

Teacher Professional Development and Leadership in the Age of Global Change: A Vision for the Now!

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Abstract: This chapter offers a critical and future-facing reconceptualization of teacher professional development and leadership, grounded in complex systems-thinking and responsive to the evolving global educational landscape. Rejecting reductionist, top-down paradigms, it repositions teachers as epistemic agents, pedagogical leaders, and architects of systemic transformation. It calls for a shift from compliance-based training toward immersive, co-constructed learning aligned with 21st-century classroom realities. Drawing on contemporary theoretical frameworks and global policy trends, the chapter outlines teacher-centric ecosystems that prioritize autonomy, innovation, and equity. It explores how digital technologies, virtual communities of practice, and transnational collaborations can reimagine PD as a lifelong, interconnected journey. Emphasizing the ethical and moral dimensions of teacher leadership, it culminates in a call to action for an inclusive, sustainable, and globally engaged profession—one where teachers lead not from the margins, but from the center of educational reform.

Keywords: teacher leadership, professional development, educational transformation, equity in education, global collaboration.

INTRODUCTION

The landscape of education has undergone, and continues to undergo, profound transformations that are inextricably linked to the rapidly evolving forces of globalization, technological advancement, and societal upheaval. In an era defined by technological convergence and social disruption, educational paradigms rooted in the industrial age are increasingly out of step with the complexities of the 21st century (Ghamrawi, 2024; Ghamrawi et al., 2024a). The traditional models of teacher professional development (PD) and leadership, which were forged in an era that emphasized static, hierarchical structures and standardized knowledge transmission, are now confronting urgent calls for systemic reform (Al-Jammal & Ghamrawi, 2013a, 2013b, 2015). These outdated approaches, often sustained by neoliberal ideologies that prioritize efficiency and market-driven metrics (Özkeskin & Yıldız, 2025), fail to equip educators with the tools necessary to address the dynamic challenges posed by an interconnected, knowledge-driven global society (Shal et al., 2018a, 2018b, 2019).

The nexus between educational systems and broader global forces—such as climate change, economic inequality, and digital disruption—has revealed deep inadequacies in how teachers are prepared and supported in their roles (Simpson et al., 2025). As educators around the world are increasingly tasked with nurturing students who will inherit an uncertain future, the need for an education system that is flexible, adaptive, and responsive to these global challenges has never been more pressing (OECD, 2020). The current system of teacher preparation, shaped largely by models designed in the 19th century, remains mired in bureaucratic compliance, offering minimal opportunities for creativity, critical reflection, or genuine pedagogical innovation (Hargreaves & Fullan, 2012). The result is a dissonance between the evolving needs of the global educational environment and the static, often perfunctory professional development that many teachers experience (Ghamrawi & Shal, 2012).

This chapter proposes a transformative shift in teacher PD and leadership, moving away from outdated, reductionist models toward a holistic, collaborative, and globally engaged vision of professional growth. The focus is twofold: first, to reconceptualize pre-service teacher training, ensuring that it reflects the complex, dynamic realities of contemporary classrooms; and second, to reimagine in-service PD as an ongoing, interconnected, and lifelong process that responds to the fluid, ever-evolving nature of global educational demands. In doing so, this chapter addresses the essential need to redefine teacher leadership—not as an exclusive domain of administrators or policymakers—but as a shared

responsibility that empowers educators to become active agents of change within their classrooms, schools, and broader educational systems (Ghamrawi et al., 2023a, 2023b, 2024a, 2024b, 2024c, 2024d, 2024e, 2024f, 2024g, 2024h).

As schools evolve into dynamic ecosystems of innovation, disruption, and reinvention, teacher leadership must be reconceived—no longer as a supplementary role but as the very compass guiding educational transformation. In this reimagined vision, teachers are not simply participants in reform but its architects. They must be empowered to define the contours of their own professional development, for no policy, external consultant, or administrative directive can fully grasp the complexities of their daily practice. Only those who dwell within the complexity of the classroom—living the pedagogical dilemmas, student diversity, and systemic constraints—can authoritatively discern what learning is needed, what works, and what fails to resonate. Therefore, teacher professional development should avoid the archaic, deficit-based ‘train and drain’ model, where external inputs are deposited into passive recipients. Instead, it must emerge from within, driven by teachers’ authentic voices, rooted in their lived realities, and attuned to their aspirations for meaningful and lasting change.

This necessitates a paradigmatic shift toward a new form of teacher leadership—one that sees educators as proactive agents of change, strategic confronters of educational challenges, and visionary navigators of reform. Such leadership cannot flourish in isolation. It requires a global ecology of practice where teachers are not bounded by geography but are connected across borders through shared goals and mutual inquiry. In the face of unprecedented global challenges, teacher PD must evolve to equip educators with the skills, knowledge, and capacities needed to engage with and navigate the multifaceted complexities of the 21st century (Brandão et al., 2024). The expanding horizon of Professional Learning Communities (PLCs) and Virtual Communities of Practice (VCoPs) offers fertile ground for this transformation (Shal et al., 2024a, 2024b, 2024c, 2024d). These collaborative constellations allow teachers to break free from insular school cultures and instead immerse themselves in global conversations—co-constructing knowledge, interrogating assumptions, and designing context-responsive innovations (Ghamrawi et al., 2024f).

In this emergent paradigm, teachers are no longer cast as implementers of externally designed initiatives but as co-creators of professional knowledge and pedagogical insight. They engage not in episodic training but in continuous professional inquiry, driven by the belief that their collective intelligence is key to systemic renewal. Reimagining teacher preparation and development as an interconnected, dialogic, and evolving process ensures that educators are not merely keeping pace with global change but are actively shaping its trajectory. In doing so, we reframe teacher professional development not as an obligation to be fulfilled but as a vital, teacher-led engine of reform—locally grounded, globally connected, and perpetually evolving.

REDEFINING PRE-SERVICE TEACHER TRAINING: FROM COMPLIANCE TO CO-CREATION

As educational systems worldwide stand at the precipice of radical transformation, the imperative to reconceptualize pre-service teacher education becomes increasingly urgent. Prevailing models of teacher preparation, characterized by linearity, standardization, and performative compliance, are no longer adequate in the face of the volatility, uncertainty, complexity, and ambiguity that define contemporary schooling (Fullan, 2021; Schleicher, 2018). These models, rooted in bureaucratic and industrial-era assumptions, frame teacher candidates as passive recipients of static knowledge rather than as emergent intellectuals engaged in the dynamic co-construction of pedagogical practice (Ghamrawi et al., 2024b). To move beyond the deficit-laden view of novice teachers as empty vessels to be filled, we must embrace a vision of pre-service training as an epistemic, embodied, and dialogical process, in which the personal and professional, theoretical and practical, and local and global intersect in productive tension (Cochran-Smith et al., 2016).

Reconceptualizing Teacher Preparation: Embracing Complexity as Pedagogical Terrain

This reimagined architecture of teacher education calls for a paradigmatic shift—from fragmented, compliance-driven certification pathways toward holistic, inquiry-centered ecosystems that reflect the chaotic realities of the modern classroom. Teacher education must evolve into a complex system of knowledge production, situated inquiry, and continuous sense-making (Abu-Shawish & Ghamrawi, 2015). It must cultivate in pre-service teachers the capacity for what Biesta (2013) calls ‘educational wisdom’—the ability to make informed, ethical, and context-sensitive judgments in conditions of uncertainty. Rather than following pre-determined scripts of practice, teacher candidates should engage in deep interrogations of power, identity, and pedagogy, recognizing themselves as historical actors within systems of oppression and transformation (Rincón-Gallardo, 2019).

This form of education requires immersive and interdisciplinary exposure, collapsing the false dichotomies between theory and practice, cognition and emotion, individual development and collective responsibility. It entails designing learning experiences that are non-linear, recursive, and anchored in authentic dilemmas—allowing teacher candidates to

iteratively refine their understanding through cycles of critique, experimentation, and reflection. In so doing, teacher preparation becomes not merely a means to professional readiness but a site of ontological awakening, where becoming a teacher is indistinguishable from becoming a reflective, ethical, and critically conscious person (Mezirow, 2000).

Clinical Field Experiences as Epistemic Practice

Field-based learning, in this reconceptualized model, cannot remain a peripheral component of teacher education but must serve as its epistemological core (Lapidot-Lefler et al., 2024). The prevailing practice of situating student teaching as a capstone event—a brief apprenticeship under the watchful eye of an experienced educator—fails to account for the complexity of practice and the iterative nature of professional growth (O'Brien et al., 2024). Instead, clinical experiences should be re-envisioned as long-term, dialogic partnerships that unfold across diverse settings and invite teacher candidates to engage deeply with the cultural, social, and emotional dimensions of schooling (Darling-Hammond, 2017). Within this framework, the school becomes a living laboratory of inquiry, and the classroom a site of praxis, where pedagogical theories are not simply applied but challenged, adapted, and reconstructed in situ (Benenson & Bryan, 2024). Pre-service teachers must be encouraged to problematize their experiences—to interrogate moments of success and failure not as endpoints but as generative sources of insight (Ghamrawi & Al-Thani, 2023). Such an approach aligns with Dewey's (1938) conception of experience as educative only when it leads to growth and further inquiry. When clinical practice is embedded longitudinally, spanning various demographic, linguistic, and disciplinary contexts, it engenders what Cochran-Smith and Lytle (2009) describe as 'inquiry as stance'—a commitment to seeing teaching as a form of disciplined investigation into the world.

