Leadership in Educational: A Systematic Review

Mehmet Toprak

Department of Educational Psychology, Istanbul University, Beyazıt, Turkey

E-mail: mehmetoprak@sehir.edu.tr

ABSTRACT

The aim of this study is to show the extent to which different models of leadership in education are studied, including changes in the trends of research on each model over time, the most prominent scholars working on each model, and the countries in which the articles are based. The analysis of related literature was first conducted using a bibliometric analysis of research and review papers indexed in the Science Database Web between 1980 and 2014. A more in-depth analysis of the selected papers was then carried out using the content analysis method. Results have shown that there has been an increasing interest in educational research leadership models over time. Distributed leadership, educational leadership, teacher leadership and transformational leadership are the most studied leadership models in education research. It was also found that related research increasingly focuses on the impact of leaders on organizational behaviors/conditions and student achievement. As a result, the use of quantitative methodology has increased significantly over the last decade. Possible reasons for such changes, implications and recommendations for future research are also discussed.

Keywords: Leadership Research; Leadership Models; Transformational Leadership; Teacher Leadership.

INTRODUCTION

The question of leadership has been a matter of concern for hundreds of years and can be traced back to the philosophers of Ancient Greece, but the discussion of leadership and the need for effective leaders has come to the fore in today's world, where the success of individuals, organizations and sectors depends substantially on the success of leaders (Bolden, 2004). It is difficult, despite its importance, to define leadership (Leithwood and Riehl, 2005). In fact, there is no single definition of leadership/leader in the literature (Bush, 2008; Yukl, 2002). Kruse (2013) defined leadership as "a process of social influence that maximizes the efforts of others to achieve a goal"' (p.2). In accordance with this definition, Leithwood and Riehl (2003: 4) have stated that "the core of most definitions of leadership is two functions: providing direction and exerting influence."' In the context of education, therefore, school leadership can refer to "the

work of mobilizing and influencing others to articulate and achieve the shared intentions and objectives of the school"' (Leithwood and Riehl, 2005: 14).

Leadership in the education sector began to attract attention at the beginning of the 20th century, when the theory of scientific management was introduced with the aim of improving the quality and quantity of results achieved in the business sector. Following the theory of scientific management, some other theories in the business sector, such as Fayol's management theory functions and Weber's bureaucratic management theory, also influenced the perception of leadership in education. However, there was also some level of awareness among scholars that the special characteristics of education and schools should be taken into account when considering leadership in the education sector (Bush, 2003; Yunus et al., 2020). This has helped educational researchers to develop specific leadership models that apply to schools and other educational institutions, particularly over the last few decades. As a result, many different leadership models, either from other sectors or specifically developed for the education sector, have been discussed, implemented and researched in educational settings for a long time.

Although leadership models have become a very popular subject in education research, especially over the last three decades, the popularity of specific leadership models over time and trends in related literature is not very clear (Jamaluddin et al., 2020). Most of the systematic review studies on educational leadership included all types of education leadership studies without paying particular attention to leadership models (see Hallinger, 2014, for more information on review studies in educational leadership). On the other hand, there were only a few systematic review studies that were primarily interested in research on leadership models. These studies have generally focused on only one or, rarely, a few specific leadership models (e.g. Instruc-tional, Distributed, Transformational) in detail (Bennett et al., 2003; Hallinger, 2003, 2005; Leithwood and Jantzi, 2005; Neumerski, 2013; Tian et al., 2016) rather than looking at research trends in many different leadership models. Therefore, due to their scope and the nature of their work, these review studies were able to analyze only a limited number of papers. To this end, we believe that a more comprehensive review of existing research on leading-edge models in education can be carried out, drawing on the titles, keywords and abstracts of papers published in prominent educational journals. The main aim of this study is therefore to carry out a comprehensive review of leadership models in education to show the extent to which different leadership models are being studied, changes in trends in research on each model over time, the most prominent scholars and journals working on these models, and the countries in which the articles are based through a bibliometric analysis of the models. In addition, we also analyzed the content of the selected papers in order to obtain more detailed information on the methods, purposes and focus groups of the related studies. Analyzing a significant amount of literature in top journals would help researchers gain a better picture of the change in trends in leadership model research. This would also provide an opportunity to interpret how leadership research has been influenced by the issues that education systems have faced over time.

