

Course Syllabus
ED 945
ADVANCED ECONOMICS AND ECONOMETRIC APPLICATIONS TO
EDUCATION RESEASRCH II

Instructor: Cassandra Guarino
Semester Spring 2011
Day Time: Monday 3:00-5:50
Room Number: C314 Wells Hall
Updated 1/10/11

This course is the second in a two-course series designed to provide students with a strong foundation in economics of education research and theories and the ability to apply this knowledge to their own research. This second course covers issues in the analysis of teacher-related policies. The goals of the course are to provide students with (1) familiarity with the research conducted by education economists on the main topics related to teacher policy and (2) skills to conduct their own research in these areas. As part of (2), students will learn to conduct hands-on research and to construct a research proposal.

The topic areas covered will be divided into two main sections: teacher labor markets and teacher quality. The teacher labor market section will cover teacher supply and demand, the recruitment and retention of teachers, and the influence of accountability policies on teacher mobility. The teacher quality section will cover value-added models of instructional effectiveness and teacher performance and pay-for-performance policies.

The class will have a discussion format combined with formal presentations. The instructor will provide an overview of each topic area and advise students with regard to theory, methodological issues, and research design. In addition, the instructor will offer guidance on how to critique articles and structure an effective proposal and research presentation.

For each topic area, the class will read and present summaries of articles for discussion. We will begin with seminal articles and continue with more recent articles and working papers. Students will be expected to read all assigned materials and give brief individual in-class presentations that critique particular aspects of each case study. Each student will present one teacher labor market study and one teacher quality study from the list of assigned readings. All students are expected to read each paper carefully and participate in each discussion.

A midterm project will consist of a 10-page research proposal and associated Power Point presentation. This will be a group project, with students participating in teams of 3, 4, or 5. The particular contributions of individuals must be identified by the team, however.

The final project will consist of a small research project on either teacher labor markets or teacher quality conducted by students individually or in groups of 2 to 3. If the group option is chosen, the contributions of individuals must be identified by the team. The results of this research will be presented to the class by the team in a Power Point presentation. Data from the public use versions of the Schools and Staffing Survey and the Early Childhood Longitudinal Study will be provided, but students may choose other data sources if they wish.

Grading

Students are expected to prepare carefully for class, read all assigned papers, complete all assignments, and work collegially with classmates. One quarter of the grade will be based on the presentations related to the readings. One quarter will be based on in-class participation, including knowledge of the reading. One quarter will be based on the team presentation of the research proposal (with each team member receiving the same grade). The final quarter of the grade will be based on the research presentation (students who work in groups will all receive the group grade).

Instructor

Cassandra Guarino, an assistant professor in Measurement and Quantitative Methods and a former RAND economist, studies teacher quality, teacher labor markets, school choice, and the connection between health and education. Her review of the empirical research on teacher recruitment and retention has been used nationally by policymakers and scholars as a guiding tool on the topic. Her work on teacher effectiveness has included an NCES study on early elementary mathematics teaching. Her work on school choice has included the evaluation of the charter school movement in California and charter schools in the nation of Qatar. Current work includes studies of value-added models of teacher and school performance, effective teaching practices, and teacher labor markets in North Carolina.

Other Details

Students with disabilities: Reasonable accommodations for persons with documented disabilities will be made available. Please feel free to speak with us if there are issues of which we should be aware.

Academic Honesty and Integrity: Students are assumed to be honest, and course work is assumed to represent the student's own work. Violations of the academic integrity policy such as cheating, plagiarism, selling course assignments or academic fraud are grounds for academic action and/or disciplinary sanction as described in the University's student conduct code.

Incidents of Plagiarism: They will be taken very seriously and will be pursued. Students are strongly cautioned not to copy any text verbatim without appropriate quotations and source citations.

