

E53.2008: COMPARATIVE EDUCATION II: QUANTITATIVE ANALYSIS
NEW YORK UNIVERSITY
FALL 2008

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Office hours:	Thursdays 10-12 (or by appt.)	Mondays 10 – 12 (or by appt.)
Lecture:	Thursdays, 4:55 – 7:35 p.m. (Silver 411)	
Recitations:	Section 2: Thursdays 7:45 – 8:45 p.m. (Bobst 436) Section 3: Thursdays 3:30 – 4:30 p.m. (48 Cooper Square #114) Section 4: Mondays 12:30 – 1:30 p.m. (48 Cooper Square #106) Section 5: Mondays 2:00 – 3:00 p.m. (48 Cooper Square #118)	

COURSE DESCRIPTION	An introduction to the analytical and empirical methodologies employed in modern economic analyses of education. Emphasis on the application of quantitative methods to a wide range of education policy issues, including the level of individual and public demand for schooling, the impact of school resources on student outcomes, education and economic growth, the operation of teacher labor markets, and the equity and efficiency of school funding. Issues will be addressed in domestic, international, and comparative education contexts. Throughout the course, particular attention will be paid to the ability of quantitative methodology to draw causal inferences of the effects of education policies, and to make predictions about the likely impact of policy changes.
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PREREQUISITES	A prior introductory course in statistics, quantitative methods, or microeconomics will be helpful, but is not required (we will assume you have no training in economics).
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COURSE OBJECTIVES	Upon completion of this course, students will be able to: <ul style="list-style-type: none">• apply basic theoretical concepts of microeconomics to the education sector• read, interpret, and synthesize the findings of simple quantitative research in education and describe common econometric approaches to education research• identify the challenges associated with causal inference based on quantitative research in education policy, and critically examine existing empirical literature in light of these challenges
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- understand how economic theory and empirical methods are applied to questions of human capital accumulation, economic growth and development, public investment in education, educational production, school choice, accountability, and the labor market for teachers
 - describe how the economic approach to education research has been applied in an international context and used in comparative studies of educational systems
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READINGS

There is currently no textbook devoted to the economics of education (though several are in progress). Thus, assigned readings will consist of book chapters or journal articles from a variety of sources (a reading list is attached). In addition, we will read much of the following two books:

Fiske, Edward B., and Helen F. Ladd, *Elusive equity: Education reform in post-apartheid South Africa* (Washington, D.C.: Brookings Institution Press, 2004).

Schneider, Barbara et al., *Estimating causal effects: Using experimental and observational designs*. (Washington, DC: American Educational Research Association, 2007).

Most if not all of the assigned journal articles are available for download through the NYU Library e-journal portal: http://library.nyu.edu/collections/find_ejournals.html. In some cases we will provide copies of readings, or direct links to the article source, on Blackboard. Class discussion will focus on the assigned readings, so please prepare for each meeting by reading the assigned articles before class.

HOW TO APPROACH READINGS

We 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 education policy. That said, *some* of the assigned articles will seem impossibly technical. *Rest assured* that we do not expect you to fully understand research papers with a sophisticated mathematical or econometric content. Rather, you should read these articles with the following objectives in mind:

- 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 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 do the author use (if any) to address their research question?
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COURSE REQUIREMENTS

Your grade for this course will be determined as follows: *four* written problem sets (10% each for a total of 40%), one short written review of a recent economic analysis of an education policy question (20%), a written midterm (20%) and final examination (20%).

The problem sets are designed to give you practice with the analytical tools introduced in class and additional depth into specific subject areas. These assignments will be discussed in depth in your discussion sections.

The research review will consist of a written synthesis (4 pages max) that describes and critically analyzes a piece of existing empirical research on education from the economics or public policy literature. Papers will be assigned to small groups of students toward the beginning of the semester. Each group will be asked to spend roughly 5-10 minutes in class informally presenting the findings of their assigned paper, for class discussion (I recommend using a brief Powerpoint presentation).

