

The Effect of Distributed Leadership and Perceived Organizational Support on Work Engagement: The Mediating Role of Psychological Capital in a Private SPK School in Tangerang Selatan

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Abstract: Research on teacher work engagement identifies leadership and organizational support as job resources, but prior findings remain unclear about whether these resources act directly or by strengthening personal resources. This study integrates the Job Demands-Resources model and Conservation of Resources theory to examine psychological capital as a mechanism linking distributed leadership and perceived organizational support to teacher work engagement. A cross-sectional survey involved 129 teachers from kindergarten to senior high school in a private SPK school in Tangerang Selatan, Indonesia. Data were collected through a five-point Likert questionnaire and analyzed using PLS-SEM in SmartPLS 4. The measurement model showed acceptable reliability, convergent validity, and discriminant validity. Psychological capital was the strongest predictor of work engagement. Distributed leadership affected work engagement only through full mediation by psychological capital, whereas perceived organizational support had both direct and indirect effects. Schools should combine fair organizational support, coordinated distributed leadership, and psychological capital development.

Keywords: *Distributed Leadership, Perceived Organizational Support, Psychological Capital, Work Engagement*

A. Introduction

The education sector is experiencing sustained transformation through accelerated digitalization, curriculum reform, accountability pressures, and the growing demand for twenty-first-century competencies. These developments expand teachers' instructional, administrative, relational, and emotional responsibilities. Globally, intense job demands combined with insufficient resources can increase workload and undermine teachers' psychological well-being (International Labour Office et al., 2024). A recent bibliometric review likewise indicates that teacher burnout remains a persistent international concern associated with high workload and demanding working conditions (Yao & Abdullah, 2025). This situation matters for school quality because engaged teachers are more willing to develop professionally, take initiative, innovate, and sustain high performance (Schaufeli, 2021).

Research has therefore shifted from merely documenting strain toward identifying the resources that enable teachers to remain energetic, dedicated, and absorbed in their work. However, the evidence is fragmented. Some studies report a direct relationship between

leadership and work engagement, whereas others show that leadership becomes influential only when it develops personal resources such as teacher efficacy or psychological capital (Cai et al., 2023; Kavgacı & Öztürk, 2023; Tejero & Aoanan, 2024). Leadership that does not accommodate professional participation or that distributes roles without coordination may create ambiguity, inconsistent decisions, and weaker motivation (Tejero & Aoanan, 2024).

Organizational support also appears to influence engagement through more than one route: it may encourage immediate reciprocal effort and may also strengthen employees' psychological resources (Yang et al., 2020; Sudibjo & Riantini, 2023; Tian et al., 2023). These mixed patterns indicate that job resources should not be assumed to operate through a single direct pathway. More attention is needed to the mediating role of personal resources, especially in a school context where teachers face complex instructional, administrative, and emotional demands.

Two school-level resources are especially relevant. Distributed leadership refers to leadership practice shared across leaders, teams, and teachers, where different members contribute their skills, knowledge, and perspectives (Spillane, 2006; Spillane et al., 2004). Its relevance has increased as schools have become more complex and leadership work can no longer be concentrated in one formal position (Adams et al., 2025). Perceived organizational support, in contrast, concerns the extent to which teachers believe that the school values their contributions and cares about their well-being (Eisenberger et al., 1986). Longitudinal meta-analytic evidence identifies organizational resources as important drivers of work engagement and suggests that organization-level resources may be more influential than isolated leader-level practices (Lesener et al., 2020).

The unresolved issue is how these external resources become sustained work engagement. Psychological capital, comprising self-efficacy, hope, resilience, and optimism, offers a theoretically plausible explanation because it represents a developable reservoir of personal resources. Recent educational evidence shows that personal psychological resources are closely connected to teacher work engagement and well-being (Wang & Pan, 2023; Ma, 2023). A scoping review further found consistently positive relationships between psychological capital and well-being across the reviewed literature, while emphasizing the need for more education-specific models and interventions (Bertieaux et al., 2024). Similarly, meta-analytic structural modeling indicates that work engagement is better explained through mechanisms involving personal resources than through isolated bivariate relationships (Huo & Wang, 2024).

