

A Study on the Relationship between Perceived Distributed Leadership and Teaching Autonomy among High School Teachers in Yuhua Education Group, Henan Province, China

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Abstract: This study investigated the relationship between perceived distributed leadership and teaching autonomy among high school teachers in a private education group in Henan Province, China. A quantitative survey was conducted with 211 teachers from three high schools of the Yuhua Education Group. The results showed that teachers' perception of distributed leadership was at a high level ($M=3.70$), while their teaching autonomy was at a medium level ($M=3.42$), with general teaching autonomy higher than curriculum autonomy. Significant differences were found based on teaching experience, education level, and professional title ($p<0.05$), but not by gender, administrative position, subject taught, or campus. Pearson correlation analysis revealed a significant and high positive correlation between perceived distributed leadership and teaching autonomy ($r=0.833$, $p<0.01$). The study concludes that distributed leadership practices positively enhance teachers' professional autonomy, suggesting that private high schools should optimize shared decision-making mechanisms and implement stratified support strategies.

Keywords: Distributed Leadership; Teaching Autonomy; High School Teachers; Private Education; Yuhua Education Group

1. INTRODUCTION

Against the backdrop of a profound shift in global education governance towards participatory school leadership, distributed leadership has emerged as a core paradigm in educational leadership research. The UNESCO 2030 Education Action Framework explicitly advocates for building participatory school leadership structures to enhance teachers' professional autonomy (UNESCO, 2021). OECD research indicates that distributed leadership practices significantly improve teachers' organizational engagement and teaching efficacy (Harris, 2013).

Within this international context, China's basic education reform resonates with these trends. The National Medium- and Long-Term Education Reform and Development Plan (2010-2020) and subsequent policies have emphasized improving school governance structures and granting teachers greater decision-making power in teaching design and evaluation (Ministry of Education, 2022). However, despite these policy aspirations, implementation challenges persist. Research shows that high school teachers commonly face excessive administrative

intervention and limited participation in curriculum development and school decision-making (Wang & Zhang, 2021; Zhang & Wang, 2023).

Research Problem and Gap: Distributed leadership theory aims to overcome traditional bureaucratic management and stimulate organizational innovation. However, limited systematic research exists on its implementation in private high schools, particularly in central and western China. Existing studies have three obvious gaps: first, research subjects mainly focus on public demonstration high schools in developed regions, with insufficient attention to private high schools in central and western regions; second, most studies only report direct correlations between the two variables, lacking empirical testing of possible mediating mechanisms; third, research methods are mainly cross-sectional questionnaire surveys, lacking mixed-method research to reveal the micro-processes through which distributed leadership influences teacher autonomy (Li & Zhao, 2022; Wang, Zhang, & others, 2021).

Research Contribution: The Yuhua Education Group in Henan Province, a

representative private education provider, has actively explored distributed leadership practices through subject chief teacher systems, grade-level autonomy, and curriculum development teams. Nevertheless, the relationship between teachers' perceived distributed leadership and their teaching autonomy remains systematically unexamined. This study aims to fill this gap by providing empirical evidence from a private high school context in central China, thereby extending the applicability of distributed leadership theory to non-public educational settings in developing regions.

Research Objectives

Based on these findings, it is recommended that private high schools: 1) deepen empowerment participation mechanisms and build teacher-led governance structures; 2) optimize shared decision-making channels to enhance the depth of teacher participation; 3) strengthen collective collaboration culture and build professional learning communities; 4) implement differentiated support strategies for teachers at different career stages and with different educational backgrounds.

2. LITERATURE REVIEW

2.1 Theory of Distributed Leadership

Distributed leadership is a theoretical paradigm in contemporary educational leadership research. Spillane (2006) defined distributed leadership as a dynamic process where leadership functions are distributed among organizational members through interaction and collaboration, rather than being concentrated in formal positions. Harris (2013) further argued that distributed leadership values power sharing and shared responsibility, thereby empowering teachers to participate in decision-making to improve organizational adaptability and innovation. Gronn (2002) suggested that distributed leadership has evolved from role dispersion to practice coordination, focusing on how leadership practices gradually form through interaction and exert influence on organizational effectiveness. In the Chinese educational context, distributed leadership implies the potential value of promoting school governance modernization, breaking through bureaucratic management rigidity, and enhancing teacher professional autonomy (Zhang, 2020; Li, 2018). For this study, distributed leadership includes four dimensions: empowerment participation, leadership

cultivation, shared decision-making, and collective collaboration (Hairon & Goh, 2015).

