Professional learning communities

Impact on pupils	Impact on teachers	Strength of evidence
Promising	Mixed	Moderate

What is it?

A Professional Learning Community (PLC) is a structured and sustained form of collaborative professional learning in which teachers work together to refine their practice and, in turn, support pupil outcomes. At its heart, a PLC brings educators into regular, reflective dialogue, grounded in evidence, classroom experience, and a shared sense of responsibility for learning.

PLCs can look different in practice. Some are school based, with colleagues meeting regularly to explore teaching challenges, analyse pupil work, or trial new approaches within a familiar context. Others are online, connecting teachers across schools and regions through forums, video calls, or shared platforms. These networks can provide educators with wider perspectives and access to expertise.

Key findings

Impact on teachers

Research suggests that PLCs may offer a range of benefits for teachers, though the strength of evidence across the reviews varies. Reported teacher outcomes include:

- **Improved knowledge and skills:** Teachers often report deeper subject understanding and stronger pedagogical strategies when PLCs focus on practical classroom challenges.
- **Changes in practice:** Collaborative inquiry can support the uptake of new approaches, particularly when dialogue is sustained and linked to evidence.
- **Motivation and efficacy:** Some reviews report increases in teacher confidence, motivation, and professional self-belief, which appear linked to the sense of shared responsibility within PLCs.
- **Belonging and support:** Teachers may experience stronger professional identity and collegial trust when PLCs create inclusive, respectful spaces for dialogue.

- **Lack of alignment:** Tensions or competitiveness within learning communities, increased workload, or reduced autonomy are potential risks, particularly where participation is mandated or poorly aligned with teachers' own goals.

Both the potential benefits and risks of this approach suggest that design and facilitation may play a crucial role in whether and how PLCs impact teacher outcomes.

Impact on pupils

The evidence on how PLCs affect pupils is mixed. A substantial number of reviews focus on teacher outcomes, with pupil learning often inferred rather than measured directly. Findings suggest:

- **Modest academic gains:** Some reviews report small improvements in attainment particularly in Maths and English when collaboration is tightly linked to performance goals. However, other reviews report no measurable effect on pupil outcomes, underlining the need for caution in assuming direct impact.
- **Digital spillover effects:** In cases where PLCs used online networks, teachers reported greater classroom use of digital tools. This was sometimes associated with gains in pupils' ICT skills, collaboration, and communication, though evidence is drawn from small-scale studies.

While PLCs may contribute indirectly to pupil progress through stronger teaching practice, the evidence base on direct and sustained impact on pupils remains limited.

How effective is the approach?

The evidence on the impact of PLCs is mixed. Reported benefits for teachers are clearer than those for pupils, though even here the translation of professional learning into classroom practice is not always guaranteed.

For teachers, reviews often point to gains in knowledge, collaboration, and confidence. Yet these do not always translate into sustained changes in teaching practice, reminding us that impact cannot be taken for granted. The way a PLC is designed also matters. When groups are teacher-led, participatory, and built from the bottom up, they tend to foster deeper engagement than those that feel imposed or overly directive.

Leadership support plays a pivotal role in determining whether PLCs take root and are effective. Where leaders create time, build trust, and nurture a shared sense of purpose, collaboration is more likely to flourish and endure.

Despite these positive signs, gaps in the evidence remain. Few reviews track long-term or causal impact, and questions of cost-effectiveness are rarely explored. Much of the available evidence is descriptive, often based on self-report or drawn from small-scale contexts.

Taken together, PLCs are a promising form of professional learning, but their success depends heavily on the quality of design, the context in which they are introduced, and the strength of leadership support.

How to implement it well

Behaviours

The effectiveness of PLCs depends on the professional behaviours that shape how teachers and leaders engage. Evidence shows that PLCs are not casual conversations or short-term projects, but require sustained commitment, clear goals, and structured collaboration that promotes inquiry and reflection. They are best understood as a flexible approach to professional learning, rooted in trust, accountability, and shared exploration.

The following behaviours appear important:

- **Inquiry mindset:** PLCs are most valuable when teachers bring curiosity and a willingness to evaluate ideas, rather than treating them as compliance.
- **Shared responsibility:** Collective ownership of goals and mutual accountability encourage deeper follow-through than individually focused activity.
- **Dialogue with challenge:** High-functioning PLCs allow for constructive disagreement as well as affirmation, enabling reflection that is both evidence-informed and respectful.
- **Leadership modelling:** When leaders participate as learners and model openness, they legitimise the process and create a cultural tone that supports collaboration.

These behaviours suggest that PLCs are most effective when both teachers and leaders embrace inquiry, responsibility, and openness within a culture of trust.

