

Improving Education in Developing Countries: Lessons and Questions

Richard J. Murnane

Harvard Graduate School of Education & NBER

Presentation to the

Impact Evaluation Network

September 20, 2012

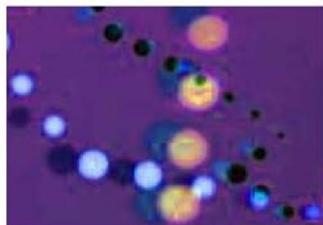
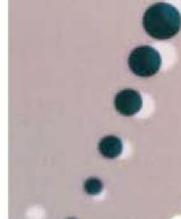
Summarizing Substantive Lessons from Causal Research on Education Initiatives

- A Danger
- An Opportunity

Four Guidelines for Improving Educational Outcomes

(and some puzzles to pay attention to)

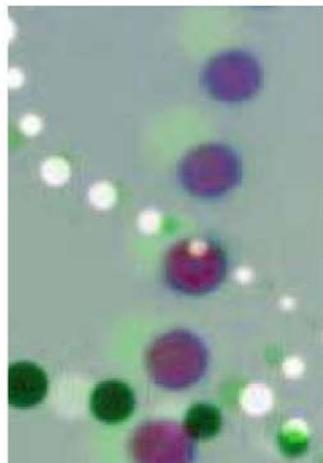
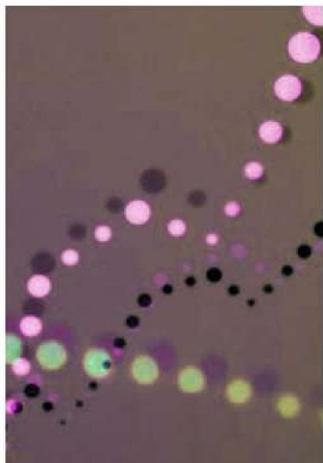
1. Lower the Cost of School Enrollment
2. Change Children's Daily Experiences in School
3. Improve Incentives
4. Create More Schooling Options for Children from Poor Families



METHODS MATTER

Improving Causal Inference
in Educational and Social
Science Research

Richard Murnane
John Willett



OXFORD

Guideline 1: Lower the Cost of School Enrollment

- Reduce Commuting Time
 - Duflo (2001) on Indonesia
 - Burde & Linden (2009) on Afghanistan
 - Currie & Moretti (2003) on U.S.
- Reduce Out-of-Pocket Educational Costs
 - Duflo et al. (2006) on Kenya
 - Dynarski (2003) on U.S.
- Reduce Opportunity Costs
 - Fiszbein & Schady (2009) on Conditional Cash Transfers
- Puzzle
 - Increasing attendance does not always increase achievement (Hanushek & Woessman, 2009; Fitzbein & Schady, 2009)

Guideline 2:

Change Children's Daily Experiences in School

- Traditional Input-based policies – more books, etc.
 - Popular
 - Do not change children's daily experiences in school
- The Balsakhi initiative did change the daily experiences of children.
- Puzzle: Investments in computer technology?

Guideline 2: Change Children's Daily Experiences in School

- Teaching Quality Matters
- Better Teaching
 - Challenges
 - Pre-service credentials do not predict teaching effectiveness well.
 - Conventional in-service professional development does not alter teachers' instructional methods or children's experiences.
 - Components of effective professional development
 - Focus on instructional methods for teaching particular skills
 - Teachers should experience what they want student to do (e.g. Hands-on science)
 - School-based focus in order to make instruction more consistent.
 - Teachers need to observe effective instruction of students similar to theirs.
 - A process, not an event.
 - Accountability.
- Puzzle: Most school systems devote resources to in-service training of teachers.
 - Evidence that in-service training enhances students' skills?
 - Evidence that in-service training consistently changes instruction?
- Critical research challenge: Examining conditions under which teacher training makes a difference.

Guideline 3: Improve Incentives (for teachers)

- Base compensation on factors teachers can control that influence student achievement:
 - teacher attendance (Duflo et al., 2008)
 - working at low-performing school (Clotfelter et al., 2008; Steele et al., 2010)
- Base compensation on students' achievement gains
 - Some Positive Evidence (Muralidharan & Sundararaman, 2009; Lavy, 2009)
 - New study by John List and colleagues – Short run importance of “loss aversion”
- Puzzles and Cautions
 - Half of variation in “value-added” consists of variation within teachers across years (McCafferty et al, 2009)
 - Rank order of teachers' value-added depends on choice of test and timing of test in a particular subject (Papay, 2010)
 - Dysfunctional responses may increase over time (Jacob & Levitt, 2003; Figlio & Getzler, 2002).
- A new direction: Focus on school as an organization – evidence from Jackson & Bruegman (2009)
- Hypothesis: Performance incentives are more likely to elicit desirable responses if coupled with capacity building. (Initiative with AP Math)

Guideline 3: Improve Incentives (for students)

- Long-run incentives are critical
 - Education paying off in labor markets
 - Long-run incentives may not be enough, given short time horizon of teenagers.
- Puzzles about responses to short-run Incentives
 - Different responses in Different Settings (Kremer et al., 2009)
 - Heterogeneous responses in the same setting (males v females, better prepared v. less well prepared):
Angrist & Lavy, 2009; Angrist et al., 2009; Riccio et al., 2010
 - Student responses depend on What is Rewarded (Fryer, 2010)
 - positive effects on student test scores to payment for reading books, for regular attendance, and for behaving well.
 - No responses to substantial payment for good test scores – students do not know how to achieve this objective.

Guideline 4: Create More Schooling Options for Children from Poor Families

- Many policy options: vouchers; charter schools; subsidies to schools to serve poor children.
- Policy should favor children from poor families (contrast Colombia secondary school vouchers with Chile school vouchers (Angrist et al., 2002, 2006; McEwan et al., 2008))
- Public funding of choice options should be tied to accountability for performance (Barrera-Osorio & Raju, 2009).
- Puzzle: Some schooling options affected long-run outcomes for disadvantaged students, but not test scores
 - Career academies (Kemple, 2008)
 - Charlotte-Mecklenburg high school lotteries (Deming, 2009).
 - So how should performance be measured for accountability?
 - Possibility of waivers from conventional accountability measures if a group of schools commits to rigorous evaluation using alternative outcome measures?

Final Words

- The Guidelines are just that (not recipes)
- The guidelines are complements, not substitutes
 1. Lower the Cost of School Enrollment
 2. Change Children's Daily Experiences in School
 3. Improve Incentives
 4. Create More Schooling Options for Children from Poor Families
- Incentives and capacity-building may be critical partners.
- It is important to pay attention to puzzles in the evidence
 - year-to-year variation in estimated teacher performance in improving students' scores
 - schooling options that improve long-run student outcomes, but not scores on standardized tests of reading and mathematics skills

Thank you for your time.

Email: Richard_Murnane@Harvard.edu