



What works in professional development?

A short review of reviews (2026)

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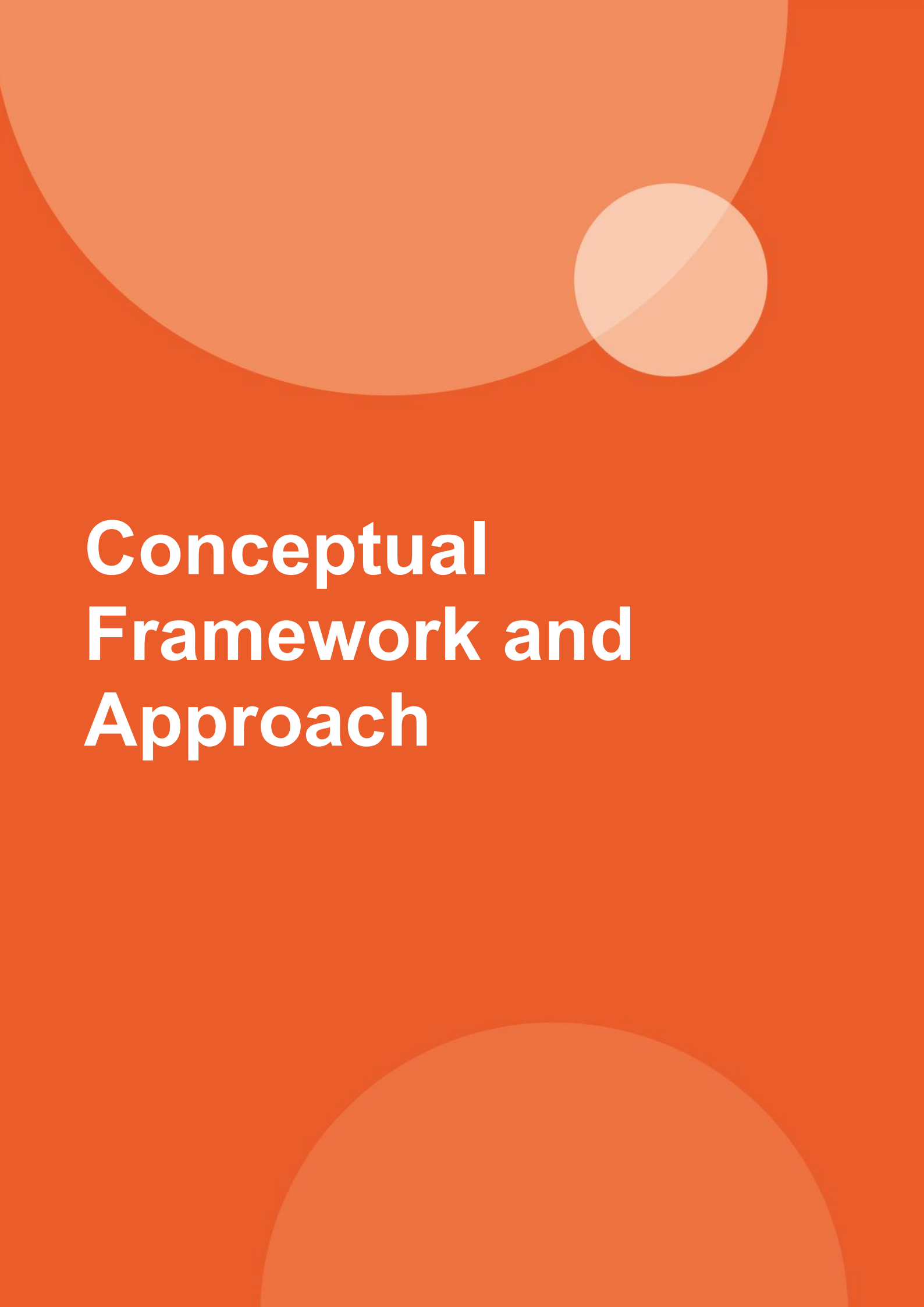
Introduction

This briefing paper presents an evidence-based synthesis of effective Professional Development design and implementation. Drawing on an 'organic' review of recent research reviews from diverse sectors - including education, healthcare, policing, and the civil service - this report aims to identify cross-sector principles that drive genuine skill acquisition and behavioral change.



Table of Contents

Introduction	2
Evidence included in this briefing	6
The Core Principles of Effective Professional Development	7
1.1 Moving from 'Forms' to 'Mechanisms'	8
1.2 The IGTP Framework	8
1.3 Consensus Features of High-Quality Professional Development	10
The Core Principles of Effective Professional Development	11
2.1 Coaching and Mentoring	12
2.2 Collaborative and Peer Learning	14
2.3 Remote and Blended Learning	18
2.4 Simulation and Role Play	19
2.5 What Does NOT Work?	21
Implementation and Leadership	24
3.1 Organisational Alignment	25
3.2 Leadership Support	25
Competency and Professional Development Frameworks	27
Limitations of Evidence Base	30
Recommendations for Future Research and Evaluation	32
Recommendations for UPEN	34
Adopt an Evidence-Based Framework for Professional Development	34
Prioritise Coaching and Mentoring	34
Structure EDI Interventions to Provide 'Conduits' for Engagement	35
Implement Longitudinal Leadership Development	36
Use Blended Learning to Maximise Accessibility and Efficacy	36
References	37
Included reviews of research and synthesis	40
Summary of Common Professional Development Delivery Methods	42

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Conceptual Framework and Approach



This briefing paper presents an evidence-based synthesis of effective Professional Development design and implementation. Drawing on an 'organic' review of recent research reviews from diverse sectors - including education, healthcare, policing, and the civil service - this report aims to identify cross-sector principles that drive genuine skill acquisition and behavioral change.

Crucially, the report argues for a strategic shift away from evaluating PD based merely on its form (e.g., workshops, mentoring, or communities of practice). Instead, it focuses on the specific mechanisms - defined as the core building blocks or active ingredients - that must be present for any intervention to be effective. Central to this approach is considering the use of a PD framework like IGTP (Sims et al, 2025), which suggests that balanced professional programmes must address four distinct purposes to be successful:

- **I - Instilling Insight:** ensures professionals understand the underlying principles of a new practice (the 'why') while managing "cognitive load" to prevent information overload.
- **G- Motivating Goals:** insight alone does not change behaviour. This phase uses specific mechanisms to create a conscious intention to act and buy-in from the participant.
- **T - Teaching Techniques:** focusing on mastering specific skills. It requires active instruction, modelling, and feedback, rather than just abstract knowledge
- **E - Embedding Practice:** this is often the missing link. It ensures that the techniques learned in training are consistently applied in the real-world environment until they become habit.

By critiquing ineffective methods, such as passive information dissemination and 'drive-by' workshops, and highlighting high-impact strategies like coaching, blended learning, and simulation, this document serves as a guide for UPEN to design and commission robust, evidence-led interventions for academic-policy engagement.



