



# A Bibliometric Analysis of Influence of Leadership Behavior of School Leaders on Organizations in School Education Sector from 1983 To 2022

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## Abstract

This study addresses the concerns of leadership in the educational sector, particularly in school education. While leadership behaviour and their effects on educational factors have been extensively studied, there is a lack of literature review studies focusing on the impact of leadership behaviour on employees and organizations in a school educational context. Existing literature reviews have primarily examined specific leadership behaviour, while this study explores the influence of various leadership behaviour. By analyzing 517 papers published between 1983 and June 2022 using Biblioshiny package from R software and VOSViewer, this paper aims to consolidate the literature and achieve two objectives. First, it examines the research trends on leadership behaviour in school education. Second, it provides insights into the relationship between various leadership behaviour and educational factors, specifically their impact on employees and organizations. The findings of this study contribute to the understanding of leadership effectiveness and the current state of educational leadership. Theoretical implications are provided to advance future research, while practical implications are suggested for the development of leadership in school.

**Keywords:** Leadership behavior, School education, Bibliometric analysis, Transformational leadership

## Introduction

Conducting a bibliometric analysis on the influence of leadership behavior of school leaders on organizations in the school education sector from 1983 to 2022 is a complex and time-consuming task that requires access to relevant academic databases, citation analysis tools, and expertise in research methods. However, I can provide you with a general outline of how you can approach this analysis:

To this end, the study aims to investigate the literature to understand the changes in the research trends on educational leadership and the extent to which how each leadership behaviour is studied over time. In specific, the primary purpose of this literature review is to address two research questions:

### 1. Define Research Scope and Objectives:

- RQ1: What are the publication trends, most influential authors, regions, most researched methods, and overall intellectual structure of leadership behaviour impact on employee and organizations factors in school education?
- RQ2: How do leadership behaviour affect employee and organizational levels in the school education sector?

The first question was addressed by conducting a bibliometric analysis on relevant papers indexed in the Scopus database (one of the biggest databases) to provide findings on the most prominent research periods, regions, journals and research methods studied in such articles. In addition, VOSviewer is constructed to visualize and identify the most occurred keywords, significant cited authors and references among the studies. The second question was addressed by analyzing the content of relevant papers. The content analysis provided an overview of the relationship between various leadership behaviour and outcomes, mediators, and moderators at organizational levels, contributing to the literature as a groundwork for future studies. Following this brief introduction, the remaining part of the paper is arranged as follows. Section 2 provides a theoretical background on the evolution of different leadership behaviours and the impact of leadership behaviour in school education sector. The review methodology has been discussed in Section 3, followed by results and analysis in Section 4. Section 5 provides the discussion from this review and the paper concludes by Section 6 which is about the conclusion of the paper.

## Theoretical background

### The change of leadership behavior research in the educational sector

In recent years, research on leadership behavior in the educational sector has shifted from traditional top-down models to more collaborative, inclusive, and adaptive approaches. Scholars have explored various leadership behaviour, including transformational, ethical, instructional, and culturally responsive leadership. These studies emphasize the importance of fostering positive school cultures, promoting teacher professional development, embracing diversity, and

making data-driven decisions. The evolving educational landscape, marked by digital advancements and diverse student needs, has prompted researchers to investigate leadership's role in addressing contemporary challenges and supporting effective teaching and learning practices. As a result, educational leadership research continues to adapt, providing valuable insights for administrators, educators, and policymakers in the ever-changing field of education.

### **The evolution of leadership behavior**

The evolution of leadership behavior reflects a dynamic shift from traditional authoritative models to more inclusive and adaptive approaches across various sectors. Historically, leadership was often characterized by hierarchical structures and strict command-and-control methods. It emphasized the activities, behaviour, and qualities of leaders. However, as organizations became more complex and diverse, leadership theories evolved.

**Trait Theory:** Early leadership theories focused on identifying specific traits such as intelligence, confidence, determination, and charisma, assuming that these traits were inherent in effective leaders (Reyes, 1996). While these traits are still considered valuable, modern research suggests that effective leadership is more complex and context-dependent.

**Behavioral Theories:** Behavioral theories shifted the focus from inherent traits to observable behaviors (Day & Zaccaro, 2014). Researchers studied the behaviors of leaders and identified different styles, such as autocratic (authoritarian), democratic (participative), and laissez-faire (hands-off) leadership. This approach highlighted the importance of how leaders interact with their teams.

**Contingency Theories:** Contingency theories, such as the situational leadership model, recognized that effective leadership depends on various situational factors. (Nam Nguyen & Mohamed, 2011) stated that leaders must adapt their behaviour based on the specific situation, the skills of their team members, the nature of the task, and the organizational culture. This adaptive approach ensures that leadership is tailored to the unique requirements of each situation. Based on the above leadership theories, leadership style have emerged.

**Transformational Leadership:** Transformational leaders inspire and motivate their followers to achieve extraordinary outcomes and exceed their own self-interests (Louis & Murphy, 2017). They articulate a compelling vision, exhibit passion and enthusiasm, and demonstrate high levels of emotional intelligence. (Nathan et al., 2017) stated that transformational leaders empower their teams, foster innovation, and create a positive organizational culture where individuals feel motivated to contribute their best efforts.

