Economics of Education

Instructor Contact Information

Professor: Chris Herbst
Day, Time, and Location of Meetings: Monday, 1:30pm to 5:20pm (break: 3:10pm to 3:40pm)
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Course Description

The goal of this course is to provide students with an introduction to the way economists approach the market for education as well as education policy. Central to our investigation is why governments intervene in various education markets, either by providing education services directly, subsidizing the cost of services, or regulating the private provision of services. The course begins by covering some key theoretical models for understanding how education is produced (i.e., education production functions) and how individuals and societies may benefit from consuming it (i.e., human capital formation). Here, we will review the latest empirical evidence on the returns to education as well as the impact of education on economic growth. The next part of the course focuses on the market for early childhood education: why and how the government provides citizens with early education services; the supply and demand for early childhood education; and how these services are produced. Here again we will examine the latest evidence studying the impact of various early education policies on service providers, children, and families. In the final part of the course, we will focus on a variety of questions related to the ways in which education quality at all levels might be improved: how schools are funded, how high-quality teachers are identified and retained, and whether school accountability policies achieve their desired outcomes.

Our meetings throughout the semester will combine instructor-led lectures as well as instructor- and student-directed discussions of the course readings. As such, broad participation is important, and students are expected to come to class ready to engage in critical discussion and analysis. An important part of the course consists of discussing and critically assessing empirical papers in economics that attempt to identify the causal impact of education policy. Therefore, students should ideally have a sophisticated understanding of regression analysis at a minimum, along with prior exposure to econometric methods for making causal inferences.

Students throughout the semester will work in groups to conduct a series of four Education Policy Analysis Labs, each one focusing on a specific education policy. The purpose of the Labs is to use economic theory and empirical tools to analyze a number of real-life, contemporary education policies that overlap with the course content. At the start of each Lab, students will be handed the Lab questions as they organize themselves into work groups. Students will then spend approximately 60 minutes discussing and answering the questions. The content of the Lab questions will draw heavily on the lecture material and readings from the previous week. One set of answers will be

created for each group, and submitted to the instructor. Finally, we will spend the remainder of our time together discussing each Lab question.

Course Learning Objectives

Upon successful completion of the course, students will have the tools to:

1) identify the strengths and weaknesses of various empirical methods used in education policy research (e.g., randomized controlled trials, difference-in-differences, etc.), particularly as it relates to internal and external validity;

2) understand the state of current evidence on some important education policy issues, as well as how to obtain and synthesize the evidence on issues the course does not cover;

3) engage in and critically assess the merits of several important contemporary education policy debates; and

4) evaluate arguments about whether a given education policy is likely to improve student, teacher, and societal outcomes, including with respect to efficiency and equity.

Class Schedule

Class	Date	Topic(s) Covered	Assignment
1	April 8	*Introduction to the course and each other* o Why is this topic important? o What kinds of education questions can economics help us answer? o Cross-national comparison of educational inputs and outcomes	Policy Analysis Lab #1
2	April 15	*Theoretical Frameworks* o Education production functions o Models of human capital formation o Signaling vs. human capital in the returns to education	Policy Analysis Lab #2
3	April 22	*Market for Early Childhood Education I* o What is the market for early care and education? o Why and how the government intervenes: externalities, asymmetric information, and equity o A simple model of child care subsidies	Policy Analysis Lab #3
4	April 29	*Market for Early Childhood Education II* o Assessing the empirical evidence	Policy Analysis Lab #4
5	May 6	*Inputs to Education Production* o School funding	

		o Teacher quality o Teacher compensation and performance incentives o Class size	
6	May 13	*Economics of Education Debates* o Topic #1: The goal of government policy should be to enact universally-accessible, publicly-provided early childhood education and child care. o Topic #2: When central and local governments increase spending on education, student performance (on a variety of metrics) drastically improves.	None

Required Reading

Class #2
Duncan, Greg, Ariel Kalil, Magne Mogstad, and Mari Rege. (2023). Chapter 1 - Investing in early childhood development in preschool and at home. In Eric A. Hanushek, Stephen Machin, and Ludger Woessmann (Eds.) Handbook of the Economics of Education, Volume 6, 1-91 (**Sections 1-3**).