Evidence included in this briefing

This is an informal ‘organic’ review of recently published research synthesis relating to effective professional development. It is not a rapid evidence assessment using systematic review methods but aims to be a snapshot of current research relevant to UPEN. It includes reviews of evidence from a range of sectors including education, healthcare, policing and higher education. Due to the large body of evidence in this space and narrow timetable, this report focused on recent published synthesis of research including systematic reviews, rapid evidence assessments, scoping reviews, landscape mapping, theoretical frameworks, and research summaries (See Appendix B). However, as there were no published rigorous reviews dedicated to academic-policy PD, two evaluations of US policy engagement training programmes were included (Tama et al., 2024; Crowley et al., 2021).

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The Core Principles of Effective Professional Development



1.1 Moving from 'Forms' to 'Mechanisms'

A significant finding in recent research is that the label attached to PD (e.g., 'Coaching' or 'Community of Practice') is not a reliable predictor of its success. Instead, effectiveness depends on the inclusion of specific *mechanisms*.

Sims et al. (2021, p. 10) define mechanisms as 'the core building blocks of a programme' which are 'observable, can be replicated, and could not be removed without making that PD less effective'. They liken mechanisms to the fluoride in toothpaste: the brand or stripe-pattern (form) matters less than the active ingredient of fluoride (mechanism) that actually prevents cavities.

1.2 The IGTP Framework

Evidence suggests that effective PD should address four distinct purposes, known as the IGTP model (Sims et al., 2021). PD programmes with a 'balanced design' - incorporating at least one mechanism from each of these four groups - are associated with larger impacts on attainment (Sims et al., 2021, p. 61).



Purpose	Goal	Mechanisms (Active Ingredients)
I - Instill Insight	To help professionals gain new, evidence-based understandings and mental models.	<ul style="list-style-type: none"> • Manage cognitive load: Preventing information overload (e.g., removing redundant content). • Revisit prior learning: Using retrieval practice to consolidate knowledge.
G - Motivate Goals	To encourage professionals to pursue specific goal-directed behaviours.	<ul style="list-style-type: none"> • Goal setting: Agreeing on specific, measurable objectives. • Credible source: Using evidence/experts to justify the change. • Praise/Reinforce: Affirming progress.
T - Teach Techniques	To help professionals master the specific skills required to enact the change.	<ul style="list-style-type: none"> • Instruction: Explicit advice on how to perform a technique. • Modelling: Providing observable examples (e.g., videos, demonstrations). • Practical social support: Peer support or coaching. • Feedback: Monitoring performance and providing input. • Rehearsal: Practicing outside the live environment.
P - Embed Practice	To support the consistent application of skills in the real-world workplace.	<ul style="list-style-type: none"> • Prompts/cues: Reminders in the workflow. • Action planning: Detailed planning of when/how to use a skill. • Self-monitoring: Professionals recording their own behaviour • Context-specific repetition: Rehearsal in the actual work setting.

(Source: Adapted from Sims et al., 2021, pp. 10–11 and Gov Skills, 2025, p. 15)



1.3 Consensus Features of High-Quality Professional Development

Beyond specific mechanisms, systematic reviews across education and healthcare identify the core *principles* and characteristics of effective PD designs. Darling-Hammond et al. (2017) identify seven key features:

1. **Content Focused:** PD must treat discipline-specific curricula. Generic training is less effective than training grounded in the specific content professionals teach or practice.
2. **Active Learning:** Passive listening is ineffective. Effective PD ‘incorporates active learning’ where professionals engage directly in designing and trying out strategies (Darling-Hammond et al., 2017, p. v).
3. **Collaboration:** High-quality PD ‘creates space for teachers to share ideas and collaborate’ (Darling-Hammond et al., 2017, p. v).
4. **Models of Effective Practice:** Professionals need a clear vision of what best practice looks like, often provided through video cases, lesson plans, or observation.
5. **Coaching and Expert Support:** The sharing of expertise focused on individual needs is critical.
6. **Feedback and Reflection:** High-quality programmes provide built-in time for reflection and input on practice.
7. **Sustained Duration:** Effective PD ‘provides teachers with adequate time to learn, practice, implement, and reflect upon new strategies’ (Darling-Hammond et al., 2017, p. v).

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The Core Principles of Effective Professional Development



The efficacy of PD is heavily influenced by how it is delivered. Much of this 'how' is relevant to the 'T' of Techniques in the IGTP framework. The following section evaluates common delivery methods based on the research summaries included in this briefing.

2.1 Coaching and Mentoring

There is consistent evidence that coaching and mentoring are effective mechanisms for improving skills, knowledge, and professional confidence (CIPD, 2019; Education Endowment Foundation, 2020; Government Skills, 2025; Manley et al., 2018; Phillipson et al., 2025; Sims et al., 2021; Tama, Rublee and Urban, 2024). They are considered effective professional development approaches because they facilitate personalised learning, skill application, and behavioural change more successfully than passive or standalone training methods. Effectiveness includes:

- **Skill Acquisition:** In a civil service context, peer coaching significantly improved knowledge and skills among programme administrators compared to standard training alone (Government Skills, 2025). Similarly, in healthcare leadership, coaching and mentoring are associated with improved performance, self-awareness, and organisational-level outcomes (Phillipson et al., 2025).
- **Remote Delivery:** Remote coaching and mentoring are effective in improving practitioner knowledge and skills, with the added benefit of reducing feelings of isolation (Education Endowment Foundation, 2020).
- **Instructional Coaching:** In the education sector, instructional coaching is identified as a distinct form of PD composed of specific mechanisms: goal setting, feedback, instruction or modelling, and rehearsal (Sims et al., 2021). While effective, it was found to be statistically similar in impact to other structured forms of PD (Sims et al., 2021).

Definitions and Distinctions: Coaching, Mentoring and Sponsorship

The evidence included here draws clear distinctions between coaching, mentoring, and sponsorship. Coaching is defined as a non-directive form of learning that can be led by any suitably skilled colleague to foster reflection and sustainable solutions (CIPD, 2019).

Mentoring is typically conducted by a senior manager and involves more advice-giving alongside non-directive learning (CIPD, 2019). In contrast, sponsorship involves senior



managers actively advocating for specific employees (protégés) and influencing decisions to advance their careers; this practice is critiqued for legitimising favouritism and perpetuating bias, whereas coaching and mentoring are recommended as fair, open development tools (CIPD, 2019).

Mechanisms for Success

Coaching and mentoring appear to be most effective when they are integrated into broader training programmes rather than used in isolation.

- **Combined Approaches:** Interventions that combine training methods yield stronger results. For example, probation officers who received both group learning and one-to-one coaching showed meaningful improvements in competence, whereas neither method was sufficient on its own (Government Skills, 2025). This aligns with findings that coaching can be effective alone but is also valuable when used to complement broader PD programmes (Education Endowment Foundation, 2020).
- **Personalisation:** These interventions allow for a personalised approach, providing tailored guidance and feedback that helps individuals refine specific skills (Government Skills, 2025). This 'facilitated support' helps transform individual professional practice by enabling reflection and role clarity (Manley et al., 2018).