MODELS OF LEADERSHIP IN EDUCATIONAL RESEARCH

Before the 1900s, there was not much focus on school leadership when it came to education administration as a field of research. Back then, there was no clear distinction between the roles of school leadership and the teaching role. Efforts to train individuals as leaders during this period focused mainly on issues related to curriculum, teaching, and the description of eminent school leaders (Button, 1966; Callahan and Button, 1964). Leadership understanding was largely shaped by ideas and pure reason rather than the use of data (Jacobson and Cypres, 2012). Therefore, during this period, there was no particular leadership model observed in education.

However, after the 1900s, more concrete theories and models for leadership began to emerge. We would like to describe briefly the development of earlier leadership theories, such as trait, behavioral, and situational, which provided a basis for discussions on leadership in different sectors, before going into the details of the most prominent leadership models used in education.

Over the last century, discussions about achieving more efficient and effective organizations have been overwhelming. While discussions about leadership types were mostly concerned with what makes an organization more efficient, management discussions focused on under-standing or identifying leadership practices that can help achieve the desired goals of an organization. The "great man" theory was the common phenom-enon that shaped the understanding of leadership in the late 19th and early 20th centuries. This theory assumed that leaders need specific qualities inherent in one's personality, meaning that leaders are born with qualities of leadership and it is not possible to acquire such qualities afterward (Egbeji 2019). The great man theory later evolved into the " trait theory," which focused only on defining characteristics of leadership and non-leadership instead of making an argument as to whether these characteristics were acquired or innate (Kirkpatrick and Locke, 1991).

Criticism of the theory of traits led to the development of the leadership " behavioral theory." As a result of substantial research on understanding the type of leadership behaviors that led to successful organizations, the behavioral theory was developed (Derue et al., 2011). Effective leadership behaviors are categorized into four groups in the behavioral theory, including task-oriented behavior, relational-oriented behavior, change-oriented behavior and passive leadership. Task-oriented behaviors include defining tasks, coordinating members, setting task performance standards, and ensuring that members comply with these norms. Relational-oriented behaviors focus substantially on the quality of group members' relationships. By developing vision and motivating creative thinking and risk taking, change-oriented behaviors are concerned with driving change within the group. Many transformational leadership behaviors, for example, can be considered to be change-oriented. Finally, passive leaders refer to those who do not engage in the organization during times when there is no problem. Passive leadership is more likely to represent transactional management and laissez-faire leadership behaviors (Derue et al., 2011).

The behavioral science era characterized leadership studies from post-World War II through the 1980s (Murphy, 1995), and " the behavioral science approach was an attempt to reconcile the fundamental incongruity between the rational-economic model and the social model" (Lunenburg, 2003: 5). Contingency/situational leadership was the particular leadership theory that emerged during this period. The theory of situational leadership opposes theories of characteristic and behavioral leadership that assert the existence of leaders' " best " characteristics and behaviors to influence subordinates. Situational leadership theory followers focus their thoughts on the argument that there is no " best leadership practice " appropriate for all contexts and situations; thus, effective leadership practices are highly dependent on the situation in which leaders operate (Onyemachi 2020). Simi- Basically, because of their different characteristics, there is no " best method " for influencing subordinates. Instead, in a given situation, the task-relevant maturity levels of individuals or groups tend to determine which leadership styles are likely to achieve the highest results (Hersey et al., 1982: 217). For example, followers who are not willing to perform specific tasks should be given clear guidance and close supervision, while those who perform the tasks but have little trust should be supported by two-way communication (Hersey et al., 1982).

While leadership discussions have a long history, most of today's educational leadership models, such as instructional leadership, distributed leadership, and leadership of teachers, emerged during the post-behavioral-science era (after the 1980s). The post-behavioral-science era was characterized by " the interrelated concepts of school enhancement, demo-cratic

community, and social injustice, as well as subjectivist and interpretative approaches to the study and practice of neo-Marxist/critical theory and postmodernism " in educational administration (Lunenburg, 2003: 5). There has been a significant increase in the number of qualitative studies as a result of the emphasis placed on subjectivist and interpretative perspectives. Research on effective schools was the cornerstone of the creation of school leadership models. Effective school research was mostly qualitative and focused on schools that, regardless of their socio-economic backgrounds, successfully created environments and conditions in which students could develop (Clark et al., 1984). The results of that research body can be summarized as follows: "School leaders matter, they are educationally important, school leaders make a difference" (Huber, 2004: 669). The existence of strong leaders in the most successful schools was one of the main themes that arose as a consequence of effective school research (Austin, 1979; Bridges, 1982; Dougherty, 1981; Murnane, 1981; Purkey and Smith, 1983; Ralph and Fennessey, 1983). These studies have played a key role in developing new educational leadership models and in integrating other organizations' leadership models into schools.

