

Title: Calling their Bluff: Expressed and Revealed Preferences of Top College Graduates Entering Teaching in Argentina.

Authors and Affiliations: Alejandro Ganimian, Harvard Graduate School of Education and Harvard Kennedy School of Government; Mariana Alfonso, Inter-American Development Bank; Ana Santiago, Inter-American Development Bank

Abstract Body

Background Context:

Over the past two decades, rigorous studies have found that teachers who are successful at helping students make large academic gains can offset learning disadvantages associated with students' socioeconomic background, and can also increase students' chances of enrolling in college and earning relatively high wages once they enter the labor market (Chetty, Friedman, and Rockoff 2011; Kane and Staiger 2012; Kane et al. 2013; Kane and Staiger 2008; Rivkin, Hanushek, and Kain 2005; Sanders and Horn 1998). These studies have prompted school systems around the world to enact reforms to increase the effectiveness of their teachers (Bruns, Filmer and Patrinos 2011; Vegas et al. 2012). An approach that has recently gained traction in both developed and developing countries is to attract top college graduates into teaching. In recent years, evidence that countries with the top global testing scores recruit teachers from the top of their high school classes has complemented the earlier findings (Auguste, Kihn, and Miller 2010; Barber and Mourshed 2007; Mourshed, Chijioke, and Barber 2010).

Purpose / Objective / Research Question / Focus of Study:

Many school systems today are trying to attract top college graduates into teaching, but little is known about what dissuades this target group from entering the profession. This study randomly assigned applicants for a highly-selective alternative pathway into teaching in Argentina either to a survey about their motivations for applying to the program or to surveys that revealed information about their future pay or working conditions.

Population / Participants / Subjects:

The data for this study are from Enseñá por Argentina, a program that recruits top college graduates to teach in high-need schools for at least two years. It is an adaptation of Teach for America, a U.S. nonprofit that has implemented the same model and placed over 28,000 college graduates in teaching since 1990. This model has been replicated in 29 developed and developing countries by the organizations that form part of the global network called Teach for All. In 2012, Enseñá por Argentina (EpA), had a large pool of applicants who wanted to enter the profession but knew little about what their pay or working conditions would be if they did so.

Intervention / Program / Practice Research Design:

In order to estimate the extent to which a particular factor dissuades top college graduates from entering teaching, this study used a sample from the population of top graduates considering teaching and randomly assigned them to offers of teaching jobs that vary solely on that factor. In this paper, we try to get as close as possible to this ideal experiment. Applicants were randomly assigned either to a plain survey or to a survey that revealed information about a potential dissuading factor. The study then observed their expressed and revealed preferences for applying to the program. If applicants knew little about these potential dissuading factors when they applied, one can obtain a lower bound estimate of the causal effect of the dissuaders by estimating the causal effect of the information.

Data Collection and Analysis: The data include all of the information entered by the 1,017 applicants to EpA in 2012 who finished their online application form (out of the 1,800 applicants who started it). This includes their responses to demographic and academic and professional background questions. The data also include their responses to the question on their three most

important motivations and reservations when they applied to EpA. All applications were completed prior to randomization.

This study combines three datasets: datasets from EpA's application and selection processes, and the dataset from the survey administered as part of the study itself. All surveys had three parts. The first was the same across the three versions and included questions about demographic, academic, and professional background. A second part differed by version, which will be explained below. A third part, which was the same across the three versions, asked applicants whether they continued to be interested in applying to EpA and asked them to rank potential changes that could be made to the program to make it more appealing. In the control version of the survey, the second part asked applicants their expectations about pay and working conditions if they were to get into EpA and about their motivations for applying to the program. These questions measured how much applicants knew about these two factors and whether applicants viewed them as potential dissuaders for entering the profession.

The first treatment version of the survey included a set of questions with informational prompts about the applicants' working conditions if they were admitted to EpA. Specifically, information was provided about EpA's restrictions on the number of corps members it can assign to public schools and the fact that graduates are often assigned to low-cost private schools and are typically assigned teaching hours at multiple schools. The second treatment version of the survey included a set of questions with informational prompts about the pay that applicants would receive if they were admitted to EpA. Specifically, information was provided on the starting salary that the average EpA program graduate receives, the salary that teachers in Argentina receive after 15 years of experience, the maximum salary that teachers in Argentina can receive by the end of their careers, the options that corps members have to increase their pay (e.g., accumulate years of experience, participate in professional development activities, and obtain a graduate degree), and the fact that corps members can only access the benefits of public school teachers if they become certified teachers.

The impact of the informational prompts on applicants' interest to continue to pursue their application to EpA was measured through expressed and revealed preferences. Applicants stated expressed preferences at the end of all surveys, when they were asked whether they wanted to continue to pursue their application to the program. Revealed preferences were determined by tracking applicants at every step of the program's selection process and seeing whether they accepted, rejected, or ignored a "callback" (an invitation from the organization to move forward).

Findings / Results: The study finds that applicants who received information about pay or working conditions were much more likely to report that they intended to drop out of the selection process, but were no more likely to actually drop out. This can be explained by the temporary salience effects of the informational prompts. Applicants with higher undergraduate grade point averages and/or scores in the selection process, however, were both more likely to report that they will drop out and to actually do so.