Diversity and Inclusion

Coaching and mentoring are positioned as key tools for advancing diversity and inclusion, provided they are implemented correctly.

- **Open Access:** To avoid the exclusivity associated with sponsorship, employers are advised to promote coaching and mentoring schemes that are open to all employees rather than select protégés (CIPD, 2019).
- **Reverse Mentoring:** Pairing senior managers with junior staff from minority groups (reverse mentoring) is suggested as a method to develop leadership skills in junior staff while raising senior managers' awareness of the challenges faced by minority groups (CIPD, 2019).



- **Support for Marginalised Groups:** Mentoring programs can be particularly welcomed by women and historically excluded scholars as a means of providing academic advice and networking (Tama, Rublee and Urban, 2024).

2.2 Collaborative and Peer Learning

Collaboration is a potent tool for professional growth, provided it is structured. Communities of practice (CoPs) and professional learning communities (PLCs) or peer review are identified across multiple sectors as effective vehicles for professional development, valued for its ability to foster collaboration, emotional support, and improved outcomes (Darling-Hammond et al., 2017; Education Endowment Foundation, 2020; Sims et al., 2021; Smith and Wyness, 2024).

In the context of higher education, Smith and Wyness (2024) note that pedagogical collaboration, in the form of peer review teaching and the development of communities, is valued amongst university teachers due to their close 'dialogic nature', and that participants 'acknowledged the value of exchanging ideas, learning about colleagues' problems and strengths of practice and concentrating on specific needs' (Smith and Wyness, 2024, p. 11).

However, the Education Endowment Foundation (2020, p. 17) warns that the delivery mode influences effectiveness, noting that evidence from one study suggests communities of practice have fewer benefits to participants' knowledge when delivered remotely, although they bring additional gains in connecting professionals at a greater geographical distance.

Communities of Practice

Communities of Practice (CoPs) and professional learning communities are effective when they move beyond passive information sharing to include structured, active, and socially supportive mechanisms. The effectiveness of these communities is driven by the following factors:

- **Shared Purpose and Values:** Effective communities require a clear, collective focus rather than just a gathering of individuals. Manley et al. (2018) argue that transformation of workplace culture requires 'developing shared values and a shared purpose'. They note that organisations must facilitate the implementation of these



values through feedback, critical reflection, peer support and challenge. Darling-Hammond et al. (2017) highlight that strong professional communities are characterized by shared intellectual purpose and a sense of collective responsibility for learning.

- **Specific Structural Mechanisms:** Simply grouping professionals together is insufficient; the specific activities undertaken determine effectiveness. Sims et al. (2021) distinguish between general communities and ‘strong’ learning communities. They conclude that for a community to be effective, it must incorporate specific mechanisms: ‘Goal setting’, ‘Practical social support’, and ‘Action planning’. Smith and Wyness (2024) cite a study by Glaés-Coutts (2020) where effective networks were underpinned by the principles of democracy, equality and equity, allowing the group to negotiate its own purpose.
- **Active Focus on Practice and Outcomes:** Effective communities focus on the practical application of skills and the analysis of real-world outcomes rather than abstract theory. The Education Endowment Foundation (2020) notes that collaboration improves outcomes through ‘enabling reflective practice and collective problem-solving’.
- **Social and Emotional Support:** The social nature of these communities provides a psychological safety net that encourages risk-taking and professional growth. In the context of researcher-policymaker partnerships, Crowley et al. (2021) emphasise that effectiveness is highest in the context of trusting partnerships that facilitate bidirectional information exchange.
- **Expert Facilitation:** While peer-led, effective communities often benefit from structured facilitation or external input, Manley et al. (2018) argue that skilled facilitators are necessary to support knowledge translation and enable teams to evaluate their collective practice.

Peer Review

Another form of colleague-support is peer review - often referred to in the literature as ‘peer observation’, ‘peer coaching’, or ‘collaborative inquiry’. It is distinct from performance management (e.g. peer feedback) and is most impactful when used as a developmental tool to foster reflection and collective problem-solving.



The evidence generally supports peer review as a valuable mechanism for professional learning, particularly when integrated into broader PD programmes (Belur et al., 2023; Darling-Hammond et al., 2017; Education Endowment Foundation, 2020; Filges et al., 2019; Government Skills, 2025; Health and Care Professions Council, n.d.; Manley et al., 2018; Sims et al., 2021; Smith and Wyness, 2024; Wheller and Morris, 2010). Some key features are:

- **Skill and Knowledge Acquisition:** In the civil service context, peer coaching has been found to significantly improve knowledge and skills compared to standard training alone (Government Skills, 2025). Similarly, in healthcare and policing, peer-led small group education and peer interaction have been linked to sustained changes in practitioner behaviour and the effective integration of theory with practice (Wheller and Morris, 2010; Belur et al., 2023).
- **Confidence and Relationships:** In higher education, peer review of teaching provides an opportunity for collaboration that enables teachers to feel more confident with their pedagogy and their role within the workplace (Smith and Wyness, 2024). It strengthens professional relationships, even among colleagues who were not previously friends (Smith and Wyness, 2024).
- **Structuring Learning:** Peer review is a core component of ‘Lesson Study,’ a specific form of PD in schools where teachers collaboratively analyse and discuss teaching and learning (Sims et al., 2021). It is also a recognised continuous professional development (CPD) activity for health professionals, classed as a work-based learning method alongside coaching and mentoring (Health and Care Professions Council, undated).

Why Peer Review is Effective

The evidence included in this review identifies several mechanisms that explain *why* peer review works:

- **Reducing Isolation:** Teaching and other public service roles can often be isolated activities. Peer review and collaboration help break this isolation, providing social professional connections and emotional support (Education Endowment Foundation, 2020; Manley et al., 2018).



- **Reflection and ‘Critical Friendship’:** Effective peer review acts as a ‘critical friend’ model. This relationship generates mutual trust and allows for appropriate challenge, which encourages professionals to reflect on their own practice in ways they might not do in isolation (Smith and Wyness, 2024).
- **Modelling:** Observing peers allows professionals to see a clear vision of what effective practice looks like. This modelling helps teachers and practitioners construct their own understanding of best practices (Darling-Hammond et al., 2017; Filges et al., 2019).
- **Practical Social Support:** Peers often share a common language and culture regarding the specific problems they face. This allows them to provide informational assistance that is highly relevant to the practitioner’s daily context (Sims et al., 2021).

Effective Implementation of Peer Review

However, peer review needs to be adopted in a sensitive way to be effective. To ensure peer review avoids becoming a box-ticking exercise or a source of anxiety, the evidence reviewed here suggests several implementation strategies:

- **Separate from Performance Management:** Traditional ‘top-down’ peer observation can cause anxiety and discomfort due to power dynamics. To encourage implementation, peer review should be framed as a developmental, collaborative activity rather than a graded performance evaluation (Smith and Wyness, 2024).
- **Training in Observation and Feedback:** Participants should not be expected to know how to review peers instinctively. Training on observational skills and how to give constructive feedback is necessary to ensure the process is useful and builds trust (Smith and Wyness, 2024).
- **Protected Time and Resources:** Lack of time is a major barrier to collaboration. In the schools context, leaders and managers must provide protected time for staff to engage in peer observation and subsequent discussions (Education Endowment Foundation, 2020; Belur et al., 2023).



