

Literature Review on the Impact of Educational Leadership on Student Academic Achievement

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Abstract: This paper systematically reviews the research progress (2000-2024) on the impact of educational leadership on student academic achievement. The review finds that the theoretical connotation of educational leadership has continuously evolved, shifting from an early focus on formal leaders (e.g., principals) to emerging perspectives emphasizing distributed leadership, teacher leadership, and learning-centered instructional leadership. Teacher leadership, as a vital branch of educational leadership, has become a research hotspot, with studies exploring its structural connotations (e.g., self-leadership, student development, professional community, school development, family education leadership), developmental characteristics (process-oriented, contextual), and enhancement pathways (empowerment, course development, practical transformation). Regarding the relationship between educational leadership and academic achievement, research indicates that the influence is indirect and complex: educational leadership (e.g., instructional leadership, teacher curriculum leadership, distributed leadership) affects students' learning attitudes, motivation, emotions, and strategies through mediating variables such as school culture, teacher motivation and behaviors, teaching strategies, curriculum implementation, technology application, and resource sharing, ultimately impacting academic achievement. Existing research primarily employs empirical methods (combining qualitative and quantitative approaches), yet exhibits limitations including insufficient and inconsistent empirical evidence, low ecological validity, lack of research on dynamic interactions and synergistic effects, and inadequate exploration of cultural factors. Future research should focus on the mechanisms of specific leadership types (e.g., teacher leadership, distributed leadership), adopt mixed methods, pay attention to contextual differences, and explore the dynamic interactions among leadership, teaching practices, student states, and academic achievement.

Keywords: Educational Leadership; Academic Achievement; Distributed Leadership; Teacher Leadership; Academic Emotions

1. Introduction

Education is the cornerstone of national development, and improving educational quality and promoting the comprehensive development of students are the core goals of educational reform. Educational leadership, as a key factor influencing school effectiveness, teaching quality, and ultimately student academic achievement, has increasingly attracted widespread attention from both academia and practice. In the face of numerous challenges in educational reform, exploring educational leadership, particularly how it affects student academic achievement, is of significant theoretical and practical importance for

understanding school operational mechanisms, optimizing educational management practices, and promoting modernization and sustainable development in education. Therefore, this study focuses on the core issue of "the impact of educational leadership on student academic achievement," aiming to systematically review existing research findings, clarify the evolution of the connotation of educational leadership, its main types, mechanisms of action, and the complex relationship with student academic achievement, as well as identify the shortcomings of existing research and future directions.

The research mainly focuses on the evolution of educational leadership theories, core connotations and

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types, the role of teacher leadership, the relationship between educational leadership and student academic achievement, research methodologies, and main findings. The study is based on abstracts of 18 Chinese and English literature sources from core journals at home and abroad, covering the period from 2000 to 2024 and encompassing various research types. Through systematic reading, summarization, and integration of these abstracted information, the study aims to present the basic landscape and cutting-edge dynamics of this research field.

2. Evolution of Educational Leadership

Theories and Core Connotations

Educational leadership is not a static concept; its theoretical development exhibits dynamic evolution characteristics. Research by Teng Peng et al. points out that while educational leadership theory originates from the perspective of corporate leadership, its development must be closely integrated with the practice of educational management. This study reveals through content analysis that research on educational leadership theory is predominantly empirical, utilizing both qualitative and quantitative methods, with case studies playing a key role in promoting topic development and theoretical construction. Early research may have focused more on the roles of formal leaders (such as principals) and objective job analysis, but as research deepens, the focus gradually shifts to the subjective constructions of stakeholders and increasingly centers on "learning."

Among various educational leadership theories, the theory of "distributed leadership" has gained significant attention and development in recent years.

