

Teachers Matter

Understanding Teachers' Impact on Student Achievement

ISAAC M. OPPER



People often emphasize the importance of good teachers, and many local, state, and federal policies are designed to promote teacher quality. Research using student scores on standardized tests confirms the common perception that some teachers are more effective at improving student test scores than others, although standardized tests provide an incomplete window into teachers' overall effectiveness.



Teachers matter more to student achievement than any other aspect of schooling.

Many factors contribute to a student's academic performance, including individual characteristics and family and neighborhood experiences. But research suggests that, among school-related factors, teachers matter most. When it comes to student performance on reading and math tests, teachers are estimated to have two to three times the effect of any other school factor, including services, facilities, and even leadership.



Although researchers do not usually observe nonschool factors, statistical methods can provide valuable estimates of teachers' effectiveness, but these estimates are imprecise.

Researchers cannot directly control for most nonschool factors that affect student test scores. Statistical methods such as value-added modeling have been shown to produce valuable information about teachers' effectiveness at increasing student test scores, but these estimates can be imprecise, especially for teachers who are early in their careers or who are new to a district. In addition, standardized tests do not measure all the outcomes that teachers are responsible for promoting, so measures based on these scores provide incomplete information about teachers' effectiveness. Even with these caveats, research shows that high value-added teachers also influence longer-term outcomes, such as graduation, college attendance, and earnings.



Effective teachers are best identified by their performance, not by their background or experience.

Despite common perceptions, effective teachers cannot reliably be identified based on where they went to school, whether they are licensed, or how long they have taught. A better way to assess teachers' effectiveness is to look at their on-the-job performance, including what they do in the classroom and how much progress their students make on achievement tests. This has led to policies that require evaluating teachers' on-the-job performance, based in part on evidence about their students' learning.

WANT TO LEARN MORE?

To access other fact sheets in this series, as well as reports, multimedia products, and more or visit www.rand.org/teacher-effectiveness.

Related Readings

Chetty, Raj, John N. Friedman, and Jonah E. Rockoff, "Measuring the Impacts of Teachers II: Teacher Value-Added and Student Outcomes in Adulthood," *American Economic Review*, Vol. 104, No. 9, May 2014, pp. 2633–2679.

Cantrell, Steven, and Thomas J. Kane, *Ensuring Fair and Reliable Measures of Effective Teaching: Culminating Findings from the MET Project's Three-Year Study*, Seattle, Wash.: Bill & Melinda Gates Foundation, Policy and Practice Brief, Measures of Effective Teaching project, January 2013.

Rockoff, Jonah E., Brian A. Jacob, Thomas J. Kane, and Douglas O. Staiger, "Can You Recognize an Effective Teacher When You Recruit One?" *Education Finance and Policy*, Vol. 6, No. 1, 2011, pp. 43–74.

About This Research

The author presents how research suggests that teachers are important to student achievement and how statistical methods can provide valuable but imprecise estimates of teacher effectiveness. This research in the public interest was supported by RAND, using discretionary funds made possible by the generosity of RAND's donors and the fees earned on client-funded research.

About RAND Education and Labor

This study was undertaken by RAND Education and Labor, a division of the RAND Corporation that conducts research on early childhood through postsecondary education programs, workforce development, and programs and policies affecting workers, entrepreneurship, and financial literacy and decisionmaking.

More information about RAND can be found at www.rand.org. Questions about this document should be directed to Isaac_Opper@rand.org, and questions about RAND Education and Labor should be directed to educationandlabor@rand.org.

The RAND Corporation is a research organization that develops solutions to public policy challenges to help make communities throughout the world safer and more secure, healthier and more prosperous. RAND is a nonprofit, nonpartisan, and committed to the public interest. RAND's publications do not necessarily reflect the opinions of its research clients or sponsors.

© 2019 RAND Corporation | Photo: TongRo Images Inc/Getty Images

Limited Print and Electronic Distribution Rights: This document and trademark(s) contained herein are protected by law. This representation of RAND intellectual property is provided for noncommercial use only. Unauthorized posting of this publication online is prohibited. Permission is given to duplicate this document for personal use only, as long as it is unaltered and complete. Permission is required from RAND to reproduce, or reuse in another form, any of our research documents for commercial use. For information on reprint and linking permissions, please visit www.rand.org/pubs/permissions.



www.rand.org