This study addresses three related gaps. First, previous research has commonly examined distributed leadership, organizational support, or personal resources separately, leaving their simultaneous effects insufficiently integrated. Second, the inconsistent direct effects of leadership require a mechanism-based explanation of when leadership becomes an engagement-enhancing resource. Third, empirical evidence remains limited in Indonesian private SPK (Satuan Pendidikan Kerjasama) schools, where internationally oriented performance expectations coexist with local organizational culture, multiple school units, and layered leadership arrangements. Its novelty lies not simply in testing another set of antecedents, but in comparing two distinct resource pathways within one model: a leadership resource that may require psychological conversion and an organizational support resource that may motivate both directly and indirectly. The research questions

are: (1) Do distributed leadership and perceived organizational support directly affect teacher work engagement? (2) Do distributed leadership and perceived organizational support affect psychological capital? (3) Does psychological capital mediate the effects of distributed leadership and perceived organizational support on work engagement?

Hypothesis Development

Integrating JD-R and COR provides a stronger explanation than either framework alone. The JD-R model classifies distributed leadership and perceived organizational support as job resources because they can facilitate goal attainment, reduce the costs of demanding work, and stimulate professional growth. Personal resources strengthen the motivational process by shaping how employees interpret and use available job resources (Bakker & Demerouti, 2017; Bakker et al., 2023). COR theory adds a dynamic explanation: individuals seek to acquire, protect, and accumulate resources, and an initial resource can generate additional resources in a gain spiral (Hobfoll et al., 2018). In this study, psychological capital is therefore not treated as another independent predictor only, but as the mechanism through which external school resources may become internal motivational capacity.

Distributed leadership can provide access to expertise, shared problem solving, timely supervision, and coordinated support. When the distribution of leadership roles is clear and collaborative, teachers may experience greater autonomy and confidence. However, the label 'distributed' does not guarantee that teachers perceive the practice as supportive. Overlapping authority, weak coordination, or task transfer without empowerment may neutralize its motivational value. Prior studies have accordingly produced effects ranging from direct to fully mediated relationships (Cai et al., 2023; Kavgacı & Öztürk, 2023). Distributed leadership is thus expected to affect engagement, but it should more consistently strengthen the psychological resources that help teachers respond to demanding work. The following hypotheses are proposed:

H1: Distributed leadership positively affects work engagement.

H2: Distributed leadership positively affects psychological capital.

Perceived organizational support is a broader organizational resource. Fair procedures, recognition, concern for well-being, and supportive working conditions communicate that teachers are valued members of the institution (Eisenberger et al., 1986; Rhoades & Eisenberger, 2002). Organizational support theory predicts reciprocity: teachers who receive beneficial treatment are more likely to respond with dedication and effort. Support may also build hope, optimism, resilience, and efficacy by reducing uncertainty and assuring teachers that assistance is available. Evidence from education and other high-demand occupations supports both the direct support-engagement path and an indirect path through personal resources (Yang et al., 2020; Sudibjo & Riantini, 2023; Tian et al., 2023). Accordingly, the following hypotheses are proposed:

H3: Perceived organizational support positively affects work engagement.

H4: Perceived organizational support positively affects psychological capital.

Psychological capital combines self-efficacy, hope, resilience, and optimism into a higher-order positive psychological resource (Luthans, 2002; Luthans et al., 2006; Luthans & Youssef-Morgan, 2017). Teachers with stronger psychological capital are more likely to believe that they can complete difficult tasks, generate alternative pathways to goals,

recover from setbacks, and expect constructive outcomes. These capacities are especially valuable in educational settings characterized by workload and emotional demands. Empirical studies show that personal resources can mediate the relationship between contextual conditions and work engagement, particularly when work is challenging (Ma, 2023; Tesi et al., 2024). Therefore, the following hypothesis is proposed:

H5: Psychological capital positively affects work engagement.

The mediation hypotheses follow from the resource-conversion logic. Distributed leadership may not be motivational until teachers interpret shared leadership as competence-building, coordinated, and empowering; psychological capital should therefore transmit its effect to work engagement. Perceived organizational support can motivate directly through reciprocity, but it can also generate personal resource gains that sustain engagement. Consequently, the following hypotheses are proposed:

H6: Psychological capital mediates the effect of distributed leadership on work engagement.

H7: Psychological capital mediates the effect of perceived organizational support on work engagement.