Bailey, D. H., Duncan, G. J., Cunha, F., Foorman, B. R., and Yeager, D. S. (2020). Persistence and Fade-Out of Educational-Intervention Effects: Mechanisms and Potential Solutions. *Psychological Science in the Public Interest*, *21*(2), 55-97.

Cunha, Flavio, and James Heckman. (2007). The Technology of Skill Formation. *American Economic Review*, *97*(2): 31-47.

Class #3
Blau, David and Janet Currie. (2004). Preschool, Day Care, and Afterschool Care: Who's Minding the Kids? NBER Working Paper No. 10670. Cambridge, MA: National Bureau of Economic Research.

Elango, S., Garcia, J.L., Heckman, J.J., and Hojman, A. (2015). Early childhood education. NBER Working Paper No. 21766. Cambridge, MA: National Bureau of Economic Research.

Heckman, James and Dimitriy V. Masterov. (2007). The Productivity Argument for Investing in Young Children. NBER Working Paper No. 13016. Cambridge, MA: National Bureau of Economic Research.

Class #4
Duncan, Greg, Ariel Kalil, Magne Mogstad, and Mari Rege. (2023). Chapter 1 - Investing in early childhood development in preschool and at home. In Eric A. Hanushek, Stephen Machin, and Ludger Woessmann (Eds.) Handbook of the Economics of Education, Volume 6, 1-91 (**Section 4**).

Baker, Michael, Jonathan Gruber, and Kevin Milligan. (2008). Universal Child Care, Maternal Labor Supply, and Family Well-Being. *Journal of Political Economy* 116(4): 709-745.

Deming, David. (2009). Early Childhood Intervention and Life-Cycle Skill Development: Evidence from Head Start. *American Economic Journal: Applied Economics, 1*(3): 111-134.

Havnes, Tarjei, and Magne Mogstad (2011). No Child Left Behind: Subsidized Child Care and Children's Long-Run Outcomes. *American Economic Journal: Economic Policy*, *3*(2): 97-129.

Durkin, K., Lipsey, M. W., Farran, D. C., and Wiesen, S. E. (2022). Effects of a statewide pre-kindergarten program on children's achievement and behavior through sixth grade. *Developmental Psychology, 58*(3):470-484.

Herbst, C. M. and Tekin, E. (2016). The impact of child-care subsidies on child development: Evidence from geographic variation in the distance to social service agencies. *Journal of Policy Analysis and Management, 35*(1):94-116.

Class #5
Duncan, Greg, Ariel Kalil, Magne Mogstad, and Mari Rege. (2023). Chapter 1 - Investing in early childhood development in preschool and at home. In Eric A. Hanushek, Stephen Machin, and Ludger Woessmann (Eds.) Handbook of the Economics of Education, Volume 6, 1-91 (**Section 5**).

David M. Blau. (2000). The Production of Quality in Child-Care Centers: Another Look. *Applied Developmental Science, 4*(3), 136-148.

Handel, Danielle Victoria and Eric A. Hanushek. (2023). Chapter 3 – U.S. school finance: Resources and outcomes. In Eric A. Hanushek, Stephen Machin, and Ludger Woessmann (Eds.) Handbook of the Economics of Education, Volume 6, 143-226.

Hanushek, Eric A. and Steven G. Rivkin. (2006). Chapter 18 – Teacher quality. In Eric A. Hanushek and F. Welch (Eds.) Handbook of the Economics of Education, Volume 2, 1051-1078.

Eric A. Hanushek, Marc Piopiunik, and Simon Wiederhold. (2019). The Value of Smarter Teachers. *Journal of Human Resources, 54*(4), 857-899.

Schanzenbach, D.W. (2020). Chapter 23 - The economics of class size. In Steve Bradley and Colin Green (Eds.) The Economics of Education (Second Edition), 321-331.

Evaluation and Grading

Evaluation in the course is based on class participation, four (4) policy analysis labs, and an education policy debate. Each component is weighted as follows:

Class participation and preparation: 20%
Policy analysis labs: 40%
Education policy debate: 40%

Education Policy Debate

During week six, students will engage in a debate of two policies that have recently received intense public interest: a system of universal public child care and taxes on sugar-sweetened beverages.

