A Review and Inspiration of Research on Teaching Leadership in China - Based on CiteSpace Visualization Analysis

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Abstract: Teaching leadership has teaching characteristics that are different from general educational leadership. In order to better understand the current situation of teaching leadership in China, this article uses content analysis method and literature analysis tools to analyze relevant papers on teaching leadership in China. By interpreting the basic information, basic research, structural research, and applied research of literature one by one, this paper summarizes the current situation of research on teaching leadership in China, identifies problems, and based on this, proposes insights for research on teaching leadership in China, such as paying more attention to research on teaching leadership, further enriching multi subject research on teaching leadership, conducting qualitative and quantitative research, and deepening research on teaching leadership based on three directions.

Keywords: Teaching leadership; Research on teaching leadership; Research Review

1. Introduction

Teaching leadership has different teaching characteristics and educational attributes from general leadership due to its ideal vision and institutional construction, functional orientation and job evaluation, teacher growth and student development, school mission and cultural harmony, and other functions. Teaching leadership is a new educational ability that is rooted in the influence of traditional Chinese educational ideas, developed in the practice of socialist education with Chinese characteristics, and organically integrates organizational logic and value load.

In the context of the deepening of the new curriculum reform and "double reduction", teaching leadership is increasingly valued. In recent years, the number of training programs on teaching leadership at all levels has increased sharply, highlighting the urgent need for improving teaching leadership in educational practice. The author conducted a review of high-quality journal literature in China from 2006 to 2023 to understand research progress and identify areas for improvement.

2. Research Design

This study mainly used content analysis method and tools such as CiteSpace, SATI, Easy Scholar, and SPSS to conduct statistical and visual analysis of literature related to teaching leadership in China. The main database was China National Knowledge Infrastructure, and the search formula was "Theme=Teaching Leadership" or "Abstract=Teaching Leadership". A total of 444 articles were obtained, with the earliest journal published in 2006. In order to ensure the authority of journal data, the latest version of Easy Scholar was used to limit the journal sources to "core journals", "CSSCI", and "CSSCI extended versions" with strong influence and authority. A total of 174 articles were retrieved. Then verify the titles and abstracts of the collected data item by item, and delete 45 literature that is unrelated to the research topic and teaching leadership. Finally, a review of the author's entire text was conducted, and 21 papers with research content unrelated to teaching leadership or low relevance were deleted, resulting in 108 articles. The 108 articles were converted to Refworks format and entered into CiteSpace 6.2. The time zone was set to "1" and the time segment was set to "2006-2023". Knowledge graphs were drawn for information such as publication volume, authors, institutions, keywords, etc., and mathematical statistical analysis was conducted using SATI3.2 and Excel software.

3. Research findings

3.1 Basic Research on Teaching Leadership

The research on the concept of teaching leadership in China is mostly defined from the connotation of teaching, viewed from the perspective of educational management, and referenced from the research results of teaching leadership abroad. Based on the definitions of mul-

tiple scholars, it has been found that teaching leadership is often based on certain goals, with principals, school teaching and research team leaders, teachers, or teaching and research staff as the main producers, and through a series of means and methods, it is a kind of influence generated in the field of teaching activities. The concept of teaching leadership includes elements such as goals, generating subjects, modes of action, and corresponding objects, and is positioned in terms of appeal, influence, ability, or force.

From the conceptual analysis, it is evident that the research subjects of teaching leadership in China exhibit diversity. Among the 108 literature obtained in this study, the distribution of research subjects is shown in Table 1. Among them, there are the most articles related to the teaching leadership of principals, reaching 62, which is consistent with the initial purpose of focusing on the role of principal leadership in the transformation of "effective schools". At the same time, in the process of transferring the research scope of teaching leadership from administration to the classroom, scholars have continuously increased their emphasis on the teaching leadership of teachers, and the proportion has been increasing year by year. In addition, the teaching leadership of government researchers and school research leaders is also a new hot topic in this field of research.

