International Journal of Contemporary Economics and Administrative Sciences
ISSN: 1925 – 4423
Volume: XV, Issue: 2, Year: 2025, pp.571-594

Intellectual Leadership Research: A Bibliometric Review with VOSviewer

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Received: 11.09.2025, Accepted: 18.12.2025
10.5281/zenodo.18044671

Abstract

Purpose: The aim of this study is to systematically examine the concept of intellectual leadership, which is an emerging leadership approach, and to evaluate scientific publications regarding the concept using the bibliometric analysis method. As a result of the analyses carried out through the VOSviewer program, several literature gaps regarding the concept were identified, and it was aimed to guide future studies.

Method: The concept of "Intellectual Leadership" was scanned as a keyword in the Web of Science (WoS) database as of 28 May 2025, using the "all fields" search criterion. A total of 191 publications were accessed and analyzed through VOSviewer software after data cleaning. In the analysis, network maps of the concept were revealed based on co-authorship, citation, country, institution, bibliometric author matching, and bibliometric publication matching. In addition, collaborations, trends, and thematic concentrations regarding the concept were examined.

Findings: It was observed that the concept was studied mainly between 2012 and 2022, while collaborations regarding this relatively new concept remained limited. Citation and co-authorship analyses revealed the existence of clusters centered around certain institutions and authors. Country- and institution-based analyses indicate that the concept has an increasing visibility in international literature.

Limitations: The study is limited to publications indexed in the WoS database. The exclusion of other important databases, such as Scopus, constitutes one of the main limitations of the study.

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Originality Value: Since the concept of intellectual leadership is a rising field in literature, this study reveals existing gaps and contributes to making the concept more visible. In addition, it offers suggestions for future research in both methodological and thematic terms.

Key words: Intellectual Leadership, Organization Management, Management Information Systems, Bibliometric Analysis, Scientific Collaboration

JEL Code: M10, M12, C88

1. Introduction

Leadership is one of the oldest social phenomena of humanity and is defined by the process of individuals directing, influencing and inspiring others. This behavior, which is not unique to the human species, is also observed in nature in different ways. Deterministic matriarchal leadership in elephant communities (Moss, 2000), guidance by old and female wolves in wolf packs (Mech, 1999), strategic positioning of birds controlling the flight in bird flocks and guiding the herd (Nagy et al., 2010) are evidence that leadership also has evolutionary and biological foundations. These examples show that leadership depends not only on authority; It also reveals that it is based on capacities such as adaptation, orientation, experience transfer and guidance (Grant, 1996).

When the historical process is examined, it is seen that leadership for humanity is sometimes conceptualized based on power and authority, sometimes on moral guidance (Schermerhorn et al., 2011), and sometimes on the role of strategic determination (Ireland and Hitt, 2005; Akdemir, 2021). In this context, leadership behavior has undertaken different functions depending on the needs of historical periods and played an important role in the development of both institutions and individuals. Leadership concepts shaped after the industrial revolution were redesigned in the twentieth century with various theoretical approaches such as situational, behavioral and transformational (Bass and Riggio, 2006). Thus, leadership began to be stripped of individual characteristics and transformed into a phenomenon sensitive to situational dynamics (Antonakis and Day, 2018).

Today, digitalization, information technologies, changes in business processes and differentiation of employee trends have begun to bring the phenomenon of leadership to the fore with its more abstract, with its more abstract and cognitive dimensions (Antonakis and Day, 2018). In this context, systematically examining the concept of intellectual leadership, which is a relatively new concept in literature, is important in terms of identifying trends in the field, field gaps, academic collaborations, and using this developing concept effectively and efficiently with existing knowledge. In line with these needs, bibliometric data analysis methods come to the fore by allowing academic publications to be examined through numerical data (Moral-Muñoz et al., 2020; Donthu et al., 2021). With this analysis method, the common research areas,

development process, academic collaboration and conceptual structure of the concept discussed are revealed. The VOSviewer software used for analyzes is a user-friendly program that allows the analyzes to be carried out technically and visually, making the findings more understandable (VanEck and Waltman, 2010).

Bibliometric analysis is a method that allows qualitatively examining the trends, structure and relationships of publications related to a particular concept (Zupic and Čater, 2015; Donthu et al., 2021). In this context, the study follows a mixed approach that includes both descriptive and visual analysis techniques. Data for the research was obtained from the WoS database. As the concept is relatively new, not many restrictions were entered during data collection, and all publication types, not limited to just articles, were included (Moral-Muñoz et al., 2020). Thanks to this method, the representation of the concept in literature could be discussed in a more in-depth and holistic manner.

As a result, the concept of intellectual leadership is a candidate to be an area that is addressed with an increasing tendency in literature and attracts attention. The concept is mostly studied in the fields of politics (Lindgren & Packendorff, 2009), education (later, 2008; Saiti, 2015) and social sciences (Mayo, 2016; Smith & Larimer, 2017); It is seen that articles come to the fore as a publication type. In studies where the predominant publication type is articles, the concept has become a focal point in certain institutions, countries and authors.

The fact that countries such as China and America have high citation numbers is an indication that the concept is discussed in different contexts globally (Antonakis and Day, 2018; Donthu et al., 2021). In this respect, it is anticipated that this study will reveal the thematic concentration, conceptual development and collaborations of the concept of intellectual leadership, making the gaps in this research field visible and providing direction for future studies.

2. Literature Review

In this part of the study, the concepts of intellectual leadership and bibliometric data analysis are discussed under two subheadings.

