

CPRE Policy Bulletin

Changing Teaching Practice and Improving Student Performance: The Role of Professional Development

A survey and analysis by the Consortium for Policy Research in Education suggest that certain kinds of professional development influence teachers to change their teaching practice and that their changed practice improves student achievement.

Consortium for Policy Research in Education (CPRE) researchers have defined the kind of professional development that holds great promise for helping teachers to improve their practice and, in turn, for students to improve their academic performance. This study of mathematics reform in California has important implications for other subjects of curriculum and instruction.

States and school districts have set new academic standards that require teachers to change the way they teach so their students can meet the more challenging standards.

Teachers have long been seen as the key to improving student performance. School districts and state education agencies have long recognized the importance of providing learning opportunities for classroom teachers. However, the focus, quality and duration of these professional development experiences vary widely and most of these learning opportunities for teachers do not meet the criteria identified by the CPRE study.

Professional development that is **grounded in the curriculum that students study**, professional development that is **connected to several elements of instruction** (for example, curriculum *and* assessment), and professional development that is **extended in time** influences teachers to change the ways they teach and their students perform better on curriculum-based assessments.

CPRE researchers found that California students benefitted from having teachers whose practice was more closely tied to state instructional goals:

- Students of teachers who attended student-curriculum-centered workshops performed better on California mathematics tests.
- Students of teachers who attended workshops that did not focus on the student curriculum (even those that focused on important topics like diversity and collaborative learning) did not perform better on the California mathematics tests.

- Schools where teachers reported using more teaching practices associated with the new mathematics curriculum framework had higher student scores on the state mathematics test.
- Schools where teachers used new curriculum units based on the new framework had higher student test scores than schools where teachers did not use the new curriculum units.

Most professional development in the United States does not meet the CPRE criteria. Relatively few professional development experiences are grounded in the academic content of schooling. Far more professional development is either generic (say, focused on classroom management) or peripheral (training in the use of math manipulatives, for example). The majority of professional development experiences for teachers are one-shot, one day or even briefer experiences.

Professional development that is fragmented, that is not focused on the student curriculum, and that does not afford teachers consequential learning opportunities cannot be expected to be a constructive agent of state or local instructional policy.

Based on the analysis of the survey of California teachers and the results of the California assessments in 1994, CPRE researchers conclude that when there is a consistent relationship between the elements of instruction—instructional policy goals, the professional development curriculum, assessment instruments and teachers' knowledge about assessment, and the student curriculum—teachers' professional development pays off in students' performance.

For copies of the 16-page issue of the CPRE Policy Brief, *State Policy and Classroom Performance: Mathematics Reform in California*, (individual copies are free) or the 48-page CPRE Research Report, *Instructional Policy and Classroom Performance: The Mathematics Reform in California*, (\$12.00), write to: CPRE Publications, Graduate School of Education, University of Pennsylvania, 3440 Market Street, Suite 560, Philadelphia, PA 19104-3325. Make checks payable to: **Trustees of the University of Pennsylvania**.