Mentorship and Reflection in Practice

Crucially, the reimagined field experience must be scaffolded through robust, multidimensional mentorship models. Mentorship, in this schema, transcends the managerial task of ensuring procedural compliance and evolves into a deeply relational and critical pedagogical encounter (Thornton, 2024). Mentors must be cultivated not merely as seasoned practitioners but as intellectual allies and critical friends who can engage teacher candidates in sustained dialogue, co-analysis of practice, and mutual reflection (Mgaiwa & Milinga, 2024).

Reflection, long touted as a hallmark of teacher development, must be elevated from a perfunctory exercise to a complex epistemological practice (Dunn et al., 2025). It should be framed not as a solitary cognitive act but as a dialogic, communal process of making meaning from lived experience (Heron & Wason, 2025). Drawing on Habermasian notions of critical reflection, teacher candidates should be encouraged to surface and interrogate the sociopolitical assumptions underlying their decisions, classroom interactions, and institutional norms (Brookfield, 2017). Only through such radical reflexivity can we cultivate teachers who are not merely skilled technicians but transformative intellectuals capable of navigating and reshaping the shifting terrains of contemporary education.

Leveraging Technology and Global Perspectives

In an era marked by unprecedented connectivity and knowledge mobility, preparing teachers for local practice must necessarily involve engagement with global perspectives and digital fluency (Ghamrawi et al., 2024e, 2024f; Shal et al., 2024a, 2024b, 2024c). Yet, the integration of technology in teacher education must move beyond tool-centered training toward the development of what Selwyn (2016) terms 'critical digital pedagogy'—the ability to use technology not only efficiently, but ethically, equitably, and imaginatively.

Virtual simulations, global teaching exchanges, and participation in transnational professional learning networks can serve as critical platforms for pre-service teachers to encounter alternative pedagogical imaginaries and develop cosmopolitan dispositions (Ghamrawi et al., 2024f). Through such experiences, teacher candidates learn to see themselves as part of a borderless profession, responsible not only for their classrooms but for contributing to a broader global dialogue on education, equity, and justice (Shal et al., 2024a, 2024b).

The future of teacher preparation, therefore, lies not in tighter alignment with predetermined standards or faster credentialing pipelines, but in the creation of expansive, immersive, and justice-oriented ecosystems of learning that empower teachers to be agents of systemic renewal. Only by embracing the complicatedness of teaching as a moral, political, and intellectual endeavor can we cultivate the kind of educators the world so desperately needs.

REIMAGINING IN-SERVICE TEACHER DEVELOPMENT: TOWARD TRANSNATIONAL ECOSYSTEMS OF LIFELONG PROFESSIONAL LEARNING

If pre-service teacher preparation requires a paradigmatic rupture from its conventional linear architecture, then in-service professional development must undergo an even more radical metamorphosis. As explained earlier, historically rooted in

industrial-era logics of standardization, efficiency, and compliance, much of in-service teacher training remains predicated on episodic workshops, deficit-based assessments, and externally imposed mandates (Darling-Hammond et al., 2017; Opfer & Pedder, 2011). These models, symptomatic of managerialist educational cultures and neoliberal accountability regimes, render teachers as passive recipients of reform rather than generative agents of educational innovation (Caruthers et al., 2025). In an era characterized by epistemic volatility, technological fluidity, and sociopolitical complexity, such reductive models are not only inadequate—they are pedagogically irresponsible.

To render in-service teacher development truly transformative, a fundamental epistemological shift must occur: from training to learning, from prescription to co-construction, and from individual capacity-building to communal knowledge production. Professional development must no longer be conceived as a set of static inputs aligned with institutional benchmarks, but as an open-ended, recursive, and dialogical process wherein teachers critically engage with their contexts, communities, and the world (Ghamrawi et al., 2024b). Teachers must become cartographers of their own professional landscapes—identifying needs, charting developmental trajectories, and evaluating impact within an evolving ecology of educational praxis (Biesta, 2010; Ghamrawi, 2013a; Sachs, 2016).

From Professional Development to Professional Becoming

Contemporary theories of teacher learning emphasize the notion of *professional becoming*—a concept that transcends the mechanistic view of development as linear accretion of skills and instead embraces the complexity, relationality, and uncertainty of professional identity formation (Fraser, et al., 2007; Fraser, 2023). This orientation acknowledges that teachers' learning does not unfold in a vacuum but is dynamically interwoven with their values, emotions, histories, and sociopolitical commitments (Kunrath et al., 2020; Opfer & Pedder, 2011; Taylor, 2018). In-service learning must therefore accommodate affective dimensions of teaching, allowing for generative spaces of dissonance, vulnerability, and critical reflection (Kelchtermans, 2009; Sahay & Mathur, 2025; Zhang et al., 2025).

Moreover, this notion of becoming foregrounds the ethical imperative of *agency*. Teachers must be empowered to interrogate dominant narratives, contest standardizing logics, and co-create alternative futures with colleagues, students, and communities (Nelis et al., 2025; Pretorius, 2025; Shal et al., 2024c). This necessitates shifting the locus of control from external agencies to the teachers themselves—recognizing that no one is more intimately attuned to the needs of the classroom than the teacher inhabiting it (Leonard et al., 2025; Wong, 2025). As Lieberman and Miller (2014) assert, teachers are not merely the implementers of innovation; they are its architects and sustainers. As such, their agency transcends the passive reception of top-down mandates, positioning them as epistemic agents who co-construct pedagogical paradigms through iterative praxis. This reconceptualization challenges hierarchical models of reform by foregrounding teacher leadership as a dynamic force that shapes, contextualizes, and legitimizes educational change within localized professional ecologies.

Global Collaboration and the Decentering of Authority

In a hyperconnected world, the boundaries of teacher learning can no longer be delimited by local school systems or national curricula. The digitization of professional knowledge, the proliferation of open educational resources, and the rise of globally distributed networks of practice have collapsed traditional hierarchies of expertise (Du et al., 2025; Febring & Risenfors, 2025; Ghamrawi, 2022; Trust et al., 2016). In-service professional development must therefore embrace a *transnational epistemology*—one that valorizes cross-cultural dialogue, mutual exchange, and the situated knowledges of educators across contexts. Such an epistemological stance resists the homogenizing tendencies of universalist training models, instead cultivating a dynamic knowledge ecology where diverse pedagogical traditions and experiential insights are leveraged as co-equal sources of innovation. This approach not only democratizes professional learning but also equips educators to navigate the intricacies of an interconnected world with reflexivity, adaptability, and critical intercultural competence.

Virtual Communities of Practice (VCoPs) exemplify this shift. When designed with equity, openness, and reflexivity at their core, VCoPs allow teachers to traverse geopolitical boundaries, engage with heterogeneous perspectives, and participate in collective sense-making that enriches local pedagogies with global insight (Ghamrawi, 2022; Ghamrawi et al., 2024f; Shal et al., 2024c; Wenger et al., 2020). These platforms enable the emergence of what Rizvi and Lingard (2010) describe as *cosmopolitan professionalism*: an orientation toward teaching that is deeply rooted in local commitments yet expansively attuned to global challenges such as ecological sustainability, equity, and digital ethics. This dual anchoring fosters a pedagogical disposition that navigates the tensions between the particular and the universal, allowing educators to mediate global imperatives through culturally responsive and contextually situated practices. In doing so, teachers enact a form of professional identity that is both ethically grounded and globally literate, capable of addressing transnational complexities without forfeiting local relevance.

Crucially, these transnational communities must resist the temptations of homogenization and instrumentalism. Rather than promoting a universalist model of 'best practices'—which often serve to reinforce Western-centric paradigms—professional development should foreground dialogic pluralism, where divergent pedagogical philosophies are not only acknowledged but generatively juxtaposed (Andreotti, 2014; Ignazzi et al., 2025). This approach fosters a transformative space where multiple epistemological frameworks intersect, allowing for a robust interrogation of power dynamics and ideological imbalances embedded in dominant educational narratives (Johnson et al., 2025; Supa et al., 2025). By prioritizing dialogic pluralism, professional development can cultivate a more equitable and inclusive pedagogy, one that encourages educators to critically engage with both local and global knowledge systems, ultimately fostering a deeper, more complex understanding of teaching and learning across diverse cultural contexts.