Intellectual Leadership

The concept of *"intellectual"* originates from the Latin concept *"Intellectus". "Intellect"* is used in the sense of mind, brain, intellect, perception, power (Çağan, 2003: 163). The word intellectual is a term used for people or classes who work with the mind, reason, thought or idea (Fer, 2012: 110; Magill and Rodriguez, 2024:134). Intellectuals have existed in almost every society. In non-literate societies, magicians, priests and bards; In literate societies, philosophers, poets, lawyers and civil servants were considered intellectuals (Mercier, Higgins and Da Costa, 2014). It is possible to say that the first ancestors of the intellectual were the sophists living in Ancient Greece (Tell, 2007). The use of the concept in

its current meaning occurred with the discussions and enlightenment period after the Dreyfus incident in 1898 (Kardaş, 2023). After the Dreyfus incident, the concept of intellectual gained a new identity and began to be used for people who question, seek the truth, resist wrong, and have knowledge and culture.

According to the Oxford Dictionary, the concept of intellectual is defined as an individual with developed intelligence and the ability to think logically and concretely (Oxford Dictionary). In this context, the intellectual person; He is a person who has the knowledge of his period, is a researcher (Kang et al., 2021), inquisitive and sensitive to social problems. Intellectual people stand out with their ability to think not only with their immediate surroundings but also with the whole society (Akdemir and Mert, 2018; Kang et al., 2021).

In this context, intellectual leadership; They have acquired the characteristics of being able to express their thoughts in different fields, taking a critical stance against authority (Kalenyuki and Tysmbal 2020), freeing individuals' thoughts from stereotypes, and expressing the truth by even risking being alone when necessary (Akdemir and Mert, 2018; Kalenyuki and Tysmbal, 2020). In addition, such personalities defend progressive and rational values and center experience and innovation instead of the status quo (Antonakis and Day, 2018). These people prefer to rely on rational foundations with an intellectual distance, rather than pursuing traditional emotions (Furedi, 2004). In this context, intellectual leaders; They are also known as people who can develop intellectual reflexes against crises (Yukl, 2012), are solution-oriented, can successfully carry out mental processes (Mayo and Thomas, 2017), and can synthesize national problems objectively (Furedi, 2004).

Throughout the historical process, intellectual people have been at the forefront, especially in professional groups where critical thinking is based, such as media, art, academia and law (Çağan, 2003; Furedi, 2004; Kardaş, 2023). Furedi (2004) defined intellectuals as individuals who can change the existing dynamics with their critical discourses and push the current intellectual boundaries of society. Considering that today, leadership is not limited to just managerial skills, these features have become an important factor in directing followers to a rational vision (Day et al., 2014; Sánchez-Cardona et al., 2018) and providing cognitive flexibility. The success of influencing followers and directing them to organizational goals can be achieved thanks to high mentality diversity and intellectual depth (Zacher et al., 2014; Akdemir, 2018).

An intellectual leader is a person who stands out by influencing others with his intelligence, reasoning and persuasion skills, logic, verbal and written expression power, appearance, determination and consistency, general culture, and the cause-effect relationships he has established (Akdemir, 2018: 160). Intellectual leaders are people who direct their followers in every field rather than specializing in a single field, do not have economic and managerial concerns, and try to make justice, equality, transparency, merit and continuous development dominant in the organization they are in (Akdemir, 2018; Kalenyuki and Tysmbal, 2020). The

power resources that leaders use on their followers vary depending on their leadership styles. The power resources that intellectual leaders use over their followers are their competencies, logicality and originality, transformability, reasoning ability, being sensitive to problems, being able to clearly express their feelings and thoughts, and being able to determine the priority order of management-related functions (Akdemir, 2018). The studies on the concept are summarized as follows, in order of number of citations in WoS categories, from most to least citations:

Macfarlane (2011): In the study conducted on university professors, academicians' intellectual leadership; It is discussed through three basic components: moral responsibility, intellectual guidance and academic originality. The study highlighted that it is not enough for academics to just teach, but also to contribute to the academic development of their students and colleagues, to determine academic direction and to shape research areas. However, it has been determined that the existing administrative performance measurement system in higher education puts these features in the background.

Barron (2000): The study, which examines the types of leadership in children's group work, particularly focused on the distinction between "organizational leadership" and "intellectual leadership" and analyzed how these two types of leadership are determined in children's cooperation processes. According to the author's study, children with intellectual leadership characteristics are skilled in problem solving, developing solution strategies and developing cognitive aspects, while children with organizational leadership characteristics are skilled in time management, maintaining order and task distribution. The author stated that intellectual leadership is shaped by social interaction and group dynamics, not age or academic achievement, and supports this type of leadership in educational environments. emphasized the need.

Uslu, B. & Welch A. (2018): Like Macfarlane's (2011) study, a study conducted on university professors examined how academics influence their intellectual leadership roles. According to the authors, this type of leadership is not only related to academic knowledge but also to the bureaucratic structure of the university. The study, conducted using comparative analysis method with data obtained from universities in Turkey and Australia, concluded that organizational structures have an impact on professors' abilities to present innovative ideas, establish academic networks and determine research priorities. In this context, the authors suggested redesigning the institutional structure in universities to support intellectual leadership.

Fumasoli, T. Gornitzka, Å., & Maassen, P. (2014): In a qualitative study conducted with many universities in Europe examining the intellectual leadership roles of university rectors in social development, the authors described rectors as actors with intellectual responsibility towards society rather than administrative figures. According to the authors, rectors are important actors who should exhibit

intellectual leadership in university-society interaction, academic contribution to public policies and development of strategic vision. However, this ability is limited by resource management, entrenched performance measurement systems, and institutional pressures. The authors argued that intellectual leadership should be more effectively associated with social development goals.

Leung, M.W.H. (2018): In the study conducted through in-depth interviews on female professors in Hong Kong, intellectual leadership was examined in relation to academic freedom. The author argued that to develop the intellectual leadership of female professors, areas of academic freedom should be expanded, gender prejudices should be overcome, and institutional structures should be fought. Therefore, the development of women's intellectual leadership is important in academic culture and structural reforms are necessary.

