

LEADERSHIP IN EDUCATIONAL MANAGEMENT RESEARCH: THE BIBLIOMETRIC ANALYSIS OF THE LAST 20 YEARS

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Abstract

This research aims to reveal trends in leadership research published in the most prominent journals of educational management. A total of 1846 articles that were indexed by the Scopus database after the year 2000 were included in the bibliometric analysis. The quantitative and qualitative properties of these articles draw a big picture that shows the most important authors, journals, topics, and countries in leadership research. This review concluded that interest in leadership has been constantly growing, but research on leadership is not prevalent worldwide.

Keywords: *leadership, bibliometrics, scopus, educational management*

INTRODUCTION

Although leadership has been defined in different ways in the educational administration literature, it is also possible to find common similarities pointed out by these definitions. Based on the definitions expressed, leadership is the creation of an environment where the leader can manage the members of the organization in a way that motivates them to achieve the goals of the organization in line with the determined goals and objectives. When the need for a management task arises, it is seen that leadership emerges in some situations that require joint action (Özsalmanlı, 2006).

Leadership is the ability to voluntarily get members of the organization to do their job by catching action in harmony with the members and people of the organization. While performing the leadership task, it is not fed by any power, on the contrary, it is necessary to persuade people to cooperate. The leader should not make use of unethical means during this duty of persuasion. Leadership means catching the right cooperation between the leader and the members, not to force domination over individuals (Doruk, 2012).

In order to make the functioning of the organization correctly and effectively, the leader should be one of the individuals who can make this change effectively while planning the leadership tasks (Eren, 2009). The leader should draw on his experience in bringing group members together for goals and purposes. The way he uses these experiences is one of the most important factors that determine how much approval and acceptance he will receive from those around him (Erçetin, 2010).

As it is understood from the conceptual, theoretical and empirical research in the literature, knowledge, experience and charisma alone are not sufficient qualifications to be an effective leader. Among the skills that the leader has, there should be features such as motivating, influencing, directing, and focusing on the result.

While evaluating the professionalism of the leader in an organization, his basic, managerial and technical competencies should be considered. A manager with a combination of these managerial competencies is a good manager. The expected performance from these skills of the leader will vary according to the position, role and hierarchical position of the leader in the organization. For example, As the level of managerial position in the organization rises, the expected technical performance output will be lower (Eraslan, 2004).

Although knowledge and positive energy are expected from every leader, regardless of their rank, the ability to manage emotional intelligence (Emotional Quotient) is expected. Emotional intelligence acts as a good filter for the manager to reach his goal. This is a feature expected from effective and self-developed leaders (Öztürk, 2013).

In addition, the leader must show consistency and continuity in order to be accepted by his followers. In order for the leader to provide the Leader-follower relationship at the desired level, it is not enough to show consistency and continuity, but he must also be superior to his followers in this regard.

Despite all the generalizations made about leadership characteristics and competencies, there are differences between leader behaviors and categories due to cultural differences, environment, educational status, working hours, experiences and historical conditions. It is understood from this that there is no one best leadership type or approach. Other reasons that differentiate leadership behavior from each other include the leader's age, socio-economic environment, and experience in the profession.

Roles of Leaders

The roles of leaders vary according to their technical, personal and specialist skills. Leaders with high these skills are able to carry out their roles in the organization more effectively. However, changes can be seen in the roles and effects of leaders according to the state of the hierarchy within the organization.

The supportive and developing attitude of the top management in the organization will increase the power of the leader in the organization as well as ensuring the participation of the personnel in the solution. In today's conditions, the need for such leaders is increasing and top management and one-person leadership should be abandoned (Akat, 2009).

Leaders can improve their roles in the organization by using one or more of their own power sources. The fact that there are many positive forces among these power sources will show the leader as a charismatic and effective leader in the eyes of the employees of the organization.

In successful organizations, there are strong leaders in terms of mission and vision, who will guide other leaders in the organization, present them with goals. The dissemination of such strategic practices within the organization enables the organization to establish supportive relationships between employees and managers at different levels (Erdem, 2009).

Since organizational culture and leadership are important factors that affect each other, transforming this relationship into a mutually nourishing and developing strategy will be very effective in achieving success for the organization (Gül, 2013).

The understanding of leadership, which is changing day by day, has turned from a management style based on strict, controlling and technical skills to one based on positive communication, which motivates its employees, where the adaptability of the leader is at the forefront (Leblebici, 2008).

Today, where there are leaders with a participatory understanding, leaders encourage their employees to participate more in management as a result of their strategic management approach. Thanks to this strategic vision to be created, the leader will gain his power not from the rules and laws within the organization, but from gaining the respect of his employees, who are more effective, and making himself accepted (Özsalmanlı, 2006).

Factors Affecting Leadership

As a stakeholder of the leadership process, the leader, his followers and conditions are very important. All these are the variables that the leader will be affected while using his/her competencies (Aydın, 2007). In order to manage the process in a healthy way, leaders work to create an appropriate leadership environment and achieve the goals of the organization, thanks to

the skills and vision they have. The characteristics of not only the leader but also the personnel have a great importance in achieving the goals. The leader should keep the staff's desire for good relations with the organization alive by including the staff in the management and by offering various dynamics such as promotion in the profession (Ulukan, 2006).

Leadership should not be considered only formal. Leadership can be formal or informal. Some individuals have the potential to become leaders spontaneously, with some characteristics such as personality traits and power coming from the environment. However, the environments where these leaders are seen in the group are usually large groups. Because formal leaders are controlling and effective in groups under a certain size (Eraslan, 2004).

Vision is one of the most important tools of the leadership process. The leader influences and motivates his followers with his vision. However, in this regard, leaders from time to time knowingly and willingly show less skill and meet the need of employees to reach them. The leader should create a strong organizational culture and support the employees with appropriate standards so that the members serve the interests of the organization rather than their own interests (Çirpan, 1999).

Leaders are people who contribute to the formation and spread of organizational culture and represent both the organization and its culture to the outside. Leaders are very effective and important people in creating and maintaining organizational culture. The leader should strive to create the culture of the organization by drawing attention to himself with the knowledge and skills he has (Geylan, 2012).

In conclusion, the main theme of the leadership process is the influence of the leader on others. An effective leader with this power has the ability to affect the organizational culture in many issues, from employees in the organization avoiding absenteeism to increasing their commitment to the job and the organization (Baltaş, 2011).

Differences Between Manager and Leader

There are similar characteristics between the leader and the manager. For example, in management, it is important to direct the members of the organization to the determined goals, both the leader and the manager are related to this direction. Both use the power actively while doing this direction. Both have efforts to motivate employees and use resources effectively for targets that are predetermined and will lead the organization to success. However, despite all these common aspects, there are also distinct differences. For example, not every manager can be a leader, and not every leader can be a manager. The definition and duties of management is the person who works on behalf of others, tries to achieve the previously determined goals, and controls, implements and plans to achieve these goals. The leader, on the other hand, is the person who gathers all the members of the group around a common goal and increases and directs the energy and motivation in order to reach the goal (Erçetin, 2010).

The manager provides the movement of the organization by activating all the dynamics that make up the organization (such as planning and budgeting, organizing and controlling, coordinating) in order to increase the predictability of all problems; It helps the implementation of these decisions by preventing the disruptions that arise during this time, solving the problems, making programs and budgets. The leader, on the other hand, determines the purpose and direction together with the organization, not the predetermined goals like the manager, the goals and targets determined together are more acceptable by the organization. Based on these differences, it can be said that while the manager's effort to maintain the existing situation comes to the fore, the leader tries to activate creative and original processes that will bring the organization to its goals (Peker, 2005).

While the manager is often assigned by the senior authorities in the organization, the leader is born from within the organization he is in, taking his power from the organization. This shows that the manager takes his power from legal authorities, while the leader takes his power from the group. In short, management is a concept that expresses the institutional and official authority in the

organization. While the manager ensures progress in the organization with the support of the official authority, the leader gets strength from the love, respect and loyalty of the organization (Özalp et al., 2012).

It is observed that leaders have more specific communication, orientation, giving ideas and representation skills than managers. Managers, on the other hand, have more administrative, technical and verbal skills than leaders. Since leaders are in good interaction with other people in the organization, they are also the pioneers of changes in the organization (Akiş, 2004). The leader achieves success by adopting his vision, not by imposing it on the employees (Doruk, 2012).

From these explanations, it can be thought that management and leadership contradict each other. But there are aspects of management and leadership that complement each other's deficiencies. For example, thanks to the budget planning that the manager will present to the leader, the leader will be able to fulfill his duties and maintain his prestige in the organization. Therefore, it is seen that the powers of leaders and managers are combined in good organizations (Serinkan, 2008).

Leadership Theories

Different leadership theories have emerged with research, and this increase has made it difficult to classify and understand these theories (Sabuncuoğlu & Tüz, 2011). Due to the difficulties brought by the increase in literature, some reclassifications were made and contributed to the understanding of leadership theories.

