



Continuous professional development models for university faculty: A review of approaches, effectiveness, and implementation challenges

Poonam Kaushik

Department of Education, Merlion Paediatric Therapy Clinic, Aligarh Muslim University, Aligarh, Uttar Pradesh, India

Abstract

Continuous professional development (CPD) has become a central mechanism through which universities attempt to sustain and improve the instructional quality of their faculty in the face of expanding enrolments, digital transformation, and rising expectations for evidence-based teaching. Yet CPD in higher education remains far less standardized than its counterpart in schools, and institutions draw on a wide and sometimes inconsistent set of models, ranging from short workshops to sustained communities of practice and competency-based micro-credentials. This paper reviews the literature on CPD models for university faculty, synthesizing findings on their design, delivery, and effectiveness. Drawing on recent systematic reviews and empirical studies, the paper identifies four broad model families used across institutions: episodic training events, mentoring and coaching relationships, communities of practice, and structured evaluation frameworks such as Kirkpatrick's four-level model. The review finds converging evidence that CPD is most effective when it is sustained rather than one-off, embedded within faculty's actual teaching context, and supported institutionally through protected time and resources. Persistent barriers include heavy workloads, insufficient institutional support, and a scarcity of rigorous outcome evaluation beyond participant satisfaction. The paper concludes by outlining implications for the design of faculty development programmes and directions for future research, particularly the need for longitudinal studies linking CPD participation to measurable teaching and student outcomes.

Keywords: Continuous professional development, faculty development, higher education, communities of practice, teaching effectiveness, mentoring

Introduction

Universities worldwide face mounting pressure to demonstrate that their teaching, not only their research, meets high standards of quality (Sikandar & Iqbal, 2024)^[4]. This pressure has elevated continuous professional development (CPD) from a peripheral human-resources function to a strategic priority in institutional planning. Unlike school-level teacher training, which in many countries is governed by national frameworks and certification requirements, CPD for university faculty is typically voluntary, fragmented across departments, and shaped as much by individual career incentives as by institutional mandate.

The purpose of this review is to synthesize current literature on the models used to deliver CPD to university faculty, to examine the evidence for their effectiveness, and to identify the structural barriers that limit their impact. The review focuses specifically on higher education settings, distinguishing this literature from the considerably larger body of research on K-12 teacher professional development, whose findings do not transfer neatly to the university context given differences in disciplinary autonomy, workload structures, and the dual research-teaching mandate faculty typically carry.

Review Approach

This paper adopts a narrative literature review approach, drawing on peer-reviewed systematic reviews, empirical studies, and institutional case reports published between approximately 2019 and 2026. Sources were identified through targeted searches of recent education research literature using terms including "continuous professional

development," "faculty development," "higher education," and related model-specific terms such as "communities of practice" and "mentoring." Priority was given to systematic reviews and studies published in the last three years to ensure the synthesis reflects current practice, while foundational conceptual work was retained where it continues to shape how CPD is defined and evaluated.

Models of CPD in Higher Education

1. Episodic Training: Workshops, Seminars, and Short Courses

The most common and longest-standing model of faculty CPD remains the discrete training event: a workshop, seminar, or short course addressing a specific pedagogical or technical skill. These formats are administratively simple to organize and allow institutions to respond quickly to emerging needs, such as training on generative AI tools or online course design. However, a recurring finding across the literature is that one-off events, when disconnected from a wider developmental sequence, produce limited and short-lived change in actual teaching practice, even when participant satisfaction with the sessions themselves is high (Ncube & Ajani, 2025)^[3].

2. Mentoring and Coaching

Mentoring relationships, whether formal pairings between senior and junior faculty or peer coaching arrangements among colleagues at similar career stages, represent a second major model family. Mentoring extends support over a longer time horizon than a single workshop and allows guidance to be tailored to a faculty member's specific courses, students, and disciplinary context. Reviews of

faculty development programmes suggest that mentoring is particularly valued by early-career academics, who report that individualized feedback on their teaching is more actionable than generic training content, though the effectiveness of mentoring depends heavily on mentor training and the voluntary versus mandated nature of the pairing.

3. Communities of Practice

A growing body of literature positions communities of practice (CoPs) as one of the more sustainable CPD models for higher education. In a CoP, faculty with a shared teaching interest, such as a discipline, a pedagogical approach, or a student population, meet regularly to exchange experience, co-develop teaching materials, and reflect collectively on practice. A recent literature review of CoPs in higher education settings describes them as a mechanism through which faculty development becomes an ongoing, socially embedded process rather than a series of isolated training events (Every Learner Everywhere, 2025). Related work on scientific and STEM education CPD similarly identifies collaborative and virtual CoP structures as valuable for sustaining peer exchange and co-constructing pedagogical knowledge over time, while cautioning that time constraints and limited institutional infrastructure remain frequent barriers to sustaining such communities (Frontiers in Education, 2025).