**Servant Leadership:** (Chiniara & Bentein, 2016) stated that servant leaders prioritize the needs of others, placing the well-being and development of their followers above their own interests. They exhibit empathy, active listening, and a genuine concern for the welfare of their team members. By serving their followers and removing obstacles in their path, servant leaders create a supportive environment where individuals can thrive and grow.

**Adaptive Leadership:** Adaptive leaders are agile and flexible, capable of guiding their organizations through change and uncertainty. They encourage a culture of learning and innovation, enabling their teams to adapt to new challenges and opportunities. Adaptive leaders are comfortable with ambiguity and can make decisions in complex, evolving situations (DeRue, 2011).

**Ethical Leadership:** Ethical leaders prioritize moral principles and integrity in their decision-making processes. They set high ethical standards, promote fairness and justice, and earn the trust and respect of their followers. (Pasricha et al., 2018) stated that ethical leadership is essential for building a positive organizational culture and maintaining the reputation of the organization.

In summary, the evolution of leadership behavior reflects a shift from simplistic trait-based approaches to more nuanced, adaptable, and ethical models. Modern leaders are expected to integrate a variety of behaviors and styles, drawing upon different theories and approaches based on the specific needs of their teams and organizations. Effective leadership today involves a combination of emotional intelligence, ethical decision-making, adaptability, and the ability to inspire and empower others, creating a positive and productive work environment.

### **The Impact of Leadership Behaviour on School Education**

The impact of leadership behavior on school education is profound and multifaceted. Effective school leadership is essential for creating a positive learning environment, fostering teacher development, improving student outcomes, and ensuring the overall success of educational institutions. Here's a detailed discussion on how leadership behavior influences school education:

**Creating a Visionary Educational Environment:** (Deal & Peterson, 2010) stated that effective school leaders articulate a compelling vision for the future of the institution. This vision serves as a guiding light, shaping the school's

mission, goals, and strategies. A well-defined vision motivates teachers, students, and parents alike, fostering a sense of purpose and direction.

**Fostering a Positive School Culture:** Leadership behavior sets the tone for the school's culture. Leaders who demonstrate positivity, respect, and inclusivity create an atmosphere where diversity is celebrated, and students feel safe to express themselves (Shields & Hesbol, 2020). Such a culture encourages mutual respect among students and teachers, enhancing the overall learning experience.

**Supporting Professional Development:** (Zepeda, 2019) stated that effective leaders invest in the continuous growth of their staff. They provide professional development opportunities, mentorship programs, and resources that enable teachers to stay updated with the latest educational techniques and methodologies. This investment enhances teaching quality, leading to improved student engagement and achievement.

**Encouraging Collaborative Learning Communities:** Leaders who promote collaboration among teachers foster a culture of collective learning. (Roberts & Pruitt, 2008) stated that professional learning communities allow educators to collaborate, share insights, and develop innovative teaching approaches. This collaborative environment enhances teacher morale, encourages the exchange of best practices, and positively impacts student learning outcomes.

**Utilizing Data-Driven Decision Making:** Data-informed leadership involves the strategic use of student performance data. Leaders analyze this data to identify trends, strengths, and areas for improvement. Data-driven decision-making helps in tailoring instructional strategies to individual student needs, ensuring targeted support and fostering a culture of continuous improvement (Hora et al., 2017).

**Empowering Students and Encouraging Student Leadership:** Empowering leadership behavior involves giving students a voice in their own education (Reitzug, 1994). Leaders who encourage student participation in decision-making processes and extracurricular activities empower them to take ownership of their learning. This empowerment enhances student motivation, self-confidence, and leadership skills, preparing them for future success.

**Promoting Parent and Community Engagement:** Effective school leaders build strong partnerships with parents and the wider community. Open lines of communication, involvement in school activities, and transparent reporting create a supportive network around the school. (Comer & Haynes, 1991) stated that engaged parents and community members contribute positively to the learning environment, reinforcing the school's educational objectives.

**Addressing Challenges and Encouraging Innovation:** Strong leadership involves addressing challenges proactively. (Christensen et al., 2018) stated that effective leaders identify obstacles to learning, implement targeted interventions, and create a culture where teachers are encouraged to experiment with innovative teaching methods. Embracing technology, encouraging creative thinking, and adapting to changing educational needs foster an environment of innovation and adaptability.

