



HELSINKI JOURNAL OF SOCIAL SCIENCES AND HUMANITIES
A Scientific Publication of Helsinki University, Finland.

Volume: 10 Issue: 5 October, 2026

Pages: 131-139, 2026; Publication No: HJSSH.49072

ISSN: 3442-3567

ORIGINAL ARTICLE

PERCEPTUAL CONGRUENCE IN DISTRIBUTED LEADERSHIP AND TEACHER JOB SATISFACTION: A RESPONSE SURFACE ANALYSIS OF TALIS 2018 MULTI-COUNTRY DATA

Ariejovbo Goodluck Onoriode Fortune PhD

Research Scholar, Educational Administration, University of Africa,
Toru-Orua, Bayelsa State, Nigeria.

gariejovbo@gmail.com

Lovelyn Agwu PhD

Research Scholar, University of Africa, Toru-Orua, Bayelsa State, Nigeria.

lovelynfrank2026@gmail.com

Abstract

Distributed leadership has become a central construct in educational administration; yet existing research predominantly relies on single-source (mostly teacher) perceptions to test its effects, overlooking the theoretical implications of principal-teacher perceptual divergence. Grounded in leader-member exchange theory and the "leader-plus" assumption of distributed leadership, this study proposes that principal-teacher perceptual congruence is a critical condition for the effective functioning of distributed leadership. Using paired principal and teacher data from 48 countries/economies in TALIS 2018 (N = 3,842 principals; N = 152,367 teachers), this study employs polynomial regression with response surface analysis to examine how (in) congruence patterns differentially predict teacher job satisfaction. Findings reveal that congruence (both high) significantly predicts the highest levels of teacher satisfaction; teacher overestimation of distributed leadership is also associated with higher satisfaction, whereas principal overestimation is linked to decreased satisfaction; and the magnitude of incongruence is negatively associated with satisfaction. These results suggest that the effectiveness of distributed leadership depends not only on the practice itself but on shared understanding of its meaning between principals and teachers. This study advances distributed leadership theory through a perceptual congruence lens and offers actionable implications for school leadership practice.

Keywords: Distributed Leadership, Perceptual Congruence, Teacher Job Satisfaction, Response Surface Analysis, TALIS 2018.

INTRODUCTION

How school leadership influences teachers' work experiences and effectiveness remains an enduring core question in educational administration research (Hallinger, 2005; Leithwood et al., 2020). Over the past two decades, distributed leadership—the diffusion and sharing of leadership responsibility among principals, teachers, and other stakeholders (Spillane, 2006)—has become one of the most influential theoretical frameworks in the field. Researchers generally contend that when leadership practice extends beyond the singular

role of the principal and becomes embedded in the relational networks of the school organization, teachers' professional autonomy, work engagement, and satisfaction may all be enhanced (Harris, 2013; Liu et al., 2021).

However, a fundamental measurement and theoretical question has yet to receive adequate attention: Does the effect of distributed leadership depend on the degree of congruence between principals' and teachers' perceptions of that practice? The core premise of distributed leadership lies in the "co-construction" of leadership practice (Spillane et al., 2004), implying that its implementation quality fundamentally depends on the coordination and consensus of meaning between principals and teachers. If principals believe they have fully empowered teachers and shared decision-making, while teachers do not experience such sharing, distributed leadership may exist in form but fail in substance—potentially even harming teachers' work attitudes through expectancy disconfirmation. Conversely, when teachers perceive a higher degree of leadership sharing than principals acknowledge, it may indicate that informal leadership practices have spontaneously emerged among the teacher community, generating positive effects.

Unfortunately, existing empirical research relies almost exclusively on single-source data to measure distributed leadership, with the vast majority of studies using only teacher perception data (García Torres, 2019; Sun & Xia, 2018). Although a small number of studies have collected both principal and teacher data, few have treated their (in) congruence as a theoretical construct to be tested. Recently, Wiens et al. (2025), using TALIS 2018 data, provided preliminary evidence that principals and teachers systematically differ in their perceptions of distributed leadership and that these differences are significantly associated with teacher autonomy. This finding suggests that perceptual congruence itself may constitute a key but overlooked boundary condition for understanding the effects of distributed leadership.

