

# The silent emotional engine: Wellbeing at the core of teacher leadership

Norma Ghamrawi · Tarek Shal · Mohamed Loay Dahhan · Najah A. R. Ghamrawi

**Abstract:** This cross-national study investigates how teacher leadership (TL) influences distributed leadership (DL) in K–12 schools across six Arab countries, with teacher wellbeing (TWB) positioned as a central mediating factor. Drawing on a research-grounded conceptual model, the findings reveal that TWB significantly enhances the impact of TL on DL, particularly when driven by professional growth, learning leadership, and school community support. Notably, collaboration and communication—though linked to wellbeing—do not independently foster DL, exposing limitations in prevailing assumptions about their sufficiency. This study challenges the conventional belief that collaboration alone can catalyze leadership distribution, arguing instead for holistic, wellbeing-centered leadership models. TWB emerges not merely as a byproduct of leadership practices but as a pivotal enabler of distributed leadership. The findings offer implications for rethinking leadership development policies, urging educational systems to center teacher support and wellbeing as strategic levers for systemic transformation and sustainable school leadership.

**Keywords:** teacher leadership, distributed leadership, teacher wellbeing, educational leadership, school improvement

## 1. Introduction

Amid ongoing transformations in how leadership is conceptualized and enacted in schools, the inadequacies of top-down, principal-centric models have prompted a shift toward more democratic, participatory, and capacity-building approaches. Among these, distributed leadership (DL) has emerged as a theoretical and practical framework that reconceptualizes leadership as a shared, interactive process embedded within the daily practices of school life (Harris, 2013; Spillane, 2006). Unlike formal hierarchical models, DL posits that leadership is a practice stretched over multiple actors, artifacts, and actions—intentionally mobilized across various roles and levels of the school system (Spillane et al., 2004). It encourages the redistribution of power and authority, allowing not only principals but also teachers, students, and communities to meaningfully participate in shaping school directions. DL has been associated with organizational resilience, innovation diffusion, and sustained school improvement (Leithwood et al., 2020), yet its effective enactment remains contingent on the professional agency of teachers (Shal et al., 2024a).

Complementing this shift, TL constitutes both a foundational and catalytic force within the DL paradigm. Moving beyond the notion of informal leadership, TL involves teachers assuming roles that extend beyond the classroom to influence pedagogy, curriculum, school culture, and peer development (Ghamrawi, 2026; York-Barr & Duke, 2004; Wenner & Campbell, 2017). These

roles are not simply delegated tasks; they are contextually embedded practices grounded in professional expertise, relational trust, and reflective capacity (Abu-Shawish & Ghamrawi, 2025). Teachers who lead often initiate and sustain professional learning communities, contribute to policy deliberations, and drive collective instructional improvement (Nguyen et al., 2020). Importantly, TL is not uniformly enacted but shaped by organizational culture, leadership climate, and teacher motivation—conditions that directly intersect with their wellbeing.

At the heart of these enabling conditions lies TWB, increasingly recognized as a core element of school effectiveness, encompassing teachers' holistic experience of purpose, emotional resilience, job satisfaction, and psychological health (Viac & Fraser, 2020). Research suggests that teachers' capacity to lead, innovate, and collaborate is tightly bound to their sense of wellbeing (Acton & Glasgow, 2015; Ghamrawi & Al-Thani, 2023; Liu et al., 2022). When teachers experience autonomy, support, and meaningful professional relationships, they are more likely to take on leadership roles and contribute constructively to the wider school mission (Ghamrawi et al., 2023a, 2023b; Leithwood & Azah, 2017). Conversely, declining wellbeing—often exacerbated by organizational stressors or performative accountability systems—can restrict teachers' willingness to lead and participate in DL configurations.

Despite the conceptual linkages among DL, TL, and TWB, the empirical literature remains underdeveloped, particularly regarding how TWB mediates the relationship between TL and DL (Cann et al., 2021; McCallum, 2022). Studies have largely treated these constructs in isolation, neglecting to explore their systemic interplay and mutual reinforcement. Moreover, while DL and TL have been widely researched in Western contexts, there is a stark dearth of empirical work from the Arab region, where sociocultural traditions, centralized systems, and reform dynamics complicate the operationalization of shared leadership (Ghamrawi, 2016; Arar & Oplatka, 2016). What remains particularly absent is a structural investigation of how TL translates into DL through the mediating function of TWB within these distinctive educational ecologies.

This study addresses this critical gap by investigating the triadic relationship between TL, TWB, and DL across six Arab countries. Using Structural Equation Modeling (SEM), it explores how different dimensions of TL—collaboration and communication, professional learning and growth, learning leadership, and school community support—contribute to TWB, and how, in turn, TWB fosters DL practices. The study was guided by the following research questions:

1. Does teacher leadership affect distributed leadership in school settings?
2. Does teacher leadership influence teacher wellbeing?
3. Does teacher wellbeing impact the practice of distributed leadership in schools?
4. Does teacher wellbeing mediate the relationship between teacher leadership and distributed leadership?
5. Which dimensions of teacher leadership (e.g., collaboration, professional learning, learning leadership, school support) most significantly contribute to enhancing teacher wellbeing?

## 2. Literature review

### 2.1 Distributed and teacher leadership

In recent decades, the conceptual turn from leadership as an individualistic, hierarchical function to one that is distributed, relational, and situated within the everyday interactions of school communities has gained notable traction in the field of educational leadership (Gronn, 2002; Lu

& Chen, 2025; Spillane, 2006). DL, in its most refined interpretation, transcends the mere delegation of tasks; it denotes a systemic reconfiguration wherein leadership is not anchored in positional authority but diffused across a multiplicity of actors, roles, and contexts (Harris, 2013; Kılınc, & Özdemir, 2025). This paradigm is predicated on the premise that leadership emerges organically through practice and interaction, as power and decision-making are shared among both formally designated leaders and those whose influence arises informally through expertise, trust, and relational capital (Mifsud, 2024).

The dispersal of leadership inevitably gives rise to differentiated leadership forms—including subject leaders, department heads, instructional coaches, and notably, teacher leaders—each functioning within distinct loci of agency and responsibility (Muijs & Harris, 2007; Shal et al., 2024b). Among these, TL has emerged as a particularly salient form, gaining scholarly attention for its potential to reconstitute the role of the teacher as a proactive change agent, rather than a passive implementer of top-down mandates (Ghamrawi et al., 2024a; York-Barr & Duke, 2004). Embedded within the everyday fabric of teaching and learning, TL represents an enactment of DL at the pedagogical core of schooling—where influence is exercised not through authority, but through pedagogical innovation, peer collaboration, and normative leadership (Lieberman & Miller, 2011; Wiens et al., 2024).

The significance of TL lies not merely in its capacity to decentralize leadership, but in its latent potential to foster collective efficacy, professional trust, and ultimately, sustainable school improvement (Wenner & Campbell, 2017). When teachers are recognized as epistemic contributors rather than executors, they become vital agents in cultivating a school culture oriented toward continuous inquiry and reform (Ghamrawi et al., 2024a; Katzenmeyer & Moller, 2009). Furthermore, research suggests that schools where TL is embedded within a distributed framework are more adaptive, resilient, and capable of self-renewal in the face of complex policy and societal challenges (Çilek et al., 2025; Harris & Spillane, 2008).

Nonetheless, the institutionalization of TL within DL models is not without tensions. Power asymmetries, rigid bureaucratic structures, and the performative demands of accountability regimes may stifle authentic forms of shared leadership, rendering TL tokenistic or co-opted (Lumby, 2013). In one study, TL was found to harbor a shadow side, manifesting in unintended consequences such as stress, burnout, isolation, peer rivalry, role ambiguity, organizational fragmentation, and diminished instructional quality (Savaş et al., 2025). Therefore, fostering genuine DL necessitates a critical interrogation of the structural and cultural conditions that enable or inhibit the flourishing of informal leadership in schools.

