

## Does Content-Focused Teacher Professional Development Work? Findings from Three Institute of Education Sciences Studies

Garet, M. S., Heppen, J. B., Walters, K., Smith, T. M., & Yang, R. (Nov 2016) Does Content-Focused Teacher Professional Development Work? Findings From Three Institute of Education Sciences Studies [Brief]. Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education.

**Purpose:** The goal of this study was to examine the impact of professional development on teachers' instructional practice and content knowledge, as well as their students' achievement.

**Subjects:** The three subjects were from a second-grade reading study, seventh-grade math study, and fourth-grade math study. In the second-grade reading study, there were six districts, 90 schools, 270 teachers, and 5,530 students. In the seventh-grade math study, there were 12 districts, 77 schools, 195 teachers, and 11,470 students. In the fourth-grade math study, there were six districts, 73 schools, 165 teachers, and 3,677 students.

**Research methods:** All three studies used an experimental design, with treatment groups receiving professional development and the control groups, business-as-usual professional development, formed using random assignment. Each study's design features included sample and outcome measures.

**Findings:** The studies provided evidence that professional development programs focused on improving teachers' content knowledge and their knowledge about content-specific pedagogy can produce significant gains in teachers' knowledge by the end of the year. The studies also provide evidence that a one-year professional development program can improve some aspects of instructional practice. None of the three studies showed a positive effect on student achievement at the end of the year that the professional development experience was implemented, as measured by accountability tests or tests constructed specifically for the studies. The studies found that most of the measured aspects of teachers' knowledge and practice were not associated with student achievement.

**Implications:** The studies suggest that there is a need to improve our understanding of the aspects of teacher knowledge and practice and how to focus professional development on improving outcomes. Teacher knowledge and practice, as measured in existing studies, do not appear to be strongly and consistently related to student achievement. This finding reinforces the need to improve our ability to identify and reliably measure the specific aspects of teacher knowledge and practice that professional development should try to strengthen. Another implication is further research on how teacher professional development leads to measurable improvements in student learning.