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Research on the Relationship between Educational Leadership in Higher Education and Teacher Professional Development

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Abstract: This study investigates the relationship between educational leadership and teacher professional development in Chinese primary schools, focusing on how school leaders facilitate the emergence of teacher leadership. Grounded in Distributed Leadership Theory and the concept of Teacher Professional Agency, the research employs a quantitative design using a structured questionnaire administered to 50 teachers. The findings indicate that school leadership practices—specifically participatory decision-making, professional development support, and the recognition of innovation—significantly influence teacher leadership development. Furthermore, correlation and regression analyses demonstrate that organizational and cultural factors, such as trust, collaboration, and shared values, exert a slightly more substantial effect than direct leadership actions. These results suggest that cultivating a supportive school culture is as critical as enhancing specific leadership behaviors. This study contributes theoretical insights into distributed leadership within the Chinese educational context and provides practical recommendations for school leaders and policymakers to strengthen teacher agency, promote collaborative cultures, and integrate leadership training with cultural development strategies. Finally, the research discusses implications for policy under the Education Modernization 2035 initiative and suggests directions for future research.

Keywords: educational leadership; teacher leadership; distributed leadership; teacher professional development; school leadership practices

1. Introduction

Effective school leadership is a cornerstone of educational transformation and teacher empowerment in the 21st century. Current global discourse emphasizes that sustainable improvement in teaching and learning stems from distributed leadership, where teachers actively help shape instructional practices and school culture. In China, as the educational landscape shifts from traditional hierarchical management toward more inclusive models, fostering teacher leadership presents both significant opportunities and structural challenges [1,2].

The evolution of China's education system, guided by initiatives like the Education Modernization 2035 policy, has redefined the role of principals from administrative managers to instructional leaders [3]. These leaders are now expected to cultivate environments of innovation and autonomy. However, the implementation of distributed leadership is often complicated by the persistence of exam-oriented cultures and bureaucratic oversight [4]. While international models, such as those in Finland and Singapore, offer insights into structured career ladders and collective responsibility, the application of these concepts within the Chinese primary school context remains relatively under-researched [5].

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Teacher leadership encompasses both formal roles and informal influence, yet it faces barriers such as rigid hierarchies and a lack of recognition. Many teachers still perceive leadership as an administrative domain rather than a core part of their professional identity [6,7]. Despite its importance, empirical data suggests a gap between policy goals and school-level reality. For instance, a 2023 survey indicated that only 34% of primary school teachers reported involvement in leadership roles, with fewer than 20% perceiving active support from their administrators.

This study investigates how school leaders in Chinese primary schools promote teacher leadership, examining the strategies used, the organizational conditions involved, and how teachers perceive these opportunities [8]. The research objectives are to examine leadership practices (RO1), explore cultural factors (RO2), and understand teacher perceptions (RO3). Correspondingly, the study addresses what strategies are used (RQ1), which conditions support leadership (RQ2), and how teachers interpret their roles (RQ3).

The significance of this research lies in its potential to inform leadership training and policy, particularly in bridging the resource gap in various educational contexts. By amplifying teacher voices, the study aims to validate educator experiences and provide guidance for creating trust-based professional environments [9]. Focusing on an urban public primary school, this research utilizes interviews and document analysis to provide in-depth insights into specific institutional practices. Key terms include Teacher Leadership, School Leadership, Distributed Leadership, and Empowerment [10].

The conceptual framework, grounded in Distributed Leadership Theory and Teacher Professional Agency, is illustrated in Figure 1. It posits that school leadership practices influence organizational support and teacher perceptions, which in turn drive teacher leadership development. As shown in Figure 1, the framework establishes the path from leadership actions to professional outcomes.