Ferris, E. (2008): The study examines the intellectual leadership of Francis Deng, the first Refugee Human Rights Representative of the United Nations, and analyzes Deng not only in the bureaucratic or political framework but also in the ethical and conceptual plan. Deng's bringing the issue of "internally displaced persons" to the international agenda is presented as an example of intellectual leadership by establishing a strong bridge between academic knowledge and global politics.

Apart from these studies, Woods (2004) examined teacher leadership and intellectual leadership and stated that teachers assuming thought leadership in their pedagogical practices can develop a more participatory and innovative school culture compared to traditional hierarchical structures. Evaluating intellectual leadership through a decentralized collective structure, Gonzalez (2022) stated in his study that this type of leadership, combined not only with academic knowledge but also with field experiences, fighting spirit and collective mind, plays an important role in the development of political strategy, especially in activist groups. In another study examining intellectual leadership on marketing academics from a different discipline, it was concluded that academics with such leadership abilities were able to understand the socio-economic and cultural context of the current period and pioneer ideas (Brownlie, Hewer, and Ferguson, 2007).

Another study conducted in the academic sector examined the place of intellectual leaders in academic communities and universities, and in parallel with the results of studies conducted in other academic fields, it was underlined that this type of leadership is not only related to academic knowledge, but also has great importance in determining the vision and guiding the society (McNay, 2003). Another study on strategic visioning was conducted by Andresen and Agrawala (2002). In their study, the authors examined four different types of leadership in the stages of global climate change: intellectual, instrumental, power-based and directive. In the study, they empirically tested the claim that certain types of leadership are dominant in certain regime phases and stated that intellectual leaders are significantly effective, especially in the agenda-setting phase. All these studies, the integration of intellectual capital into corporate competition strategies in recent

years, indicate that intellectual leadership plays a decisive role not only in knowledge production but also in increasing organizational agility (Nonaka and Takeuchi, 1995; Grant, 1996).

Bibliometric Analysis

Bibliometric analysis is a method that allows quantitative analysis of scientific publications (Van Eck and Waltman, 2010). In this study, four basic techniques were used within the scope of bibliometric analysis. These are as follows (Zitt et al., 2005; Garfield, 2006):

1. Co-authorship analysis: It is the examination of collaboration between authors.
2. Keyword Co-occurrence Analysis (co-occurrence of keywords): It is the determination of thematic similarities between concepts.
3. Citation Analysis: It is the measurement of the scientific impact of publications.
4. Bibliographic coupling analysis: It is the mapping of the relationships established by different studies over common sources.

These methods allow a more holistic evaluation of research trends and structural relationships existing in the literature (Callon et al., 1983; Garfield, 2006). Scientific academic networks and scientific collaborations are another important component of bibliometric analyses. Literature mapping performed with bibliometric analysis is an effective tool in understanding the structure of a research field (Waltman and Van Eck, 2011). The networks formed as a result of the analysis help to understand the evolution of research fields and the formation of important research groups. VOSviewer analyzes the relationships between keywords and provides a visual representation of these relationships. In this way, it helps to examine which sub-topics the research on a particular topic focuses on and which areas are more developed (Van Eck and Waltman, 2010). By mining scientific data obtained from large databases, it allows detailed analysis and maps to be created on this data. This feature is especially important for studies that conduct extensive literature reviews and comprehensive bibliometric analyzes (Van Eck et al., 2010). The technical features of VOSviewer are briefly as follows (Van Eck and Waltman, 2010; Waltman and Van Eck, 2011):

1. Visualization; VOSviewer produces high quality and understandable maps. These maps present the relationships between key components in the research area in the form of a network structure.
2. Data import and export; can import and analyze data from different bibliometric data sources (e.g., Web of Science).
3. Clustering algorithms: It uses special algorithms to group data into clusters.
4. Time series analysis: It allows monitoring changes in the literature over time.

5. User-friendly interface: It has a user-friendly interface and allows researchers to perform analyzes easily.

Although VOSviewer is advantageous in that it is free and can visualize large data sets quickly, it does not allow deep analysis when compared to tools with deeper language processing techniques such as advanced text mining and analysis, and it can only work with bibliometric data, such as surveys, experimental data, etc. It is disadvantageous because it is not suitable for analysis of other types of data.

3. Methodology

The research focuses on academic publications related to the concept of *"intellectual leadership"*. The literature search was conducted from the WoS database. To make the collected data suitable for analysis, incorrect, incomplete or repetitive information was removed and only studies directly related to *"intellectual leadership"* were identified and cleaned. In the analysis that ended on 28.05.2025, when the WoS search page was searched with the keyword "intellectual leadership" and the *"title"* option, 158 publications were reached. Since the number is relatively small, the *"all fields"* option was added instead of just the title option, and the search was made that way. A total of 203 publications were made. As a result of cleaning the publications, all analysis was made on 191 publications. For the analysis, the VOSviewer program was used due to its functionality, ease of use and the ability to provide multi-dimensional analysis, including mapping and visualization. In line with this information, the questions that the research seeks to answer are as follows:

- Who are the authors who publish on the concept of intellectual leadership and what is the structure of the partnerships?
- Who are the most cited authors, publications, countries, institutions?
- What are the keywords most frequently mentioned with the concept?
- Which documents and which authors match academic publications in terms of bibliometrics?

The research questions aim to systematically explain the theoretical development of the concept and its application trends. In addition, the study will contribute to determining the gaps in this new concept and the areas that need to be studied. In this regard, the study aims to analyze scientific production on intellectual leadership, identify the main trends of the field and concentration in the field, and make potential future research suggestions. In this context, the problematic of the study is as follows: What is the appearance of the concept of intellectual leadership in literature and what kind of evolutionary process has it undergone with different variables in academic studies?

Bibliometric analysis is a method that allows qualitatively examining the trends, structure and relationships of publications related to a particular concept (Zupic and Cater, 2015). In this context, the study follows a mixed approach that

includes both descriptive and visual analysis techniques. Data for the research will be obtained from the WoS database. As the concept is relatively new, not many restrictions were imposed during data collection, and all publication types, not limited to just articles, were include ed.

