

## Syllabus: Topics in the economics of education

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The course will cover the following topics. Required (noted by a \*) and additional suggested readings for each topic are listed below.

### Lecture 1. The Production Function of Cognitive Achievements

- \*Angrist, J. and Lavy, V. (1999). 'Using Maimonides' rule to estimate the effect of class size on student achievement', *Quarterly Journal of Economics*, vol. 114 (May), pp. 535–575.
- \*Angrist, J. and Lavy, V. (2001) "Does teacher training affect pupil learning? Evidence from matched comparisons in Jerusalem public schools", 2001, volume 19, no. 2, pp. 343-369.
- \*Angrist, J. and Lavy, V. (2002) "New Evidence on Classroom Computers and Pupil Learning", *The Economic Journal*, October.
- \*Banerjee, A. V., S. Cole, E. Duflo, and L. Linden (2007): "Remedying Education: Evidence from Two Randomized Experiments in India," *Quarterly Journal of Economics*, 122(3), 1235 – 1264.
- Bressoux, P., F. Kramarz, and C. Prost (2005): "Teachers' Training, Class Size and Students' Outcomes: Evidence from Third Grade Classes in France," Unpublished paper, CREST.
- Card, David, and Alan Krueger, "Does School Quality Matter? Returns to Education and the Characteristics of Public Schools in the United States," *Journal of Political Economy*, C (1992a), 1–40.
- Card, David, and Alan Krueger, "School Quality and Black-White Relative Earnings: A Direct Assessment," *Quarterly Journal of Economics*, CVII (February 1992b), 151–200.
- \*Gould E. Victor Lavy and Daniele Paserman. "Immigrating to Opportunity: Estimating The Effect of School Quality Using A Natural Experiment on Ethiopians in Israel", *Quarterly Journal of Economics*, May 2004
- \*Hanushek, Eric, "The Economics of Schooling: Production and Efficiency in Public Schools," *Journal of Economic Literature*, XXIV (September 1986), 1141–1177.
- Hanushek, Eric, "School Resources and Student Performance," in *Does Money Matter? The Effect of School Resources on Student Achievement and Adult Success*, Gary Burtless, ed. (Washington,DC: Brookings Institution, 1996).
- Hanushek, Eric, Victor Lavy and Kohtaro Hitomi., "Do Students Care about School Quality? Determinants of Dropout Behavior in Developing Countries," 2008, *The Human Capital Journal*.
- Heckman, James J., A. Layne-Farrar, and P. Todd, "Does Measured School Quality Really Matter? An Examination of the Earnings-Quality Relationship," NBER Working Paper No. 5274, September 1995.
- \*Hoxby, C. M. (2000): "The Effects of Class Size on Student Achievement: New Evidence from Population Variation," *Quarterly Journal of Economics*, 115(4), 1239–1285.
- \*Krueger, A. B. (2003): "Economic Considerations and Class Size," *Economic Journal*, 113(485), F34–63.
- \*Lazear, E. P. (2001): "Educational Production," *Quarterly Journal of Economics*, 116(3), 777–803.
- \*Lavy Victor and Analia Schlosser "Targeted Remedial Education for Under-Performing Teenagers: Costs and Benefits" *Journal of Labor Economics*, vol. 23(4), pages 839-874, October.
- Urquiola, M. (2006): "Identifying Class Size Effects in Developing Countries: Evidence from Rural Schools in Bolivia," *Review of Economics and Statistics*, 88(1).