- **Structure and Focus:** Peer review should not be aimless. It is most effective when it focuses on specific tasks, such as analysing work (Darling-Hammond et al., 2017). Protocols or instruments of evaluation can guide the observation to ensure it remains focused on development (Smith and Wyness, 2024).
- **Small Groups and Flexibility:** Smaller formats (one-to-one or small groups) are often favoured over larger audiences for collaborative learning (Smith and Wyness, 2024). Furthermore, allowing practitioners some choice in who they work with can reduce friction and nervousness (Smith and Wyness, 2024).

2.3 Remote and Blended Learning

- **Remote Learning can support PD:** There is some evidence across the education, civil service, and healthcare sectors that remote PD can support improvements in professional knowledge, skills, and outcomes (Belur et al., 2023; Darling-Hammond et al., 2017; Education Endowment Foundation, 2020; Filges et al., 2019; Government Skills, 2025; Health and Care Professions Council, n.d.; Manley et al., 2018; Sims et al., 2021; Smith and Wyness, 2024; Wheller and Morris, 2010). A rapid evidence assessment in education found that remote PD has the potential to improve professionals' knowledge and skills, ultimately improving pupil outcomes (Education Endowment Foundation, 2020). Similarly, in a civil service context, an online course on behavioural economics was found to significantly improve policymakers' problem-solving and decision-making skills compared to a control group (Government Skills, 2025).
- **Online vs In-Person:** However, the comparative effectiveness of remote versus face-to-face training is mixed. While some evidence suggests remote PD is at least as effective as face-to-face methods (Education Endowment Foundation, 2020), other reviews suggest that exclusive online delivery may be less effective than face-to-face or blended approaches (Phillipson et al., 2025). For instance, in teacher development, some programmes involving online components had weaker student outcomes on average compared to those that did not (Education Endowment Foundation, 2020).



- **Best of Both Worlds - Blended Learning:** Combining online and face-to-face elements is effective for skill acquisition, knowledge transfer, and applying skills in real-world settings (Alma Economics, 2025; Belur et al., 2023; Education Endowment Foundation, 2020; Phillipson et al., 2025). This approach allows flexibility while maintaining the social aspects of learning. Belur et al. (2023) provides the most robust support, stating that ‘findings suggest that blended learning is at least as good as, if not more effective than, only face-to-face, or only online learning methods’. They cite systematic reviews finding blended learning to be more effective for knowledge gain than traditional methods (Belur et al., 2022, p. 32). But the same review notes that some studies did not find significant benefits for blending, and some students preferred the face-to-face format compared to the blended one, citing distractions in the online environment and the ease of asking questions in person as key factors.
- **Benefits of ‘flipped learning’:** A form of blended learning, also known as the ‘flipped classroom’, this is a pedagogical approach that reverses the traditional teaching model by requiring learners to proactively familiarise themselves with content online - such as through video lectures- in a self-directed manner *before* training, thereby reserving face-to-face time for interactive activities that consolidate learning (Belur et al., 2023). This approach is often integrated into blended learning strategies, where online components address declarative knowledge (theory) and in-person sessions focus on procedural knowledge (practice) (Government Skills, 2025). Evidence indicates that flipped instruction can be superior to standalone face-to-face or online formats, with the ‘flipped aspect’ itself identified as a critical mechanism for effectiveness; however, implementation requires careful management as the model is resource-intensive for tutors to prepare and can negatively impact learner satisfaction due to the increased demands on self-regulation and workload if learners are not adequately ‘primed’ to understand the format (Belur et al., 2023).

2.4 Simulation and Role Play

Based on the included reviews, simulation and role play are considered effective professional development methods, particularly for skill acquisition, confidence building, and bridging the gap between theory and practice (Akerlof et al., 2025; Darling-Hammond et al., 2017; Education Endowment Foundation, 2020; Government Skills, 2025; Jonathan-



Zamir, Litmanovitz and Haviv, 2022; Phillipson et al., 2025; Sims et al., 2021; Wheller and Morris, 2010).

Interactive methods such as role play and hands-on practice are preferred over didactic methods for linking training to practice (Jonathan-Zamir et al., 2022). In a civil service context, behavioural practice and rehearsal (which includes role play) was the most common mechanism identified in effective interventions for improving skills (Government Skills, 2025). The reviews identify several reasons for the success of these methods:

- **Active Learning:** Effective professional development engages teachers directly in designing and trying out strategies, moving away from lecture-based models (Darling-Hammond et al., 2017). Role play allows participants to engage with key concepts in vivid, illustrative ways (Akerlof et al., 2025).
- **Realism and Low Risk:** Computerised and mixed-reality interactive simulations support the development of skills (such as classroom management) by increasing realism with low cost and risk to students (Education Endowment Foundation, 2020).
- **Mechanism of Rehearsal:** Role play acts as a 'rehearsal' mechanism, allowing professionals to practice a technique at a time when performance is not necessary, thereby increasing habit and skill (Sims et al., 2021). This helps build confidence in handling situations in the future (Government Skills, 2025).
- **Reflection:** These exercises help participants engage with others and reflect on their own potential roles in policy conversations (Akerlof et al., 2025).

Implementation

The evidence suggests several best practices for implementing simulation and role play:

- **Combine with other resources:** Interactive content and video viewing are unlikely to be impactful in isolation; they should be paired with learning resources, viewing guides, or discussion with other professionals (Education Endowment Foundation, 2020).
- **Technology range:** Implementation can range from 'low-tech' methods using physical props or actors to 'high-tech' methods using virtual reality and computer



simulations (Government Skills, 2025). Online simulations have been reported to have large beneficial effects (Education Endowment Foundation, 2020).

- **Attention to delivery:** Implementation can be challenging. In a policing study, role plays were difficult to implement faithfully because commanders found the participatory technique challenging and lack of manpower prevented small-group practice (Jonathan-Zamir et al., 2022).
- **Use of actors:** Role plays can be enhanced by using professional actors to play the role of citizens or clients to ensure realistic responses (Jonathan-Zamir et al., 2022).

2.5 What Does NOT Work?

Several reviews cast doubt on the effectiveness of traditional training workshops, classroom-based instruction, and one-off meetings when used in isolation. The criticisms generally focus on their passive nature, lack of sustained engagement, and failure to change behaviour (Civil Serving Learning, 2025; CIPD, 2019; Darling-Hammond et al., 2017; Phillipson et al., 2025; Sims et al., 2021; Wheller and Morris, 2010).

For example Darling-Hammond et al. (2017) critique the traditional model of professional development, contrasting effective methods against the traditional, one-day, 'drive by' workshop model' which they imply is ineffective compared to sustained, content-focused learning. Sims et al. (2021) echo this sentiment, noting that the traditional episodic and fragmented approach to PD does not afford the time necessary for learning that is rigorous and cumulative.

