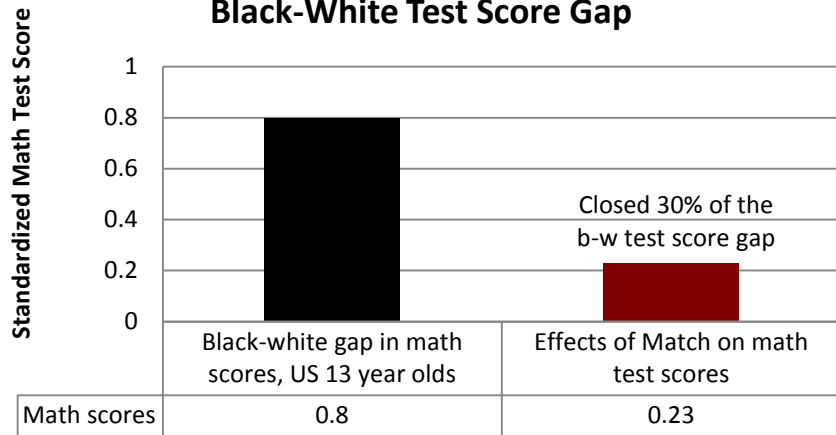


NOT TOO LATE: Building on the promise of Match-style tutoring

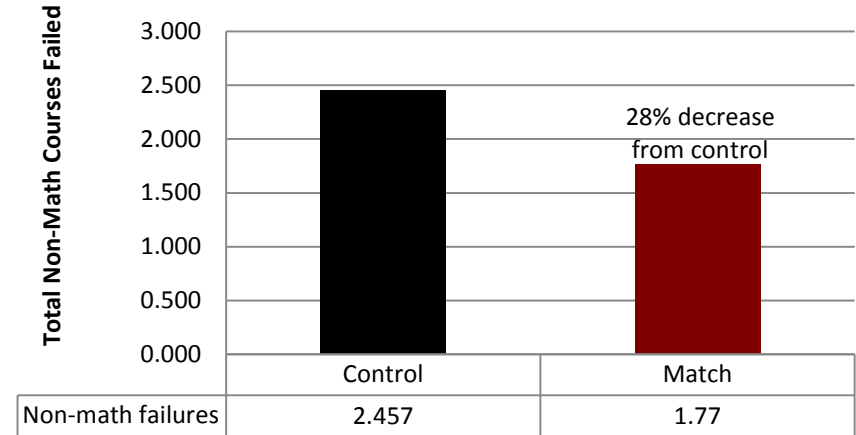
- Graduation rates and achievement test scores of black and Hispanic youth remain far lower than those of their white counterparts, and this gap is mirrored by striking disparities between rich and poor. As a society, we have made little progress towards closing these gaps over the past 40 years (Murnane, 2013). The test score gap between rich and poor (the 90th and the 10th percentiles of the income distribution) has actually *increased* substantially since 1940 (Reardon, 2011). Improving academic outcomes for disadvantaged youth is one of our nation's most urgent challenges.
- Most attempts to improve academic outcomes for disadvantaged adolescents have yielded disappointing results. This has led to growing concern that improving the academic skills of low-income children when they have already reached adolescence is too difficult and costly, which in turn has led some observers to argue that policy should focus on vocationally oriented instruction for teens or else on early childhood education.
- Yet previous interventions for disadvantaged youth may have been aiming at the wrong target. Few have addressed one of the key barriers to schooling success – academic “mismatch.” The variability in student academic levels increases as they progress through school, and by high school many students in distressed communities can be 4 to 7 years behind, particularly in math. Many previous interventions have tried to improve the quality of grade-level instruction, but students who are struggling to do 3rd or 4th grade math will still struggle to engage with 9th or 10th grade level math content, even if the quality of instruction is high.
- Our hypothesis is that the large variance we see in student achievement in public school systems – particularly in urban school districts – creates a “mismatch” between the sorts of supports that many youth need to succeed in school and what most previous education or social policy interventions have provided. To test this hypothesis, our University of Chicago research team is carrying out the first ever large-scale randomized controlled trial (RCT) of Match Education's tutoring program over two years with 5,000 students in 15 CPS high schools.¹ Match holds great promise for addressing the problem of academic mismatch, providing youth with high-intensity individualized math tutoring – two-on-one instruction for an hour a day, every day (“tutoring on steroids”) – designed to help them catch back up to grade level so that they can re-engage with regular classroom instruction. The contribution of our current paper is to present RCT evidence – of the sort that provides gold-standard evidence in medicine – that it is possible to substantially and cost-effectively improve academic outcomes for disadvantaged children *even once they reach adolescence*.
- Our data from the first year of this two-year study show that participation in Match improved student math test scores by the equivalent of an extra one to two years of learning for the typical American high school student (put differently, the effect equals about one quarter of a standard deviation, which is equal to about 30% of the black-white test score gap nationwide as measured by the NAEP for 13 year olds); improved math grades equal to 0.58 points on a 4-point scale; reduced math course failures by over 50%; and reduced overall course failures by over one quarter (a reduction in course failures of about half a course failed per student on average compared to the control mean of 2.4 courses failed).
- We are very encouraged by the results of the first year of this experiment. Contingent on funding, we are hopeful that at-risk youth in the Chicago Public Schools will continue to benefit from interventions like Match in the 2015-16 school year.

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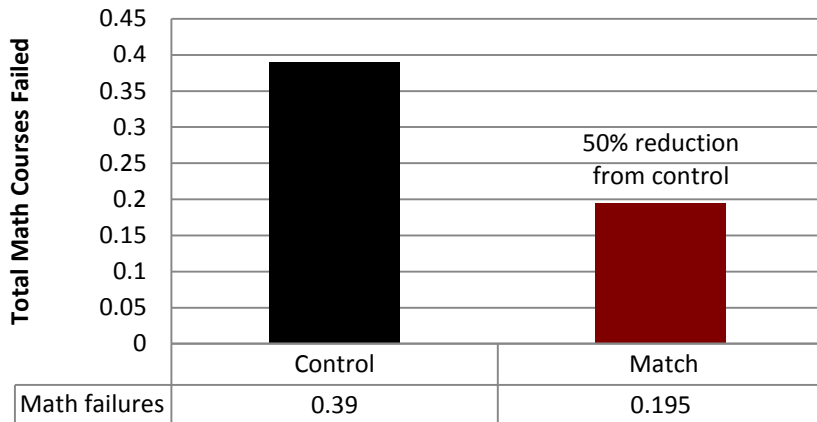
Match Effects Compared to Nationwide Black-White Test Score Gap



Non-Math Course Failures, AY2013-14



Math Course Failures, AY2013-14



Comparison of Cost Effectiveness in Math Gains