Table 1 Distribution of research subjects in 108 valid articles

Research subject	NUMBER OF ARTICLES
principal	62
teacher	34
Government Education and Research Officer	7
Principal and Teachers	3
School Teaching and Research Team Leader	2

The significance of teaching leadership is the key to the development of research on teaching leadership. The improvement of teaching quality is the focus of balanced and high-quality development in school education, and teaching leadership is the key to the development of classroom quality[1].The foundation of evaluating education and educational management lies in the growth of students, and teaching leadership is also an inevitable requirement for the professional development of teaching stakeholders such as principals and teachers. The proposal of teaching leadership can help principals and teachers better understand the position of teaching in school work. Focusing on the teaching leadership of principals not only focuses on their organizational and management abilities, but also enables them to intuitively feel the changes in the new classroom, grasp the direction of education, and better understand the inner world of students through firsthand experience of the hard work of teachers, further understanding the professional status and needs of teachers[2].In summary, the significance of research on teaching leadership originates from the study of teacher teaching leadership, advances in the study of principal teaching leadership, and deepens in the study of teaching leadership of other stakeholders.

3.2 A Study on the Structure of Teaching Leadership

Leadership is a very rich and complex category of reality, and conducting research on structures or models shifts the focus of research on teaching leadership towards internal levels. Philip Heilinger and Jasper Murphy, two American scholars, created a teaching leadership model called "Three Dimensions and Ten Functions". In China, the construction of teaching leadership structures or models has mostly been localized and improved based on this model. Huang Lili established a teaching leadership framework based on Taylor's principle, which includes teaching leadership, teaching decision-making, teaching organization, and teaching effectiveness[3].Qi Xuan conducted research on the teaching leadership structure of university teachers[4]. Zhao Qian constructed a model of principal's teaching leadership through mixed research[5]. It is worth noting that the teaching leadership structure of teachers is often constructed from the three stages of teaching (pre teaching, middle teaching, and post teaching), and the teaching leadership structure of principals is often organized by school level teaching management and teacher level teaching management. In addition, there is a lot of research on the leadership model of teacher information technology teaching, which has achieved effective intersection between fields.

The study of the relationship and mechanism of teaching leadership is a deepening of the research on the significance of teaching leadership. Chen Shuangye found through matching and mining data from 53 representative middle schools in a central province that the teaching leadership of principals has a direct and indirect impact on students' sense of happiness in school. The relationship between teacher's teaching efficacy and teacher-student relationship plays a chain mediating role. Focusing on this, it can be found that the closer the subject of teaching leadership behavior is to the key area, the more susceptible it is to the influence of the school environment, the more its value can be explored and highlighted, and its role in the micro field of the school will be more profound and extensive. For example, teaching leadership will have a direct or indirect impact on policy consultation and teaching guidance for the education department, school learning community, teacher self-efficacy, and student learning quality.

3.3 Research on the Application of Teaching Leadership

This study imported literature title, author, and abstract data into SATI 3.2 and selected high-frequency keywords (frequency greater than or equal to 3 times), resulting in 15 high-frequency keywords, which reflect the key aspects of the current research on teaching leadership, as shown in Table 2. At present, research on teaching leadership mainly focuses on principals and teachers, with a focus on influencing factors, theoretical models, and other aspects. In addition, the interdisciplinary research on informatization and teaching leadership has been increasing year by year.