4. Structured, Competency-Based, and Evaluated Models

A fourth model family includes more formally structured approaches: competency-based micro-credentials, multidimensional mentoring networks, and programmes explicitly designed around evaluation frameworks. Kirkpatrick's four-level model, originally developed for corporate training evaluation, has been adapted by several institutions to assess faculty development programmes across the dimensions of participant reaction, learning, behavioural change, and institutional-level results. A recent mixed-methods application of this framework to a faculty development programme found high participant satisfaction (the "reaction" level) and reported gains in instructional design and technology-integration competencies (the "learning" level), while noting, consistent with the broader literature, that evidence at the behavioural and institutional-outcome levels remains harder to establish and less frequently reported.

Evidence on Effectiveness

Across model types, several converging findings emerge from the recent literature. First, sustained and iterative engagement produces more durable change than isolated events; a systematised international review of university teacher development found that effective programmes were increasingly designed as developmental and ongoing processes rather than single interventions. Second, active and embedded learning, meaning CPD activities that faculty can apply directly within their own courses rather than generic content delivered off-site, is associated with stronger reported gains in teaching practice. Third, institutional support, including protected time, leadership endorsement, and integration of CPD participation into workload and promotion structures, consistently emerges as a determinant of whether faculty translate CPD participation

into sustained practice change, rather than treating it as a compliance exercise.

At the same time, the evidence base has notable limitations. Much of the available research relies on self-reported satisfaction or perceived competence gains rather than independently observed teaching behaviour or, further still, measured student learning outcomes. A systematic review of CPD's impact on teaching quality concludes that CPD should be understood as operating across multiple, interlinked levels, namely individual practice, reflective capacity, professional community, and institutional context, and that its impact cannot be adequately captured by satisfaction surveys alone (ResearchGate, 2024).

Barriers to Effective Implementation

Several structural barriers recur across the literature. Faculty workload is the most frequently cited obstacle: academics balancing teaching, research, administrative duties, and, in many contexts, clinical or industry responsibilities, report insufficient time to engage meaningfully with CPD activities. Related to this is a lack of institutional infrastructure and funding to sustain longer-term models such as communities of practice, which require dedicated coordination and meeting time rather than a single budget line for an external trainer. A further barrier is the absence of clear incentive structures; where CPD participation is not recognized in promotion, tenure, or workload allocation processes, faculty engagement tends to be inconsistent and driven by individual motivation rather than institutional design.

Discussion and Implications

The literature reviewed here suggests that the choice of CPD model matters less in isolation than the way models are combined and embedded within institutional structures. Episodic training remains useful for rapid, targeted skill transfer, such as onboarding faculty to a new learning management system, but is insufficient as a standalone strategy for deeper pedagogical change. Mentoring and communities of practice appear better suited to sustaining reflective, iterative development, particularly when they are voluntary in spirit but institutionally facilitated through allocated time. Evaluation frameworks such as Kirkpatrick's model offer institutions a structured way to move beyond satisfaction metrics, though the literature indicates that most programmes still struggle to capture evidence at the behavioural and institutional-outcome levels.

For institutions designing or revising faculty development programmes, these findings suggest three practical implications: CPD initiatives should be sequenced rather than delivered as isolated events; programmes should build in protected time and formal recognition rather than relying on faculty goodwill; and evaluation should be designed from the outset to track indicators beyond immediate participant satisfaction, ideally including classroom observation or student outcome data where feasible.

Conclusion

Continuous professional development for university faculty spans a diverse set of models, from short workshops to sustained communities of practice and formally evaluated competency frameworks. The weight of recent evidence favours sustained, embedded, and institutionally supported approaches over episodic training delivered in isolation.

However, the field continues to be constrained by an evidence base that leans heavily on self-reported outcomes. Future research would benefit from longitudinal designs that connect CPD participation to observed teaching practice and, where possible, student learning outcomes, as well as comparative studies examining how different model combinations perform across disciplinary and institutional contexts.

References

1. Every Learner Everywhere. Communities of practice in the higher education landscape: A literature review. Every Learner Everywhere, 2025.
2. Frontiers in Education. Continuing professional development in teachers: Insights for designing a formative trajectory in scientific education. *Frontiers in Education*, 2025, 10. <https://doi.org/10.3389/feduc.2025.1537502>
3. Ncube S, Ajani OA. The impact of continuous professional development on teaching quality: A systematic review. [Preprint/manuscript], 2025.
4. Sikandar H, Iqbal F. What makes professional teacher development in universities effective? Lessons from an international systematised review. *Professional Development in Education*, 2024;50(6):1550–1572. <https://doi.org/10.1080/19415257.2024.2386666>
5. UKR Publisher. Evaluating the contribution of faculty development programs to institutional outcomes: A mixed-methods study using Kirkpatrick's four-level model. *UKR Journal of Arts, Humanities and Social Sciences*, 2026.