

ECON 8400-002 — Topics in Education

Syllabus

University of Pennsylvania
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Fall 2024

Course description

Synopsis. As most second-year Ph.D. courses, this course is designed to help you transition to you conducting your own research. Through the discussion of seminal and recent papers, the goal is to help you gain an understanding of the literature that allows you to come up with original questions of interest and/or new useful methods.

This class will focus on the discussion of education-related questions (see list of topics below). However, I certainly hope the class will be the occasion to discuss models and methods that are useful in economics and empirical micro, beyond the study of education questions. The list of topics below is tentative: I can definitely modify the list to include related topics of interest to students. Feel free to email me if you have suggestions and/or questions.

Logistics and instruction planning

Email: mluflade@sas.upenn.edu

Meeting times: Monday and Wednesday, 12–1:30pm, Fall session 1.

Office hours: by appointment, feel free to email me.

Typical class structure:

- Each class, we'll discuss in depth one or two papers. For each paper, either me or a student will be in charge of preparing a presentation of the paper, and leading the discussion. I'll try to give a quick broader view of where these papers fit in the literature and how they are connected to other papers of interest.

Assessment

- Presentation and discussion of paper(s)
- Literature review (10–15 pages): each student will submit a literature review on a topic of their choice (no need to be in economics of education). The goal on this assignment is to start the transition to the third year of the Ph.D., during which you'll start developing your own research full time. I would like you to identify a topic you'd be interested in and get started on gathering a reading list. I don't expect an exhaustive literature review by the end of the semester. I would like you to include six to seven papers in the review, including seminal papers on the topic, as well as recent articles to show case the state-of-the-art. The literature review should be an organized document, with sub-themes, and not just a list of papers with their summary. You need to understand how the papers relate to each other and together build a body of research. At the end of your literature review, I would like you to identify several "holes" in the literature that would be avenues for your future research. Briefly explain, in one paragraph each, say, each of these holes and what a contribution would be to fill that hole. Finally, your literature review will also include a reading list of, say, five to six additional papers that you are planning on reading next, as you continue exploring the research topic.

Tentative overview of topics

1. Modeling self-selection and education decisions

- In-class discussions
 - A.D. Roy (1951). Some thoughts on the distribution of earnings. *Oxford Economic Papers* 3(2): 135–46.
 - R. Willis and S. Rosen (1979). Education and self-selection. *Journal of Political Economy*, 87: 507–526.
 - J. Heckman and B. Honoré (1990). The empirical content of the Roy model. *Econometrica* 58(5): 1121–49.
 - J. Heckman and G. Sedlacek (1985). Heterogeneity, aggregation, and market wage functions: An empirical model of self-selection in the labor market. *Journal of Political Economy* 93(6): 1077–125.
 - P. Arcidiacono (2005). Affirmative action in higher education: How do admission and financial aid rules affect future earnings? *Econometrica*, 73(5): 1477–524.
 - M. Keane, K. Wolpin (1997). The career decisions of young men. *Journal of Political Economy*, 105(2): 2075–91.
- Additional readings
 - P. Arcidiacono (2004). Ability sorting and the returns to college majors. *Journal of Econometrics*, 121(1–2): 343–75.
 - C. Belzil, The return to schooling in structural dynamic models: a survey (2007). *European Economic Review*, 1059–107.
 - I. Mourifié, M. Henry, R. Méango (2019). Sharp bounds and testability of a Roy model of STEM major choices. *Journal of Political Economy*, 128(8).

2. Modeling skill formation and identification of the returns to education

- In-class discussions
 - P. Arcidiacono (2005). Affirmative action in higher education: How do admission and financial aid rules affect future earnings? *Econometrica*, 73(5): 1477–524.
 - P. Todd, K. Wolpin (2003). On the specification and estimation of the production function for cognitive achievement. *Economic Journal*, 113(485): F3–F33.
 - F. Cunha, J. Heckman, S. Schennach (2010). Estimating the technology of cognitive and noncognitive skill formation. *Econometrica*, 78(3): 883–931.
- Additional readings
 - P. Arcidiacono (2004). Ability sorting and the returns to college majors. *Journal of Econometrics*, 121(1–2): 343–75.
 - J. Altonji (1993). The demand for and return to education when education outcomes are uncertain. *Journal of Labor Economics*, 11(1, Part 1): 48–83.
 - L. Kirkeboen, E. Leuven, M. Mogstad (2016). Field of study, earnings, and self-selection. *Quarterly Journal of Economics*, 131(2): 1057–112.
 - P. Carneiro, J. Heckman, E. Vytlačil (2011). Estimating marginal returns to education. *American Economic Review*, 101(6): 2754–81.