Findings

In this part of the study, first the WoS reports and secondly the bibliometric analysis results are included.

WoS Reports

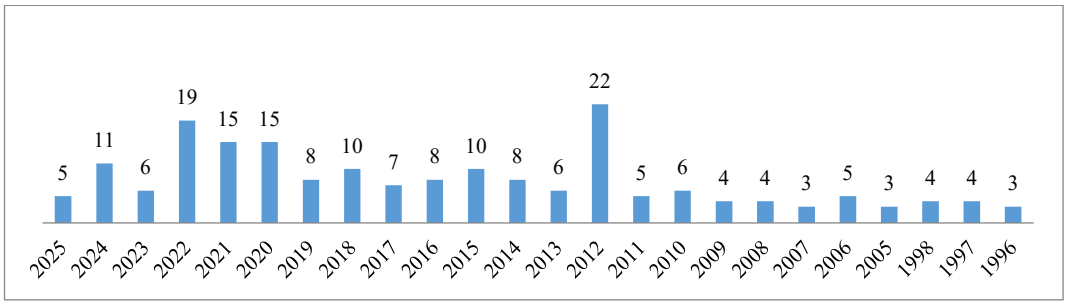
In the analysis made by selecting all fields with the keyword *"intellectual leadership"*, 191 publications that were cleaned on 25.05.2025 were reached. The annual number of publications is shown in Table 1 and Graph 1:

Table 1. Number of publications by year

Year	n	%	Year	n	%	Year	n	%
2024	11	5,556	2016	8	4,04	2008	4	2,02
2023	6	3,03	2015	10	5,051	2007	3	1,515
2022	19	9,596	2014	8	4,04	2006	5	2,525
2021	15	7,576	2013	6	3,03	2005	3	1,515
2020	15	7,576	2012	22	11,111	1998	4	2,02
2019	8	4,04	2011	5	2,525	1997	4	2,02
2018	10	5,051	2010	6	3,03	1996	3	1,515
2017	7	3,535	2009	4	2,02	2025	5	2,52

Source: Web of Science

Graph 1. Number of publications by year



Source: Web of Science

When the table is examined, it is observed that the first publication date is 1995. There was an increase and decrease in publications with small accelerations until 2012. In 2012, the number of publications increased to 22, an increase that has not been reached even today. There was a serious decrease in 2013, down to six publications, and no significant increase was observed until 2022. It increased to 19

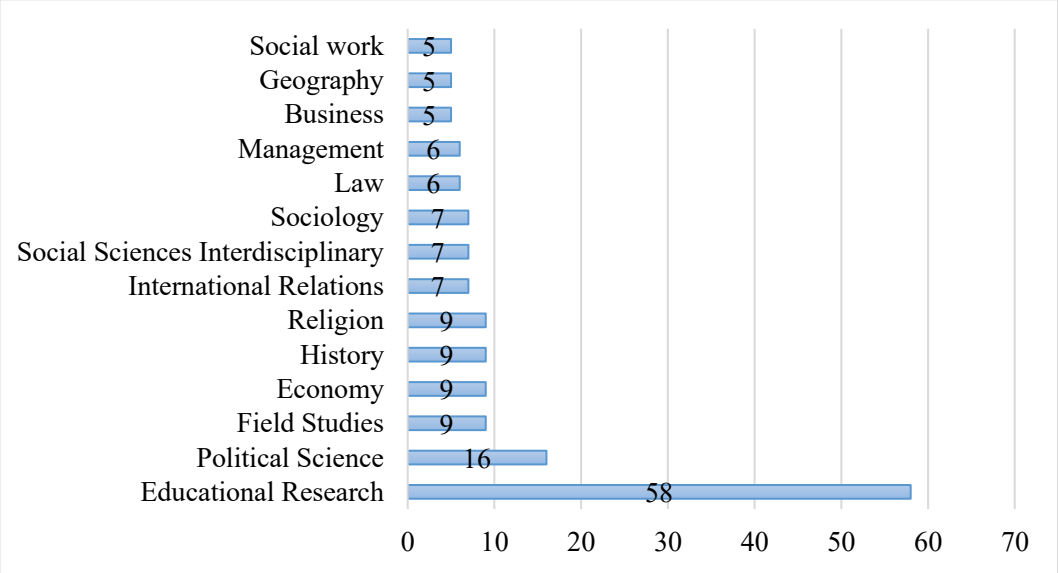
publications in 2022, and in 2023, the 2012-2013 cycle continued with a sharp decline, decreasing from 19 publications to six publications. As of 2025, there are still five publications. The studies were examined according to WoS categories, and the results are shown in Table 2 and Graph 2. As can be seen in the table, approximately 30% of the studies were conducted in the field of educational research. The second prominent field was political science with 8.1%. Field studies, economy, history and religion took third place with 4.5% each.

Table 2. WoS Categories

Categories	n	%	Categories	n	%
Educational Research	58	29,293	International Relations	7	3,535
Political Science	16	8,081	Social Sciences Interdisciplinary	7	3,535
Field Studies	9	4,545	Sociology	7	3,535
Economy	9	4,545	Law	6	3,03
History	9	4,545	Management	6	3,03
Religion	9	4,545	Business	5	2,525
Environmental Studies	7	3,535	Geography	5	2,525
			Social work	5	2,525

