# Can you recognize an effective teacher when you recruit one?

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Research on the relationship between teacher characteristics and teacher effectiveness has been underway for over a century, yet little progress has been made in linking teacher quality with factors observable at the time of hire.

A recent study by Columbia Business School's Prof. Jonah Rockoff, Sidney Taurel Associate Professor of Business, Finance and Economics; Brian Jacob, Walter H. Annenberg Professor of Education Policy, Gerald R. Ford School of Public Policy, University of Michigan; Thomas Kane, Professor of Education and Economics, Harvard Graduate School of Education; and Douglas Staiger, John French Professor of Economics, Dartmouth, suggests that one can predict economically significant variation in teacher effectiveness using a broadened set of information on new recruits. The researchers administered an in-depth survey to new math teachers in New York City and collected information on a number of nontraditional predictors of effectiveness, including teaching-specific content knowledge, cognitive ability, personality traits, feelings of self-efficacy, and scores on a commercially available teacher selection instrument, the Haberman PreScreener. Ultimately, the results suggest collecting a set of measures that would not appear on a teacher's curriculum vitae. The research was featured in *Education Finance and Policy*.

With the assistance of school district officials, the professors identified 602 teachers with no prior experience who were listed as teaching mathematics to students in grades 4-8 in the academic year 2006-07.

They limited the sample to math teachers in these grades in order to calculate a value-added measure of teacher effectiveness using at least one prior test score as a control. Of the teachers invited to complete the roughly 90 minute survey, 418 (69.4 percent) responded and 55.3 percent completed it entirely. The survey assesses a host of teacher qualities at the time of hire, including SAT scores, whether the teacher passed their licensure test on the first try, their undergraduate major, and the selectivity of their undergraduate college. The list also included less commonly used measures like tests of cognitive and mathematic ability and efficacy. The researchers also test what teacher characteristics are associated with high scores on the Haberman PreScreener and then test whether performance on this instrument predicts a variety of teacher and student outcomes. The study then documents how these metrics can be used to create composite measures of cognitive and noncognitive skills, both of which have statistically significant relationships with student achievement. By combining these measures of cognitive and noncognitive abilities, hiring committees could pull out useful information; the added information could explain 12 percent of the variance in teacher effectiveness.

The results are also consistent with the notion that data on job performance may be a more powerful tool for improving teacher selection than data available at the recruitment stage. However, they note that gathering information for selection during the recruitment process is likely to be far less costly than after teachers are already working with students. The researchers also find that more work is necessary in this line of research, and that further validation of their findings will require researchers or policymakers to gather a similar set of information on a different sample of teachers and test whether their results also emerge for this new sample.

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