## 2.2 Teacher wellbeing

TWB has emerged as a central concern within contemporary educational discourse, not merely as a matter of individual welfare but as a systemic determinant of school effectiveness, teacher retention, and student success (Acton & Glasgow, 2015; Zhou et al., 2024). Wellbeing, in this context, transcends the absence of stress or burnout; it encompasses a multidimensional equilibrium of professional fulfilment, emotional resilience, and a sense of belonging within the school ecology (McCallum, 2022). As educational systems worldwide grapple with intensifying pressures of standardization, performativity, and reform fatigue (Ghamrawi, 2018; Shal et al., 2024c), the wellbeing of teachers becomes a crucial barometer of institutional health and sustainability (Karakus et al., 2024).

In parallel, scholarship on TL has intensified, positioning teachers as pivotal agents of pedagogical innovation, organizational change, and collaborative culture (Ghamrawi et al., 2023a, 2023b, 2024a, 2024b; Wenner & Campbell, 2017). While TL is often lauded as a pathway to

professional empowerment and agency, emerging evidence suggests that the affective and existential toll of leadership roles on teachers is frequently overlooked (Savaş et al., 2025). The blurring of instructional and leadership responsibilities, particularly when not institutionally scaffolded, may produce role ambiguity, increased workload, and emotional dissonance—factors that erode rather than enhance wellbeing (Ghamrawi et al., 2023a). Thus, TL—when implemented without structural support or cultural coherence—risks becoming a double-edged sword: fostering professional growth on one hand, while silently engendering vulnerability and exhaustion on the other (Frost, 2016).

DL, in theory, offers an antidote to this dilemma by promoting a more relational and participatory model of leadership wherein influence and responsibility are diffused across the organizational fabric (Spillane, 2006; Harris, 2013). When enacted authentically, DL has been shown to contribute to improved teacher morale, enhanced collegiality, and a shared sense of purpose—all of which are critical drivers of wellbeing (Shal et al., 2024a). Yet, the translation of DL from theory to practice remains uneven, often complicated by latent power hierarchies, institutional inertia, and accountability demands that re-centralize control even as they rhetorically advocate for dispersion (Abu-Shawish & Ghamrawi, 2025; Lumby, 2013). In such contexts, teachers may be expected to assume leadership functions without the concomitant authority, recognition, or autonomy—thus exacerbating the very stressors that distributed models seek to ameliorate.

The intersection of TWB, TL, and DL invites a rethinking of leadership not merely as functional coordination but as an ethical and affective architecture. It demands a conceptual shift from leadership as task distribution to leadership as care-infused practice—one that recognizes the emotional labor of teaching and attends to the psychic economy of those who lead from the middle. In doing so, it foregrounds the necessity of leadership models that do not extract from wellbeing but are generative of it.

### 3. Conceptual framework and hypotheses

This study is grounded in a theoretically integrated framework that brings together DL (Spillane, 2006), TL (York-Barr & Duke, 2004), and TWB (Viac & Fraser, 2020), positioning TWB as the mediating psychological mechanism through which TL informs and enables DL in school contexts. Each of these constructs has been extensively examined in isolation, yet there remains a lack of empirical work exploring how they dynamically interact, particularly in the context of K–12 education in Arab states.

DL, as conceptualized by Spillane (2006), moves beyond the premise of leadership as the act of an individual in a formal role, toward a relational and practice-based perspective. In this view, leadership is enacted across people and contexts, through a web of interactions involving principals, teachers, students, and other stakeholders (Harris, 2013). DL is associated with improved innovation, collective capacity, and sustained school improvement (Leithwood et al., 2020), but its implementation is contingent upon the availability and activation of leadership from within the teaching body.

It is within this context that TL emerges as both a driver and prerequisite for DL. TL refers to the influence teachers exert beyond their classrooms to enhance schoolwide instruction, mentor colleagues, participate in decision-making, and shape school culture (Ghamrawi et al., 2024a, 2024b, 2024c, 2024d; Wenner & Campbell, 2017). As a construct, TL comprises several dimensions, including collaboration and communication; professional learning and growth; learning leadership; and school community and Support (Ghamrawi et al., 2023a, 2023c). When teachers engage in these leadership practices, they not only build collective capacity but also

provide the relational and instructional backbone necessary for DL to thrive. Accordingly, we hypothesize that:

**H1.** Teacher leadership has a significant positive effect on distributed leadership.

However, the successful enactment of TL and its translation into DL is not purely structural—it is also deeply psychological. Emerging literature highlights the critical role of TWB in mediating how leadership is experienced and sustained in schools (Cann et al., 2021; Ghamrawi et al., 2023a; Liu et al., 2023). TWB encompasses dimensions such as emotional resilience, psychological fulfillment, job satisfaction, and a sense of purpose. Teachers who experience high levels of wellbeing are more likely to initiate and sustain leadership behaviors, engage in school improvement, and collaborate meaningfully with peers (Ghamrawi & Al-Thani, 2023; McCallum, 2022). Thus, the framework further posits that TL positively influences TWB, as leadership roles can contribute to teachers' sense of competence, purpose, and professional identity. In supportive environments, teachers who lead often report higher wellbeing due to the autonomy, social connectedness, and meaningfulness associated with their expanded roles (Liu et al., 2023; Nguyen et al., 2020). Accordingly, we hypothesize that:

**H2.** Teacher leadership has a significant positive effect on teacher wellbeing.

Given that TWB fosters openness to collaboration, motivation to contribute, and emotional capacity to lead, we assume that TWB directly contributes to the realization of DL. Teachers with high levels of wellbeing are more inclined to engage in collective leadership efforts, collaborate on school initiatives, and mentor peers—all hallmarks of DL. Therefore, we hypothesize that:

**H3.** Teacher wellbeing has a significant positive effect on distributed leadership.

Building on this logic, the framework positions TWB as a mediating construct—a psychological bridge through which TL is translated into DL. That is, TL enhances TWB, which in turn increases the likelihood of teachers participating in and enabling DL practices. This mediation model is particularly relevant in high-stress educational environments, where teacher burnout can limit engagement despite high leadership potential (Ghamrawi & Al-Thani, 2023). As such, we hypothesize that:

**H4.** Teacher wellbeing mediates the relationship between teacher leadership and distributed leadership.

Moreover, the study delves deeper into the specific dimensions of TL to understand their unique contributions to TWB. For example, teachers who engage in collaboration & communication may benefit from stronger collegial relationships and mutual trust, which are known to enhance emotional wellbeing (Shal et al., 2024b). Similarly, engaging in professional learning and growth may cultivate a sense of purpose and self-efficacy (Liu et al., 2023). Moreover, by encouraging cognitive stimulation and innovation, learning leadership can foster intellectual engagement and motivation (Cann et al., 2021). Lastly, active involvement in school community and support may promote a sense of belonging and social connectedness—both vital components of wellbeing (Ghamrawi & Al-Thani, 2023).