Properties Theory. The theory of traits has been a widely criticized theory because it does not focus on the needs of the followers of the leader in the organization but tries to base it on research data that cannot be measured due to the abundance of leader characteristics (Çetin & Beceren, 2007). The fact that the leaders do not appear to have a common set of personality traits is one of the strong evidence that makes this theory weak. Since the theory focuses only on the characteristics of the leader, it ignores the interaction between the leader and the group and displays a one-sided approach.

Behavioral Leadership Theories. With the development of similar behavioral theories, which are the basis of the behavioral leadership theory, leadership has begun to be perceived as the results of the leader's influence on the group and the feedback given by the group to these effects. As a result, the concept of leadership can be shown as an activity or behavior function (Başaran, 2014).

The leader, who uses the management matrix to understand his own leadership style, will add various training and management development programs to his management style in order to develop his own management style and thus achieve the goals of the organization. In this way, he will be able to use the information he has learned to increase his leadership skills (Uzun, 2002).

Situational Leadership Theories. In the history of leadership theories research, from the late 1960s to the 1980s, it has been focused on investigating in which situations leadership behaviors criticized in previous theories can be effective. It is argued that the leadership style can take shape and differ according to the needs of the current situation, place and time (Şimşek, 2009).

Contingency theories, unlike previous theories, argue that the leader should take different approaches for different conditions. It should be an autocratic leader according to the need, and it should turn into a democratic leader when all the members of the organization are asked to participate. Therefore, the leader should have the vision to see this difference and take a position accordingly. According to this approach, leadership; it is to see the work environment as a whole and to display behavior by calculating the leader's own personal characteristics together with the followers and goals (Can et al., 2008).

Since the behavioral theories do not specify the behaviors that should be preferred according to the conditions, the contingency theories tend to search for the leadership styles suitable for the

conditions. By filtering both the structure of the organization and the situational conditions, the leader should balance the decision mechanism about whether to give weight to the task or to the people. The main mistakes of unsuccessful leaders are not being able to establish this balance (Dinçer & Fidan, 2016).

When the influence of the leader in the organization is considered in terms of change, the most influential is the intra-organizational conditions. It may have less impact on the immediate environment consisting of interest groups (Eren, 2009). Effective leadership is possible when the leader can ensure the harmony and integrity of all functions in the organization with the changing internal and external conditions. After the researches carried out with the target given by this claim, new leadership theories have emerged. Understanding new leadership theories requires understanding and understanding these emerging theories well (Zel, 2011).

Transactional Leadership. Transactional leaders are aware of what activities the individuals in the organization, and therefore their subordinates, need to engage in to achieve effective results; While observing the effort needed by defining the content of these activities, he explains how they will be rewarded and satisfied by listening to the demands of their subordinates that they deem necessary (Oktay, 2011).

The transactional leadership approach is based on motivating the employees, whose job descriptions are clearly defined and targeted, by rewarding them according to their efforts in business success, with the effect of traditional understanding. A reward and punishment system is used depending on the performance of the employees and whether they comply with the rules. In order that this situation does not happen frequently, they develop contracts with their audience about the work they will do and the results (Akşit, 2008).

In this type of leadership, the details of working conditions, rules, reward and punishment system are clearly stated. In a transactional leadership culture, employees have a reward based on their job performance. Personal interest comes first. Due to the conflict of interest, commitment to the organization is short-lived. It is considered as a system in which the reward of employees depends on their individual performance, based on the logic of the “marketplace” in the organization. While employees move independently from other employees, business success is not dependent on a common mission based on negotiations. In the transactional leadership culture, the understanding of innovation and the level of risk taking are quite low (Keçecioglu, 2008).

The general approach of transactional leaders negatively affects the performance of the employees of the organization. Because they do not consider the individual needs of employees. For this reason, the understanding of transactional leadership may be insufficient to increase the business performance of the organization (Begeç, 2009).

Transactional leadership style is quite unsuccessful in adapting to complex and changing environmental conditions. In transactional leadership, managers perform their duties with an autocratic understanding while using their official authority.

These types of leaders are typical managers who keep the participation of employees in the decisions taken at the lowest level, not at the desired level. The contribution of the organization to the mission, structure and human resources management is very low (Eren, 2009).

Types of Leaders in Schools

It is possible to evaluate the leadership types encountered in primary education institutions in relation to the classical leadership types. Accordingly, it is possible to list the modern leadership types that come to the fore in primary education institutions as autocratic leader, libertarian leader, democratic leader, charismatic leader.

In addition to these, definitions of leadership types in classical or modern terms are introduced in the literature. On the other hand, these four leadership types mentioned above and mentioned in the following section are the most common types of leadership.

Autocratic Leader. The autocratic leadership type, which is the sole authority in decision-making and does not share this power with other people, provides motivation within the team with the power given to it by more sanctions and legal regulations in this process. When evaluated in this respect, the autocratic leader thinks that he deserves the leadership. Therefore, it is possible to say that this type of teacher leadership is more difficult in institutions that provide education in traditional, master-apprentice mentality, where there are definite rules in educational institutions.

However, this type of teacher leadership is not very effective, since today's modern education systems and education are seen as a global public good, especially with the formation of global public awareness. Again, it is possible to state that this type of leadership is one of the leadership types in which the difference between management and leadership is the least.

Libertarian Leader. As can be understood from its definition, the liberal leader is actually seen as one of the democratic leadership types in the literature, and although the team members seem to have more power to direct the leader, this type of leadership is different from democratic leadership. In the liberal leadership type, more leaders release their followers on issues that can be released within the organization or business. For example, a leader in a business cannot show a liberal approach to employees about working hours. But where and how they spend mealtimes is up to the employees.

Therefore, the type of liberal leadership is actually a subject that is shaped according to the hierarchy within the tasks to be done in the business or organization and is applied according to its place. In the context of teacher leadership in educational institutions, liberal leadership is a process that requires taking initiative outside the framework required by current legal and national regulations.

Democratic Leader. In this type of leadership, where there is no central authority and human relations are more important, each individual has democratic rights and responsibilities in the environment addressed by the team or leader. At this point, it is possible to evaluate democracy not only as the presumption of having rights, but also as having a sense of duty. Therefore, in the democratic leadership type, it can be stated that the team or the employees following the leader have a high level of democracy awareness.

Democratic teacher leadership is one of the most common types of leadership in educational institutions due to the high level of education of all teachers in educational institutions and the fact that they have received training on democratic environment and democracy in universities. Understanding the importance of democratic attitude in teachers' group meetings, in-class and out-of-class teaching practices and lessons increases the importance of this type of teacher leadership.

Charismatic Leader. In this type of leadership, where the main source of authority is charisma and which is far from personal, the followers generally gather around the leader according to the leader's charismatic attitude and characteristics. However, at this point, the concept of charisma should also be mentioned.

In general terms, charisma refers to charm or power of attraction. This feature in the definition of charisma actually overlaps with the definition of leadership. For this reason, it is possible to state that every leader has a significant amount of charisma.

In educational institutions, charisma is mostly associated with scientific status and knowledge. In general, teachers in schools have a more respectful and valuing attitude towards teachers who have more professional experience or more education, for example those who have master's and doctorate degrees. For this reason, it is necessary to deal with charismatic teacher leadership in educational institutions in a more scientific and informational sense.

PURPOSE

The purpose of this research is to make bibliometric analyzes of leadership studies conducted in educational administration research. In addition, it is to determine the sources that have been published on this subject since 2001, their annual scientific production, the authors who publish on the subject and their countries, and the universities where the authors work. It is aimed that this study will be a guide in terms of source, author and country in future studies for Leadership Researchers who will work in Educational Administration Research. The study material of the research is 1846 publications in the field of Leadership Studies in Educational Administration Research since 2001.

METHOD

To achieve the aim of the research, bibliometric analysis was used. Bibliometric analysis provides detailed statistics on the subject under investigation. Bibliometric analysis is an attempt to quantitatively evaluate the academic quality of academic literature, publications, journals or authors by statistical methods such as citation rates, number of publications by year, regions, organizations, classifications in terms of publication types. It is a quantitative method used to examine the knowledge structure and development of research areas based on the analysis of relevant publications (IGI Global, 2018).

The bibliometrix package developed for the R statistics program was used for bibliometric analysis. With this package, the output files obtained from the Scopus database can be analyzed. Then, the publications after the year 2000 with the expression "leader" in the title of the related journals are listed in the database. Publications from 2021 are excluded. The output file of this list was imported into the bibliometrix package.

In order to be able to find publications on leadership in educational administration in the database, a list of academic journals that frequently publish in the field of education administration was made (Table 1).

