

SOCIOLOGY/EPS 908
SEMINAR IN SOCIOLOGY OF EDUCATION
Spring 2006

Multilevel Models for Education Effects

Thursdays, 1:00-3:30pm

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Course Description

This graduate seminar concerns the hierarchical and stratified nature of school systems, including the “nested layers” of classrooms, schools, and districts, and the stratified divisions within school systems such as selective schools, tracks, and ability groups. In the course, students will explore the methodological challenges and substantive implications of stratification and hierarchy for understanding the effects of schools and schooling on student outcomes. Substantively, we will begin with the literature on school effects, moving from early input-output studies to current research that examines the organizational context of schools. We will also examine the impact of stratification within and between schools, focusing on selection processes as well outcomes. Next, we will consider stratification and hierarchy in light of salient policy issues such as standards and accountability, teacher quality, evidence-based practice, and school choice. Methodologically, we will explore statistical packages designed to address the hierarchical organization of school systems through *multilevel models*. Substantive and methodological issues will be integrated through seminar discussions, student presentations, and seminar papers.

Students are advised that Sociology 362 or equivalent (statistics through ordinary least squares regression) is necessary for adequate preparation for this course.

Course Requirements

Students will be expected to read assigned material, take part in discussions, complete computer exercises, present work in progress to the class, and write a seminar paper. The course grade will be based on an evaluation of the seminar paper, and satisfactory performance on the other requirements.

Note: On February 23, class will not meet at the regular time. Instead, students are asked to attend the public forum on “Standards-based accountability in education is one step towards closing the poverty gap” on February 23 at 4pm in the Pyle Center. Also, class will not meet on April 13. Instead, class will meet on Tuesday, April 18, at the usual time and place.

Course Readings

A packet of readings is available for purchase at the Social Sciences Copy Center (6th floor of Social Sciences) and additional readings are on reserve at the Social Science Reading Room (8th floor of Social Sciences). In addition, the following books have been ordered at the University Bookstore:

Rebecca Barr and Robert Dreeben, *How Schools Work* (Chicago: University of Chicago, 1983).

Harvey Goldstein, *Multilevel Statistical Models*, third edition (London: Arnold Publishing, 2002).

Jeannie Oakes, *Keeping Track: How Schools Structure Inequality*, second edition (New Haven, CT: Yale 2005).

Stephen W. Raudenbush and Anthony S. Bryk, *Hierarchical Linear Models: Applications and Data Analysis Methods*, second edition (Thousand Oaks, CA: Sage, 2002).

Stephen W. Raudenbush, Anthony S. Bryk, Yuk Fai Cheong, Richard Congdon, and Mathilda duToit, *HLM6: Hierarchical Linear and Nonlinear Modeling* (Chicago: Scientific Software International, 2004).

*Anthony S. Bryk, Valerie E. Lee, and Peter B. Holland, *Catholic Schools and the Common Good* (Cambridge, MA: Harvard, 1993).

*Adam Gamoran, Charles W. Anderson, Pamela Anne Quiroz, Walter G. Secada, Tona Williams, and Scott Ashmann, *Transforming Teaching in Math and Science: How Schools and Districts Can Support Change* (New York: Teachers College Press, 2003).

*Maureen T. Hallinan, Editor, *Handbook of the Sociology of Education* (New York: Kluwer Academic/Plenum 2000).

*Alan C. Kerckhoff, *Diverging Pathways* (Cambridge, England: Cambridge University Press, 1993).

*Samuel R. Lucas, *Tracking Inequality* (New York: Teachers College Press 1999).

* indicates recommended book, not required.

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Schedule of Topics

	TOPIC 1	TOPIC 2
JAN 19	Introduction	
JAN 26	School Effects - 1	
FEB 2	School Effects - 2	Multilevel Methods - 1
FEB 9	Organizational Context - 1	Multilevel Methods - 2
FEB 16	Organizational Context - 2	Multilevel Methods - 3
FEB 23*	Public Forum: “Standards-based accountability in education is one step towards closing the poverty gap.” Pyle Center, 4:00-5:30pm.	
MAR 2	Stratification between Schools	Student Presentations: Research Problems
MAR 9	Stratification within Schools	Student Presentations: Research Problems
MAR 16	SPRING BREAK	
MAR 23	Selection	Multilevel Methods - 4
MAR 30	Standards and Accountability	Multilevel Methods - 5
APR 6	School Choice	Multilevel Models - 6
APR 18**	Evidence-Based Practice	Student Presentations: Models
APR 20	Teacher Quality Guest speaker: Spyros Konstantopolous, Northwestern University	Student Presentations: Models
APR 27	Student Presentations -- Results and Interpretation	
MAY 4	Student Presentations -- Results and Interpretation	

* Special time and location.