We now turn to the specific leadership models that have frequently been used in educational research after a brief background on the development of essential leadership theories. In the following sections, general information, such as development and content, about several prominent management models is provided.

METHOD

In this study, bibliometric and content analysis methods investigated the study of leadership models in the field of education. First, by exploring the numbers and trends related to journals, countries, leadership models, and authors, we used bibliometrics to draw a broader picture of educational research on leadership models. Then, to obtain more in-depth information on the methods, purposes, and focus groups of the related studies, we analyzed the content of selected papers. Some information regarding the bibliometric analysis and the rationale for selecting a specific database and time interval for the analysis will be explained before providing a description of how the analysis was conducted.

Analysis of bibliometrics

Bibliometrics is the application to books and other communication media of mathematics and statistical methods (Pritchard, 1969: 348). In other words, the use of statistical methods in the literature review process is intended to explore trends in research on a subject (Young and Belanger, 1983). This approach allows researchers to explore the abstracts, keywords, and references of studies in a particular field; to identify and compare authors, countries, journals, and institutions in the field; and to establish scientific collaboration with leading researchers and journals. Although the quantity of bibliometrics has increased in different academic fields, the method is relatively new to educational research. Very little educational research using bibliometrics is carried out (Diem and Wolter, 2013; Phelan et al., 2000; Zawacki-Richter et al., 2010).

Procedures for Data analysis

With a total of 157,190 papers, including " articles " and " reviews " published in 334 journals in the field of " Education and Educational Research " indexed between 1980 and 2014 by the Web of Science database, we started our analysis. By investigating the titles, abstracts, and keywords of those studies as revealed through the Vantage Point software, 1,191,735 Combined Keywords Phrases were obtained. The word " lead " was then searched and 7455 phrases and keywords were listed. Two researchers sorted out the ones thought to be related to

leadership models after listing all sentences and keywords that included the word"lead,' The two other researchers involved in this study re-checked the list of keywords and phrases created by the two researchers and the missing ones were added to the list. Two researchers separately developed lists of leadership models that are prevalent in literature by categorizing keywords and phrases, in collaboration with the final list of related phrases and keywords. A list that included 18 leadership models was developed by one researcher, while another developed one with 22 leadership models. Based on the existing literature, the two lists were compared and discussed. Researchers benefited from the views of prominent researchers in the field in the case of several controversial questions. As a result, researchers developed a consensus on maintaining 14 leadership models in the study by combining some models (e.g. Ethical and Moral Leadership; Distributed, Shared, and Collaborative Leadership; Instructional and Learning-Centered Leadership) and removing models that focused outside the K-12 level (e.g. Academic Leadership, Campus/University Leadership).

Under the final list of 14 leadership models, a total of 505 keywords and sentences were categorized. Then, the study included a total of 709 articles that included at least one of these keywords and phrases. In terms of publishing the most articles related to leadership models in education, our preliminary analysis showed that two journals stood out. Of the 709 papers, 107 were published in the Educational Administration Quarterly (EAQ), which has been indexed since 1980 in the Web of Science database. In its very short index period between 2009 and 2014, Educational Management, Administration and Leadership (EMAL) also published a significant number of articles (60), while the rest of the journals published 30 or fewer related articles. Based on these preliminary results, in order to get a more complete picture, we decided to integrate the earlier EMAL volumes, which were not indexed in the Web of Science database at the time of their publication, into our analyses. To do so, we visited the website of the journal and searched for all the volumes published between 1980 and 2009. To determine which were related to the above-mentioned 14 leadership models, two researchers carefully investigated all the papers published in these volumes. At this stage, what we did manually was very similar to what the Vantage Point software did automatically with a command in the Web of Science database for the papers indexed. This means that, to search for keywords or phrases related to a leadership model, we simply read all the titles, abstracts, and keywords of hundreds of papers. As a consequence, we found a total of 34 papers that included keywords or phrases like this. In order to integrate them into our bibliometric analysis, we also identified the author(s), base country, and the related leadership model(s) for each paper. The addition of these 34 papers raised our bibliometric analysis total to 743.

RESULT AND DISCUSSION

This chapter is organized into two sub-sections. The first section provides the bibliometric analysis results, drawing a broader picture of leadership model educational research. The second section provides the results of the analysis of the content, including more in-depth information on the selected papers' methods, purposes, and focus groups.

The Bibliometric Analysis Results

In this section, we present the outcomes of our bibliometric analysis. First, over time, we would like to introduce the overall trends in leadership model research. Between 1980 and 2014, Table 1 shows the number of papers on leadership models in education research.

