leadership development programme will create more effective leaders to lead and influence positively.

This study demonstrates the advancement of leadership research in higher education and its structure by evaluating and tracking published articles. The findings will assist the academicians and practitioners in better comprehending the subject's state and the direction for potential new study avenues. This study will significantly enhance and clarify the conceptual basis for leadership research in higher education and its theoretical and historical development. This study is distinctive because of the method used. Bibliometrics, a recently developed tool written in the R programming language, was used to conduct the study (Aria & Cuccurullo, 2017; Singh, Sibi, & Sharma, 2021; Singh, Singh, et al., 2022).

The study's primary objective is a bibliometric evaluation of research papers published on leadership in higher education that was retrieved from the Scopus database between 2008 and 2022 to understand the current knowledge base and intellectual and conceptual structure of research. The study was conducted with the help of various bibliometric analysis indicators, including yearly scientific production, most prolific scholar, country and institutions, most impact full articles, and author keywords analysis. The outcomes of the above analyses are described in detail in the results and discussion section.

## **METHODOLOGY**

Bibliometric analysis, which employs both relational and evaluative methodologies, is an effective tool for assessing the scientific output of countries, authors, and institutions (Benckendorff & Zehrer, 2013; Singh, Sibi, & Sharma, 2021; Singh, Sibi, Yost, et al., 2021; Singh, Singh, et al., 2022). Bibliometric analysis is a commonly applied statistical approach with broad implications to ascertain the epistemology and knowledge structure of a particular subject area (Singh, Sibi, Yost, et al., 2021). It is a quantitative method that employs publication and citation data to build the evolutionary structure of a research field while also adding statistics and econometrics to the process (Singh, Sibi, & Sharma, 2021). Bibliometrics, an R-package that allows for bibliometric analysis using the R language, was employed to analyze data in this research (Aria & Cuccurullo, 2017; Warin, 2020).

Scopus, the largest abstract and citation database, was used to find the bibliographic information for this study. Researchers have often used this database to extract the pertinent peer-reviewed literature for bibliometric and scientometrics analyses in a particular research field (Singh, Sibi, et al., 2022). Following the standard search protocol ("leadership" AND "higher education"), keywords were used to search in the Scopus database. A total of 5934 articles related to leadership research in higher education were reflected. The results were delimited to the year 2008 to 2022, with the only article published in the English language and the most prominent ten journals in higher education research. The final result reflects 553 articles, followed by the screening of titles, abstracts, and keywords final analysis considered 268 articles.

The current study has used annual scientific production, most prolific journals, highly productive researchers, nations, higher education institutions, most impactful articles, author's keywords, and co-

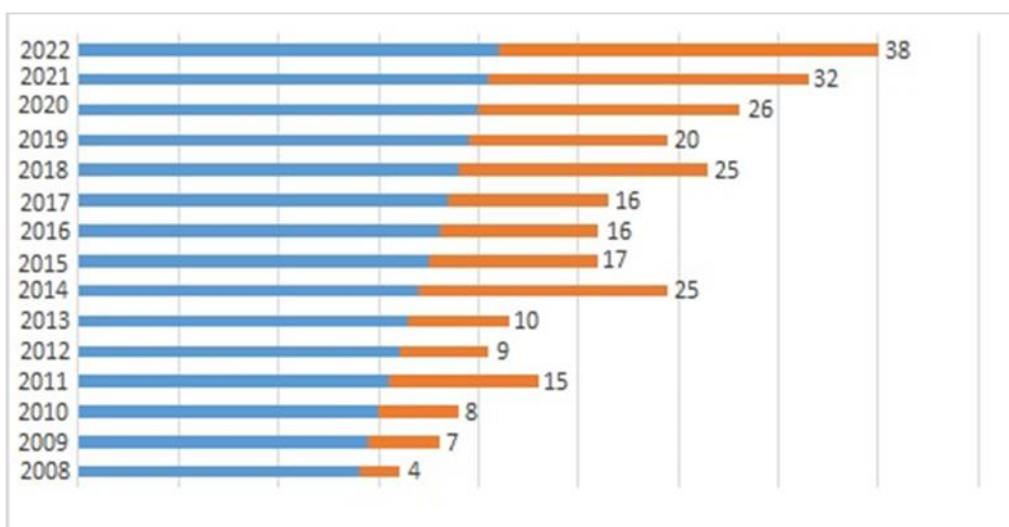
citation analysis to comprehend the publication trend of leadership research in higher education. These indicators are the most commonly used to measure the performance of authors in a specific research field (Mulet-Forteza et al., 2019; Kumar et al., 2020; Singh, Sibi, & Sharma, 2021).