Table 1. *Selected Journals*

NASSP Bulletin
Educational Leadership
Economics of Education Review
Education & Urban Society
Journal of Educational Administration
International Journal of Educational Management
Educational Administration Quarterly
Urban Education
Educational Management Administration & Leadership
School Leadership & Management
Management in Education
School Effectiveness and School Improvement
Journal of Educational Administration and History
Improving Schools
International Journal of Leadership in Education
Journal of Personnel Evaluation in Education
Journal of Educational Change
Advances in Educational Administration
International Journal of Management in Education
Education as Change
Leadership and Policy in Schools

FINDINGS

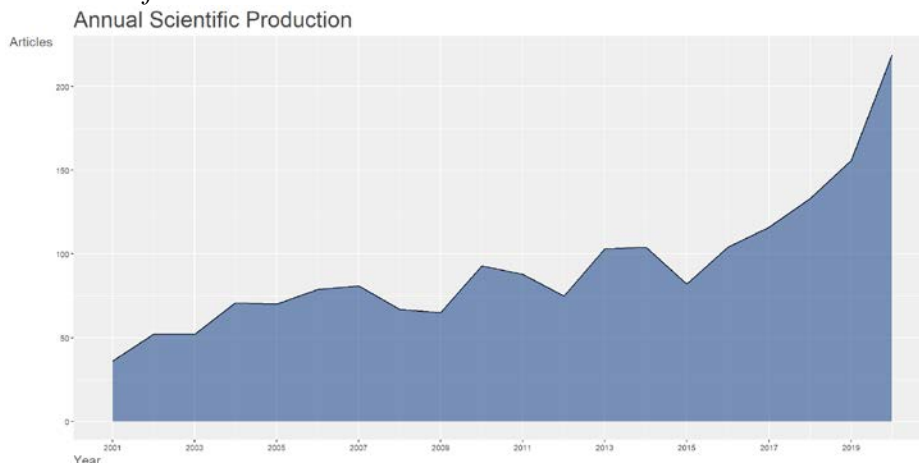
It is seen that 19 sources (journals, books, etc.) published between 2001 and 2020, in which the keyword "Leader" is mentioned, and 1846 articles were published. 802 single-authored articles were written by 638 authors and multi-authored articles were written by 1870 authors, and a total of 2508 authors contributed to these resources. Each author has 3587 author views. Table 2 shows that a lot of research has been done on "leadership research" in the last 20 years.

Table 2. Main Information About Data

Description	Results
Timespan	2001:2020
Sources (Journals, Books, etc)	19
Documents	1846
Average years from publication	8,38
Average citations per documents	16,94
Average citations per year per doc	1,57
References	81520
article	1613
article in press	9
review	224
Author's Keywords	2301
Authors	2508
Author Appearances	3587
Authors of single-authored documents	638
Authors of multi-authored documents	1870
Single-authored documents	802
Documents per Author	0,74
Authors per Document	1,36
Co-Authors per Documents	1,94

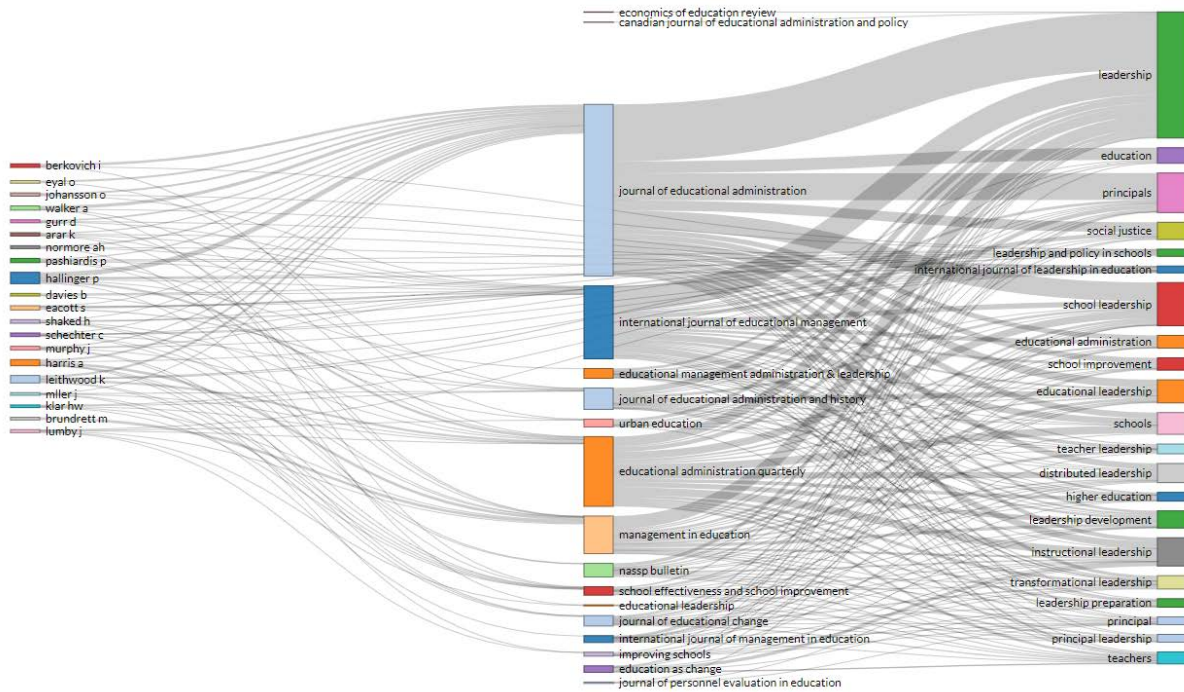
Between 2001 and 2020, a total of 1846 articles with the phrase "leader" in their abstract and keywords were published, and it is seen that 219 articles were published most intensively in 2020. Although there were occasional decreases in the subject of "Leadership Studies" between the years given, the interest in the subject in general continued to increase. "Leadership Studies" in Educational Administration Research continued with increases and decreases between 2001-2015 but increased rapidly after 2015 and more than 200 scientific productions were made on this subject in 2020.

Figure 1. Annual Scientific Production



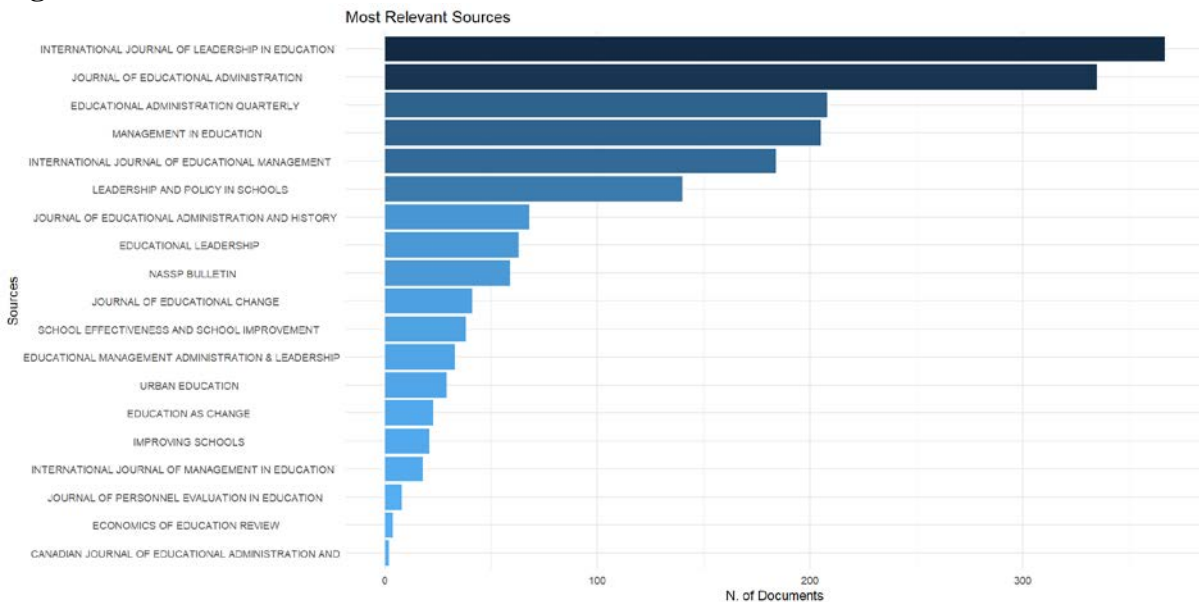
It is seen that a total of 20 authors used 21 different keywords in 14 different sources. Among the 20 authors, the most published author is Hallinger P.'s publications in the "Journal of Educational Administration", which is the most widely published resource. It is seen in the table that the most used keyword "leadership" is used in all sources in general, and it is used extensively in the sources named "Journal of Educational Administration" and "International Journal of Educational Management".