When we looked at the number of papers per year, until the 1990s, we saw that interest in researching leadership models grew slowly. Until the year 2000, this interest seemed to remain stable. The number of papers on leadership models began to increase again after 2000. Specifically, after 2005, there was a dramatic increase. However, as the number of education journals indexed in the Web of Science database also increased substantially after 2005, this figure should be analyzed with caution. For more than two decades, the number of education journals indexed in the Web of Science database was around 100. In 2010, the number was 200, with new journals added to the database after 2005. This change in the database could be due to the increase in the number of papers on leadership models. Therefore, to better understand the trends of studies on leadership models in educational research, it was important to individually look at each journal. We could also identify the particular journals that published the most papers on education leadership models by doing this. Table 2 shows the number of papers published in education journals over a five-year span on leadership models.

Because over a hundred journals published at least one paper on leadership models in the Web of Science database between 1980 and 2014, we only included a total of 16 education journals publishing at least 10 related papers. Among these journals, most of the papers (107) on leadership models have been published by EAQ, which has been indexed in the Web of Science database since the beginning of this review (1980). With 94 papers, EMAL followed EAQ. Although EMAL was indexed in the Web of Science database beginning in 2009, as explained in the method section, we manually searched for its earlier volumes back to 1980 and integrated related articles into our analyses. School Effectiveness and School Improvement (30), Elementary School Journal (24), Teaching and Teacher Education (23), and Educational Lead- ership were other education journals that published significant numbers of papers on leadership models (21).

Furthermore, after 2005, a few journals added to the Web of Science database, such as Education as Change, Asia Pacific Education Review, Asia-Pacific Education Researcher, and Educational Sciences: Theory & Practice, published significant numbers of leadership model papers. However, to fully explain the trends shown, the number of papers published in these journals was not enough. This implies that, after accounting for the increased number of journals indexed in the Web of Science database, there has been increased interest in research on leadership models. The dramatic increase in research on leadership models in education during the last decade was more clearly seen when the most popular journals such as EAQ, EMAL, and School Effectiveness and School Improvement were examined in detail.

We reveal the countries in which the articles were based after introducing the number of articles published on leadership models by year and journal. The first 10 nations that were the sources for the articles on leadership models in education between 1980 and 2014 are shown in Table 3. As expected, a significant number of the articles (296 of 743) on leadership models originated from the USA. With 67 articles, the UK followed the USA, while the number of articles originating from Australia and Canada was 46 and 32, respectively. South Africa and Turkey, with 31 and 30 articles, were also important sources for the subject. When we looked at the source countries by year, we saw that until 1995, the United States was almost the only source of related studies. Then, a number of studies, including Canada, Australia, the UK, and South Africa, began to come from other countries. After 2005, a number of countries, including Turkey, China, the Netherlands, Belgium and Taiwan, became major sources of studies on educational leadership models.

We have concentrated on research on leadership models in general so far. In order to demonstrate the most studied models, as well as the trends over time, we have also carried out some analyses on the specific leadership models used in education research. The number of articles related to each of the 14 leadership models specified earlier is shown in table 4. The most studied leadership models in education, according to the table, were as follows: distributed/collaborative leadership, instructional leadership, teacher leadership, and leadership in transformation.

The detailed analysis of the model of Instructional Leadership dominated the field from 1980 to 1995. Until 1995, nearly half of all studies on leadership models focused on instructional leadership. Interest in Instructional Leadership then gradually decreased until 2010, when the proportion of instructional leadership studies began to increase again for all studies on leadership models. The trend in studies focusing on the Distributed/Collaborative Leadership model is another interesting finding. While only a few studies related to this leadership model existed until 2000, the number of studies gradually increased until 2005. Distributed/ Collaborative Leadership studies dominated the field after 2005, according to the figures in Table 4. On the other hand, Teacher Leadership studies showed a more stable trend, with a rapid increase after 2005. Although, after the Distributed/Collaborative Labor Leadership model between 2005 and 2009, teacher leadership became the second most studied leadership model in education, it held the fourth position between 2010 and 2014. After 1985, research on Transformational Leadership was very stable. Although interest peaked during the early 1990s, it continues to be one of education's most popular leadership models. Furthermore, in line with the studies on Transformational Leadership, the number of studies on Charismatic Leadership has mostly gone up and down. Finally, mostly after 1995, Technology Leadership, Strategic Leadership, Servant Leadership, and Authentic Leadership models started to emerge.