Disrupting the Temporal Grammar of Professional Learning

The dominant grammar of professional development continues to reflect a Newtonian temporality—segmented, linear, and cumulative. Such temporality is antithetical to the messy, recursive nature of real-world teaching, where learning as Britzman (2003) suggests often occurs in non-linear bursts, affective encounters, and moments of pedagogical uncertainty. Reconceptualizing PD demands a new temporal framework—one that acknowledges the simultaneity of knowing, doing, and becoming. Such a framework emphasizes the fluidity of professional growth, wherein learning is not a discrete event but a continuous, iterative process that unfolds within the complexity of lived experience. This reconceptualization enables teachers to engage in a form of development that is integrally connected to their evolving roles, contexts, and aspirations, thus fostering deeper and more sustained professional transformation.

Professional learning should not be episodic or divorced from daily practice but embedded into the rhythm of educators' lived experiences (Ghamrawi et al., 2024b; Mulaimović et al., 2025). Job-embedded inquiry, action research, and critical reflection circles can serve as powerful vehicles for sustaining learning that is both rigorous and relational. As Cochran-Smith and Lytle (2009) contend, the most meaningful forms of teacher learning emerge from inquiry 'with, not on, practice'. This perspective redefines professional learning as a continual, contextually embedded process, emphasizing the reciprocal relationship between inquiry and practice, where teachers are active participants in shaping their own development. By fostering spaces for collaborative inquiry and collective reflection, such as action research and reflective circles, educators are empowered to critically engage with their own pedagogical practices, thereby co-constructing knowledge that is not only rigorous but also responsive to the complexities of the classroom.

This also implies rethinking the institutional structures that inhibit sustained, reflective engagement (Ghamrawi et al., 2024b, 2025). Allocating protected time within teachers' schedules for inquiry and collaborative reflection is not a luxury but a necessity (Ghamrawi & Al-Jammal, 2013a, 2013b; Sellen, 2016). The absence of time—often cited as a barrier to effective PD—is not merely a logistical issue but a symptom of the systemic devaluation of teachers' intellectual labor (Sims & Fletcher-Wood, 2021; Sims et al., 2021, 2025). This calls for a radical restructuring of institutional priorities, wherein time for professional development is not relegated to the margins of teachers' schedules but is enshrined as a core component of the educational ecosystem. The persistent marginalization of teachers' intellectual labor through the denial of adequate time for reflection and collaborative inquiry underscores a deeper, more insidious form of systemic inequality, one that diminishes the profession's capacity for meaningful, self-directed growth and undermines the broader transformative potential of education.

Toward an Ethos of Teacher-Led Transformation

At the heart of this reimagining is a call for teacher-led professional development—not in the tokenistic sense of participatory feedback, but in the radical sense of ceding authority to those who live the work (Ghamrawi, 2013b, 2016; Ghamrawi & Abu-Tinch, 2023). Teachers should be leading the conversations about what matters, what works, and what needs to change (Ghamrawi et al., 2024b). Their experiential knowledge, pedagogical insight, and ethical commitments must form the compass by which reform is navigated. Only then can professional development become truly emancipatory: a process not of adaptation to reform, but of contribution to its very design.

At the core of this vision lies a profound shift in the power dynamics of professional development, wherein teachers are not mere recipients of externally imposed mandates but are recognized as central agents of change. This reconceptualization challenges the prevailing hierarchies that position policymakers and administrators as the primary architects of reform, instead advocating for a collaborative, teacher-driven approach where those who are immersed in the complexities of daily classroom life hold the authority to shape the trajectory of educational transformation. Teachers, as reflective practitioners, possess invaluable insights into the nuanced realities of teaching and learning, making their voices indispensable in the conversation about effective reform. Entrusting teachers with the leadership of their own professional development, as a token of honoring their expertise and ethical responsibilities, empowering them to act as both the critics and creators of the reforms they are tasked with implementing. This shift not only deepens their

engagement with the reform process but also ensures that professional development is not a process of passive adaptation but an active, generative endeavor that allows teachers to co-construct the educational futures they aspire to create.

PROFESSIONAL LEARNING COMMUNITIES AND VIRTUAL COMMUNITIES OF PRACTICE: CATALYSTS FOR CONTINUOUS, TRANSFORMATIVE TEACHER DEVELOPMENT

The previous discussion on the imperative to reconceptualize in-service professional development as an ongoing, teacher-led, and globally connected process necessitates the integration of collaborative frameworks that transcend the traditional boundaries of the classroom. Professional Learning Communities (PLCs) and Virtual Communities of Practice (VCoPs) embody the very principles of lifelong, dynamic, and co-constructed professional growth (Ghamrawi, 2022; Ghamrawi et al., 2024f; Shal et al., 2024a,2024c; Supa et al., 2025). These frameworks are not simply mechanisms for knowledge dissemination; they represent a paradigmatic shift in the way teachers interact with professional knowledge and engage in collective inquiry, creating new epistemic ecosystems for teaching and learning (Ghamrawi, 2022; Ghamrawi et al., 2024f; Shal et al., 2024a,2024c).

When VCoPs are utilized within this framework, they become powerful vehicles for fostering cross-contextual knowledge exchange and professional solidarity, unencumbered by geographic or institutional constraints (Burazin & Chow, 2025). As dynamic, fluid entities, VCoPs enable teachers to tap into a global network of peers, engaging in real-time dialogue that is both reflective and transformative (Ghamrawi, 2022; Ghamrawi et al., 2024f; Shal et al., 2024a,2024c). These communities facilitate the continuous negotiation of pedagogical practices and professional identities, allowing teachers to collectively navigate the complexities of global educational challenges while remaining rooted in their local contexts. This global-local interplay not only enhances the depth and relevance of professional development but also cultivates a sense of shared purpose, where educators are not only recipients of knowledge but active contributors to a global conversation on educational excellence and equity. Thus, the reimagining of PLCs as VCoPs represents a crucial step toward breaking down the silos of traditional professional development, creating a vibrant, interconnected ecosystem of teachers who lead, learn, and evolve together.

In other words, in VCoPs, the traditional roles of teacher and learner, expert and novice, become fluid, fostering a collaborative environment in which educators are no longer isolated or subjected to hierarchical, one-size-fits-all reforms. Instead, they engage as active participants in a community of practice, co-creating knowledge through shared inquiry, collective purpose, and mutual agency (Ghamrawi, 2022; Ghamrawi et al., 2024f; Shal et al., 2024a,2024c). Within this framework, teaching is reframed as a collective endeavor, shaped not only by the immediate context of the classroom but also by broader socio-political dynamics and global educational trends (Shal et al., 2024c). This paradigm shift disrupts conventional notions of professional expertise, facilitating a dynamic exchange of knowledge across diverse cultural and institutional contexts.

As VCoPs expand, they catalyze a reimagining of educational ecosystems, where power structures are flattened, and educators' expertise is recognized within a globalized framework of pedagogical inquiry. In this future-oriented space, the collective intelligence of teachers can reshape educational paradigms, responding to both local needs and global challenges, thereby fostering the emergence of an adaptive, sustainable model of teaching that transcends traditional constraints.

Although we have briefly explored the concepts of PLCs and VCoPs, the subsequent discussion will deconstruct their differences and interrelationships, offering a deeper analysis of their roles in transformative teacher development.

PLCS: Embedding Reflection and Dialogue in Collaborative Practice

PLCs, grounded in the principles of shared vision, collective responsibility, and reflective practice, provide an essential scaffolding for the transformation of teacher professional development (Christensen & Jerrim, 2025; Golledge et al., 2025). At their core, PLCs reimagine the process of teacher learning as a communal endeavor—one that acknowledges the distinct experiences, perspectives, and expertise of all participants (Hendrickx et al., 2025). The collaborative ethos of PLCs enables teachers to engage in critical dialogue, challenge prevailing assumptions, and experiment with innovative pedagogical practices, thus fostering a culture of continuous inquiry (Hord, 1997; Roesminingsih et al., 2025; Stoll et al., 2006).

Moreover, PLCs serve as incubators for teachers' professional identity formation. As members engage in joint problem-solving and peer feedback, they develop a sense of collective agency that empowers them to confront educational inequities, critique institutional norms, and contribute to larger systemic reforms (Nazari et al., 2025). As discussed earlier in this chapter, this dynamic process occurs through iterative cycles of action, reflection, and refinement, which is distinct

from the traditionally passive, compliance-driven forms of professional development (Fraser et al., 2007). The ongoing dialogue within PLCs does not merely aim at the accumulation of technical skills; it fosters deeper critical consciousness regarding the broader socio-political forces shaping educational practice (Cochran-Smith & Lytle, 2009; Lopez Burrola et al., 2025). This way, PLCs can act as sites of resistance to neoliberal discourses, positioning teachers not as mere implementers of policy but as active agents in reimagining education for the public good.