** Special Tuesday class meeting.

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Reading List

Notes: Readings should be completed in advance of the class session date listed.
Supplemental readings indicated by *.

JAN 26

School Effects - 1

J. S. Coleman, *Equality and Achievement in Education*, chapters 2, 6-11. [ON RESERVE]

Barr and Dreeben, *How Schools Work*, chapters 1-2, 6.

R. Dreeben, "Structural Effects in Education: History of an Idea," in Hallinan, *Handbook of the Sociology of Education*. [ON RESERVE]

M. R. Olneck, "Terms of Inclusion: Has Multiculturalism Redefined Equality in American Education?" *American Journal of Education*, 101, 234-260 (1993).

Wisconsin Department of Public Instruction, *An AYP Primer*. Madison, WI: Author. Available at: <http://dpi.wi.gov/esea/pdf/ayprimer.pdf>

*C. E. Bidwell and J. D. Kasarda, "Conceptualizing and Measuring the Effects of School and Schooling." *American Journal of Education*, 88, 401-430 (1980).

FEB 2

School Effects - 2

A. B. Sorensen and S. L. Morgan, "School Effects: Theoretical and Methodological Issues," in Hallinan, *Handbook of the Sociology of Education*. [ON RESERVE]

R. Greenwald, L. Hedges, and R. D. Laine, R. D., "The Effects of School Resources on Student Achievement." *Review of Educational Research*, 66, 361-396 (1996).

D. Downey, P. von Hippel, and B. Broh, "Are Schools the Great Equalizer? Cognitive Inequality during the Summer Months and the School Year." *Sociology of Education*, 69, 613-635 (2004).

*E. Hanushek, J. Kain, and S. Rivkin, "New Evidence about Brown v. Board of Education: The Complex Effects of School Racial Composition on Achievement." Madison, WI: Institute for Research on Poverty, Discussion Paper no. 1284-04.

*A. S. Bryk and S. W. Raudenbush, "Toward a More Appropriate Conceptualization of Research on School Effects: A Three-Level Linear Model." *American Journal of Education*, 97, 65-108 (1988).

*B. Heyns, *Summer Learning and the Effects of Schooling* (New York: Academic Press, 1978).

*Doris Entwisle, Karl L. Alexander, and Linda S. Olson, *Children, Schools, and Inequality* (Boulder, CO: Westview, 1997). Chapters 1-4.

*D. Card and A. Krueger, "Labor market effects of school quality: Theory and evidence." Pp. 97-140 in G. Burtless (Ed.), *Does money matter? The effect of school resources on student achievement and adult success*. (Washington, DC: Brookings, 1996.)

*A. Gamoran, "Schooling and Achievement: Additive Versus Interactive Models." Pp. 37-51 in S. W. Raudenbush and J. D. Willms (Eds.), *International Studies of Schooling from a Multilevel Perspective* (San Diego: Academic Press, 1991).

Multilevel Methods - 1

Raudenbush and Bryk, *Hierarchical Linear Models*, chapters 1-2.

Raudenbush et al., *HLM6*, chapters 1-2.

Goldstein, *Multilevel Statistical Models*, chapters 1-2.

FEB 9

Organizational Context - 1

Barr and Dreeben, *How Schools Work*, chapters 3-5.

K. Weick, "Educational Organizations as Loosely Coupled Systems." *Administrative Science Quarterly*, 21, 541-552 (1976).

J. Meyer and B. Rowan, "The Structure of Educational Organizations." In M. Meyer and Associates, *Environments and Organizations* (San Francisco: Jossey-Bass, 1978).

Multilevel Methods - 2

Raudenbush and Bryk, *Hierarchical Linear Models*, chapters 3-5.

Goldstein, *Multilevel Statistical Models*, chapter 3.

FEB 16

Organizational Context - 2

B. Rowan, "Commitment and Control: Alternative Strategies for the Organizational Design of Schools." In C. Cazden (Ed.), *Review of Research in Education*, vol 16 (Washington, DC:

AERA 1990).

A. Gamoran, W. G. Secada, and C. B. Marrett, "The organizational context of teaching and learning: Changing theoretical perspectives," in Hallinan, *Handbook of the Sociology of Education*. [ON RESERVE]

B. Rowan, R. Correnti and R. J. Miller, "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, 1525-1567 (2002).

*B. Rowan, S. W. Raudenbush, and S. J. Kang, "Organizational Design in High Schools: A Multilevel Analysis." *American Journal of Education*, 99, 238-266 (1991).

