

background

Report # 99

Teachers' Education & Elementary School Quality

December 2007

**Teachers' Education
And
Quality Learning**

Elementary Questions

Teacher quality regulations not driving improvements

Teachers without question play a critical role in determining the quality of the children's learning experiences and academic outcomes. Nearly all states seek highly qualified teachers to work in the public schools and the yardstick most widely used to determine who fits the bill is the degree a teacher has earned.

But a new study of 2,500 elementary school classrooms across the nation reports that a teacher's degree is too narrow a measure to predict whether children in the early grades are getting a high-quality education. In fact, the study warns, unless states rethink that metric of quality, actual opportunities to learn may not be driven to improve.

The study, published this year in the journal *Science* examined the elementary classroom experiences of more than 1,000 children recruited at birth in 10 U.S. cities, including Pittsburgh. The sample covered classrooms in more than 1,000 elementary schools. All of the teachers had a bachelor's degree, 44% had a master's degree and 90% held state teaching credentials.

Classroom Experiences

Although the experiences of fifth graders varied, the study found that for the most part the teaching was focused more on performance of basic reading and math skills, rather than on problem-solving and reasoning skills or other content areas.

And few opportunities were provided in the classroom to learn in small groups, to improve analytical skills or to interact extensively with teachers.

The findings for first and thirds grades were similar to those reported for

fifth grade classrooms.

Fifth graders, for example, spent more than 91% of their time working in whole-group or individual-seatwork settings, while only 7% of their time was spent in small group instruction with fewer than five students.

In the fifth grade, 37% of instruction was in literacy and 25% in math. In the first and second grades, math accounted for more than 50% of instruction. Also in the fifth grade, science accounted for 11% of instruction and social studies for 13%. On average, fifth graders received five times as much instruction in basic skills as instruction on problem solving or reasoning.

Fifth grade teachers also spent 17% of their time instructing students on how to manage materials and time.

The study noted that while children were engaged in instructional activities, they usually were exposed to only one method of instruction, such as

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a vocabulary worksheet or watching the teacher do math problems on the blackboard.

Children also received fairly generic feedback about their performance and that feedback mostly focused on whether or not their work was correct.

Researchers also examined the amount of verbal and non-verbal interaction teachers had with individual children. Most of the time, children were left to manage their own learning and activity without contact with the teacher. Also, children who needed support were unlikely to receive it consistently.

The study reported that such classroom dynamics were not related to teachers' degree status or experience. Overall, the researchers stated, the findings indicated a pattern of instruction that "appears inconsistent with aims to add depth to students' understanding, particularly in mathematics and science."

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Policy Implications

Recent major studies of preschool classrooms and elementary school classrooms each found that although states focus on recruiting quality teachers in the public schools, simply relying on a teacher's degree as a measure of quality teaching is not enough to improve the learning opportunities in those classrooms or the academic outcomes of students.

The findings were not seen as an indictment of the role of teachers' education in creating quality learning opportunities.

Instead, they suggest that teachers' level of education should be considered as only one part of a system of factors that contribute to teacher and classroom quality and children's academic gains.

After studying the dynamics of elementary classrooms across the nation, researchers concluded their report with a warning: "It is troubling that opportunities to learn in classrooms are unrelated to features intended to regulate such opportunities and that students most in need of high-quality instruction are unlikely to experience it consistently. If metrics and regulations for high-quality teaching continue to rely on teachers' credentials or school attributes, actual opportunities to learn may not be driven to improve."

Redefining Quality Teaching

The American Association of Colleges for Teacher Education (AACTE), in a statement last year to the Commission on No Child Left Behind, challenged the commission's definition of a "highly qualified teacher" as being too narrowly focused on teachers knowing their content. The AACTE argued that the term "highly qualified" should be reserved for teachers who not only know their content, but are also able to

teach it effectively.¹

Effective teaching, the AACTE stated, includes being able to engage students' interest in a subject; impart content in ways that children will comprehend; change teaching strategies to address the learning styles of diverse learners; and observe student progress toward standards, interpret scores from formal assessments, then make the appropriate adjustments in their teaching.

The AACTE, in recommending a more demanding definition, said prospective teachers should exhibit consistent success through a substantial pre-service clinical experience in a challenging school setting supervised by both university and school-based faculty.

Also, the AACTE recommended that a portion of No Child Left Behind funds be spent on school/university partnerships based on a Professional Development School (PDS) model for the purposes of candidate development, new

teacher induction, on-going professional development and improved teacher retention.

The PDS model involves an intensive, collaborative relationship between community school systems and an education college. It is based, in part, on the teaching hospital model, in which practitioners contribute to advancing the field and training the next generation of doctors and other health professionals.

Few evaluations of the PDS model have been done. However, available evidence suggests the potential to improve teachers' classroom skills, student outcomes and teacher retention. A Rand Corporation study, for example, found that high school students in a West Virginia PDS generally outscored students who were not in the PDS program in the basic skills and math portions of the Stanford Achievement Test.²



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