Hence, the following hypotheses are articulated to reflect the differentiated impact of TL dimensions on TWB:

**H5a.** The dimension of collaboration and communication within teacher leadership positively affects TWB.

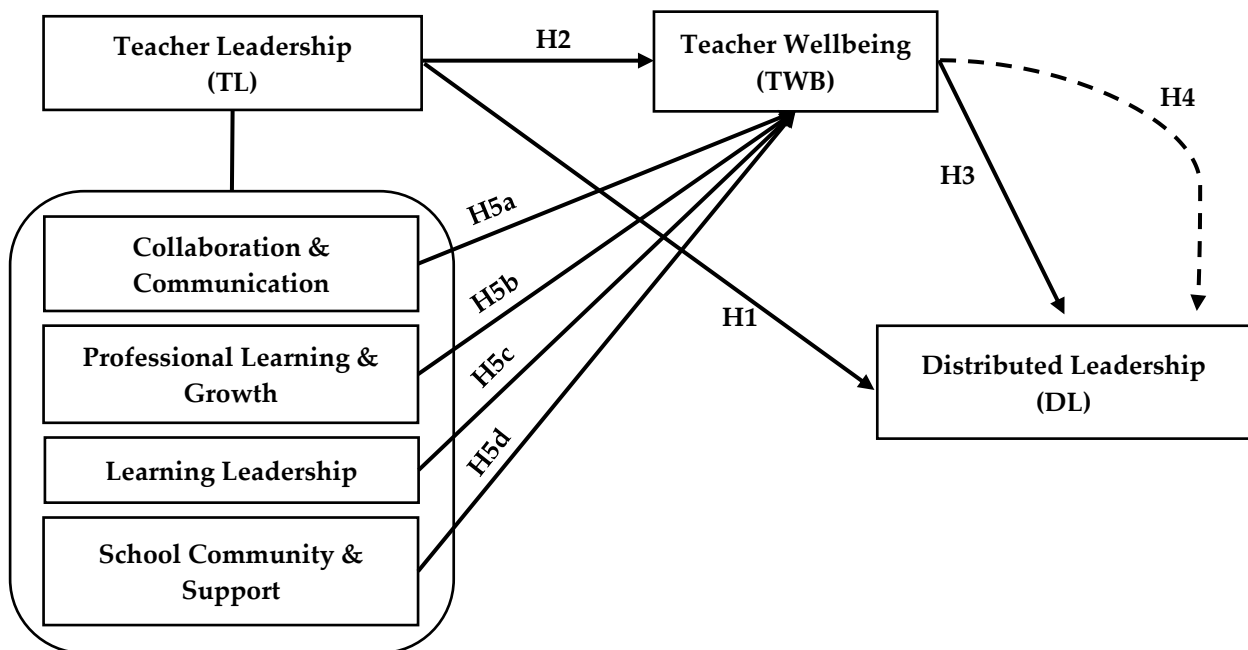
**H5b.** The dimension of Professional Learning & Growth within teacher leadership positively affects teacher wellbeing.

**H5c.** The dimension of Learning Leadership within teacher leadership positively affects teacher wellbeing.

**H5d.** The dimension of School Community & Support within teacher leadership positively affects teacher wellbeing.

Together, these theoretical assumptions form a coherent conceptual model in which TL is both a structural and psychological driver of DL—mediated through the lived experience of TWB (Figure 1). The resulting model offers a layered understanding of how leadership cultures are fostered in schools and emphasizes the critical role of supporting TWB in any effort to build distributed forms of leadership.

**Figure 1.** Theorized conceptual model for the study



## 4. Methodology

### 4.1 Research design

This study aimed to explore the interconnections between TL, TWB, and DL in K–12 schools across six Arab countries. The research design was grounded in the positivist paradigm, emphasizing empirical analysis and objective measurement to understand the complex relationships among leadership constructs (Creswell & Creswell, 2018). Accordingly, a quantitative methodology was employed, utilizing Structural Equation Modeling (SEM) to systematically analyze data collected from a sample of 359 teachers. This approach enabled the examination of the mediating role of TWB between TL and DL, providing robust empirical evidence for the proposed conceptual model (Kline, 2023).

### 4.2 Participants

This study employed a survey methodology to investigate the relationship between DL, TL, and TWB with TWB positioned as a mediating factor. Participants were drawn from an online community for teachers in the Arab States Region, which was selected as the most convenient and efficient platform to reach educators from multiple Arab countries. The community’s free-of-charge membership made it accessible to a diverse group of teachers from various school types

and educational settings, attracting educators who were actively engaged in their professional growth and development. To ensure relevance to the study, invitations to participate were sent to all members of the online community who identified as K–12 schoolteachers. Out of 868 eligible members, 370 completed the questionnaire, with 359 being valid (N=359) thus constituting the dataset for the study.

### 4.3 Research instrument

The survey instrument was consisted of four sections. The first section gathered demographic information, including gender, age, years of experience, and teaching cycles, to contextualize the respondents' profiles. The second section, informed by the Great Teachers and Leaders framework and supported by the American Institutes for Research and the U.S. Department of Education, assessed TL across four critical components: Collaboration and Communication (6 statements), Professional Learning and Growth (5 statements), Learning Leadership (6 statements), and School Community (6 statements).

The third section focused on TWB, employing a validated survey developed by Butler and Kern (2016), which comprised 19 items designed to capture the multifaceted aspects of wellbeing among teachers. The fourth section evaluated DL, drawing on 10 statements adapted from the survey developed by Ozer and Beycioglu (2013).

All items were rated on a 4-point Likert scale, ranging from 4 = Strongly Agree to 1 = Strongly Disagree, to capture participants' perceptions. The electronic questionnaire (E-Questionnaire) was designed to ensure completeness by requiring responses to all items prior to submission, effectively eliminating missing data and thereby enhancing the reliability and integrity of the dataset.

## 5. Data analysis

Data analysis for this study was conducted using Structural Equation Modeling (SEM) to examine the relationships between Teacher Leadership (TL), Teacher Well-Being (TWB), and Distributed Leadership (DL), with TWB positioned as a mediating factor. Descriptive statistics were calculated to summarize demographic characteristics, and reliability analysis was conducted using Cronbach's alpha to ensure consistency. SEM analysis was performed using SPSS and AMOS software to evaluate the model and estimate relationships. An exploratory analysis was also conducted to maintain data quality by identifying and excluding outliers, ensuring a robust and reliable final dataset.

## 6. Findings

### 6.1 Descriptive statistics

Descriptive statistics were utilized to present the demographic characteristics of the sample, including gender, years of experience, teaching cycle, and country. The details are summarized in Table 1 (below).

As Table 1 suggests, the study sample comprised 359 respondents, predominantly female (68.8%), with most participants having 11–15 years of experience (23.1%). The majority worked at the primary school level (36.2%), with substantial representation from Lebanon (26.5%), Qatar (20.9%), and the United Arab Emirates (18.7%). Most respondents held a Bachelor's degree (59.9%), while a significant portion had a Master's degree (40.1%). In terms of income, the largest group earned more than 3000 USD (44.6%), followed by those earning less than 1000 USD (34.5%).

**Table 1.** The characteristics of the sample

Variable	Categories	N	%
Gender	male	112	31.2%
	female	247	68.8%
Years of Experience	0-5	62	17.3%
	6-10	71	19.8%
	11-15	83	23.1%
	16-20	81	22.6%
	<20	62	17.3%
Cycle	KGs	46	12.8%
	Primary	130	36.2%
	Middle	76	21.2%
	High	107	29.8%
Country	UAE	67	18.7%
	JOR	56	15.6%
	KSA	42	11.7%
	QAT	75	20.9%
	LEB	95	26.5%
	EGY	24	6.7%
Degree	Bachelor	215	59.9%
	Master	144	40.1%
Income	< 1000	124	34.5%
	[1000, 2000]	75	20.9%
	> 3000	160	44.6%
<b>Total</b>		<b>359</b>	<b>100%</b>

### 6.2 Reliability

Cronbach's alpha was used to measure the consistency of different elements administered in the questionnaire. Table 2 presents the coefficient values for each dimension individually, as well as for the overall questionnaire.