Several approaches to PD, training, and behaviour change have been identified as ineffective, counter-productive, or unlikely to generate positive outcomes:

- **Passive and Didactic Approaches:** Traditional, passive methods of information delivery are consistently highlighted as ineffective for changing practice or behaviour. The passive distribution of toolkits and guidelines, for instance, such as through publication or direct mailing, is described as the least successful approach to behaviour change and consistently fails to alter professional behaviour or patient outcomes (Wheller and Morris, 2010). Classroom-based training or didactic teaching



alone is not necessarily an effective way to improve skills or change behaviour (Wheller and Morris, 2010; Phillipson et al., 2025). Remote PD that involves passive clicking through slides is generally less effective, and non-interactive courses are more likely to suffer from high attrition (Education Endowment Foundation, 2020).

- **Isolation and Exclusive Online Delivery:** Learning in isolation or through specific delivery modes without support often fails to achieve desired results. Watching videos of classroom practice is unlikely to be impactful if done in isolation; it must be paired with other learning resources or discussion (Education Endowment Foundation, 2020). In healthcare leadership, interventions delivered exclusively online were found to be less effective in producing outcomes than those utilizing face-to-face or blended formats (Phillipson et al., 2025). Furthermore, in teacher development, some programmes involving online components resulted in weaker student outcomes compared to those that did not include them (Education Endowment Foundation, 2020).
- **Flawed Design and Mechanisms:** PD programmes that lack specific ‘mechanisms’ or are ‘imbalanced’ in their design are less likely to succeed. Programmes that fail to address four key purposes—instilling insight, motivating goals, developing techniques, and embedding practice—are less effective. For instance, PD that develops techniques but fails to instill ‘insight’ (understanding *why* a practice works) can lead to the ‘misapplication’ of techniques (Sims et al., 2021). PD that builds knowledge and motivation but lacks ‘embedding practice’ mechanisms causes professionals to revert to old habits (Sims et al., 2021). In addition, setting ‘distal’ (long-term) goals alone is not effective for ensuring training transfer to the workplace (Government Skills, 2025).
- **Implementation and Measurement Issues** How PD is implemented and measured can also render it ineffective. Also, forcing training - such as through professional requirements and mandates - can increase the *quantity* of skill usage, but they may lead to the use of simpler, less effective techniques rather than advanced strategies (Government Skills, 2025). Feedback provided without implementation support or guidance does not result in significant improvement in professional practice (Wheller and Morris, 2010).



- **Ineffective Diversity and Inclusion Strategies** Specific strategies regarding diversity and inclusion have been identified as ineffective or potentially damaging. Unconscious Bias Training (UBT) alone is unlikely to foster a diverse and inclusive organisation and does not usually show sustained impact on behaviour. It can backfire if it induces ‘moral licensing’ (where people feel virtuous for attending and stop making an effort) or if it suggests bias is unchangeable (CIPD, 2019). Also, diversity initiatives designed to control managers-such as mandatory training that dictates what they can and cannot say-often lead to resistance and can backfire (CIPD, 2019). cursory, one-off training exercises done for compliance (a ‘sheep dip’ approach) are ineffective for behavioural outcomes (CIPD, 2019). Unlike mentoring, ‘sponsorship’ (where senior managers advocate for protégés) can be counter-productive to diversity as it legitimises favouritism and reinforces exclusive networks (CIPD, 2019).

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Implementation and Leadership



Even the best-designed PD will fail if the implementation environment is hostile or unsupported.

3.1 Organisational Alignment

PD must align with the wider values and structures of the organisation. In the healthcare context, Manley et al. (2018) identify that the transformation of workplace culture is necessary to implement effective development and care. Similarly, in policing, training must include 'alignment of training with organizational norms and structures' to ensure that new skills are incentivised in the field (Jonathan-Zamir et al., 2022, p. 285). Training cannot be viewed as a simple intervention; it is 'complex social intervention' (Jonathan-Zamir et al., 2022, p. 281). To be effective, training must address three domains defined in the General Ecological Training (GET) model:

- **The Individual Professional:** Training must treat recruits as adult learners and focus on specific skills rather than abstract values.
- **The Learning Environment:** Trainers must be viewed as 'credible experts' (often experienced colleagues).
- **The Organisation:** Training goals must align with organisational norms. If training teaches one thing (e.g. policy impact), but the organisation rewards another (e.g., publishing in academic journals), the training will fail (Jonathan-Zamir et al., 2022, p. 285).

3.2 Leadership Support

There is a strong association between staff learning opportunities and transformational leadership, which enhances participatory management and staff involvement in decision-making (King et al., 2020). In the healthcare context, strong leaders can empower individuals to identify their own learning needs, which is crucial for sustaining a commitment to lifelong learning (King et al., 2020).

Leadership buy-in is more than just signing off on a budget; it requires active accountability. In the context of DEI, for instance, senior managers may pledge support for diversity, but if these are perceived as 'empty shells' by middle managers, implementation fails (CIPD, 2019, p. 13). Middle managers can act as a barrier to change (described as 'permafrost') if they prioritise operational issues over development initiatives. However, this often stems



from a lack of resources or conflicting KPIs set by senior leaders (CIPD, 2019). Managers need to be 'held directly accountable for their team's development'. In the civil service, training is often seen as a 'nice to have' rather than a core performance metric (Institute for Government, 2021, p. 5).

Furthermore, leaders need to be responsible for removing barriers to implementation. For instance, school leaders may need to delay the implementation of PD until specific barriers, such as heavy timetables or outdated operating systems, are resolved (Education Endowment Foundation, 2020). A lack of resources and time due to high workloads are frequently cited as obstructions to effective implementation (Government Skills, 2025).

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Competency and Professional Development Frameworks



Across the public and professional sectors, competency frameworks and standards play a crucial role in scaffolding development and structuring career progression. Within the UK Civil Service, for instance, specific 'career frameworks' have been established to align skills assessments with functional requirements (Institute for Government, 2021), a structured approach mirrored in policing by the 'Police Educational Qualifications Framework' (PEQF), which aims to professionalise training by integrating theoretical learning with practice (Belur et al., 2023). This use of structured standards extends to healthcare, where the 'Medical Leadership Competency Framework' is identified as a key element of effective training (Phillipson et al., 2025), and to the education sector in the US, where the 'National Board for Professional Teaching Standards' outlines the core commitments required of teachers (Smith and Wyness, 2024). Furthermore, regulatory bodies like the UK's Health and Care Professions Council utilise specific standards for continuing professional development to ensure that practitioners effectively demonstrate their ongoing competence (Health and Care Professions Council, undated).