Each debate will be structured as a traditional Policy—or Cross-Examination—Debate, in which small teams promote positions for and against a given policy intervention. One set of students presents the

Affirmative Constructive, so called because it defends government policy; the other group of students presents the Negative Constructive, or key arguments against the policy. Affirmative and negative arguments are then buttressed by brief periods of cross-examination, which allows each team to question some of the central arguments articulated by the opposition. Each team will be comprised of 3 to 4 students. The assignment of students to teams will be done by the instructor.

The format of the debate is as follows:

- *First Affirmative Constructive* (10 minutes): opening statement that attracts the audience and motivates the policy problem; present key economic arguments in favor of government intervention, along with all supporting evidence; conclude effectively with a cogent summary of central propositions.
- *First Cross-Examination by the Negative Constructive* (5 minutes): Rigorous, but courteous, questioning by the Negative Constructive of the Affirmative Constructive's previous arguments.
- *First Negative Constructive* (10 minutes): opening statement that attracts the audience and motivates the policy problem; present key economic arguments against government intervention, along with all supporting evidence; conclude effectively with a cogent summary of central propositions.
- *First Cross-Examination by the Affirmative Constructive* (5 minutes): Rigorous, but courteous, questioning by the Affirmative Constructive of the Negative Constructive's previous arguments.

- *Second Affirmative Constructive* (10 minutes): opening statement that attracts the audience and motivates the policy problem; present <u>new</u> economic arguments in favor of government intervention, along with all supporting evidence; and respond to any remaining Negative arguments.
- *Second Cross-Examination by the Negative Constructive* (5 minutes): Rigorous, but courteous, questioning by the Negative Constructive of the Affirmative Constructive's previous arguments.
- *Second Negative Constructive* (10 minutes): opening statement that attracts the audience and motivates the policy problem; present <u>new</u> economic arguments against government intervention, along with all supporting evidence; and respond to any remaining Positive arguments.
- *Second Cross-Examination by the Affirmative Constructive* (5 minutes): Rigorous, but courteous, questioning by the Affirmative Constructive of the Negative Constructive's previous arguments.

- *Negative Rebuttal and Closing Statement* (5 minutes): Rebuild the Negative case, and summarize key arguments; present arguments both in favor of the Negative case and against the Positive case; no new arguments; conclude clearly and persuasively.
- *Affirmative Rebuttal and Closing Statement* (5 minutes): Rebuild the Positive case, and summarize key arguments; present arguments both in favor of the Affirmative case and against the Negative case; no new arguments, and conclude clearly and persuasively.

At the close of each debate, there will be 10 minutes allocated to a question-and-answer period in which the audience can inquire about specific arguments made by the Affirmative and Negative teams.

Here are some thoughts on how to prepare for the debate:

- One of your goals is to *inform* the audience about the topic under debate. Therefore, you should become quite fluent with the policy's history, how the policy currently operates and its design characteristics, where its funding comes from, and at what level of government the policy is administered.
- Teams are expected to ground their arguments using economic principles. It is important to understand the economics on both sides of the debate—no matter which side you are defending—so that you can anticipate opposing arguments and prepare rebuttals using economic theory. Specifically, students should be attentive to the economic rationales underlying government intervention, the incentives created by each proposal (and its alternatives), unintended consequences (positive or negative) associated with the intervention, opportunity costs, and cost-benefit calculations.
- It is often the case that policy debates are cast in all-or-nothing terms. That is, there are only two worlds under consideration: a world with the policy enacted and a world without *any* policy. Think carefully about alternative approaches to the policy reforms and how your position stacks up against these alternatives.
- There is no need to use PowerPoint for the debates. Face the other team and your audience (virtually, of course) while presenting key arguments and rebuttals. Teams may utilize other visual aids, however, if they add to the substance of the argumentation.
- Rigor is good. Rude is bad. Please be attentive to the distinction between making forceful arguments in favor of a policy position and being discourteous to those with whom you are debating.