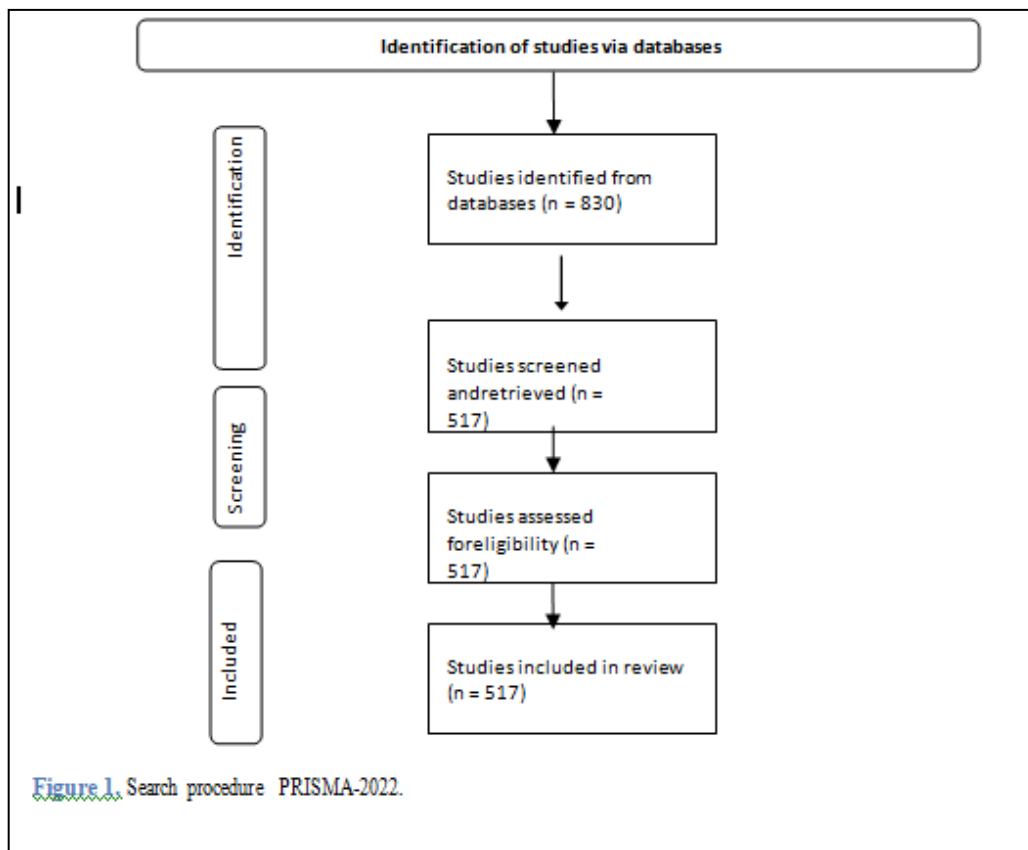
In essence, leadership behavior shapes the ethos of a school and significantly impacts the educational journey of both students and teachers. A thoughtful and empowering leadership approach creates a harmonious and stimulating environment where every stakeholder is motivated to excel. Through visionary leadership, schools become nurturing grounds for knowledge, personal growth, and lifelong learning, preparing students to thrive in an ever-changing world.

## Review Methodology

### Search Procedure

A systematic literature review was conducted to address the two research questions. The articles chosen for this literature review studied the effect of leadership behaviour on various organizational factors in school education, written in English and published from January 1983 – 2022. To extract the articles for this review, we chose Scopus as a final database to extract the articles due to three reasons (1) Scopus was chosen as a main database source for the review as compared to Web of Science (WoS) or any other database, because it is considered one of the largest citation databases of literature, with many highly ranked journals on educational themes and covers 60% of the literature (Bang et al., 2023; Donthu et al., 2021), (2) As suggested by Bang et al. (2023), using one database has been advised to avoid human errors as different databases present data in different formats and lastly (3) Scopus database meets the publication standards and helps in conducting network analysis in VOSviewer and Biblioshiny package of R software.

This study adopted the PRISMA 2022 diagram (Figure 1) for



following the PRISMA process. The database search focused on academic articles including **keywords** such as ‘**leadership behaviour**’, ‘**school leaders**’, ‘**school education**’, ‘**relationship**’, ‘**impact**’, ‘**organizations factors**’, ‘**affect**’, ‘**organizational levels**’ that generated total 830 results.

### Analysis and results

The data for this review have been analyzed using the Biblioshiny package of R software and VOSViewer. Before answering the research questions, the descriptive statistics of the published articles are provided as in **Table 1**. The descriptive results indicate that the relevant studies were published in **517 sources**, including journals, books, and others, and the average citation per document was **19.16**. A total of **830 authors published** research on this topic, and out of those, **201 were single-authored papers**. The annual growth rate in publications was found to be **9.92%**. To answer this study’s first research question regarding identifying the existing literature patterns, the selected 517 papers were analyzed based on published years, regions of research, journal details, and research methodologies. Co-occurrence and co-citation analysis was generated by importing the Scopus database into VOSviewer software, which provided insights into the linkages among related papers. The second research question was answered by reviewing the relevant articles and gathering details of leadership behaviour, mediators, moderators, and dependent variables that were grouped into two main clusters, i.e. organizational levels and organizational factors. The contents of papers were then reviewed to understand how each leadership behaviour impacts various variables and identify any differences among the results of related articles.

Table 1. Main information of data using descriptive statistics.

<u>Description</u>	<u>Results</u>
Time span	1983:2022
Sources (Journals, Books, etc)	517
Documents	830
Annual Growth Rate %	9.92
Document Average Age	9.28
Average citations per doc	19.16
References	38577

### DOCUMENT CONTENTS

Keywords Plus (ID)	2081
Author's Keywords (DE)	2031
<b>AUTHORS</b>	
Authors	2393
Authors of single-authored docs	201
<b>AUTHORS COLLABORATION</b>	
Single-authored docs	212
Co-Authors per Doc	3.09
International co-authorships %	12.41
<b>DOCUMENT TYPES</b>	
Article	747
Book	25
book chapter	58

**Bibliometric analysis**

**Publication Trend**

The growth in research field can be identified by understanding the publication trend (as seen in Figure 2) which shows the increase in publications significantly since the research field expanded in 2008; 20 articles have been published within the last seven years. The interest in this topic has remained especially high in the last 5 years, with the number of papers accounting for 68.2% (341) of total papers.

