

E10.2155: ECONOMIC ANALYSIS FOR EDUCATION POLICY
NEW YORK UNIVERSITY
FALL 2006

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Lecture:	Thursday evenings, 4:55 – 7:35 p.m.	Office hours:	TBD

COURSE DESCRIPTION This course applies the tools of microeconomics to the analysis of policy issues in education. After an introduction to the analytical and empirical toolkit that economists draw upon to study education, we apply these methods to questions such as: how do individuals decide how much education to pursue? What school resources have the greatest impact on students' test scores and other life outcomes? Do class sizes matter? How do teacher labor markets operate? How are schools funded, and how have major finance reforms of the past four decades affected outcomes and school behaviors? Throughout the course, particular attention will be paid to the empirical methods social scientists use to rigorously test the effects of education policies and to make predictions about the impact of future policy changes.

PREREQUISITES A prior introductory course in statistics, econometrics, or quantitative methods is highly recommended. An undergraduate or graduate course in microeconomics would be beneficial, but is not required (I will assume you have no training whatsoever in economics). If you are concerned about your preparation for this course, please see Prof. Corcoran at the beginning of the semester.

TEXTBOOKS AND READINGS There is currently no textbook dedicated to the economics of education (though several are in progress). Therefore, all assigned readings will consist of book chapters or journal articles from a variety of sources (a reading list follows). Most if not all of the journal articles are available for download through the NYU Library e-journal portal, provided you are connected via a campus computer or are logged in with your NYU NetID, at: http://library.nyu.edu/collections/find_ejournals.html.

I have attempted to assign readings that are accessible to any graduate student with a modicum of training in quantitative methods and some institutional knowledge of U.S. education policy. That said, some of the assigned articles may seem impossibly technical. *Rest assured* that I do not expect you to fully understand research papers with a sophisticated econometric content. Rather, you should read these articles with the following objectives:

- be able to identify the specific research question that is being addressed, or hypothesis that is being tested
- be able to place this research question in the context of our class discussions
- be able to explain—verbally, not mathematically—the methods the author(s) are using to tackle this research question or test this hypothesis
- where a specific hypothesis is being tested—for example, “x has a positive (negative) and significant effect on y”—what does the author do to convince the reader that this effect is a *causal* one?
- what data does the author use (if any) to address their research question?

The bulk of our class discussion will focus on the assigned readings, so please prepare for each meeting by reading the assigned articles before class.

COURSE REQUIREMENTS Your grade for this course will be determined as follows: three problem sets (5% each for a total of 15%), written reviews of *six* recent economic analyses of education policy issues (10% each for a total of 60%) and a written midterm examination (25%). *To pass the course, you must complete all problem sets, research reviews, and the midterm exam.*

The problem sets are designed to give you practice with the analytical tools introduced in class, and thus will be assigned early in the semester. Many concepts will be introduced in the first half of the course that are key to your success in the remainder of the course. Thus, I have elected to give a midterm examination rather than a final to ensure that everyone is on track at the mid-semester point.

The research reviews will consist of written syntheses (4-5 pages each) that describe and critically analyze a piece of existing empirical research on education from the economics and public policy literature. I will provide a list of suggested papers, or you may suggest your own (subject to my approval). More details on the research reviews will be provided at a later date.

- COURSE OUTLINE**
- I. Introduction to the Economics of Education—A Brief Survey
 - II. Thinking Like an Economist—Concepts and Basic Analytical Tools of Economics
 - a. Markets: Demand, Supply and Equilibrium
 - b. Markets: The Labor Market
 - III. Private Investments in Education—the “Demand Side” of Education
 - a. The Economist’s Empirical Toolbox (a diversion)
 - b. The Economic Return to Schooling
 - c. The Economic Return to a GED
 - IV. Why is Education Publicly Provided? An Economic Rationale
 - V. The Education Production Function—the “Supply Side” of Education
 - a. The Production Function
 - b. The Education Production Function
 - c. “Does Money Matter?”
 - d. Does Class Size Matter?
 - e. Teachers
 - f. The Role of Peers
 - VI. More on Teacher Labor Markets and Teacher Labor Market Policies
 - VII. School Finance
 - a. An Overview of School Finance in the U.S.
 - b. Economies of Scale and the Cost of Education
 - c. The Good, the Bad and the Ugly of School Finance Reform
 - VIII. Market-Based Education Reforms
 - a. Overview
 - b. Vouchers
 - c. Charter Schools
 - IX. School Accountability Reforms
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READING LIST **Preliminary and Subject to Change**
(*) = required, all others are recommended readings