BLACKBOARD

All materials pertaining to this course (lecture notes, readings, problem sets, handouts, etc) will be made available via Blackboard, which can be accessed through NYUHome (home.nyu.edu). Enrollment in the course should automatically give you access to the Blackboard site for the class. Check in with Blackboard frequently for new announcements, lecture notes, readings, and the like.

MISC. POLICIES

- 1) Policies of New York University and the Steinhardt School of Culture, Education, and Human Development pertaining to academic integrity will be *strictly enforced* in this class. You are encouraged to study and work together on homework assignments, but all work submitted must be that of the individual student.
 - 2) Please make an effort to be on time (we will do the same) and please turn off your cell phone.
 - 3) If you wish to withdraw from this course, please do so formally with the University Registrar. If you withdraw without authorization, you may receive an "F" for the course. *Note Monday September 24th is the last day for graduate and undergraduate students to withdraw without receiving a "W" on transcripts.*
 - 4) Any student attending NYU who needs an accommodation due to a chronic, psychological, visual, mobility and/or learning disability, or is Deaf or Hard of Hearing, should register with the Moses Center for Students with Disabilities at 212-998-4980, 240 Greene Street (www.nyu.edu/csd).
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COURSE OUTLINE

Thursday September 4	Lecture 1: Introduction to the economics of education <u>Recitation</u> : Principles of microeconomics	<i>PS1 available</i>
September 11	Lecture 2: The economist's empirical toolbox <u>Recitation</u> : Regression analysis, international data sources	
September 18	Lecture 3: Human capital and the return to schooling (I) <u>Recitation</u> : Human capital model—applications	PS1 due this week <i>PS2 available</i>
September 25	Lecture 4: Human capital and the return to schooling (II) <u>Recitation</u> : Human capital model—applications	
October 2	Lecture 5: Education, macroeconomic growth, and development <u>Recitation</u> : <i>NONE</i>	PS2 due this week
October 9	MIDTERM EXAM	
October 16	Lecture 6: Efficiency in education <u>Recitation</u> : Efficiency in education—applications	<i>PS3 available</i>
October 23	Lecture 7: Teachers and teacher labor markets <u>Recitation</u> : Teacher labor markets—applications	
October 30	Class presentations: research review	Research reviews due
November 6	Lecture 8: Financing schools <u>Recitation</u> : Financing schools—applications	<i>PS4 available</i>
November 13	Lecture 9: School reform: market-based approaches <u>Recitation</u> : School choice—applications	PS3 due this week
November 20	Class presentations: research review	Research reviews due
November 27	THANKSGIVING – NO CLASS	
December 4	Lecture 10: School reform: accountability <u>Recitation</u> : School accountability—applications	
December 11	Lecture 11: School reform: governance and decentralization <u>Recitation</u> : <i>NONE</i>	PS4 due this week
Thursday December 18	FINAL EXAM – 6:00 – 7:50 p.m.	

RECITATION SCHEDULE

Lecture 1 recitation

Monday 9/8 (12:30 and 2)
Thursday 9/11 (3:30 and 7:45)

** Note: No Thursday recitation on September 4

Lecture 2 recitation

Monday 9/15 (12:30 and 2)
Thursday 9/18 (3:30 and 7:45)

Lecture 3 recitation

Monday 9/22 (12:30 and 2)
Thursday 9/25 (3:30 and 7:45)

Lecture 4 recitation

Monday 9/29 (12:30 and 2)
Thursday 10/2 (3:30 and 7:45)

Lecture 5 recitation

NONE – Midterm exam review

**Note: No Monday classes on October 13

Lecture 6 recitation

Monday 10/20 (12:30 and 2)
Thursday 10/23 (3:30 and 7:45)

Lecture 7 recitation

Monday 10/27 (12:30 and 2)
Thursday 10/30 (3:30 and 7:45)

Recitation: extra time for presentations as needed

Monday 11/3 (12:30 and 2)
Thursday 11/6 (3:30 and 7:45)