## Lecture 2. Peer Effects in Schools

- \*Ammermueller, Andreas and Jorn-Steffen Pischke, "Peer Effects in European Primary Schools: Evidence from PIRLS," IZA Discussion Paper No. 2077, April 2006.
- \*Angrist, Joshua D. and Lang, Kevin. "Does School Integration Generate Peer Effects? Evidence from Boston's Metco Program," *American Economic Review*, 94(5), December 2004, 1613-1634.
- Arcidiacono, Peter and Nicholson Sean, "Peer Effects in Medical School," *Journal of Public Economics*, 89, 2005, pp. 327-350.
- Bayer, Patrick, Pintoff, Randi and Pozen, David. "Building Criminal Capital Behind Bars: Peer Effects in Juvenile Corrections." Mimeo., Yale University, 2004.
- Boozer, Michael A. and Stephen E. Cacciola. "Inside the 'Black Box' of Project STAR: Estimation of Peer Effects Using Experimental Data." Economic Growth Center Discussion Paper 832, Yale University, June 2001.
- Gibbons, Stephen and Shqiponja Telhaj, "Peer Effects and Pupil Attainment: Evidence from Secondary School Transition," London School of Economics, mimeo, 2005.
- \*Gould, Eric D.; Lavy Victor and Paserman, M. Daniele. "Does Immigration Affect the Long-Term Educational Outcomes of Natives? Quasi-Experimental Evidence." CEPR Discussion Paper 5439. January 2006.
- Guryan, Jonathan, "Desegregation and Black Dropout Rates," *American Economic Review*, 94(4), September 2004, 919-943.
- Hanushek, Eric, John Kain, Jacob Markman and Steven Rivkin, "Does Peer Ability Affect Student Achievement?," *Journal of Applied Econometrics*, 18(5), 2003, pp. 527-544.
- \*Hoxby, Caroline M. "Peer Effects in the Classroom: Learning from Gender and Race Variation." NBER Working Paper No. 7867, August 2000.
- \*Hoxby, Caroline M. and Gretchen Weingarth, "Taking Race Out of the Equation: School Reassignment and the Structure of Peer Effects", Mimeo, Harvard University, 2005.
- \*Lavy, Victor and Analia Schlosser, "Mechanisms and Impacts of Gender Peer Effects at School", NBER working paper, Hebrew University, January 2007.
- Lavy, Victor, Daniele Paserman and Analia Schlosser "Inside the Black Box of Ability Peer Effects," Presented at the NBER Fall Education Program, November 2007).
- Lefgren, Lars. "Educational Peer Effects and the Chicago Public Schools." *Journal of Urban Economics*, 56(2), September 2004, pages 169-191.
- \*Manski, Charles, "Identification of Endogenous Social Effects: The Reflection Problem," *Review of Economic Studies*, 60(3), 1993, pp. 531-542.
- Nechyba, Thomas and Vigdor, Jacob. "Peer Effects in North Carolina Public Schools." Mimeo. Duke University, July 2005.
- \*Sacerdote, Bruce, "Peer Effects with Random Assignment: Results for Dartmouth mates," *Quarterly Journal of Economics*, CXVI (2001), 681-704.
- Sacerdote, Bruce and Marmaros, David. "How do Friendships Form?" NBER Working Paper No. 11530, August 2005.
- Vigdor, Jacob and Nechyba, Thomas. "Peer Effects in Elementary School: Learning from 'Apparent' Random Assignment." Mimeo., Duke University, October 2004.
- Zimmerman, David J., "Peer Effects in Academic Outcomes: Evidence from a Natural Experiment," *Review of Economics and Statistics*, LXXXV (2003), 9-23.

## Lecture 3. Teachers' Compensation and Pay for Performance

Cohen, D. and R. Murnane (1985). "The Merits of Merit Pay." *Public Interest*, 80 summer: 3-30.

- \*Duflo Esther and Rema Hanna, “Monitoring Works: Getting Teachers to Come to School” Department of Economics and Poverty Action Lab, Massachusetts Institute of Technology, 2006.
- \*Glewwe, Paul, N. Ilias and M. Kremer (2003). “Teacher Incentives,” NBER Working Paper Number W9671.
- \*Holmstrom, B. and P. Milgrom (1991). “Multitask Principal-Agent Analysis: Incentive Contracts, Asset Ownership and Job Design, *Journal of Law, Economics and Organization* 7 (Special Issue), 24–52.
- Jackson C. Kirabo, (2007). “A Little Now for a Lot Later: A Look at a Texas Advanced Placement Incentive Program”, Harvard University, Department of Economics.
- \*Lavy, V. “Evaluating the Effect of Teachers’ Group Performance Incentives on Students Achievements.” *Journal of Political Economy*, 10 (6), December 2002, 1286–1318.
- \*Lavy, V “Performance Pay and Teachers’ Effort, Productivity and Grading Ethics”. 2007 (NBER working paper).
- \*Lazear, E. “Performance Pay and Productivity,” *American Economic Review*, December, 2000.
- Lazear, E. “Paying Teachers for Performance: Incentives and Selection,” Draft, August 2001.
- Mitchell Nancy, “Denver Teachers Opt for Merit Pay,” *Rocky Mountain* (Denver, Col), December 29, 2005.
- Malcomson, J. (1998): “Incentives Contracts in Labor Markets,” in Ashenfelter, O. and D. Card, eds. *Handbook of Labor Economics* 3(B): 2291–2372.
- Prendergast, Canice. (1999). “The Provision of Incentives in Firms.” *Journal of Economic Literature* 37: 7–63.
- Vegas, Emiliana, Editor, *Incentives to Improve Teaching Lessons from Latin America*, The World Bank 2005, 1818 H Street, NW Washington, DC 20433.

