

Communities of Practice as a Framework for School Leadership Development: A Theoretical Exploration

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Abstract. The professional development of school leaders has become increasingly critical in addressing the complex challenges facing contemporary education systems. This conceptual article examines communities of practice (COPs) as a theoretical framework for enhancing school leadership development. Drawing on social learning theory and constructivist epistemology, this article explores the theoretical foundations, defining features, and conceptual frameworks that position COPs as effective professional development mechanisms for school principals. The article synthesizes literature on COP origins, core characteristics including recruitment methods, common purpose, interaction modes, and participant value, alongside conditions promoting COP success. By examining the theoretical underpinnings through an interpretivist paradigm, this article establishes that COPs offer a collaborative, context-responsive approach to leadership development that contrasts with traditional hierarchical training models. The conceptual framework presented integrates social learning theory with workplace integration principles, demonstrating how principals can enhance professional competencies through sustained interaction, knowledge sharing, and collective inquiry. Implications for educational policy and leadership development programs are discussed, with recommendations for theoretically grounded COP implementation in educational contexts.

Keywords: communities of practice; leadership development, social learning theory; professional development, school principals

1 Introduction

The development of effective school leadership has emerged as a critical priority in education systems worldwide, particularly in contexts characterized by historical inequities and ongoing transformation, as is the case in South Africa (Sepuru & Mohlakwana, 2020). Traditional approaches to principal professional development, including formal certification programs, in-service workshops, and hierarchical training models, have demonstrated

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significant limitations in preparing school leaders to navigate the complex realities of contemporary educational environments (Heystek, 2015). These conventional methods often feature ill-fitting content, insufficient attention to situated practice, and limited opportunities for sustained collaborative learning according to Wenger & Wenger-Trayner (2015).

In response to these limitations, communities of practice (COPs) have gained recognition as an alternative framework for professional development that emphasizes collaborative learning, shared inquiry, and the co-construction of professional knowledge (Wenger & Wenger-Trayner, 2015). COPs represent a fundamental shift from individualistic, transmission-based models of professional learning toward social, participatory approaches grounded in authentic contexts and real-world challenges. This theoretical reorientation aligns with broader movements in educational leadership that emphasize shared leadership and collaborative inquiry as mechanisms for organisational learning and improvement. COP's may be useful in school leadership development and by synthesizing literature on COP theory, social learning perspectives, and leadership development, it may help us understand how COPs function as professional learning environments for school leaders.

1.1 Background

Historically, professional development for school principals has been characterized by sporadic interventions that foregrounded technical approaches to leadership rather than situated, context-responsive learning (Day et al., 2016). In many educational systems, particularly those emerging from colonial or authoritarian legacies, principal preparation has emphasized administrative compliance, hierarchical control, and the implementation of prescribed policies rather than adaptive leadership, collaborative inquiry, or transformational practice (Bush & Glover, 2016; Day et al., 2016). The inadequacy of these traditional approaches has become increasingly evident as schools face multifaceted challenges that require sophisticated leadership (Wenger & Wenger-Trayner, 2015).

Various initiatives have emerged to address these deficiencies, including advanced certification programs, university-based leadership courses, and externally provided professional development workshops. However, Bergman et al. (2011) and Heystek (2015) indicate that many of these interventions have been characterized by vague standards, insufficient connection to practice, and limited impact on principals' day-to-day leadership behaviors.

Communities of practice emerged in the 1990s through the work of Lave & Wenger (1991) as a theoretical construct for understanding how learning occurs through participation in social practice. Grounded in situated learning theory and social constructivism, the COP concept challenged prevailing cognitive and individual-centered models of learning by foregrounding the social, relational, and participatory dimensions of knowledge construction (Wenger, 1998). Over the next few decades, COPs have been increasingly recognized as promising frameworks for professional learning that honour teachers' and leaders' expertise, promote collaborative inquiry, and support the development of shared practices aligned with local contexts and needs (Mahlo & Waghid, 2026).

The post-Apartheid resolution to grant school leaders more decision-making powers by decentralising education, has, according to Gessler & Ashmawy (2016), left school leaders with responsibilities, but not necessarily the capacity to improve education in South African schools. Participation in a COP may be key to empowering school leaders to address their unique challenges efficiently and since COP's have been successfully implemented in Europe and the USA, it may be valuable to study their success in South Africa. It is in that light that this paper aims, and is confined to, examine published research on COP's and how the practice has been studied over the decades, by stating the following objectives:

1. To investigate the question of how Communities of Practice may contribute to school leadership development.
2. To provide recommendations for policymakers and future research.

This paper starts with a review of literature and the theories that underlie the concept, follows with the methodology chosen to unpack the literature and theories and concludes with recommendations for future research.

1.2 Literature Review: Theoretical Foundations of Communities of Practice

1.2.1 *Defining Communities of Practice*

Wenger (1998) defines communities of practice as groups of people who share a concern or passion for something they do and learn how to do it better as they interact regularly. Wenger's (1998) definition emphasizes three core components: the domain of shared interest, the community of people who care about that domain, and the shared practice that members develop through sustained interaction. Within educational contexts, COPs represent social processes wherein individuals unite around common purposes to support mutual understanding of professional contexts and to learn together toward improved practice (Agherdien, 2015; Herbers et al., 2011; Mercieca, 2017).

Several scholars elaborate on this foundational definition. Wenger et al. (2002) describe COPs as comprising individuals bound together by the value they find in learning collectively; a value that extends beyond instrumental workplace needs to encompass personal satisfaction, professional identity, and belonging to communities of understanding. Later, Herbers et al. (2011) posited that over time, COP members develop unique perspectives on their shared domain, accumulate bodies of knowledge and practices, establish interaction patterns, and cultivate common identities that distinguish them as communities of practice rather than merely work groups or project teams.

1.2.2 *Core Features of Effective Communities of Practice*

Literature identifies four essential features that characterize effective COPs: recruitment of participants, common purpose, methods of interaction, and value generated through participation (Gonçalves, 2021; Mercieca, 2017). These features, illustrated in Fig 1 and discussed in turn below, provide a conceptual architecture for understanding how COPs function as learning environments and what conditions enable them to support professional development effectively.