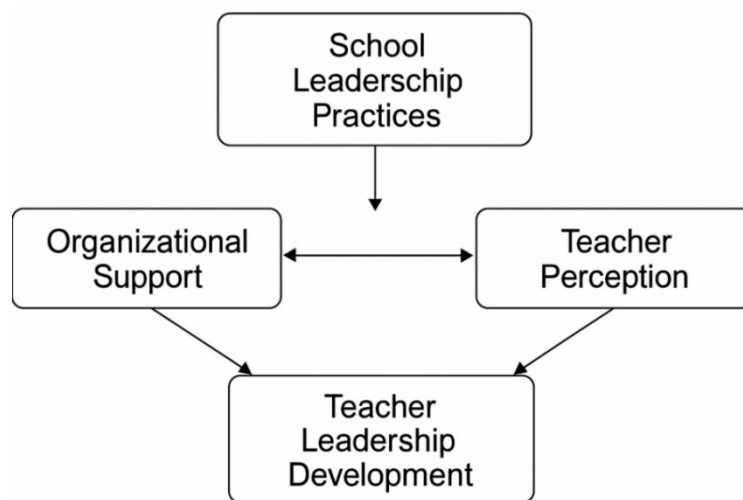


Figure 1. Conceptual Framework.

The variables associated with this framework are summarized in Table 1. As shown in Table 1, the study identifies leadership practices as the primary driver, with culture and perceptions acting as mediating and moderating factors.

Table 1. Key Constructs and Variables.

| Category | Variable | Description |
|-------------|-----------------------------|--|
| Independent | School Leadership Practices | Leader actions taken to empower and support teachers. |
| Mediator | Organizational Support | Institutional trust, collaboration, and shared values. |

| | |
|----------------------------------|--|
| Dependent Leadership Development | The extent of teacher engagement in leadership roles. |
| Moderator | Teacher Perceptions |
| | Subjective interpretations of support and opportunities. |

2. Literature Review

2.1. Introduction

This chapter reviews the body of literature related to educational leadership and teacher leadership development, particularly within the context of Chinese primary education. Grounded in a quantitative design, it systematically examines theoretical perspectives, empirical findings, and contextual factors to build a comprehensive understanding of how leadership practices shape teacher empowerment. The review is organized to address the strategies used by school leaders, the organizational conditions that support leadership development, and teachers' perceptions of their roles.

2.2. Evolution of Educational Leadership

Educational leadership has transitioned from traditional top-down administrative approaches to collaborative and participatory models. This transformation recognizes that effective teaching and learning require visionary, supportive leadership that empowers educators at all levels. Modern leadership is characterized by the ability to guide instruction, influence school culture, and support professional development. Scholars describe it as a strategic process through which principals influence instructional quality and student achievement.

The shift from managerialism to instructional and distributed leadership reflects a significant change in educational governance. In China, curriculum reforms have urged principals to move beyond compliance management to support pedagogical innovation. Distributed leadership is increasingly viewed as a necessary response to the complex challenges of modern schooling, promoting shared responsibility and fostering a resilient organizational culture.

2.3. Distributed Leadership: Theory and Practice

Distributed leadership theory conceptualizes leadership as an organizational system rather than a set of individual traits, shifting attention to the dynamic interactions between leaders and followers [11]. In the Chinese context, empirical investigations reveal that while policy documents promote distributed models, implementation varies across regions. Urban schools often demonstrate more flexibility in integrating shared leadership practices, whereas schools in other areas may face constraints due to traditional administrative structures [3].

Research indicates a positive correlation between distributed leadership and teacher collaboration, empowerment, and job satisfaction [12]. The effectiveness of this model is shaped by mediating factors such as teacher self-efficacy, trust in leadership, and professional autonomy. Schools with high relational trust enable teachers to assume leadership roles with greater confidence. Furthermore, cultural norms and institutional clarity influence the extent to which teachers participate meaningfully in leadership activities.

2.4. Dimensions and Challenges of Teacher Leadership

Teacher leadership involves educators influencing peers, leading change, and participating in school governance through both formal roles and informal collaboration [2]. Internationally, structured career ladders and mentorship systems demonstrate how teacher leadership can be developed systematically when supported by school heads [13]. In China, however, teacher leadership remains a relatively emerging concept in primary

education. Despite national policy encouragement, many schools continue to operate under centralized control, which can limit teacher decision-making power and career advancement pathways.