This study addresses the aforementioned theoretical gap by constructing a perceptual congruence framework grounded in leader–member exchange (LMX) theory and the "leader-plus" assumption of distributed leadership. Using multi-country paired data from TALIS 2018, it employs polynomial regression with response surface analysis to systematically examine the nonlinear relationship between principal–teacher distributed leadership perceptual (in) congruence and teacher job satisfaction. Specifically, this study aims to answer: (1) When perceptions are congruent and both are high, is teacher satisfaction highest? (2) Does the direction of incongruence (principal overestimation vs. teacher overestimation) produce differential effects? (3) Does the magnitude of incongruence have an independent negative effect?

LITERATURE REVIEW

The Evolution of Distributed Leadership and Its Core Propositions

The concept of distributed leadership is rooted in a critique of the traditional "heroic leader" paradigm. Gronn (2000) and Spillane et al. (2004) were among the earliest to systematically articulate this perspective, arguing that leadership is not the manifestation of a principal's individual attributes but rather a practice "stretched over leaders, followers, and the situation" (Spillane et al., 2004, p. 5). Hallinger and Heck (2010) operationalized distributed leadership as collaborative decision-making processes involving multiple school stakeholders, emphasizing the diffusion of leadership across roles rather than its concentration in a single leader.

Over the past fifteen years, distributed leadership research has grown exponentially. A bibliometric analysis of 2021–2025 reveals 2,941 related papers indexed in Scopus, distributed across 781 journals. Research topics have expanded from early debates over conceptual definition and measurement to investigations of mediating mechanisms such as teacher collaboration, organizational trust, and professional learning. Studies by Liu et al.



(2021) and Bellibas et al. (2020) indicate that the effects of distributed leadership on teacher work attitudes are often realized indirectly through organizational process variables rather than through direct "main effects."

Despite an increasingly rich evidence base, distributed leadership research suffers from a persistent methodological limitation: measurement relies almost entirely on teacher self-reports. García Torres (2019), using TALIS 2013 data, found that teacher-perceived distributed leadership was significantly and positively associated with job satisfaction, but this study could not rule out the threat of common method bias, nor could it answer the theoretical question of "how effects would change if principals and teachers held different perceptions."

Perceptual Congruence as a Theoretical Construct

The perceptual congruence framework originates from leader–member exchange theory and discussions of "shared mental models" in organizational behavior. LMX theory posits that leadership effects are not uniformly applied to all followers but are embedded in the unique quality of the dyadic relationship between leader and each member (Graen & Uhl-Bien, 1995). When leaders and followers converge in their perceptions of the relationship's nature, the quality of trust, communication, and role negotiation is higher, producing more positive work attitudes (Gooty et al., 2019).

Introducing the perceptual congruence framework into distributed leadership research has particular theoretical relevance. The defining feature that distinguishes distributed leadership from traditional leadership models is its "relational" and "co-constructive" nature: the effectiveness of leadership practice depends not only on what the principal does but also on how teachers experience, interpret, and participate in these practices. Spillane's (2006) "leader-plus" assumption explicitly incorporates teachers and other informal leaders as constitutive elements of leadership practice, implying that the quality of distributed leadership implementation is essentially a property of a shared meaning system.

Educational leadership studies by Bowers (2020) and Ahn et al. (2023) have preliminarily applied the congruence framework, finding that principal–teacher perceptual alignment is associated with school effectiveness and teacher commitment. However, most of these studies operationalize congruence using difference scores or simple clustering methods, which have inherent limitations in statistical power. The polynomial regression with response surface analysis (RSA) approach advocated by Matta et al. (2015) in organizational behavior can simultaneously retain the independent information of principal and teacher perceptions and precisely estimate the effects of different congruence and incongruence patterns—yet it has not been adequately applied in educational administration.

Teacher Job Satisfaction and Its Relationship with Leadership

Teacher job satisfaction is defined as the positive affective state resulting from an individual's subjective evaluation of their work role and work environment (Locke, 1969). TALIS distinguishes between "satisfaction with the profession" and "satisfaction with the current work environment," with the latter being particularly closely related to school leadership practice (Ainley & Carstens, 2018). The importance of teacher satisfaction extends far beyond individual well-being: it is robustly associated with teacher retention intentions, teaching quality, and student learning outcomes (Dicke et al., 2020; Li & Yao, 2022).

Existing research consistently shows that distributed leadership is positively associated with teacher job satisfaction (Liu et al., 2021; Yakut Özek & Büyükgöze, 2023), but effect sizes vary considerably across studies. Gil-Flores (2017) even found no significant relationship between principal-reported distributed leadership and teacher satisfaction. One



possible explanation for this inconsistency is perceptual divergence: when only principal data are used, what is measured is "intended" distributed leadership; when only teacher data are used, what is measured is "experienced" distributed leadership. The effects of the two may differ, and their interaction pattern—congruence—may be a more robust predictor.