**Table 2.** Cronbach's Alpha

Variable	Cronbach's Alpha	N of Items	Excluded Statements
Collaboration and communication	0.886	6	None
Professional learning and growth	0.914	5	None
Learning leadership	0.920	6	None
School community and support	0.876	6	None
TL	0.962	23	None
TWB	0.937	19	None
DL	0.930	10	None
All items	0.977	52	None

As Table 2 suggests, variables demonstrated strong reliability, with Cronbach's Alpha values ranging from 0.876 (School Community and Support) to 0.962 (TL), while the overall reliability for all items was 0.977. The variables were measured using a fixed number of items as follows:

Collaboration and Communication (6 items,  $\alpha=0.886$ ), Professional Learning and Growth (5 items,  $\alpha=0.914$ ), Learning Leadership (6 items,  $\alpha=0.920$ ), School Community and Support (6 items,  $\alpha=0.876$ ), TWB (19 items,  $\alpha=0.937$ ), and DL (10 items,  $\alpha=0.930$ ). These results confirmed the internal consistency of the survey, indicating that all items were well-aligned with their respective constructs. Consequently, the high reliability of the measurement scales ensured the validity of the data for subsequent analyses.

### 6.3 Construct validity and internal consistency

Table 3 presents the internal consistency of the constructs and their respective items, demonstrating the robustness of the measurement framework.

**Table 3.** Internal consistency

Items	r	P-value
<b>Independent Variable: Teacher Leadership (TL)</b>		
<b>Collaboration &amp; communication</b>	<b>0.833</b>	<0.001
<i>I use technology to improve communication in meetings</i>	0.631	
<i>I guide the group toward completing tasks effectively</i>	0.769	
<i>I support colleagues in collective decision making</i>	0.804	
<i>I promote impactful change within small groups, large groups, and/or the school.</i>	0.895	
<i>I resolve conflicts between myself and colleagues and mediate between other colleagues.</i>	0.853	
<i>I facilitate difficult conversations.</i>	0.864	
<b>Learning &amp; Professional growth</b>	<b>0.927</b>	<0.001
<i>I establish a culture of collegial community with a group of teachers</i>	0.890	
<i>I allocate time for reflection on professional learning activities.</i>	0.814	
<i>I contribute to creating a positive environment that allows for experimentation, making mistakes, and learning from them.</i>	0.867	
<i>I contribute to learning communities that encourage colleagues to actively participate.</i>	0.876	
<i>I support teachers in understanding the relationships between subjects, grades, and the classroom/school context.</i>	0.869	
<b>Learning Leadership</b>	<b>0.929</b>	<0.001
<i>I identify applicable practices based on educational research and implement them in the classroom.</i>	0.839	
<i>I support colleagues in collecting and analyzing data to improve teaching and learning.</i>	0.874	
<i>I regularly analyze data as part of reflecting on my practice.</i>	0.885	
<i>I modify my teaching practices based on data analysis.</i>	0.884	
<i>I contribute to training other teachers on how to improve their teaching.</i>	0.728	
<i>I ensure providing constructive and actionable feedback to teachers.</i>	0.873	
<b>School community &amp; support</b>	<b>0.867</b>	<0.001
<i>I engage students' parents in their children's learning, treat them with respect in all circumstances, and honour their backgrounds.</i>	0.663	
<i>I promote ongoing collaboration with members of the wider community to expand learning opportunities for students.</i>	0.752	
<i>I lead school committees, such as subject committees or school improvement committees.</i>	0.733	
<i>I support the teaching profession through activities such as mentoring and training.</i>	0.858	
<i>I empower all teachers to participate in decision-making within the school.</i>	0.854	
<i>I advocate for important issues that impact the school and community.</i>	0.818	
<b>Mediator variable: Teacher Wellbeing (TWB)</b>		
<i>I feel that I am making progress toward achieving my goals most of the time.</i>	0.881	<0.001
<i>I love what I do, and generally, I feel joy.</i>	0.859	
<i>Overall, I constantly feel anxious.</i>	-0.583	
<i>I often achieve the important goals I set for myself.</i>	0.866	

Items	r	P-value
<i>In general, my health is satisfactory.</i>	0.559	
<i>Overall, I live a purposeful and meaningful life.</i>	0.839	
<i>I receive significant help and support from others when I need it.</i>	0.812	
<i>Overall, I feel that what I do in my life is valuable and highly respectable.</i>	0.759	
<i>In general, I feel greatly enthusiastic and interested in things, and I experience little loneliness in my daily life.</i>	0.690	
<i>I am very satisfied with my current physical health.</i>	0.749	
<i>Overall, I often feel positive.</i>	0.722	
<i>In general, I rarely feel angry.</i>	0.639	
<i>I can handle my responsibilities most of the time, and generally, I sometimes feel sad.</i>	0.568	
<i>I often lose track of time while doing something I enjoy.</i>	0.771	
<i>Compared to others of the same age and gender, my health is similar.</i>	0.759	
<i>I feel highly loved.</i>	0.845	
<i>Overall, I feel that I have a clear purpose in life.</i>	0.858	
<i>I am very satisfied with my personal relationships, and generally, I feel highly content.</i>	0.825	
<i>Overall, I can say that I am very grateful for everything in my life.</i>	0.821	
<b>Dependent Variable Distributed Leadership (DL)</b>	<b>0.834</b>	<0.001
<i>Our principal involves all members of the school community (e.g., teachers, students, parents, etc.) in the school decision-making process.</i>	0.800	
<i>Our principal collaborates with other school partners (vice principals, teachers, students, and parents) to achieve the school's goals.</i>	0.743	
<i>Our principal values teachers for their efforts in improving their teaching practices.</i>	0.802	
<i>Teachers, students, and parents can express their opinions and suggestions to the principal without hesitation.</i>	0.804	
<i>Teachers are willing to contribute to the school's administrative tasks</i>	0.798	
<i>Teachers assist school principals.</i>	0.787	
<i>Our principal strives to create a school environment based on collaboration and participation.</i>	0.798	
<i>Our principal collaborates with members of the school community to achieve the school's goals.</i>	0.753	
<i>Teachers are encouraged to actively participate in all efforts of change and improvement in the school.</i>	0.766	
<i>Our principal involves members of the school community (teachers, students, parents, etc.) in the process of solving the problems faced by the school.</i>	0.776	

The analysis demonstrated strong construct validity, with statistically significant correlations between each dimension and the overall questionnaire score. TL was effectively captured across four dimensions: Collaboration & Communication ( $r = 0.833$ ), Learning & Professional Growth ( $r = 0.927$ ), Learning Leadership ( $r = 0.929$ ), and School Community & Support ( $r = 0.867$ ). Both TWB and DL showed high internal consistency ( $r = 0.937$  and  $r = 0.834$ , respectively), confirming the reliability of the measurement model. TWB primarily reflected life satisfaction and purpose, with strong positive correlations such as goal progress ( $r = 0.881$ ), while DL was characterized by inclusive decision-making and collaborative practices ( $r = 0.800$ ). These correlations affirm that effective TL, when supported by TWB, is strongly associated with DL practices, emphasizing the importance of fostering teacher growth, collaboration, and a positive school environment.