The implementation of teacher leadership faces cultural and structural challenges. Traditional emphasis on organizational harmony may sometimes discourage non-administrative staff from exercising influence. Additionally, inconsistent policy execution and insufficient professional development resources can impede the building of leadership capacities. Teachers in resource-constrained environments, in particular, may lack access to the collaborative training necessary for teacher-led initiatives.

2.5. The Principal's Role and Organizational Culture

School leaders play a pivotal role in nurturing teacher leadership by fostering collaborative environments and recognizing teacher contributions [9]. Principals who model distributed leadership by delegating decision-making and encouraging risk-taking tend to foster more innovative school cultures [5]. This shift aligns with national directives emphasizing participatory governance, though leadership development programs for principals need to incorporate distributed frameworks more explicitly [10].

Supportive organizational culture is vital for leadership development. Schools that promote open communication and shared values tend to have more engaged teacher leaders, while environments characterized by top-down management may stifle leadership potential. Teachers' perceptions of their own leadership capacities are also shaped by this institutional culture. Positive perceptions lead to greater involvement in school improvement, whereas negative experiences can hinder motivation.

2.6. Policy Context and Research Gaps

The Education Modernization 2035 policy advocates for a redefinition of school leadership and the promotion of teacher professionalism. However, implementation remains uneven across different regions and school types [14]. Despite growing attention to distributed leadership and teacher agency, there is a lack of empirical studies specifically focusing on Chinese primary schools. Most research centers on secondary or international contexts, leaving a gap in understanding the lived experiences of primary educators. Furthermore, few studies employ quantitative methods to examine the direct and indirect effects of leadership practices on teacher empowerment.

2.7. Theoretical Framework

This study adopts two complementary theoretical perspectives: Distributed Leadership Theory and Teacher Professional Agency [15]. These frameworks offer insight into how leadership practices are enacted and how teachers respond within specific institutional contexts. The conceptual model assumes that school leadership practices influence teacher leadership directly and indirectly through organizational support and teacher perceptions.

2.8. Conclusion

This chapter has reviewed the literature regarding conceptual definitions, theoretical models, and empirical findings. It highlighted the crucial role of school leadership in enabling teacher empowerment and identified key challenges within the Chinese education system. The following chapter will describe the research methodology used to test the relationships proposed in the conceptual framework.

3. Methodology

3.1. Research Design and Setting

This study adopts a quantitative research design to examine how school leaders promote teacher leadership within the Chinese primary school context. A cross-sectional survey method was selected to collect standardized data at a single point in time, facilitating the measurement of relationships between variables with high objectivity and reliability. This approach supports hypothesis testing and the identification of trends across diverse teacher experiences [16].

The research was conducted at School A, a public primary school in an urban area of Eastern China. Serving approximately 850 students with over 60 full-time teachers, the school is active in national professional development initiatives and education reforms. Its emphasis on collaborative teaching and continuous improvement provides an ideal environment for investigating the dynamics of distributed leadership and teacher empowerment.

3.2. Participants and Sampling Strategy

A purposive sample of 50 in-service teachers from School A was selected to participate in the study. To ensure broad representation, the sample included educators from various grade levels and subject specializations. Participation was entirely voluntary, and all respondents provided informed consent prior to data collection. This sampling strategy ensured that the insights gathered reflect a wide range of professional backgrounds and leadership experiences within the school.

3.3. Research Instrument

The primary data collection tool was a structured questionnaire developed from validated instruments in educational leadership and organizational behavior. It comprised four key sections: (a) perceptions of school leadership practices, (b) organizational support, (c) feelings of empowerment, and (d) involvement in teacher leadership roles. Items were rated on a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree), a format widely accepted for measuring professional attitudes [17]. The instrument's internal consistency was confirmed through a pilot study before full implementation.