Fig 1 illustrates features that are aligned with what Wenger (2000) identified as the vital characteristics of the COP. The domain of common interest, shared activities, and the practice of learning are key features (Wenger, 2000).

Recruitment and Voluntary Participation

A crucial characteristic distinguishing COPs from conventional professional development structures is the principle of voluntary participation. Multiple scholars emphasize that participation should be self-selected based on individual interest, which promotes authentic engagement, free interaction among members, and confidence in contributing to discussions (Gonçalves, 2021; Mercieca, 2017). Voluntary participation reflects the social learning theory premise that meaningful learning occurs through genuine engagement rather than compliance with external mandates.

Research indicates that compulsory participation can generate uncooperative attitudes, high absenteeism, and elevated dropout rates (Benseman, 2013; Gonçalves, 2021). In contexts where principals have experienced intensive interventions framed as remediation for underperformance, mandatory COP participation risks perpetuating training fatigue and reinforcing deficit orientations toward professional learning (Bergman et al., 2011; Beycioglu & Sincar, 2019). Heystek (2015) presents a counterview: when principals voluntarily choose to participate based on perceived relevance and value, they are more likely to engage authentically, share candidly, and apply learning to their practice.

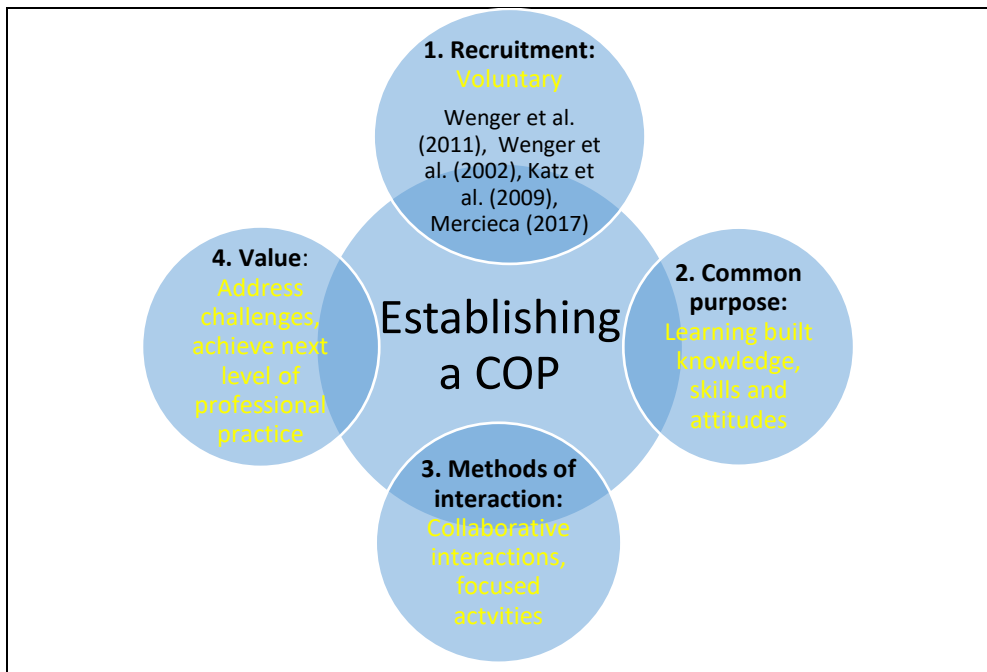


Fig 1. Features outlining origins of a COP (adapted from Katz et al., 2009; Wenger et al., 2002, 2011)

Common Purpose and Shared Learning

Common purpose articulates the intent or rationale for why individuals come together in a COP, and according to Wenger (1998) and subsequent scholars (Gonçalves, 2021; Vescio et al., 2008), the primary purpose centers on opportunities to educate, support, and encourage one another through collecting and sharing information related to questions and issues of practice. The defining goal is to cultivate, sustain, and integrate learning such that participants can leverage new knowledge to effect meaningful change in their work contexts.

Wenger (2000, p. 226) emphasizes that learning serves as the central organizing principle, and ‘the more individuals learn together, the more they create knowledge and build a sense of identity within the organisations they work in’. For educational leaders, shared learning focuses specifically on developing collaborative work cultures that enhance both leadership practice and instructional quality (Ali, 2011; Bridge, 2014; Jimenez-Silva, 2012). Through collective engagement with problems of practice, principals deepen their professional content knowledge, refine their leadership capabilities, and develop shared understandings that become embedded in enhanced organisational practice.

Methods of Interaction and Collaborative Engagement

Methods of interaction encompass the processes and structures through which COP activities unfold and determine whether participants feel comfortable engaging fully in learning opportunities. According to Wenger & Snyder (2000) and the Edmonton Regional Learning Consortium (Edmonton Regional Learning Consortium, 2016), effective interaction methods provide forums for members to assist each other with everyday work needs through authentic dialogue and shared problem-solving. Key dimensions include how participants engage in activities, seating and grouping arrangements, topic selection processes, meeting frequency, and facilitation approaches.

For principals’ COPs, interaction methods hold particular significance given sociopolitical dynamics, historical inequities, and power differentials that may influence participation patterns (Bridge, 2014). Effective interaction structures must create equitable spaces where all principals can collaborate freely, regardless of race, gender, geographic location, or school performance status. This requires careful attention to facilitation practices, power dynamics, and the creation of psychologically safe environments where vulnerability, questioning, and learning from mistakes are normalized rather than stigmatized (Serrat, 2017).

Value and Benefits of Participation

The value generated through COP participation manifests in both tangible products and intangible professional growth. Wenger et al. (2002) and Serrat (2017) identify various forms of COP value, which include artifacts such as documents, resource packs, toolkits, and protocols, as well as less tangible outcomes including acquired knowledge, developed skills, enhanced professional attitudes, and improved workplace practices. This dual emphasis on concrete outputs and professional transformation reflects COPs’ distinctive capacity to integrate product development with identity formation and practice improvement (Bridge, 2014).

