

# Metasynthesis of Inservice Research: Implication for Early Childhood Intervention From the ECPC

## Purpose

The purpose of the metasynthesis described was to ascertain the extent to which studies of inservice professional development that included key characteristics and core features of inservice training considered effective by professional development specialists were associated with changes and improvements in educator and student outcomes. This was accomplished by identifying research syntheses of inservice professional development and coding and systematically analyzing the types of inservice afforded teachers and educators to determine whether the inclusion of key characteristics and core features in fact were related to positive teacher and student outcomes.

## Included Research Syntheses

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## Search Methods

Search terms: (in-service OR inservice) AND (professional development OR staff development OR continuing education OR training) AND (literature review OR narrative review OR systematic review OR meta-analysis OR summative review OR traditional review) AND (teacher OR educator OR practitioner) AND (early intervention OR early childhood OR preschool OR elementary OR secondary)  
\*Research syntheses were included if inservice professional development was the main focus of a literature review

## Search Results



## Implications for Practice

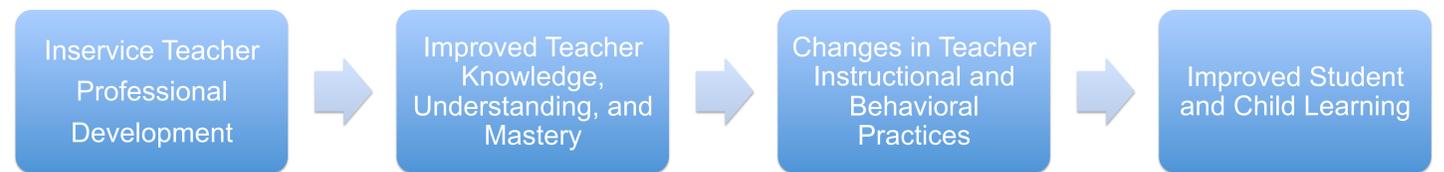
The findings reported provide additional empirical support for the professional development framework for planning and conducting inservice training to promote and improve teacher acquisition of content knowledge and instructional practices and in turn enhance child and student learning and competence.

In planning and conducting inservice professional development, it is important to have the appropriate dose of inservice teacher training.

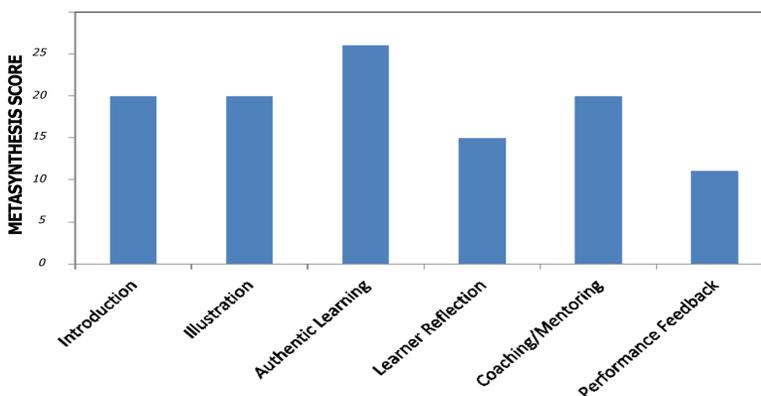
There is a need to explicitly include distributed teacher learning opportunities with enough time between opportunities to reflect on and internalize knowledge and skill acquisition and to receive ongoing supports to reinforce teacher mastery.