Lecture 8 recitation

Monday 11/10 (12:30 and 2)
Thursday 11/13 (3:30 and 7:45)

Lecture 9 recitation

Monday 11/17 (12:30 and 2)
Thursday 11/20 (3:30 and 7:45)

**Note: No Monday recitation on November 24

**Note: No Thursday recitation on November 27

Recitation: extra time for presentations as needed

Monday 12/1 (12:30 and 2)
Thursday 12/4 (3:30 and 7:45)

Lecture 10 recitation

Monday 12/8 (12:30 and 2)
Thursday 12/11 (3:30 and 7:45)

**Note: Thursday 12/11 is the last day of class

READING LIST

(*) = *required*, all others are recommended readings that will be discussed in the lectures

Lecture 1

Introduction to the Economics of Education

The economic approach to the study of education and education policy. Thinking like an economist: the concepts and basic analytical tools of economics. The economic rationale for government involvement in education.

(*) Brewer, Dominic J., Guilbert C. Hentschke, and Eric R. Eide. 2008. "The Role of Economics in Education Policy Research," in Helen F. Ladd and Edward B. Fiske (eds.), *Handbook of Research in Education Finance and Policy*. New York: Routledge.

(*) Taylor, Lori L. 1999. "Government's Role in Primary and Secondary Education." *Federal Reserve Bank of Dallas Economic Review* Vol. 1, pp. 15 – 24.
(www.dallasfed.org/research/er/1999/er9901b.pdf)

Levin, Henry et al. 2007. *The Costs and Benefits of an Excellent Education for All of America's Children*.

Recitation: Principles of Microeconomics

(*) Murnane, Richard. 2005. "How Economists Analyze Problems of Scarcity and Choice," and "Supply and Demand in Education: How Markets Allocate Scarce Resources." Lecture Notes, *Mimeo*.

Krugman, Paul and Robin Wells. 2004. *Microeconomics*. Chapters 1 and 3, "First Principles," and "Supply and Demand."

Lecture 2

The Economist's Empirical Toolbox

Correlation vs. causality. Linear regression, interpreting regression coefficients, understanding sampling error, omitted variables bias, natural and quasi-experiments. How to critically read empirical research.

(*) Gruber, Jonathan. 2005. *Public Finance and Public Policy*. Chapter 3 and Appendix, "Empirical Tools of Public Finance," and "Cross-Sectional Regression Analysis."

(*) McEwan, Patrick. 2008. "Quantitative Research Methods in Education Finance and Policy," in Helen F. Ladd and Edward B. Fiske (eds.), *Handbook of Research in Education Finance and Policy*. New York: Routledge.

Schneider, Barbara et al. 2007. Chapters 1-3, "Introduction," "Causality: Forming an Evidential Base," and "Estimating Causal Effects Using Observational Data."

Recitation: Regression Analysis, International Education Data

Barro, Robert J. and Jong-Wha Lee. 2001. "International Data on Educational Attainment: Updates and Implications," *Oxford Economic Papers*, Vol. 53 No. 3, pp. 541—563.

Heyneman, Stephen P. and Chad R. Lykins. 2008. "The Evolution of Comparative and International Education Statistics," in Helen F. Ladd and Edward B. Fiske (eds.), *Handbook of Research in Education Finance and Policy*. New York: Routledge.

Lecture 3

Human Capital and the Return to Schooling (I)

Human capital theory and the demand for education; the "signaling" model of schooling and wages.

(*) Borjas, George J. 2005. *Labor Economics, 3rd Edition*. New York: McGraw-Hill/Irwin, Chapter 7, "Human Capital."

(*) Weiss, Andrew. 1995. "Human Capital vs. Signaling Explanations for Wages," *Journal of Economic Perspectives*, Vol. 9 No. 4, pp. 133—154.

Recitation: Human Capital Model—Applications

Continue Borjas Chapter 7.