Short-term value includes help with challenges, access to expertise, confidence in approaching problems, meaningful discussions with colleagues, and increased professional recognition. Long-term value encompasses personal development, new knowledge and skills, ability to contribute strategically, reusable methods and tools, professional reputation enhancement, and sense of belonging to meaningful professional communities (Buckner, 2020; Katz et al., 2009; Webber, 2016). For principals, this value manifests specifically in enhanced leadership capabilities, improved school outcomes, and sustained professional identity development as educational leaders. Table 1 below catalogues the short- and long-term benefits articulated across the literature.

Table 1. The short- and long-term value of a COP

AUTHOR	SHORT-TERM VALUE OF COP	LONG-TERM VALUE OF COP
(Wenger et al., 2002)	Sources of information	Contribute largely to the knowledge economy of the organisation
	Problem solvers	Create synergy across the organisational boundaries
	Participants coordinating efforts	Improving practices and knowledge
	Discuss new technologies with suppliers including information technology	Members develop professionally
	Prepare the organisation to respond to changes and developments	Improve processes in the organisation

	A positive sense of belonging to a group that discusses issues openly and freely	Assists organisational members to achieve ideals for organisational growth
	To develop and complement organisational structures to support operations	Finding and creating longstanding and useful solutions
	Venue for bold thinking, innovation and clear ideas	Learning beyond what is already known
		Turning lofty ideas into concrete changes in professional practice
		NLCs can speed up processes of policy reform in an organisation
(Serrat, 2017)	COP providing for shared leadership in an organisation	A vehicle to produce new knowledge
	COP serving as a capacity building tool	COP assisting in strengthening interconnections and spreading innovation across all levels in an organisation

1.2.3 Conditions Promoting COP Success

Beyond defining features, literature identifies critical conditions that enable COP sustainability and effectiveness. Katz et al. (2009) and Buckner (2020) highlight five key enablers: focus on clear purpose, attention to COP developmental stages, willingness to engage in collaborative inquiry, distributed leadership involving both facilitators and participants, and proactive administrative support. Without these enablers, (Wenger et al., 2002) caution that COPs may be ‘poorly formed, lose focus, or actually cease to exist.’

Each of these enablers plays a distinct but interconnected role in sustaining a COP over time. Buckner (2020) argues that a sustained focus on purpose is perhaps the most foundational, as it keeps activities anchored to the domain of shared interest rather than allowing gatherings to drift into unfocused exchange. Equally important is an awareness of developmental trajectory: Katz et al. (2009) note that COPs are not static structures but evolve through recognisable phases, from potential and coalescing, through active engagement and dispersed activity, to eventual transformation or completion and that facilitators who understand this arc are better positioned to respond appropriately at each stage. The enabler of collaborative inquiry goes further still, requiring members not merely to share information but to genuinely examine their practice, question assumptions, and draw on collective wisdom as a resource for growth. This kind of intellectual openness is complemented by distributed leadership, which ensures that authority and initiative are shared rather than concentrated in a single facilitator, thereby fostering broader ownership and resilience within the group. Finally, administrative support provides the structural foundation that makes sustained participation viable, offering resources, institutional legitimacy, and logistical conditions that reduce the burden on participants whose professional schedules are already demanding. Taken together, these enablers suggest that COPs do not flourish by accident; rather, their effectiveness depends on deliberate and ongoing attention to both relational and organisational conditions.

1.2.4 Social Learning Theory as Theoretical Foundation

Social learning theory, as articulated by Bandura (1977) and elaborated by Wenger (1998), provides the primary theoretical foundation for understanding COPs as learning environments. This theory posits that individuals learn by observing, modelling, and imitating the behaviors, attitudes, and emotional reactions of others, emphasizing the

fundamentally social nature of knowledge construction (Mcleod, 2016). Rather than viewing learning as individual cognitive change, social learning theory foregrounds the relational, participatory, and culturally situated dimensions of learning.

Lave & Wenger (1991) extend social learning theory through their concept of legitimate peripheral participation, describing how newcomers to communities gradually move from peripheral observation toward full participation in sociocultural practices. This trajectory of increasing participation and growing identity as community members characterizes the learning process within COPs. Principals in COPs thus learn not through transmission of decontextualized knowledge but through engagement in shared practices, negotiation of meaning with peers, and gradual development of professional identities as educational leaders capable of navigating complex organisational challenges.

Social learning theory also emphasizes how environmental and cognitive factors interact to influence learning and behaviour. For principals' COPs, this highlights the importance of creating conducive learning environments through thoughtful design of activities, equitable participation structures, effective facilitation, and the provision of opportunities for innovative experimentation. The theory suggests that learning occurs through the interplay of social interaction, individual reflection, and practical application, which is a dynamic that COPs are uniquely positioned to support.