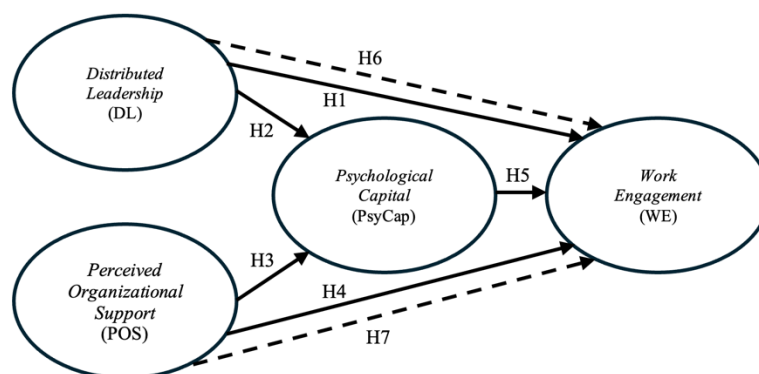


Figure 1. Integrated JD-R & COR Conceptual Model

B. Methods

This study employed an explanatory cross-sectional survey with a quantitative approach. The research was conducted in a private SPK school in Tangerang Selatan, to maintain institutional anonymity. The population and unit of analysis consisted of permanent teachers at the school. Because the population was relatively limited and accessible, this study used a total population sampling approach, also referred to as a census approach, by inviting all 139 permanent teachers to participate. A total of 129 valid responses were obtained, resulting in a high response rate of 92.8%. The respondents came from different school units, including kindergarten, elementary, junior high school, and senior high school, so the data reflected a school-wide teacher perspective rather than a single unit only.

Before questionnaire distribution, participants were informed about the study purpose, the voluntary nature of participation, the confidentiality of responses, and the non-reporting of personally identifying information. Returning a completed questionnaire indicated informed consent. Because all variables were self-reported in one questionnaire at one point in time, common method bias was considered as a potential risk. To reduce this risk, responses were anonymous and confidential, and participants were told that there were no right or wrong answers. The VIF analysis reported below is interpreted only as a

structural collinearity diagnostic, not as definitive evidence that common method bias is absent.

The study examined four reflective latent variables: work engagement (WE), distributed leadership (DL), perceived organizational support (POS), and psychological capital (PsyCap). Latent variables were measured using a structured questionnaire, with each item rated by respondents on a five-point scale ranging from 1 for strongly disagree to 5 for strongly agree. Distributed leadership was measured through items reflecting distribution of leadership roles, collaboration, support, and supervision (Gronn, 2002; Spillane et al., 2004).

Perceived organizational support was measured through items reflecting fairness, reward, work comfort, and institutional care (Eisenberger et al., 1986; Rhoades & Eisenberger, 2002). Psychological capital was measured through items reflecting self-efficacy, hope, resilience, and optimism (Luthans, 2002; Luthans et al., 2006; Luthans & Youssef-Morgan, 2017). Work engagement was measured through items reflecting vigor, dedication, absorption, and initiative (Schaufeli & Bakker, 2004; Bakker & Leiter, 2010; Kahn, 1990). All constructs were treated as reflective constructs. Figure 1 displays the research model, where solid lines show direct relationships and dashed lines indicate indirect relationships through psychological capital.

SmartPLS 4 was employed to process the data through the PLS-SEM approach (Ringle et al., 2024). The analysis followed two stages. First, the measurement model was assessed by testing indicator reliability, convergent validity, internal consistency reliability, and discriminant validity. Indicators with weak contribution were evaluated carefully to ensure that the retained measurement model was reliable and conceptually meaningful. Second, the structural model was assessed using collinearity, coefficient of determination, effect size, path coefficients, direct effect and mediation testing through bootstrapping.

PLS-SEM was chosen because the primary objective was to explain variance and compare direct and mediated resource pathways in an underexamined educational context, rather than to confirm a firmly established covariance structure. It is also appropriate for simultaneous estimation of multiple indirect relationships with a moderate sample and does not require multivariate normality to the same degree as covariance-based SEM (Hair et al., 2022). The selection was therefore theory- and objective-driven, not based solely on sample size.

C. Results and Discussion

Measurement Model

To evaluate the measurement model, this study examined the reliability of the indicators, convergent validity, internal consistency, and discriminant validity. The reflective indicators were retained when they met acceptable outer loading and convergent validity criteria. Table 1 shows that the majority of indicators had outer loading values above 0.70. The initial questionnaire contained 48 items, consisting of 12 distributed leadership items, 12 perceived organizational support items, 12 psychological capital items, and 12 work engagement items. Three work engagement indicators were removed during measurement-model evaluation because outer loading values were less than 0.60. Although five indicators showed outer loadings between 0.60 and 0.70, they were retained

because the AVE values exceeded 0.50, confirming acceptable convergent validity. The AVE results for convergent validity are presented in Table 2.