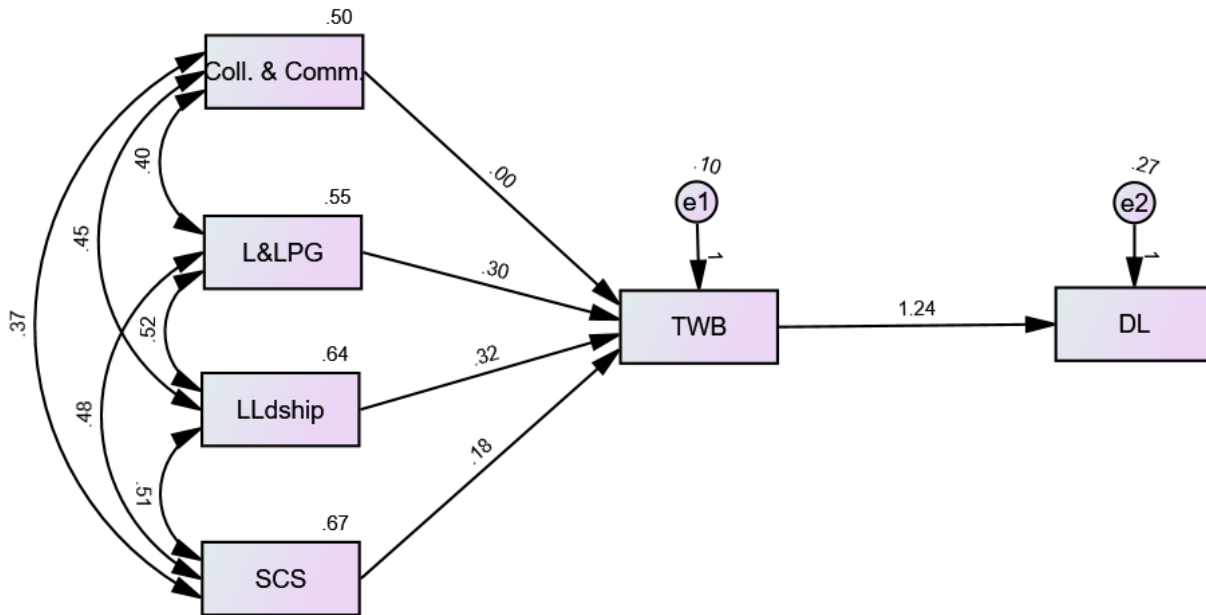
#### 6.4 Structural equation modelling

The study investigated if TL leads to DL along with examining if TWB mediated this relationship using structural equation modelling (SEM) as presented in Figure 2 (below).

Figure 2 illustrates the relationships between the key variables of the study, highlighting how Collaboration & Communication, Learning & Lesson Planning and Growth (L&LPG), Learning Leadership (LLdship), and School Climate and Support (SCS) are utilized to measure TL and its

impact on DL through TWB. The model indicates that School Climate and Support (SCS) exhibited a high loading of 0.67, making it the strongest indicator of TWB. In comparison, Learning Leadership (0.64), L&LPG (0.55), and Collaboration & Communication (0.50) also contributed significantly, though to slightly varying extents, reflecting their distinct yet interconnected influences on teachers' well-being. This configuration underscores the multidimensional nature of TL within the model.

**Figure 2.** Structural equation modelling



The relationship between TL and DL is significantly mediated through TWB, indicating that changes in the foundational constructs of TL indirectly impact DL by channeling through TWB. Although this relationship is not purely linear, its influence remains substantial. For instance, when the school climate is positive and continues to improve, it enhances TWB, which in turn amplifies the effect of TWB on DL, as demonstrated by the coefficient of 1.24 from TWB to DL. In other words, favorable school-level elements—such as a supportive climate and robust leadership practices—positively affect TWB, thereby fostering and strengthening DL practices throughout the school.

### 6.5 Model fit indices

In Table 4, model fit indices were calculated to assess the adequacy of the hypothesized structural model, ensuring that the observed data aligned well with the proposed theoretical framework.

The model fit indices strongly support the assertion that TWB mediates the relationship between TL and DL, demonstrating a balanced fit between the observed data and the theoretical framework. The chi-square value ( $\chi^2 = 12.625$ ,  $p = 0.000$ ), while significant, is better interpreted through the relative chi-square ( $\chi^2/df = 3.156$ ), indicating a well-fitting model. Additional indices such as RMR = 0.007, GFI = 0.989, AGFI = 0.940, CFI = 0.996, and RMSEA = 0.078 further confirm the model's robustness. These results demonstrate that TWB acts as a catalyst for TL, facilitating the dissemination of DL within schools. The strong direct path score ( $\beta = 1.24$ ) from TWB to DL underscores that TL significantly enhances DL when teachers feel supported and fulfilled. Thus, fostering TWB should be a fundamental strategy for schools aiming to develop DL practices.

**Table 4.** Model fit indices

Index		Value
$\chi^2$	Pvalue=.000	12.625
df		4
$\chi^2/df$		3.156
Root Mean Square Residual (RMR)		0.007
Goodness of Fit Index (GFI)		0.989
Adjusted Goodness of Fit Index (AGFI)		0.940
Comparative Fit Index (CFI)		0.996
Root Mean Square Error of Approximation (RMSEA)		0.078

### 6.6 Direct and indirect effects

Direct and indirect effects were calculated to examine the mediating role of TWB between TL and DL, and are presented in Table 5.

**Table 5.** Direct and indirect effects\*

Predictor	Outcome	Mediator	Direct	Indirect
			Std. coeff.	Std. coeff.
Collaboration & communication	TWB		0.962	
Learning & Professional growth	TWB		0.01*	
Learning Leadership	TWB		0.01*	
School community & support	TWB		0.01*	
Teacher Wellbeing (TWB)	DL		0.01*	
Collaboration & communication	DL	TWB		0.962
Learning & Professional growth	DL	TWB		0.01*
Learning Leadership	DL	TWB		0.01*
School community & support	DL	TWB		0.01*

\*  $p < 0.05$

Table 5 demonstrates the mediating role of TWB in predicting DL, particularly within the context of TL as explained by various school-level predictors. Learning & Professional Growth ( $0.01 < p = 0.05$ ), Learning Leadership ( $0.01 < p = 0.05$ ), and School Community & Support ( $0.01 < p = 0.05$ ) exhibited statistically significant indirect effects on DL via TWB, indicating that improvements in these dimensions enhance TWB, which subsequently fosters more effective DL practices. In contrast, the indirect effect of Collaboration & Communication on DL through TWB was not statistically significant ( $0.962 > p = 0.05$ ), suggesting that while collaboration positively influences TWB, it does not consistently translate into distributed leadership. Similarly, the direct effect of Collaboration & Communication on TWB was also not significant ( $0.962 > p = 0.05$ ), indicating that its influence on DL primarily operates through enhancing TWB rather than directly. These findings underscore the critical role of TWB as a catalyst for DL, emphasizing that leadership practices are strengthened when TWB is prioritized. Additionally, TWB itself demonstrated a direct effect on DL ( $0.01 < p = 0.05$ ), reinforcing the idea that TWB not only mediates but also independently drives leadership distribution within educational contexts.

## 7. Discussion

This study aimed to explore the complex relationships between teacher leadership (TL), teacher wellbeing (TWB), and distributed leadership (DL) within K–12 educational contexts. The findings have demonstrated that TWB serves as a central mediating factor between TL and DL, emphasizing that the influence of teacher leadership on distributed leadership is significantly enhanced when TWB is prioritized. This relationship underscores the pivotal role that teacher support structures play in fostering a culture of shared leadership.

The study posits that the safeguarding of TWB is intrinsically linked to the presence of sustained professional growth, active engagement in leadership roles, and the reinforcement provided by a robust community of practice. Such a confluence of factors not only fortifies wellbeing but also serves as a conduit for more effective leadership distribution. In contrast, the findings indicate that collaboration and communication, despite their positive correlation with teacher wellbeing, do not inherently translate into distributed leadership practices. This outcome suggests that when collaboration exists in isolation—devoid of structured professional development and strategically aligned leadership opportunities—it remains insufficient as a mechanism for fostering genuine distributed leadership. Rather, collaboration must be seamlessly integrated within comprehensive leadership frameworks to realize its potential in catalyzing leadership diffusion.