3.4. Data Collection and Quality Control

Data collection took place over a two-week period during the school's professional development program. Printed questionnaires were distributed in a structured session, and participants were given approximately 30 minutes to complete them. To ensure validity, the instrument underwent expert review for alignment with research objectives. Construct validity and reliability were further assessed using Exploratory Factor Analysis (EFA) and Cronbach's alpha, with a coefficient of 0.70 or above considered acceptable [17]. All collected data were encrypted and stored securely to maintain participant anonymity and confidentiality.

3.5. Data Analysis Procedures

Quantitative data were analyzed using SPSS Version 28.0. Descriptive statistics, including means and standard deviations, were used to summarize responses. Correlation analysis was conducted to examine the direction and strength of relationships between leadership practices and teacher development, while multiple regression analysis identified specific leadership predictors of teacher leadership [16]. These statistical methods allowed for a rigorous testing of the research hypotheses.

3.6. Ethical Considerations

The study adhered to institutional ethical guidelines, obtaining approval from the relevant Review Board before commencement. Participants were provided with an information sheet detailing the study's aims and their rights, including the option to withdraw at any time without consequence. All data were used strictly for academic purposes, ensuring a voluntary and risk-free environment for all involved [9].

3.7. Conclusion

In summary, the methodological framework utilizes a quantitative approach to objectively assess the influence of school leadership on teacher leadership. Through rigorous sampling, validated instrumentation, and systematic statistical analysis, the study provides empirical evidence to address the core research questions regarding leadership strategies and organizational culture in a Chinese primary school.

4. Results and Discussion

4.1. Introduction

This chapter presents the findings of the empirical analysis conducted to investigate the relationships among school leadership practices, organizational and cultural support, and teacher leadership development in a Chinese primary school. Grounded in Distributed Leadership Theory and Teacher Professional Agency, the analysis translates the conceptual framework into measurable outcomes. The study utilizes descriptive statistics, correlation analysis, and multiple regression to determine how leadership behaviors and organizational conditions interact to shape teacher agency. These statistical procedures provide robust evidence for testing the proposed model and addressing the research questions in light of the Chinese educational context and policies like Education Modernization 2035.

4.2. Demographic Profile of Respondents

The demographic characteristics of the 50 participating teachers provide essential context for interpreting the findings. As shown in Table 2, the participants are categorized by gender, age, experience, and subject area.

Table 2. Demographic Information of Respondents.

| Variable | Category | Frequency | Percentage |
|----------------|-------------|-----------|------------|
| Gender | Male | 18 | 36% |
| | Female | 32 | 64% |
| Age Group | <30 | 9 | 18% |
| | 30-39 | 22 | 44% |
| | 40-49 | 15 | 30% |
| | 50+ | 4 | 8% |
| | | | |
| Years Teaching | <3 | 6 | 12% |
| | 3-5 | 11 | 22% |
| | 6-10 | 15 | 30% |
| | 11-15 | 11 | 22% |
| | 16+ | 7 | 14% |
| Subject | Chinese | 14 | 28% |
| | Mathematics | 13 | 26% |
| | English | 10 | 20% |
| | Science | 7 | 14% |
| | Other | 6 | 12% |

The gender distribution, visualized in Figure 2, reflects the broader pattern in Chinese primary education where female teachers form the majority. This composition may influence leadership dynamics, as collaborative environments often thrive in relational trust-based settings [7].

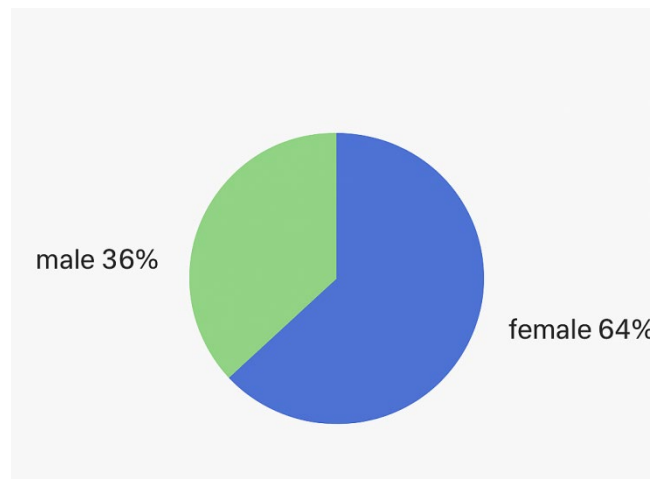


Figure 2. Gender Distribution of Respondents.