3. School choice and mechanism design

- In-class discussions
 - A. Abdulkadiroğlu, T. Sönmez (2003). School choice: a mechanism design approach. *American Economic Review*, 93(3): 729–47.
 - N. Agarwal, P. Somaini (2018). Demand analysis using strategic reports: An application to a school choice mechanism. *Econometrica*, 86(2): 391–444.
 - M. Lufade (2019). The value of information in centralized school choice systems. *Working paper*.
 - T. Larroucau, I. Ríos (2021). Dynamic college admissions and the determinants of students' college retention. *Working paper*.
- Additional readings
 - G. Fack, J. Grenet, Y. He (2019). Beyond truth-telling: preference estimation with centralized school choice and college admissions. *American Economic Review*, 109(4): 1486–529.

4. School and neighborhood choice, and the role of geography

- In-class discussions
 - S. Black (1999). Do better schools matter? Parental valuation of elementary education. *Quarterly Journal of Economics*, 114(2): 577–99.
 - P. Bayer, F. Ferreira, R. McMillan (2007). A unified framework for measuring preferences for schools and neighborhoods. *Journal of Political Economy*, 115(4): 588–638.
 - R. Benabou (1993). Workings of a city: Location, education, and production. *Quarterly Journal of Economics*, 108(3): 619–52.
 - F. Agostinelli, M. Lufade, P. Martellini (2021). On the spatial determinants of educational access. *Working paper*.
- Additional readings
 - D. Epple, R. Romano (2003). Neighborhood schools, choice, and the distribution of educational benefits. In Caroline M. Hoxby, ed., *The Economics of school choice*. University of Chicago Press, p.227–286.
 - T. Nechyba (2000). Mobility, targeting, and private-school vouchers. *American Economic Review*, 90(1): 120–146.

5. Supply side and competition

- In-class discussions
 - M. Dinerstein and T. Smith (2021). Quantifying the supply response of private schools to public policies. *American Economic Review*
 - J. Singleton (2019). Incentives and the supply of effective charter schools. *American Economic Review*, 109(7): 2568–612.
 - C. Allende (2020). Targeted vouchers, competition among schools, and the academic achievement of poor students. *Working paper*.
- Additional readings
 - NN. Mehta (2017). Competition in Public School Districts: Charter School Entry, Student Sorting, and School Input Determination. *International Economic Review*, 58(4): 1089–116.
 - D. Epple, R. Romano, S. Scarpa, H. Sieg (2017). A general equilibrium analysis of state and private colleges and access to higher education in the US. *Journal of Public Economics*, 155: 164–178.

6. Teachers: value added, labor market

- In-class discussions
 - B. Biasi, C. Fu, J. Stromme (2021). Equilibrium in the Market for Public School Teachers: District Wage Strategies and Teacher Comparative Advantage. *Working paper*.
 - M. Bates, M. Dinerstein, A. Johnston, I. Sorkin (2022). Teacher Labor Market Equilibrium and Student Achievement. *Working paper*.
- Additional readings
 - D. Aaronson, L. Barrow, W. Sander (2007). Teachers and student achievement in the Chicago public high schools. *Journal of Labor Economics*, 25(1): 95–135.
 - R. Chetty, J. Friedman, J. Rockoff (2014a). Measuring the impacts of teachers I: Evaluating bias in teacher value-added estimates. *American Economic Review*, 104(9): 2593–632.
 - R. Chetty, J. Friedman, J. Rockoff (2014b). Measuring the impacts of teachers II: Teacher value added and student outcomes in adulthood. *American Economic Review*, 104(9): 2633–79.
 - R. Chetty, J. Friedman, J. Rockoff (2017). Measuring the impacts of teachers: reply. *American Economic Review*, 107: 1685–717.
 - T. Kane, D. Staiger (2008). Estimating teacher impacts on student achievement: an experimental evaluation. *NBER WP No. 14607*.
 - C. Koedel, K. Mihaly, J. Rockoff (2015). Value-added modeling: a review. *Economics of Education Review*, 47: 180–95.
 - J. Rothstein (2010). Teacher quality in educational production: tracking, decay, and student achievement. *Quarterly Journal of Economics*, 125(1): 175–214.
 - J. Rothstein (2015). Teacher Quality Policy When Supply Matters. *American Economic Review*, 105(1): 100–30.