2.2 Theory of Teaching Autonomy

Teaching autonomy refers to teachers' professional discretion and freedom in instructional design, implementation, and evaluation. Friedman and Phillips (2004) defined teaching autonomy as "the discretion and decision-making freedom teachers enjoy in core teaching activities such as curriculum implementation, teaching method selection, student assessment, and classroom management." Pearson and Moomaw (2006) distinguished two dimensions of teaching autonomy: curriculum autonomy (decisions about teaching content, curriculum structure, and teaching pace) and general teaching autonomy (decisions about teaching methods, classroom management, and student assessment). In the Chinese educational context, teaching autonomy is characterized as "freedom within prescribed norms" (Zhong, 2021), where teachers have more autonomy in how to teach than in what to teach. Teacher empowerment theory, proposed by Short and Rinehart (1992), further explains that teacher empowerment is a multi-dimensional process combining psychological perception and organizational practice, including decision participation, professional growth, status enhancement, self-efficacy, autonomy, and influence, among which the "autonomy" dimension is most directly related to the concept of teaching autonomy.

2.3 Measurement Tools for Distributed Leadership and Teaching Autonomy

Quantitative research on distributed leadership has established several widely used measurement tools. Hairon and Goh (2014) developed the Distributed Leadership Scale (DLS), consisting of 25 items measuring four dimensions: empowerment participation, leadership cultivation, shared decision-making, and collective collaboration, using a five-point Likert scale. The original scale reported Cronbach's α coefficients ranging from 0.85 to 0.92. In the Chinese context, Tian and Risko (2018) conducted a culturally adaptive revision of the DLS and found that the collective collaboration dimension could be further divided into "peer assistance" and "cross-departmental cooperation." For teaching autonomy, Pearson and Moomaw (2005) developed the Teaching Autonomy Scale (TAS), containing 18 items across two dimensions: curriculum autonomy and

general teaching autonomy. The original scale reported Cronbach's α coefficients ranging from 0.82 to 0.91. In the Chinese educational context, Chen and Li (2021) revised the High School Teacher Teaching Autonomy Scale, adding two Chinese characteristic dimensions: "school-based curriculum development autonomy" and "student evaluation autonomy." These instruments provide reliable technical support for measuring distributed leadership and teaching autonomy among high school teachers.

2.4 Research on the Relationship between Distributed Leadership and Teaching Autonomy

Empirical research has demonstrated a clear positive relationship between distributed leadership and teacher teaching autonomy. Leithwood, Harris, and Hopkins (2020) conducted a comparative analysis of OECD countries and clarified the influence of four core dimensions of distributed leadership on teacher teaching autonomy. Specifically, empowerment participation and shared decision-making had the most direct and significant positive effects on teacher teaching autonomy, together explaining more than 40% of the variance in teacher teaching autonomy. Harris (2020) concluded that teachers' perception level of distributed leadership is significantly positively correlated with their professional efficacy and organizational commitment, and this relationship is more prominent in school reform contexts. In the Chinese high school education context, Li and Zhao (2022) conducted an empirical study of several high schools in Henan Province and found that the influence of distributed leadership on teaching autonomy is moderated by school type and regional education policy. Wang, Zhang, and others (2021) revealed that the degree of flattening of school organizational structure and the maturity of professional learning communities are positively correlated with teachers' perception of empowerment participation and collective collaboration. However, existing research has three obvious gaps: first, research subjects mainly focus on public demonstration high schools in developed regions, with insufficient attention to private high schools in central and western regions; second, most studies only report direct correlations between the two variables, lacking empirical testing of possible mediating mechanisms; third, research methods are mainly cross-sectional questionnaire surveys, lacking mixed-method research to reveal the micro-processes through which distributed leadership influences teacher autonomy. Therefore,

empirical research targeting private high school teachers to examine the relationship between distributed leadership and teaching autonomy urgently needs to be conducted, which is precisely the gap this study aims to fill.