Contextual factors

The impact of PLCs often depends on the wider environment in which they operate. At their best, they can create a culture where professional learning is continuous, embedded in daily practice, and linked to improved outcomes for both teachers and pupils.

Phase differences are important. In primary schools, PLCs are typically smaller, more informal, and often cross-curricular. Collaboration may centre on whole-child development, general pedagogy, and pastoral care, often woven into everyday planning. Leadership can come from senior leaders, phase coordinators, or class teachers. In secondary schools, PLCs are usually subject-specific and more formally structured, with a focus on curriculum alignment, subject knowledge, and assessment. They require more deliberate scheduling, and collaboration often stays within departments unless cross-subject links are actively fostered. Leadership here tends to sit with heads of department, subject leads, or key stage coordinators. Recognising these differences helps leaders tailor PLCs to their setting so they remain practical and sustainable.

Several wider factors also shape effectiveness:

- **School culture:** Trust, openness, and shared learning provide the psychological safety teachers need to reflect honestly and take risks.
- **Resourcing:** Dedicated time, cover, and materials signal that PLCs are valued and integral, rather than additional and separate.
- **Alignment:** Linking PLCs to school improvement plans, curriculum goals, or wider reforms enhances coherence and impact.

- **Staff stability:** High turnover or recruitment challenges can weaken continuity and momentum.
- **Clarity:** A shared understanding of scope and goals helps prevent drift and keeps collaboration focused.

PLCs are most likely to have impact when they are well resourced, aligned with school priorities, and supported by a culture of trust and stability.

Structured but flexible

Reviews report that PLCs work best when supported by purposeful structures while allowing room for adaptation. Key considerations include:

- **Light-touch but defined frameworks:** Tools such as inquiry cycles or meeting protocols can help PLCs stay focused without prescribing every detail.
- **Adaptive facilitation:** Skilled facilitators appear important in adjusting support as group needs evolve, knowing when to guide and when to step back.
- **Locally relevant inquiries:** PLCs may be more meaningful when teachers choose problems of practice that connect directly to their own context.
- **Time for growth:** PLCs often need sustained periods to build trust, rhythm, and impact. Early uncertainty does not necessarily indicate failure.

Structures may also differ by phase: in primary schools, collaboration often spans across subjects, while in secondary settings, structures are often tied to departments and subject-specific agendas.

Barriers to effective implementation

Even when well intentioned, PLCs may struggle to gain traction if key risks are not addressed. Common barriers include:

- **Initiative overload:** When PLCs are added to a crowded agenda, they risk becoming tokenistic or surface-level rather than developmental.
- **Lack of clarity and challenge:** Vague goals, over-focus on organisation, or avoidance of professional challenge can reduce PLCs to routine meetings without real impact.
- **Instability and reliance on individuals:** High turnover, irregular attendance, or dependence on a single facilitator may weaken continuity and sustainability.
- **Weak alignment with strategy and evidence:** PLCs disconnected from school priorities, research, or external expertise often struggle to influence wider practice.
- **Structural constraints:** Timetabling, workload, and capacity gaps (especially in secondary schools or cross-school networks) can limit depth and consistency.

PLCs appear most vulnerable when they lack purpose, continuity, or alignment with wider systems. Sustained design and leadership support are reported necessary to guard against these risks.

Other considerations

Beyond core implementation, several wider issues may shape how PLCs are experienced and sustained:

- **Emotional demands of collaboration:** Inquiry into teaching can feel exposing. Skilled facilitation and psychological safety are important if teachers are to share challenges openly.
- **Equity of participation:** Hierarchies of role, experience, or confidence may affect whose voices are heard. Inclusive practices can help ensure all contributions are valued.
- **Unintended benefits:** PLCs sometimes generate ripple effects, such as peer mentoring, leadership growth, or improved morale. These may be worth recognising alongside core goals.
- **Adaptability across contexts:** PLCs can look quite different in schools of varying sizes, or in primary and secondary schools. Flexibility in design appears to be a strength rather than a weakness.
- **Conceptual variation:** Definitions of PLCs vary across studies, which makes comparison difficult. Leaders may therefore need to clarify purpose and scope locally.

These considerations suggest that PLCs can influence professional culture in diverse ways, but outcomes are shaped by how identity, equity, and local context are managed.

Summary

Professional Learning Communities (PLCs) offer consistent benefits for teachers, particularly in developing knowledge, collaboration, and confidence. The evidence on pupil outcomes is less secure: some studies suggest modest gains, while others report little measurable impact.