The age and experience data indicate a workforce with significant professional maturity. The largest group (44%) consists of mid-career professionals (aged 30-39), who are typically experienced enough to lead while remaining open to innovation [9]. The sample also shows a healthy mix of subject specializations and grade-level representation, ensuring a comprehensive view of leadership opportunities across the curriculum.

4.3. Descriptive and Correlation Analysis

Descriptive statistics were computed to summarize perceptions of leadership and culture. As shown in Table 3, the mean scores across all items were high, generally exceeding 4.0 on a 5-point scale.

Table 3. Descriptive Statistics of Survey Items (Selected).

| Item | Mean | SD | Min | Max |
|----------|------|------|-----|-----|
| Q1 (SLP) | 4.06 | 1.00 | 2 | 5 |
| Q6 (OCS) | 4.10 | 0.95 | 2 | 5 |
| Q8 (TLD) | 4.14 | 0.97 | 2 | 5 |

Figure 3 illustrates the consistently high perception of leadership support across the survey dimensions.

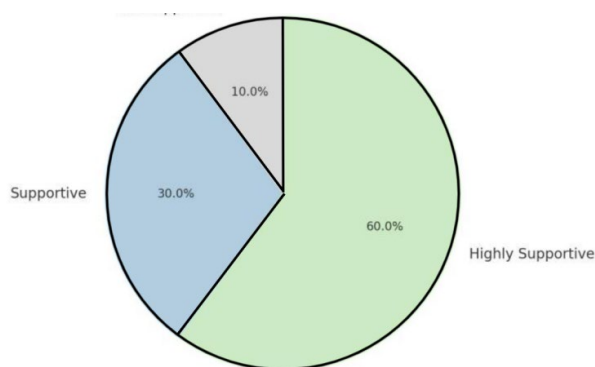


Figure 3. Perception of Leadership Support.

To examine bivariate relationships, Pearson correlations were calculated. As shown in Table 4, all core constructs showed strong and statistically significant positive correlations ($p < .001$).

Table 4. Pearson Correlations among Main Variables.

| Variable | 1. SLP | 2. OCS | 3. TLD |
|--|--------|--------|--------|
| 1. School Leadership Practices (SLP) | 1.000 | 0.416 | 0.769 |
| 2. Organizational & Cultural Support (OCS) | 0.416 | 1.000 | 0.848 |
| 3. Teacher Leadership Development (TLD) | 0.769 | 0.848 | 1.000 |

The strong correlation between SLP and TLD ($r = .769$) confirms that participatory leadership fosters teacher agency [9]. Notably, the link between OCS and TLD was even stronger ($r = .848$), suggesting that a supportive organizational climate, characterized by trust and collegiality, is a critical enabler of teacher-led initiatives in the Chinese context.

4.4. Regression Analysis and Discussion

Multiple regression analysis was conducted to isolate the unique contributions of SLP and OCS to teacher leadership. The model was highly significant, $F(2, 47) = 302.2$, $p < .001$, explaining 92.8% of the variance in TLD. Both variables emerged as significant predictors, though OCS ($\beta = 0.598$, $p < .001$) exerted a stronger influence than SLP ($\beta = 0.372$, $p < .001$).

These findings provide empirical support for Distributed Leadership Theory [14]. The dominance of OCS suggests that while direct leadership actions are vital, the broader cultural environment—characterized by psychological safety and collective trust—is the primary driver for teachers to assume leadership roles. This is particularly relevant in the Chinese context, where principals operate at the intersection of institutional standards and collaborative professional development.