VCoPs: Democratizing Access to Global Educational Knowledge

The advent of technology has catalyzed the creation of Virtual Communities of Practice (VCoPs), which enable geographically dispersed educators to engage in real-time collaborative exchanges that transcend the limitations of time and space (Ghamrawi, 2022; Murtagh & Rushton, 2023). While PLCs are often grounded in local contexts and face-to-face interactions, VCoPs operate in a digital realm, opening up access to an exponentially larger pool of knowledge and expertise (Ghamrawi, 2022; Ghamrawi et al., 2024f; Myers, S., & Washburn, 2022). These networks leverage digital platforms to connect teachers across borders, offering unprecedented opportunities for global knowledge sharing, comparative analysis, and cross-cultural learning (Shal et al., 2024a, 2024c; Trust et al., 2016). Such platforms, whether synchronous or asynchronous, allow for the creation of a more inclusive, decentralized knowledge economy—one where educators from diverse contexts contribute to and draw from a shared pool of expertise (Ghamrawi, 2022; Ghamrawi et al., 2024f; Shal et al., 2024a, 2024c).

VCoPs democratize access to knowledge by breaking down the traditional barriers imposed by institutional silos. These platforms enable the *boundary crossing* of ideas, pedagogies, and curricula, encouraging teachers to engage in transnational dialogues that challenge both local and global educational assumptions. For example, teachers from the Global South can contribute to and learn from the pedagogical innovations in the Global North, while simultaneously infusing the discourse with culturally relevant insights that reflect the lived realities of their students (Wenger et al., 2020). This dialogical exchange fosters a cosmopolitan ethos of teaching—an orientation that values the fluidity of professional identities, the multiplicity of pedagogical approaches, and the interconnectedness of global educational challenges (Koullapi & Lyra, 2024; Rizvi & Lingard, 2010).

Crucially, VCoPs also offer new ways for teachers to engage in action research and inquiry-based learning, providing platforms for collaborative problem-solving that are more agile and adaptive to the rapid shifts in educational landscapes (Ghamrawi, 2022; Ghamrawi et al., 2024f; Shal et al., 2024a, 2024c). Teachers can contribute to and learn from real-time data and case studies, reflecting on what works in various educational contexts, testing new strategies, and sharing findings with an audience of like-minded teachers (Ghamrawi et al., 2024f). Again, the iterative, participatory nature of VCoPs encourages both critical engagement and reflective practice, reinforcing the notion that teacher development is not a linear journey, but a dynamic, context-dependent process.

A Global Learning Ecosystem for Teachers

VCoPs can create a robust, transnational ecosystem for teacher learning—one that merges the local with the global, the personal with the collective, and the reflective with the action-oriented. This hybrid model of professional development, which seamlessly integrates face-to-face collaboration with virtual exchanges, offers a dynamic space for teachers to continuously negotiate their professional identities, co-construct knowledge, and engage in systemic reform (Bird, 2023; Schrire et al., 2024).

Teachers are no longer confined to the constraints of isolated, one-off training sessions but can engage in continuous, self-directed learning cycles that reflect their evolving professional needs. These networks empower teachers to identify shared challenges, collectively analyze pedagogical practices, and develop actionable strategies for addressing both local and global educational crises (Alshaboul et al., 2024; Bird, 2023; Ghamrawi, 2022; Schrire et al., 2024). VCoPs enable teachers to not only adapt to change but to actively shape the future of education, drawing upon diverse, cross-cultural insights that challenge dominant models of knowledge production (Hafeez et al., 2019; Murtagh & Rushton, 2023).

In this reimagined ecosystem of teacher development, educational reform becomes a co-creative process, wherein teachers are recognized as critical agents of change—agents who possess the agency, autonomy, and reflective capacity to drive meaningful transformation within their classrooms, schools, and broader educational systems (Ghamrawi, 2022; Ghamrawi et al., 2024f; Koullapi & Lyra, 2024; Rizvi & Lingard, 2010; Shal et al., 2024a, 2024c). These communities of practice represent not only a rethinking of professional development but a reinvention of the very notion of what it means to be a teacher in the 21st century: a lifelong learner, a global collaborator, and a committed agent of social and educational justice.

TEACHER LEADERSHIP AND SYSTEMIC EDUCATIONAL REFORM: CATALYSTS FOR TRANSFORMATION

Building upon the transformative possibilities offered by Professional Learning Communities (PLCs) and Virtual Communities of Practice (VCoPs), we now turn to the nexus of teacher leadership and systemic educational reform. While much of contemporary educational discourse focuses on policy-driven reforms, the lived reality of reform rests in the hands of teachers. Teachers, as the primary agents of educational change, hold the potential not only to navigate the complexities of their classroom environments but also to act as leaders who shape the broader educational system (Leithwood, 2012). To harness this transformative potential, we must reconceptualize teacher leadership in ways that empower teachers to be not only instructional leaders but also visionaries, policy advocates, and community builders committed to equity and social justice (Day, 2014).

In this vision, teacher leadership is not simply a positional role or a set of discrete tasks; it is a dynamic, evolving process of agency and influence that operates within the organizational and cultural contexts of schools and beyond (Ghamrawi et al., 2023a, 2023b, 2024a, 2024b, 2024c, 2024d, 2024e, 2024f, 2024g, 2024h). Teacher leaders are positioned at the intersection of micro-level classroom practices and macro-level educational policy, where they can exert significant influence on both the pedagogy that shapes student learning and the policies that structure educational systems (Ghamrawi et al., 2023a, 2023b). Through a combination of professional expertise, collaborative inquiry, and sustained reflection, teacher leaders contribute to the continuous reimagining of educational practices, challenging the status quo and advocating for reform that is both context-sensitive and globally informed (Ghamrawi et al., 2013, 2018, 2023c; Santiago et al., 2012). In this way, teacher leadership becomes a critical catalyst for systemic change, fostering an environment where teachers not only influence their immediate classroom environments but also drive broader educational transformations that are responsive to both local needs and global challenges.

Teacher Leadership as a Vehicle for Systemic Reform

Historically, the role of teachers in educational reform has been conceptualized within narrow, hierarchical frameworks that often limit teachers to roles of implementation rather than active participation in the policymaking process (Leithwood & Mascall, 2008). However, as global educational challenges grow more complex and interconnected, the need for a shift toward decentralized, teacher-driven leadership becomes paramount. Teacher leaders are uniquely positioned to bridge the gap between policy and practice by interpreting, adapting, and re-contextualizing educational reforms to fit the specific needs of their students, schools, and communities (Timperley, 2008).

Teacher leadership, in this regard, extends beyond the confines of the classroom and the school, permeating the wider educational ecosystem. It involves teachers in the process of systemic policy critique, development, and implementation. As active participants in policy dialogues, teacher leaders possess the expertise and the grounded insights to advocate for reform that reflects the lived experiences of students, teachers, and communities (Ghamrawi et al., 2023a, 2024b). Furthermore, teacher leaders play a crucial role in fostering a culture of collaboration and trust within schools, enabling the collective capacity of educators to engage in systemic change. Through distributed leadership models, which emphasize collaboration over hierarchical authority, teacher leaders can help create a shared vision of educational success that aligns with both local priorities and global imperatives (Ghamrawi & El-Khatib, 2019).

The Role of Teacher Leadership in Shaping Educational Policy and Practice

The relationship between teacher leadership and educational reform is inherently reciprocal: teacher leaders influence policy, and in turn, policies shape the parameters of leadership (Bros & Schechter, 2022). The transformative power of teacher leadership lies in its capacity to shape and redefine educational practices and structures through continuous cycles of inquiry, action, and reflection (Fullan, 2011). In this sense, teacher leadership must be viewed not as a static form of influence, but as an ongoing, adaptive process that requires critical engagement with the broader policy landscape, as well as the flexibility to respond to emergent challenges (Ghamrawi et al., 2024a, 2024b, 2024c, 2024d).

One of the most compelling aspects of teacher leadership is its capacity to promote systemic change that is both localized and contextualized. Through participation in VCoPs, and other collaborative networks, teacher leaders can challenge and critique the very frameworks within which educational policy is constructed (Hargreaves & Fullan, 2012). They can bring to the table the voices of marginalized communities, advocate for more equitable distribution of resources, and contribute to the development of curricula and assessments that reflect the diverse needs of their students. This participatory, inclusive approach to educational reform is essential for creating systems that are responsive to the demands of an increasingly globalized world (Biesta, 2010).

At the same time, teacher leaders must also act as change agents within their own schools and districts. By leveraging their professional knowledge and expertise, teacher leaders can identify opportunities for innovation within existing structures and lead efforts to implement practices that are both pedagogically sound and socially transformative (Day & Leithwood, 2007). Whether through advocating for more inclusive curricular practices, fostering a culture of peer mentorship, or developing school policies that support sustainable teacher development, teacher leaders play a critical role in the ongoing transformation of the educational system (MacBeath, 2008).