Table 2 108 high-frequency keywords in academic papers

Number	Keyword	frequency
1	Teaching leadership	43
2	principal	14
3	Teaching leadership	7
4	Teaching leadership	7
5	Teacher's teaching leadership	6
6	Principal's teaching leadership	6
7	influence factor	4
8	Curriculum leadership	4
9	Primary and secondary school principals	4
10	Principal leadership	4
11	Effective teaching	3
12	leadership	3
13	theoretical model	3
14	Information leadership	3
15	Teacher Professional Development	3

By using CiteSpace 6.2 to visualize the co-occurrence of keywords in valid literature (see Figure 1), it can be seen that Chinese teaching leadership has emerged since 2006, and the research context has delved into different stages, subjects, disciplines, and educational fields, enriching the connotation and extension of teaching leadership. However, empirical research is relatively scarce, and comparative research based on current situation surveys is also insufficient.
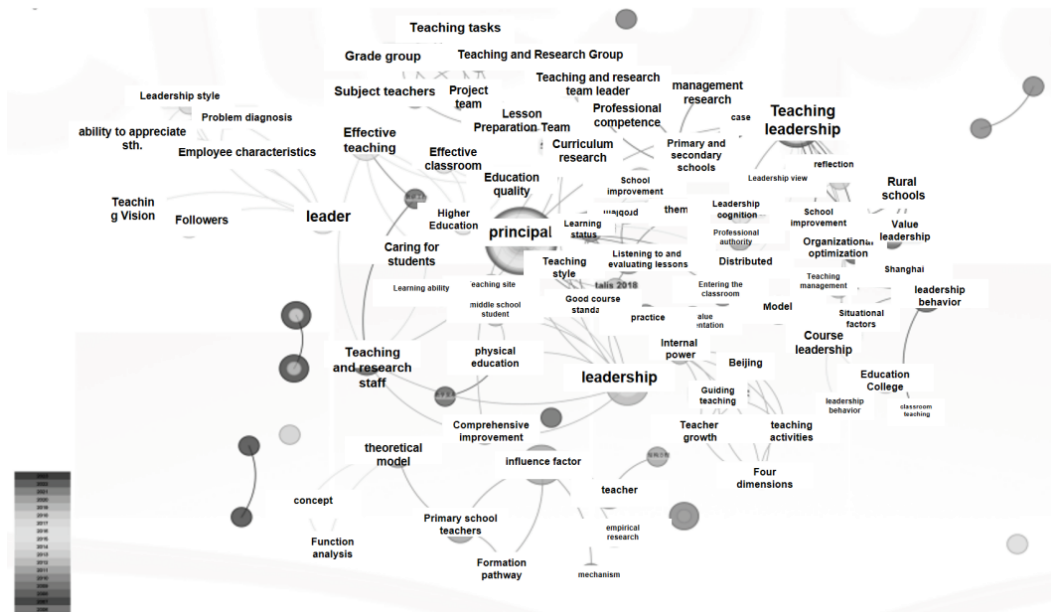
Figure 1 Keyword co-occurrence map of research on teaching leadership in China

By using CiteSpace 6.2 software to visualize the keyword Citation Burst of 444 initially collected literature (see Figure 2), it can be seen that research on teaching leadership in China has shifted from basic research to empirical research, from single subject research to multi subject research, and from macro research to micro practical research.

Top 11 Keywords with the Strongest Citation Bursts

Keywords	Year	Strength	Begin	End	2014 - 2023
Teaching leadership	2014	1.62	2014	2018	▬▬▬
Primary and secondary schools	2014	1.19	2014	2015	▬
Effective teaching	2014	1.03	2014	2015	▬
Generate Path	2017	1.09	2017	2018	▬
teacher	2017	0.8	2017	2019	▬▬
influence factor	2017	1.5	2019	2021	▬▬
Enhancement strategy	2019	2.08	2020	2021	▬
connotation	2020	1.38	2020	2021	▬
Grounded theory	2021	1.36	2021	2023	▬▬
Teaching and research team leader	2021	1.36	2021	2023	▬▬
leadership behavior	2021	1.36	2021	2023	▬▬

Figure 2 Keyword citation burst statistics of research on teaching leadership in China