These findings underscore that TL attains its greatest efficacy when it is intertwined with practices that actively promote wellbeing, such as continuous professional learning and the intentional cultivation of supportive school environments. This finding challenges the prevailing assumption that collaboration, in isolation, is sufficient to engender DL. Instead, it posits that collaboration must be contextualized within a comprehensive framework that integrates professional development and robust community support, thereby transforming it from a mere relational exercise into a strategic catalyst for leadership distribution.

These results resonate with contemporary leadership theories that emphasize the transformative potential of DL when anchored in wellbeing and professional growth. This alignment is evident in previous research (e.g. Bellibaş et al., 2024; Hickey et al., 2022; Liu et al., 2024) who argue that DL is most impactful when it emerges from an organizational culture prioritizing professional development and collective wellbeing, advocating that leadership practices embedded within supportive school climates are more likely to foster sustainable and resilient leadership structures. These perspectives highlight the critical role of creating environments where teacher wellbeing is integral to leadership development. The present study extends this discourse by providing empirical evidence that TWB not only constitutes an individual benefit but also strategically enhances DL within educational settings.

However, by positioning TWB as a mediating factor between TL and DL, this study challenges the conventional notion that leadership distribution can occur independently of wellbeing initiatives. Thus, this study diverges from the conclusions drawn by Muijs and Harris (2007), who assert that collaboration alone suffices to drive leadership distribution. Contrary to this view, the current study reveals that collaboration, when not embedded within a broader framework of professional and community support, lacks the capacity to independently foster distributed leadership. In the same vein, the findings also challenge the perspective that dominates the literature contending that leadership distribution inherently arises from collaborative practices (e.g. De Jong et al., 2023; Jutzi et al., 2025). In contrast, the results of this study underscore that collaborative efforts must be strategically aligned with structured leadership opportunities to meaningfully contribute to DL outcomes. In fact, by empirically demonstrating that TWB serves as a critical enabler for leadership distribution, this study

advocates for a shift towards wellbeing-centered leadership frameworks. Such an approach not only enhances individual teacher fulfillment but also facilitates a more resilient and collaborative leadership culture within schools. The study's insights are particularly significant given the increasing demand for leadership practices that are not only collective but also sustainable, thereby reinforcing the importance of integrating wellbeing support mechanisms into leadership development initiatives.

Moreover, while the literature frequently positions collaboration as a fundamental component of teacher leadership, the study posits that its efficacy as a leadership catalyst is contingent upon its integration within a comprehensive leadership strategy (ex. Abu-Shawish & Ghamrawi, 2025; Lieberman & Miller, 2011; Wenner & Campbell, 2017). One plausible interpretation is that collaboration, when practiced in isolation or without structured leadership training, does not naturally evolve into distributed leadership. Rather, collaboration might be more effective when accompanied by opportunities for leadership capacity building and professional development. This insight suggests that collaborative practices need to be strategically aligned with leadership initiatives to truly foster a culture of shared leadership. This finding necessitates a critical re-evaluation of how collaborative practices are conceptualized and operationalized within school settings. It underscores that, in the absence of intentional alignment with leadership development initiatives, collaboration alone lacks the capacity to yield meaningful leadership outcomes. Hence, fostering effective distributed leadership requires embedding collaboration within structured frameworks that purposefully link professional growth with leadership capacity building.

Despite the robustness of the findings, this study is not without limitations. The data were collected from an online community of teachers in the Arab States, which, although diverse, may not fully capture the leadership practices present in other educational contexts. Additionally, the reliance on self-reported data could introduce response bias, as participants might present themselves more favorably. While the internal consistency of the responses was validated through reliability analysis, the subjective nature of wellbeing assessments remains a potential limitation. Additionally, integrating qualitative insights through interviews or focus groups could enrich the findings, offering deeper insights into teachers' lived experiences of leadership and wellbeing.

The study's findings indicate several avenues for future research. First, further investigation into the contextual factors that influence the relationship between collaborative practices and distributed leadership could provide nuanced insights. Examining variables such as school culture, leadership styles, and administrative support could deepen the understanding of why collaboration alone does not consistently translate into distributed leadership. Moreover, future studies could explore the intersectionality of well-being dimensions, particularly how emotional, professional, and social support intersect to influence leadership distribution. Understanding whether different types of well-being have varying impacts on leadership practices could help refine leadership training programs. Additionally, expanding the research to include different educational systems and cultural contexts would offer a broader perspective on how leadership practices are embedded in diverse educational environments.

## 8. Limitations and directions for future research

Several limitations should be acknowledged when interpreting the findings of this study. First, the sample was drawn from a single online professional community of teachers in six Arab countries. While this virtual network enabled access to a diverse cross-national pool, it likely

attracted teachers who are already more professionally engaged, digitally fluent, and predisposed toward leadership and collaboration. This self-selection, combined with the uneven distribution of respondents across countries, constrains the generalizability of the findings to the wider teaching populations in the participating systems and beyond.

Second, the study relied exclusively on cross-sectional, self-reported survey data. Although reliability and construct validity indices were strong, self-report measures remain vulnerable to social desirability biases and individual differences in how wellbeing, leadership, and school climate are perceived and articulated. The cross-sectional design also precludes causal inferences: while the model positions teacher wellbeing as a mediator between teacher leadership and distributed leadership, longitudinal and experimental designs would be needed to more rigorously test temporal ordering and reciprocal effects among these constructs.

Third, although the study is situated in Arab educational systems often characterized as collectivistic and hierarchical, culture was not directly operationalized in the analysis. Country of employment was included descriptively, but neither national- nor individual-level indicators of collectivism/individualism, power distance, or related cultural orientations were measured. This is a notable omission given that teachers' cultural value orientations are likely to shape both their willingness to take initiative and their comfort with distributed authority, regardless of their reported levels of wellbeing. Future research should incorporate validated measures of individual-level cultural values and, where possible, multi-level models that disentangle country, school, and individual cultural effects on teacher leadership and distributed leadership.

Fourth, the study did not examine variation by school or curriculum type (e.g., public, private, British, American, international, Islamic). Existing regional evidence on students suggests that wellbeing can vary substantially across curriculum and school types, and it is reasonable to expect similar variability in teachers' wellbeing and leadership opportunities. Because school type was not systematically captured or analysed in this study, the model may be obscuring important contextual differences in how teachers experience leadership, agency, and support. Subsequent work should explicitly compare patterns of teacher leadership, wellbeing, and distributed leadership across different school and curriculum types to better localize the findings and enhance their practical applicability in the region.

Finally, the study's quantitative design, while well-suited to testing the proposed structural model, did not capture the qualitative nuances of how teachers in different Arab contexts make sense of wellbeing, leadership, and authority. Incorporating interviews, focus groups, or mixed-methods designs in future research would allow for a richer understanding of how cultural norms, institutional histories, and policy environments intersect with teacher wellbeing to either enable or constrain distributed leadership. Together, these limitations point toward a research agenda that is both more culturally attuned and more contextually differentiated, thereby deepening and localizing the contribution of wellbeing-centered leadership models in Arab schooling.