Source: Web of Science

Graph 2. WoS categories



Source: Web of Science

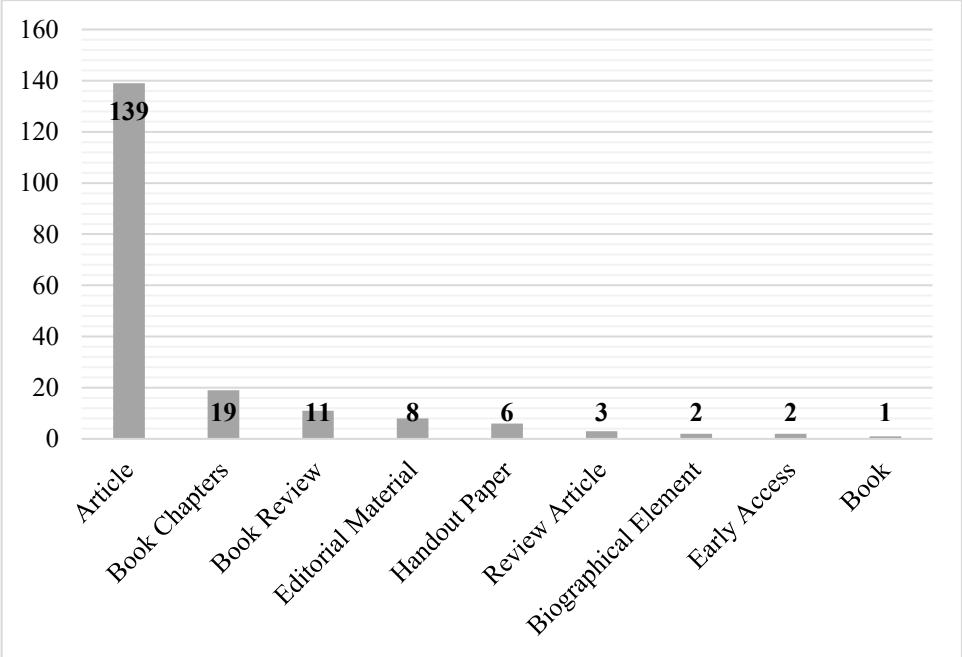
The results regarding the publication types of the studies are shown in Table 3 and Graph 3. Many of the studies (72.8%) are in the type of articles. The second most publication types are Book chapter (9.9%) and book review (5.8%).

Table 3. Types of work

Publication Type	**N**	**%**
Article	139	72,8
Book Chapters	19	9,9
Book Review	11	5,8
Editorial Material	8	4,2
Handout Paper	6	3,1
Review Article	3	1,6
Biographical Element	2	1,0
Early Access	2	1,0
Book	1	0,5

Source: Web of Science

Graph 3. WoS categories



Source: Web of Science

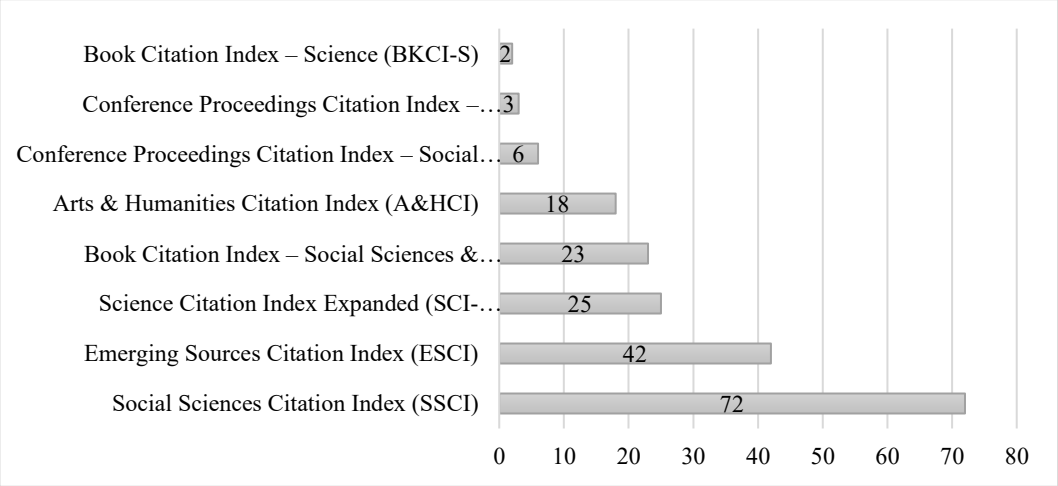
The distribution of studies according to WoS indices is shown in Table 4and Graph 4. Nearly half of the publications are in the SSCI (37.7%) category. Approximately a quarter are in the ESCI (22.0%) category and a third, 13.1%, are in the SCI-EXPANDED category.

Table 4. Wos indexes

WoS İndeks	Adet	%
Social Sciences Citation Index (SSCI)	72	37,7
Emerging Sources Citation Index (ESCI)	42	22,0
Science Citation Index Expanded (SCI-EXPANDED)	25	13,1
Book Citation Index – Social Sciences & Humanities (BKCI-SSH)	23	12,0
Arts & Humanities Citation Index (A&HCI)	18	9,4
Conference Proceedings Citation Index – Social Science & Humanities (CPCI-SSH)	6	3,1
Conference Proceedings Citation Index – Science (CPCI-S)	3	1,6
Book Citation Index – Science (BKCI-S)	2	1,0