Their impact seems strongest when PLCs are inquiry-driven, well-facilitated, and clearly aligned with instructional or school priorities. Success also depends on conditions such as time, trust, shared purpose, and visible leadership support. Phase differences are evident: secondary PLCs tend to have most impact when subject-specific and networked, while primary PLCs may face structural and curricular challenges.

Reviews suggest that poorly designed PLCs risk becoming tokenistic or adding to workload without real impact. Overall, evidence included in the reviews yield mixed results in terms of PLCs' impact on both teacher and student outcomes (7, 8, 9). More robust and long-term evidence is needed to clarify how they can best contribute to sustained improvements in teaching and learning.

When citing this strand, please use the following reference:

National Institute of Teaching (2026). NIoT Evidence Toolkit: Professional learning communities strand

References

	Review	Years of research	Focus	# studies	Countries	Impact on pupils	Impact on teachers	Reporting quality
1	Brown et al. (2024) How educational leaders can maximise the social capital benefits of inter-school networks: findings from a systematic review	2010-2023	CPD only	111	Australia, Canada, USA, England, Israel, Netherlands, New Zealand, Singapore, South Africa, Spain,	Not reported	Positive	Medium
2	Galvin & Greenhow (2020) Educational Networking: A Novel Discipline for Improved K-12 Learning Based on Social Networks	2004-2019	CPD only	56	Unclear	Mixed	Mixed	Medium
3	Ismail et al (2020) Professional Learning Communities in Malaysian Schools: A Contemporary Literature Review	2009-2018	CPD only	35	Malaysia	Not reported	Mixed	Medium
4	Jin et al. (2023) Technological affordances in teachers' online professional learning communities: A systematic review	2013-2023	CPD only	28	Australia, China, Indonesia, USA	Not reported	Mixed	Excellent
5	Lee et al. (2020) A Sociological View on Designing a Sustainable Online Community for K–12 Teachers: A Systematic Review	1990-2020	ITE & CPD	43	Australia, Brazil, China, Dominican Republic, Italy, Kenya, New Zealand, South Korea, Spain, Sweden,	Not reported	Mixed	High

					Türkiye, UK, USA			
6	Nguyen et al. (2024) A review of the empirical research literature on PLCs for teachers in the Global South: evidence, implications, and directions	2000-2021	CPD only	70	Bangladesh, Brazil, China, India, Iran, Malaysia, Pakistan, South Africa, Thailand, Türkiye	Not reported	Positive	Medium
7	Sims, S et al. (2021). What Are the Characteristics of Effective Teacher Professional Development? A Systematic Review and Meta-Analysis.	2002-2020	CPD only	119 (not all PLCs)	Australia, Canada, Italy, Netherlands, UK, USA	Positive	Mixed	Excellent
8	Vangrieken (2017) Teacher communities as a context for professional development: A systematic review	1990-2014	CPD only	40	Australia, Canada, China, England, Finland, Germany, Hong Kong, India, Ireland, Israel, Japan, Malta, Norway, South Africa, Taiwan, Thailand, USA	Positive	Mixed	Medium
9	Warmoes et al. (2025) Exploring learning outcomes: the impact of professional learning networks on members, schools, and students	2003-2024	ITE & CPD	21	Australia, Belgium, England, Thailand, UK, USA	Mixed	Positive	High

10	Burgess et al. (2024) Communities of secondary science teachers: a systematic review	2010–2023.	CPD only	28	Australia, Bangladesh, Brazil, China, Germany, Philippines, South Africa, Taiwan, USA	Positive	Mixed	Medium
11	Castillo et al. (2024) A Qualitative Synthesis of Research on Professional Learning for Multi-Tiered Systems of Support	2002-2021	CPD only	46	USA	Not reported	Mixed	Medium

Review citations

Brown, C., Luzmore, R., O'Donovan, R., Ji, G., & Patnaik, S. (2024). How educational leaders can maximise the social capital benefits of inter-school networks: findings from a systematic review. *International Journal of Educational Management*, *38*(1), 213–264. https://doi.org/10.1108/ijem-09-2023-0447

Burgess, R., Waters, K., & Prieto-Rodriguez, E. (2024). Communities of secondary science teachers: a systematic review. *International Journal of Science Education*, 1–23. https://doi.org/10.1080/09500693.2024.2423967

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Galvin, S., & Greenhow, C. (2020). Educational Networking: A Novel Discipline for Improved K-12 Learning Based on Social Networks. In A. Peña-Ayala (Ed.), *Lecture Notes in Social Networks. Educational Networking* (pp. 3–41). Springer International Publishing. https://doi.org/10.1007/978-3-030-29973-6_1

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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*. https://eric.ed.gov/?id=ed615914

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