## RESULTS

### The Evolution of Publications by Year

The trend of scientific publications year by year is presented in Figure 1. A total of 268 articles were published between the years 2008 and 2022. The publication trend of articles reflects that from 2008 to 2013, productivity was very low; only 53 articles were published between these years. While since 2014, it has seen a change in publication trends. From 2014 to 2022, a total of 215 articles were published, which is 80.22% of the total production. The years 2021 and 2022 were the most productive, contributing 32 and 38 publications, respectively.

**FIGURE 1**  
**ANNUAL SCIENTIFIC PRODUCTION**



### Most Prolific Journals

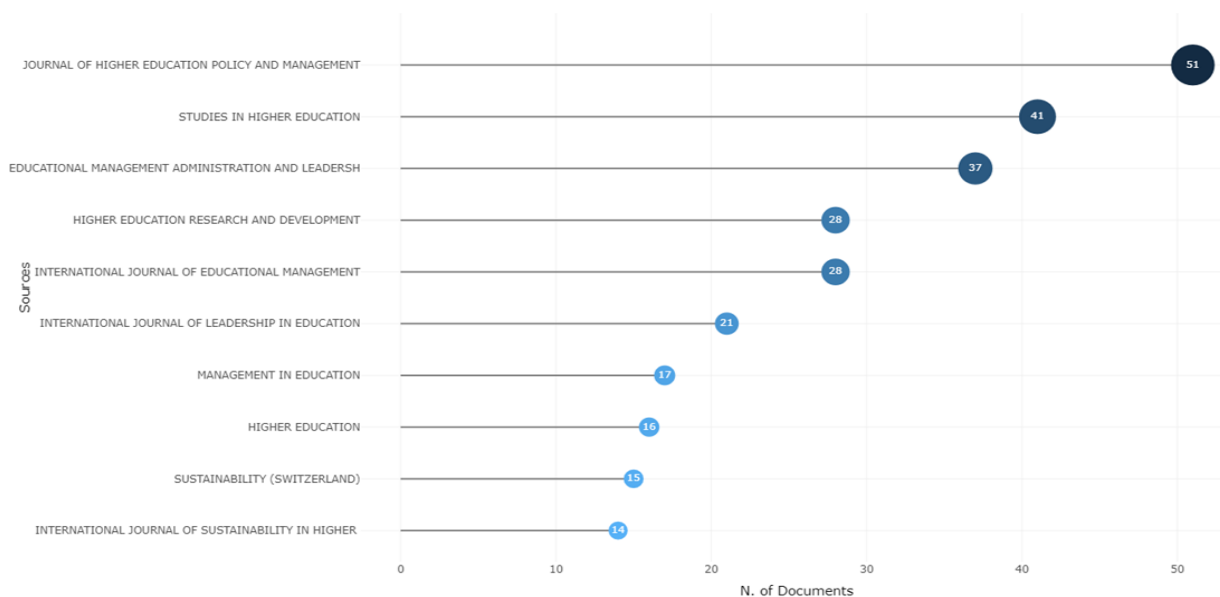
This study included all the articles published in ten prominent higher education journals between 2008 and 2022 (figure 2). Out of ten journals, the journal of higher education policy and management occupied the top place with 51 documents which is 19% of the total documents, including the highly cited article “Distributed leadership: a collaborative framework for academics, executives and professionals in higher education” of Jones et al. (2012). However, studies in higher education, educational management administration, and leadership placed in second and third positions with 41 and 37 documents, respectively.

### Most Influential Articles

Table 1 provides a detailed summary of the top 10 highly influential articles with a total number of citations each article receives. According to the Scopus data, out of 268 articles, “An international comparative analysis of sustainability transformation across seven universities” is the most influential article with 220 citations. The ideal attributes of a “sustainable university,” as well as the factors and obstacles in the transformation, are discussed by Ferrer-Balas et al. (2008), who compare the strategies of seven universities globally. The significance of vision and leadership that encourages the necessary transition, along with the appropriate assignment of responsibility and rewards, for those who are devoted to this transformation is also emphasized.