<p>Thursday September 9</p>	<p>Introduction to the Economics of Education—A Brief Survey The economic approach to the study of education and education policy.</p> <p>Owen, John D. 1995. <i>Why Our Kids Don't Study: An Economist's Perspective</i>. Baltimore: Johns Hopkins University Press. Chapters 3—6.</p> <p>Thinking Like an Economist: Concepts and Basic Analytical Tools of Economics Economic models, opportunity cost, marginal and cost-benefit analysis.</p> <p>(*) [introductory microeconomics textbook TBD—relevant chapter(s)]</p> <p>Markets: Demand, Supply, and Equilibrium Applying the economist's model of consumer and producer behavior to markets. How resources are allocated and prices determined in free markets.</p> <p>(*) [introductory microeconomics textbook TBD—relevant chapter(s)]</p>
<p>Thursday September 14</p>	<p>Markets: The Labor Market What determines the supply of and demand for labor, how wages are determined.</p> <p>(*) [introductory microeconomics textbook TBD—relevant chapter(s)]</p> <p>Private Investments in Education—the “Demand Side” of Education Human capital theory, and the “signaling” model of education and wages.</p> <p>(*) Borjas, George J. (2005). <i>Labor Economics, 3rd Edition</i> (New York: McGraw-Hill/Irwin), Chapter 7, pp. 235—245.</p> <p>(*) Weiss, Andrew. 1995. “Human Capital vs. Signaling Explanations for Wages,” <i>Journal of Economic Perspectives</i>, Vol. 9, No. 4, pp. 133—154.</p> <p>The Economist's Empirical Toolbox Correlation vs. causation. Linear regression, interpreting regression coefficients and standard errors, omitted variables bias, natural and quasi-experiments. How to critically read empirical research.</p> <p>(*) Wooldridge, Jeffrey M. 2003. <i>Introductory Econometrics: A Modern Approach</i>, 2nd edition. Chapter 1.</p>

<p>Thursday September 21</p>	<p>The Economic Return to Schooling How economists measure the private benefits to schooling, and the difficulties in doing so.</p> <p>(*) Borjas, George J. (2005). <i>Labor Economics, 3rd Edition</i> (New York: McGraw-Hill/Irwin), Chapter 7, pp. 245—257.</p> <p>Angrist, Joshua and Alan Krueger. 1991. “Does Compulsory School Attendance Affect Education and Earnings?” <i>The Quarterly Journal of Economics</i>, Vol. 106 No. 4, pp. 979—1014.</p> <p>Ashenfelter, Orley and Alan Krueger. 1994. “Estimates of the Economic Return to Schooling from a New Sample of Twins.” <i>American Economic Review</i>, Vol. 84, No. 5, pp. 1157—1173.</p> <p>The Economic Return to a GED The methodological difficulties in estimating the returns to obtaining a GED; the GED as an example of the “signaling” model of education.</p> <p>Tyler, John, Richard Murnane, and John B. Willet. 2000. “Estimating the Labor Market Signaling Value of the GED.” <i>Quarterly Journal of Economics</i>, Vol. (May), pp. 431—468.</p>
<p>Thursday September 28</p>	<p>Why is Education Publicly Provided? Externalities and public investment in education, asymmetric information, compulsory schooling laws, and the civic returns to education. An economic rationale for government involvement in education.</p> <p>(*) [introductory microeconomics textbook TBD—relevant chapter on externalities]</p> <p>(*) Taylor, Lori L. 1999. “Government’s Role in Primary and Secondary Education.” <i>Federal Reserve Bank of Dallas Economic Review</i> (1), 15 – 24. (www.dallasfed.org/research/er/1999/er9901b.pdf)</p> <p>Borjas, George J. 2005. <i>Labor Economics, 3rd Edition</i> (New York: McGraw-Hill/Irwin), Chapter 7, pp. 260—266.</p> <p>Dee, Thomas S. 2004. “Are there Civic Returns to Education?” <i>Journal of Public Economics</i>. Vol. 88, No. xx, pp. 1697—1720.</p>

The Production Function

Basic concepts of firm production; inputs, outputs, input substitution, diminishing returns.