Figure 2. Author-Source-Keyword Matching



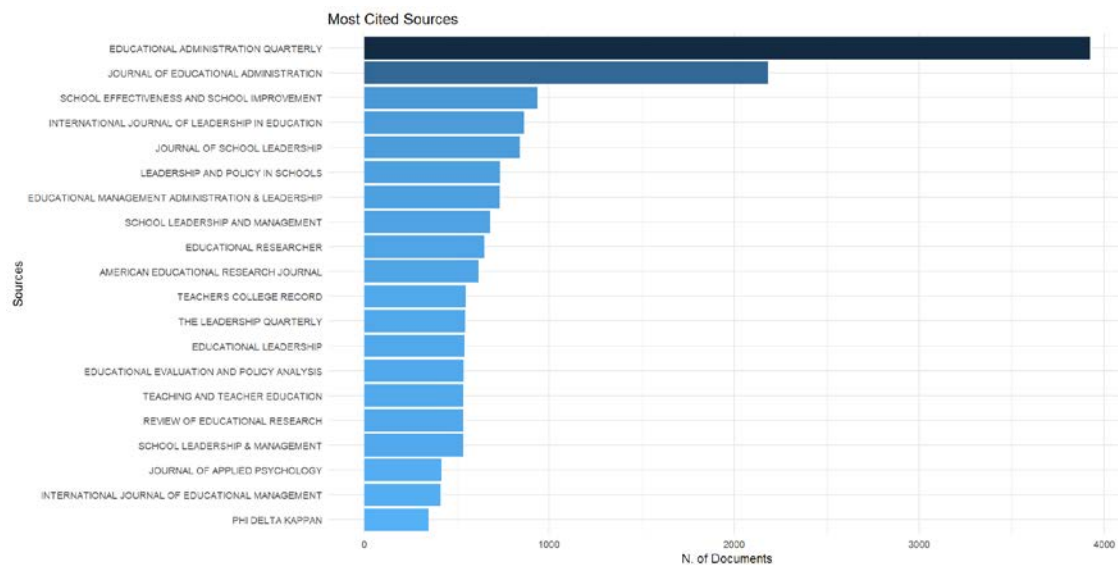
It has been observed that 1846 articles published in 19 sources between 2001 and 2020, in which the keyword "Leader" was mentioned, were published intensively in the "International Journal of Educational Management" with 367 articles, followed by the "Journal of Educational Administration" with 335 articles.

Figure 3. Most Relevant Sources



The 1846 articles published in 19 different sources between 2001 and 2020, in which the keyword "Leader" was mentioned, referred most heavily to 3926 articles published in the "Educational Administration Quarterly". This was followed by the "Journal of Educational Administration", which referred to 2183 articles. The number of articles published and cited in 23 other journals is less than 1000. Accordingly, the most cited publications in the field of "Leadership Research" were published in the "Educational Administration Quarterly".

Figure 4. Most Cited Sources



Bradford's Law of Scattering "describes the scattering or distribution of literature on a particular subject into journals" (Garfield, 1980, p. 476). According to Bradford's Law, first formulated in 1934, "if scientific journals are arranged in descending order of efficiency of articles published on a particular subject, journals may be divided into a core group of journals that publish articles exclusively on that subject, and several groups or regions containing the same number of articles as the core group" (Hertzell, 1987, p. 175). According to Garfield, Bradford's Law derives its universality fundamentally from the unity of science, that is, every scientific field, however distant, is related to another field. Garfield (1980, p. 477) comments on this point as follows: "If you want to compile a bibliography on a particular topic, you will find that a small core group of journals always contains a significant portion (one-third) of the articles published in that topic or discipline. Then you find that a group with a second or higher number of journals contains the other third of all articles, and a much larger group of journals contains the last third." The Bradford Law is used in many areas from library collection management to citation analysis. Looking at the table, it is recommended to examine the "International Journal of Leadership in Education" and "Journal of Educational Administration" first, when researching in the field of "Leadership Studies". The "Educational Administration Quarterly", "Management in Education" and "International Journal of Educational Management" journals in the 2nd region also contain articles that will contribute significantly to the research to be done.

Table 3. Bradford's Law

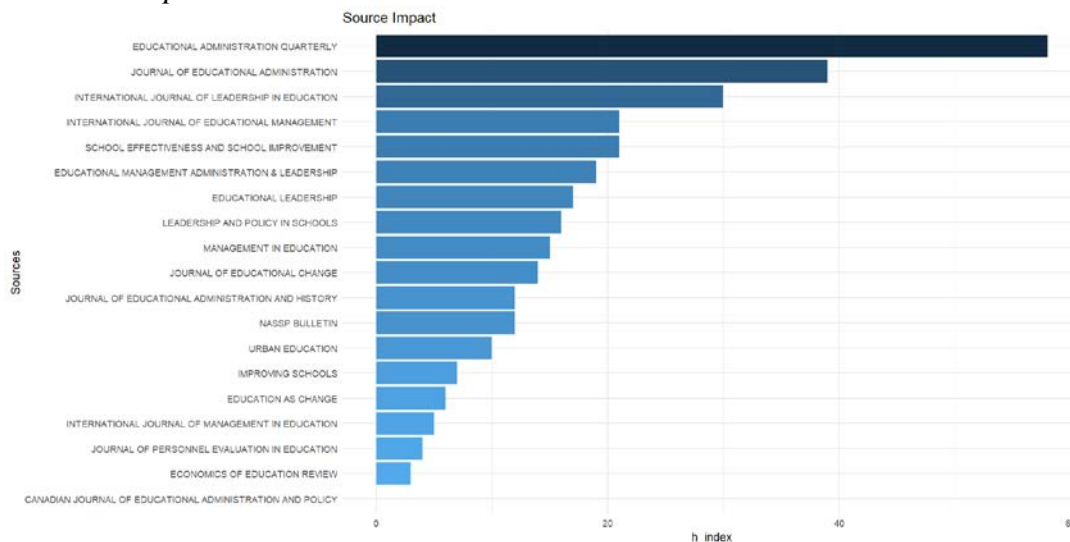
Source	Rank	Freq.	Cum. Freq.	Zone
International Journal of Leadership in Education	1	367	367	1
Journal Of Educational Administration	2	335	702	1
Educational Administration Quarterly	3	208	910	2
Management In Education	4	205	1115	2
International Journal of Educational Management	5	184	1299	2
Leadership And Policy in Schools	6	140	1439	3

Journal Of Educational Administration and History	7	68	1507	3
Educational Leadership	8	63	1570	3
NASSP Bulletin	9	59	1629	3
Journal Of Educational Change	10	41	1670	3
School Effectiveness and School Improvement	11	38	1708	3
Educational Management Administration & Leadership	12	33	1741	3
Urban Education	13	29	1770	3
Education As Change	14	23	1793	3
Improving Schools	15	21	1814	3
International Journal of Management in Education	16	18	1832	3
Journal Of Personnel Evaluation in Education	17	8	1840	3
Economics Of Education Review	18	4	1844	3
Canadian Journal of Educational Administration and Policy	19	2	1846	3

The H-index is a measure developed by Jorge E Hirsch in 2005. H-index means that he has h publications with at least h citations. For example, it means that an academic with a h-index of 10 has at least 10 publications with at least 10 citations, while another academic with a h-index of 5 has at least 5 publications with more than 5 citations. For an academic's h-index to increase by one point, for example, to increase from 5 to 6, the number of citations of his publications in the top five must be 6 or more, and another study that is not in the top five must receive at least 6 citations.

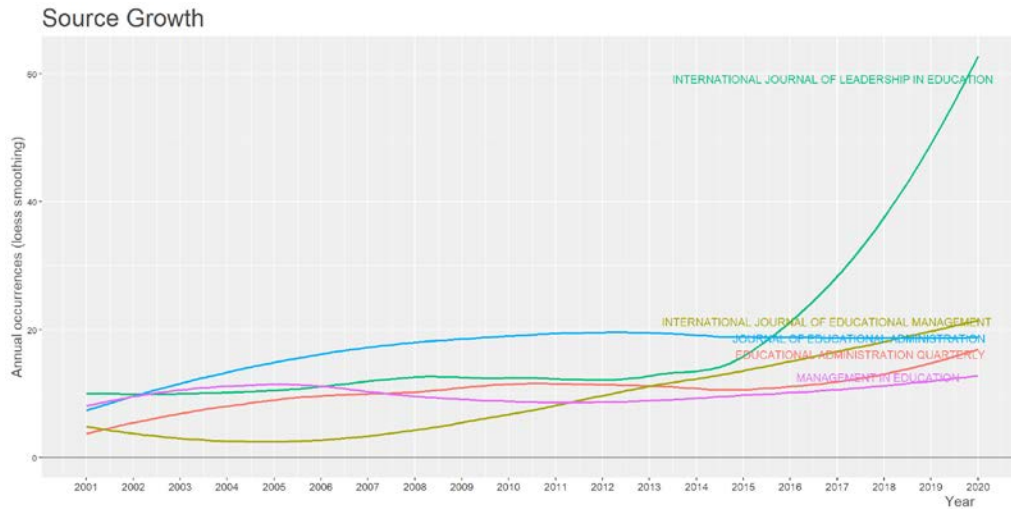
When the citation numbers and H Indexes of 21 journals in which the "Leadership" summary and keyword are mentioned, it is understood from the table that the source with the highest index is the "Educational Administration Quarterly" with the highest number of citations, and it is shown in the darkest color. It is seen that the "Journal of Educational Administration" and the "International Journal of Leadership in Education" are shown with the second blue shade and are among the most frequently cited journals.