## 9. Conclusion

This study challenges the prevailing assumption that collaboration alone suffices to foster DL, instead positing that leadership distribution is inherently contingent upon the integration of TWB within structured leadership frameworks. By empirically demonstrating that TWB acts as a critical mediator between TL and DL, the study redefines the discourse on leadership practices in educational contexts, asserting that leadership distribution cannot thrive in the absence of intentional wellbeing initiatives. Collaboration, while positively correlated with wellbeing, emerges as insufficient when isolated from comprehensive professional development and

strategically aligned leadership opportunities, thereby necessitating a paradigm shift that moves beyond superficial relational practices towards the cultivation of resilient, wellbeing-centered leadership ecosystems. This insight challenges entrenched narratives that valorize collaboration as inherently transformative, revealing instead that genuine distributed leadership arises not from collaboration alone but from its purposeful embedding within holistic leadership strategies that prioritize teacher empowerment and sustained professional growth. Consequently, the study advocates for a recalibration of leadership development models, calling for an integrated approach where TWB is not merely an adjunct to leadership but the foundational axis upon which sustainable leadership distribution turns, thereby positioning schools as ecosystems of growth where leadership is both nurtured and shared.

### Authors

Norma Ghamrawi  
College of Education, Qatar University, Doha, Qatar  
<https://orcid.org/0000-0002-5754-9657>  
Email: [norma.G@qu.edu.qa](mailto:norma.G@qu.edu.qa)

Tarek Shal  
Social & Economic Survey Institute (SESRI), Qatar University, Doha, Qatar  
<https://orcid.org/0000-0002-0824-6449>

Mohamed Loay Dahhan  
Faculty of Economics, University of Aleppo, Aleppo, Syria

Najah A. R. Ghamrawi  
Faculty of Education, Lebanese University, Beirut, Lebanon  
<https://orcid.org/0009-0000-7588-4996>

### Author contribution statement

Norma Ghamrawi: Norma conceptualized the study and collected the initial data in partnership with Najah A.R. Ghamrawi. She framed and oversaw the writing and methodology in partnership with Tarek Shal. Najah A.R. Ghamrawi: supported in data collection and contributed to parts of the literature. Tarek Shal: provided the data analysis in partnership with Mohamed Loay Dahhan. He contributed to the methodology section and wrote the discussion section and conclusion. Mohamed Loay Dahhan: conducted the data curation and analysis of the study in collaboration with Tarek and contributed to findings section.

### Funding

The authors received no financial support for the research, authorship, and/or publication of this article.

### Conflict of interest statement

The author declares no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

### AI statement

During the preparation of this work, the authors wrote initial drafts of all materials. They used OpenAI's ChatGPT to assist with clarity-based editing and language refinement. After using this tool, the authors reviewed, verified, and extensively edited all AI-assisted revisions to ensure accuracy, comprehensiveness, and alignment with their own scholarly analysis and interpretations. The authors take full responsibility for the content of this published article.

### Data availability statement

The data used in this study are confidential, as specified in the participant consent forms and the study's ethical procedures. Therefore, it cannot be shared publicly.

### Acknowledgments

We sincerely appreciate the participation of all individuals who contributed their time and input to this study.

### Publishing Timeline

Received 27 June 2025

Revised version received 28 November 2025

Accepted 18 December 2025

Published 10 February 2026

### References

- Abu-Shawish, R. K., & Ghamrawi, N. (2025). Sense-making and middle leaders: Analyzing perceptions of role in the development of teacher leadership. *Management in Education*. Advance online publication. <https://doi.org/10.1177/08920206251315629>
- Acton, R., & Glasgow, P. (2015). Teacher wellbeing in neoliberal contexts: A review of the literature. *Australian Journal of Teacher Education*, 40(8), 99–114. <https://doi.org/10.14221/ajte.2015v40n8.6>
- Oplatka, I., & Arar, K. (2016). Leadership for social justice and the characteristics of traditional societies: Ponderings on the application of western-grounded models. *International Journal of Leadership in Education*, 19(3), 352–369. <https://doi.org/10.1080/13603124.2015.1028464>
- Bellibaş, M. Ş., Gümüş, S., & Chen, J. (2024). The impact of distributed leadership on teacher commitment: The mediation role of teacher workload stress and teacher well-being. *British Educational Research Journal*, 50(2), 814–836. <https://doi.org/10.1002/berj.3944>
- Ponderings on the application of Western-grounded models. *International Journal of Leadership in Education*, 19(3), 352–369. <https://doi.org/10.1080/13603124.2015.1028466>
- Cann, R. F., Riedel-Prabhakar, R., & Powell, D. (2021). A model of positive school leadership to improve teacher wellbeing. *International Journal of Applied Positive Psychology*, 6(2), 195–218. <https://doi.org/10.1007/s41042-021-00051-1>
- Çilek, A., Kılınç, A. Ç., Erdoğan, O., Arslan, K., & Sezgin, F. (2025). Linking principal support and teacher resilience to teacher leadership in Türkiye: The mediating role of teacher work engagement. *Educational Management Administration & Leadership*. Advance online publication. <https://doi.org/10.1177/17411432241308679>
- Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). Sage.
- De Jong, W. A., De Kleijn, R. A. M., Lockhorst, D., Brouwer, J., Noordegraaf, M., & Van Tartwijk, J. W. F. (2023). Collaborative spirit: Understanding distributed leadership practices in and around teacher teams. *Teaching and Teacher Education*, Article 103977. <https://doi.org/10.1016/j.tate.2022.103977>
- Frost, D. (2016). From professional development to system change: Teacher leadership and innovation. *Professional Development in Education*, 38(2), 205–227. <https://doi.org/10.1080/19415257.2012.657861>
- Ghamrawi, N. A. R. (2018). Schooling for digital citizens. *Open Journal of Leadership*, 7(3), 209–224. <https://doi.org/10.4236/ojl.2018.73012>
- Ghamrawi, N. (2016). A policy review of school leadership in the Arab states. In UNESCO (Ed.), *Leading better learning: School leadership and quality in the Education 2030 agenda: Regional reviews of policies and practices* (pp. 26–49). UNESCO.
- Ghamrawi, N. (2026). Ten claims about teacher leadership that merit rethinking. *Management in Education*. Advance online publication. <https://doi.org/10.1177/08920206261417841>