For University regulations on academic dishonesty and plagiarism, please refer to:
<http://www.msu.edu/unit/ombud/plagiarism.html>

Class Meeting Schedule:

Jan 10	Introduction to course, introduction to proposal writing, and overview of teacher labor market research
<i>Jan 17</i>	<i>No class- Martin Luther King Day</i>
Jan 24	Teacher labor markets: Readings and discussion
Jan 31	Teacher labor markets: Readings and discussion
Feb 7	Teacher labor markets: Readings and discussion
Feb 14	Teacher labor markets: Readings and discussion
Feb 21	Preliminary presentations of research proposals
Feb 28	Final presentations of research proposals
<i>Mar 7</i>	<i>No class—spring break</i>
Mar 14	Overview of teacher quality research: Readings and discussion
Mar 21	Teacher quality: Readings and discussion
Mar 28	Teacher quality: Readings and discussion
Apr 4	Teacher quality: Readings and discussion
Apr 11	Teacher quality: Readings and discussion
Apr 18	Preliminary presentations of research projects
Apr 25	Preliminary presentations of research projects
May 3	Final presentations of research projects (date subject to change) Scheduled Final exam time is Tues May 3 rd 3-5pm

Note on conference schedules: SREE is 3/3-3/5, AAFP is 3/24-3/26, AERA is 4/8-4/11

Assigned Readings: Teacher Labor Markets (in order of assignment)

- Guarino, C., Santibanez, L., & Daley, G. (2006) Teacher Recruitment and Retention: A Review of the Recent Empirical Literature, *Review of Educational Research*, 76(2), pp. 173-208.
- Murnane, R. J., & Olsen, R. J. (1989). The Effects of Salaries and Opportunity Costs on Duration in Teaching: Evidence from Michigan. *Review of Economics and Statistics*, 71(2), 347–352.
- Ballou, D., & Podgursky, M. (1995). Recruiting Smarter Teachers. *Journal of Human Resources*, 30(2), 326–338.
- Hanushek, E. A. & Pace, R. R. (1995). Who Chooses to Teach (and Why)? *Economics of Education Review*, 14(2), 101–117.
- Lankford, M., Loeb, S., & Wyckoff, J. (2002). Teacher Sorting and the Plight of Urban Schools. A Descriptive Analysis. *Educational Evaluation and Policy Analysis*, 24(1), 37–62.
- Figlio, D. (2002). Can Public Schools Buy Better-Qualified Teachers? *Industrial and Labor Relations Review*, 55(4), 686–697.
- Hanushek, E., Kain, J., & Rivkin, S. (2004) Why Public Schools Lose Teachers, *Journal of Human Resources*, XXXIX, 326-354.
- Podgursky, M., Monroe, R., & Watson, D. (2004). The academic quality of public school teachers: An analysis of entry and exit behavior. *Economics of Education Review*, 23, 507-518.
- Clotfelter, C., Ladd, H., Vidgor, J., & Diaz, R. (2004). Do school accountability systems make it more difficult for low-performing schools to attract and retain high-quality teachers? *Journal of Public Policy Analysis and Management*, 23(2), 251-271.
- Boyd, D., Lankford, H., Loeb, S., & Wyckoff, J. (2005) The Draw of Home: How Teachers' Preferences for Proximity Disadvantage Urban Schools, *Journal of Public Policy and Management*, 24(1), 113-132.
- Corcoran, S., Evans, W., Schwab, R. (2004) Women, the Labor Market, and the Declining Relative Quality of Teachers, *Journal of Public Policy and Management* 23(3), 449-470.
- Bacolod, M. (2007) Do Alternative Opportunities Matter? The Role of Female Labor Markets in the Decline of Teacher Quality. *Review of Economics and Statistics*. 89(4), 737-751.

Feng, L, Figlio, D., & Sass, T. (2010) School Accountability and Teacher Mobility. *NBER Working Paper Series*, Working Paper 16070, <http://www.nber.org/papers/w16070>.

Costrell, R. & Podgursky, M. (2010) Distribution of Benefits in Teacher Retirement Systems and Their Implications for Mobility, *Education Finance and Policy*. 5(4), 519-557.