Source: Web of Science

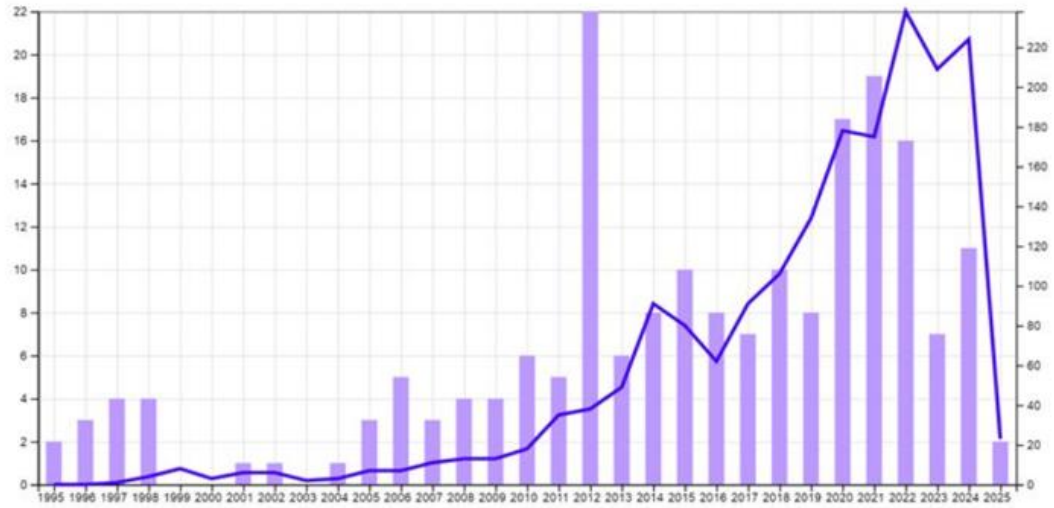
Graph 4. Wos indexes



Source: Web of Science

Publication years and citation evolution are as in Graph 5. The graph shows that the publications reached the highest number (22) in 2012 and the highest number of citations (240) in 2022. The columns in the chart show the number of publications and the lines show the number of citations.

Graph 5. Citation and publication scale by year



Source: Web of Science

All sources included in the analysis were cited at least once and the concept was cited a total of 1456 times. Table 5 shows the five most cited publications.

Table 5. Most cited works

No	Author(s)	Publication Title	Journal	2021	2022	2023	2024	2025	Avarage per year
1	Reynolds et al. (2011)	Scientific concepts for an integrated analysis of desertification	Land Degradation & Development	12	4	5	3	5	7,8
2	Andresen &Agrawala (2002)	Leaders, pushers and laggards in the making of the climate regime.	Global Environmental Change	9	6	5	1	1	4,75
3	Macfarlane (2013)	Intellectual leadership in higher education: Renewing the role of the university professor	Routledge	4	5	4	7	1	6,71
4	Macfarlane (2011)	Professors as intellectual leaders: Formation, identity and role	Studies in Higher Education	8	4	6	4	1	6,00
5	Nielsen et al. (2021).	Biodiversity conservation as a promising frontier for behavioural science	Nature Human Behaviour	6	14	24	34	6	16,2

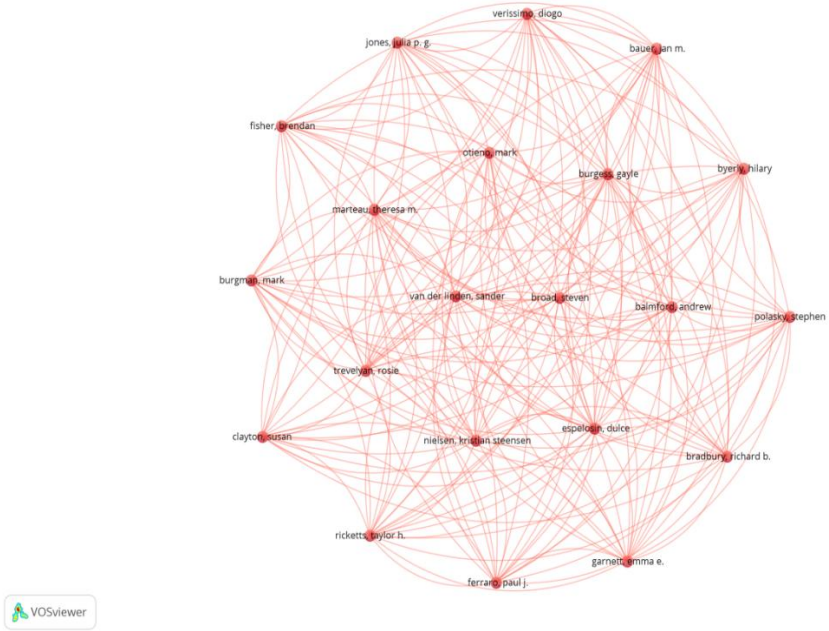
Source: Web of Science

As seen in the table, the authors with the most cited publications are Reynolds et al. (2011), Andresen and Agrawala (2002) and Macfarlane (2013).

Co-Authorship Analysis

The analysis, which was conducted with at least one publication and one citation criterion, resulted in 148 publications. The network map of publications is shown in Figure 1.

Figure 1. Collaboration between authors, joint author ties



Source: VOSviewer

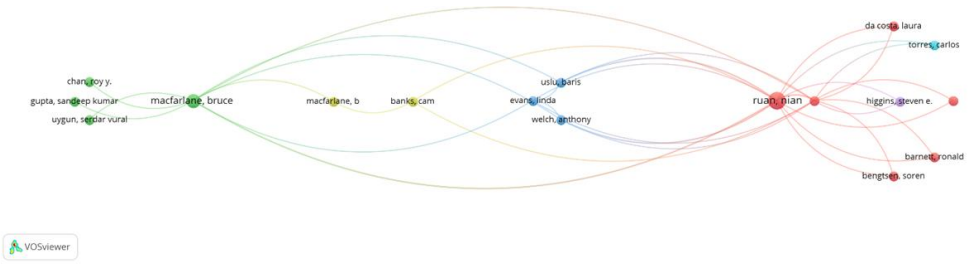
It was observed that the connection strength of 21 authors in a single publication (Nielsen et al., 2021) was the highest (20). Following this, Reynolds et al., (2011) has the second highest link strength (12) and has received 117 citations, and in the third place, Te Ao et al., (2015) has 28 citations with a link strength of 10. The authors with the highest number of citations are also the authors with the second highest link strength. Only one publication of all authors in the list appears. In the map created for co-authorship analysis, it was determined that there were a cluster of 21 units and 210 connection strengths.

Authors' Citation Analysis

A network map was created for author citation analysis with at least one publication and one citation criterion. It was analyzed with at least one citation and one publication criteria to create a network map of citations. Six clusters of 29 connections and a total of 33 connection power emerged over 15 interconnected units. The authors with the highest link strength were determined as Ruan (15 link strength, 37 citations), Oleksiyenko (12 link strength, 12 citations) and Macfarlane

(10 link strength, 90 citations). The network map resulting from the analysis is as shown in Figure 2.