Internal consistency reliability was assessed using three measures: Cronbach's alpha, reliability coefficient (ρ_A), and composite reliability (ρ_c) to complement the analysis. All values must be greater than 0.70 to conclude that internal consistency reliability exists. Based on the data shown in Table 3, all constructs met the reliability criteria.

Table 1. Indicator Reliability

Variables							
Work Engagement		Perceived Organizational Support		Distributed Leadership		Psychological Capital	
Indicator	Outer Loading	Indicator	Outer Loading	Indicator	Outer Loading	Indicator	Outer Loading
WE_01	0.845	POS_01	0.790	DL_01	0.829	PsyCap_01	0.659
WE_02	0.852	POS_02	0.782	DL_02	0.753	PsyCap_02	0.771
WE_03	0.727	POS_03	0.798	DL_03	0.665	PsyCap_03	0.755
WE_04	0.783	POS_04	0.769	DL_04	0.844	PsyCap_04	0.766
WE_05	0.885	POS_05	0.814	DL_05	0.819	PsyCap_05	0.817
WE_06	0.790	POS_06	0.757	DL_06	0.828	PsyCap_06	0.848
WE_07	0.688	POS_07	0.782	DL_07	0.855	PsyCap_07	0.755
WE_09	0.689	POS_08	0.739	DL_08	0.866	PsyCap_08	0.763
WE_10	0.644	POS_09	0.763	DL_09	0.872	PsyCap_09	0.845
		POS_10	0.840	DL_10	0.811	PsyCap_10	0.809
		POS_11	0.865	DL_11	0.803	PsyCap_11	0.822
		POS_12	0.863	DL_12	0.832	PsyCap_12	0.855

Table 2. Convergent Validity

Variable	Average Variance Extracted (AVE)
Work Engagement	0.595
Distributed Leadership	0.667
Perceived Organizational Support	0.636
Psychological Capital	0.625

Table 3. Internal Consistency Reliability

Variable	Cronbach's Alpha	Reliability Coefficient (ρ_A)	Composite Reliability (ρ_c)
Work Engagement	0.913	0.918	0.929
Distributed Leadership	0.954	0.959	0.960
Perceived Organizational Support	0.948	0.949	0.954
Psychological Capital	0.945	0.947	0.952

The discriminant validity test used the heterotrait-monotrait ratio (HTMT). This value provides an estimate of the true correlation between two constructs. All HTMT values are less than 0.85 as shown in Table 4. Thus, all constructs in this research model can be concluded to have met the requirements for discriminant validity. This indicates that each construct measures a distinct and unique empirical concept.

Table 4. Discriminant Validity

Variable	DL	POS	PsyCap	WE
DL				
POS	0.790			
PsyCap	0.659	0.624		
WE	0.675	0.708	0.773	

All of these results indicate that distributed leadership, perceived organizational support, psychological capital, and work engagement were measured consistently and were suitable for structural model testing.

Structural Model

The structural model was used to analyze the relationships among latent variables and evaluate the proposed hypotheses. To evaluate the structural model, this study examined collinearity, explanatory power through the coefficient of determination and effect size, and hypothesis testing using path coefficients.

Table 5. Collinearity

Variable	DL	POS	PsyCap	WE
DL			2.364	2.693
POS			2.364	2.496
PsyCap				1.778
WE				

The collinearity test used the variance inflation factor (VIF). All VIF values were below both the conventional threshold of 5.00 and the more conservative threshold of 3.00 as shown in Table 5. Therefore, it can be concluded that the correlation between predictor variables is not high and there were no critical collinearity concerns.

Explanatory power was assessed using R^2 , while f^2 indicated the change in an endogenous construct's explained variance when a specific predictor was omitted. As general guidelines, f^2 values of 0.02, 0.15, and 0.35 indicate small, medium, and large effects. These benchmarks are interpreted cautiously because substantive importance also depends on theory and context.

Table 6. Coefficient of Determination

Variable	R-square
Work Engagement	0.611
Psychological Capital	0.437

Table 6 shows that work engagement has an R^2 value of 0.611, meaning distributed leadership, perceived organizational support, and psychological capital collectively explain 61.1% of work engagement variance. Psychological capital has an R^2 value of 0.437, meaning distributed leadership and perceived organizational support collectively explain 43.7% of psychological capital variance. These values indicate moderate in-sample explanatory power rather than proof of predictive accuracy beyond the studied school.