Lecture 4

Human Capital and the Return to Schooling (II)

How economists measure the private returns to schooling, and the difficulties in doing so. More on techniques for estimating causal effects. The economic return to a GED, and the return to education in developing countries..

(*) Psacharopoulos, George and Harry Anthony Patrinos. 2004. "Returns to Investment in Education: A Further Update," *Education Economics*. Vol. 12 No. 2, pp. 111-134.

(*) Schultz, T. Paul. 1999. "Health and Schooling Investments in Africa," *Journal of Economic Perspectives*. Vol. 13 No. 3, pp. 67-88.

Recitation: Human Capital Model—Applications

Lecture 5

Education, Growth, and Development

Schooling and macroeconomic growth—theory and a review of the evidence. Common problems facing educational systems in developing countries, and related policies.

(*) Fiske and Ladd, *Elusive Equity*, chapters 1 – 5.

Barro, Robert J. 2002. "Education as a Determinant of Economic Growth," in Edward J. Lazear (ed.) *Education in the Twenty-first Century*. Stanford, CA: Hoover Institution Press.

World Bank. 2004. *World Development Report 2004: Making Services Work for Poor People*. Chapter 7, "Basic Education Services."

Selected articles from the issue of *Finance and Development*, “Cultivating Minds: How Investing in Education Boosts Development” (International Monetary Fund). Articles by 1) Joel E. Cohen and David E. Bloom, 2) Eric A. Hanushek, 3) Emanuele Baldacci, Benedict Clements, Qiang Cui, and Sanjeev Gupta, 4) Gene Sperling and Reka Balu; 5) Dean T. Jamison and Steven Radelet; 6) Picture This : Report Card on Primary Education (scroll down to find it). <http://www.imf.org/external/pubs/ft/fandd/2005/06/index.htm>

Recitation: NONE

Lecture 6

Efficiency in Education

Concepts of the production function in economics—inputs, outputs, input substitution, diminishing returns. How should scarce resources be allocated in the production of education? Does “money matter?” Evidence on class size, teachers, peers, and other inputs into education. The Perry Preschool and Tennessee STAR experiments.

(*) Murnane, Richard. 2005. “Providing Education Efficiently: Choosing How to Produce.” Lecture Notes, *Mimeo*.

(*) Hanushek, Eric A. 1996. “Measuring Investment in Education,” *Journal of Economic Perspectives*, Vol. 10 No. 4, pp. 9—30.

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.

Glewwe, Paul. 2002. “Schools and Skills in Developing Countries: Education Policies and Socioeconomic Outcomes,” *Journal of Economic Literature* Vol .40 No. 2, pp. 436—482.

Recitation: Efficiency in Education—Applications

Lecture 7

Teachers and Teacher Labor Markets

Measures of teacher quality, and which measurable attributes of teachers contribute the most to student outcomes. Teacher compensation, factors that influence the demand for and supply of teachers, teachers unions, and the analysis of merit pay policies. Teacher labor markets in developing nations.

(*) Schneider, Barbara et al. 2007. Chapter 4, “Analysis of Large Scale Datasets,” pp. 58—67 only.

(*) Corcoran, Sean P., William N. Evans, and Robert M. Schwab. 2004. “Changing Labor Market Opportunities for Women and the Quality of Teachers, 1957-2000,” *American Economic Review*, Vol. 94 No. 2, pp. 230—235.

(* Murnane, Richard J., and Jennifer L. Steele, "What Is the Problem? The Challenge of Providing Effective Teachers for All Children," *The Future of Children*, 17 (2007), 15-43.

Ladd, Helen F., "Teacher Labor Markets in Developed Countries," *The Future of Children*, 17 (2007), 201-217.

Duflo, Esther and Rema Hanna. 2005. "Monitoring Works: Getting Teachers to Come to School," *NBER Working Paper* No. 11880. <http://www.nber.org/papers/w11880>.