We disclose the scholars who published the most articles on leadership models in education in the last part of our bibliometric analysis. With the number of articles they released, the top authors. We only present the publications on the most popular four leadership models in Table 5. We have identified 13 authors who have published at least six articles on models of leadership. There were 15 articles published by Philip Hallinger, most of which were about Instructional Leadership. With 12 articles on various leadership models, Kenneth Leithwood followed Hallinger, but primarily focused on Transformational Leadership. Eleven papers on various leadership models were published by Geert Devos, mostly on Distributed and Transformational leadership models. 10 papers were published by James Spillane, most of which focused on Distributed and Instructional Leadership. Nine papers were published by both Ellen Goldring and Peter Sleegers on leadership models in education. Although Ellen Goldring published mostly on Instructional Leadership, most of the works of Peter Sleegers were about Trans-formational Leadership. Detailed information about the publications of authors by subject. It should be noted that while most of the top publishing authors came from North America, a significant number of related articles were also published by several European scholars, particularly in the last decade.

Discussion

The aim of this research was two-fold. First, by using a bibliometric analysis of the research and review papers indexed in the Web of Science database between 1980 and 2010, we aimed to reveal changes in research trends on different leadership models over time, the journals that published the most related papers, the most prominent scholars working on these models, and the countries in which the related research was based. Second, by using the content analysis method, we explored detailed information about the methods, purposes, and focus groups of the existing studies on leadership models. For that part, to obtain more in-

depth knowledge, we only analyzed related papers from two prominent journals, EAQ and EMAL.

First of all, our findings have clearly demonstrated a growing interest over the last three decades in studying leadership models in educational settings. In addition, after the year 2000, this interest increased substantially. A number of factors could explain this significant increase, such as the prominent trend of globalization, the increasing demands for accountability internationally, the availability of more advanced statistical methods and big data sets, etc. For instance, the increased competition between schools and nations with regard to student test scores is one effect of globalization on education. Many countries set clear objectives to enhance student learning outcomes, which in turn led to the movement of accountability (Hursh, 2005). As a result, the need for effective leaders who can produce enhanced outcomes for student learning has become even more significant. At the same time, with the availability of more advanced statistical methods and relevant data sets, a significant amount of research has begun to provide persuasive evidence regarding the effects of leadership on educational results (Leithwood and Jantzi, 2000; Leithwood and Riehl, 2003, 2005; Leithwood et al., 2003, 2004, 2010). These developments could therefore have encouraged more researchers to concentrate on models of leadership and their effects.

Our analyses have shown that distributed leadership is the most studied leadership model in educational research in terms of specific leadership models, although it is a relatively new model. Researchers have also received significant attention from instructional leadership, which is one of the oldest models of educational leadership. Teacher leadership was found to be the third most studied model, closely followed by transformational leadership. When we looked at different time periods, we observed that the field was dominated by studies related to the educational leadership model until 1995. Then, for about a decade, research interest in instructional leadership paused, while the number of studies focused on other leadership models gradually increased. Nevertheless, after 2005, the number of studies related to instructional leadership began to grow again and increased even more over the last five years. It can be argued that in the last decade, research interest in instructional leadership may have been more influenced by current accountability requirements and increasing international emphasis on student achievement, as it focuses specifically on the roles of leaders in educational processes. The availability of more advanced statistical methods to measure the specific effects of leadership on student achievement could also, from a similar perspective, partially explain the dramatic increase in educational leadership studies over the last five years. Whatever the reasons, it is clear that, over more than three decades, the concept of instructional leadership has remained one of the most popular leadership models in the field of education. Similarly, in his review of research on instructional leadership, Hallinger (2005) emphasized the persistence of interest in educational leadership.

Results on specific leadership models have also shown that the number of distributed leadership studies has been enormous over the last decade, with only a few related studies taking place in educational settings up until 2000. This outcome is well aligned with the content of two prior review studies focusing specifically on distributed leadership research (Bennett et al., 2003; Tian et al., 2016). Our findings have also shown that the model of teacher leadership has attracted considerable attention over the last decade. An important change in understanding the leadership phenomenon is illustrated by increased interest in these two leadership models. Leadership no longer appears to be attributed to a single individual who represents " the heroic genre of leadership " (Spillane, 2005: 143); rather, it is viewed as a more 'collective performance" (Gronn, 2002: 437). The increasing demands for accountability and ten-tralization movements in education could also have influenced this trend, as these changes put significant pressure on local educational administrators. As a

result, with the traditional understanding of leadership, most individuals have come to the realization that achieving success for all students is hardly possible. A new definition of leadership has gained prominence based on the decentralization of power. The distributed leadership perspective aims to advocate the involvement and accountability of all stakeholders in the educational processes for student learning outcomes (Leithwood, 2001).