1.2.5 Conceptual Framework: An Interpretivist Perspective

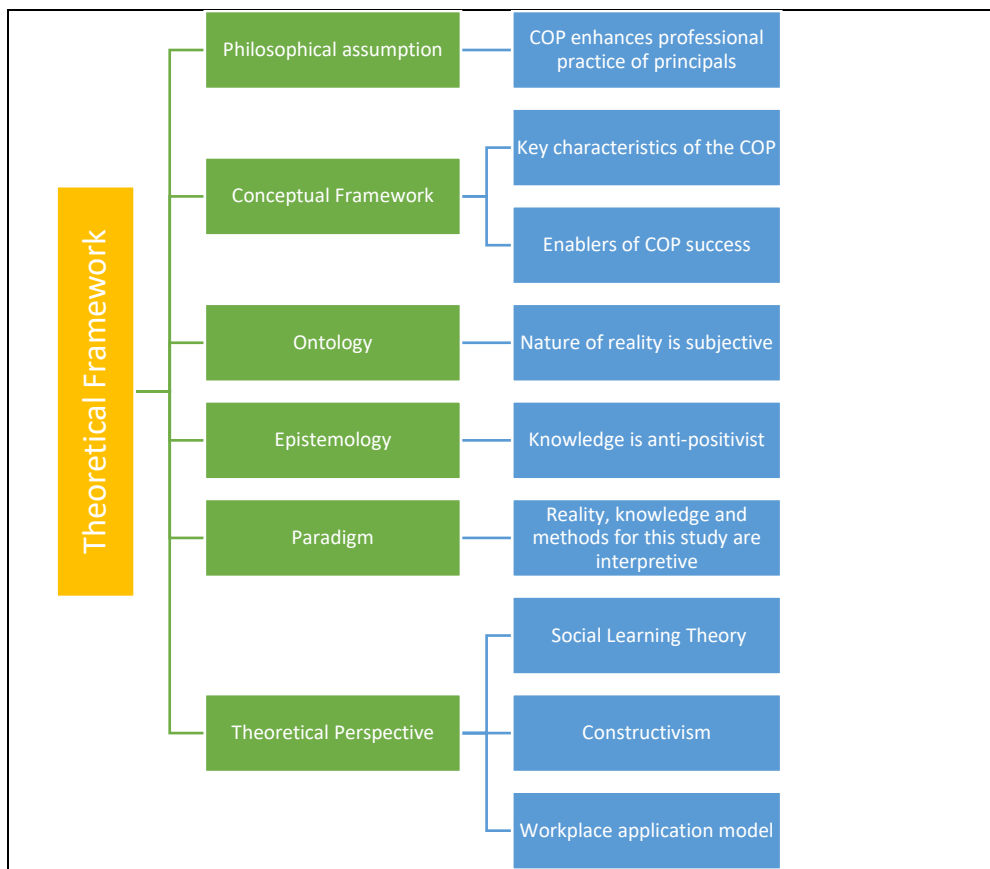


Fig 2. Theoretical framework of the study (authors design)

The conceptual framework underpinning this study is grounded in social learning theory (McLeod, 2016), complemented by elements of constructivism and a workplace integration model (see Fig 2).

This article proceeds from the philosophical conviction that communities of practice are not fixed, objectively measurable structures but socially constituted phenomena whose meaning and impact are shaped by the contexts in which they are enacted (Cohen et al., 2000). The ontological and epistemological positions set out below align with an interpretivist paradigm that foregrounds meaning-making, reflexivity, and the socially situated nature of professional knowledge (Dean, 2018). This paradigm finds its expression in the article's two organising constructs: the defining characteristics of the COP and the conditions that enable its success, both of which are treated as theoretically constituted categories rather than empirically derived variables.

Ontologically, this article treats COPs as nominally real: they exist not as objective, context-independent structures that produce uniform effects wherever they are implemented, but as socially constituted arrangements whose meaning, character, and impact are shaped by the particular histories, relationships, and institutional contexts in which they unfold (Cohen et al., 2000, 2007). This has direct implications for how the article theorises COP effectiveness. Rather than identifying universal design features that guarantee outcomes, the analysis attends to the conditions under which COP principles are likely to be meaningful, which in South Africa means acknowledging that the legacies of apartheid, patterns of under-resourcing, and the decentralisation of educational responsibility all shape what a COP can and cannot achieve. The ontological position is therefore not merely philosophical decoration; it is the reason this article treats context-responsiveness as a constitutive feature of COP design rather than an optional enhancement.

Epistemologically, the article adopts a post-positivist position, holding that knowledge about COPs, cannot be established through measurement and generalisation alone (Cohen et al., 2000), but rather by reading across bodies of scholarship, identifying convergences and tensions, and constructing arguments about how concepts relate. This is precisely what a conceptual paper does, and it is why systematic literature synthesis is an epistemologically legitimate method under these assumptions. The article does not claim to discover objective facts about how COPs work; it claims to offer a theoretically coherent account of the conditions under which they are likely to support school leadership development in contextually specific settings. This position contrasts with the positivist assumptions behind evaluation frameworks that reduce COP effectiveness to standardised outputs, which tell us very little about whether principals working in historically complex South African communities have developed the contextually appropriate leadership capabilities their schools require.

2 Method

This study follows the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) process for systematic literature reviews, as described by Page & Moher (2017), combined with a thematic narrative synthesis. A systematic search was used to make the selection of sources transparent, and a narrative synthesis was used because the aim was to build a conceptual account of how COPs support school leadership development rather than to pool empirical results. This paper aimed to synthesize classical and recent research to offer suggestions for future research in the field. As this paper was intended and executed as conceptual, the research process was operationalised by means of two research objectives, namely:

1. Research objective 1: To explore the classical and modern discourse on communities of practice in schools, with a particular focus on the transformation expected to take place

among school leaders. Following the literature search, content analysis was conducted to identify the elements of communities of practice and the authors in the field. The outcome of the content analysis has informed the second objective of this paper.

2. Research objective 2; To make recommendations regarding the continued viability of communities of practice in South African schools.

The review proceeded in four stages: search, selection, analysis and synthesis, and validation.

2.1 Search

Peer-reviewed literature was searched on EBSCOhost, Sabinet, ResearchGate and Google Scholar using the keywords and key phrases “communities of practice”, “characteristics of COP”, “enablers of COP success”, “social learning theory” and “COP in South African schools”. Searching continued until a saturation point was reached, that is, until additional sources yielded no new themes.

2.2 Selection

Following the PRISMA stages of identification, screening, eligibility and inclusion, the records retrieved were screened against the inclusion and exclusion criteria. Sources were included if they were published between 2010 and 2026, were written in English, reported scientific investigations rather than opinion, and addressed the objectives of this paper. Sources published before 2010, not written in English, or reflecting opinion were excluded. Eighteen studies met these criteria and form the reviewed set summarised in Table 2. Foundational theoretical works published before 2010, such as Lave & Wenger (1991) and Wenger (1998), were consulted to develop the literature review and conceptual framework but were not part of the reviewed set.

2.3 Analysis and Synthesis

Content analysis was conducted on the 18 studies to identify the elements of COPs each described the context in which it was conducted, and its main findings. Recurring ideas were then grouped across studies into themes, and the themes were compared to identify where studies converged, where they diverged, and how the themes related to one another. This produced the four themes and the cross-theme patterns reported in the Findings section.

2.4 Validation

The authors have many years of experience in school education and leadership. To strengthen the credibility of the synthesis, a peer from the Department of Education Leadership and a peer from the Department of Business Management were asked to review and validate the constructs and arguments.