Nye, Barbara, Spyros Konstantopoulos, and Larry V. Hedges. 2004. "How Large Are Teacher Effects?" *Educational Evaluation and Policy Analysis*, Vol. 26, pp. 237—257. [technical]

Lecture 8

Financing Schools

Spending on education in the U.S. and other nations. Federalism and the financing of public education. The impact of court-ordered school finance reform on the level and distribution of spending, student achievement, private school enrollment, property values and school district behavior in the U.S.

(* Fiske and Ladd, *Elusive Equity*, chapters 6 – 7.

(* Gertler, Paul and Paul Glewwe. 1990. "The Willingness to Pay for Education in Developing Countries: Evidence from Rural Peru." *Journal of Public Economics*, Vol 42, pp. 251—275.

(* Hillman, Arye L. and Eva Jenkner. 2004. "User Payments for Basic Education in High-Income Countries," in Sanjeev Gupta et al. (eds.), *Helping Countries Develop: The Role of Fiscal Policy*. Washington, D.C.: International Monetary Fund. (Available on [Google Books](#)).

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

Recitation: Financing Schools—Applications

Education at a Glance: OECD Indicators 2006, Chapter B, "Financial and Human Resources Invested in Education."

Lecture 9

School Reform: Market-Based Approaches

The economic rationale for school choice. Framework for evaluating school choice policies. Evidence on the effectiveness of school vouchers in raising school quality and student performance. Do private schools perform better than public schools?

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

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

Angrist, Joshua, Eric Bettinger, Erik Bloom, Elizabeth King, and Michael Kremer. 2002. "Vouchers for Private Schooling in Colombia: Evidence from a Randomized Natural Experiment." *The American Economic Review*, Vol. 92 No. 5, pp. 1535-1558.

Elacqua, Gregory, Mark Schneider, and Jack Buckley. 2006. "School Choice in Chile: Is It Class or the Classroom?" *Journal of Policy Analysis and Management*, Vol. 25 No. 3, 577-601.

McEwan, Patrick J. and Martin Carnoy. 2000. "The Effectiveness and Efficiency of Private Schools in Chile's Voucher System," *Educational Evaluation and Policy Analysis*, Vol. 22 No. 3, pp. 213—239.

Recitation: School Choice—Applications

Lecture 10

School Reform: Accountability

Incentives and the economic rationale for school accountability, measuring student performance, evaluating existing accountability programs, the unintended consequences of school accountability.

(*) Clotfelter, Charles T. and Helen F. Ladd. 1996. "Recognizing and Rewarding Success in Public Schools," in *Holding Schools Accountable: Performance-Based Reform in Public Education*. Washington, D.C.: Brookings Institution Press.

(*) Jacob, Brian. 2003. "High Stakes in Chicago," *Education Next* (Winter).

Chay, Kenneth Y., Patrick J. McEwan, and Miguel Urquiola. 2005. "The Central Role of Noise in Evaluating Interventions that Use Test Scores to Rank Schools," *American Economic Review*, Vol. 95, pp. 1237—1258.

Kane, Thomas J. and Douglas O. Staiger. 2002. "The Promise and Pitfalls of Using Imprecise School Accountability Measures." *Journal of Economic Perspectives*. Vol. 16, No. 4 (Autumn), pp. 91—114.

Recitation: School Accountability—Applications

Lecture 11

School Reform: Governance and Decentralization

The World Bank, Making Services Work for the Poor—the World Development Report 2004, Overview and Chapters 3 and 7. Available at:

<http://econ.worldbank.org/WBSITE/EXTERNAL/EXTMODELSITE/EXTWDRMOD>

EL/0,,ImgPagePK:64202988~entityID:000090341_20031007150121~pagePK:64217930~piPK:64217936~theSitePK:477688,00.html

(*) McEwan, Patrick J.; Benveniste, Luis. "The politics of rural school reform: Escuela Nueva in Colombia." *Journal of Education Policy*, Nov2001, Vol. 16 Issue 6, p547-559.

Recitation: NONE