This theory posits that "leadership is not concentrated in individuals holding formal positions," advocating for the view of leadership as a practice dispersed throughout the organization, encouraging broader member participation. Understanding and practicing distributed leadership requires adopting a "gradual adjustment" perspective, adapting according to the school context, developmental needs, and member readiness, and reinterpreting the roles of formal leadership and organizational structure within it. Wu Yu explores how educational information technology leadership can promote the sharing of educational resources from the perspective of distributed leadership, suggesting that this process can be divided into three stages: initial planning, collaborative interaction, and proactive innovation, ultimately forming a bottom-up, proactive innovation atmosphere through institutional guarantees and cultural penetration. This theory has propelled research on informal leadership roles such as teacher leadership.

At the same time, "instructional leadership," as a core concept in the field of school leadership and management, continues to receive attention. Cheng Shangrong emphasizes that instructional leadership possesses profound leadership, transcendence over technology, and diversity of subjects, closely linked to culture, aiming to enhance the quality of student learning and creativity. Zhao Decheng summarizes the assessment tools for instructional leadership and points out future research directions, including guiding research with a comprehensive development concept, shifting from principal instructional leadership to shared instructional leadership, and improving the ecological validity of research.

Table 1: Summary of Major Educational Leadership Related Concepts Mentioned in Literature Abstracts

Concept of Leadership / Theory	Core Ideas / Characteristics / Dimensions (According to Abstract)	Cited Literature (Abstract Number)
Teaching Leadership	Through value leadership; transcending technical pursuits for value rationality; pluralism of subjects (teachers as leaders); emphasizing self-leadership; cultural relevance; aimed at improving student learning quality	[1], [13]
Distributed Leadership	Leadership is not concentrated in individuals with formal positions; a gradual process of involvement from formal to informal leadership; needs to be adjusted according to context; promotes resource sharing (startup, interaction, innovation stages)	[3], [10], [15]

Teacher Leadership (General)	One of the triple abilities of excellent teachers; a measure of educational vitality; includes self, nurturing, professional community, school development, and family education leadership; process-oriented, contextual, interactive, and implicit.	[3], [5], [9]
Teacher Technological Leadership	Integrating technological literacy / capabilities / resource integration into leadership behaviors; promoting technology application, improving teaching, and enhancing efficiency; including dimensions such as integration, planning, assurance, management, and reflective ability.	[6]
Teacher Curriculum Leadership	Leading and guiding members in curriculum affairs (design, development, implementation, evaluation); enhancing the quality of student learning; different representations at various developmental stages (awareness, professionalism, collaboration, and critical thinking).	[11], [12], [14]
Learning-Centered Leadership	A direction for the development of teaching leadership that emphasizes learning as the core.	[13]

3. The Rise, Connotation, and Development Path of Teacher Leadership

With the popularization of distributed leadership theory and the increasing demand for teacher subjectivity in educational reform, teacher leadership has become an increasingly important branch and emerging field in educational leadership research ([3], [5], [9]). Several scholars emphasize that in the context of the new era, leveraging teacher leadership is crucial for promoting educational modernization ([5]), implementing collaborative educational reforms ([9]), deepening curriculum reform ([11], [12]), and enhancing the overall vitality of schools.

Scholars have defined the connotation and structure of teacher leadership from multiple dimensions. Zhao Mingren (2023) proposed that teacher leadership is a third capability characteristic beyond excellent teachers' learning and teaching abilities, including five dimensions: self-leadership, student development, professional community, school development, and family education leadership. The functioning of these dimensions is an important measure of regional educational vitality [5]. Zhang Rongfei and Zhao Leilei focus on the technological leadership of teachers in the intelligent era, defining it

as the ability to integrate information technology into leadership behaviors, and dividing its structure into five components: integration of technology and teaching, planning ability for technology application, support capacity, management power under technological support, and reflective ability in technology application. Other scholars have explored teacher curriculum leadership, which refers to the ability of teachers to lead and guide members in curriculum matters ([11], [14]).