(*) [introductory microeconomics textbook TBD—relevant chapter(s)]

The Education Production Function—the “Supply Side” of Education

Inputs and outputs of the education process, measuring school quality, the black-white test score gap.

(*) Hanushek, Eric A. 1986. “The Economics of Schooling: Production and Efficiency in Public Schools.” *Journal of Economic Literature*. Vol. 24, No. 3, pp. 1141—1159.

(*) Jencks, Christopher and Meredith Phillips. 1998. “The Black-White Test Score Gap,” chapter 1 in Christopher Jencks and Meredith Phillips, eds., *The Black-White Test Score Gap*, Washington, D.C.: The Brookings Institution, pp. 1—25.

Haveman, Robert and Barbara Wolfe. 1995. “The Determinants of Children’s Attainments: A Review of Methods and Findings.” *Journal of Economic Literature*, Vol. 33, No. 4, pp. 1829—1978. (select pages)

The Education Production Function—“Does Money Matter?”

Estimating the relationship between school spending and student outcomes.

(*) Burtless, Gary (ed). *Does Money Matter? The Effect of School Resources on Student Achievement and Adult Success*. Washington, D.C.: The Brookings Institution, 1996. (chapters TBD; will include “Introduction and Summary,” pages 1—42, possibly Hanushek chapter pp. 43—73).

(*) Card, David and Alan Krueger. 1996. “School Resources and Student Outcomes: An Overview of the Literature and New Evidence from North and South Carolina.” *Journal of Economic Perspectives*, Vol. 10, No. 4, pp. 31—50.

**Thursday
October 5****The Education Production Function—Does Class Size Matter?**

Estimating the relationship between class size and student outcomes. The Tennessee STAR experiment.

(*) Krueger, Alan. 1999. “Experimental Estimates of Education Production Functions.” *Quarterly Journal of Economics*, Vol. 114, No. 2, pp. 497—532.

Angrist, Joshua D. and Victor Lavy. 1999. "Using Maimonides' Rule to Estimate the Effect of Class Size on Scholastic Achievement," *Quarterly Journal of Economics*, Vol. 114, No. 2, pp. 533—576.

Mishel, Lawrence and Richard Rothstein, eds. 2002. *The Class Size Debate*. Washington, D.C.: Economic Policy Institute. (chapters TBD).

The Education Production Function—Teachers

Measures of teacher quality, which measurable attributes of teachers contribute the most to student outcomes.

(* Rice, Jennifer King. 2003. *Teacher Quality: Understanding the Effectiveness of Teacher Attributes*. Washington, D.C.: Economic Policy Institute. (chapters TBD).

(* Ferguson, Ronald and Helen Ladd. 1992. "How and Why Money Matters: An Analysis of Alabama Schools" in Helen Ladd (ed.) *Holding Schools Accountable: Performance-Based Reform in Education*. Washington, D.C.: The Brookings Institution, pp. 265—298.

Dee, Thomas S. 2001. "Teachers, Race and Student Achievement in a Randomized Experiment." *The Review of Economics and Statistics*, Vol. 86, No. 1, pp. 195—210.

The Education Production Function—The Role of Peers

Estimating the role of peers on student test scores and other outcomes. School and residential segregation.

Angrist, Joshua D. and Kevin Lang. 2004. "Does School Integration Generate Peer Effects? Evidence from Boston's Metco Program." *American Economic Review*, Vol. 94 No. 5, pp. 1613—1634.

Cook, Michael and William Evans. 2000. "Families or Schools? Explaining the Convergence in White and Black Academic Performance." *Journal of Labor Economics*, Vol. 18 No. 4, pp. 729—754.