Specifically, the research and practice of teaching leadership are distributed across different stages and subjects. Such as the teaching leadership of the principal, the teaching leadership of primary and secondary school principals, and the teaching leadership of English, physical education, and art subject teachers. In the research on the teaching leadership of principals, different from the research orientation of foreign teaching leadership gradually transitioning from "heroic leadership" to "distributed leadership", the research focus of Chinese teaching leadership not only focuses on hierarchical control and administrative management, but also places great emphasis on the principal's subjective participation in teaching, such as the "principal" entering the "small classroom", the principal listening and evaluating classes, and the principal concurrently teaching. This is related to China's social culture and historical traditions, and also reflects the basic characteristics of Chinese educational thought. In ancient China, the system of "official teacher integration" runs through official education, and the principal is also an official teacher. Therefore, the principal should have teaching leadership, which is also the fundamental principle of the principal's role[6].In the research on teacher's teaching leadership, it is seen as an important component of teacher professional development, such as having structural elements such as practice, communication, and cooperation[7].It comprehensively reflects the core abilities that teachers should possess. This is also similar to the path of teaching leadership and professional development of teaching and research personnel.

Using CiteSpace 6.2 software for cluster analysis of valid literature, it can be found that the study of influencing factors is an important part of research on teaching leadership in China, as shown in Figure 3. Teaching leadership itself is influenced by various factors. From an internal perspective, whether it is the four types of principals categorized by Shen Shu sheng as energetic and proactive, or the classification of educational and management oriented principals proposed by Zhao Xiaowei[8].It can be found that principals who have a vision for education and a desire for change, and are able to conduct continuous action research, are better equipped with teaching leadership. At the same time, teachers and researchers who possess charming teaching styles, complete teaching visions, profound teaching insights, and strong self-directed execution abilities are better equipped with teaching leadership[9].Therefore, regardless of the type of subject in teaching leadership, the inner spiritual core and execution ability are important factors in obtaining teaching leadership. In terms of external influencing factors, the cultural capital of hierarchical organizations plays an important role in supporting the ideal landscape of distributed leadership, shared leadership, and
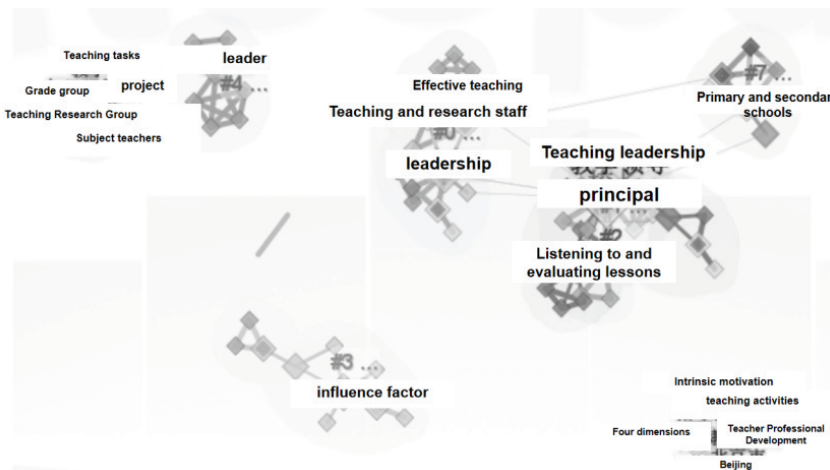
Figure 3 A Keyword Cluster Graph of Research on Teaching Leadership in China

so on. In short, the creation of cultural atmosphere is a key field for the generation and development of teaching leadership. To ensure the efficient use of teaching leadership, it is not only necessary to rely on the support of internal and external environments, but also to set shared goals, create shared environments, and improve classroom culture through specific operational methods.