The Intersections of Teacher Leadership, Equity, and Social Justice

An integral dimension of teacher leadership in the context of systemic reform is its capacity to advance social justice and equity within the educational system. As systemic inequalities persist in education, teacher leaders are uniquely positioned to confront these disparities through their instructional practices, advocacy, and engagement with their communities (Gümüş et al., 2021). Teacher leaders, by virtue of their proximity to the classroom, can challenge inequitable policies, advocate for inclusive teaching practices, and create spaces where marginalized voices are heard and valued (Wiedeman, 2022). They can also work collaboratively to dismantle systems of oppression within education, advocating for reforms that ensure all students, regardless of their backgrounds, have access to high-quality learning opportunities.

In this sense, teacher leadership is not merely about improving individual practice or local school outcomes, but about contributing to broader efforts to restructure educational systems in ways that promote equity, justice, and sustainability. Teacher leaders must engage in critical, reflective practices that interrogate their own positionalities within systems of power and privilege and that actively challenge the inequities embedded in educational policy and practice (Kearney et al., 2018). By embracing these roles, teacher leaders become agents of systemic change—agents who not only transform their classrooms but also contribute to the creation of an educational system that is more equitable, just, and responsive to the needs of all students.

In conclusion, the reconceptualization of teacher leadership as a dynamic, reflective, and transformative process is essential for driving systemic educational reform. Teacher leaders, through their deep expertise and commitment to professional growth, have the potential to reshape both local practices and global educational policies. By participating in collaborative communities of practice, engaging in critical policy dialogues, and advocating for social justice, teacher leaders can play a pivotal role in the reimagining of education for the 21st century. As such, teacher leadership represents not just an individual or institutional phenomenon, but a global movement towards a more inclusive, equitable, and sustainable educational future.

A POLICY FRAMEWORK FOR RE-ENVISIONING TEACHER PD AND LEADERSHIP

At the heart of educational transformation lies the crucial necessity of reconceptualizing policy frameworks for teacher professional development (PD) and leadership. The conventional policy landscapes, often dominated by one-size-fits-all approaches, fail to account for the diverse needs of educators working in increasingly complex and globalized educational environments. To rectify this, policy reform must embrace a holistic and teacher-centric ecosystem that integrates professional development as a foundational element of systemic change.

A comprehensive policy framework should begin by recognizing teacher leadership not merely as a supplementary or optional feature but as a core driver of educational progress. Policies must focus on fostering professional autonomy, critical inquiry, and collaboration among educators. This entails promoting ongoing professional development as an iterative, lifelong process rather than a series of isolated workshops or one-off interventions. Crucially, teacher leadership should be redefined within this policy context—not as a hierarchical, top-down mechanism, but as a dynamic, distributive practice that permeates all levels of the educational system, allowing for the authentic co-creation of knowledge and educational solutions (Ghamrawi et al., 2023a, 2023b).

In envisioning such policy reforms, it is also imperative to take into account the global context in which teachers operate. As the world becomes more interconnected, the challenges and opportunities that educators face are no longer confined to local or national borders. Policies for teacher leadership and PD should integrate international perspectives and best practices, creating a globally attuned framework that equips educators to thrive in diverse, multicultural classrooms while ensuring that local needs and contexts remain central (Darling-Hammond et al., 2017).

Supportive Ecosystems for Teacher Empowerment

A policy shift towards a supportive ecosystem for teacher empowerment requires dismantling the entrenched bureaucratic structures that often stifle innovation and autonomy in the profession (Amzat & Valdez, 2017). The power dynamics

within traditional educational systems frequently reinforce rigid hierarchies and restrict teachers' ability to make meaningful decisions about their practice. To counteract this, policies must create environments where teachers have the agency to drive change within their classrooms and schools, positioning them as leaders within their educational ecosystems (Ahmed, 2024).

This requires cultivating policies that encourage autonomy in curriculum design, pedagogical innovation, and professional growth, while dismantling barriers such as excessive standardization, accountability pressures, and top-down control. A teacher-centric ecosystem emphasizes trust, professional respect, and the understanding that teachers are best placed to lead their own professional development and contribute meaningfully to educational policy and practice (Hargreaves & Fullan, 2012). These policies must also promote continuous learning and reflection, fostering a culture of inquiry that extends beyond the classroom to encompass school-wide and system-wide transformation (Sahlberg, 2011). Such an ecosystem should be grounded in mutual respect, where teachers are empowered not only through professional development but also through shared decision-making and leadership opportunities. Supportive environments that recognize and elevate teacher expertise unlock the full potential for innovation and creativity within the profession, positioning teachers as central agents in shaping the future of education.

Building a Global Infrastructure for Teacher Learning

A global infrastructure for teacher learning entails the creation of international platforms that facilitate the exchange of ideas, pedagogical innovations, and best practices across borders. Digital networks, collaborative online spaces, and VCoPs offer unprecedented opportunities for teachers worldwide to engage with one another, sharing resources and strategies for traversing the complexities of modern classrooms.

The development of such global infrastructures, however, is not merely about access to technology; it requires the establishment of a culture of international collaboration that fosters mutual learning. Policymakers must ensure that global platforms are not limited to knowledge-sharing but are instead designed to facilitate co-creation, allowing teachers from diverse cultural and educational contexts to work together on solving common challenges. These platforms should also address disparities in access to technology and ensure equitable participation, providing opportunities for teachers in all regions—particularly those in marginalized or under-resourced areas—to benefit from global learning networks.

As part of this global infrastructure, professional development should no longer be seen as a localized endeavor but as a global mission that recognizes the interconnectedness of educational systems. This expansive view of teacher learning allows for more flexible, diverse, and scalable approaches to professional growth, which can ultimately inform local policies and practices. By embedding a global perspective into teacher PD, the profession as a whole can engage more effectively with the challenges posed by an interconnected world.

Ensuring Equity and Access in Teacher Development

Ensuring equity and access to high-quality professional development opportunities for all teachers is one of the most pressing imperatives in educational policy reform. Policies must address the systemic barriers that limit access to PD, particularly for teachers from underrepresented, low-income, or rural communities, as well as those working in culturally diverse or marginalized educational contexts. This requires targeted interventions that not only make PD opportunities more accessible but also tailor them to meet the needs of diverse teaching populations.

Equitable access to professional development should encompass both structural and cultural dimensions. Policies must remove the financial, geographical, and logistical obstacles that hinder teachers' participation in PD programs while simultaneously ensuring that PD content is inclusive, culturally responsive, and relevant to the varied contexts in which teachers work. Moreover, policies should recognize the importance of mentorship and peer learning, ensuring that all teachers—regardless of their background—have the support and resources necessary to continuously grow in their profession.

In the context of global education reform, equity in PD is not only about access to opportunities but also about the democratization of knowledge. By providing teachers with the tools, resources, and networks they need to succeed, we are fostering a more inclusive teaching profession that can better meet the needs of a diverse student population and address the persistent inequities that plague many education systems worldwide.

A VISION FOR THE FUTURE

As we consider the future of teacher development and leadership, it is vital to recognize that these efforts must no longer be seen as isolated from the broader educational system. In the 21st century, the lines between teacher professional

development, school leadership, and systemic reform must be blurred, with each area contributing to and reinforcing the others. This holistic, interconnected approach challenges the traditional model where PD is often viewed as a stand-alone initiative, disconnected from the lived experiences of teachers and the realities of the classroom. A truly interconnected educational ecosystem positions teacher development and leadership as central to systemic change. It requires the alignment of policies, resources, and practices across the educational system to support the continuous, reciprocal growth of teachers as leaders, learners, and agents of change. This vision also demands that PD is not limited to isolated workshops or off-site conferences, but instead is deeply embedded in the fabric of everyday school life, integrated into the daily interactions among educators and woven into the broader culture of the school.

In this model, teacher leadership is understood as a communal, collective endeavor, where leadership roles are distributed across a network of educators rather than confined to a few individuals at the top. This approach fosters a collaborative environment where teachers share responsibility for the success of their students and the transformation of the system itself. It envisions a system in which teachers are not merely recipients of directives but are co-creators of the educational environment in which they work. The future of teacher development and leadership is therefore one of active engagement, mutual support, and shared accountability, where educators at all levels are empowered to shape the future of education together.

Cultivating Lifelong, Global Learning Networks

In the evolving landscape of education, the concept of lifelong learning has never been more critical. Teachers, as lifelong learners, must have access to ongoing opportunities for growth and development throughout their careers. However, the future of teacher learning cannot be limited to isolated, nationally-focused programs. Instead, it must be global in scope, offering teachers the chance to engage with a rich variety of perspectives, methodologies, and challenges from around the world.

Building sustainable, intergenerational networks for teacher learning is essential for fostering a vibrant, dynamic teaching profession that adapts to the changing needs of students and society. These networks should transcend geographical and cultural boundaries, creating opportunities for teachers to collaborate and innovate across borders. The development of digital platforms and virtual communities of practice can facilitate this global exchange, enabling teachers to connect with colleagues worldwide, share their experiences, and learn from diverse educational contexts (Wenger-Trayner & Wenger-Trayner, 2015).