Similarly, in this list, the article titled “Distributed Leadership in Higher Education: Rhetoric and Reality” has occupied second place with 182 citations. This phenomenal work of Bolden et al. (2009) examined the distribution of leadership throughout the organization of various universities in the UK for the long-term success of institutions. Other influential works include “Distributed leadership: a collaborative framework for academics, executives and professionals in higher education” by Jones et al. (2012) with 118 citations and “Professors as intellectual leaders: formation, identity and role” by Macfarlane (2011) with 90 citations.

**FIGURE 2  
MOST PROLIFIC JOURNALS**



**TABLE 1  
MOST INFLUENTIAL ARTICLES**

Title	Paper	Author	Total Citations	TC per Year
1.	An international comparative analysis of sustainability transformation across seven universities	Ferrer-Balas et al. (2008)	220	14.67
2.	Distributed Leadership in Higher Education: Rhetoric and Reality	Bolden et al. (2009)	182	13.00
3.	Distributed leadership: a collaborative framework for academics, executives, and professionals in higher education	Jones et al. (2012)	118	10.73
4.	Professors as intellectual leaders: formation, identity, and role	Macfarlane (2011)	90	7.50
5.	Exploring the ambiguity: what faculty leaders think of sustainability in higher education	Wright & Horst (2013)	83	8.30
6.	Leadership style and job satisfaction in higher education institutions	Alonderiene & Majauskaite (2016)	81	11.57

7.	Transformational leadership and innovation: a comparison study between Iraq's public and private higher education	Al-Husseini & Elbeltagi (2016)	70	10.00
8.	Improving leadership in Higher Education institutions: a distributed perspective	van Ameijde et al. (2009)	70	5.00
9.	Managing the teaching-research nexus: ideals and practice in research-oriented universities	Geschwind & Broström (2015)	65	8.13
10.	The tension between marketization and academisation in higher education	Ek et al. (2013)	59	5.90

### Most Influential Authors, Countries, and Institutions

Table 2 provides a detailed overview of the top 10 most influential authors, institutions, and countries between 2008 and 2022. Harvey M contributes the most, with five publications, followed by Bolden R, Coates H and Jones S, with four publications each. Regarding citations, Bolden R occupied the top position in the list with 257 citations, followed by Gosling J, Harvey M and Jones S, with 247,206 and 206, respectively.

The most influential countries list reflects that Australia contributes the most, with 127 publications, followed by UK, USA and New Zealand, with 80, 70 and 22 publications, respectively. In terms of citations, the UK placed top in the list with 1037 citations, followed by Australia, Spain and USA with 852,241 and 213 citations, respectively. However, regarding the most influential institutions, the Monash University of Australia occupied the top position in the list with 10 publications, and the Griffith University of Australia occupied second place in the list, with 9 publications, which shows the dominance of Australia in this particular field.

**TABLE 2**  
**MOST INFLUENTIAL AUTHORS, COUNTRIES AND INSTITUTIONS**

Author	h_index	g_index	m_index	TC	NP	PY_start
BOLDEN R	4	4	0.286	257	4	2009
COATES H	4	4	0.308	76	4	2010
HARVEY M	4	5	0.364	206	5	2012
JONES S	4	4	0.364	206	4	2012
AL-HUSSEINI S	3	3	0.429	127	3	2016
BILLOT J	3	3	0.25	24	3	2011
CROUCHER G	3	3	1	22	3	2020
GOSLING J	3	3	0.214	247	3	2009
LUMBY J	3	3	0.429	101	3	2016
RAYNER S	3	3	0.231	74	3	2010

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**Most Productive Countries**

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<b>Country</b>	<b>TC</b>	<b>AAC</b>	<b>NP</b>
UNITED KINGDOM	1037	22.06	80
AUSTRALIA	852	14.69	127
SPAIN	241	80.33	4
USA	213	7.34	70
NEW ZEALAND	203	20.30	22
SWEDEN	193	24.13	15
CANADA	130	21.67	13
IRELAND	122	20.33	10
NETHERLANDS	91	22.75	7
CHINA	85	12.14	13

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**Most Influential Institutions**

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<b>Institution</b>	<b>Articles</b>
MONASH UNIVERSITY	10
GRIFFITH UNIVERSITY	9
DEAKIN UNIVERSITY	6
MACQUARIE UNIVERSITY	6
UNIVERSITY OF MELBOURNE	6
UNIVERSITY OF MICHIGAN	6
WESTERN SYDNEY UNIVERSITY	6
DALHOUSIE UNIVERSITY	5
AUSTRALIAN CATHOLIC UNIVERSITY	4
EDITH COWAN UNIVERSITY	4