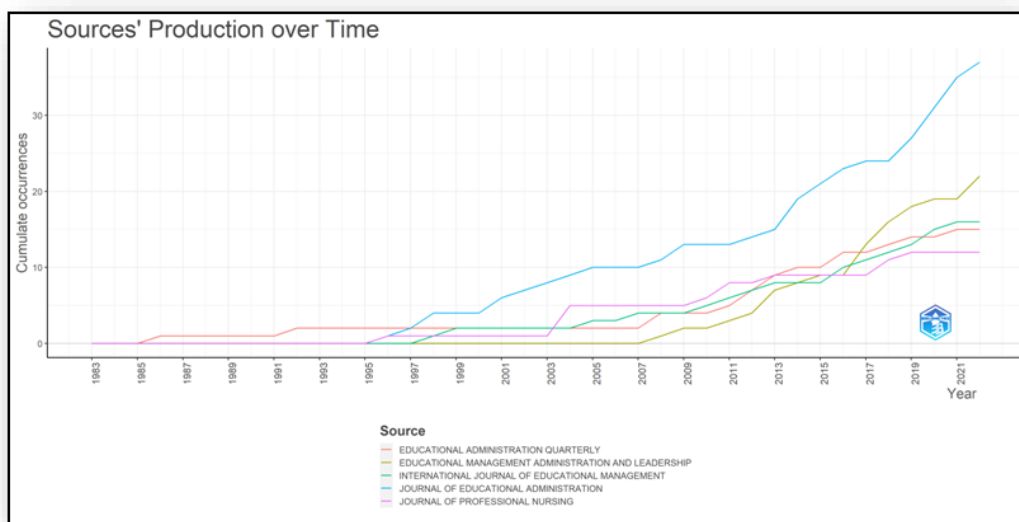


Figure 2. Number of papers by years.

**Contributing Authors Countries of Belonging**

figure 3 shows the countries to which the corresponding authors belong to and this analysis shows that most of the corresponding authors are from American countries, with USA (N = 230) and United Kingdom (N = 50) topping the list. This aligns well with Table 2’s finding which suggested that America is leading this research domain.

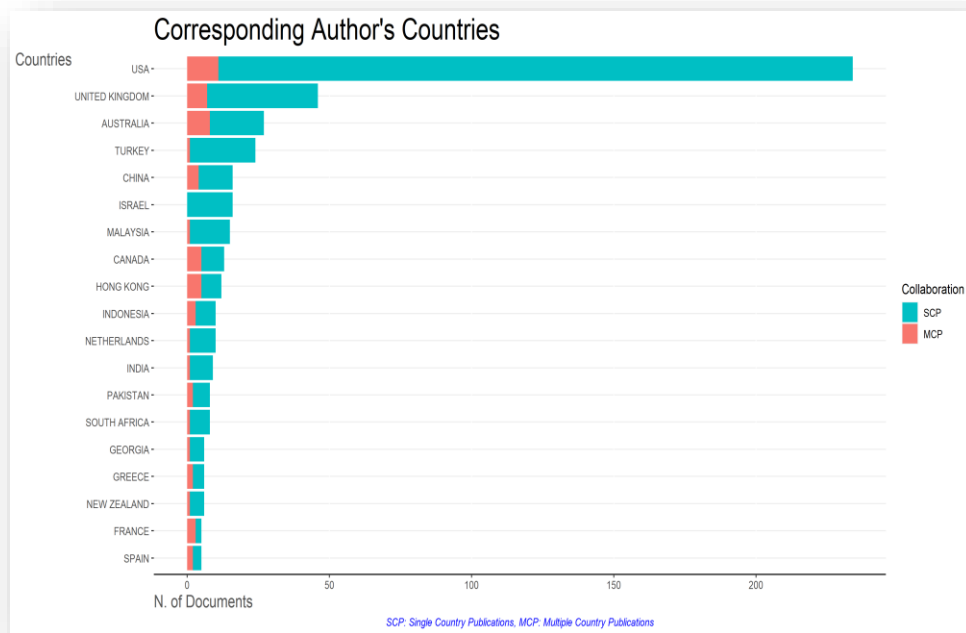


Figure 3 Corresponding Authors: Country of Belonging

### Most Relevant Sources

According to figure 4, the top five journals indexed in the Scopus database that published the most papers on this related topic between 1983- 2022 period are Journal of Educational Administration (thirty-seven papers), Educational Management Administration and Leadership (twenty two), International Journal of Educational Management (sixteen), Educational Administration Quarterly (fifteen), and Journal of Professional Nursing (twelve). Most journals published significant papers between 2008 and 2022 (as in figure 4 and table 2).