#### **Lecture 4. Students' Incentives and Intrinsic and Extrinsic Motivation**

- \*Angrist, Joshua, Eric Bettinger, Erik Bloom, Beth King, and Michael Kremer, “Vouchers for Private Schooling in Colombia: Evidence from a Randomized Natural Experiment,” *American Economic Review* 92 (2002), 1535-1558.
- \*Angrist, Joshua, Daniel Lang, and Philip Oreopoulos, “Lead Them to Water and Pay Them to Drink: An Experiment with Services and Incentives for College Achievement,” NBER Working Paper 12790, December 2006.
- \*Angrist, Joshua D. and Victor Lavy, “The Effect of High Stakes High School Achievement Awards: Evidence from a School-Centered Randomized Trial,” IZA Working Paper 1146, May 2004.
- Behrman, Jere R., P. Sengupta, and P. Todd, Final Report: The Impact of PROGRESA on Achievement Test Scores in the First year, International Food Policy Research Institute, Food Consumption and Nutrition Division, September 2000.
- Dee, Thomas S., and Brian Jacob, “Do High School Exit Exams Influence Educational Attainment or Labor Market Performance,” NBER Working Paper 12199, April 2006.
- \*Dearden, L., C. Emmerson, C. Frayne and C. Meghir (2003). “The Impact of Financial Incentives on Education Choice,” Presented in a CEPR conference “The Economics of Education and Inequality,” May 2003.
- Jackson, C. Kirabo, “A Little Now for a Lot Later: A Look at a Texas Advanced Placement Incentive Program,” Harvard Department of Economics, mimeo, September 2007.
- \*Kremer, Michael, Edward Miguel, and Rebecca Thornton, “Incentives to Learn,” forthcoming, *Review of Economics and Statistics*, 2008.
- \*Leuven, E., H. Oosterbeek and B. van der Klaauw., “The Effect of Financial Rewards on Students’ Achievement: Evidence from a Randomized Experiment,” CEPR Discussion Paper no. 3921, June 2003.

- Maxfield, Myles, Allen Schirm, and Nuria Rodriguez-Planas, "The Quantum Opportunities Program Demonstration: Implementation and Short-Term Impacts," Mathematica Policy Research Report 8279-093, Washington, DC: Mathematica Policy Research, Inc., August 2003.
- Medina, Jennifer, "Schools Plan to Pay Cash for Marks," *The New York Times* (June 19, 2007).
- Reich, Robert, Op. Ed., *The New York Times* (January 9, 1998).
- Schultz, T. Paul, "School Subsidies for the Poor: Evaluating the Mexican Progresa Poverty Program," *Journal of Development Economics* 74 (June), 199-250.