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**Author's Keyword and Trend Analysis**

The author's keyword analysis is one of the primary analyses that offer a thorough overview of the content and subject of research publications. Authors have used 707 keywords to categorize their works between 2008 and 2022. Which appeared 1230 times, so only highly appeared keywords are selected for analysis. The word cloud of the author's keywords (figure 3) reflects that "academic leadership," "management," "distributed leadership," "transformational leadership," and "leadership development" are the most frequently appeared keywords. Only a cumulative rise of keywords is seen in the word cloud. It seems inadequate on its own. Therefore, to examine the evolution of concepts in the literature, trend topics analysis was used to examine the popularity of concepts throughout the period. The trend analysis showed the logarithmic frequencies of various keywords used in the publications. Figure 4 reflects a comprehensive overview of the trending topics. From figure 3, it can be observed that the keywords such as higher education (108), leadership (104), management (23), distributed leadership (19), transformational leadership (11), educational leadership (8), and shared leadership (6) have been used frequently.







documents, respectively. That included very prominent work, “Distributed leadership: a collaborative framework for academics, executives and professionals in higher education,” conducted by Jones et al. (2012). That reflects the shift of attention toward leadership research in higher education and its importance.

Similarly, one of the major indicators of this analysis is the most impactful article in the field of leadership research in higher education, showing that the article titled “An international comparative analysis of sustainability transformation across seven universities” is the most influential article with 220 citations. In this work, by evaluating the approaches of seven universities from around the world, Ferrer-Balas et al. (2008) emphasize the significance of leadership and vision that promotes the necessary transformation and the proper assignment of responsibility across the university.

Moreover, other significant findings of this study show that Harvey M is regarded as the most impactful author in terms of publication, with 5 publications, followed by Bolden R, Coates H and Jones S, with 4 publications each. Regarding citations, Bolden R occupied the top position in the list with 257 citations, followed by Gosling J, Harvey M and Jones S, with 247, 206 and 206, respectively. However, In the case of the most influential countries, it has been seen that Australia contributes the most, with 127 publications, followed by UK, USA and New Zealand, with 80, 70 and 22 publications, respectively. In terms of citations, the UK placed top in the list with 1037 citations, followed by Australia, Spain and USA with 852, 241 and 213 citations, respectively. However, when it comes to the most influential institutions, the Monash University of Australia occupied the top position in the list, with 10 publications, and the Griffith University of Australia occupied second place in the list, with 9 publications.

The authors’ keyword analysis reflects the theoretical and practical evolution of research in a specific research area. A total of 707 keywords have appeared in this study, “academic leadership,” “management,” “distributed leadership,” “transformational leadership,” and “leadership development” are the most frequently appeared keywords. This has been reflected in the word cloud figure. However, for a more in-depth analysis to understand the evolution of research in a specific field, the trend analysis played a significant role by giving a compressive overview of various keywords used in the publications. From this analysis, it has been observed that the keywords such as higher education, leadership, management, distributed leadership, transformational leadership, educational leadership and shared leadership have been used frequently, which indicates the shift of paradigm in leadership research in higher education.

## **IMPLICATIONS AND LIMITATIONS**

The results have several implications for research related to the higher education area. The present study employed an innovative tool for conducting bibliometric analysis called bibliometrics (Aria & Cuccurullo, 2017). The results of the present study would support academicians and researcher professionals to understand better and deepen their understanding of the various bibliometric analysis schedules from multiple perspectives and how they may be used to categorize certain tourism research areas. Additionally, the results also contribute reliable primary information on leadership research in higher education and its more affluent patrons to related literature. The use of co-citation and co-occurrence visualization techniques in this work should make it easier for academicians engaged in higher education research to comprehend the subject from various angles. Furthermore, this study also extensively covers significant developments and trends in leadership research in higher education. This will help scholars find existing literature gaps and choose future research areas (Singh, Sibi, & Sharma, 2021; Strandberg et al., 2018).

Despite highlighting the extensive growth of leadership literature in higher education, the research has several limitations. Firstly, only articles published between 2008 to 2022 were analyzed. Secondly, the findings were obtained only by evaluating the bibliographic data of publications. Thirdly, the data were obtained from Scopus; thus, Scopus’ limitations may also apply to this study. The publication and citation data were compiled only using the Scopus database, which formed the basis of the outcome stated in the current study. As a result, it opens up opportunities for future studies in the theme to employ a variety of databases and bibliometric indicators to get a deeper understanding.

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