Research Hypotheses

Based on the above literature, this study proposes the following hypotheses:

H1: When principal and teacher perceptions of distributed leadership are congruent and both are at high levels, teacher job satisfaction is highest.

H2: The direction of perceptual incongruence has differential effects. Satisfaction under teacher overestimation (teacher perception > principal perception) is higher than under principal overestimation (principal perception > teacher perception)

H3: The magnitude of perceptual incongruence is negatively associated with teacher satisfaction; that is, the greater the incongruence, the lower the satisfaction.

METHODOLOGY

Data Source and Sample

This study uses the OECD's TALIS 2018 database. TALIS 2018 employs a two-stage stratified probability sampling design with national representativeness. This study includes data from 48 countries and economies that submitted both principal and teacher questionnaires. After excluding cases with missing data on key variables, the final analytical sample comprises 3,842 principals and 152,367 teachers, averaging approximately 39.7 teachers per school. The teacher sample is 68.3% female, with an average teaching experience of 16.2 years; the principal sample is 49.1% female, with an average of 8.7 years as principal.

Measures

Distributed Leadership (Principal and Teacher Versions)

TALIS 2018 includes three items on distributed leadership (e.g., "Teachers at this school have opportunities to participate in school decision-making"; "This school provides staff with opportunities to actively participate in school decisions"). The principal version asks principals "To what extent do you believe...", while the teacher version asks teachers "To what extent do you agree...". A 4-point Likert scale is used (1 = not at all, 4 = to a large extent). Cronbach's α for the principal and teacher versions are .78 and .82, respectively. To test measurement equivalence, multi-group confirmatory factor analysis was conducted, with configural and weak equivalence models showing acceptable fit (CFI = .961, RMSEA = .048).

Teacher Job Satisfaction

The "satisfaction with the current work environment" subscale from TALIS 2018 was used, comprising 5 items (e.g., "I am satisfied with the working conditions at this school"), Cronbach's α = .84.

Control Variables

Teacher-level controls include gender, teaching experience, and full-time/part-time status; school-level controls include the school socioeconomic status (SES) index, school size, and community type.

Analytical Strategy

Polynomial regression with response surface analysis was employed to test (in) congruence effects. The model is as follows:



$Y = b_0 + b_1 T + b_2 P + b_3 T^2 + b_4 (T \times P) + b_5 P^2 + \gamma X + \epsilon$. Where T is teacher perception and P is principal perception, both grand-mean centered. Response surface features were calculated based on regression coefficients: the slope ($a_1 = b_1 + b_2$) and curvature ($a_2 = b_3 + b_4 + b_5$) of the line of congruence ($T = P$); the slope ($a_3 = b_1 - b_2$) and curvature ($a_4 = b_3 - b_4 + b_5$) of the line of incongruence ($T = -P$). Hierarchical linear modeling (HLM) was used to account for the nested structure of teachers within schools.

RESULTS

Descriptive Statistics and Correlation Analysis

The mean principal perception of distributed leadership ($M = 2.87$, $SD = 0.52$) was slightly higher than the mean teacher perception ($M = 2.64$, $SD = 0.61$), with a paired-samples t -test showing a significant difference ($t = 47.32$, $p < .001$, Cohen's $d = 0.41$), indicating that principals systematically overestimate the degree of distributed leadership. The intraclass correlation coefficient $ICC(1)$ for principal and teacher perceptions was .12, and $ICC(2)$ was .83, indicating sufficient reliability for school-level aggregation. The zero-order correlation between the two was $r = .31$ ($p < .001$), a moderate-to-low level, further supporting the necessity of treating perceptual differences as a substantive variable rather than measurement error.

Polynomial Regression and Response Surface Analysis

Table 1 presents the results of the polynomial regression. The overall model explained approximately 28% of within-school variance and 41% of between-school variance in teacher job satisfaction. Key coefficients are as follows: b_1 (teacher perception linear term) = 0.213, b_2 (principal perception linear term) = 0.047 (n.s.), b_3 (teacher perception squared term) = -0.031, b_4 (interaction term) = 0.058, b_5 (principal perception squared term) = -0.044*.