Such networks should be designed to evolve alongside the changing educational landscape, with teachers from various backgrounds contributing their expertise and experiences. These collaborative, global learning networks will become vital engines for professional growth, ensuring that teacher leadership remains relevant and responsive to emerging challenges and innovations.

The Ethical and Moral Dimensions of Teacher Leadership

Teacher leadership carries profound ethical responsibilities. In the face of increasingly complex global challenges, the role of educators as moral agents has never been more urgent. Teacher leaders must confront the ethical dilemmas of an increasingly diverse and divided world, ensuring that their practices are rooted in principles of equity, justice, and social responsibility. These ethical dimensions are not just abstract ideals but must be translated into concrete actions that affect the daily lives of students and their communities (Banks, 2015).

Moreover, teacher leaders have an essential role in fostering a sense of global citizenship in their students, preparing them to engage with the pressing challenges of the 21st century—climate change, migration, inequality, and conflict. The ethical responsibility of teacher leadership extends beyond the walls of the classroom, encompassing the moral obligation to advocate for policies and practices that prioritize social justice and sustainable development (Noddings, 2013).

CONCLUSION

Re-envisioning teacher professional development and leadership for the 21st century requires a decisive departure from fragmented, compliance-driven approaches toward holistic, systemic, and globally connected frameworks. This chapter has argued for the repositioning of teachers as central agents of change—professionals whose growth, leadership, and agency are foundational to educational transformation. By embedding professional development in reflective practice, collective inquiry, and situated learning, teachers evolve as empowered leaders who influence policy, pedagogy, and school culture.

We have emphasized the need to dismantle hierarchical and technocratic models of leadership, advocating instead for distributed, collaborative, and context-sensitive approaches that honor teacher voice and expertise. Such a shift must be underpinned by equitable policies that support teacher autonomy, ensure inclusive access to learning opportunities, and cultivate supportive ecosystems where innovation and critical inquiry flourish.

Ultimately, the future of teacher development lies in building interconnected, lifelong learning networks that transcend local boundaries and embrace the global nature of education today. In doing so, we not only strengthen teacher leadership but also advance an ethical, socially just vision of schooling—one where educators are empowered to lead with purpose, shape their profession, and co-create a more equitable and resilient educational future.

REFERENCES

- [1]. 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*, 0(0). <https://doi.org/10.1177/08920206251315629>
- [2]. Ahmed, E. I. (2024). Teacher empowerment and organisational citizenship behaviour in public schools in Saudi Arabia. *Management in Education*, 38(1), 22-29.
- [3]. Al-Jammal, K., & Ghamrawi, N. (2013a). Teacher professional development in Lebanese schools. *Basic Research Journal of Education Research and Review*, 2(7), 104-128.
- [4]. Al-Jammal, K., & Ghamrawi, N. (2013b). Total quality management: Effectiveness in Lebanese schools perceptions of school leaders and teachers. *International Journal of Management*, 1(12), 488-509.
- [5]. Al-Jammal, K., & Ghamrawi, N. (2015). Leading the self: Self-leadership skills of Lebanese private school principals. *International Journal of Social Science and Economics Invention*, 1(2), 1-20.
- [6]. Alshaboul, Y. M., Alazaizeh, M. A., Sellami, A. L., Abu-Tineh, A. M., Ghamrawi, N., & Shal, T. (2024). The perceived challenges to online learning during the COVID-19 pandemic: A nationwide study of K-12 parental perspectives (Arab and other parents) in Qatar. *Heliyon*, 10(7).
- [7]. Amzat, I. H., & Valdez, N. P. (2017). Teacher empowerment toward professional development and practices. *Sharing school leadership: Principals' empowerment or relegation*, 43-58.
- [8]. Andreotti, V. (2014). *Soft versus critical global citizenship education*. In S. McCloskey (Ed.), *Development education in policy and practice* (pp. 21–31). Palgrave Macmillan.
- [9]. Banks, J. A. (2015). *Cultural diversity and education: Foundations, curriculum, and teaching* (6th ed.). Pearson.
- [10]. Benenson, J., & Bryan, T. K. (2024). The Classroom Laboratory. In *Engaged Learning in the Public Service Classroom* (pp. 49-65). Routledge.
- [11]. Biesta, G. (2013). *The beautiful risk of education*. Routledge.
- [12]. Bird, J. E. (2023). *A phenomenological exploration of new teachers' experiences in a vCoP designed and administered by an educator preparation provider* (Doctoral dissertation, Doctoral dissertation, Baker University).
- [13]. Brandão, A., Pedro, L., & Zagalo, N. (2024). Teacher professional development for a future with generative artificial intelligence—an integrative literature review. *Digital Education Review*, (45), 151-157.
- [14]. Bros, E., & Schechter, C. (2022). The coherence challenge between policy makers and school leaders: Exploring a national pedagogical reform. *Journal of School Leadership*, 32(5), 488-513.
- [15]. Burazin, A., & Chow, A. N. (2025). Communities of Practice for Canadian University Mathematics Instructors. *Canadian Journal of Science, Mathematics and Technology Education*, 1-10.
- [16]. Caruthers, L., Friend, J., Schlein, C., & Tucker, V. G. (2025). Explorations of Cultural Experiences at the Intersection of Neoliberalism and School Desegregation. *The Urban Review*, 1-21.
- [17]. Christensen, A. A., & Jerrim, J. (2025). Professional learning communities and teacher outcomes. A cross-national analysis. *Teaching and Teacher Education*, 156, 104920.
- [18]. Cochran-Smith, M., & Lytle, S. L. (2009). *Inquiry as stance: Practitioner research for the next generation*. Teachers College Press.
- [19]. Cochran-Smith, M., Ell, F., Grudnoff, L., Haigh, M., Hill, M., & Ludlow, L. (2016). Initial teacher education: What does it take to put equity at the center?. *Teaching and Teacher Education*, 57, 67-78.
- [20]. Darling-Hammond, L. (2017). Teacher education around the world: What can we learn from international practice?. *European journal of teacher education*, 40(3), 291-309.
- [21]. Day, C. (2014). *Professionalism, reflective practice, and the ethics of teacher leadership*. In J. MacBeath & L. S. Cheng (Eds.), *Leading professional learning* (pp. 121–139). Routledge.
- [22]. Day, C., & Leithwood, K. (2007). *Successful school leadership: Building leadership capacity through professional development*. Sage.
- [23]. Dewey, J. (1938). *Experience and education*. Macmillan.