*Bryk, Lee, and Holland, *Catholic Schools and the Common Good*, chapters 4, 6-8.

*Gamoran et al., *Transforming Teaching in Math and Science: How schools and districts can support change*, chapters 1-6.

Multilevel Methods - 3

Bryk and Raudenbush, *Hierarchical Linear Models*, chapters 6, 8.

Raudenbush et al., *HLM6*, chapters 3-4.

Goldstein, chapter 5.

MAR 2

Stratification between Schools

A. Gamoran, "Student Achievement in Public Magnet, Public Comprehensive, and Private City High Schools." *Educational Evaluation and Policy Analysis*, 18, 1-18 (1996).

C. Buchmann and E. Hannum, "Education and Stratification in Developing Countries: A Review of Theories and Research." *Annual Review of Sociology*, 27, 77-102 (2001).

*Bryk, Lee, and Holland, *Catholic Schools and the Common Good*, chapter 10.

*T. P. Rohlen. *Japan's High Schools* (Berkeley, CA: University of California Press, 1983).

*J. E. Chubb and T. M. Moe, *Politics, Markets, and America's Schools* (Washington, DC: Brookings Institution, 1990).

* P. Cookson and C. Persell, *Preparing for Power: America's Elite Boarding Schools* (New York: Basic Books, 1987).

MAR 9

Stratification within Schools - 1

Jeannie Oakes, *Keeping Track*, chapters 3-8, 11.

A. Gamoran, "The Stratification of High School Learning Opportunities." *Sociology of Education*, 60, 135-155 (1987).

A. Gamoran, "The Variable Effects of High School Tracking." *American Sociological Review*, 57, 812-828 (1992).

A. Gamoran, "Curriculum Standardization and Equality of Opportunity in Scottish Secondary Education, 1984-1990." *Sociology of Education*, 29, 1-21 (1996).

A. N. Applebee, J. Langer, M. Nystrand, and A. Gamoran. "Discussion-Based Approaches to Developing Understanding: Classroom Instruction and Student Performance in Middle and High School English." *American Educational Research Journal*, 40, 685-730 (2003).

W. Carbonaro, "Tracking, Student Effort, and Academic Achievement." *Sociology of Education* 78:27-49 (2005).

*B. Heyns, "Social Selection and Stratification in Schools." *American Journal of Sociology*, 79, 1434-1451.

*A. Gamoran, M. Nystrand, M. Berends, and P. C. LePore, "An Organizational Analysis of the Effects of Ability Grouping." *American Educational Research Journal*, 32, 687-715 (1995).

*A. Gamoran, A. C. Porter, J. Smithson, and P. A. White, "Upgrading High School Mathematics Instruction: Improving Learning Opportunities for Low-Income, Low-Achieving Youth." *Educational Evaluation and Policy Analysis*, 19, 325-338 (1997).

*A. B. Sorensen, "Organizational Differentiation of Students and Educational Opportunity." *Sociology of Education*, 43, 35-376 (1970).

*S. R. Lucas, *Tracking Inequality*, chapters 2-4.

*A. C. Kerckhoff, *Diverging Pathways*, chapters 1-4, 8.

MAR 23

Selection

R. Breen and J. O. Jonsson, "Analyzing Educational Careers: A Multinomial Transition Model." *American Sociological Review*, 65, 754-772 (2000).

S. R. Lucas, "Effectively Maintained Inequality: Education Transitions, Track Mobility, and Social Background Effects." *American Journal of Sociology*, 106, 1642-1690 (2001).

E. Grodsky, "Sponsored Mobility in Higher Education." Davis, CA: University of California-Davis, Department of Sociology (2005). At: <http://repositories.cdlib.org/ucdsoc/sponsmoblt/>

*W. G. Howell, "Dynamic selection effects in means-tested, urban school voucher programs." *Journal of Policy Analysis and Management*, 23, 225-250 (2004).

*J. D. Jones, B. E. Vanfossen, and M. E. Ensminger, "Individual and Organizational Predictors of High School Track Placement." *Sociology of Education*, 68, 287-300 (1995).

* S. Dauber, K. L. Alexander, and D. R. Entwisle, "Tracking and Transitions through the Middle Grades: Channeling Educational Trajectories." *Sociology of Education*, 69, 290-307 (1996).

*S. Kelly, "Do increased levels of parental involvement account for the social class difference in track placement?" *Social Science Research*, 33, 626-659 (2004).