Figure 5. Source Impact



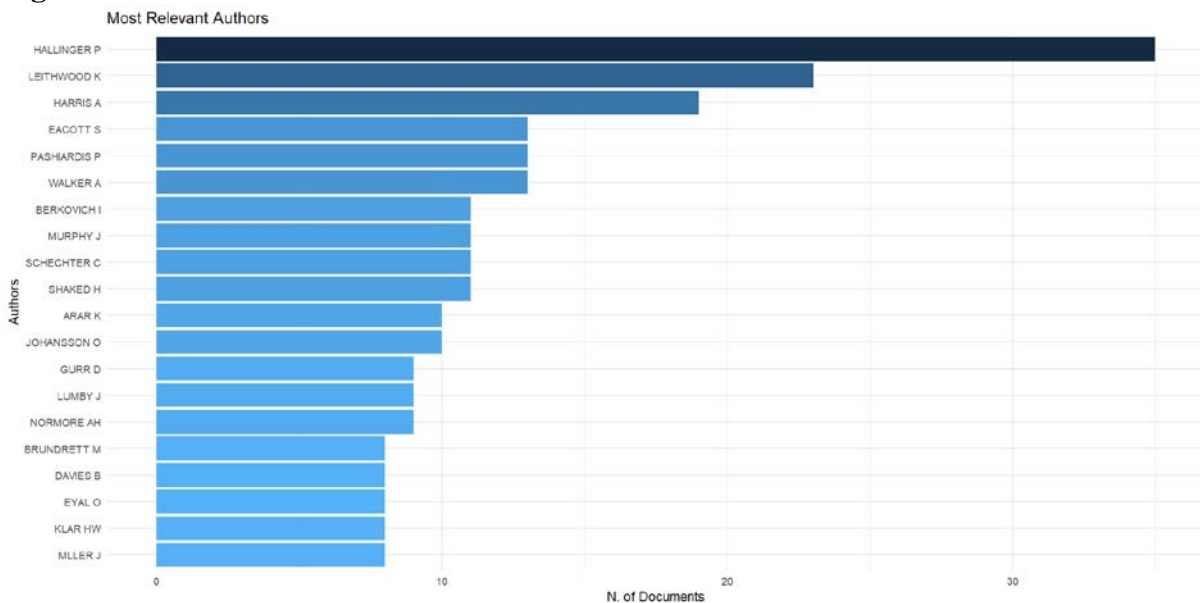
When we look at the Resource Growth table, it is seen that the 5 resources given in the table in 2001 by "Leadership Research" were preferred at similar rates, but the most preferred resource was the "International Journal of Leadership in Education" in 2020.

Figure 6. Source Growth



When the table of authors who published in the field of "Leadership Studies" between 2001-2020 is examined, 25 authors who published on the subject were examined and it is understood from the table that the author who published the most was Hallinger and the author had 35 publications related to the subject.

Figure 7. Most Relevant Authors



Lotka's law provides the opportunity to determine how many articles the authors contribute to a certain literature with their articles. This practically provided the opportunity to predict quantitatively how many articles could be written to that literature by the authors in the future. When the productivity of the authors is examined with Lotka's law, it is seen that 199 authors have 1 article, 5 authors have 2 articles, and 1 author with the most articles has 3 articles.

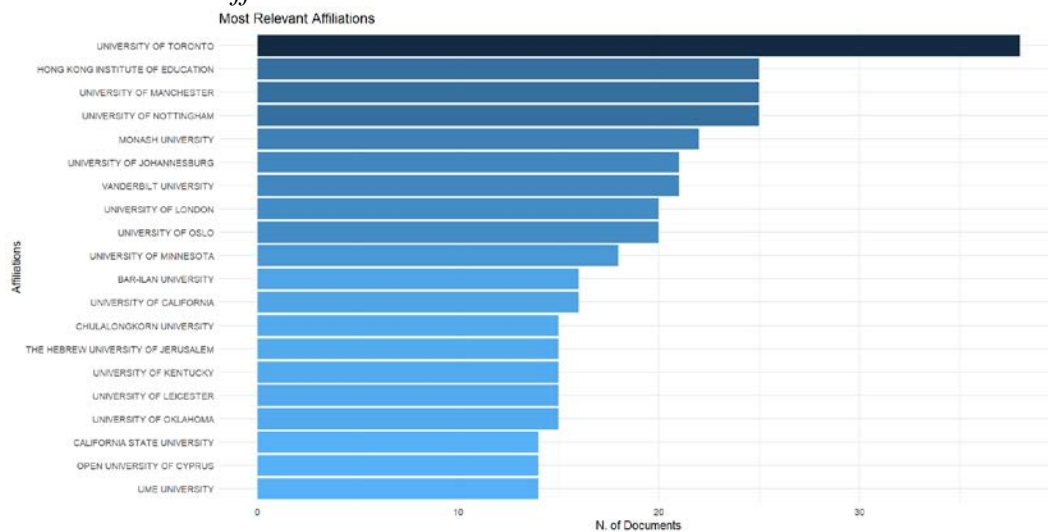
Table 4. Lotka's Law

Documents written	N. of Authors	Proportion of Authors
1	2016	0,804
2	288	0,115
3	87	0,035
4	43	0,017
5	24	0,01
6	18	0,007

7	9	0,004
8	8	0,003
9	3	0,001
10	2	0,001
11	4	0,002
13	3	0,001
19	1	0

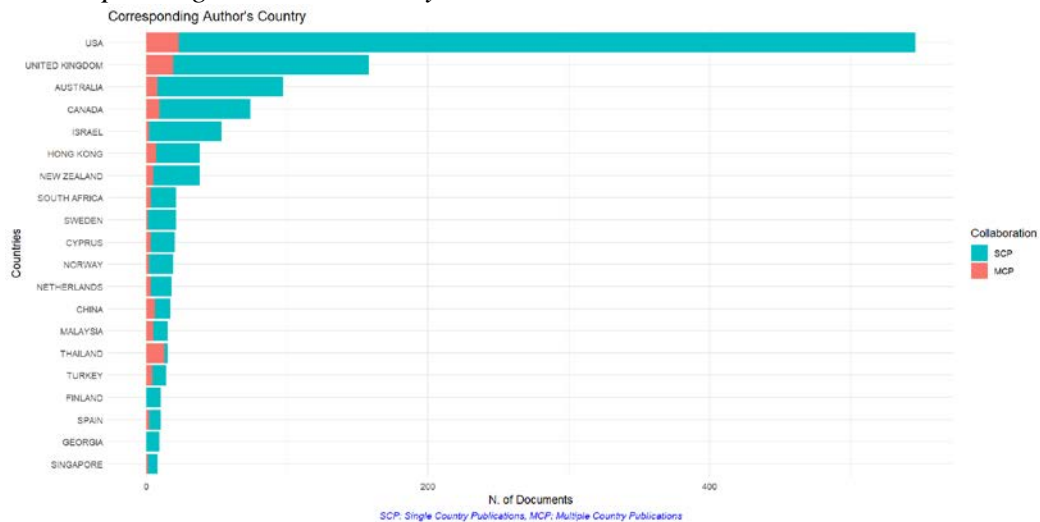
When the universities where Leadership Researchers work and the articles published by that university are examined, it is seen that the most articles were published by the "University of Toronto" and the university had 38 articles. "Hong Kong Institute of Education", "University of Manchester" and "University of Nottingham", which have 25 publications, share the 2nd place in the list of universities with the most publications.

Figure 8. Most Relevant Affiliations



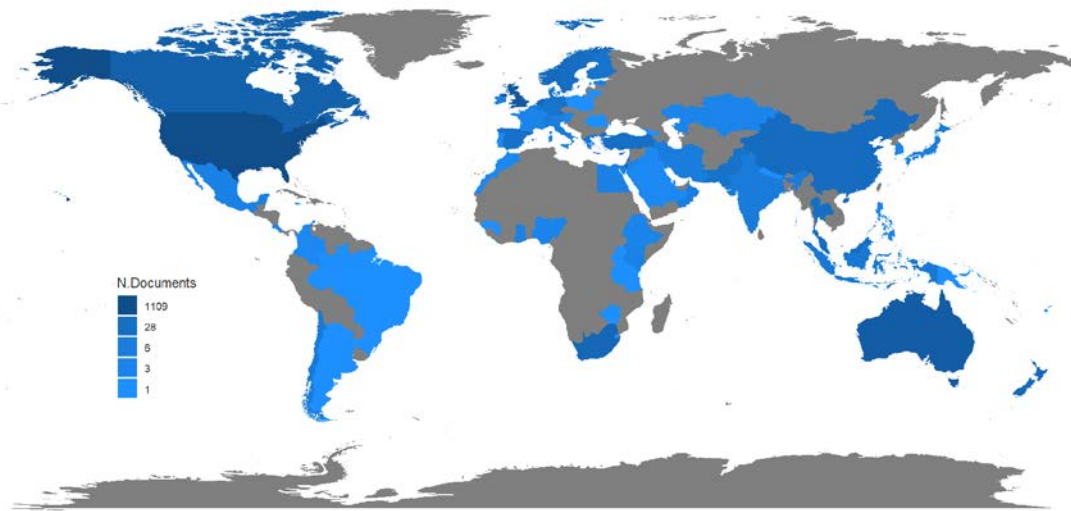
Looking at the countries of the authors, it can be seen in the table that the US country with the highest number of publications published very few articles in cooperation with different countries, but the majority of their publications were published alone, and Thailand, which is in the 15th place, which publishes almost the same number of multi-country publications, has more than half of its total publications as multi-country. has been published. The United Kingdom, the other country with the highest number of single-country broadcasts, is one of the countries closest to the USA in terms of multi-country broadcasts.