3 Results and Discussion

This section reports the synthesis of the 18 studies, published between 2010 and 2026, that are summarised in Table 2. Four themes emerged from the analysis. These themes are not mutually exclusive; rather, they are interconnected strands that together describe how COPs function as vehicles for school leadership development. Each theme is presented below, followed by the patterns that cut across them.

3.1 Theme 1: Distributed and Collaborative Leadership

A dominant theme across the literature is the relationship between COPs and distributed leadership. Bickmore et al. (2021) found that mutual engagement, joint enterprise, and shared repertoire, i.e. Wenger's three COP dimensions, were evident in effective leadership communities and that COP membership reduced principal isolation while building capacity. Lester & Kezar (2017) demonstrated that distributing leadership within COPs requires deliberate strategies including boundary-spanning roles, trust-building routines, and shared governance protocols, and that genuine ownership among members deepens COP effectiveness. Van den Boom-Muilenburg et al. (2023) similarly found that a broad set of distributed leadership practices, carried out in interplay by both formal and informal leaders, is necessary for sustainable data-use PLCs. In the South African context, Chikoko et al. (2015) showed that effective leadership in high-poverty schools is characterised by distributed, Ubuntu-inspired relational practices, with principals leveraging social capital and collaborative cultures to offset resource constraints. Collectively, these findings suggest that COPs are most effective when leadership is shared rather than concentrated, and when structures actively counteract isolation and hierarchy.

3.2 Theme 2: Professional Identity and Leadership Capacity Building

A second theme concerns COPs as spaces in which professional identity develops alongside leadership capacity. Campbell et al. (2022) argued that the COP model provides a productive theoretical lens for understanding how teacher and school leaders develop identity, learn through participation, and influence practice, with legitimate peripheral participation being central to leadership growth. Wilson (2016) found that secondary school teachers in PLCs developed leadership identity incrementally through three evolutionary waves: formal roles, instructional expertise, and re-culturing, and that PLCs both promoted and hindered leadership depending on principal support and relational trust. Smith et al. (2019) demonstrated that a deliberately structured programme-level COP can serve as an effective framework for leadership development, with shared inquiry, peer mentoring, and collective reflection accelerating leadership competency. Muhayimana et al. (2023) further showed that COP-based leadership conversations reduced rural educational leaders' perceived isolation, increased self-efficacy, and fostered peer networking. These findings align with social learning theory's emphasis on identity formation through participation and confirm that COPs generate both tangible competency gains and deeper professional self-understanding.

3.3 Theme 3: Context-Responsiveness, Equity, and Social Justice

A third theme highlights the importance of situating COPs within their social, cultural, and political contexts. Scanlan et al. (2016) demonstrated that schools build linguistically equitable communities incrementally through leadership practices that centre language equity, and that COP structures support teachers in developing linguistically responsive practice. Cooper et al. (2010) argued that schools' leadership approaches to family engagement often reflect deficit epistemologies, and that COP structures reconceptualised through a critical lens can create more equitable, culturally sustaining partnerships. Feldman (2020) applied social practice theory to argue that PLCs in the South African post-apartheid context can support sustained improvement in teaching by addressing collective, practice-based change rather than individual behaviour. Vandeyar (2013) found that the absence of district-level policy support paradoxically catalysed COP formation among teachers, who used collaborative structures to compensate for systemic neglect. Together, these studies affirm that effective COPs must engage actively with inequity rather than treating it as

peripheral, and that context-responsiveness is not merely a design preference but a moral imperative in historically marginalised settings such as South Africa.

3.4 Theme 4: Technology-Enhanced and Digitally Mediated COPs

A fourth theme emerging from the literature concerns the growing role of digital tools and technology in shaping COP design and reach. Ghamrawi et al. (2024) found that technology-mediated professional learning and AI-enhanced tools are reshaping teacher professional development, with digitally facilitated COPs and leadership networks significantly improving teacher competencies and readiness for AI-integrated pedagogy. Mahlo & Waghid (2026) demonstrated that deliberately cultivated COPs are effective vehicles for developing primary school educators' Technological Pedagogical Content Knowledge (TPACK), with collaborative, contextualised professional learning within COPs building sustainable teacher capacity in technology-rich environments. Edamo (2026) similarly found that integrating digital learning environments and technology-enhanced professional development frameworks enhanced teacher competency and learner engagement through structured digital collaboration. These findings signal a significant evolution in COP design: digital mediation extends geographic reach, enables asynchronous participation, and introduces new forms of knowledge-sharing, while also raising new questions about equity of access and the quality of relational trust in virtual communities. School leaders must be prepared to both participate in and facilitate technology-mediated COPs. Table 2 below summarises the 18 articles, which were analysed to produce the above themes.

Table 2. Summary of main findings and key authors

Source	Main Findings	Context/Purpose of Study	Key Authors Cited
Bickmore et al. (2021)	School leaders' participation in CoPs positively influences school improvement outcomes. Mutual engagement, joint enterprise, and shared repertoire (Wenger's three CoP dimensions) were evident in effective leadership communities. CoP membership reduced principal isolation and built leadership capacity.	Examined how school principals and other leaders form and participate in Communities of Practice and how this contributes to school improvement. Drawn from Wenger's CoP framework applied to the leadership context.	Wenger (1998); Leithwood et al.; Fullan; Spillane; Gronn
Braun et al. (2011)	A framework of core school leader practices emerged from two focus groups. Specific preparation practices (standards-based curriculum, shared instructional leadership, high-quality field experience) are critical to effective leadership. Findings support inclusion of targeted preparation practices in leader preparation programs.	Qualitative second phase of a mixed-method study using focus groups (N=8, N=7) to explore relationships among leader preparation practices and school/student outcomes. Set in the K-8 US school context.	Leithwood, Seashore Louis, Anderson & Wahlstrom (2004); Waters, Marzano & McNulty (2003); Darling-Hammond (2010); Levine (2005); Elmore (1999, 2006); Murphy (1999)
Brouwer et al. (2012)	Communities of practice do occur in school workplaces, but only to a moderate extent. CoPs were found to be related	Explored the extent to which CoPs occur in secondary school workplaces and examined	Wenger (1998); Hargreaves & Dawe (1990); Vescio et al.

