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Raising the Quality of Public Education: Challenges and Options for Local Governments

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Structure of Talk

- Discuss U.S. Research on Teacher Quality and Program Evaluation
 - Evidence is of fundamental importance, as many commonly held beliefs turn out to be incorrect
 - Evidence provides foundation for the development of effective policies that achieve specific goals



- Discuss implications of evidence for education policy-making
 - Highlight distinction between prescriptive policies such as training requirements for teachers and policies that strengthen incentives and evaluation practices
- Final Thoughts, questions and discussion
- Please interrupt me if something is not clear



Education Research

- Large and growing body of research investigates the effects of schools and teachers on student outcomes
 - Test scores
 - Educational attainment
 - Earnings
 - Social outcomes (e.g. probability of being in jail)



- Increasing policy focus on test scores, which are most easily measured and more relevant for primary and lower secondary schools
- I will focus on test scores today, though findings for other education and economic outcomes are similar



Research Puzzle

- Initial statistical research on schools produced findings that appeared to conflict with commonly held views that teachers and schools had large effects on learning and achievement and that they differed substantially in quality

1960s and 1970s US Research Findings

- Little evidence that higher spending schools were systematically better
- Little evidence that teachers with post-graduate degrees (MA or PhD) were systematically more effective
- Little evidence that teachers improved with experience
 - Note that these two teacher characteristics are primary determinants of teacher salaries



Explanation of Early Findings

- Difficult to separate effects of schools and teachers from effects of families, and methods used in early studies were not as sophisticated as those used today
 - May have produced misleading results



- Sample sizes were generally too small to identify educational important effects
 - Early expectations regarding the magnitude of effects were far too high
 - Recognition of reasonable treatment effect magnitudes is quite important for research and policy making



- Specification errors concealed important effects
 - Benefits of smaller classes appear to be concentrated in early grades and in higher poverty schools
 - Benefits of teacher experience appear to be concentrated in the first few years when teachers appear to improve a great deal



Common Misinterpretation of Results

- Finding that spending and specific teacher characteristics are not systematically related does NOT imply that schools and teachers are not important determinants of achievement and learning
- Rather these measures do not appear to capture important variation in school and teacher quality



Further explanation

- MA degree may not increase teacher effectiveness because teachers obtain the degree in order to meet requirements or increase pay rather than become better teachers
 - Incentive to obtain the least costly degree possible in terms of both money and time
 - If teacher compensation were more closely linked with effectiveness, we would expect teachers to attend programs that improve their performance

Student Outcome Based Research

- Substantial differences even WITHIN schools in teacher value added to student achievement (matters which 3rd grade teacher you get!)
 - Order teachers from least to most effective
 - Changing from the median teacher (middle in terms of effectiveness) to a very effective teacher (in the top 20 percent) has as large an effect on achievement in grades 1 to 7 as a very expensive **10** student reduction in class size

Variation NOT Explained by Standard Characteristics

- Typical difference in effectiveness between two 49 year old male teachers will be much larger than the average difference between teachers with
 - 3 versus 10 years of experience
 - Certification versus those without
 - MA degree versus those with only a BA
 - high versus low examination scores



Policy Dilemma

- Difficult to specify rules or regulations that will raise teacher quality
- In fact requirements that teacher obtain a “costly” masters degree may actually reduce the quality of instruction by discouraging some from becoming teachers



- Difficult to hire those who turn out to be excellent teachers, because it is difficult to predict who will be the better teachers
 - Asking teachers to teach a class would yield more information than evidence on university performance



Local District Plays Key Role in Raising Teacher Quality

- Rigorous evaluation of teaching key to raising the quality of instruction and education
 - Teachers should receive meaningful feedback in order to improve
 - Administrators must use information in employment and compensation decisions in order to serve students



Evaluation must be related to important student outcomes

- Highly rated teachers should be those generating significant learning as measured by achievement and other student outcome measures

Difficult to Implement Policy

- Much less stressful for administrators to give good ratings to all teachers
 - Evidence in US shows that vast majority of teachers receive high ratings and very few contracts are not renewed
- Educator training often emphasizes particular teaching methods
 - Many will want to base evaluation of teaching on the method observed in class, even if there is no evidence that outcomes are improved



Incentives for teachers to over-represent the typical quality of their instruction

- If classroom observations are announced in advance, teachers are likely to prepare much more for those lessons
- Teachers may cheat by altering student outcomes to inflate achievements
 - E.g. scores on standardized tests



Keys to Effective Evaluation

- There must be evidence of student outcomes that provides good picture of student performance
 - US now requires students to take standardized tests each spring and judges schools on the basis of test results (No Child Left Behind)
 - Some states and districts also reward teachers on the basis of test results



Test-Based Accountability

- Advantages
 - Objective measures of learning and achievement that are benchmarked against students outside of the classroom and school
 - Can use prior scores to account for family background and other factors that influence achievement and therefore isolate contribution of teacher
 - Focus on core subjects of reading, mathematics and science



- Disadvantages

- Teachers may teach very narrowly to tests in ways that do not contribute much to meaningful student learning
- Teachers may cheat
- Valuable outcomes that are not amenable to testing may be underemphasized
- Adoption of such systems typically done at the national or at least regional level, so districts may not be able to do this on their own



There must be Rigorous Evaluation of Teaching

- Must establish a system that encourages principals and other administrators to engage in rigorous evaluations and act on the results



Key Components of Good Evaluation Systems

- Judge teachers and administrators on the basis of their work and not on the basis of the contributions of families or previous teachers
 - Focus on value added to student outcomes is crucial regardless of the specific outcome measures



Avoid Perverse Incentives

- It is very problematic if an effective teacher in a school serving disadvantaged students is penalized because her students begin the year with less knowledge and have little family support
 - This would tend to discourage teachers from working in schools with high shares of disadvantaged children and lower the quality of instruction received by these students



Adopt incentives for administrators to evaluate rigorously and fairly

- Private schools have strong incentives to produce good education or face loss of students
- Public schools often do not have such incentives, and political processes are complex
- Competition among schools and districts can be a good mechanism to encourage high quality education



- Dissemination of school performance information to families and community at large provides one method for encouraging school to improve
- Linking resources with performance is a second tool, but it can be problematic to deprive struggling schools of resources



Ongoing Monitoring of Administrators Crucial

- Must monitor principals to ensure that evaluation is rigorous and fair and that they are having difficult conversations and making difficult decisions that serve students
- Must monitor more senior administrators to ensure that they are evaluating principals
 - Political process must be effective



Role of State and National Governments

- Use regulation wisely in order to avoid imposing requirements that are a burden for potential teachers and that are not good predictors of the quality of instruction
- Invest in research on school and teacher quality and disseminate results
- Require schools to provide meaningful information on student outcomes
 - National tests?



- Provide competitive salaries
- Consider factors that make it more difficult to attract teachers to a school when making school finance decisions
 - Offset labor market disadvantages in order to encourage a greater supply of teachers in disadvantaged schools
 - Evidence suggests that working conditions are more important than pay



Final Thoughts

- Raising the quality of instruction requires a strong, ongoing commitment to children
 - It is much more difficult to foster an environment of rigorous performance monitoring and evidence-based decision-making than to impose a regulation that requires additional training for teachers



- The increasing importance of education and higher order skills in the labor market amplifies the importance of high quality instruction
- The failure by local governments to adopt practices that lead to high quality instruction is becoming increasingly costly to children