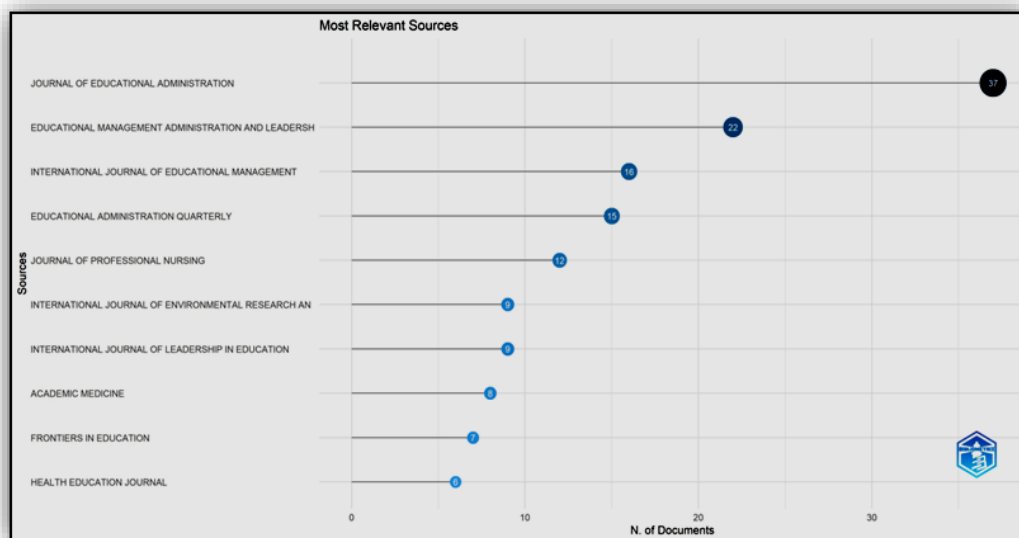


Figure 4 Most Relevant Sources

Sources	Articles
JOURNAL OF EDUCATIONAL ADMINISTRATION	37
EDUCATIONAL MANAGEMENT ADMINISTRATION AND LEADERSHIP	22
INTERNATIONAL JOURNAL OF EDUCATIONAL MANAGEMENT	16
EDUCATIONAL ADMINISTRATION QUARTERLY	15
JOURNAL OF PROFESSIONAL NURSING	12
INTERNATIONAL JOURNAL OF ENVIRONMENTAL RESEARCH AND	9



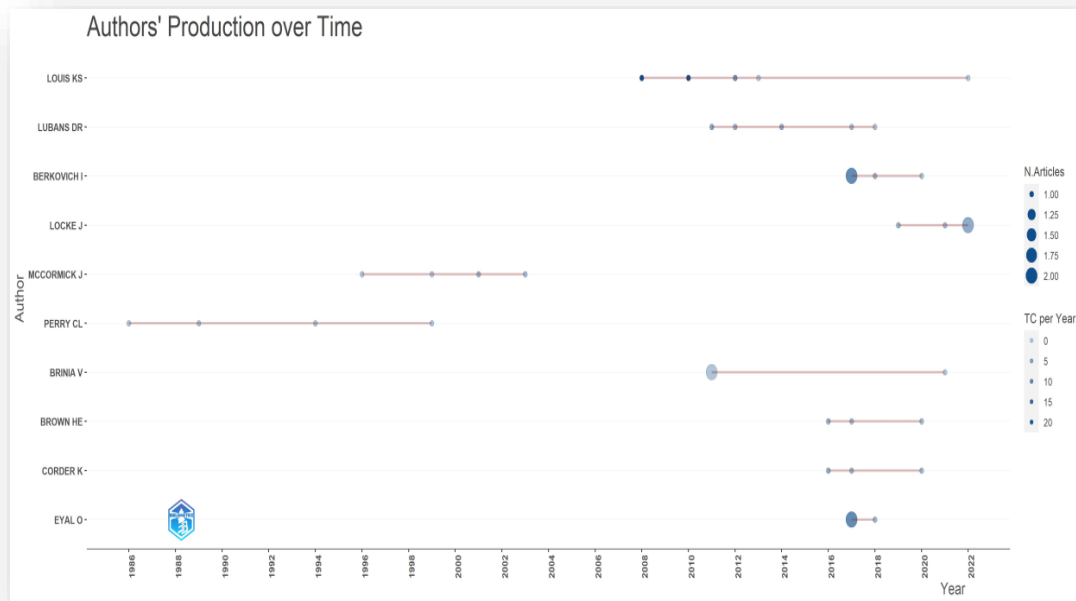


Figure 7 Network map of most cited authors over time in research.

Other authors such as Berkovich I, Locke J, and Brinia V also have a considerable number of citations in the research topic of the influence of leadership behaviour of school leaders impact on organizations factors in the school education. The colors and lines illustrate the connection of those particular cited authors.

### Most Cited References in Related Papers

Figure 8 shows the most-cited references among related papers in the research field. Some of the works of the most influential authors, such as Huth A and J Theor Biol, include the development of transformational leadership extended theory (Huth A, 1992), analysis of the impact of transformational leadership on individual performance and organizational commitment (Avolio et al., 2004; Dvir et al., 2002), and literature review on leadership (Avolio et al., 2009). In addition, other research works that were greatly cited in related articles are analyzed using structural equation modeling (SEM) theory (Anderson & Gerbing, 1988; Fornell & Larcker, 1981), which can refer that many researchers in this field applied SEM to explain the relationship between leadership behavior and school educational factors. These works are reliable and have been used in various papers on the topic, and thus future researchers can consider these studies as a reference to develop a research framework.

