

Identifying Effective Classroom Practices Using Student Achievement Data

Recent research has confirmed both the importance of teachers in producing student achievement growth and in the variability across teachers in the ability to do that. Such findings raise the stakes on our ability to identify effective teachers and teaching practices. This paper combines information from classroom-based observations and measures of teachers' ability to improve student achievement as a step toward addressing these challenges. The authors found that classroom based measures of teaching effectiveness are related in substantial ways to student achievement growth. The results point to the promise of teacher evaluation systems that would use information from both classroom observations and student test scores to identify effective teachers. The results also offer information on the types of practices that are most effective at raising achievement.

This study tests whether classroom observations- when done by trained professionals, external to the school, using an elaborated set of standards- can identify teaching practices most likely to raise achievement.

The results of the study provide some of the strongest evidence that classroom observations can capture elements of teaching that is related to student achievement. Relating observed classroom practices to achievement growth offers some insight regarding what types of classroom practices may be important in increasing student achievement.

The authors found that first, a teacher's overall score is important, and the results predict that policies and programs that help a teacher get better on all eight "teaching practice" and "classroom environment" skills measuring by TES (Teacher Evaluation System) will lead to student achievement gains. Second, even among those with the same average rating across all domains, helping teachers improve their "classroom environment" management will likely also generate higher student achievement. Third, given two teachers who are equally adept at "routinized content and standards focused teaching." The teacher who adds pedagogy that utilizes "questioning and discussion" practices will generate higher reading achievement, but not higher math achievement.

In conclusion, the results of this study provide initial support for the notion that multiple alternative measures of teacher effectiveness may be more predictive of future student achievement effects than any single measure.

Kane, T.J., Taylor, E.S., Tyler, J.H., & Wooten, A.L. (2010, March). *Identifying effective classroom practices using student achievement data* (Working Paper No. 15803). Cambridge, MA: National Bureau of Economic Research.