Figure 9. Corresponding Author's Country



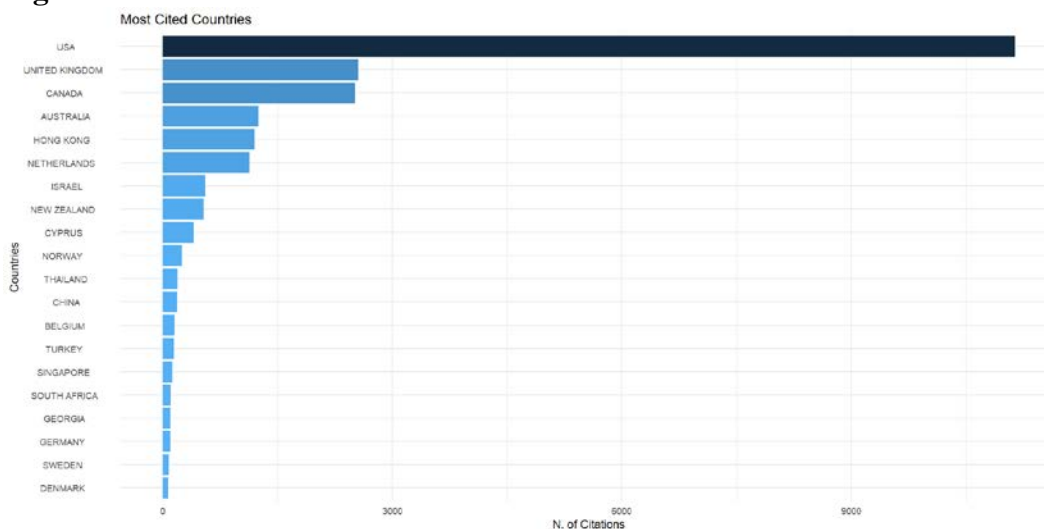
Studies have been carried out in 25 countries in total in the field of "Leadership Studies" and 2508 authors have contributed to the field. When the studies are analyzed on the basis of countries, it is seen that the most intensive work is done in the USA with 1109 authors in this field. The United States is followed by the United Kingdom, with 314 authors contributing. In Australia, Canada, Israel and other countries, the research topic seems to have lost its popularity, and the number of articles published on a country-by-country basis continues to decrease. In Figure 10, we see the Scientific Productions of the Countries on the map. When the map is examined, it is seen that the subject of "Leadership Studies" is mostly studied in Western countries and studies in this field are mostly preferred by English-speaking countries.

Figure 10. Country Scientific Production
Country Scientific Production



When the citations received by the studies in the field of "Leadership Studies" are examined, we see that the most cited 1109 studies in the USA. While the number of citations was above 1000 in the first six of the 25 countries in the table, the number of citations decreased to 500 with Israel and continued to decrease. However, in the Netherlands, which has a total of 1131 citations, the average article citations for 56 studies in this field are the highest at 62,833. When Figure 11 is examined, it is seen that the USA, which is shown in dark blue, is the country that receives the most citations, followed by the UK and Canada with the second blue tone.

Figure 11. Most Cited Countries



The most cited work (843 citations) in the global arena is the work done by Robinson VMJ in 2008.

Table 5. *Most Cited Documents (Limited to the First 10)*

Documents	DOI	Citations
Robinson VMJ, 2008, Educ Adm Q	10.1177/0013161X08321509	843
Marks HM, 2003, Educ Adm Q	10.1177/0013161X03253412	515
Theoharis G, 2007, Educ Adm Q	10.1177/0013161X06293717	374
Darling-Hammond L, 2003, Educ L.	NA	312
Witziers B, 2003, EDUC Adm Q	10.1177/0013161X03253411	299
Hallinger P, 2011, J Educ Adm	10.1108/09578231111116699	265
Leithwood K, 2006, Sch Eff Sch Imp	10.1080/09243450600565829	260
Wahlstrom KL, 2008, Educ Adm Q	10.1177/0013161X08321502	256
Fullan M, 2002, Educ L.	NA	239
Brown KM, 2004, Educ Adm Q	10.1177/0013161x03259147	230

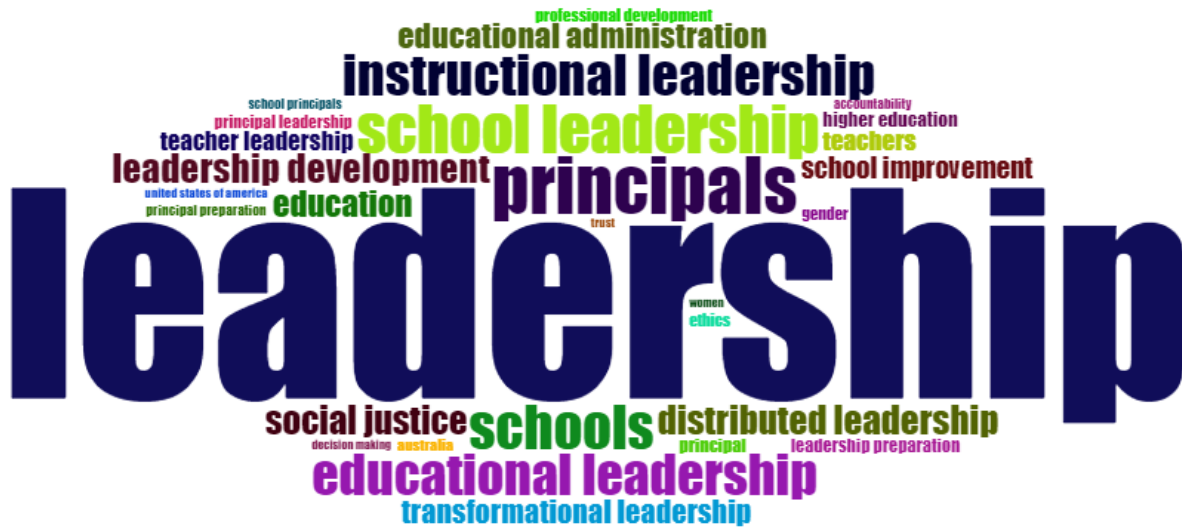
It is seen that 2301 words were used as keywords by 2508 authors, and the word "Leadership" was preferred the most, and it was preferred as a keyword 389 times in total. It is understood from the table that words such as "Principals, School Leadership, Schools" are also frequently preferred by the authors as keywords.

Table 6. *Most Frequent Key Words (Limited to the First 25)*

Key Words	Occurrences
leadership	389
principals	106
school leadership	91
schools	83
instructional leadership	78
educational leadership	77
leadership development	55
distributed leadership	54
social justice	53
education	49
educational administration	48
transformational leadership	44
school improvement	40
teachers	37
teacher leadership	36
higher education	28
leadership preparation	26
principal	26
principal leadership	24
professional development	24
ethics	23
gender	23
Australia	22
principal preparation	20
accountability	19

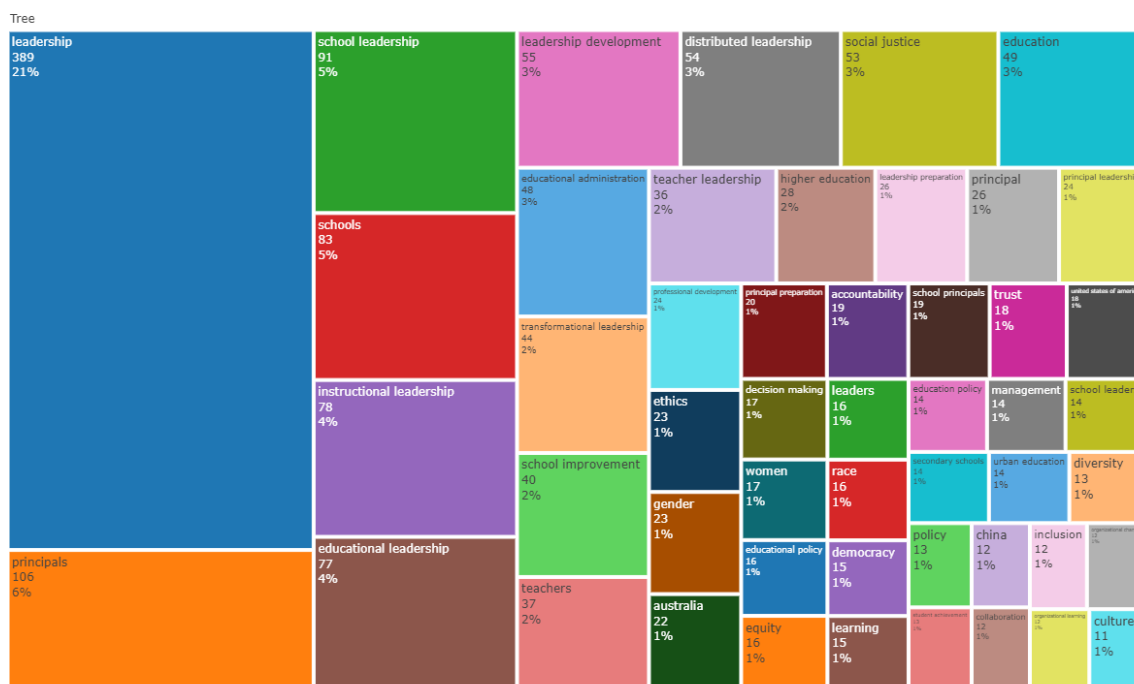
In the Word Cloud, the size and thickness of which vary according to the amount of use of the keywords used in the researches in the field of "Leadership Research", the most preferred keyword "Leadership" is seen as the most prominent word. This keyword is followed by words such as "principals (principals), school leadership (school leadership), schools (schools), instructional leadership (instructional leadership), educational leadership" in lesser size and thickness.