Figure 2. Citation links of authors



Source: VOSviewer

Citation Analysis of Countries

To create a network map of the citations received according to the countries where the publications were made, seven units, four clusters, eight connections and 17 connection strengths were identified within the scope of the criterion of publishing at least one work and receiving one citation by a country. The citation network map of the countries is shown in Figure 3.

Figure 3. Citation network map of countries

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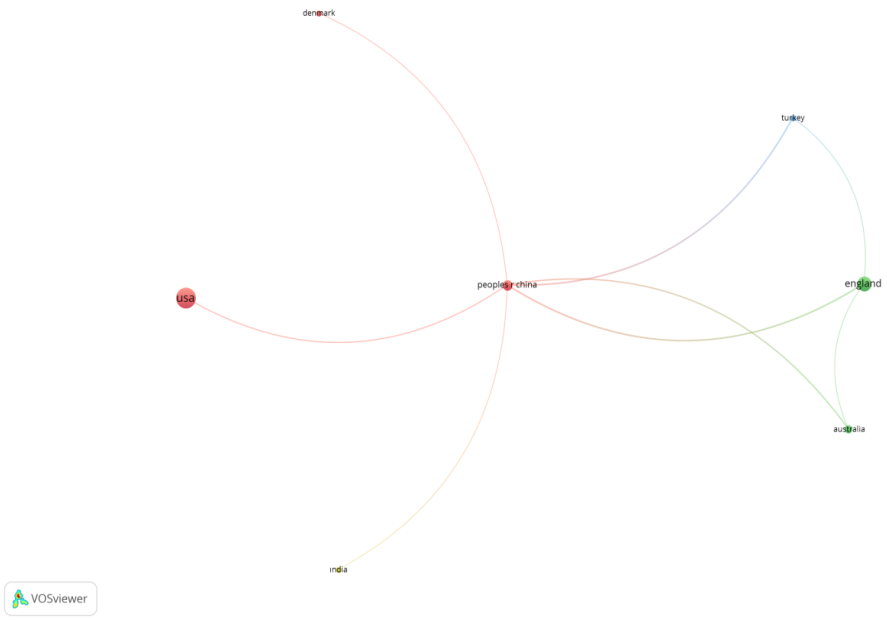


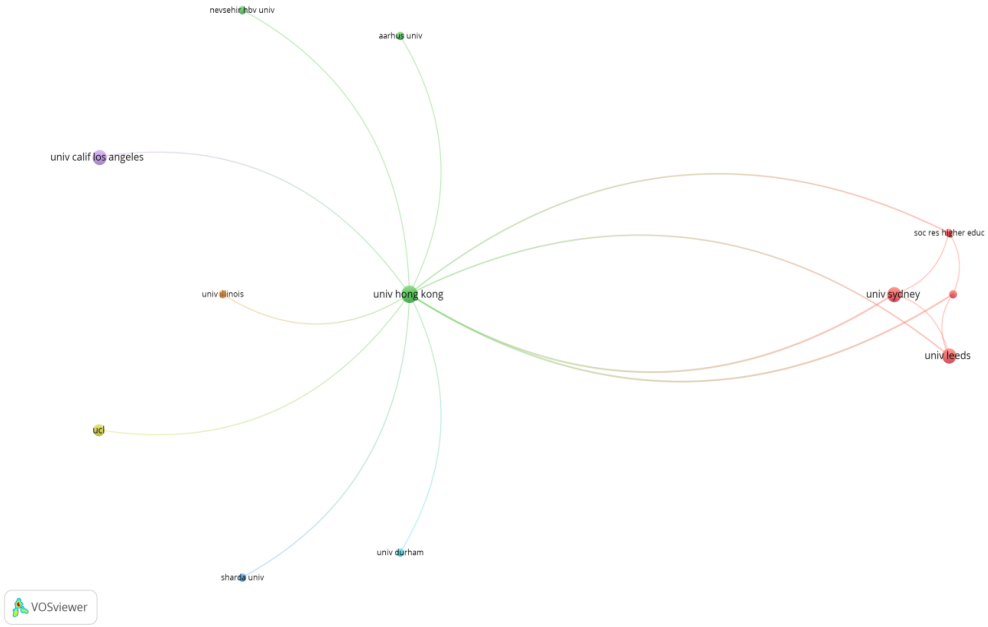
Source: VOSviewer

The highest connection strength was seen in China (15). The country has a total of 195 citations and six publications. Countries that follow China; England with a link strength of six (477 citations, 12 publications), Turkey (37 citations, 2 publications) with a link strength of five, Australia (206 citations and 4 publications) with a link strength of 4, America (876 citations and 23 publications) with a link strength of two, and Denmark (68 citations and 1 publication) and India (111 citations and 2 publications) with a link strength each. No connection was seen between other countries.

Citation Analysis of Institutions

To create a network map for inter-institutional citations, an analysis was made on 98 observation units with a relationship between them, with the criterion that an institution should publish at least one work and receive one citation. The citation network map of institutions is shown in Figure 4.

Figure 4. Citation network map of Institutions



Source: VOSviewer

A total of 12 units, seven clusters, 15 connections and 21 connection strengths were identified. The institution with the highest link strength was the University of Hong Kong (17 link strength, 127 citations and 4 publications). The institution was followed by Çanakkale Onsekiz Mart University (5 link strength, 20 citations and 1 publication) and Sydney University (5 link strength, 89 citations and 3 publications).

International Journal of Contemporary Economics and Administrative Sciences
ISSN: 1925 – 4423
Volume: 1X, Issue: X, Year: 202X, pp. XX-X

Bibliographic Match Analysis of Authors

In the analysis carried out determining the bibliographic match of authors who can be defined as a common author cited by two independent sources, with the criteria of having received at least one citation and making one publication, 23 units, six clusters, 68 links and 973 link strengths were detected. The authors with the highest link strength (81 citations and 218 link strength) were all authors in Nielsen's study in 2021. The network map for bibliographic matching analysis of authors is shown in Figure 5.