Frameworks - based on skills, competency, career progression, or even theoretical - are generally presented as helpful tools for structuring development, ensuring professional standards, and enabling robust evaluation. Benefits include:

- **Structuring Progression:** Institute for Government (2021) note that 'career frameworks' help to 'structure the progression of specialists' and provide a basis against which skills assessments can be aligned.
- **Underpinning Quality:** Sims et al. (2021) highlight the 'Early Career Framework' (ECF) as the foundation for a 'structured two-year package of high quality professional development', ensuring that training is based on trusted sources of research evidence.
- **Professionalisation:** Belur et al. (2023) describe the 'Police Educational Qualifications Framework' (PEQF) as a key part of the move towards 'professionalising' police training, which aids in credibility and integrating theory with practice.
- **Evaluation and Evidence-Based Practice:** In addition, some reviews say that frameworks are needed for evaluation. Phillipson et al. (2025) recommend that future research should prioritise the development of 'standardised, validated evaluation



tools' by 'integrating existing competency frameworks with validated leadership assessment instruments'. Jonathan-Zamir et al. (2022) argue that a 'consistent theoretical framework' is critical for integrating isolated studies into a coherent body of knowledge, allowing researchers to understand not just if training worked, but 'how it worked'.

But, while helpful for structure, frameworks can create barriers if applied too rigidly. The Institute for Government (2021) warn that career frameworks designed by specific functions 'can hinder movement across different areas' (reducing the 'porosity' of the civil service) if job descriptions are overly restrictive and prevent staff from transferring their skills to new roles.

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Limitations of Evidence Base



A systematic review for Government Skills (2025) found 'strong evidence' that professional development interventions have a positive impact on skills, but the evidence linking these interventions to work performance and productivity is much weaker. While 15 out of 16 relevant studies in the Government Skills systematic review reported positive effects favoring the intervention, the strongest evidence was for skills acquisition (e.g., leadership behaviours, cognitive techniques). Evidence for productivity (efficiency and effectiveness of outputs) was sparse. The lack of productivity evidence is attributed to the difficulty of defining and measuring output in knowledge-intensive Civil Service roles. Consequently, the evidence base is skewed toward **operational Delivery** professions (e.g., probation officers, call centre workers) where outputs (e.g., recidivism rates, call handling times) are easily quantifiable.

The report emphasises significant gaps in the quality of existing research relevant to the Civil Service:

- **Heterogeneity:** There is a lack of standardised outcome measures, making meta-analysis impossible.
- **Reporting Quality:** Many studies failed to adequately report intervention details (e.g., dosage, duration) or participant demographics, limiting the ability to determine what works for whom.
- **Lack of Causal Evidence:** There are very few high-quality Randomised Controlled Trials (RCTs) conducted directly within the Civil Service, largely due to cost and complexity.

What counts as 'evidence' of learning?

- **Quantitative vs. Qualitative:** There is a tension between quantitative measures (hours spent training) and qualitative growth. Mackay (2017) argues that 'reflections on casework' provide 'convincing, qualitative evidence of expanding professional judgement' (p. 17).
- **Institutional Constraints:** A quantitative view of evidence can 'restrict the possibilities of autonomous professional growth' by reducing learning to a corporate exercise (Mackay, 2017, p. 7).

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Recommendations for Future Research and Evaluation



There is a consensus across the sources for more robust evidence is needed to evaluate professional development.

- **Longitudinal Studies:** Research should move beyond short-term snapshots to controlled, longitudinal studies that can assess sustained impacts over time (Phillipson et al., 2025; Al-Omary et al., 2024,). For example, in healthcare, research should assess long-term impacts on team performance and workplace impact (Phillipson et al., 2025).
- **Comparators:** Further research is recommended to compare face-to-face, online, and blended delivery of the same PD programme to determine relative effectiveness (Education Endowment Foundation, 2020).
- **Reporting Standards:** To improve the utility of evidence, researchers should adhere to stricter reporting guidelines, including detailed descriptions of interventions (e.g. duration, delivery mode), participant characteristics, and implementation process evaluations (Government Skills, 2025).
- **Standardised and Validated Evaluation Tools:** Research should prioritise the development and adoption of standardised, validated evaluation tools to allow for comparability across studies (Phillipson et al., 2025; Government Skills, 2025).
- **Beyond Self-Report:** Evaluations should incorporate multisource data, such as external observer ratings and 360-degree feedback, rather than relying solely on participants' self-assessments (Phillipson et al., 2025).
- **Mechanisms of Action:** Researchers should use mechanism-based definitions to disambiguate forms of PD and avoid terminological confusion (Sims et al., 2021). There is a need to refine taxonomies of mechanisms to better reflect their application in specific sectors like the Civil Service (Government Skills, 2025).
- **Equity and Inclusion:** Future work must apply methodologies *a priori* for subpopulations, specifically ethnic minority knowledge mobilisers and scholars, to ensure equity in policy engagement support (Crowley et al., 2021). Studies should overrepresent racially minoritised groups to ensure sufficient statistical power to



detect differences, and qualitative research should explore the intersectional experiences of marginalised scholars (Crowley et al., 2021).

Recommendations for UPEN

Below are some recommendations for UPEN to inform future work and funding opportunities. UPEN aims to ‘develop a national understanding of the capacity and capability for academic-policy engagement’, curate a ‘professional development programme’, and build ‘capacity among under-represented groups’ (University College London, 2025). To ensure these initiatives result in genuine behaviour change and skill acquisition, the following evidence-based strategies should be considered.

Adopt an Evidence-Based Framework for Professional Development

UPEN proposes to consider and develop ‘accredited professional development programmes’ and a ‘knowledge mobiliser professional competency framework’ (University College London, 2025). To be effective, these curricula should not rely on didactic information delivery. Instead, they must be structured around an existing credible framework, such as the IGTP (Insight, Goals, Techniques, Practice) framework.

Evidence: Systematic review evidence indicates that PD is most effective when it addresses four specific purposes: instilling insight (understanding the ‘why’), motivating goals (creating a conscious intention to act), developing techniques (learning the specific skills), and embedding practice (Sims et al., 2021). For example, training on policy briefs should not just explain what a brief is (Insight); it must include modelling of good practice, specific instruction on writing techniques (Techniques), and opportunities to draft and receive feedback (Practice) (Sims et al., 2021). Programmes that fail to include mechanisms for embedding practice - such as context-specific repetition - often lead participants to revert to old habits (Sims et al., 2021).

Prioritise Coaching and Mentoring

UPEN plans to ‘expand UPEN’s existing mentorship scheme’ and introduce a ‘pairing programme’ (University College London, 2025). This should be the dominant vehicle for capability building, prioritised over static toolkits or one-off workshops. The coaching model



should include specific mechanisms: goal setting, observation/review of work, and feedback.

Evidence: Evidence from the Research-to-Policy Collaboration (RPC) model¹ demonstrates that researchers often perceive high ‘costs’ to policy engagement (time, effort, anxiety) (Crowley et al., 2021). Coaching and structured support significantly reduces these perceived costs and increase engagement activity (Crowley et al., 2021). Furthermore, leadership training reviews indicate that coaching and mentoring are consistently associated with better outcomes than classroom-based instruction alone (Phillipson et al., 2025; Government Skills, 2025).