3. MATERIALS AND METHODS

This study employed a quantitative cross-sectional survey design. The target population comprised all in-service high school teachers at three schools of the Yuhua Education Group in Henan Province. A convenience sampling method was used to select participants from Luohe Yuhua Experimental School, Jiaozuo Yuhua Experimental School, and Xuchang Yuhua Experimental School. According to the sample size requirements of Krejcie and Morgan (1970), a minimum sample of 196 was needed for a population of approximately 400 teachers. A total of 211 questionnaires were distributed and 211 valid questionnaires were recovered, yielding a 100% response rate. The sample exceeded the minimum requirement, providing adequate statistical power for correlation and subgroup analyses.

The questionnaire consisted of three parts: demographic information (7 items), the Distributed Leadership Scale (DLS), and the Teaching Autonomy Scale (TAS).

Distributed Leadership Scale: Originally developed by Hairon and Goh (2014), the DLS comprises 25 items across four dimensions: empowerment participation (7 items), leadership cultivation (6 items), shared decision-making (5 items), and collective collaboration (7 items). Responses were rated on a five-point Likert scale (1=strongly disagree to 5=strongly agree). The original scale demonstrated good reliability with an overall Cronbach's α of 0.966 and dimensional coefficients ranging from 0.882 to 0.904. In the present study ($N=211$), the overall Cronbach's α was 0.966, with dimensional α coefficients of 0.902 (empowerment participation), 0.891 (leadership cultivation), 0.904 (shared decision-making), and 0.882 (collective collaboration).

Data were collected via paper-based questionnaires administered during regular faculty meetings. Teachers were informed of the study's purpose, assured of anonymity and confidentiality, and provided voluntary consent. Data were analyzed using SPSS 26.0. Descriptive statistics (means and standard deviations) addressed Objectives 1. Independent t-tests and one-way ANOVA examined differences across demographic variables (Objective 2). Pearson correlation analysis examined the relationship

between perceived distributed leadership and teaching autonomy (Objective 3).

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4. RESULTS AND DISCUSSION

4.1 Demographic Profile of Respondents

The questionnaire used in this study is titled "Survey on Distributed Leadership and Teaching Autonomy of High School Teachers in Yuhua Education Group." A total of 211 valid samples were collected for data analysis. Descriptive statistical analysis was conducted on the collected data regarding teachers' gender, teaching experience, administrative position, educational background, professional title, subject taught, and campus. Frequency and percentage were used for representation.

Gender Distribution: Among the 211 valid samples, 115 were male (54.50%), and 96 were female (45.50%), indicating a relatively balanced gender ratio. **Teaching Experience Distribution:** ≤3 years: 26 (12.32%), 4-10 years: 77 (36.49%), 11-15 years: 44 (20.85%), 16-20 years: 40 (18.96%), ≥21 years: 24 (11.37%). **Administrative Position:** Teachers holding administrative positions: 29 (13.74%), non-administrative: 182 (86.26%). **Educational Background:** Bachelor's degree: 149 (70.62%), Master's degree: 40 (18.96%), Doctoral degree: 22 (10.43%). **Professional Title:** Junior title: 117 (55.45%), Intermediate title: 70 (33.18%), Senior title: 24 (11.37%). **Subject Taught:** Chinese: 64 (30.33%), Mathematics: 47 (22.27%), English: 40 (18.96%), Science: 17 (8.06%), Humanities: 28 (13.27%), Arts and Others: 15 (7.11%). **Campus Distribution:** Luohe: 71 (33.64%), Jiaozuo: 70 (33.18%), Xuchang: 70 (33.18%). The basic profile of the questionnaire participants is shown in Table 1 below.

Table 1. Basic personal information of teachers (N=211)

Name	Options	Frequency	Percent age (%)
1. Your gender	male	115	54.50
	female	96	45.50
2 Your years of teaching experience	3 years or less	26	12.32
	4 to 10 years	77	36.49
	11-15 years	44	20.85
	16-20 years	40	18.96
	21 years and more	24	11.37
3 Whether in an administrative position	is	29	13.74
	no	182	86.26
4 Your qualifications	Bachelor's degree	149	70.62
	Master's degree	40	18.96
	Doctoral student	22	10.43
5 Your title	Junior Title	117	55.45
	Intermediate title	70	33.18
	Senior title	24	11.37
6 Subjects you teach:	Chinese	64	30.33
	Mathematics	47	22.27
	English	40	18.96
	Comprehensive Science	17	8.06
	Comprehensive Liberal Arts	28	13.27
	Arts, Sports and others	15	7.11
7. Your campus:	Luohe Yuhua Experimental School	71	33.64
	Jiaozuo Yuhua Experimental School	70	33.18
	Xuchang Yuhua Experimental School	70	33.18
Total		211	100.00

