

# Public schools as good as private schools in raising math scores, study says

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Students in public schools learn as much or more math between kindergarten and fifth grade as similar students in private schools, according to a new University of Illinois study of multi-year, longitudinal data on nearly 10,000 students. The results of the study appear in the May issue of the influential education journal *Phi Delta Kappan*.

“These data provide strong, longitudinal evidence that public schools are at least as effective as private schools in boosting student achievement,” according to the authors, education professor Christopher Lubienski, doctoral student Corinna Crane and education professor Sarah Theule Lubienski.

The new study is the first published study to show that public schools are at least as effective as private schools at promoting student learning over time, they say.

Combined with other, yet-unpublished studies of the same data, which produced similar findings, “we think this effectively ends the debate about whether private schools are more effective than publics,” said Christopher Lubienski, whose research has dealt with all aspects of alternative education.

This is important, he said, because many current reforms, such as No Child Left Behind, charter schools and vouchers for private schools, are based on that assumption.

The debate essentially began three years ago with the publication in Phi Delta Kappan of a previous study by the Lubienskis, which challenged the then-common wisdom – supported by well-regarded but dated research – that private schools were superior.

In that 2005 study, they found that public school students tested higher in math than their private school peers from similar social and economic backgrounds.

In another, more-extensive study in early 2006, they built on those findings, and also raised similar questions about charter schools.

Both studies were based on fourth- and eighth-grade test data from the National Assessment of Educational Progress (NAEP).

The conclusions of the husband-and-wife team seemed “crazy radical” at the time, Sarah Lubienski said, and generated significant controversy. They were supported, however, later in 2006, with similar findings in U.S. Department of Education studies comparing public schools with privates and with charters, which looked at NAEP test data on both math and reading.

(Unlike literacy, math is viewed as being less dependent on a student’s home environment and more an indication of a school’s effectiveness, Sarah Lubienski said.)

Critics of these previous studies, however, have cited the lack of longitudinal data showing the possible effect over time of different types of schooling. The studies of NAEP data were only snapshots, they said, showing student achievement at a single point in time. The studies did not address the possibility that some students may have entered private school at a lower level of achievement.

The new study was designed, in part, to address that issue, the authors say in their PDK article.

The data for the new study came from the database produced by the Early Childhood Longitudinal Study, Kindergarten Class of 1998-99 (or ECLS-K), administered by the National Center for Education Statistics (NCES), part of the U.S. Department of Education.

The ECLS-K database includes both student achievement and comprehensive background information drawn from a nationally representative sample of more than 21,000 students, starting with their entry into kindergarten in the fall of 1998.

The most recent data available for the U. of I. study was gathered in 2004, in the spring of the students' fifth-grade year. The sample used for the study included 9,791 students in 1,531 schools (1,273 public, 140 Catholic and 118 other private schools).

To better determine the effects of attending different types of schools, the sample included only students who had stayed in the same type of school – though not necessarily the same school – throughout the years covered.

As in the previous studies, the researchers used a statistical technique known as hierarchical linear modeling to control for demographic differences between students, as well as schools. Among the demographic variables included in looking at students were measures of socioeconomic status; race and ethnicity; gender; disability; and whether the child spoke a language other than English at home.

Among the variables included in looking at schools was the average socioeconomic level of its students, its racial or ethnic composition, and its location (urban or rural).

The NAEP data had included similar information, but its quality and controls on its collection were not as strong as for ECLS-K, according to Sarah Lubienski, who studies math education and specializes in statistical research. “It’s one reason this study feels more definitive than the NAEP studies,” she said.

After controlling for demographic differences among students and schools, the researchers’ found that public school students began kindergarten with math scores roughly equal to those of their Catholic school peers. By fifth grade, however, they had made significantly greater gains, equal to almost an extra half year of schooling.

Part of the explanation, Sarah Lubienski said, might lie in the fact that Catholic schools have fewer certified teachers and employ fewer reform-oriented mathematics teaching practices – something they found in research for another study, accepted for publication in the American Journal of Education.

Public school students also “rivalled the performance of students in other (non-Catholic) private schools,” the researchers wrote. After adjusting for demographics and initial kindergarten scores, they found that achievement gains between kindergarten and fifth grade were roughly equal.

The number of private schools in the study did not allow for drawing conclusions about other subcategories of private schools, such as Lutheran, conservative Christian or secular, Sarah Lubienski said. In their earlier NAEP research, they found that Lutheran schools, for instance, performed on par with publics, while conservative Christian schools performed lower than all other school types.

“It is worth noting,” the researchers write in analyzing their results, “how little variation school type really accounts for in students’ growth in

achievement ... Specifically, while all of the variables in our model together explained 62 percent of the achievement differences between schools, school type alone accounted for less than 5 percent of these differences, with demographic considerations accounting for a much greater share.”

Put another way by Sarah Lubienski, “school type alone doesn’t explain very much of why these scores vary ... in truth, whether the school is public or private doesn’t seem to make that much difference.”

The researchers go on to write that they “personally see private schools as an integral part of the American system of education” and “there are many valid reasons why parents choose private schools and why policymakers may push for school choice.”

Academic achievement, however, may no longer be one of those reasons, they write. “Claims that simply switching students from one type of school to another will result in higher scores appear to be unfounded.”

They suggest “moving away from a simple focus on school type and instead examining what happens within schools.”

Source: University of Illinois at Urbana-Champaign

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