Figure 5. Bibliographic matching network map of authors

Source: VOSviewer

3. Result-Discussion

Discussion

This study analyzed the Wos literature on the concept of "intellectual leadership" from a bibliometric perspective through VOSviewer. The findings revealed that the concept gained remarkable momentum in the academic field, especially after 2012. Furedi's (2006) study, which emphasizes the place of intellectual leadership in social transformation, is parallel to the mentioned trend. Additionally, in the study conducted by Brownlie, Hewer and Ferguson (2007) with marketing academics, it is pointed out that the interdisciplinary visibility of the concept has increased.

According to the findings, it is noteworthy that the number of publications and citations is high in countries such as China and the USA. This situation can be explained by the high level of research funds in these countries. Uslu and Welch's (2018) study on how intellectual leadership is shaped in universities coincides with this result. The concept, which has been widely researched in the academic field (McNay, 2003; Macfarlane, 2011; Fumasoli, Gornitzka, and Maassen, 2014; Leungh, 2018), has revealed that intellectual leadership plays an important role in the transformation of society, with similar results. In this case, intellectual leadership is not only an individual or knowledge-based competence, but also a structure intertwined with international research policies, institutional support and academic networks (Deng, 2008; Cardona et al., 2018).

The research has shown that the concept has been studied especially in the fields of education, politics and social sciences, but has only been addressed to a limited extent in disciplines such as health sciences and engineering. This result can be considered as a reflection of the thematic clustering in the literature stated by Zupic and Cater (2015).

In this context, intellectual leadership, unlike other types of organizational leadership, is closely related to qualities such as taking a critical stance, defending the idea, opposing the status quo and being innovative (Furedi, 2006; Akdemir and Mert, 2018). As Kang et al. state, intellectual leaders are transformative actors who can lead thought in society, not only with their knowledge or knowledge transfer (Kang et al., 2021).

Result

This study used all publications dated 1995-2025 regarding the concept of *"intellectual leadership"*, which were searched by selecting *"all fields"* in the WoS database on 28.05.2025, as a data set, and the data were analyzed through the VOSviewer program, systematically mapping the place of the concept in the literature and revealing its theoretical development and academic collaborations. The results of the concept show that it is mainly studied in the field of political science and education. However, leadership is a subject that has an important place in organizational behavior, and it is noteworthy that not much has been studied in this field. Although the lack of studies in the organizational discipline is a gap in literature, it is a pleasing development, especially as studies conducted in the field of education have gained an important place in leadership discourses in the educational context. Especially the field of health is an area that contains a lot of managerial problems, and a lot of research has been done on leadership issues. In this context, studying intellectual leadership in the field of health is a literary openness.

The analysis shows that works related to the concept have decreased and increased with high accelerations over the years. It is a remarkable fluctuation, especially that it increased to 22 publications in 2012 and 19 publications in 2022 and then decreased to six publications each in 2013 and 2023. While the fact that it

stands out in terms of citation numbers in countries such as China, England and America shows that interest in the concept has increased over time, the fact that studies conducted in our country are also included in the analysis results is another pleasing result. While Hong Kong ranks first by a significant margin in institution analyses, it was determined that certain authors focused on the concept in author analyses. Çanakkale Onsekiz Mart University is also among the prominent institutions in our country.

As a result of the limited thematic clusters in the literature in the bibliographic matching analysis of authors and publications regarding the concept, it is understood that the concept is still in the theoretical maturity period. In this context, it is critical that the concept be studied in multidimensional different disciplines, especially in the organizational discipline. The concept should be studied not only as a set of individual characteristics, but also as a collective phenomenon in institutional structures. Reasons such as the limitations in existing literature and the lack of studies in cultural context will also lead to discussions about the universality of the concept.

The most important contribution of this study is to reveal in which thematic area the concept is discussed, which countries and institutions are leading in this field, and which research networks play a carrier role in this concept.

Theoretical and Practical Suggestions

While the bibliometric analysis method made with VOSviewer has many advantages, it also has some disadvantages. The software program only works with bibliometric data; it does not work with qualitative data types such as interviews or content surveys. In addition, the program is insufficient for advanced data mining techniques such as language processing. Its speed may decrease, especially in large data sets. Additionally, shifts may occur in the analysis of preliminary data that is not processed correctly. This can be seen as one of the important limitations of research. In this context, it is recommended to use different data analysis programs in future studies, thus examining the multidimensional structure of the concept in more depth.

Only Wos database was used in the study, and other international bibliometric databases such as Scopus were not included. This situation causes literature not to be represented in all its aspects and constitutes a limit in terms of the comprehensiveness of the data. The simultaneous use of multiple databases in future studies will be important for the publication types and disciplinary diversity of the concept.

In future research, the concept should be supported not only theoretically but also by field studies and applied analyses. Interdisciplinary studies, especially in areas such as public administration, organizational behavior and educational leadership, will increase the depth of the concept and allow it to be strengthened

theoretically. Although Türkiye and Turkish Universities are included in the concept of intellectual leadership, which has a limited number of resources, having more publications in Turkish will strengthen the Turkish literature in the developing concept.

This study bibliometrically maps the dimension of the concept in academic literature, making its thematic foci, development and collaborations visible. The concept, which has been frequently studied in certain fields in literature, has the potential to increase interdisciplinary permeability. It is especially recommended to focus on organizational behavior, crisis leadership and strategic management.

Regardless of policy makers or the academic world, intellectual leadership should be considered not only as publication production, but also with the production of social awareness, ethics, critical thinking and responsibility.

It is recommended that theoretical model suggestions be developed, addressed in different cultures and disciplines, and more comprehensive analyses be conducted in future studies.

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