Structure EDI Interventions to Provide ‘Conduits’ for Engagement

UPEN aims to ‘build capacity among under-represented groups’ and assess ‘inequalities in opportunity’ (University College London, 2025). Interventions here should avoid generic ‘diversity training’ or ‘unconscious bias training’, which evidence suggests can be ineffective or even backfire if mandatory or isolating (CIPD, 2019). Instead, UPEN should use its proposed UPEN fellowships² to provide structured *conduits* for engagement that specifically target the structural barriers facing researchers from ethnic minority groups and backgrounds.

Evidence: Ethnic minority researchers often report lower involvement in policy engagement due to systemic barriers and higher perceived costs (Crowley et al., 2021). However, when provided with structured opportunities (like the RPC model) that facilitate the connection,

¹ The Research-to-Policy Collaboration (RPC) is a comprehensive model from the US that operates through a seven-step process that spans capacity building and direct collaboration: policy identification, development of a rapid response network, network capacity building, policy needs assessment, rapid response meetings between researchers and policy staff, initial strategic planning, and ongoing collaboration involving the synthesis of research into products like fact sheets (Crowley et al., 2021). To support this, the RPC creates a ‘rapid response network’ of researchers who receive both didactic instruction and experiential training-often supported by a coach-to prepare them to respond to legislative requests (Crowley et al., 2021; Akerlof et al., 2025). It can have specific benefits observed for ethnic minority researchers, who reported fewer concerns and greater engagement benefits than their counterparts in control groups (Crowley et al., 2021; Government Skills, 2025).

² The original business case proposed offering ‘UPEN fellowships’ as a targeted intervention to build capacity among under-represented groups, thereby addressing inequalities in opportunity, resource, and capability. Also, under Pillar 3 (Practice), the budget and resource planning included specific funding for ‘ARI [Areas of Research Interest] Fellows’ (2 FTE for 1.5 years). These fellows were intended to be embedded with partner regional authorities to support the development of best practice methodologies



ethnic minority researchers reported greater benefits and reduced concerns about engagement than their white counterparts (Crowley et al., 2021). This suggests that providing the *mechanism* for engagement is more effective than training that focuses solely on attitudes.

Implement Longitudinal Leadership Development

UPEN intends to create 'leadership offers for knowledge mobilisers' (University College London, 2025). This training should be designed as a longitudinal programme rather than a short course, incorporating 360-degree feedback and experiential learning.

Evidence: A systematic umbrella review of leadership training in healthcare found that longitudinal designs (multiple sessions separated by time) are associated with lasting behavioural change, whereas short interventions are less effective (Phillipson et al., 2025). Effective leadership programmes also typically incorporate multi-source (360-degree) feedback and experiential learning (e.g., action learning sets) to improve self-awareness and team dynamics (Phillipson et al., 2025).

Use Blended Learning to Maximise Accessibility and Efficacy

To deliver training across the 'wider university sector' and to 'knowledge mobilisers' at different career stages (University College London, 2025), UPEN should utilise a blended learning approach. This should follow a 'flipped' model: using online methods for acquiring declarative knowledge (concepts/theory) and reserving synchronous (face-to-face or virtual) time for procedural knowledge (practice/skills).

Evidence: Blended learning is often found to be more effective than exclusive online delivery and allows learners to process content at their own pace, which supports equity (Belur et al., 2023). The 'flipped classroom' model, where learners engage with material before sessions to allow for interactive practice during sessions, has been identified as a superior pedagogical approach for professional education (Belur et al., 2023).

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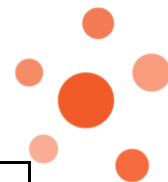


Included reviews of research and synthesis

Based on the sources provided, the following table categorises the included evidence by study type, country of origin, and sector focus. The studies in blue are not research synthesis but are primary studies (e.g. evaluations of policy engagement training programmes).

Table providing overview of included evidence: study design, country of origin and sector focus

Source	Type of Study	Country of Origin	Sector Focus
Akerlof et al. (2025)	Exploratory mapping research using database development, surveys, and interviews	USA	Higher Education / Science Policy
Belur et al. (2023)	Rapid Evidence Assessment	UK	Policing
CIPD (2019)	Research report based on evidence reviews and practitioner workshops	UK	Human Resources / General Workforce
Crowley et al. (2021)	Randomised Controlled Trial (RCT)	USA	Psychology / Public Policy
Darling-Hammond et al. (2017)	Review of 35 methodologically rigorous studies	USA	Education (K-12 Teachers)



Education Endowment Foundation (2020)	Rapid Evidence Assessment of systematic reviews and meta-analyses	UK	Education (Schools)
Filges et al. (2019)	Systematic Review and Meta-analysis	Denmark / UK	Education and Welfare
Government Skills (2025)	Systematic review (Rapid review of reviews and vote counting)	UK	Civil Service / Public Sector
Institute for Government (2021)	Research report based on interviews, desk research, and workshops	UK	Civil Service / Government
Jonathan-Zamir et al. (2022)	Quasi-experiment	Israel	Policing
King et al. (2020)	Rapid Evidence Assessment	UK	Healthcare
Manley et al. (2018)	Realist Synthesis	UK	Healthcare
Phillipson et al. (2025)	Systematic Umbrella Review	UK	Healthcare



Sims et al. (2021)	Systematic Review and Meta-analysis	UK	Education (Teachers)
Smith and Wyness (2024)	Systematic Review	UK	Higher Education
Tama et al. (2024)	Pre- and post-survey evaluation of a training program	USA	Political Science / Higher Education
Wheller and Morris (2010)	Rapid Evidence Assessments (three separate reviews)	UK	Policing / General Training

Summary of Common Professional Development Delivery Methods

The reviews of evidence included in this briefing provide a wide range of professional development (PD) delivery methods, ranging from traditional workshops to integrated workplace learning. Notably, a significant portion of the recent evidence-particularly from Sims et al. (2021) argues that the *form* of delivery (e.g., coaching vs. lesson study) is less important than the presence of specific 'mechanisms' (active ingredients) within that form. However, the sources do evaluate specific delivery models. The table below categorises these methods, outlining their advantages, disadvantages, examples, and the associated evidence.



Table of Professional Development Delivery Methods

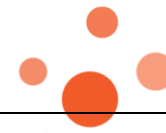
Delivery Method	Pros	Cons	Examples	Evidence of Effectiveness
<p>Coaching</p>	<p>Highly effective for skill transfer: It allows for the ‘sharing of expertise... focused directly on teachers’ individual needs’ (Darling-Hammond et al., 2017, p. v).</p> <p>Improves outcomes: Associated with positive impacts on practice and pupil attainment (Sims et al., 2021).</p>	<p>Resource intensive: Requires trained experts/coaches and time.</p> <p>Implementation challenges: Success depends on the expertise of the coach and depth of observation (Gov Skills, 2025).</p>	<p>Instructional Coaching: Expert observes and provides feedback on specific techniques (Sims et al., 2021).</p> <p>Peer Coaching: Colleagues supporting each other (Gov Skills, 2025).</p> <p>Remote Coaching: Reviewing video recordings of practice (Education Endowment Foundation, 2020).</p>	<p>‘Coaching and mentoring can improve skills and knowledge of professionals when delivered remotely’ (Education Endowment Foundation, 2020, p. 4).</p> <p>In civil service contexts, ‘peer coaching’ significantly improved outcomes (Gov Skills, 2025, p. 4).</p> <p>Coaching was associated with ‘greater leadership outcomes’ in healthcare (Phillipson et al., 2025, p. 352).</p>



