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COMMENTARY

School-Based Accountability and the Distribution of Teacher Quality Across Grades in Elementary School

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Research consistently shows that schools serving large proportions of disadvantaged students tend to have teachers with weaker credentials. Because teacher credentials, such as more years of experience, higher licensure test scores, and National Board Certification, are predictive of higher student achievement, this uneven distribution of teachers across schools is detrimental to the learning of disadvantaged students.

In our recent paper in *Education Finance and Policy*, we shift the focus away from differences in teacher quality across schools to differences in teacher quality across grades within schools. Specifically, we use North Carolina data to examine whether teachers in the lower grades (K–2) of elementary school are of poorer quality, as measured by their credentials, than those in the upper grades (3–5) of the same school. Teacher quality in the early grades is worthy of policy attention because recent studies demonstrate that children's early schooling experiences have large and significant effects on their later outcomes.

In addition, we examine the hypothesis that school-based accountability programs exacerbate any teacher quality shortfalls in the lower grades. We reasoned that because school accountability is typically based on student test scores that are not administered to children in the early years of elementary school (grades K–2 in North Carolina and many other states), these policies gives school principals an incentive to assign their stronger teachers to the upper grades. In that way, the testing performance of the school will be maximized.

We use longitudinal data on all teachers in North Carolina schools that serve grades K–5 from 1995 to 2009, a period that spans the introduction of the Federal No Child Left Behind (NCLB) accountability program. Since we cannot measure teacher quality by gains in student test scores in grades K–2, we use two credentials- based measures of teacher quality. One measure is the teacher's licensure test score and the other is a weighted average of credentials based on a value-added model estimated using student test scores in the upper elementary grades which we then use to predict the quality of teachers in the early grades. Using these measures of teacher quality, we compare teachers in the lower and upper grades of the same elementary schools.

Our first finding is that teachers in the lower elementary grades are consistently of lower quality, by both measures, than those in the upper grades in the same schools. Our second finding is that No Child Left Behind increased the relative shortfalls of teacher quality in the lower grades. Consistent with that finding, we document that NCLB induced school principals to move higher-quality teachers from the lower to the upper grades and to move lower-quality teachers from the upper to the early grades.

These finding are important for California schools. Like many states, California has made a significant investment in early childhood education for low income students through the California State Preschool Program. For these investments to reach their full potential, quality preschool must be followed by quality instruction in the early elementary grades. California begins standardized testing in second grade, a year earlier than many other states, but there may still be significant incentives for principals to move less qualified teachers to kindergarten and first grade. As policy makers consider changes to the accountability system, they should bear in mind the consequences that school accountability has for the distribution of high quality teachers across grades within elementary schools. Otherwise, they may inadvertently harm children at a particularly important time in their educational development.

The full study (gated) can be found in Fuller, Sarah C. and Helen F. Ladd, "School-Based Accountability and the Distribution of Teacher quality Across Grades in Elementary School", Education Finance and Policy, Fall 2013, Vol. 8, No. 4, Pages 528-559.

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