Figure 12. Word Cloud



When we analyze the keywords used in the studies conducted in the field of "Leadership Studies" as a percentage, it is seen that the keyword "leadership", which is used 389 times, has the largest area in the Word Map, constituting 21% of the total keywords. It is seen that the word "principals", which has the second largest area on the map, constitutes 6% of the total.

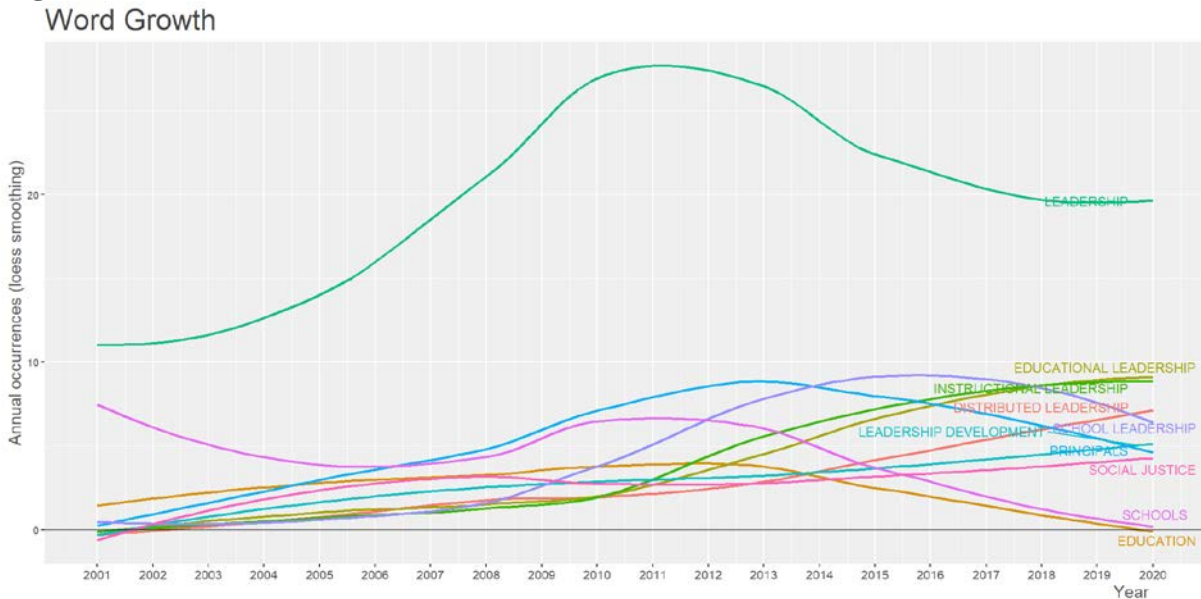
Figure 13. Word Tree



When the table showing the years in which keywords were preferred more by 2508 authors who published in the field of "Leadership Studies", it was seen that the most preferred word "leadership"

was the most used word in all years, but it was used most intensively in 2011. The keyword "schools", which was preferred in the second place in 2001, the beginning year, has become less preferred in 2020.

Figure 14. Word Growth



When we examine the table showing Trend Topics, it is understood from the table that leadership was the most preferred topic in 2011.

Figure 15. Trend Topics

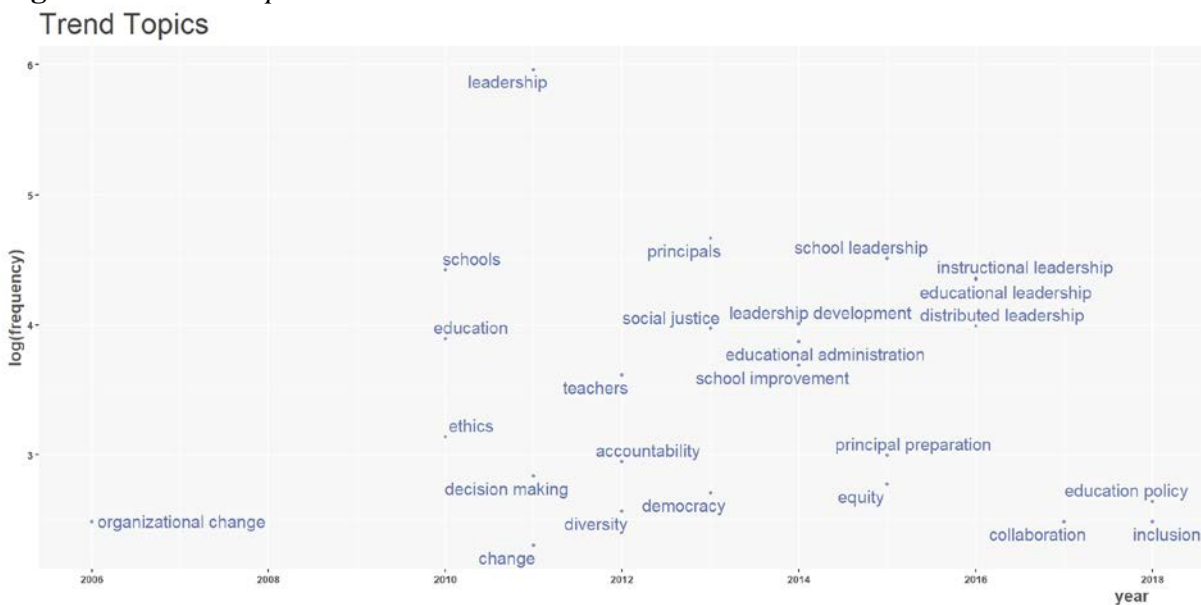
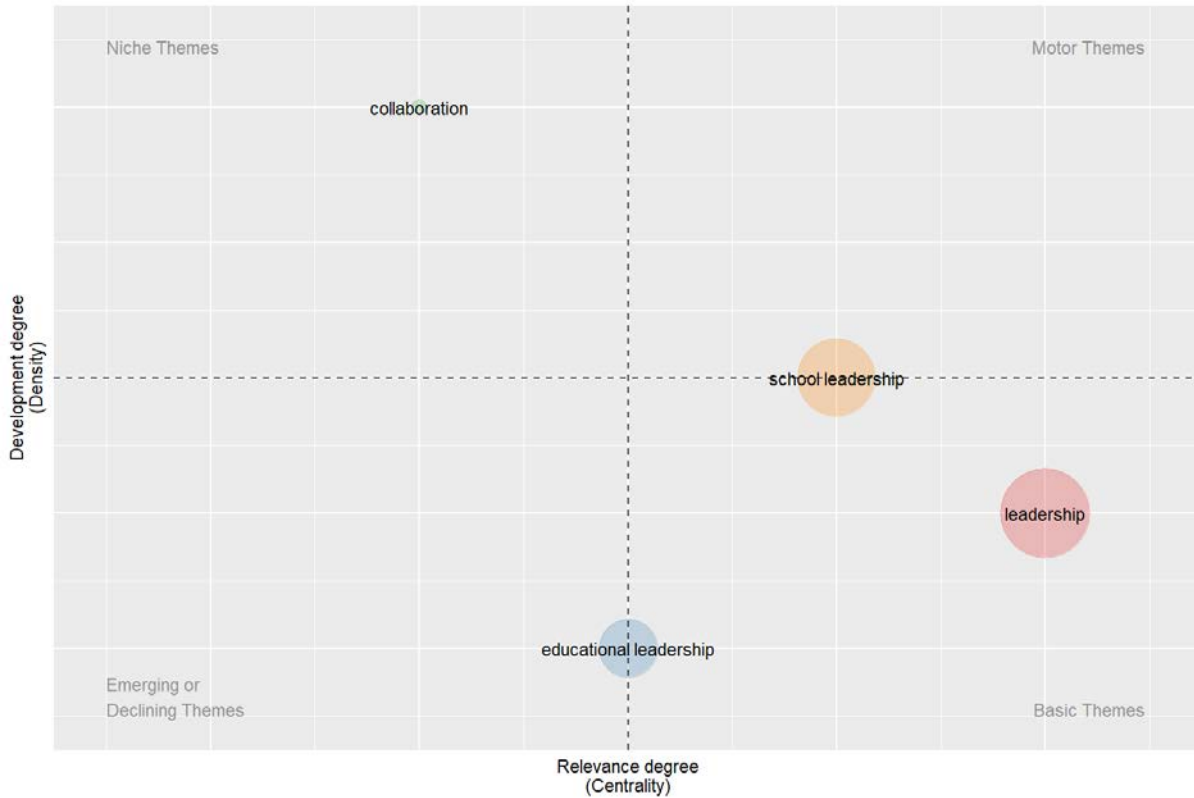


Figure 16 divides the keywords into 4 sections: "Low Worked (Niche Themes), Most Used (Engine Themes), Basic Themes (Basic Themes) and Emerging or Declining Themes". When this table is examined, it is seen that the most preferred keyword "leadership" is among the Basic Topics. While the word "School Leadership" is among the most used and basic topics, it is understood from the table that the word "educational leadership" is a new and basic subject, and the keyword "collaboration" is a less studied subject.