Table 7. Effect Size

Variable	f-square	Effect Size
DL → WE	0.012	Very Small
DL → PsyCap	0.139	Small
POS → WE	0.089	Small
POS → PsyCap	0.056	Small
PsyCap → WE	0.324	Medium

The f^2 results clarify the practical contribution of each predictor. Psychological capital had the largest effect on work engagement ($f^2 = 0.324$), a relatively strong medium effect. Perceived organizational support had a small effect on work engagement ($f^2 = 0.089$). Distributed leadership had a very small direct effect on work engagement ($f^2 = 0.012$), but a small and substantively meaningful effect on psychological capital ($f^2 = 0.139$). Perceived organizational support also had a small effect on psychological capital ($f^2 = 0.056$). The contrast suggests that distributed leadership primarily contributes by building teachers' personal resources, whereas organizational support retains a more immediate motivational function.

Bootstrapping was used to test the hypothesized direct and indirect relationships at the 5% significance level (Table 8). Psychological capital was the strongest direct predictor of work engagement ($\beta = 0.473$, $p = 0.000$). Perceived organizational support also had a positive direct effect ($\beta = 0.294$, $p = 0.001$), whereas the direct effect of distributed leadership was not statistically supported ($\beta = 0.114$, $p = 0.086$). Distributed leadership positively affected psychological capital ($\beta = 0.430$, $p = 0.000$), and perceived organizational support also positively affected psychological capital ($\beta = 0.272$, $p = 0.005$). Accordingly, H2, H3, H4, and H5 were supported, while H1 was not supported.

Table 8. Hypothesis Testing

Hypothesis	Path Coefficient	P values	Conclusion
H1: DL → WE	0.114	0.086	Not supported
H2: DL → PsyCap	0.430	0.000	Supported
H3: POS → WE	0.294	0.001	Supported
H4: POS → PsyCap	0.272	0.005	Supported
H5: PsyCap → WE	0.473	0.000	Supported
H6: DL → PsyCap → WE	0.204	0.000	Supported
H7: POS → PsyCap → WE	0.129	0.012	Supported

The mediation results provide the central explanation of the model. Distributed leadership had a positive indirect effect on work engagement through psychological capital ($\beta = 0.204$, $p = 0.000$). Because the corresponding direct path was not statistically supported, psychological capital fully mediated this relationship, supporting H6. Perceived organizational support also had a positive indirect effect through psychological capital ($\beta = 0.129$, $p = .012$). Because its direct effect remained significant, the mediation was partial, supporting H7. The indirect effect should not be interpreted merely as a statistical addition. It indicates that organizational conditions can generate personal resource gains that are then associated with higher work engagement.

Discussion

The findings confirm that psychological capital functions as the central mechanism in explaining work engagement at the school. This result is consistent with Donaldson and Villalobos (2024), who found across several studies that psychological capital is associated with various positive work outcomes, including improved work performance and other beneficial organizational outcomes. This finding is also consistent with the JD-R model, which places personal resources as important predictors of engagement (Bakker et al., 2023). It is also aligned with COR theory because psychological capital represents a pool of personal resources that helps teachers respond positively to work demands (Hobfoll et al., 2018). In the SPK context, psychological capital appears to help teachers translate demanding expectations into sustained involvement rather than resource depletion.

The unsupported direct effect of distributed leadership is theoretically informative rather than evidence that leadership is unimportant. Distributed leadership structures do not automatically produce engaged teachers; their meaning depends on implementation and context (Spillane, 2005). From a JD-R perspective, distributed leadership appears to function as a resource-enabling condition rather than an immediate motivational stimulus. The finding is consistent with studies in which teacher efficacy or another personal resource transmitted the effect of distributed leadership to work engagement (Cai et al., 2023; Kavgacı & Öztürk, 2023). It also helps explain why inconsistent or partial leadership practices may not improve engagement (Tejero & Aonan, 2024). In a multi-unit SPK school, leadership is likely to be distributed across principals, coordinators, heads of department, and other appointed leaders. The arrangement becomes resourceful only

when responsibilities are clear, decisions are coordinated, and teachers experience supervision as competence-building rather than as fragmented control.

Perceived organizational support had a direct effect on work engagement. This finding is consistent with organizational support theory, which explains that employees are more likely to respond with stronger involvement and commitment when they believe that the organization values their contributions and cares about their well-being (Kurtessis et al., 2017; Eisenberger & Stinglhamber, 2011). Compared with distributed leadership, perceived organizational support has a more immediate motivational value because it directly strengthens teachers' sense of being valued by the institution through a reciprocal relationship in which employees respond positively when they perceive that the organization provides beneficial treatment and support (Eisenberger & Stinglhamber, 2011).