The development of teacher leadership is characterized by processuality and situationality, influenced by individual, group, and environmental factors [5]. Zhang Qiong and Fu Yan found through surveys that teachers at different development stages exhibit differences in their curriculum leadership representations [14]. However, the overall development of teacher leadership currently faces challenges. Zhao Mingren pointed out that the overall situation is not ideal [5], and Ye Liping and Zhu Chengke (2014) also mentioned that teachers are detached from curriculum leadership, with traditional management models hindering the enhancement of their leadership. In response to these issues, scholars have proposed corresponding improvement paths,

including setting up leadership courses, transformational leadership practices [5], and empowerment [12].

4. Student Academic Achievement: Evaluation, Influencing Factors, and the Connection with Motivation Theory

The effective evaluation of student academic achievement and the study of influencing factors are quite complex. Zhang Bin and Wang Shaofei believe that the design of academic achievement report cards affects the realization of evaluation functions, suggesting a shift from "informative" to promoting learning improvement, requiring specific situations to be presented based on teaching objectives, focusing on improvement actions, accommodating student reflections, and establishing a communication and negotiation mechanism between teachers and students

[2]. However, achieving effective monitoring of academic achievement also faces challenges. Zhang Zhenzhu and Wang Yan mentioned in their review of an interview with Aaron Benavot that monitoring educational sustainable development goals is difficult and requires a transformation of monitoring mechanisms [8].

Multiple studies focus on students' psychological factors. Dong Yan and Yu Guoliang found that academic emotions have a complex impact on academic achievement, with different levels of emotional arousal having different effects [16]. The research by Wang Zhenhong and Liu Ping also revealed significant impacts of motivational factors, learning strategies, and intelligence levels on high school students' academic achievement, with some factors having direct effects and others influencing indirectly through mediating variables [18].

Table 2: Factors Related to Student Academic Achievement Mentioned in the Literature Abstracts

Influencing Factors	Relationship/Effect with Academic Achievement (According to Abstract)	Cited Literature (Abstract Number)
Design of Academic Achievement Report Card	New designs point to learning improvements, establish communication and negotiation mechanisms, provide reflection opportunities, and focus on improvement actions (indirect influence)	[2]
Teacher Educational Leadership	Shapes academic achievement through active communication, motivation stimulation, demonstration, etc. (positive influence)	[4]
Teacher Motivation	The association with student outcomes is still inconsistent and may be influenced by mediating variables such as teaching strategies	[7]
Academic Emotions	Positive low-arousal emotions directly predict positively; negative high/low-arousal emotions directly predict negatively; positive high-arousal emotions indirectly predict positively through goals, efficacy, and strategies	[16]
Motivational Factors (Students)	Self-efficacy, intrinsic motivation, and mastery goals are significantly positively correlated; extrinsic motivation and performance goals are significantly negatively correlated; self-efficacy has a	[18]

	direct regression effect on mastery goals; intrinsic motivation indirectly influences through learning strategies.	
Learning Strategies	Significantly positively correlated with academic achievement; has a direct regression effect on academic achievement.	[18], [16]
Intelligence Level (IQ)	Significantly positively correlated with academic achievement; has a direct regression effect on academic achievement.	[18]
Monitoring of Educational Sustainable Development Goals	Monitoring difficulties and challenges in achieving goals, indirectly related to academic achievement as one of the measurement indicators.	[8]

These studies on students' intrinsic motivation and emotions are also linked to research exploring teacher behaviors and leadership. For example, Bardach and Klassen focus on the relationship between teacher motivation and student outcomes; although their conclusions are inconsistent, they suggest that teacher motivation may influence students through teaching strategies, among other factors [7]. YuSong Liu and others apply Maslow's hierarchy of needs theory to teacher educational leadership practices, arguing that teachers shape students' academic achievements and character through positive communication, implying that the motivational state of teachers may affect leadership behaviors and students [4].