Springer, M., et al. (2010) *Teacher Pay for Performance: Experimental Evidence from the Project on Incentives in Teacher*. National Center on Performance Incentives, Vanderbilt University.

Goldhaber, D., Gross, B., & Player, D. (2011) Teacher Career Paths, Teacher Quality, and Persistence in the Classroom: Are Public Schools Keeping their Best? *Journal of Public Policy and Management*, 30 (1), 10-142.

Other Literature on Teacher Labor Markets (not assigned)

Clotfelter, Ladd, H., & Vigdor, J. (2010) Teacher Mobility, School Segregation, and Pay-Based Policies to Level the Playing Field. *CALDER Working Paper 44*.

Friedberg, L. & Turner, S. (2010) Labor Market Effects of Pensions and Implications for Teachers. *Education Finance and Policy*, 5(4), 463-491.

Grissmer, D., & Kirby, S. (1997). Teacher Turnover and Teacher Quality. *Teachers College Record*, 99(1), 45–56.

Ingersoll, R. (2001a). Teacher Turnover and Teacher Shortages: An Organizational Analysis. *American Educational Research Journal*, 38(3), 499–534.

Murnane, R. J. (1984). Selection and Survival in the Teacher Labor Market. *The Review of Economics and Statistics*, 66, 513–518.

Murnane, R. J., & Olsen, R. J. (1990). The Effect of Salaries and Opportunity Costs on Length of Stay in Teaching. Evidence from North Carolina. *The Journal of Human Resources*, 25(1), 106–124.

Rees, D. I. (1991). Grievance Procedure Strength and Teacher Quits. *Industrial and Labor Relations Review*, 45(1), 31–43.

Hanushek, E. & Rivkin, S. (2010) Constrained Job Matching: Does Teacher Job Search Harm Disadvantaged Urban Schools? *CALDER Working Paper 42*.

Krieg

Guarino, C., Brown, A., & Wyse, A. (2010) Can Districts Keep Good Teachers in the Schools that Need them Most? SSRN Working Paper.

http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1541522

Assigned Readings: Teacher Quality (in order of assignment)

Hanushek, E. "Conceptual and Empirical Issues in the Estimation of Educational Production Functions," *Journal of Human Resources*, 14(3): 351-388, 1979.

Monk, D. (1994). Subject Area Preparation of Secondary Mathematics and Science Teachers and Student Achievement. *Economics of Education Review*, 13(2), 125–145.

Ehrenberg, R., & Brewer, D. (1995). Did Teachers' Verbal Ability and Race Matter in the 1960s? Coleman Revisited. *Economics of Education Review*, 14(1), 1–21.

Goldhaber, D., & Brewer, D.(2000). Does Teacher Certification Matter? High School Teacher Certification Status and Student Achievement. *Educational Evaluation and Policy Analysis*, 22(2), 129–145.

Loeb, S., & Page, M. (2000). Examining the Link Between Teacher Wages and Student Outcomes: The Importance of Alternative Labor Market Opportunities and Non-Pecuniary Variation. *The Review of Economics and Statistics*, 82(3), 393–408.

Todd, P. & Wolpin, K. (2003). On the Specification and Estimation of the Production Function for Cognitive Achievement. *Economic Journal*, 113(485), 3-33.

Jacob, B. & Lefgren, L. (2005) Principals as Agents: Subjective Performance Measurement in Education, Working Paper 11463, National Bureau of Economic Research.

Harris, D. & Sass, T. (2006) Value-Added Models and the Measurement of Teacher Quality, Unpublished Draft.

Rothstein, J. (2008) Teacher Quality in Educational Production: Tracking, Decay, and Student Achievement. *NBER Working Paper Series*, Working Paper 14442, <http://www.nber.org/papers/w14442>.

Rothstein, J. (2009) Student Sorting and Bias in Value-Added Estimation: Selection on Observables and Unobservables. *Education Finance and Policy*, 4(4), 537-571.

Kane, T. & Staiger, D. (Unpublished Draft) Are Teacher-Level Value-Added Estimates Biased? An Experimental Validation of Non-Experimental Estimates, presented at the National Conference on Value-Added Modeling, April 22-24, 2008 Madison, WI.