Finally, we found that some leadership models such as Strategic Leadership, Authentic Leadership, Visionary Leadership, and Servant Leadership have been emerging concepts in educational research over the past two decades, in addition to well-grounded leadership models such as Instructional Leadership, Teacher Leadership, and Distributed Leadership. Citing Leithwood and Riehl (2003) and Bush and Glover (2003), Harris (2004) stated that there is still not enough knowledge about what constitutes effective leadership practices, despite long-held discussions on leadership and a plethora of recent evidence of how leaders could influence student achievement. Therefore, the development of new leadership models can be explained as the efforts of researchers to clarify from different perspectives the definition and practices of effective leadership. We can anticipate more new leadership models to emerge in the coming years, given the current emphasis on the importance of leaders for organizations and schools in particular.

The findings of this study also showed that the USA accounted for a high proportion of published papers on various leadership models. It is already well known that most of the research on leadership was launched in the USA, so this outcome is not surprising. This could also be partially caused, however, by the fact that many of the journals in the database of the Web of Science have origins in the USA. It was also discovered that, after 1995, related publications began to come from several other nations, such as the UK, Australia, and Canada. After 2005, when the database was added to many journals outside the USA, related studies came from countries around the world, such as South Africa, Turkey, and China. In line with these findings, North American scholars, such as Philip Hallinger, Kenneth Leithwood, and James Spillane, were also found to have contributed the most research to the study of educational leadership models. Moreover, a significant number of related papers have been published in recent years by several European scholars, such as Geert Devos, Peter Sleegers, Alma Harris, and Hester Hulpia.

Some important information about the research trends in leadership models was also revealed in the second part of our review, the content analysis. First of all, the qualitative method of research was found to have dominated the field until 2010. However, during the last five years, the proportion of quantitative studies to all related studies has increased dramatically. Earlier review studies have also identified increasing methodological diversity in leadership research (Hallinger and Chen, 2015; Heck and Hallinger, 2005; Tian et al., 2016). This could partly be triggered by the significant development of statistical methods over the last decade. In addition, another reason may be significant shifts in terms of the purposes of related research over the past five years. The results showed that in the last five years, studies focusing on the impact of leadership on organizational behaviors/conditions or on student achievement have increased dramatically. There is also a very similar trend in a recent book (Karadag, 2015) that includes meta-analysis review studies on the relationship between leadership and distinct organizational results. The number of studies using quantitative methodology could also be affected by this trend, since studies that have such purposes generally require statistical analysis. It is also noteworthy that increasing global accountability requirements over the last decade could have boosted the number of studies using quantitative research methods focusing on the measurable effects of leadership models.

The groups that were perceived as leaders in selected papers were also identified by our content analysis. Our findings have also shown, in line with the results of earlier review

studies (Hallinger, 2011; Neumerski, 2013), that school principals have been the most popular focus group, followed by teachers, in educational research on leadership models. Over the years, this trend has not changed much, while in the last decade, some other groups, such as assistant directors, department heads, district leaders, and university professors or administrators, have begun to receive some attention. Furthermore, during the last decade, studies that perceived leadership as a shared concept and defined or evaluated it without focusing on any specific groups (or focusing on more than three different groups) have increased. While these trends are in line with the results of our bibliometric analysis in the last 10 years in terms of increasing research interest in distributed leadership forms, it can be argued that most studies related to leadership models still regard certain people as leaders and focus on leadership practices.

CONCLUSION

By reviewing a large number of studies indexed in the Web of Science database, this study makes an important contribution to research on leadership models in education. The study results have provided important insights into the development of related research and have drawn a large picture based on numerical evidence. As all review studies do, however, the study also has some limitations. First, while the authors spent considerable time and effort to minimize errors such as missing information or incorrect categorization during the research process, from the cleaning and categorization of bibliometric analysis keywords to the content analysis of the documents, some minor errors could still occur due to the nature of bibliometrics and the large volume of papers used in the analysis. In addition, our research does not include papers published in some of the well-known journals of education administration, such as the Journal of Educational Administration, the International Journal of Educational Management, School Leadership and Management, and the International Journal of Education Leadership, as these journals were not indexed in the database that we used in this study. Although it is a common problem for almost all review studies not to be able to include all related journals or papers, excluding these important sources could be thought of as another limitation of our study. Future review studies should therefore focus on specific journals that were not included in this study, we suggest. Furthermore, it could be argued that some generalizations, particularly in terms of their purpose, were made during the content analysis of documents. Based on our findings, future research may narrow its scope and select only one category, such as the effect of leadership on organizational behaviors or contextual factors that affect leadership practices, and conduct more in-depth analysis on the lower number of related studies.