## Lecture 5. Models of School Choice

- Abdulkadiroğlu, A., P. A. Pathak, and A. E. Roth (2005a), "The New York City High School Match," *American Economic Review, Papers and Proceedings*, 364-367.
- Abdulkadiroğlu, A., P. A. Pathak, A. E. Roth, and T. Sönmez (2005), "The Boston Public School Match," *American Economic Review, Papers and Proceedings*, 368-371.
- Abdulkadiroğlu, A., and Tayfun Sönmez (2003), "School Choice: A Mechanism Design Approach," *American Economic Review*, 93: 729-747.
- Ahlin, Asa (2003): "Does School Competition Matter? Effects of a Large-Scale Choice Reform on Student Performance." Working paper, Uppsala University.
- \*Angrist, J. E., Bettinger, E., Bloom, E., King, Kremer, M., "Vouchers for Private Schooling in Colombia: Evidence from a Randomized Natural Experiment," *American Economic Review*, December 2002.
- \*Angrist, J., Bettinger, E., and Kremer, M., "Long-Term Consequences of Secondary School Vouchers: Evidence from Administrative Records in Colombia," NBER WP 10713, August 2004.
- \*Angrist, Joshua D., and Lavy, Victor. "The Effect of High School Matriculation Awards: Evidence from Randomized Trials," October 2004.
- Bayer, Patrick. And Robert McMillan. "Choice and Competition in Local Education Markets." NBER Working Paper 11802, November 2005.
- \*Black, Sandra, "Do Better Schools Matter? Parental Valuation of Elementary Education," *Quarterly Journal of Economics*, 114(2), May 1999, 577-99.
- Bradley, Steve, Geraint Johnes and Jim Millington (2001): "The Effect of Competition on the Efficiency of Secondary Schools in England", *European Journal of Operational Research*, 135: 545-568.
- \*Chang-Tai Hsieh and Miguel Urquiola, 2003. "When Schools Compete, How Do They Compete? An Assessment of Chile's Nationwide School Voucher Program," NBER Working Papers 10008.
- Clark Damon, "Politics, Markets and Schools: Quasi-Experimental Estimates of the Impact of Autonomy and Competition from a Truly Revolutionary UK Reform" Job Market Paper, Jan. 2005.
- \*Cullen, J. B., Jacob, B.A., and Levitt, S.D., "The Impact of School Choice on Student Outcomes: An Analysis of the Chicago Public Schools," *Journal of Public Economics*, 2005. 89(5-6): 729-760.
- \*Cullen, J. B., Jacob, B.A., and Levitt, S.D., "The Effect of School Choice on Student Outcomes: Evidence from Randomized Lotteries," NBER Working Paper 10133, November 2003.
- Fiske Edward and Helen F. Ladd, *When Schools Compete: A Cautionary Tale*, Brookings Institution Press, 2000.
- Gibbons, Steve, Steve Machin and Olmo Silva (2005): *Competition, Choice and Primary School Performance*. Working paper CEP/LSE.
- \*Hastings S. Justine, Thomas J. Kane and Douglas O. Staiger, "Parental Preferences and School Competition: Evidence from a Public School Choice Program", NBER Working Paper 11805, December 2005.
- \*Hoxby, Caroline M., "Does Competition among Public Schools Benefit Students and Taxpayers?" *American Economic Review*, 2000: 90, 1209-1238.

- Hoxby, Caroline M., "School Choice and School Productivity (Or Could School Choice Be a Tide That Lifts all Boats?)," April 2002, NBER WP8873.
- \*Hoxby, Caroline M., "Competition among Public Schools: A Reply to Rothstein (2004)," NBER WP, 11216.
- Lankford, R. H., Lee, E. S., et al. "An Empirical Analysis of Elementary and Secondary School Choice," *Journal of Urban Economics*, 1995: 38, 236–251.
- \*Victor Lavy, "Mechanisms and Effects of Free Choice among Public Schools," (NBER working paper).
- Mayer, Daniel P., Peterson, Paul E., Myers, David E., Clark Tuttle, Christina, and Howell, William G., "School Choice in New York City after Three Years: An Evaluation of the School Choice Scholarships Program," Washington, DC: Mathematica, 2002.
- Obrien, D. M., and Murdoch, J. C., School Choice in a Large Texas School District, American Education Finance Association Annual Meeting, 2000, Austin, Texas.
- Peterson, P., Myers, E., D., and Howell, William G.. "An Evaluation of the New York City School Choice Scholarship Program: The First Year," Cambridge, MA, 1998, Mathematica.
- \*Rothstein, Jesse M., "Does Competition among Public Schools Benefit Students and Taxpayers? Comment," Mimeo, February 2004.
- \*Rothstein, Jesse M., "Good Principals or Good Peers? Parental Valuation of School Characteristics, Tiebout Equilibrium, and the Incentive Effects of Competition among Jurisdictions," Working Paper No. 10, Princeton University, Education Research Section, December 2004.
- \*Rouse, C. E., "Private School Vouchers and Student Achievement: an Evaluation of the Milwaukee Parental Choice Program," *Quarterly Journal of Economics*, 1998: 118, 553–602.
- \*Urquiola, M. (2005): "Does School Choice Lead to Sorting? Evidence from Tiebout Variation," *American Economic Review*, 95(4), 1310–1326.