Multilevel Methods - 4

Raudenbush and Bryk, *Hierarchical Linear Models*, chapter 9.

MAR 30

Standards and Accountability

E. A. Hanushek and M. E. Raymond, "Does School Accountability Lead to Improved Student Performance?" *Journal of Policy Analysis and Management*, 24, 297-327 (2005).

L. Resnick and C. Zurawsky, "Fixing School-Based Accountability." *American Educator*, Spring 2005. Available at: http://www.aft.org/pubs-reports/american_educator/issues/spring05

R. Linn, "Fixing the NCLB Accountability System." Los Angeles: Center for Research on Evaluation, Standards, and Student Testing, CRESST Policy Brief no.8, 2005.

*D. Betebenner, "An Analysis of School District Data Using Value-Added Methodology." Los Angeles: Center for the Study of Evaluation, CRESST, Report no. 622. Available at: <http://www.cse.ucla.edu/reports/R622.pdf>

Multilevel Methods - 5

Raudenbush and Bryk, *Hierarchical Linear Models*, chapter 10.

Goldstein, *Multilevel Statistical Models*, chapter 4.

Raudenbush et al., *HLM6*, chapters 5-6.

APR 6

School Choice

W. G. Howell, P. Wolf, D. Campbell, and P. E. Peterson, "School Vouchers and Academic Performance: Results from Three Randomized Field Trials." *Journal of Policy Analysis and Management*, 21, 191-218 (2002).

*A. B. Krueger and P. Zhu, "Another Look at the New York City School Voucher Experiment." *American Behavioral Scientist*, 47, 648-698 (2004).

*P. E. Peterson and W. G. Howell, "Efficiency, Bias, and Classification Schemes: Estimating Private-School Impacts on Test Scores in the New York City Voucher Experiment." *American Behavioral Scientist*, 47, 699-717 (2004).

*A. B. Krueger and P. Zhu, "Inefficiency, Subsample Selection Bias, and Nonrobustness: A Response to Paul E. Peterson and William G. Howell." *American Behavioral Scientist*, 47, 718-728 (2004).

*J. Witte, "The Milwaukee Voucher Experiment." *Educational Evaluation and Policy Analysis*, 20, 229-252 (1998).

*J. F. Witte and C. A. Thorn, "Who Chooses? Voucher and Interdistrict Choice Programs in Milwaukee." *American Journal of Education*, 104, 186-217 (1996).

Multilevel Methods - 6

Raudenbush and Bryk, *Hierarchical Linear Models*, chapter 12.

Goldstein, *Multilevel Statistical Models*, chapter 11.

Raudenbush et al., *HLM6*, chapters 10-11.

APR 18

Evidence-Based Practice

U.S. Department of Education, "Identifying and Implementing Educational Practices Supported by Rigorous Practice: A User-Friendly Guide." Washington, DC (2003). At: <http://www.ed.gov/rschstat/research/pubs/rigorousetid/rigorousetid.pdf>

R. Boruch, H. May, H. Turner, J. Lavenberg, A. Petrosine, D. DeMoya, J. Grimshaw, and E. Foley, "Estimating the Effects of Interventions that are Deployed in Many Places." *American Behavioral Scientist*, 47, 608-631 (2004).

G. D. Borman, R. E. Slavin, A. C. K. Cheung, A. M. Chamberlain, N. A. Madden, and B. Chambers, "The National Randomized Field Trial of Success for All: Second-Year Outcomes." *American Educational Research Journal*, 42, 673-696 (2005).

Comprehensive School Reform Quality Center. *CSRQ Center Report on Elementary School Comprehensive School Reform Models*. Washington, DC: American Institutes for Research (2005). At: <http://www.air.org/news/documents/ES%20CSRQ%20Report%20-%20Full.pdf>

APR 20

Teacher Quality

W. L. Sanders and J. C. Rivers, *Cumulative and Residual Effects of Teachers on Future Student Academic Achievement*. Knoxville: University of Tennessee Value-Added Research and Assessment Center (1996).

D. Harris and T. Sass, "Advances in Value-Added: Theory and Applications Related to Teacher Quality." Jacksonville, FL: Florida State University (2005).

T. Smith, L. Desimone, and K. Ueno. "'Highly Qualified' to Do What? The Relation between NCLB Teacher Quality Mandates and the Use of Reform-Oriented Instruction in Middle School Mathematics." *Educational Evaluation and Policy Analysis*, 27, 75-109 (2005).

*Rivkin, S. G., Hanushek, E. A., & Kain, J. F. (2005). Teachers, schools and academic achievement. *Econometrica*, 73, 417-458.