- [24]. Du, X., Wang, J., Chen, J., Lu, W., & Chen, H. (2025). Operating a Virtual Teaching and Research Section as an Open-Source Community: Practice and Experience. *Frontiers of Digital Education*, 1-10.
- [25]. Dunn, M. B., Stark, K., & Hunter, D. B. (2025). Emotional labor as teaching expertise: reflective practices for teacher professional development workshops. *Reflective Practice*, 1-15.
- [26]. Febring, L., & Risenfors, S. (2025). Teachers' articulations of digital resources in an upper secondary programme for newly arrived migrants. *ReCALL*, 1-16.
- [27]. Fraser, G. (2023). From occupational to organisational professionalism: Exploring the changing nature of professionalism in community learning and development (1975–2019). *Studies in the Education of Adults*, 1-13.
- [28]. Fraser, C., Kennedy, A., Reid, L., & McKinney, S. (2007). Teachers' continuing professional development: Contested concepts, understandings and models. *Journal of In-Service Education*, 33(2), 153–169. <https://doi.org/10.1080/13674580701292913>
- [29]. Fullan, M. (2021). *The right drivers for whole system success*. Center for Strategic Education.
- [30]. Hafeez, K., Alghatas, F. M., Foroudi, P., Nguyen, B., & Gupta, S. (2019). Knowledge sharing by entrepreneurs in a virtual community of practice (VCoP). *Information Technology & People*, 32(2), 405-429.
- [31]. Hargreaves, A., & Fullan, M. (2012). *Professional capital: Transforming teaching in every school*. Teachers College Press.
- [32]. Hendrickx, M. M., Thurlings, M. C., & Den Brok, P. (2025). Teachers' collaborative knowledge building in professional learning communities: connecting interaction patterns to learning gains. *European Journal of Psychology of Education*, 40(1), 1-19.
- [33]. Heron, M., & Wason, H. (2025). Developing dialogic stance through professional development workshops. *Innovations in education and teaching international*, 62(1), 73-85.
- [34]. Hord, S. M. (1997). Professional learning communities: Communities of continuous inquiry and improvement. *Southwest Educational Development Laboratory*.
- [35]. Ignazzi, E., Maretti, M., & Fontanella, L. (2025). The Italian Manosphere: Composition, Structure, and Functions of a Digital Network. *Social Inclusion*, 13.
- [36]. Johnson, I., Bickle, E., & Kantcheva, R. (2025). Navigating from 'heroic' leadership to a distributed leadership model in a virtual community of practice. *Journal of Learning Development in Higher Education*, (33).
- [37]. Ghamrawi, N. (2013a). Never underestimate the power of the sandwiched: Middle leaders and school culture. *Basic Research Journal of Educational Research and Review*, 2(2), 29-41.
- [38]. Ghamrawi, N. (2013b). Teachers helping teachers: A professional development model that promotes teacher leadership. *International Education Studies*, 6(4), 171-182.
- [39]. Ghamrawi, N. (2016). Policy review of school leadership in the Arab States. In *Leading better learning: School leadership and quality in the Education 2030 agenda* (pp.25-49). *Regional reviews of policies and practices*. UNESCO: Paris.
- [40]. Ghamrawi, N. (2024). Educational leadership in the age of artificial intelligence: Are we ready? *The Annual Scientific Conference: Vision and Ideas for Hot Issues in Education* (General and Higher Education).
- [41]. Ghamrawi, N., & Al-Jammal, K. (2013a). Instructional leadership behaviors: The case of Lebanese private school principals. *Global Advanced Research Journal of Educational Research and Review*, 2(9), 181-189.
- [42]. Ghamrawi, N., & Al-Jammal, K. (2013b). Time flies—A statement that best applies to school principals. *British Journal of Education*, 1(1), 52-66.
- [43]. Ghamrawi, N., & El-Khatib, S. (2019). Distributed Leadership in the Context of Health Education: A Case Study in One Private Free School in Beirut, Lebanon. *International Journal of Research in Economics and Social Sciences (IJRESS)*, 9(8).
- [44]. Ghamrawi, N., & Shal, T. (2012). Let us teach them the way they learn: A vision on using social networking and mobiles in teaching and learning. *Educational Research*, 3(12), 921-926.
- [45]. Ghamrawi, N., & Abu-Tineh, A. (2023). A flat profession? Developing an evidence-based career ladder by teachers for teachers—A case study. *Heliyon*, 9(4).
- [46]. Ghamrawi, N., & Al-Thani, H. (2023). Wellbeing leadership: Perceptions of pre-service school leaders. *Heliyon*, 9(11).
- [47]. Ghamrawi, N., Shal, T., & Ghamrawi, N. (2013). Leadership performance of emotionally intelligent subject leaders. *Educational Research*, 4(2), 143-152.
- [48]. Ghamrawi, N. A., Ghamrawi, N., & Shal, T. (2018). Student leadership through the lens of Lebanese public school students. *Open Journal of Leadership*, 7(01), 33.
- [49]. Ghamrawi, N. (2022). Teachers' virtual communities of practice: A strong response in times of crisis or just another Fad?. *Education and information technologies*, 27(5), 5889-5915.
- [50]. Ghamrawi, N., Shal, T., & Ghamrawi, N. A. (2023a). Stepping into middle leadership: A hermeneutic phenomenological study. *International Journal of Leadership in Education*, 1-21.

- [51]. Ghamrawi, N., Naccache, H., & Shal, T. (2023b). Teacher leadership and teacher wellbeing: any relationship?. *International Journal of Educational Research*, 122, 102261.
- [52]. Ghamrawi, N., Abu-Tineh, A., & Shal, T. (2023). Teaching licensure and education quality: Teachers' perceptions. *Sustainability*, 15(14), 10886.
- [53]. Ghamrawi, N., Shal, T., Ghamrawi, N.A.R. (2024a). School Leadership 4.0: Are We Ready?. In: *Papadakis, S. (eds) IoT, AI, and ICT for Educational Applications. EAI/Springer Innovations in Communication and Computing*. Springer, Cham. https://doi.org/10.1007/978-3-031-50139-5_9
- [54]. Ghamrawi, N., Shal, T., & Ghamrawi, N. A. (2024b). Cultivating teacher leadership: evidence form a transformative professional development model. *School Leadership & Management*, 44(4), 413-441.
- [55]. Ghamrawi, N., Abu-Shawish, R. K., Shal, T., & Ghamrawi, N. A. (2024c). Destructive leadership behaviors: The case of academic middle leaders in higher education. *International Journal of Educational Research*, 126, 102382.
- [56]. Ghamrawi, N., Shal, T., & Ghamrawi, N. A. (2024d). Department heads' professional agency: investigating self-perceptions and deans' perspectives through vignette-based analysis. *Studies in Higher Education*, 1-19.
- [57]. Ghamrawi, N., Shal, T., & Ghamrawi, N. A. (2024e). Exploring the impact of AI on teacher leadership: regressing or expanding?. *Education and Information Technologies*, 29(7), 8415-8433.
- [58]. Ghamrawi, N., Shal, T., & Ghamrawi, N. A. (2024f). Leadership development in virtual communities of practice: The case of school principals from the GCC Region. *Education and Information Technologies*, 1-20.
- [59]. Ghamrawi, N., Ghamrawi, N. A., & Alshaer, A. (2024g). Academic middle leadership: An exploration of Arab women's professional identities in higher education. *Management in Education*, 08920206241234769.
- [60]. Ghamrawi, N., Abu-Shawish, R. K., Shal, T., & Ghamrawi, N. A. (2024h). Teacher leadership in higher education: why not?. *Cogent Education*, 11(1), 2366679.
- [61]. Ghamrawi, N., Abu-Tineh, A., Shal, T., Al-Shaboul, Y. M., & Sellami, A. (2025). Illuminating the obscure: Teacher leaders confronting the adverse impact of their subject leaders/coordinators. *The Educational Forum* 89(1), 113-129. Routledge.
- [62]. Golledge, C., Amazan, R., Durksen, T. L., Lowe, K., & Vass, G. (2025). Transforming practices in aboriginal education through teachers' professional learning conversations. *Teaching and Teacher Education*, 155, 104900.
- [63]. Gümüş, S., Arar, K., & Oplatka, I. (2021). Review of international research on school leadership for social justice, equity and diversity. *Journal of Educational Administration and History*, 53(1), 81-99.
- [64]. Kearney, W., Murakami, E., Bunch, K., Viamontes, C., & Campbell, A. (2018). Leadership advocacy towards teacher and student success: Addressing inequities and opportunities in a rural district. *Rural Society*, 27(2), 143-156.
- [65]. Koullapi, K., & Lyra, O. (2024). Virtual communities of practice as a means of confronting educational "emergency situations" for inclusive school communities: The case of the COVID-19 pandemic. In A. Smith & B. Johnson (Eds.), *The power of technology in school leadership during COVID-19: Insights from the field* (pp. 189-212). Springer International Publishing. <https://doi.org/10.1007/978-3-030-61945-9>
- [66]. Kunrath, K., Cash, P., & Kleinsmann, M. (2020). Designers' professional identity: personal attributes and design skills. *Journal of Engineering Design*, 31(6), 297-330.
- [67]. Lapidot-Lefler, N., Cohen, I., & Friedman, V. J. (2024). Constructing the Clinical Preparation Field: Re-Envisioning the Role of Pre-Service Teacher Clinical Supervision. *The Teacher Educator*, 1-24.
- [68]. Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge University Press.
- [69]. Leithwood, K. (2012). *Leadership for learning: A review of research on the impact of leadership on student outcomes*. International Journal of Leadership in Education, 15(2), 109-130. <https://doi.org/10.1080/13603124.2012.673189>
- [70]. Leithwood, K., & Mascal, B. (2008). *Distributed leadership: An empirical study of the links to student outcomes. School Effectiveness and School Improvement*, 19(2), 121-140. <https://doi.org/10.1080/09243450802217848>
- [71]. Leonard, J., Blondonville-Ford, D., Grubb, D., Cheng, D., & Wang, X. (2025). Self-efficacy, agency, and values as predictors of STEM teacher leader identity in urban-like learning environments. *School Science and Mathematics*.
- [72]. Lieberman, A., & Miller, L. (2014). *Teachers as professionals: Evolving definitions of professional development*. In L. E. Martin & S. Kragler (Eds.), *Handbook of professional development in education* (pp. 3-16). Routledge.
- [73]. Lopez Burrola, C., Sanders, J. Y., & Donovan, S. J. (2025). Writing for humanizing transformative professional learning and development. *Professional Development in Education*, 1-18.
- [74]. MacBeath, J. (2008). *Leadership for learning: The impact of school leadership on the quality of education*. Journal of Educational Administration, 46(2), 173-189. <https://doi.org/10.1108/09578230810856459>
- [75]. Mezirow, J. (2000). *Learning as transformation: Critical perspectives on a theory in progress*. Jossey-Bass.
- [76]. Mgaiwa, S. J., & Milinga, J. R. (2024). Teacher preparation and continuous professional development: A review of 'missing links'. *Social Sciences & Humanities Open*, 10, 100990.