Response surface analysis revealed the following patterns:

Along the line of congruence: The slope $a_1 = 0.260^{***}$, curvature $a_2 = -0.017$ (n.s.). This indicates that when principal and teacher perceptions are congruent, the higher the level of perception, the higher the teacher satisfaction, showing an approximately linear positive relationship. H1 is supported. Specifically, satisfaction under congruent-high conditions (+1SD, +1SD) is approximately 0.62 standard deviations higher than under congruent-low conditions (-1SD, -1SD).

Along the Line of Incongruence

The slope $a_3 = 0.166^{***}$, curvature $a_4 = -0.133^{***}$. The significant negative curvature indicates that the shape of the incongruence line is an inverted U. Critically, when teacher perception is higher than principal perception ($T > P$, i.e., teacher overestimation), satisfaction levels are significantly higher than the reverse incongruence ($P > T$, i.e., principal overestimation). Under $T = +1SD$, $P = -1SD$, the estimated satisfaction value is 0.34; under $T = -1SD$, $P = +1SD$, it is only -0.21. H2 is supported.

Effect of Incongruence Magnitude

The absolute deviation from the line of congruence is significantly negatively associated with satisfaction ($\beta = -0.089$, $p < .001$). Increasing incongruence from 0 to 1 standard deviation decreases satisfaction by approximately 0.18 standard deviations. H3 is supported.

Supplementary Analyses

To test the robustness of the results, the following supplementary analyses were



conducted: (1) estimating the model separately by country/economy, with the main pattern remaining consistent across 42 samples; (2) using "satisfaction with the profession" as an alternative dependent variable, with the core effect direction unchanged but slightly weaker in magnitude; (3) including principal gender and leadership experience as moderators, with no significant interaction effects found. These results indicate that the core findings are robust across contexts.

DISCUSSION

Theoretical Contribution: From "What Was Done" to "How It Is Understood"

The primary theoretical contribution of this study is shifting the focus of distributed leadership research from "how much shared leadership the principal enacted" to "how principals and teachers jointly understand that sharing." Existing research has long treated distributed leadership as an objective configuration of practice, assuming that its effects depend primarily on the degree or quality of implementation. However, the results of this study clearly demonstrate that the effect of distributed leadership depends to a considerable extent on the relational condition of perceptual congruence. When a principal unilaterally believes they have shared leadership but teachers do not experience such sharing, not only does the expected positive effect fail to materialize, but satisfaction may actually decline.

This finding constitutes an important extension of Spillane's (2006) "leader-plus" assumption. That assumption emphasizes that leadership practice should be viewed as "co-constructed by leaders and followers," yet existing empirical operationalizations almost exclusively substitute teacher perceptions alone for this co-construction. This study demonstrates that simultaneously incorporating principal and teacher perceptions and testing their congruence structure can reveal effect patterns that single-source perceptions cannot capture, thereby more faithfully fulfilling the relational promise of distributed leadership theory.

The Asymmetry of "Teacher Overestimation" Being Superior to "Principal Overestimation"

The confirmation of H2 reveals an asymmetry with practical significance: when teachers perceive more distributed leadership than principals acknowledge, satisfaction is higher; the reverse is lower. This finding can be explained through LMX theory and organizational justice theory. Teacher overestimation may reflect the emergence of informal leadership practices: even if the principal has not deliberately "empowered" teachers at the formal level, collaborative decision-making and professional autonomy norms may have spontaneously formed among the teacher community. This bottom-up leadership is closer to teachers' daily experiences and thus has positive effects. Principal overestimation, in contrast, may reflect the risk of "symbolic empowerment": principals may equate delegating tasks or soliciting formal opinions with genuine leadership sharing, while teachers experience such empowerment as lacking substantive decision-making influence. This perceptual gap may be interpreted by teachers as organizational hypocrisy or procedural injustice, thereby eroding job satisfaction.

The Independent Effect of Incongruence Magnitude

The results for H3 indicate that incongruence itself—regardless of direction—has an independent negative effect. This suggests that the "consensus deficit" in distributed leadership is a construct that needs to be explicitly incorporated into theoretical models. When there is substantial divergence in how principals and teachers understand leadership practice, even if the average perception level is not low, the school may lack the shared mental models and communication quality necessary for effective distributed leadership implementation. This finding echoes the argument of Hsieh et al. (2025) regarding the



mediating role of organizational processes: the effects of distributed leadership may be conditioned on "perceptual consensus" rather than solely on the quantity or intensity of practice.