The strategy research on teaching leadership only accounts for 19.3% of the total sample research, indicating that research on teaching leadership in China is still mainly based on basic research, with less empirical research. Whether it is to enhance the teaching leadership of the principal or other subjects such as teachers, enhancing the concept and awareness of the subject, strengthening teaching leadership ability, participating in relevant training, and emphasizing reflection are important core strategies. Among them, the principal's teaching leadership emphasizes the formation of atmosphere, establishment of vision, stimulation of backbone teachers, reasonable allocation of administrative affairs and teaching activities, and construction of teaching platforms. The teacher's teaching leadership emphasizes the guidance of professional development planning, innovation of teaching design, and strengthening of educational research.

4. Research inspiration

Firstly, greater emphasis should be placed on research on teaching leadership. Although research on teaching leadership in China has been increasing year by year, compared with foreign research, there is a significant difference in both quantity and quality. There is still room for research on the basic, structural, and applied aspects of teaching leadership. Secondly, further enrich the multi subject research on teaching leadership. The research on teaching leadership in China has initially completed the transition from a single principal subject to a multi subject, multidisciplinary study involving teachers, researchers, and other subjects. However, further research is needed, especially with limited comparative studies on teaching leadership across different subjects. There is still a gap in comparative research on teaching leadership across different stages of professional development within the same subject. Thirdly, further research combining qualitative and quantitative approaches should be carried out. According to the high-frequency keyword emergence statistics of research on teaching leadership in China, it can be concluded that research on teaching leadership in China has gradually expanded from quantitative research methods to qualitative research methods, aiming to track the formation and implementation process of teaching leadership, and further achieve the organic integration of qualitative and quantitative research. Especially at the practical level, conducting mixed research. Fourthly, deepen the research content of teaching leadership. There are three directions in the current research on teaching leadership in China. Firstly, it focuses more on summarizing the practical path of teaching leadership in China from specific educational and teaching events; Secondly, it further highlights the unique characteristics of Chinese teaching leadership in the infiltration of traditional Chinese educational ideas; The third is to focus on the collaborative achievement of teaching leadership in the external cultural atmosphere and internal spiritual transformation. In the future, it is necessary to deeply cultivate the traditional Chinese educational ideology and study the theoretical system of local teaching leadership; Based on research on leadership at home and abroad and educational leadership, explore the intersection of teaching leadership and different leadership styles, such as learning leadership, shared leadership, transformational leadership, etc; Explore and develop relevant standards for teaching leadership applicable to China.

References

[1]   Wu Xiaoying (2019).What is the impact of "influencing factors" on the generation of teaching leadership among primary and secondary school teachers—— Answer based on empirical research Contemporary Education Forum, (2), 75-87.

[2]   He Canhua (2010).Improving teaching effectiveness: The purpose of enhancing course leadership Chinese Journal of Education, (2), 56-59.

[3]   Huang Lili, &Wu Zhikui (2020).Teacher's teaching leadership and its structural model construction Contemporary Educational Science, (2), 43-47.

[4]   Qi Xuan (2015). Research on the Structure and Enhancement of Teacher Teaching Leadership Chinese Journal of Education, (S1): 378-379.

[5]   Zhao Qian, &Liu Jing (2010). Research on the Teaching Leadership Model of Chinese Principal Primary and Secondary School Management, 3, 10-13.

[6]   Wang Shao Hua, & Wang Zhi Hai. (2011). The Emergence of "School Principals" in Ancient Chinese Official Schools. Knowledge Economy, (3), 180-180.

[7]   Wang Min, &Zhu Yongxin (2020). Progress and Prospects in Research on Teaching Leadership. Chinese Educational Science (Chinese English), 3 (04), 130-143.

[8]　Zhao Xiaowei, &Wang Weihao, &Shen Shusheng (2022).Promoting or inhibiting: What factors affect the sustained willingness of principals to engage in online teaching Research on Electrified Education, 2022, 43 (08), 51-58.

[9]　Wu Xiaoying, &Zhu Dequan (2015).The dilemma and breakthrough in the generation of teacher's teaching leadership Chinese Journal of Education, 5, 71-75.

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