	to four of the five diversity attributes investigated (gender, age, subject, experience). Both quantitative and qualitative evidence confirmed collaborative norms, though embedding CoP culture deeply remained a challenge.	the relationship between CoP occurrence and diversity in teacher team composition. Used questionnaires and observation instruments across seven teacher teams in the Netherlands.	(2008); Bolam et al. (2005); Levine & Marcus (2010); Westheimer (1999)
Campbell et al. (2022)	The Community of Practice model provides a productive theoretical lens for understanding how teacher leaders develop identity, learn through participation, and influence practice. Legitimate peripheral participation and identity formation are central to teacher leadership growth within CoPs.	Theoretical paper proposing and applying Wenger's Community of Practice framework as a conceptual scaffold for teacher leadership. Critiques traditional role-based notions of teacher leadership and offers a social learning theory alternative.	Wenger (1998); Lave & Wenger (1991); Spillane; Darling-Hammond
Chikoko et al. (2015)	Effective leadership in high-poverty South African schools is characterised by distributed leadership, community partnership, Ubuntu-inspired relational practices, and unwavering commitment to learner success. Principals leveraged social capital and collaborative cultures to offset severe resource constraints.	Qualitative study investigating effective school leadership practices in schools situated in areas of multiple deprivation (poverty, unemployment, crime) in South Africa. Aimed to uncover context-sensitive leadership strategies.	Leithwood; Gronn; Hallinger; Naicker; Msila (Ubuntu leadership); South African DBE policy documents
Edamo (2026)	Integrating smart/digital learning environments and technology-enhanced professional development frameworks in educational settings. Findings point to enhanced teacher competency and improved learner engagement through structured digital collaboration and community-based professional learning approaches.	Investigates technology integration and smart learning environments in an educational context, likely drawing on Ethiopian or Sub-Saharan African schooling experiences. Addresses teacher professional development within digitally mediated communities.	Mishra & Koehler (TPACK); Wenger (CoP); various educational technology and smart learning environment scholars
Feldman (2020)	Social practice theory (Schatzki's understandings, rules and tele-affectivity) provides a productive framework for conceptualising PLCs as sites of social learning. PLCs can support sustained improvement in teaching by addressing collective, practice-based change rather than individual behaviour. The DBE's PLC initiative in South Africa is analysed using this lens.	Theoretical/conceptual article examining the potential of PLCs in the South African post-apartheid schooling context using practice theory. Responds to the DBE's 2015 guideline establishing PLCs in all South African schools.	Schatzki (1996); Kemmis (2009); Green (2009); Darling-Hammond (2013); Mcluaghin & Talbert (2006); Stoll, Bolam et al. (2006); DBE Republic of South Africa (2015)

Ghamrawi et al. (2024)	Technology-mediated professional learning and AI-enhanced tools are reshaping teacher professional development in schools. Findings indicate that digitally facilitated CoPs and leadership networks significantly improve teacher competencies, collaboration, and readiness for AI-integrated pedagogy. School leaders play a pivotal role in scaffolding digital transformation.	Investigates technology-enhanced professional learning and/or AI integration in school contexts, drawing on Lebanese/Middle Eastern school settings. Published in a Springer journal focused on educational technology. Likely explores digital communities of practice or AI-assisted professional development.	Wenger (CoP); various AI in education scholars; Mishra & Koehler (TPACK); Fullan; transformational leadership theorists
Karagianni et al. (2023)	A participatory, empowerment-focused leadership model, rather than a hierarchical model, has a catalytic impact on teacher engagement, joint commitment, cooperation, innovative attitude, job satisfaction, and student achievement. Distributed leadership and teacher self-determination are essential for high-performing schools. ICTs amplify empowerment when combined with transformational leadership.	Literature review examining the mechanisms through which school principals, acting as transformational and distributed leaders, empower teachers to improve organisational outcomes and ICT integration. Greek educational system is the contextual backdrop.	Distributed leadership scholars; transformational leadership theorists; Spreitzer (teacher empowerment); Bandura (self-efficacy); OECD reports
Lester & Kezar (2017)	Distributing leadership within CoPs requires deliberate strategies, including boundary-spanning roles, trust-building routines, and shared governance protocols. Key challenges include power imbalances, member resistance, and lack of time. Distributed leadership deepens CoP effectiveness when members feel genuine ownership.	Examined how distributed leadership can be enacted within Communities of Practice. Explored both practical strategies and organisational/human challenges encountered when sharing leadership across CoP members.	Spillane (2006) distributed leadership; Wenger (1998); Gronn (2002); Leithwood et al.; Harris (distributed leadership)
Mahlo & Waghid (2026)	Deliberately cultivated Communities of Practice are effective vehicles for developing primary school educators' Technological Pedagogical Content Knowledge (TPACK). Collaborative, contextualised professional learning within CoPs enhances technology integration in classrooms and builds sustainable teacher capacity.	Investigates how CoPs can be structured to develop TPACK among primary school educators in South Africa. Bridges CoP theory with the TPACK framework to address teacher professional development in technology-rich environments.	Mishra & Koehler (2006) TPACK; Shulman (1987) PCK; Wenger (1998) CoP; Lave & Wenger (1991); South African DBE