Practically, these results advocate for a dual strategy: principals should continue delegating authority (SLP) while simultaneously focusing on building relational trust and professional learning communities (OCS). Such an approach aligns with the Education Modernization 2035 initiative's goal of enhancing teacher professionalism.

4.5. Chapter Summary

The empirical analysis confirms that both leadership practices and organizational culture are significant predictors of teacher leadership development in the studied primary school. While descriptive data shows a positive overall environment, the regression model highlights that cultural support is the more powerful direct driver of teacher agency. This underscores the importance of integrating cultural development with leadership training to foster sustainable teacher empowerment.

5. Conclusions, Implications, and Recommendations

5.1. Introduction

This chapter synthesizes the findings to draw conclusions in response to the research questions and discusses the theoretical and practical implications of the study. It provides targeted recommendations for school leaders, policymakers, and researchers, contributing to the discourse on teacher leadership in the Chinese primary school context. The research examined how leadership practices and organizational culture influence teacher leadership, grounded in Distributed Leadership Theory and Teacher Professional Agency. Based on data from 50 teachers, the study concludes that while both factors are critical predictors of teacher leadership development, organizational support exerts a slightly stronger influence.

5.2. Conclusions

Regarding RQ1, the analysis reveals that school leaders employ strategies such as providing professional development, encouraging participatory decision-making, and recognizing innovation. These actions align with distributed leadership principles, though the data suggests room for more consistent implementation to match the high level of cultural support present in the school.

For RQ2, organizational and cultural support demonstrated the strongest correlation with teacher leadership development. Teachers perceived their environment as collaborative and trusting. This underscores that cultural factors-such as collegial trust and shared values-are essential for enabling and sustaining leadership roles over time [7].

In response to RQ3, teachers generally perceived themselves as active contributors to school leadership, engaging in both formal and informal mentoring and professional learning. These self-perceptions reflect a high degree of professional agency, where educators feel a sense of autonomy and responsibility for improving school practices.

5.3. Implications

Theoretically, this study demonstrates that in the Chinese primary school context, cultural support is as vital as formal leadership practices. It reinforces the view of leadership as a relational process embedded in organizational culture. Furthermore, it expands the theory of Teacher Professional Agency by showing that agency is not merely an individual trait but is significantly shaped by the school's structural and cultural conditions.

Practically, the results suggest that school leadership training should prioritize building inclusive professional cultures over purely technical or administrative skills. The predictive value of organizational support indicates that principals should focus on strengthening collegial relationships through structured collaboration and peer mentoring. For policymakers, the findings highlight the need to integrate cultural metrics into evaluation frameworks under the Education Modernization 2035 initiative, incentivizing schools to develop supportive organizational environments.

5.4. Recommendations

For school leaders, it is recommended to enhance participatory decision-making by creating formal structures for teachers to contribute to curriculum and policy design. Additionally, implementing recognition systems that celebrate collective achievements and allocating dedicated resources for Professional Learning Communities (PLCs) will further foster collaboration.

Policymakers should integrate cultural goals into leadership policy by including metrics for organizational trust in school evaluations. Funding for specific teacher leadership pathways, such as mentor or curriculum coordinator roles, should be prioritized. Furthermore, principal training programs should combine instructional leadership with cultural change management.

Future research should expand the sample scope to various regions to test generalizability and adopt mixed-methods approaches to capture deeper qualitative insights. Longitudinal studies are also recommended to explore how the relationship between leadership behaviors and cultural conditions evolves over time.

5.5. Chapter Summary

In conclusion, teacher leadership in Chinese primary schools is shaped by a dynamic interplay between leadership practices and organizational culture. While effective school leadership is essential, a trust-based, supportive culture has an even more direct impact on a teacher's willingness to lead. An integrated approach-combining strong leadership behaviors with deliberate cultural nurturing-is necessary to meet the goals of educational modernization and sustained school improvement.

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