Aaronson, D., Barrow, L. & Sander, W. (2007) Teachers and Student Achievement in Chicago Public High Schools, *Journal of Labor Economics*, 25(1), 95-135.

Koedel, C. & Betts, J. (2010)

Hanushek (2010) The Economic Value of Teacher Quality, *NBER Working Paper Series*, Working Paper 16606, <http://www.nber.org/papers/w16606>.

Guarino, C., Reckase, M. & Wooldridge, J. (2011) Evaluating Value-Added Approaches to Measuring Teacher Effects

Other Literature on Teacher Quality, Value-Added, and Education Production:

Ballou, D., Sanders, W., & Wright, P. (2004) Controlling for Student Background in Value-Added Assessment of Teachers. *Journal of Educational and Behavioral Statistics*, 29(1), 37-65.

Ballou, D. (Unpublished Draft) Test Scaling and Value-Added Measurement, presented at the National Conference on Value-Added Modeling, April 22-24, Madison, WI.

Briggs, D., Weeks, J., Wiley, E. (Unpublished Draft) The Sensitivity of Value-Added Modeling to the Creation of a Vertical Score Scale, presented at the National Conference on Value-Added Modeling, April 22-24, 2008 Madison, WI.

Dee, T. (2004) Teachers, Race, and Student Achievement in a Randomized Experiment. *Review of Economics and Statistics*, 86(1), 195-210.

Ehrenberg, R., & Brewer, D. (1994). Do School and Teacher Characteristics Matter? Evidence from High School and Beyond. *Economics of Education Review*, 13(1), 1-17.

Hanushek, E. "The Economics of Schooling: Production and Efficiency in the Public Schools," *Journal of Economic Literature*, XXIV (3): 1141-78, 1986.

Ishii, J. & Rivkin, S. (2009) Impediments to the Estimation of Teacher Value Added, *Education Finance and Policy*, 4(4), 520-536.

Martineau, J. (2006) Distorting Value Added: The Use of Longitudinal, Vertically Scaled Student Achievement Data for Growth-Based, Value-Added Accountability, *Journal of Educational and Behavioral Statistics*, 31(1), pp. 35-62.

McCaffrey, D., Lockwood, J.R., Louis, T., & Hamilton, L. (2004) Models for Value-Added Models of Teacher Effects. *Journal of Educational and Behavioral Statistics*, 29(1), pp. 67-101.

Lockwood, J.R., McCaffrey, D., Mariano, L., & Setodji, C. (2007) Bayesian Methods for Scalable Multivariate Value-Added Assessment. *Journal of Educational and Behavioral Statistics*, 32(2), pp. 125-150.

Lockwood, J.R., McCaffrey, D., & Sass, T. (Unpublished Draft) The Intertemporal Stability of Teacher Effect Estimates, presented at the National Conference on Value-Added Modeling, April 22-24, 2008 Madison, WI.

Neal, D. (unpublished draft) Designing Incentive Systems for Schools, presented at Performance Incentives: Their Growing Impact on American K-12 Education, February 28-29, Nashville, TN.

Rowan, B., Correnti, R., and Miller, R. (2002). What Large-Scale Survey Research Tells Us About Teacher Effects on Student Achievement: Insights from the Prospects Study of Elementary Schools. *Teachers College Record*, 104(8), 1525-67.

Sanders, W. & Horn, S. (1994) The Tennessee Value-Added Assessment System (TVAAS): Mixed-Model Methodology in Educational Assessment. *Journal of Personnel in Education*, 8, 299-311.

Sanders, W., Saxton, A., & Horn, B. (1997) The Tennessee Value-Added Assessment System: A Quantitative outcomes-based approach to educational assessment. In J. Millman (Ed.), *Grading Teachers, Grading Schools: Is student Achievement a Valid Evaluational Measure?* Thousand Oaks, CA: Corwin Press, Inc., 137-162.