- [77]. Mulaimović, N., Richter, E., Lazarides, R., & Richter, D. (2025). Comparing quality and engagement in face-to-face and online teacher professional development. *British Journal of Educational Technology*, 56(1), 61-79.
- [78]. Murtagh, L., & Rushton, E. A. (2023). The role of teacher educator virtual communities of practice (VCoPs) in mobilising policy engagement: A case study of the initial teacher training market review from England. *Asia-Pacific Journal of Teacher Education*, 51(5), 480-498.
- [79]. Myers, S., & Washburn, J. (2022). Increasing teacher access to instructional coaching through virtual tools: Advantageous before, during, and after the pandemic. *Journal of Technology and Teacher Education*, 30(3), 377-405.
- [80]. Nazari, M., Keshvari, Z., & Hu, G. (2025). Professional Learning Community as a Site for Addressing Emotional Tensions: Contributions to Language Teacher Identity (Re) construction. *British Journal of Educational Studies*, 1-24.
- [81]. Nelis, P., Pedaste, M., & Leijen, Ä. (2025). Supporting kindergarten staff's agency in inclusion through long-term in-service training. *Journal of Early Childhood Teacher Education*, 46(1), 103-122.
- [82]. Noddings, N. (2013). *Caring: A relational approach to ethics and moral education*. University of California Press.
- [83]. O'Brien, K. M., Nagro, S. A., Binkert, G. D., Szocik, K., & Gerry, M. (2024). Field experiences in special education teacher preparation: A review of the literature. *Teacher Education and Special Education*, 47(1), 5-25.
- [84]. Opfer, V. D., & Pedder, D. (2011). Conceptualizing teacher professional learning. *Review of Educational Research*, 81(3), 376-407. <https://doi.org/10.3102/0034654311413609>
- [85]. Organisation for Economic Co-operation and Development (OECD). (2020). *Future of education and skills 2030: Curriculum analysis*. <https://www.oecd.org/education/2030-project/>
- [86]. Özkeskin, H., & Yıldız, A. (2025). Teachers as adult learners in neoliberal times: motivations, trends, and practices. *Professional Development in Education*, 1-17.
- [87]. Pretorius, L. (2025). An active learning intervention for in-service teachers: self-determination theory, heutagogy, neuroeducation and the (altered) flipped classroom in practice. *Curriculum Perspectives*, 1-14.
- [88]. Rincón-Gallardo, S. (2019). *Liberating Learning: educational change as social movement*. New York: Routledge. <https://doi.org/10.4324/9781351032100>
- [89]. Rizvi, F., & Lingard, B. (2010). *Globalizing education policy*. Routledge.
- [90]. Roesminingsih, E., Setiawan, A. C., & Phan, H. P. (2025). Transformational leadership in education: How PLCs, self-efficacy, and motivation drive innovative teaching. *Multidisciplinary Reviews*, 8(7), 2025205-2025205.
- [91]. Sahay, S., & Mathur, P. (2025). Can Emotional Intelligence Shape the Future of Education?: Exploring Emotional Skills for Effective Teaching and Professional Well-Being. In *Humanizing Technology With Emotional Intelligence* (pp. 161-190). IGI Global Scientific Publishing.
- [92]. Sahlberg, P. (2011). *Finnish lessons: What can the world learn from educational change in Finland?* Teachers College Press.
- [93]. Santiago, P., Timpel, P., & Vázquez, A. (2012). *Teacher leadership in schools and its impact on policy implementation*. OECD Education Working Papers, No. 80. OECD Publishing.
- [94]. Schleicher, A. (2018). *World class: How to build a 21st-century school system*. OECD Publishing.
- [95]. Schrire, O. O., Kirchner, K., Ipsen, C., & Tsybulsky, D. (2024). Virtual communities of practice: nurturing teacher-coordinators' well-being amidst stress and crisis. *Journal of Professional Capital and Community*, 9(4), 431-449.
- [96]. Selwyn, N. (2016). *Education and technology: Key issues and debates* (2nd ed.). Bloomsbury.
- [97]. Simpson, A., Anderson, A., Goeke, M., Caruana, D., & Maltese, A. V. (2025). Identifying and shifting educators' failure pedagogical mindsets through reflective practices. *British Journal of Educational Psychology*, 95(1), 26-40.
- [98]. Shal, T., El Kibbi, I., Ghamrawi, N., & Ghamrawi, N. A. R. (2018a). Web 2.0—A Tool for Learning or Socialization Only? Perspectives & Experiences of Lebanese School Principals. *International Journal of Research in Economics and Social Sciences*, 8, 315-347.
- [99]. Shal, T., El Kibbi, I., Ghamrawi, N., & Ghamrawi, N. A. (2018b). Principals' Differentiated Learning through Social Media: Practices and Obstacles. *International Journal of Education and Applied Research*, 8, 19-29.
- [100]. Shal, T., Ghamrawi, N., & Ghamrawi, N. (2019). Mobile learning for differentiated school leadership development. *Journal of Pedagogical Sociology and Psychology*, 1(2), 88-103.
- [101]. Shal, T., Ghamrawi, N., & Ghamrawi, N. A. (2024a). 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*, 1-17.
- [102]. 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), 102849.
- [103]. Shal, T., Ghamrawi, N., Abu-Tineh, A., Al-Shaboul, Y. M., & Sellami, A. (2024c). Teacher leadership and virtual communities: Unpacking teacher agency and distributed leadership. *Education and Information Technologies*, 1-18.

- [104]. Shal, T., Ghamrawi, N., & Ghamrawi, N. A. R. (2024d). Does Accreditation Lead to School Improvement? Perceptions of Educators in K-12 Settings. *SAGE Open*, 14(3). <https://doi.org/10.1177/21582440241281222> (Original work published 2024).
- [105]. Sellen, P. (2016). Teacher workload and professional development in England's secondary schools: Insights from TALIS. Education Policy Institute.
- [106]. Sims, S., & Fletcher-Wood, H. (2021). Identifying the characteristics of effective teacher professional development: a critical review. *School Effectiveness and School Improvement*, 32(1), 47-63.
- [107]. Sims, S., Fletcher-Wood, H., O'Mara-Eves, A., Cottingham, S., Stansfield, C., Van Herwegen, J., & Anders, J. (2021). What are the characteristics of effective teacher professional development? A systematic review and meta-analysis. Education Endowment Foundation.
- [108]. Sims, S., Fletcher-Wood, H., O'Mara-Eves, A., Cottingham, S., Stansfield, C., Goodrich, J., Van Herwegen, J., Anders, J. (2022). Effective teacher professional development: new theory and a meta-analytic test? (CEPEO Working Paper No. 22-02). Centre for Education Policy and Equalising Opportunities, UCL. <https://EconPapers.repec.org/RePEc:ucl:cepeow:22-02>
- [109]. Stoll, L., Bolam, R., McMahon, A., Wallace, M., & Thomas, S. (2006). Professional learning communities: A review of the literature. *Journal of Educational Change*, 7(4), 221-258. <https://doi.org/10.1007/s10833-006-0001-8>
- [110]. Supa, W., Kamkhuntod, S., Wannapiroon, N., Wannapiroon, P., Aumgri, C., & Linthaluek, S. (2025). International Virtual Communities of Practice (I-VCop) with Immersive Learning Ecosystem for Enhancing Critical Communication Skills in Multicultural Society. *International Journal of Information and Education Technology*, 15(2).
- [111]. Taylor, P. R. (2018). *The complexity of teacher professional growth—experiences of professional learning and development, including practice-based inquiry* (Doctoral dissertation, Birmingham City University).
- [112]. Thornton, K. (2024). Mentoring preparation in educational contexts: a review of the literature. *International Journal of Mentoring and Coaching in Education*, 13(4), 441-456.
- [113]. Timperley, H. (2008). *Teacher professional learning and development. Systematic Reviews in Educational Research*, 2, 1-18. <https://doi.org/10.1002/9780470712871>
- [114]. Trust, T., Carpenter, J. P., & Krutka, D. G. (2016). Moving beyond silos: Professional learning networks in education. *The Internet and Higher Education*, 30, 1-9. <https://doi.org/10.1016/j.iheduc.2016.02.002>
- [115]. Wenger-Trayner, E., & Wenger-Trayner, B. (2015). Communities of practice: A brief introduction. In *Learning in landscapes of practice: Boundaries, identity, and knowledgeability in practice-based learning*. Routledge.
- [116]. Wenger, E., Trayner-Wenger, B., & Snyder, W. M. (2020). *Learning in landscapes of practice: Boundaries, identity, and knowledgeability in practice-based learning*. Routledge.
- [117]. Wiedeman, C. R. (2002). Teacher preparation, social justice, equity: A review of the literature. *Equity & Excellence in Education*, 35(3), 200-211.
- [118]. Wong, J. L. (2025). Teachers' perceptions of what knowledge they need to foster their multicultural competence: what are the implications for in-service teacher education programmes?. *Teachers and Teaching*, 1-18.
- [119]. Zhang, L., Chen, Y., Zhong, W., & Jiang, L. (2025). Becoming a Teacher, Coexisting with Emotions: A Follow-up Study on Emotion Regulation of ECE Student Teachers in Teaching Internship Context in China. *The Asia-Pacific Education Researcher*, 1-16.