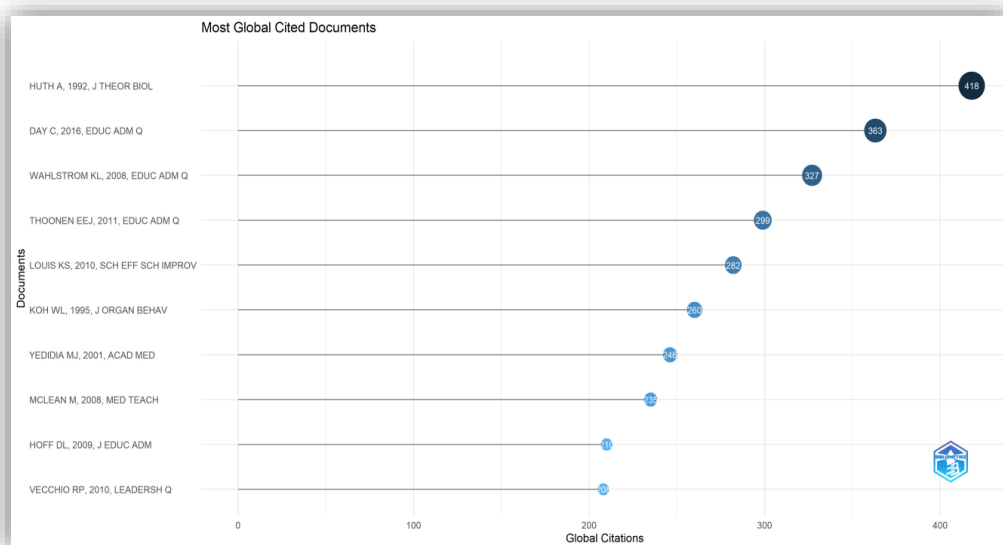


Figure 8 Network map of most Global cited Documents over time in research.

### Content analysis

#### General analysis of leadership behaviour and relationships

Based on prior empirical research on school educational leadership, this literature review investigates the relationships



of various leadership behaviour with mediators, moderators, and outcomes at the employee and organizational levels. Figure 6 summarizes employee and organizational factors, affected by different leadership behaviour.

The most studied leadership behaviour in this research field is transformational leadership, with 70 papers conducting research into its influence on educational factors, followed by ethical leadership (N = 28). Transformational leadership have been the dominant leadership behaviour studied since 2008, while laissez-faire leadership and ethical leadership have only grabbed attention in 2018–2022. Furthermore, the four leadership behaviour are studied mainly in America and UK, indicating that those leadership behaviour have been implemented in most America and UK school educations. However, this might be due to the high volume of total related papers conducted in these two regions. Sakiru et al. (2014) found that a department head most practiced transformational leadership, ethical leadership, at public universities in Nigeria. Transformational leadership was also proven to be a predominant leadership behaviour used in school educations in the study of Al-Omari (2008), Celdran (2020) and Cuadros et al. (2018). On the other hand, in the research on leadership of librarians at Nigeria private universities, ethical leadership were most implemented by library staff and suggested that ethical leadership should be applied further to enhance job satisfaction of employees due to the unhappiness of employees toward ethical leadership behaviours of leaders. Ethical leadership were suggested to help increase employees' commitment in the study of Banji (2020).

Dependent variables that educational leaders have an impact on target at employee levels, especially employees' job commitment (Huang et al., 2021; Long et al., 2012; Mwesigwa et al., 2020; Suong et al., 2019), performance and effectiveness (Azizah et al., 2020; Ramsden et al., 2007; Ugwu, 2019), job satisfaction (Alonderiene & Majauskaite, 2016; Samad et al., 2022; Webb, 2008), organizational citizenship behavior (OCB) (Asgari et al., 2020; Khaola & Rambe, 2021; Majeed et al., 2017), and innovativeness and creativity (Al-Mansoori & Koç, 2019; Elrehail et al., 2018; M. A. Khan et al., 2020). Less attention has been paid to organizational factors in existing research papers, mostly about organizational culture (Awan & Mahmood, 2010; Awan et al., 2014), performance (Alsayyed et al., 2020; Quddus et al., 2020) and innovation (Ghabash et al., 2019; Ngo et al., 2022).

Existing research primarily targeted employee-related mediating variables such as Job satisfaction (Azizah et al., 2020; Suong et al., 2019), job commitment (Djaelani et al., 2020; Ramsden et al., 2007), work engagement (M. Aboramadan, Dahleez, & Hamad, 2020; Adil & Kamal, 2016; Arokiasamy & Tat, 2020) and motivation (I. Ahmad et al., 2015; Shareef & Atan, 2019) have been most used as mediators to explain the relationship between leadership behaviour and various outcomes in a school educational context. Meanwhile, organizational mediators need more attention from the researchers. Some papers have also studied leader-member exchange as a mediator (Ho & Le, 2020; Jyoti & Bhau, 2016).

Regarding moderating factors, the majority of papers focused on employee moderators. For example, OCB significantly moderated the relationship between transformational leadership, ethical leadership and employees' innovative work behavior (M. A. Khan et al., 2020) and the relationship between exploitative leadership (Abdulmuhsin et al., 2021). Organizational moderators were also investigated by some articles, such as that organizational structure moderated the relationship between transformational leadership and knowledge (Darus et al., 2014).

## Discussion

The purpose of this literature review was twofold. The first research question was aimed at understanding the intellectual structure of the research domain which included identifying the publication trend, regions of research, contributing authors the countries to which they belong to most relevant journals, research methods used, co-occurrence of keywords, most influential authors, most cited papers. The second research question was aimed to understand the influence of various leadership behaviours on different employees' outcome and that was explored with a content analysis approach. The following section discusses the findings and further implications to advance researchers in the leadership field and leaders in school education.