REFERENCES

Austin GR (1979) Exemplary schools and the search for effectiveness. *Educational Leadership* 37(1): 10–14.
Bennett N, Wise C, Woods PA and Harvey JA (2003) *Distributed Leadership: A Review of Literature*. Nottingham: National College for School Leadership.
Bolden R (2004) *What is Leadership? Exeter*: Centre for Leadership Studies, University of Exeter.
Bridges E (1982) Research on the school administrator: The state-of-the-art, 1967–1980. *Educational Admin- istration Quarterly* 18(3): 12–33.
Bush T (2003) *Theories of Educational Leadership and Management*. London: SAGE Publications.
Bush T (2008) *Leadership and Management Development in Education*. London: SAGE Publications.
Bush T and Glover D (2003) School leadership: Concepts and evidence. Available at: www.ncsl.org.uk/ literaturereviews (accessed 17 August 2016).
Button HW (1966) Doctrines of administration: A brief history. *Educational Administration Quarterly* 2(3): 216–224.

Callahan R and Button H (1964) Historical change in the role of the man in the organization. 1865–1950. In: Griffiths D (ed) *Behavioral Science and Educational Administration*. Chicago, IL: University of Chicago Press, pp.73–92.

Clark DL, Lotto LS and Astuto TA (1984) Effective schools and school improvement: A comparative analysis of two lines of inquiry. *Educational Administration Quarterly* 20(3): 41–68.

Derue DS, Nahrgang JD, Wellman NED and Humphrey SE (2011) Trait and behavioral theories of leader- ship: An integration and meta-analytic test of their relative validity. *Personnel Psychology* 64(1): 7–52.

Diem A and Wolter SC (2013) The use of bibliometrics to measure research performance in education sciences. *Research in Higher Education* 54(1): 86–114.

Dougherty K (1981) After the fall: Research on school effects since the Coleman report. *Harvard Educational Review* 51: 301–308.

Egbeji, P. O. (2019). Leadership Dynamics and Peace Development in Nigeria. *GNOSI: An Interdisciplinary Journal of Human Theory and Praxis*, 2(2), 13-21.

Gronn P (2002) Distributed leadership as a unit of analysis. *The Leadership Quarterly* 13(4): 423–451.

Hallinger P (2003) Leading educational change: Reflections on the practice of instructional and transformational leadership. *Cambridge Journal of Education* 33(3): 329–352.

Hallinger P (2005) Instructional leadership and the school principal: A passing fancy that refuses to fade away. *Leadership and Policy in Schools* 4(3): 221–239.

Hallinger P (2011) A review of three decades of doctoral studies using the Principal Instructional Manage- ment Rating Scale: A lens on methodological progress in educational leadership. *Educational Adminis- tration Quarterly* 41(2): 271–306.

Harris A (2004) Teacher leadership and distributed leadership: An exploration of the literature. *Leading and Managing* 10(2): 1–9.

Heck RH and Hallinger P (2005) The study of educational leadership and management: Where does the field stand today? *Educational Management Administration & Leadership* 33(2): 229–244.

Hersey P, Angelini AL and Carakushansky S (1982) The impact of situational leadership and classroom structure on learning effectiveness. *Group & Organization Management* 7(2): 216–224.

Huber SG (2004) *Preparing School Leaders for the 21st Century*. New York: Routledge Falmer.

Hursh D (2005) The growth of high-stakes testing in the USA: Accountability, markets and the decline in educational equality. *British Educational Research Journal* 31(5): 605–622.

Jacobson SL and Cypres A (2012) Important shifts in curriculum of educational leadership preparation. *Journal of Research on Leadership Education* 7(2): 217–236.

Jamaluddin, Muliana, Akib, H., Salam, R., Kasmita, M., & Tenri, O. (2020). A Study of Situational Leadership Style at PT Singosari, Tidung, Rappocini, Makassar City, South Sulawesi, Indonesia. *GNOSI: An Interdisciplinary Journal of Human Theory and Praxis*, 3(2), 2-10.

Karadag E (ed) (2015) *Leadership and Organizational Outcomes: Meta-Analysis of Empirical Studies*. Switzerland: Springer.