| Study Referenced   | Type of Synthesis | Type of Studies | Research Designs | Number of Studies | Participants                  | Number of Participants |
|--|-------------------|-----------------|------------------|-------------------|-------------------------------|------------------------|
| Blank, R.K., & De las Alas, N. (2009). <i>Effects of teacher professional development on gains in student achievement: How meta analysis provides scientific evidence useful to education leaders</i> (pp.162). Washington, DC: Council of Chief State School Officers.  | Meta-analysis     | Group           | E, Q             | 16                | K-12 teachers                 | 749                    |
| Blank, R.K., De las Alas, N., & Smith, C. (2008). <i>Does teacher professional development have effects on teaching and learning?: Analysis of evaluation findings from programs of mathematics and science teachers in 14 states</i> (pp.1-35). Washington DC: Council of Chief State School Officers.  | Systematic Review | Group           | Q, P, D          | 25                | K-12 teachers                 | >3000                  |
| Capps, D.K., Crawford, B.A., & Conatas, M.A. (2012). A review of empirical literature on inquiry professional development: Alignment with best practices and a critique of the findings. <i>Journal of Science Teacher Education</i> , 23, 291-318.  | Summative Review  | Mixed           | P, D             | 17                | K-12 teachers                 | >400                   |
| Cavanaugh, B. (2013). Performance feedback and teachers' use of praise and opportunities to respond: A Review of the literature. <i>Education and Treatment of Children</i> , 36(1), 111-137.  | Summative Review  | Mixed           | Q, S, D          | 25                | PreK-12 teachers              | 86                     |
| Dunst, C.J., Trivette, C.M., & Hamby, D.W. (2010). Meta-analysis of the effectiveness of four adult learning methods and strategies. <i>International Journal of Continuing Education and Lifelong Learning</i> , 3(1), 91-112.; Dunst, C.J., & Trivette, C.M. (2012). Moderators of the effectiveness of adult learning method practices. <i>Journal of Social Sciences</i> , 8, 143-148. | Meta-analysis     | Group           | E                | 21                | Educators Non-Educators       | 1204                   |
| Fukukink, R.G., & Lont, A. (2007). Does training matter? A meta-analysis and review of caregiver training studies. <i>Early Childhood Research Quarterly</i> , 22, 294-311.  | Meta-analysis     | Group           | Q, P             | 17                | Early childhood practitioners | 959                    |
| Ingersoll, R., * Kralik, J.M. (2004). The impact of mentoring on teacher retention: What the research says. <i>ECS Research Review: Training Quality</i> . Denver, CO: Education Commission for the States.  | Narrative Review  | Group           | Q, P             | 10                | K-12 teachers                 | >18,000                |
| Inersoll, R., & Strong, M. (2011). The impact of induction and mentoring programs for beginning teacher: A critical review of the research. <i>Review of Education Research</i> , 81(2), 201-233.  | Narrative Review  | Mixed           | E, Q, P, D       | 15                | K-12 teachers                 | >15,000                |
| Inser, T., Tout, K., Zaslow, M., Shi, M., Quinn, K., & Rothenberg, L. (2011). <i>Coaching in early care and education programs and quality rating and improvement systems (QRIS): Identifying promising features</i> . Washington, DC: Child Trends.   | Narrative Review  | Group           | E, Q, P          | 44                | Early childhood practitioners | Not Reported           |
| Joyce, B., & Showers, B. (1995). <i>The design of training and peer coaching: Student achievement through staff development: Fundamentals of school renewal</i> (2 <sup>nd</sup> ed.). White Plains, NY: Longman.  | Meta-analysis     | Mixed           | Not Reported     | 200               | K-12 teachers                 | Not Reported           |
| Kretlow, A.G., & Bartholomew, C.C. (2010). Using coaching to improve the fidelity of evidence based practices: A review of studies. <i>Teacher Education and Special Education</i> , 33, 279-299.  | Summative Review  | Mixed           | E, Q, S          | 13                | PreK-8 teachers               | 110                    |
| Saylor, L.L., & Johnson, C.C. (2014). The role of reflection in elementary mathematics and science teachers' training and development: A meta-synthesis. <i>School Science and Mathematics</i> , 114(1), 30-39.  | Narrative Review  | Mixed           | Not Reported     | 21                | K-6 teachers                  | Not Reported           |
| Renner, R., & Lauer, P.A. (2005). <i>Professional development analysis Denver, CO: Mid-continent Research for Education and Learning (McREL)</i> .   | Narrative Review  | Mixed           | Q, P, D          | 37                | K-12 teachers                 | Not Reported           |
| Yoon, K.S., Duncan, T., Lee, S.W.-Y., Scarloss, B., & Shapley, K.L. (2007). <i>Reviewing the evidence on how teacher professional development affects student achievement</i> . Washington, DC: US Department of Education, Institute of Education Science, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Southwest.                   | Systematic Review | Group           | E, Q             | 9                 | K-5 teachers                  | 201                    |
| Zaslow, M., Tout, K., Halle, T., Whittaker, J.V., Lavelle, B., & Child Trends. (2010). <i>Toward the identification of</i>   | Systematic Review | Group           | E, Q, P          | 78                | Early childhood practitioners | >3400                  |

## Framework for linking inservice professional development, changes in teacher and educator knowledge, skills, and practices, and improvements in student and child learning.



## Characteristics of Effective Inservice Professional Development



## Characteristics of Inservice Professional Development Codes

|                           |  |
|---------------------------|--|
| Focus of Training         | Learner Objectives and content area  |
| Inservice Setting         | Job-embedded or nonjob-embedded inservice training   |
| Inservice Characteristics | Trainer introduction and illustration of a practice, authentic educator/practitioner learning opportunities and learner reflection, professional development specialist coaching, mentoring, or performance feedback during inservice training |
| Contextual Variables      | Extended learner supports and inservice dosage of sufficient amounts to reinforce initial learning   |
| Study Outcomes            | Learner outcomes and student/child outcomes  |

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