[survey article on peers]

**Thursday
October 12**

Midterm Examination

<p>Thursday October 19</p>	<p>More on Teacher Labor Markets and Teacher Labor Market Policies The quality of teachers, factors that influence the demand for and supply of teachers, the analysis of merit pay policies. The role of teachers unions.</p> <p>(* Boyd, Donald, Hamilton Lankford, Susanna Loeb, and James Wyckoff. 2005. "Explaining the Short Careers of High-Achieving Teachers in Schools with Low-Performing Students." <i>American Economic Review</i>, Vol. 95, No. 2, pp. xxx.</p> <p>(* Corcoran, Sean P., William N. Evans, and Robert M. Schwab. 2004. "Changing Labor Market Opportunities for Women and the Quality of Teachers, 1957-2000." <i>American Economic Review</i>, Vol. 94 No. 2, pp. 230—235.</p> <p>(* Dee, Thomas S. and Benjamin J. Keys. 2004. "Does Merit Pay Reward Good Teachers? Evidence from a Randomized Experiment." <i>Journal of Policy Analysis and Management</i>, Vol. 23 No. 3, pp. 471—488.</p> <p>(* Temin, Peter. 2003. "Low Pay, Low Quality." <i>Education Next</i> 3(3): 8—13.</p> <p>Ballou, Dale and Michael Podgursky. 1997. <i>Teacher Pay and Teacher Quality</i>. Kalamazoo: Upjohn Institute. (chapters TBD, likely include chapter 4, "What Went Wrong").</p> <p>Flyer, Fredrick, and Sherwin Rosen. 1997. "The New Economics of Teachers and Education." <i>Journal of Labor Economics</i> 15(1): S104—139.</p> <p>Hoxby, Caroline M. and Andrew Leigh. 2004. "Pulled Away or Pushed Out? Explaining the Decline in Teacher Aptitude in the United States." <i>American Economic Review</i>, Vol. 94, No. 2, pp. 236—240.</p> <p>Hoxby, Caroline. 1996. "How Teachers Unions Affect Education Production." <i>Quarterly Journal of Economics</i>. pp. 671--718.</p> <p>Murnane, R.J., J.D. Singer, J.B. Willett, J.J. Kemple, and R.J. Olsen. 1991. <i>Who Will Teach? Policies that Matter</i>. Cambridge, Mass.: Harvard University Press. (chapters TBD, likely chapter 1).</p>
<p>Thursday October 26</p>	<p>An Overview of School Finance in the United States The roles of local, state, and federal government in financing public K-12 education. Legal challenges to state school finance systems.</p>

(*) Odden, Allan R. and Lawrence O. Picus. 2004. *School Finance: A Policy Perspective*, 3rd edition. New York: McGraw-Hill. Chapters 1-2.

(*) Hanushek, Eric A., and Steven G. Rivkin. 1997. "Understanding the Twentieth-Century Growth in U.S. School Spending." *Journal of Human Resources*, Vol. 32, No. 1, pp. 35—68.

Lankford, Hamilton and James Wyckoff. 1995. "Where has the Money Gone? An Analysis of School District Spending in New York State, 1979-80 to 1991-92." *Educational Evaluation and Policy Analysis*, Summer, pp. 195—218.

Yinger, John. 2004. "State Aid and the Pursuit of Educational Equity: An Overview," in *Helping Children Left Behind: State Aid and the Pursuit of Educational Equity*, John Yinger, ed. Cambridge: MIT Press.

Economies of Scale and the Cost of Education

Costs of producing education, the structure of school districts in the U.S.

(*) [introductory microeconomics textbook TBD—relevant chapter on cost functions]

Baumol, William J. 1993. "Health Care, Education and the Cost Disease: A Looming Crisis for Public Choice." *Public Choice*, Vol. 77, No. 1, pp. 17—28.

Kenny, Lawrence W. and Amy B. Schmidt. 1994. "The Decline in the Number of School Districts in the U.S.: 1950-1980." *Public Choice*, 79(1-2), pp. 1—18.

**Thursday
November 2**

The Good, the Bad and the Ugly of School Finance Reform

The impact of state school finance reform on the level and distribution of spending, student achievement, private school enrollment, property values and the behavior of school districts.

(*) Corcoran, Sean, William Evans, Jennifer Godwin, Sheila Murray, and Robert Schwab. 2004. "The Changing Distribution of Education Finance, 1972-1997," in *Social Inequality*, Kathryn M. Neckerman, ed., New York: The Russell Sage Foundation. (pages TBD).