Muhayimana et al. (2023)	CoP-based leadership conversations (LCs) reduced rural educational leaders' perceived isolation, increased self-efficacy, and fostered peer networking. Participants valued collaborative professional conversations and reflective engagement with the Iowa Standards for School Leaders (ISSL). Rural leaders especially benefited from contextually relevant, geographically distributed capacity-building.	Assessed rural educational leaders' perceptions of capacity-building Leadership Conversations (LCs) held as Communities of Practice across Iowa, USA. Part of the larger Leading and Learning with Character Project (LLCP, 2019–2022).	Day et al. (2016); Grissom et al. (2021); du Plessis (2017); Klocko & Justis (2019); Bickmore et al. (2021); Lambert & Bouchamma (2021); Lavalley (2018); Klar & Huggins (2020)
Scanlan et al. (2016)	Schools build linguistically equitable communities incrementally ("poco a poco" — little by little). Leadership practices that centre language equity, including dual-language programming, culturally sustaining pedagogy, and collaborative professional learning, gradually transform school culture. CoP structures support teachers in developing linguistically responsive practice.	Examined how school leadership incrementally constructs linguistically equitable learning communities in schools serving English Language Learners and diverse language populations in the USA. Longitudinal study drawing on CoP and equity leadership frameworks.	Cummins (language acquisition); Wenger (CoP); Ladson-Billings; Scanlan & López (equity-oriented leadership); Fullan (change leadership)
Smith et al. (2019)	A deliberately structured program-level Community of Practice can serve as an effective framework for leadership development across educational and professional settings. Shared inquiry, peer mentoring, and collective reflection within the CoP accelerated leadership competency development. Key design principles include voluntary participation, iterative learning cycles, and boundary objects.	Describes the design, implementation, and outcomes of a programme CoP specifically created to support leadership development. Offers a CoP-based model that bridges theory and practice for aspiring and practising leaders.	Wenger (1998); Lave & Wenger (1991); Spillane; Day; leadership development theorists including Avolio & Gardner
Van den Boom-Muilenburg et al. (2023)	Sustaining data use PLCs (data teams) in schools is difficult at both ostensive and performative levels. Schools differed in the form of sustainability achieved. A broad set of distributed leadership practices — organising meetings, active participation, deep content knowledge, providing feedback — carried out in interplay by both formal and informal	Mixed-methods case study (observations, social network questionnaire, school documents) across three secondary schools in the Netherlands. Investigated what sustainable data use PLCs and associated leadership practices look like post-intervention.	Spillane (2006) distributed leadership; Fullan (2016); Harris & Jones (2010); Poortman & Schildkamp (2016); Feldman (2020); Marsh & Farrell (2015); Lee & Louis (2019)

	leaders are necessary for sustainability.		
Vandeyar (2013)	Five key findings: (1) The national e-Education policy existed as an invisible policy in schools; (2) Lack of district-level policy support; (3) Conflicting ideas about collaborative support; (4) Teachers' beliefs, attitudes, and agency drove ICT practice as de facto policy; (5) Absence of district support paradoxically catalysed CoP formation among teachers.	Case study using backward mapping principles to explore how teachers appropriate ICT policy in South African schools. Employed qualitative methods (classroom observations, interviews, document analysis) with grounded theory analysis.	Fullan; Wenger (CoP); South African DBE e-Education Policy (2004); Sabatier (policy implementation); Berman & McLaughlin
Wilson (2016)	Secondary teachers in PLCs developed leadership identity incrementally through three evolutionary waves: formal roles, instructional expertise, and re-culturing. PLCs both promoted and hindered teacher leadership depending on principal support, shared governance, and relational trust. Teachers valued PLCs for reducing isolation and increasing professional and social capital.	Qualitative online survey study examining the perceptions and lived experiences of eight high school teachers involved in a PLC. Used Hord's (1997, 2004) five-dimensional PLC framework as the conceptual foundation. Conducted in a secondary school in the USA.	Hord (1997, 2004); DuFour & Fullan (2013); Astuto et al. (1993); Spillane & Diamond (2007); Silva, Gimbert & Nolan (2000); York-Barr & Duke (2004); Darling-Hammond (1988)
Cooper et al. (2010)	Schools' leadership approaches to family engagement often reflect deficit epistemologies that marginalise diverse families. Community of Practice structures, when reconceptualised through a critical lens, can create more equitable, culturally sustaining family-school partnerships. Transformative leadership that honours diverse knowledge systems is essential.	Examined school leadership in the context of engaging diverse (racially, culturally, linguistically diverse) families. Applied critical epistemology alongside CoP theory to analyse how knowledge is constructed and who is included in school-community partnerships.	Wenger (1998); Lave & Wenger (1991); Ladson-Billings (critical race theory); Moll et al. (funds of knowledge); Delgado Bernal

3.5 Patterns Across the Themes

Read together, the four themes point to three patterns. First, shared leadership is the common mechanism across the themes. The distributed practices described under Theme 1 are also the conditions under which professional identity develops (Theme 2) and under which equity-oriented practice takes hold (Theme 3): Wilson (2016) found that leadership identity grew where principals supported it and relational trust existed, and Scanlan et al. (2016) traced equitable communities to deliberate leadership practices. Second, the benefits of COPs are conditional rather than automatic. The same structures promoted or hindered leadership depending on support and trust (Wilson, 2016), required deliberate strategies before leadership was shared (Lester & Kezar, 2017), and, where district support was absent, formed as a compensating response rather than by design (Vandeyar, 2013). Digital mediation adds

a further condition, as virtual communities raise questions of access and relational trust (Theme 4). Third, reducing isolation is the most consistently reported outcome, appearing in studies of school leaders (Bickmore et al., 2021) and rural educational leaders (Muhayimana et al., 2023), while digital mediation is presented as a way of extending this reach to geographically dispersed leaders (Theme 4).

The synthesis also shows where the evidence is thin. Several of the reviewed studies concern teachers or teacher leaders rather than principals (e.g. Wilson, 2016; Edamo, 2026; Mahlo & Waghid, 2026), so claims about principals' learning rest partly on inference from adjacent groups. Only three of the studies were conducted in South Africa (Chikoko et al., 2015; Feldman, 2020; Vandeyar, 2013), and none of these examines a principals' COP directly. These gaps inform the limitations and the directions for future research discussed below.

3.6 Theoretical Implications and Discussion

3.6.1 *COPs as Alternatives to Transmission Models*

The theoretical framework established through this literature synthesis positions COPs as fundamental alternatives to transmission-based professional development models. Traditional approaches typically embody technical-rational assumptions that knowledge exists independently of knowers, can be packaged into discrete units, and transferred efficiently through expert-led instruction.

In contrast, COPs embody social constructivist assumptions that knowledge emerges through participation in social practice, is inherently situated in contexts of use, and develops through negotiation of meaning among practitioners. This theoretical orientation, grounded in interpretivist paradigms and social learning theory, fundamentally reframes professional development from transmission toward participation, from individual toward collective, and from decontextualised toward situated.