- J. Rothstein (2017). Measuring the impacts of teachers: a comment. *American Economic Review*, 107: 1656–84.
- M. Wiswall (2013). The dynamics of teacher quality. *Journal of Public Economics*, 100:61–78.

7. Large-scale policies

- In-class discussions
 - A. Hsiao (2022). Educational investment in spatial equilibrium: Evidence from Indonesia. *Working paper*.
 - M. Dinerstein, C. Neilson, S. Otero (2022). The Equilibrium Effects of Public Provision in Education Markets: Evidence from a Public School Expansion Policy. *Working paper*.
 - E. Borghesan (2024). The heterogeneous effects of changing SAT requirements in admissions: An equilibrium evaluation. *Working paper*.
- Additional readings
 - S. Parker, P. Todd (2017). Conditional Cash Transfers: The Case of Progres/Oportunidades. *Journal of Economic Literature*, 55(3): 866-915.

8. Peers

- Additional readings
 - C. Manski (1993). Identification of endogenous social effects: The reflection problem. *Review of Economic Studies*, 60(3): 531–42.
 - C. Hoxby, G. Weingarth (2006). Taking race out of the equation. The structure of peer effects. *Working paper, Harvard University*.
 - Y. Bramoullé, H. Djebbari, B. Fortin (2009). Identification of peer effects through social networks. *Journal of Econometrics*, 150(1): 41–55.
 - W. Brock, S. Durlauf (2001). Discrete choice with social interactions. *Review of Economic Studies*, 68(2): 235–60.
 - A. Calvó-Armengol, E. Patacchini, Y. Zenou (2009). Peer effects and social networks in education. *Review of Economic Studies*, 76(4): 1239–67.
 - J. Angrist (2014). The perils of peer effects. *Labour Economics*, 30: 98-108.

9. Unequal access to education/ affirmative action

- Additional readings
 - S. Coate, G. Loury (1993). Will affirmative action policies eliminate negative stereotypes? *American Economic Review*
 - D. Epple, R. Romano, H. Sieg (2008). Diversity and affirmative action in higher education. *Journal of Public Economics*
 - P. Arcidiacono, E. Aucejo, H. Fang (2012). Affirmative action and mismatch: new test and evidence. *Quantitative Economics*

Schedule

Class #	Week #	Day		Papers	Presenter
Topic 1 – Modeling educational choices					
1	1	Wedn	28-Aug	Logistics / organization The Roy model of self-selection	Margaux
2	2	Wedn	4-Sep	Discrete choice models (Train, 2009)	Margaux
3	3	Mon	9-Sep	Keane and Wolpin (1997)	Margaux
4	3	Wedn	11-Sep	Arcidiacono (2005)	Margaux
Topic 2 – Skills production function					
5	4	Mon	16-Sep	Todd and Wolpin (2003) Cunha, Heckman, Schennach (2016)	Margaux Eymen
Topic 3 – School choice and mechanism design					
6	4	Wedn	18-Sep	Adbulkadiroglu, Sonmez (2003) Agarwal and Somaini (2018)	Margaux Yuhong
7	5	Mon	23-Sep	Luflade (2019) Larroucau and Rios (2020)	Margaux Maggie
Topic 4 – School choice, housing choice, and education policy in space					
8	5	Wedn	25-Sep	Black (1999) + Bayer, Ferreira, McMillan (2007) Benabou (1993)	Margaux Ethan Z
9	6	Mon	30-Sep	Agostinelli, Luflade, Martellini (2024)	Margaux
Topic 5 – Charters, private schools, and competition					
9	6	Wedn	2-Oct	Allende (2021)	Margaux
11	7	Mon	7-Oct	Dinerstein and Smith (2021) Singleton (2019)	Margaux Venera
Topic 6 – Teachers: value added, labor market					
12	7	Wedn	9-Oct	Biasi, Fu, Stromme (2021) Bates, Dinerstein, Johnston, Sorkin (2022)	Yifan Max
Topic 7 – Policy in equilibrium					
13	8	Mon	14-Oct	Borghesan (2022) Dinerstein, Neilson, Otero (2022)	Ethan D Martin
14	8	Wedn	16-Oct	Hsiao (2022)	Julia