(*) Hoxby, Caroline M. 2004. "Robin Hood and His Not-So-Merry Plan: Capitalization and the Self-Destruction of Texas' School Finance Equalization Plan," *NBER Working Paper #10722*, September.

(*) Silva, Fabio and Jon Sonstelie. 1995. "Did Serrano Cause a Decline in School Spending?" *National Tax Journal*. vol. 48, no. 2, pp. 199—215.

Card, David A., and Abigail Payne. 2002. "School Finance Reform, the Distribution of School Spending, and the Distribution of Test Scores." *Journal of Public Economics*. Vol 83, pp 49-82.

Figlio, David N. 1997. "Did the 'Tax Revolt' Reduce Student Performance?" *Journal of Public Economics*. Vol. 65 No. 2, pp. 245--269.

**Thursday
November 9**

Market-Based Education Reforms: An Overview

The economic rationale for school choice. Framework for evaluating school choice policies.

(*) Hoxby, Caroline M. 2003. "School Choice and School Productivity: Could School Choice be a Tide that Lifts All Boats?" in Caroline M. Hoxby (ed.), *The Economics of School Choice*. Chicago: University of Chicago Press, pp. 287--302.

(*) Ladd, Helen F. 2002. *Market-Based Reforms in Urban Education*. Washington, D.C.: Economic Policy Institute. (Introduction and chapters 1 – 2).

Hoxby, Caroline M. 2003. "School Choice and School Competition: Evidence from the United States." *Swedish Economic Policy Review*. Vol. 10, pp. xxx.

Market-Based Education Reforms: Vouchers

Evidence on the effectiveness of private school vouchers in raising school quality and student performance.

(*) Ladd, Helen F. 2002. "School Vouchers: A Critical View." *Journal of Economic Perspectives*. Vol. 16, No. 4 (Autumn), pp. 3--24.

(*) Neal, Derek. 2002. "How Vouchers Could Change the Market for Education." *Journal of Economic Perspectives*. Vol. 16, No. 4 (Autumn), pp. 25--44.

Gill, Brian P. et al. 2001. *Rhetoric Versus Reality: What We Know and What We Need to Know About Vouchers and Charter Schools*. Santa Monica, CA: RAND Corporation. (chapters TBD)

<p>Thursday November 16</p>	<p>Market-Based Education Reforms: Charter Schools Evidence on the effectiveness of charter schools in raising school quality and student performance. The impact of charter schools on student sorting. The politics of charter schools.</p> <p>(*) Bettinger, Eric. 2005. “The Effect of Charter Schools on Charter Students and Public Schools.” <i>Economics of Education Review</i>, vol. 24 no. 2, pp. 133—147.</p> <p>(*) Hoxby, Caroline M. and Jonah E. Rockoff. “The Impact of Charter Schools on Student Achievement,” Working Paper, November 2004.</p> <p>Booker, Kevin, Ron Zimmer and Richard Buddin. “The Effect of Charter Schools on Peer Competition.” National Center for the Study of Privatization in Education Occasional Paper No. 110.</p>
<p>Thursday November 23</p>	<p><i>No Class: Happy Thanksgiving!</i></p>
<p>Thursday November 30</p>	<p>School Accountability Policies Incentives and the economic rationale for school accountability, measuring student performance, evaluating existing accountability programs, the unintended consequences of school accountability.</p> <p>(*) Figlio, David and Larry Getzler. 2002. “Accountability, Ability and Disability: Gaming the System?” <i>NBER Working Paper</i> #9307.</p> <p>(*) Jacob, Brian. 2003. “High Stakes in Chicago.” <i>Education Next</i> (Winter).</p> <p>(*) Kane, Thomas J. and Douglas O. Staiger. 2002. “The Promise and Pitfalls of Using Imprecise School Accountability Measures.” <i>Journal of Economic Perspectives</i>. Vol. 16, No. 4 (Autumn), pp. 91—114.</p> <p>Figlio, David and Joshua Winicki. 2002. “Food for Thought? The Effects of School Accountability Plans on School Nutrition.” <i>NBER Working Paper</i> #9319.</p>

**Thursday
December 7**

(Last Class Meeting)

Additional Topics, TBD

Public vs. Private Schools: possible readings include: Derek Neal (JOLE 1997), Evans and Schwab (QJE 1993)

School Readiness, Head Start and Preschool Education