3.6.2 *Integration of Individual and Collective Learning*

A distinctive theoretical contribution of the COP framework involves its integration of individual professional growth with collective knowledge construction. Unlike models emphasising either individual competency development or organisational learning exclusively, COPs theorise learning as simultaneously personal and social. Principals develop individual leadership capabilities while participating in collective sense-making processes that generate shared understandings and practices.

This integration reflects Wenger's (1998) conceptualisation of learning as involving both participation and reification, engagement in shared activities and creation of artefacts that give form to collective understandings. Through participation, principals negotiate meanings, develop shared practices, and construct professional identities. Through reification, they produce tangible outputs, such as protocols, resources, and plans that embody and communicate collective learning. The dialectic between participation and reification enables COPs to support both immediate problem-solving and long-term professional identity development.

3.6.3 *Context-Responsiveness and Situated Learning*

The theoretical framework emphasizes how COPs enable context-responsive professional learning aligned with situated learning theory. Rather than treating leadership knowledge as

generic and universally applicable, COPs position learning within the specific sociocultural, political, and organisational contexts where principals work. This situatedness allows for examination of challenges unique to particular school contexts, development of solutions responsive to local conditions, and construction of leadership identities informed by cultural contexts and community values.

For principals working in contexts marked by historical inequities, resource constraints, and diverse community needs, context-responsiveness represents a crucial theoretical advantage. COPs provide structures wherein principals can collaboratively address challenges emerging from their specific contexts rather than attempting to implement decontextualized best practices developed elsewhere. The findings under Theme 3 support this: the studies conducted in South Africa show COPs and related collaborative structures responding to local conditions such as poverty and limited district support (Chikoko et al., 2015; Vandeyar, 2013).

3.7 Limitations and Counterarguments

This article has several limitations. First, as a conceptual paper based on a synthesis of 18 studies, it offers theoretical propositions rather than empirical evidence of effect, and its claims about what COPs can achieve for principals should be read as propositions to be tested. Second, although the search followed the PRISMA stages, the use of Google Scholar and ResearchGate alongside bibliographic databases, the restriction to English-language sources, and the saturation-based stopping point mean that relevant studies may have been missed. Third, as the cross-theme patterns show, much of the reviewed evidence concerns teachers rather than principals and comes from outside South Africa, which limits how far the findings can be transferred to South African principals.

The case for COPs also faces counterarguments. Voluntary participation, treated in the literature as a core feature, may leave out the principals who most need support. COPs can reproduce the hierarchies and power differentials they are meant to flatten if facilitation is weak (Bridge, 2014; Serrat, 2017), and the finding that COPs can both promote and hinder leadership Wilson (2016) cautions against treating them as inherently beneficial. Sustained COPs also demand time, facilitation and administrative support (Buckner, 2020; Katz et al., 2009), which under-resourced schools and districts may struggle to provide; in such settings, structured formal training may remain a necessary complement to COPs rather than something they replace. Finally, an interpretivist account of COP value is harder to translate into the accountability measures that education departments use, which may limit policy uptake. These counterarguments do not overturn the case for COPs, but they suggest that COPs are best understood as one component of leadership development whose value depends on design and context.

3.8 Recommendations and Implications

3.8.1 *Implications for Policy and Practice*

The theoretical framework developed through this literature synthesis carries significant implications for educational policy and leadership development practice. First, educational authorities should recognize COPs not as supplementary add-ons to conventional training but as theoretically grounded alternatives deserving systematic investment and support. This requires shifting resources from episodic workshops and certification programs toward sustained COP infrastructure including facilitation, time allocation, and administrative support.

Second, COP design should intentionally incorporate the features and enabling conditions identified in this article. Policy frameworks should provide guidance on these design principles while allowing flexibility for context-responsive implementation.

Third, evaluation of COP effectiveness should align with interpretivist epistemologies and social learning theory rather than relying exclusively on positivist metrics. Assessment frameworks should examine both collective outputs and individual professional growth, employ qualitative methods capturing principals' perspectives and experiences, and recognize the situated nature of COP learning rather than seeking decontextualized generalizations.

3.8.2 *Directions for Future Research*

This conceptual analysis identifies several directions for future research. First, empirical studies should examine how the theoretical principles articulated here manifest in actual COP implementation, particularly attending to variations across different cultural, political, and organisational contexts. Comparative research across educational systems could illuminate which theoretical principles remain consistent and which require context-specific adaptation.

Second, longitudinal research could investigate COP developmental trajectories, examining how communities evolve through stages and what factors enable sustained effectiveness over time. Such research would provide empirical grounding for theoretical claims about COP lifecycle and sustainability conditions.

Third, research could explore tensions between voluntary participation principles and equity concerns, particularly in contexts where principals most needing support may be least likely to participate voluntarily. Theoretical and empirical work addressing how to honour both voluntary engagement and equity imperatives would advance COP scholarship significantly.

Finally, research could examine how COPs integrate with other professional development approaches and school improvement initiatives. Rather than viewing COPs in isolation, research could investigate how they function within broader professional learning ecosystems and what complementary supports enhance their effectiveness.

4 Conclusion

This conceptual article set out to examine how communities of practice may contribute to school leadership development. Its contribution is threefold. First, it brings the defining features of COPs (voluntary recruitment, common purpose, collaborative interaction and value) together with the conditions for their success (focused purpose, developmental awareness, collaborative inquiry, distributed leadership and administrative support) in a single framework grounded in social learning theory. Second, the synthesis of studies published between 2010 and 2026 shows that shared leadership is the common mechanism through which COPs support leaders, that their benefits are conditional on trust, support and context, and that reducing isolation is their most consistently reported outcome. Third, by reading this evidence through an interpretivist lens and against the South African context, the article positions context-responsiveness as a constitutive feature of COP design rather than an optional enhancement and shows how little of the evidence concerns principals' COPs in South Africa.

For policy and practice, this means treating COPs as a sustained component of leadership development, designed around the features and conditions identified here and evaluated in ways that capture both collective outputs and individual growth. Empirical research on principals' COPs in South African settings is now needed to test the propositions this article advances.

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