Workshops / Training Courses	Efficient for knowledge transfer: Can introduce new concepts to groups. Inspiration: Can create 'high buy-in and enthusiasm' if delivered by credible sources (Sims et al., 2021, p. 196).	'Sheep Dip' effect: Often conducted as a tick-box exercise without sustained impact (CIPD, 2019). Limited behavior change: Passive dissemination or one-off sessions are 'unlikely to be impactful in isolation' (Education Endowment Foundation, 2020, p. 5).	Interactive Workshops: Role-playing and small group discussions (Jonathan-Zamir et al., 2022). Summer Institutes: Intensive, multi-day learning (Darling-Hammond et al., 2017). Diversity Training: Unconscious bias awareness sessions (CIPD, 2019).	Traditional classroom-based training alone is 'not necessarily an effective way to improve practitioner's skills or to change their behaviour' (Wheller and Morris, 2010, p. 5). Short workshops (e.g., 4 days) can generate 'remarkably large increases' in preparedness and confidence for public engagement (Tama et al., 2024, p. 1).
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Collaborative / Peer Learning	Reduces isolation: Helps build professional networks and shared purpose (Smith and Wyness, 2024). Problem solving: Enables 'collective problem-solving' and reflective practice (Education Endowment Foundation, 2020, p. 5).	Social friction: Peer review can cause tension or anxiety if feedback is critical (Smith and Wyness, 2024). Requires trust: Success depends on 'trust' and 'commitment' among participants (Wheller and Morris, 2010).	Lesson Study: Collaborative planning, observation, and analysis of lessons (Sims et al., 2021). Professional Learning Communities (PLCs): Ongoing groups focused on student data/work (Darling-Hammond et al., 2017). Action Learning Sets: Structured peer coaching (Phillipson et al., 2025).	'Collaboration between colleagues may also improve PD outcomes through enabling reflective practice' (Education Endowment Foundation, 2020, p. 5). In healthcare, 'interprofessional or multi-disciplinary learning approaches were found to be important for enhancing both teamwork and clinical outcomes' (Phillipson et al., 2025, p. 352).
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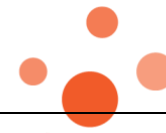
Simulation & Role Play	<p>Safe environment: Allows practice of skills without real-world risk.</p> <p>High engagement: ‘Computerised and mixed-reality interactive simulations’ increase realism (Education Endowment Foundation, 2020, p. 15).</p>	<p>Resource heavy: Can require professional actors or expensive technology (Jonathan-Zamir et al., 2022).</p>	<p>Policing: Role plays with actors to practice procedural justice (Jonathan-Zamir et al., 2022).</p> <p>Healthcare: Simulation-based training for clinical skills (Wheller and Morris, 2010).</p> <p>VR/Augmented Reality: Walking in the shoes of a visually impaired person (CIPD, 2019).</p>	<p>Simulation training achieved ‘additional gains in knowledge, critical thinking ability, satisfaction or confidence over and above those achieved using traditional training styles’ (Wheller and Morris, 2010, p. 5).</p> <p>‘Experiential learning methods [like simulation] were associated with impact in 31 studies’ in healthcare leadership (Phillipson et al., 2025, p. 352).</p>
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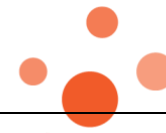
Remote & Online Learning	Flexibility: Allows professionals to access learning at their own pace/location. Cost-effective: Reduces travel costs and time (Education Endowment Foundation, 2020).	Wellbeing risks: Solely online training is 'less likely to be effective for wellbeing' (Gov Skills, 2025, p. 11). Attrition: Non-interactive courses have higher dropout rates (Education Endowment Foundation, 2020).	Webinars/Online Modules: Self-paced compliance training. Video Analysis: Uploading video of practice for remote feedback (Allen et al., 2011, cited in Sims et al., 2021).	'Evidence is mixed as to whether remotely delivered PD is more or less effective than face-to-face PD' (Education Endowment Foundation, 2020, p. 4). Interactive elements (quizzes, feedback) are essential; 'passive dissemination... is generally ineffective' (Wheller and Morris, 2010, p. 3).
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Blended Learning	Optimized format: Combines flexibility of online with community of face-to-face. Sustained engagement: Can span longer periods than one-off workshops (Belur et al., 2022).	Design complexity: Requires careful integration of different modes to be effective (Belur et al., 2022).	Police Training: Mixing online modules with physical/tactical training (Belur et al., 2022). Flipped Classroom: Learning theory online, applying it in person (Belur et al., 2022).	In policing, ‘blended learning is at least as good as, if not more effective than, only face-to-face, or only online learning methods’ (Belur et al., 2022, p. 32) Blending synchronous and asynchronous elements enables trainees to ‘feel part of a community while retaining travel cost savings’ (Education Endowment Foundation, 2020, p. 4).
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Integrated / Work-Based Learning	<p>Relevance: Learning occurs in the actual work environment, solving real problems.</p> <p>Immediate application: Bridges the 'knowing-doing gap' (Sims et al., 2021).</p>	<p>Hard to quantify: Difficult to measure as 'hours spent' for compliance records (Mackay, 2017).</p> <p>Inconsistent: Dependent on the quality of daily work opportunities.</p>	<p>Integrated Teaching: Ward rounds in hospitals, case conferences (Wheller and Morris, 2010).</p> <p>Reflective Practice: Analyzing specific casework or critical incidents (Mackay, 2017).</p>	<p>Strong evidence in health that 'training that is integrated into routine practice is more effective at changing individual's attitudes and behaviour than traditional classroom-based approaches' (Wheller and Morris, 2010, p. 4).</p> <p>Analyzing student work/data contributed to 'increases in student achievement' (Darling-Hammond et al., 2017, p. 17).</p>
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Mentoring & Sponsorship	<p>Career progression: Supports individual development and navigation of organizational culture.</p> <p>Perspective taking: Reverse mentoring helps senior leaders understand minority experiences (CIPD, 2019).</p>	<p>Bias risk (Sponsorship): Sponsorship can rely on ‘affinity bias’ and reproduce inequality (CIPD, 2019).</p> <p>Exclusivity: Targeted programs can sometimes feel stigmatizing (CIPD, 2019).</p>	<p>Mentoring: Senior staff guiding junior staff (open to all).</p> <p>Sponsorship: Senior staff advocating for a protégé (often exclusive).</p> <p>Reverse Mentoring: Junior staff mentoring senior leaders on diversity issues.</p>	<p>‘Promote mentoring but challenge sponsoring’ as sponsorship reinforces ‘biased forms of social capital’ (CIPD, 2019, p. 39).</p> <p>In higher education, mentoring ‘can reduce feelings of isolation or promote community building’ (Education Endowment Foundation, 2020, p. 13).</p>
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