### Trend in research

To answer the first research question (RQ1), the results from bibliometric analysis demonstrated that studying leadership in the educational sector has increased significantly since 2008, with the most significant surge seen in the 2018–2023 time-period. The growing interest might be due to various motives, including internationally accelerating demands, globalization, more available big data and developed statistical approaches (Gumus et al., 2018). Additionally, most research focuses on America and UK, while studies in other areas require more attention so that differences among various back- grounds can be identified further. The quantitative research method dominated the selected studies, which was also specified by previous literature reviews (Gumus et al., 2018; Hallinger & Chen, 2015; Heck & Hallinger, 2005). This could be explained by increased access to data and advanced statistical methods in recent periods (Gumus et al., 2018). According to the analysis of the most cited authors and references, the works by Bruce J. Avolio and Bernard Morris Bass were referred outstandingly pertaining to theoretical frameworks indicating one of the biggest clusters, and influential author like Podsakoff was referenced in various studies related to SEM, one of the approaches applied significantly to explain the relationship between leadership behaviours and variables in educational leadership research domain as identified as second biggest cluster.

### The impact of leadership behaviour on employees and organizational factors

The second research question (RQ2) was answered by undertaking content analysis in order to synthesize various leadership behaviour used in school education and their effects on employee and organizational factors. From the

analysis, transformational leadership is the most studied leadership behaviour in existing literature, followed by authentic leadership, ethical leadership, professional development, care behavior, and organizational behavior. This is consistent with previous studies, which indicated that instructional and transformational leadership had been one of the most prominent leadership behaviours implemented in the educational context due to its effectiveness in employee management (Berkovich, 2016; Bush, 2014; Daniëls et al., 2019; Hallinger, 2003). Other leadership behaviours such as authentic leadership, ethical leadership, professional development, care behavior, and organizational behavior need more attention from researchers so that implications can be provided for various leadership behaviours practiced in different school educations to improve the effectiveness and well-being of employees and organizations.

Employee-related outcomes, mediators and moderators have been widely studied, while less attention has been paid to factors targeting the organizational level. The mutual effects between leadership and organizational culture or atmosphere are complex to investigate due to various linkages among the assumptions of such relationships (Awan et al., 2014). Thus, to conduct a thorough study, it is essential to understand human development, management practices, and local traditions within the research context (Hofstede, 2001). However, as understanding organizational factors in an academic setting is significant to developing educational practices, researchers need to pay more attention to the determinants at the organizational level (Shulhan, 2019).

In addition, the findings from various researches might show inconsistency in the relationship between leadership behaviour and educational factors. For instance, the study by HassenYimam (2022) found a negative correlation between instructional leadership and job commitment as leaders avoided being involved in the decision-making process when issues occurred at universities in Ethiopia. Meanwhile, ethical leadership positively affected employee commitment since self-determination was considered essential in Vietnamese universities (Suong et al., 2019). Therefore, it is crucial that leaders can provide a positive environment to employees.

## **Conclusion**

This literature review has been conducted using bibliometric analysis and content analysis on 517 articles focusing on the impact of various leadership behaviour on employee and organizational factors in the worldwide school educational sector. We aimed to provide findings on the research trends on this topic and the relationship between each leadership behaviours and educational outcomes. This review demonstrates that there has been a growing trend in these research studies since 2008, with most of the studies focusing on America and UK regions indicating that those leadership behaviour have been implemented in most America and UK school educations. However, this might be due to the high-volume studies conducted in these two regions. The research also highlights that most studies conducted quantitative approaches.

To conduct a more comprehensive analysis of the evolution of the research topic, we employed thematic analysis to gain a deeper understanding of the research domain and offer suggestions for future research. As depicted in Figure 9, the dominant leadership behaviours studied since 2008 have been transformational leadership, whereas ethical leadership only gained attention between 1983 and 2022. Various studies, including Al-Omari (2008), Celdran (2020), and Cuadros et al. (2018), have established transformational leadership as the predominant behaviour employed in school educations. Ethical leadership, on the other hand, has been explored by scholars such as Bhana and Suknunan (2019), Dinc (2018), and Gollagari et al. (2021). Consequently, there is potential for future studies to examine the influence of ethical leadership behaviour.

Additionally, in light of the COVID-19 pandemic, e-leadership has emerged as a crucial form of leadership, demanding the ability to manage employees in flexible and blended work settings. Therefore, it is worth investigating the impact of e-leadership on employees and organizations in future studies. Figure 6 provides a summary of the different variables considered by various scholars, and based on the identified themes in Figure 9, it is evident that leadership behaviour acts as an antecedent that affects employees both on a personal and organizational level. However, there is a notable imbalance between the number of individual factors and organizational factors that have been considered. Hence, future studies can explore the impact of leadership behaviours on a broader range of organizational factors, such as organizational climate, teamwork,