- Ghamrawi, N., & Al-Thani, H. (2023). Wellbeing leadership: Perceptions of pre-service school leaders. *Heliyon*, 9(11), e20391. <https://doi.org/10.1016/j.heliyon.2023.e20391>
- Ghamrawi, N., Naccache, H., & Shal, T. (2023a). Teacher leadership and teacher wellbeing: Any relationship? *International Journal of Educational Research*, 122, 102261. <https://doi.org/10.1016/j.ijer.2023.102261>
- Ghamrawi, N., Shal, T., & Ghamrawi, N. A. (2023b). Stepping into middle leadership: A hermeneutic phenomenological study. *International Journal of Leadership in Education*, 1–21. <https://doi.org/10.1080/13603124.2023.2170713>
- Ghamrawi, N., Abu-Tineh, A., & Shal, T. (2023c). Teaching licensure and education quality: Teachers' perceptions. *Sustainability*, 15(14), 10886. <https://doi.org/10.3390/su151410886>
- Ghamrawi, N., Shal, T., & Ghamrawi, N. A. (2024a). Cultivating teacher leadership: Evidence from a transformative professional development model. *School Leadership & Management*, 1–29. <https://doi.org/10.1080/13632434.2024.2147427>
- Ghamrawi, N., Abu-Shawish, R. K., Shal, T., & Ghamrawi, N. A. (2024b). Teacher leadership in higher education: Why not? *Cogent Education*, 11(1), 2366679. <https://doi.org/10.1080/2331186X.2024.2366679>
- Ghamrawi, N., Abu-Tineh, A., Shal, T., Al-Shaboul, Y. M., & Sellami, A. (2024c). Illuminating the obscure: Teacher leaders confronting the adverse impact of their subject leaders/coordinators. In *The Educational Forum* (pp. 1–17). Routledge. <https://doi.org/10.1080/00131725.2024.2188504>
- Ghamrawi, N., Shal, T., & Ghamrawi, N. A. (2024d). Leadership development in virtual communities of practice: The case of school principals from the GCC Region. *Education and Information Technologies*, 1–20. <https://doi.org/10.1007/s10639-023-12291-2>
- Gronn, P. (2002). Distributed leadership as a unit of analysis. *The Leadership Quarterly*, 13(4), 423–451. [https://doi.org/10.1016/S1048-9843\(02\)00120-0](https://doi.org/10.1016/S1048-9843(02)00120-0)
- Harris, A. (2013). Distributed leadership: Friend or foe? *Educational Management Administration & Leadership*, 41(5), 545–554. <https://doi.org/10.1177/1741143213497635>
- Harris, A., & Spillane, J. (2008). Distributed leadership through the looking glass. *Management in Education*, 22(1), 31–34. <https://doi.org/10.1177/0892020607085623>
- Hickey, N., Flaherty, A., & Mannix McNamara, P. (2022). Distributed leadership: A scoping review mapping current empirical research. *Societies*, 12(1), Article 15. <https://doi.org/10.3390/soc12010015>
- Jutzi, M., Aguilar, L., & Stampfli, B. (2025, March). Collaborative or distributed? Exploring the context-dependent variations in leadership after-school programs. In *Frontiers in Education* (Vol. 10, p. 1537035). Frontiers Media SA.
- Karakus, M., Toprak, M., & Chen, J. (2024). Demystifying the impact of educational leadership on teachers' subjective well-being: A bibliometric analysis and literature review. *Educational Management Administration & Leadership*. Advance online publication. <https://doi.org/10.1177/17411432241242629>
- Kılınç, A. Ç., & Özdemir, N. (2025). Does distributed leadership matter for student achievement? Evidence from a centralised education system. *Educational Studies*, 51(1), 1–21. <https://doi.org/10.1080/03055698.2022.2117543>
- Kline, R. B. (2023). *Principles and practice of structural equation modeling*. Guilford publications.
- Leithwood, K., & Azah, V. N. (2017). Characteristics of high-performing school districts. *Leadership and Policy in Schools*, 15(1), 27–53. <https://doi.org/10.1080/15700763.2015.1054204>
- Leithwood, K., Harris, A., & Hopkins, D. (2020). Seven strong claims about successful school leadership revisited. *School Leadership & Management*, 40(1), 5–22. <https://doi.org/10.1080/13632434.2019.1596077>
- Lieberman, A., & Miller, L. (2011). *Teacher leadership*. John Wiley & Sons.
- Liu, P., Chen, X., Cheng, Y., & Xiao, S. (2023). Understanding the relationship between teacher leadership and teacher wellbeing: The mediating roles of trust in leaders and teacher efficacy. *Journal of Educational Administration*, 60(5), 485–503. <https://doi.org/10.1108/JEA-09-2021-0190>
- Liu, L., Liu, P., Yang, H., Yao, H., & Thien, L. M. (2024). The relationship between distributed leadership and teacher well-being: The mediating roles of organisational trust. *Educational Management Administration & Leadership*, 52(4), 837–853. <https://doi.org/10.1177/17411432221113683>

- Lu, S. H., & Chen, C. C. (2025). Principals' distributed leadership and the effectiveness of school innovation management: The mediating role of school organisational culture. *Journal of Educational Administration*, 63(2), 129–143. <https://doi.org/10.1108/JEA-04-2024-0109>
- Lumby, J. (2013). Distributed leadership: The uses and abuses of power. *Educational Management Administration & Leadership*, 41(5), 581–597. <https://doi.org/10.1177/1741143213489288>
- McCallum, F. (2022). School leaders' influence on teacher wellbeing: Three case studies. In M. A. White & F. McCallum (Eds.), *Transforming teaching: Wellbeing and professional practice* (pp. 121–148). Springer Nature Singapore. [https://doi.org/10.1007/978-981-19-4945-6\\_7](https://doi.org/10.1007/978-981-19-4945-6_7)
- Mifsud, D. (2024). A systematic review of school distributed leadership: Exploring research purposes, concepts and approaches in the field between 2010 and 2022. *Journal of Educational Administration and History*, 56(2), 154–179. <https://doi.org/10.1080/00220620.2022.2158181>
- Muijs, D., & Harris, A. (2007). Teacher leadership in (in)action: Three case studies of contrasting schools. *Educational Management Administration & Leadership*, 35(1), 111–134. <https://doi.org/10.1177/1741143207071387>
- Nguyen, D., Harris, A., & Ng, D. (2020). A review of the empirical research on teacher leadership (2003–2017) Evidence, patterns and implications. *Journal of educational administration*, 58(1), 60–80. <https://doi.org/10.1108/JEA-02-2018-0023>
- Savaş, G., Arslan, K., & Kılınç, A. Ç. (2025). When teacher leadership backfires: Exploring the unintended consequences of teacher leadership. *Educational Management Administration & Leadership*. Advance online publication. <https://doi.org/10.1177/17411432251325356>
- Shal, T., Ghamrawi, N., Abu-Tineh, A., Al-Shaboul, Y. M., & Sellami, A. (2024a). Teacher leadership and virtual communities: Unpacking teacher agency and distributed leadership. *Education and Information Technologies*, 1–18. <https://doi.org/10.1007/s10639-024-12743-x>
- Shal, T., Ghamrawi, N., & Naccache, H. (2024b). Leadership styles and AI acceptance in academic libraries in higher education. *The Journal of Academic Librarianship*, 50(2), Article 102849. <https://doi.org/10.1016/j.acalib.2024.102849>
- Shal, T., Ghamrawi, N., & Ghamrawi, N. A. (2024c). Does Accreditation Lead to School Improvement? Perceptions of Educators in K-12 Settings. *SAGE Open*, 14(3), 21582440241281222. <https://doi.org/10.1177/21582440241281222>
- Shal, T., Ghamrawi, N., & Ghamrawi, N. A. (2025). Webinars for teacher professional development: Perceptions of members of a virtual professional community of practice. *Open Learning: The Journal of Open, Distance and e-Learning*, 40(1), 91–107. <https://doi.org/10.1080/02680513.2024.2281545>
- 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. <https://doi.org/10.1080/0022027032000106726>
- Viac, C., & Fraser, P. (2020). *Teachers' well-being: A framework for data collection and analysis* (OECD Education Working Papers No. 213). OECD Publishing. <https://doi.org/10.1787/c36fc9d3-en>
- Wenner, J. A., & Campbell, T. (2017). The theoretical and empirical basis of teacher leadership: A review of the literature. *Review of Educational Research*, 87(1), 134–171. <https://doi.org/10.3102/0034654316653478>
- Wiens, P., Metcalf, K., & Skousen, J. (2024). Understanding Teacher Leadership: A Survey of the Field. *Research in Educational Administration and Leadership*, 9(4), 585–618. <https://doi.org/10.30828/real.1492398>
- York-Barr, J., & Duke, K. (2004). What do we know about teacher leadership? Findings from two decades of scholarship. *Review of Educational Research*, 74(3), 255–316. <https://doi.org/10.3102/00346543074003255>
- Zhou, S., Slemp, G. R., & Vella-Brodrick, D. A. (2024). Factors associated with teacher wellbeing: a Meta-analysis. *Educational Psychology Review*, 36(2), 63. Article 63. <https://doi.org/10.1007/s10648-024-09886-x>