4.2 Current Status of Perceived Distributed Leadership and Teaching Autonomy

As shown in Table 2, the overall level of perceived distributed leadership was high ($M=3.70$, $SD=0.684$). Among the four dimensions, empowerment participation scored highest ($M=3.81$, $SD=0.855$), followed by collective collaboration ($M=3.65$, $SD=0.740$), while leadership cultivation ($M=3.41$, $SD=0.773$) and shared decision-making ($M=3.32$, $SD=0.768$) were at medium levels. The overall level of teaching autonomy was medium ($M=3.42$, $SD=0.894$), with general teaching autonomy ($M=3.61$, $SD=0.951$) higher than curriculum autonomy ($M=3.43$, $SD=0.922$).

Table 2. Descriptive Statistics of Key Variables (N=211)

Variable	M	SD	Level
Perceived Distributed Leadership	3.70	0.684	High
Empowerment Participation	3.81	0.855	High
Leadership Cultivation	3.41	0.773	Medium
Shared Decision-Making	3.32	0.768	Medium
Collective Collaboration	3.65	0.740	High
Teaching Autonomy	3.42	0.894	Medium
General Teaching Autonomy	3.61	0.951	High
Curriculum Autonomy	3.43	0.922	Medium

4.3 Demographic Differences in Perceived Distributed Leadership

Significant differences in perceived distributed leadership were found for teaching experience ($F=1.005$, $p=0.028$), educational background ($F=0.500$, $p=0.010$), and professional title ($F=0.036$, $p=0.018$). Post-hoc LSD tests indicated that teachers with ≥ 21 years of experience scored higher than those with 16-20 years; master's degree holders scored higher than bachelor's degree holders; senior title teachers scored higher than junior title teachers. No significant differences were found for gender, administrative position, subject taught, or campus ($p>0.05$).

For teaching autonomy, significant differences were found for teaching experience ($F=0.776$, $p=0.001$), educational background ($F=0.284$, $p=0.020$), and professional title ($F=0.060$, $p=0.027$). Teachers with 4-10 years of experience scored highest ($M=3.72$), while those with 16-20 years scored lowest ($M=3.50$); master's degree holders scored higher than bachelor's and doctoral holders; junior title teachers scored higher than intermediate and senior title teachers. No significant differences were found for other demographic variables.

Table 3. Summary of ANOVA Results for Perceived Distributed Leadership by Demographic Variables

Variable	F / t	p	LSD
Gender	$t=-0.611$	0.542	n.s.
Teaching Experience	1.005	0.028*	5>2>1>3>4
Administrative Position	$t=0.012$	0.915	n.s.
Educational Background	0.500	0.010*	2>1>3
Professional Title	0.036	0.018*	3>2>1
Subject Taught	1.656	0.147	n.s.
Campus	0.714	0.491	n.s.

*Note: * $p<0.05$; n.s.=not significant. Teaching Experience: 1= ≤ 3 years, 2=4-10 years, 3=11-15 years, 4=16-20 years, 5= ≥ 21 years. Educational Background: 1=Bachelor's, 2=Master's, 3=Doctoral. Professional Title: 1=Junior, 2=Intermediate, 3=Senior.*

4.4 Demographic Differences in Teaching Autonomy

A similar pattern was observed for teaching autonomy. As shown in Table 4, significant differences were found based on teaching experience ($F=0.776$, $p=0.001$), educational background ($F=0.284$, $p=0.020$), and professional title ($F=0.060$, $p=0.027$). Post-hoc LSD tests revealed that teachers with 4-10 years of experience scored highest ($M=3.72$), while those with 16-20 years scored lowest ($M=3.50$). Master's degree holders scored higher than bachelor's and doctoral degree holders. Junior title teachers scored higher than intermediate and senior title teachers. No significant differences were found based on gender ($t=0.789$, $p=0.431$), administrative position ($t=0.071$, $p=0.789$), subject taught ($F=1.475$, $p=0.199$), or campus ($F=0.005$, $p=0.995$).

