

## TESTING, TEACHER TURNOVER, AND THE DISTRIBUTION OF TEACHERS ACROSS GRADES AND SCHOOLS

Dillon Fuchsman (presenter, [dsfuchsm@uark.edu](mailto:dsfuchsm@uark.edu)) and Gema Zamarro  
University of Arkansas, Fayetteville, AR

Tim Sass  
Georgia State University, Atlanta, GA

Proposal for paper for SREE Spring 2020 Conference, March 11-14, 2020, Arlington, VA

**BACKGROUND:** Teacher turnover has adverse consequences for student achievement (Ronfledt et al., 2013) and imposes large financial costs for schools (Barnes, Crowe, & Schaefer, 2007; Birkeland & Curtis, 2006; Milanowski & Odden, 2007). Some have argued that high-stakes testing may lower teachers' satisfaction with their jobs and could be a major contributor to teacher attrition. If high-performing teachers can switch to schools with more advantaged students, high-stakes testing could also exacerbate differences in school quality. Furthermore, increased flexibility from ESSA gives states the power to reduce the standardized testing burden in their schools.

**POLICY INTERVENTION:** Changes in testing practices in Georgia present a unique opportunity to study the effect of high-stakes testing on teacher turnover and the distribution of teachers across grades and schools. Since 2002, all students in grades 1-8 were tested in reading, ELA, and math. Students in grades 3-8 were also tested in science and social studies. This testing schedule continued through spring 2011. Due to budget constraints associated with the Great Recession, Georgia stopped administering tests in grades one and two in spring 2012. Also, beginning in 2015, the state adopted a new test. In 2015 and 2016, students in grades 3-8 were tested in ELA, math, science, and social studies. In 2017, science and social studies testing was scaled back to grades 5 and 8, while students in grades 3-8 were still tested in ELA and math.

**DATA:** We use data on individual students and teachers from Georgia's statewide longitudinal data system, from 2007/08-2017/18.

**METHODS:** To measure the effect of testing pressures on teacher mobility choices we use a "difference-in-differences" approach, comparing changes in mobility over time in grades/subjects that discontinue testing vis-à-vis grades/subjects that are always tested. We model turnover with multinomial logit hazard models with five choices: (i) remain in present school and grade, (ii) change to a different grade within the same school (iii) transfer to another school within district, (iv) transfer out of district, and (v) exit the public school system in Georgia. Our models control for teacher characteristics and school-by-grade-level student body demographics. To analyze the impact of testing changes on the allocation of teachers across grades, we also estimate binary choice models of whether a teacher continues to teach in the same grade from one year to the next. These models allow teachers to switch grades and schools whereas our multinomial logit hazard models estimated grade changes within school and school changes separately even if the teacher also switched grades. Finally, we estimate school-level value-added models for math and ELA to gauge the impact of test-based accountability pressure on the distribution of school quality.

**RESULTS:** Our preliminary results for the first policy change – removing testing in grades 1 and 2 in Spring 2012 – show that this policy change did not have an impact on the likelihood of leaving teaching, changing schools within a district, or moving between districts. We uncover negative effects on the likelihood of grade switching and some positive effects on retention of beginning teachers in the profession and the district. Our analyses of the second policy change – removing science and social studies testing in grades 6 and 7 – find no effects on the probability of leaving the profession, changing districts, changing schools, or changing grades. We did find that rookie teachers were less likely to leave the profession. However, we find that these effects did not translate into any meaningful changes in the distribution of school quality.