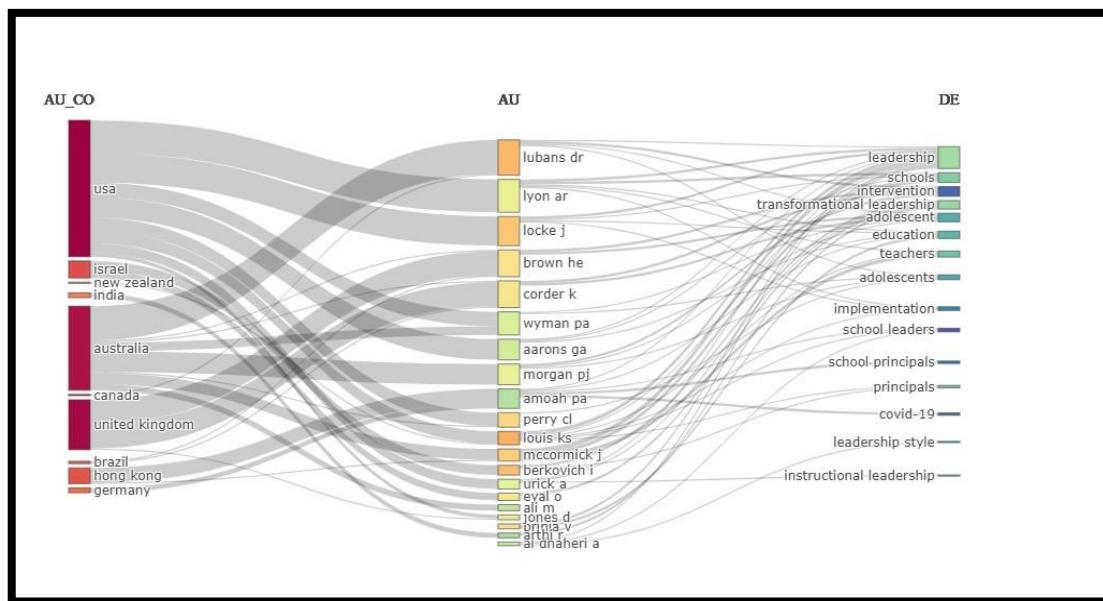


Figure 9. Thematic evolution of keywords in the research domain.

and blended working modes. Consequently, this review paves the way for further research opportunities. Further, based on the findings from this review, we provide some theoretical and practical implications.

**Theoretical implications**

The study aimed to uncover research trends in educational leadership, including the practiced leadership behaviours in school education and their influences on employee and organizational factors. Two distinct research themes emerged: Theme #1 focused on the influence of leadership behaviour on organizational factors, while Theme #2 examined the impact of leadership behaviour on employees’ personal factors. Understanding the current state of research and these themes can aid scholars in developing new frameworks in the field.

The study revealed that most published studies were conducted in America and UK, potentially influenced by cultural norms and local traditions. Therefore, it is crucial to explore educational leadership in other regions, comparing leadership behaviour and their relationships with outcomes, particularly between developed and developing countries. Additionally, while quantitative methods were predominantly used to investigate correlations, future studies should consider qualitative or mixed approaches for more robust findings.

Furthermore, although transformational leadership has been extensively studied, the exploration of other leadership behaviour is necessary to explain mutual effects among variables and provide further implications for fostering a conducive educational environment. Given the significant implementation of technology in school education, understanding the impact of e-leadership on educational factors is imperative. The shift to remote working during the COVID-19 pandemic has also highlighted the relevance of virtual or E-leadership as a suitable behaviour in the post-pandemic era, which the scholars can explore in future research as well.

Most research has focused on employee-level factors, necessitating a broader examination of other organizational outcomes, mediators, and moderators to fully comprehend the effects of leadership in school education.

Lastly, as school education plays a vital role in sustainable development, the importance of leadership in accomplishing sustainable goals deserves more attention. Researchers are encouraged to explore the influence of sustainable leadership on educational factors and investigate the relationship between leadership behaviours and social responsibility variables that contribute to the leadership literature. Effective leadership is essential for enhancing sustainable performance in organizations. Finally, the aspects of diversity, inclusivity and equity in leadership position have not been considered in the studies, and thus future studies can focus on these topics as potential areas of research.

**Practical implications**

The findings of this literature review offer valuable insights into leadership theories and practices within educational institutions. Organizations can now gain a deeper understanding of how different leadership behaviour impact various factors in school education and determine which leadership behaviour are suitable for different cultures and contexts. Consequently, school education practitioners can align their organizations with the most appropriate leadership behaviour and provide training to enhance school’ leaders leadership behaviour to facilitating successful goal achievement.

To effectively implement leadership behaviour, organizations should identify key leadership roles and develop specific leadership paradigms for each role. This allows for the definition and combination of competencies necessary for success (Hollenbeck et al., 2006). Effective leadership behaviour not only improve organizational performance but also enhance the well-being and work–life balance of employees. Creating an inclusive and supportive work

environment for different genders and minorities positively impacts performance and employee retention (Li et al., 2017; Randel et al., 2018).

Additionally, establishing a feedback system for educational leaders can be beneficial. Gathering input from both school leaders and employees about the current leadership behaviour practiced in school education institutions helps identify areas for improvement and enhances the reward system (Veli Korkmaz et al., 2022).

In summary, these findings provide organizations with actionable insights to inform their leadership approaches in school education. By aligning leadership behaviours with specific contexts, investing in leadership development, promoting inclusivity, and incorporating feedback mechanisms, educational institutions can foster a positive work environment and drive improved performance and employee satisfaction.

### **Limitations and directions for future research**

This review has some limitations. Firstly, we only focused on the papers published in the Scopus database between 1983 and 2022, which might have resulted in missing out some papers in this field and hence for future studies, the different databases might be considered to synthesize this literature. Further, this review does not consider the correlations among quantitative results of independent studies by using statistical methods, which suggests the use of the meta-analysis method for future studies (Ceri-Booms et al., 2017). Finally, some comparative review between different regions can be carried out to see if there are any differences in leadership behaviour of school leader and organizational factors in school education.

### **Disclosure statement**

No potential conflict of interest was reported by the author(s).

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