Table 4. Summary of ANOVA Results for Teaching Autonomy by Demographic Variables

Variable	F / t	p	LSD
Gender	$t=0.789$	0.431	n.s.
Teaching Experience	0.776	0.001**	2>5>3>1>4
Administrative Position	$t=0.071$	0.789	n.s.

Variable	F / t	p	LSD
Educational Background	0.284	0.020*	2>1>3
Professional Title	0.060	0.027*	1>2>3
Subject Taught	1.475	0.199	n.s.
Campus	0.005	0.995	n.s.

*Note: * $p < 0.05$, ** $p < 0.01$; n.s.=not significant.*

4.5 Correlation Analysis

Pearson correlation analysis revealed a strong, statistically significant positive correlation between teachers' overall perceived distributed leadership and their overall teaching autonomy ($r = 0.833$, $p < 0.01$). As shown in Table 5, all four dimensions of distributed leadership were significantly and positively correlated with the overall teaching autonomy: empowerment participation ($r = 0.751$), leadership cultivation ($r = 0.694$), shared decision-making ($r = 0.725$), and collective collaboration ($r = 0.723$), all $p < 0.01$. Furthermore, each dimension of distributed leadership demonstrated significant positive correlations with both sub-dimensions of teaching autonomy (general teaching autonomy and curriculum autonomy), with correlation coefficients ranging from 0.634 to 0.709 ($p < 0.01$). These findings indicate that higher levels of perceived distributed leadership are associated with better implementation of teaching autonomy.

5. CONCLUSION

The results revealed significant differences in perceived distributed leadership among high school teachers at Yuhua Education Group based on teaching experience, educational background, and professional title, with no significant differences found for gender, administrative position, subject taught, or campus. For teaching autonomy, a similar pattern emerged: significant differences were found based on teaching experience, educational background, and professional title, while no significant differences were found for gender, administrative position, subject taught, or campus. These findings suggest that within this private education group context, distributed leadership and teaching autonomy are influenced more by professional development factors than by demographic characteristics.

Both perceived distributed leadership and teaching autonomy were strongly and positively

correlated ($r = 0.833$, $p < 0.01$), with empowerment participation showing the strongest correlation with teaching autonomy ($r = 0.751$). This strong positive relationship can be understood through the lens of social cognitive theory (Bandura, 1986) and teacher empowerment theory (Short & Rinehart, 1992). Distributed leadership behaviors—such as empowerment participation, shared decision-making, leadership cultivation, and collective collaboration—satisfy teachers' professional needs for autonomy, competence, and professional identity. This satisfaction acts as a powerful professional resource that drives a positive motivational process, directly enhancing teachers' sense of teaching autonomy across both dimensions: general teaching autonomy and curriculum autonomy. The fact that distributed leadership explained a substantial portion ($r^2 = 0.694$) of the variance in teaching autonomy underscores its central importance as an organizational and professional determinant of teaching quality in this private education context.

For administrators at Yuhua Education Group, the implication is clear: cultivating distributed leadership among high school teachers—particularly empowerment participation, which emerged as the strongest correlate—is not merely a matter of professional development preference but a strategic priority for deepening teaching autonomy and improving classroom instruction. This can be achieved through leadership development programs, the institutionalization of cross-campus teaching research communities, and the consistent practice of providing instructional autonomy, resource support, and professional recognition. Additionally, given the significant differences found based on teaching experience, educational background, and professional title, differentiated support strategies should be implemented for teachers at different career stages and with different educational backgrounds to maximize the positive impact of distributed leadership on teaching autonomy.

Future research should address the limitations of this study by: (1) extending the geographic scope to include private schools in other regions of China (e.g., eastern coastal areas, western underdeveloped regions) to examine regional variations; (2) conducting comparative studies across different types of schools (public vs. private, urban vs. rural, secondary vs. primary); (3) employing mixed-method approaches, including qualitative interviews and classroom observations, to reveal the micro-

processes through which distributed leadership influences teacher autonomy; (4) using longitudinal designs to establish causal direction and examine changes over time; (5) investigating potential mediating variables (e.g., teacher self-efficacy, school trust, professional learning community) and moderating variables (e.g., school leadership style, accountability pressure) to better understand the mechanisms underlying the observed relationship.

6. REFERENCES

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