Kirkpatrick SA and Locke EA (1991) Leadership: Do traits matter? *The Executive* 5(2): 48–60.

Kruse K (2013) What is leadership? *Forbes*, 4 September. Available at: http://www.forbes.com/sites/kevink ruse/2013/04/09/what-is-leadership (accessed 17 August 2016).

Leithwood K (2001) School leadership in the context of accountability policies. *International Journal of Leadership in Education* 4(3): 217–235.

Leithwood K and Jantzi D (2000) Principal and teacher leadership effects: A replication. *School Leadership & Management* 20(4): 415–434.

Leithwood K and Jantzi D (2005) A review of transformational school leadership research 1996–2005. *Leadership and Policy in Schools* 4(3): 177–199.

Leithwood K, Louis KS, Anderson S and Wahlstrom K (2004) *How Leadership Influences Student Learning: A Review of Research for the Learning From Leadership Project*. New York: The Wallace Foundation.

Leithwood K, Patten S and Jantzi D (2010) Testing a conception of how school leadership influences student learning. *Educational Administration Quarterly* 46(5): 671–706.

Leithwood K, Riedlinger B, Bauer S and Jantzi D (2003) Leadership program effects on student learning: The case of the Greater New Orleans School Leadership Center. *Journal of School Leadership and Manage- ment* 13: 707–738.

Leithwood KA and Riehl C (2003) *What We Know About Successful School Leadership*. Nottingham: National College for School Leadership.

Leithwood KA and Riehl C (2005) What do we already know about educational leadership? In: Riehl WA and Riehl C (eds) *A New Agenda for Research in Educational Leadership*. New York: Teachers College Press, pp.12–27.

Lunenburg FC (2003) Paradigm shifts in educational administration: A view from the editor's desk of ''Educational Leadership Review'' and ''NCPEA Yearbook''. In: *The annual meeting of American Educational Research Association*. Chicago, IL, 21–25 April 2003, pp.1–18. Educational Resources of Information Center.

Murnane RJ (1981) Interpreting the evidence on school effectiveness. *Teachers College Record* 83(1): 19–35.

Murphy J (1995) The knowledge base in school administration: Historical footings and emerging trends. In: Donmoyer R, Imber M and Scheurich JJ (eds) *The Knowledge Base in Educational Administration: Multiple Perspectives*. Albany, NY: The State University of New York Press, pp.61–73.

Neumerski CM (2013) Rethinking instructional leadership, a review: What do we know about principal, teacher, and coach instructional leadership, and where should we go from here? *Educational Administra- tion Quarterly* 49(2): 310–347.

Onyemachi, F. C. (2020). Complementary Leadership: A Neglected Key to National Security Issues in Nigeria. *GNOSI: An Interdisciplinary Journal of Human Theory and Praxis*, *3*(1), 76-84.

Phelan T, Anderson D and Bourke P (2000) Educational research in Australia: A bibliometric analysis. In: DETYA (ed.) *The Impact of Educational Research*. Canberra: DETYA, pp.573–671.

Pritchard A (1969) Statistical bibliography or bibliometrics. *Journal of Documentation* 25(4): 348–349.

Purkey SC and Smith MS (1983) Effective schools: A review. *The Elementary School Journal* 83(4): 427–452.

Ralph JH and Fennessey J (1983) Science or reform: Some questions about the effective schools model. *The Phi Delta Kappan* 64(10): 689–694.

Spillane JP (2005) Distributed leadership. *The Educational Forum* 69(2): 143–150.

Tate TF (2003) Servant leadership for schools and youth programs. *Reclaiming Children and Youth* 12(1): 33–39.

Tian M, Risku M and Collin K (2016) A meta-analysis of distributed leadership from 2002 to 2013: Theory development, empirical evidence and future research focus.

Young H and Belanger T (1983) *The ALA Glossary of Library and Information Science*. Chicago, IL: American Library Association.

Yukl GA (2002) *Leadership in Organizations*. 5th ed. Upper Saddle River, NJ: Prentice Hall.

Yunus, A. M., Nurman, illahi, R., Kamaruddin, & Alimuddin. (2020). A Study of the Principal's Leadership Role on Teacher's Performance in Tonra State Senior High School 1, Bone Regency of the South Sulawesi Province, Indonesia. *GNOSI: An Interdisciplinary Journal of Human Theory and Praxis*, *3*(2), 35-44.

Zawacki-Richter O, Anderson T and Tuncay N (2010) The growing impact of open access distance education journals: A bibliometric analysis. *International Journal of E-Learning & Distance Education* 24(3): 54–73.