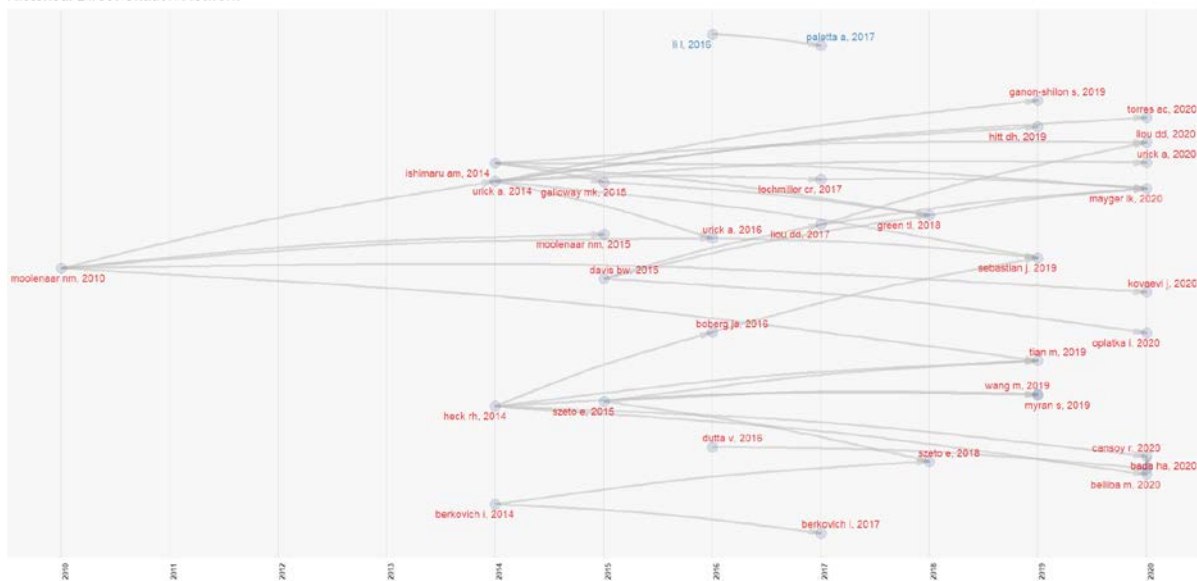
Figure 16. Thematic Map



When the Historical Direct Citation Network is examined in the figure, it is seen that the oldest publication cited by many authors is the 2010 publication of Moolenaar. The publications of Ishimaru, Urick, and Heck in 2014 have also been cited by many authors. Therefore, it can be said that the aforementioned authors are the authors who shape the field the most.

Figure 17. Historical Direct Citation Network

Historical Direct Citation Network



CONCLUSION

Education is a concept that is present at every stage of life. There are quality measures that also express this concept, which is at every stage of life. Educational institutions, which aim to improve the education and increase the education level of the country, can contribute to themselves with strategic plans.

As much as leadership is important in the creation of educational strategies, it also has an active effect on its implementation in educational life. The importance of leaders who will solve the problems brought by this situation and keep up with the change in education, which is sometimes quite complex, where new paradigms are added every day, has increased. In this system, a successful leader will be able to gather members with different thoughts, education and experience, by gathering all members of the organization around the goals, norms and values that they will be happy to share. The reaction of the leader will change in proportion to his success. This reaction will determine the qualities of the leader. In addition to theoretical and conceptual studies focusing on the determination of leadership qualities, leadership skills and competencies are revealed based on empirical research data.

This study aimed to reveal trends in leadership research. The bibliometric analysis results identified the descriptive statistics of the articles, the most productive countries and authors, the most popular articles, journals, and keywords, annual scientific production, the growth of the top journals by year, and the pioneer and influencer researchers in leadership.

In the studies on leadership research, it was seen that scientific production was most intense in 2020. The most cited references were made in 2001. It has been understood that research contributed by 2508 authors are published intensively in the resource named "International Journal of Leadership in Education" and this journal is the most popular journal among all authors in 2020.

Leadership research increased and decreased from time to time between 2001-2015. It has increased since 2015 and more than 200 scientific productions were made in 2020. Considering the studies on this subject, it was seen that the most citations were made in 2008 and the least citations were made in 2020. The fact that the publications made in 2020 are not used as a research tool yet is thought to be the reason for the low number of citations made this year.

While it has been determined that the "International Journal of Educational Management" magazine is the source that includes the most publications on the subject, it has been observed that the number of publications of the "Journal of Educational Administration" magazine follows it. It is seen that "International Journal of Leadership in Education", one of the journals in the 1st region, where the most important sources are listed according to the Bradford Law, is in the first place.

When we look at the sources in which leadership research are published in educational administration research, it is seen that the impact of the journal "School Effectiveness and School Improvement" is great. School Effectiveness and School Improvement was followed by Urban Education, Journal of Educational Administration, respectively. When we look at the source effect size on the basis of citations, it is seen that the source with the highest impact is the "Educational Administration Quarterly". In addition, it can be said that "Journal of Educational Administration" and "International Journal of Leadership in Education" are among the most frequently cited journals.

When we look at the resource growth, it is seen that the preference rates of the given resources are similar to each other, but it is seen that the most popular resource in 2020 is the "International Journal of Leadership in Education". Among the authors who published on the subject, Hallinger had the most publications, followed by Leithwood and Harris, respectively. When the productivity of the authors with Lotka's law is examined, it is seen that only one author takes the first place with three articles.

It has been understood that the university that has published the most articles among the universities where leadership researchers work is the University of Toronto, and the majority of the authors are from the USA. In addition, "Hong Kong Institute of Education", "University of Manchester" and "University of Nottingham" were seen to share the 2nd place in the list of

universities with the most publications. Among the Western countries where leadership research is done more, the USA has emerged as the country with the most scientific production and the most cited field. Similar results were found in previous research (Bozkuş, 2021; Bryman, 2007; Esen et al.,2018; Gumus et al.,2018). It has been observed that the USA has made very few of these publications in partnership with different countries, and it has been seen that it has published the majority of it alone. The United Kingdom, which is in the second place among the countries that produce the most scientific production, was seen as close to the USA in the multi-country publication ranking, and it was seen that it made many publications alone. In Australia, Canada, Israel and other countries, the research topic seems to have lost its popularity and the number of articles they published shows a decreasing graph. Georgia and Singapore rank low in scientific production.

When the keywords of the articles published in the field of leadership research are examined, it has been revealed that the most frequently preferred keyword in all years is leadership. In addition to this, it is seen that words such as "Principals, School leadership, Schools" are preferred frequently as keywords.

It is known that education is universally necessary in order to keep up with the changing and developing world socially. One of the main elements of education is education leaders. According to the findings obtained in this study, the leading concept of leadership, the increase in studies conducted in this direction, especially in western countries that have completed their development level; It puts forward that the concept of leadership is an indispensable part of education and one of the high-level standards that determine the quality of education. Although Leadership Research studies conducted in Educational Administration Research have appeared in the last 20 years, it has been determined that it is gaining popularity day by day. As it can be understood from the tables and graphics examined, it has been determined that the subject is more common in Western countries. The fact that most of the leadership researches are published in English may be a reason why there are fewer studies on this subject in non-English speaking countries. According to the data we have obtained, it has been seen that the concepts of leadership, principal and school are among the most studied subjects in the field of educational administration. Considering the concept of leadership rather than the concept of the manager has helped us to conclude that not every manager is a leader. The fact that the word "leadership" is not very old, and that this concept is considered worth investigating before, is related to its popularity. It is thought that the concept of leadership, which has been on the rise recently, will be beneficial in the effectiveness of school principals.

This review makes an important contribution to the research on leadership by systematically analyzing many studies indexed in the Scopus database. The study results draw a big picture based on numerical evidence on the development of leadership research. However, the study has some limitations. Although the authors spent a lot of time and effort in minimizing errors during the research process, considering the nature of bibliometrics and the high number of articles, there could still be minor errors. Also, articles published in some well-known educational journals that were not indexed in the Scopus database were excluded from the research. They were excluded because of the capabilities of the software used, and it is considered a common deficiency for bibliometric review studies. Future review studies may include journals excluded from this study.

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