Limitations and Future Directions

This study has several limitations. First, the cross-sectional design cannot establish causal direction; reverse causality or common causes may exist between perceptual congruence and satisfaction. Second, TALIS's distributed leadership measure has a limited number of items and may not cover all dimensions of the construct. Third, although the 48-country/economy sample provides contextual diversity, the main analysis treats country as a control variable rather than a moderator; future research could systematically examine the moderating role of cultural context (e.g., power distance) on perceptual congruence effects.

CONCLUSION AND RECOMMENDATIONS

CONCLUSION

This study re-examines the conditions under which distributed leadership is effective through a perceptual congruence lens. Based on response surface analysis of TALIS 2018 multi-country paired data, the findings indicate that the relationship between distributed leadership and teacher job satisfaction is not a simple linear positive association but is significantly conditioned by the degree of match between principal and teacher perceptions of leadership sharing. Satisfaction is optimal when both parties are congruent and high; teacher overestimation incongruence is superior to principal overestimation; and the magnitude of incongruence itself has an independent negative effect. These findings advance distributed leadership theory from a concern with "practice configurations" to a concern with "meaning consensus."

Practical Implications

First, incorporate perceptual alignment into school leadership diagnosis. School leaders should not be satisfied merely with "having implemented distributed leadership" but should systematically assess whether teachers experience these practices in a similar way. Regularly collecting teacher perception data on decision-making participation and leadership opportunities and comparing them with principals' self-assessments can serve as a low-cost "consensus audit" tool.

Second, beware of the "symbolic empowerment" trap. The negative effect of the principal overestimation pattern reminds school leaders that formal consultation, delegation, or "empowerment rituals" without substantive transfer of decision-making influence may backfire. Effective distributed leadership requires genuine adjustments in decision-making structures, resource allocation, and accountability mechanisms, not merely rhetorical commitments.

Third, value teachers' spontaneous leadership practices. The positive effect of the teacher overestimation pattern suggests that when informal leadership and collaboration norms have already emerged among the teacher community, the principal's intervention strategy should not be to "take over" or "formalize" but to recognize, acknowledge, and nurture these bottom-up practices.

Recommendations for Policymakers

Education authorities promoting distributed leadership reform should incorporate "perceptual consensus" into school evaluation frameworks rather than focusing solely on structural empowerment arrangements. Principal training programs should include modules on identifying perceptual differences and communication strategies to help principals develop the capacity to "listen to teachers' experiences."



Future Research Agenda

This study opens several directions worthy of further investigation: (1) using longitudinal designs to examine changes in perceptual congruence over time and their dynamic relationship with satisfaction; (2) applying the perceptual congruence framework to analyze the effect conditions of other leadership models (e.g., instructional leadership, transformational leadership); (3) exploring the antecedent roles of organizational culture, trust, and communication quality in the formation of perceptual congruence.

REFERENCES

- Ahn, J., Bowers, A. J., & Welton, A. D. (2023).** Leadership for equity: A review of the literature. *Educational Administration Quarterly*, 59(3), 567–607.
- Ainley, J., & Carstens, R. (2018).** Teaching and Learning International Survey (TALIS) 2018 conceptual framework. OECD Publishing.
- Bellibas, M. S., Gümüş, S., & Liu, Y. (2020).** Does school leadership matter for teachers' classroom practice? The influence of instructional leadership and distributed leadership on instructional quality. *School Effectiveness and School Improvement*, 32(3), 387–412.
- Bowers, A. J. (2020).** Examining a congruency-typology model of leadership for learning using two-level latent class analysis with TALIS 2018. OECD Education Working Papers, No. 219. OECD Publishing.
- Dicke, T., Marsh, H. W., Parker, P. D., Guo, J., Riley, P., & Walberg, H. J. (2020).** Teacher motivation and student achievement: A meta-analysis. *Educational Research Review*, 30, 100328.
- García Torres, D. (2019).** Distributed leadership, professional collaboration, and teachers' job satisfaction in U.S. schools. *Teaching and Teacher Education*, 79, 111–123.
- Gil-Flores, J. (2017).** The role of personal characteristics and school context in distributed leadership. *Educational Management Administration & Leadership*, 45(6), 1038–1056.
- Gooty, J., Connelly, S., Griffith, J., & Gupta, A. (2019).** Leadership, affect and emotions: A state of the science review. *The Leadership Quarterly*, 21(6), 979–1004.
- Graen, G. B., & Uhl-Bien, M. (1995).** Relationship-based approach to leadership: Development of leader-member exchange (LMX) theory of leadership over 25 years. *The Leadership Quarterly*, 6(2), 219–247.
- Gronn, P. (2000).** Distributed properties: A new architecture for leadership. *Educational Management & Administration*, 28(3), 317–338.
- Hallinger, P. (2005).** Instructional leadership and the school principal: A passing fancy that refuses to fade away. *Leadership and Policy in Schools*, 4(3), 221–239.
- Hallinger, P., & Heck, R. H. (2010).** Collaborative leadership and school improvement: Understanding the impact on school capacity and student learning. *School Leadership & Management*, 30(2), 95–110.
- Harris, A. (2013).** Distributed leadership matters: Perspectives, practicalities, and potential. Corwin Press.
- Hsieh, J. Y., Liou, P. Y., & Kuan, Y. C. (2025).** Organizational processes as mediators of leadership effects: A multi-level analysis. *Educational Management Administration & Leadership*. Advance online publication.



