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Professional Development for Educators: Research Summary

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Published 2025-10-29 by Higher Learning Lab, a 501(c)(3) nonprofit, Dover, Delaware.

Canonical version: https://www.higherlearninglab.org/portfolio/professional-development-for-educators-research-summary/

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Citation: Bjorn, G., & Ma, C. F. (2025). *Professional development for educators: Research summary*. Higher Learning Lab. https://doi.org/10.5281/zenodo.23541086

This review synthesizes fifteen years of peer-reviewed research on professional development (PD) for K–12 teachers, higher education faculty, and adult learning instructors in U.S. public education. Across all sectors, the evidence converges on one principle: educator learning drives student learning—but only when PD is designed as an active, sustained, and context-specific process rather than a one-time event.

1. K–12 Teachers

Impact: High-quality PD produces measurable gains in instructional quality (+0.49 SD) and modest but significant student achievement gains (+0.18 SD). A recent meta-analysis (preprint) finds the largest effects for programs exceeding 80 hours.

Core Features of Effective PD:

- Content-focused and aligned with curriculum standards.
- Active learning (practice, analysis of student work).
- Collaboration through professional learning communities.
- Modeling of effective instruction.
- Individualized coaching and expert feedback.
- Ongoing reflection and follow-up.

Outcomes: Teachers improve pedagogical skills, technology use, and equity-minded practice. Students show stronger performance in literacy, STEM, and digital competencies.

Models: Several, such as instructional coaching, lesson study, PLCs, and equity-centered frameworks (i.e., Culturally Responsive Teaching), demonstrate consistent success.

2. Higher Education Faculty

Impact: Faculty PD improves teaching practice and student learning quality, though effects are more complex to quantify than in K–12. Longitudinal studies (e.g., *The Tracer Project*) confirm that professors who repeatedly engage in development programs adopt more student-centered methods and that their students produce higher-quality work.

Best Practices for Effective PD:

- Voluntary, formative participation.
- Discipline-specific and experiential learning (micro-teaching, course redesign).
- Faculty learning communities and peer observation for collegial feedback.
- Integration with institutional initiatives (e.g., Writing Across the Curriculum, Critical Thinking).
- Multi-tiered, sustained support from teaching centers.

Challenges: Low participation, limited time, and weak institutional incentives. Success depends on campus culture valuing teaching excellence.

Models: Teaching center academies, course redesign institutes, and peer-coaching frameworks that link faculty PD to assessment of student work.

3. Adult and Self-Paced Learning Instructors

Impact: Though less researched, evidence shows that PD improves instructor confidence, instructional methods, and adult learner outcomes such as literacy gains, GED completion, and persistence.

Best Practices for Effective PD:

- PD designed using adult learning theory (self-directed, problem-based).
- Job-embedded, flexible formats—online, hybrid, or coaching models.
- Contextualized content (literacy, numeracy, workforce readiness).
- Modeling inclusive and trauma-informed practices (e.g., using Universal Design for Learning).
- Online communities of practice to overcome part-time isolation.
- Data-driven reflection on learner progress.

Challenges: High instructor turnover, part-time status, limited funding, and uneven access to technology. Programs that institutionalize mentoring and blended PD mitigate these barriers.

4. Cross-Sector Conclusions

- Active, collaborative, sustained learning is the defining feature of effective PD.
- Coaching and communities of practice outperform isolated workshops.
- Equity and technology integration are rising priorities, with proven models now available.
- Institutional support (time, incentives, leadership commitment) determines scalability.
- Evaluation systems must move beyond attendance counts to measure implementation and student outcomes.

5. Policy and Practice Implications

1. Invest in long-duration PD (60–100 hours per year) rather than short sessions.
2. Embed PD in teachers' and faculty workflows, pairing workshops with coaching.
3. Use data to close the loop: analyze student outcomes to refine PD content.
4. Fund PD as infrastructure, not as an optional add-on—especially in adult education.
5. Cultivate professional communities that make reflective, evidence-based teaching a shared norm.

Conclusion

Effective professional development is not about training teachers once—it is about building systems that enable educators to learn, test, and continually refine their practice. When PD is purposeful, sustained, and supported, it elevates both teaching quality and student success across K–12, higher education, and adult learning.