In contrast, unlike distributed leadership, perceived organizational support affects work engagement through a more layered mechanism involving psychological capital. The present result is consistent with studies showing that support directly predicts work engagement and also builds personal resources (Yang et al., 2020; Sudibjo & Riantini, 2023; Tian et al., 2023). First, it directly encourages teachers to reciprocate with greater dedication and involvement. Second, it strengthens psychological capital, which then increases work engagement. The larger direct effect relative to the indirect effect indicates that concrete organizational treatment has immediate motivational value, while the psychological capital pathway helps explain how that value can become more durable (Nikhil & Arthi, 2018).

The findings should also be interpreted carefully in relation to causality. Cross-sectional studies often treat personal resources as predictors of work engagement, but longitudinal research suggests that the relationship may be reciprocal or change over time. For example, a three-wave study found that teacher self-efficacy and work engagement were positively related, but changes in engagement predicted later self-efficacy rather than the reverse (Burić et al., 2022). Therefore, the relationship between psychological capital and work engagement in this study should be understood as an association that is consistent with the proposed theory, not as final proof that psychological capital causes engagement over time. This limitation supports the need for future longitudinal studies to examine how personal resources and engagement strengthen each other over time.

Theoretical Contributions

This study makes three theoretical contributions. First, it integrates JD-R and COR by specifying psychological capital as a resource-conversion mechanism rather than treating job and personal resources as parallel predictors. Second, it shows resource-pathway heterogeneity where perceived organizational support can function as an immediately experienced motivational resource, whereas distributed leadership is more dependent on teachers' internal interpretation and resource development. Third, it extends resource-based teacher work engagement research to an Indonesian SPK setting, demonstrating that internationally oriented schools should not be assumed to reproduce findings from public schools, universities, or non-educational occupations.

The results also refine the meaning of full and partial mediation. Full mediation in the distributed leadership pathway indicates that leadership distribution is not sufficient by itself. The finding is consistent with a pathway in which distributed leadership is associated with stronger work engagement through psychological capital. Partial mediation in the organizational support pathway indicates two simultaneous processes: reciprocal motivation from being valued and personal resource accumulation. This comparative mechanism is the study's main novelty.

Practical Implications

In practical terms, the school can use these findings to make psychological capital development part of teacher management. The school can provide professional development programs that build self-efficacy through mastery experiences, strengthen hope through goal-setting and pathway planning, cultivate optimism through constructive feedback, and develop resilience through mentoring and peer support. These programs can convert leadership and organizational support into sustainable engagement.

School leaders should also redesign distributed leadership so that it is experienced as genuine empowerment rather than task delegation. This requires competent role holders, clear coordination, and well-defined responsibilities so that distributed leadership can strengthen teachers' psychological capital and motivation. Finally, the school should strengthen perceived organizational support through consistent policies, fair treatment, and visible appreciation of teacher contributions. Because perceived organizational support directly affects work engagement, even small improvements in fairness, objectivity, and responsiveness may produce meaningful motivational benefits.

D. Conclusions

This study demonstrates that school resources do not become teacher work engagement through an identical process. Psychological capital was the strongest predictor of engagement and fully transmitted the effect of distributed leadership, whereas perceived organizational support influenced engagement both directly and indirectly. Theoretically, the findings advance JD-R and COR by identifying psychological capital as a resource-conversion mechanism and by showing that leadership and organizational support have different motivational architectures. Contextually, the study provides evidence from an Indonesian private SPK school, an educational setting that has received limited international attention.

Practically, schools should not rely on distributing leadership responsibilities alone. Distributed leadership must be coordinated and designed to build teachers' psychological capital. At the same time, schools should maintain fair, visible, and responsive organizational support because teachers can experience it as an immediate reason to reciprocate with stronger work engagement. However, the conclusion should be interpreted with caution because this study was conducted in one private SPK school, used a cross-sectional design, and reflected a single institutional context. In addition, the use of a single self-report questionnaire at one point in time may have introduced common method bias, which cannot be ruled out despite the procedural safeguards used in this study. Future studies should involve multiple schools, compare different school types, use

longitudinal or mixed-method designs, and examine additional mediators or moderators such as trust, psychological safety, school climate, or workload.

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