5.the pathways and complexities of how educational leadership influences student academic achievement

The relationship between educational leadership and student academic achievement is complex, with empirical research showing that its influence is indirect and mediated by multiple factors. Theoretically, educational leadership aims to promote student learning and development, as both instructional leadership and teacher curriculum leadership point towards the enhancement of student learning quality. However, in practice, leadership affects academic achievement through a series of mediating variables, such as teacher motivation, which may influence student outcomes through teaching strategies.

The perspective of distributed leadership also provides a framework for understanding this influence. When leadership is distributed among more members, it may stimulate broader participation and innovation

([10], [15]), forming a stronger professional learning community ([5]), which helps improve the overall teaching environment and practices, thereby benefiting student learning. However, research also points out the complexities and challenges involved. Bardach and Klassen particularly emphasize the inconsistency found in the relationship between teacher motivation and student outcomes, and explore the possibility of "signal loss," as well as the necessity of studying reverse effects, reciprocal effects, and dynamic interactions [7]. This suggests that the chain from leadership behavior to student academic achievement may be disrupted by various factors [5]. Zhao Decheng also highlighted the need to enhance the ecological validity of research on teaching leadership [13], which means that studies need to be closer to real school environments and consider the interactions of more complex factors.

6.Summary

Based on the summary of the above literature, we can see that current research on educational leadership and its impact on student academic achievement presents the following main characteristics and trends:

First, the concept of educational leadership has continuously evolved and deepened, shifting from an early focus on individual principals and management functions to a gradual emphasis on the teaching process and a learning-centered approach, leading to the emergence of new theoretical perspectives ([13]); secondly, teacher leadership has received significant attention ([3], [5], [9]), with research delving into its structural connotations ([5], [6], [11]), developmental representations ([14]), practical dilemmas ([12]), and

enhancement pathways ([5], [9], [11], [12]); thirdly, research methodologies are primarily empirical, employing both qualitative and quantitative methods, with case studies playing an important role ([3]), while also utilizing quantitative approaches such as structural equation modeling ([16]) and regression analysis ([18]) to explore influencing factors; finally, regarding the relationship between educational leadership and student academic achievement, research tends to view this as an indirect and complex process, where leadership influences student learning attitudes, motivation, emotions, and strategies ([16], [18]) through mediating factors such as school culture ([1]), teacher motivation and behaviors ([4], [7]), teaching strategies ([7]), curriculum implementation ([11]), technology application ([6]), and resource sharing ([10]), ultimately reflecting in academic achievement.

However, the existing research (based on the provided abstract) also has some obvious shortcomings or gaps:

There is limited empirical evidence regarding the direct impact of educational leadership on student academic achievement, and the conclusions are inconsistent; the research perspectives and methods need to be expanded, with a focus on improving ecological validity and addressing dynamic interactions; there is insufficient research on the synergistic effects of different types of leadership and the differences in their effects in various school contexts; the role of cultural factors in educational leadership practices lacks in-depth empirical research.

Based on this, future research can be expanded in the following areas: First, it can focus on specific types of leadership (for example, teacher leadership or distributed leadership, which are currently hot topics) and their relationship with student academic achievement, emphasizing the exploration of specific, measurable mediating mechanisms (such as teachers' sense of teaching efficacy) to more clearly reveal the pathways of "signal" transmission. Second, mixed research methods can be employed, combining large-scale surveys and in-depth case studies of schools to balance generalizability and contextual details. Third, particular attention can be paid to the differences in leadership practices across different contexts (such as regions with varying levels of development and different types of schools) and their similarities and differences in impacting student achievement, providing more targeted recommendations for policy formulation and practice improvement. Finally, this study will strive to capture

the dynamic interactions between leadership, teaching practices, student states, and academic achievement in data collection and analysis, responding to existing research calls for exploring reciprocal effects and dynamic processes. Through these efforts, it is hoped to provide deeper, more specific, and more practical insights into the core issue of "how educational leadership can effectively promote student academic achievement."

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