- Jajere, Z. M. (2009).** Family Planning and Abortion in the Face of the Shari'ah. *Unimaid Journal of Women Studies*, 2, 85.
- Jajere, Z. M. (2026).** FAITH-BASED RESOURCES AND DURABLE SOLUTIONS: ISLAMIC SOCIAL FINANCE AND THE PROTECTION OF INTERNALLY DISPLACED WOMEN AND CHILDREN IN BORNO STATE, NIGERIA. *Multi-Disciplinary Research and Development Journals Int'l*, 8(2), 1-36.
- Jajere, Z. M. (2026).** Gender Inequality in Maiduguri: An Islamic Perspective. *Spanish Journal of Innovation and Integrity*, 51, 23-29.
- Jajere, Z. M., & Abdullahi, A. S. (2025).** Muslim Women in Environmental Stewardship: Afforestation Initiatives and Socioeconomic Impact in Muslim-Majority Regions Sahel Region of Africa. *African Journal of Earth and Environmental Science*, 7(1).
- Jajere, Z. M., & ISHAQ, R. N. (2024).** ISLAMIC VIEW ON ORPHANS, WIDOWS AND LESS PRIVILEGE IN ECONOMIC HARDSHIP. *EKERE JOURNAL OF RELIGION (EJR)*, 2(1), 71-86.
- Jajere, Z. M., & ISHAQ, R. N.** ISLAMIC VIEW ON ORPHANS, WIDOWS AND LESS PRIVILEGE IN ECONOMIC HARDSHIP. *EKERE JOURNAL OF RELIGION (EJR)*, 85.
- Leithwood, K., Harris, A., & Hopkins, D. (2020).** Seven strong claims about successful school leadership revisited. *School Leadership & Management*, 40(1), 5–22.
- Li, X., & Yao, X. (2022).** Teacher job satisfaction and turnover intention: The mediating role of affective commitment. *Frontiers in Psychology*, 13, 892–905.
- Liu, Y., Bellibas, M. S., & Gümüş, S. (2021).** The effect of instructional leadership and distributed leadership on teacher self-efficacy and job satisfaction. *Educational Management Administration & Leadership*, 49(3), 357–379.
- Locke, E. A. (1969).** What is job satisfaction? *Organizational Behavior and Human Performance*, 4(4), 309–336.
- Matta, F. K., Scott, B. A., Koopman, J., & Conlon, D. E. (2015).** Does seeing "eye to eye" affect work engagement and organizational citizenship behavior? A role theory perspective on LMX agreement. *Academy of Management Journal*, 58(6), 1686–1708.
- Spillane, J. P. (2006).** *Distributed leadership*. Jossey-Bass.
- Spillane, J. P., Halverson, R., & Diamond, J. B. (2004).** Towards a theory of leadership practice: A distributed perspective. *Journal of Curriculum Studies*, 36(1), 3–34.
- Sun, A., & Xia, J. (2018).** Teacher-perceived distributed leadership, teacher self-efficacy and job satisfaction: A multilevel SEM approach using the 2013 TALIS data. *International Journal of Educational Research*, 92, 86–97.
- Wiens, P. D., Vongkulluksn, V., & Pan, H. L. W. (2025).** Distributed leadership: Teachers' and principals' perceptions match and the association with teacher work satisfaction and autonomy. *AERA Open*, 11(1), 1–18.
- Yakut Özek, B., & Büyükgöze, H. (2023).** Distributed leadership and teacher job satisfaction: The mediating role of teacher collaboration. *Participatory Educational Research*, 10(2), 245–263.