Treatment-on-the-Treated Effects on Intention/Propensity to Drop Out. Table 3 presents the results of the TOT models estimating the effects of receiving the informational prompts. In

columns 1–4, the outcome variable is whether applicants said that they wanted to drop out of the program, first upon receiving the prompts on working conditions and then upon receiving the prompts on pay without and with controls. In columns 5–8, the outcome variable is whether applicants actually dropped out, first upon receiving the prompts on working conditions and then the ones on pay without and with controls. The coefficients themselves can be interpreted as the marginal effects. Applicants who received the prompts on working conditions were 25 percent more likely than those in the control group to say that they wanted to drop out of EpA’s selection process, and those who received the prompts on pay were almost 31 percent more likely to say that they intended to drop out. However, neither of these groups was actually more likely to drop out of the selection process, with or without controls. As above, small differential attrition rates for either one of the treatments can be discarded.

Heterogeneous Effects. The TOT models were also used to explore whether there were heterogeneous effects. We examined whether the effects of receiving informational prompts differed for (1) females, (2) applicants with higher undergraduate grade point averages, (3) applicants with higher pre-randomization selection scores, (4) applicants who had previously applied to teach, and (5) applicants who were employed when they applied to EpA. Table 4 presents the heterogeneous effects on applicants’ expressed preferences. For ease of presentation, controls are left out. Interestingly, female applicants are slightly less likely than male applicants to report that they intend to drop out when they receive prompts on working conditions, but not when they receive prompts on pay. Other than that, not much else is going on. Applicants with higher selection scores who receive prompts on working conditions are more likely to report that they want to drop out, but the effect is small. Similarly, applicants employed when they applied to EpA who receive prompts on pay are more likely to report that they want to drop out. This effect is larger, but absent in the case of prompts on working conditions. It is unclear what to make of these results by themselves. Table 5 presents the heterogeneous effects on applicants’ revealed preferences. As above, only the marginal effects without controls are included. Consistent with Table 4, female applicants who receive prompts on working conditions or pay are more likely than men to drop out of EpA’s selection process. Perhaps more importantly, however, more desirable applicants are more likely to drop out. Every one point in a college grade point average makes an applicant 6–8 percentage points more likely to drop out of EpA’s selection process if he or she receives information on working conditions. Every one standard deviation in a selection score makes an applicant about 25 percentage points more likely to drop out if he/she receives prompts on working conditions or pay.

Effects on Applicants’ Demand for Changes. Using the TOT models, we also explored whether receiving prompts on working conditions or pay influenced the changes that applicants wanted in EpA in the last question of the survey.¹ Dummies were created that were equal to 1 if an applicant ranked a change to the program at the top and 0 otherwise. Table 6 presents the effects on applicants’ top-ranked changes to the program. Once again, only the estimates without controls are included. For ease of presentation, all nonsignificant results are omitted for both types of prompts: higher maximum pay, a teaching degree, a good principal, and professional development. The general pattern that emerges in the remaining variables is that applicants who were prompted to think about working conditions were more likely to rank being assigned with other corps members as their top choice and applicants who were prompted to think about pay

¹ See the section earlier in this study entitled “The Outcomes: Expressed and Revealed Preferences.”

were more likely to rank incorporating merit pay as their top choice. Prompts on one issue do not seem to have any bearing on applicants' demands on the other, with the exception of prompts on working conditions, which make applicants less likely to rank higher initial pay as their top choice.

Conclusions: To our knowledge, this is the first study that estimates the causal effect of providing top college graduates with information about pay or working conditions on their decisions to enter teaching. The overall picture that emerges is one in which applicants “bluff”—that is, those who receive this information are more likely to report that they will drop out of EpA’s selection process, but they are no more likely to actually drop out. This result should give pause to those relying on expressed preferences to understand the intentions of top college graduates for entering teaching, as self-reports do not appear to be reliable predictors of actual intentions.

Although the experimental setting is ideal to contrast applicants’ expressed and revealed preferences, it is less ideal for understanding why applicants are “bluffing.” This could happen due to one of the reasons discussed earlier in the section of the paper entitled “Expressed versus Revealed Preferences.” For example, applicants may purposefully overestimate the impact of potential dissuading factors on their decision in hopes of influencing changes in the program, or they may not fully understand the implications of the information revealed to them until they move forward in the selection process (e.g., because they can discuss these dissuading factors with peers and/or representatives from the organization).

The hypothesis here is that neither of these is the main mechanism at work. Rather, it is likely that the informational prompts are making working conditions and pay more salient in applicants’ minds at the time when they are responding to the survey, but that this salience fades quickly. We have no way of directly testing this hypothesis, but the effects of the informational prompts on the changes that applicants demanded at the end of the survey are certainly consistent with this interpretation. When prompted to think about working conditions, applicants were more likely to ask for changes related to those conditions and when prompted to think about pay, applicants were more likely to ask for changes related to pay. Our interpretation is also consistent with the results of recent surveys in education that are able to considerably influence respondents’ answers to the same question simply by changing the framing of the question (Schueler 2012).

Interestingly, the group of applicants that is not bluffing (i.e., that is both saying that it will drop out after receiving information on pay and working conditions and then actually dropping out at higher rates) is precisely the group that programs such as EpA are most interested in recruiting. In hindsight, this is not entirely surprising. The most desirable applicants are also more likely to face relatively high opportunity costs for entering teaching. So, it is reasonable that they are more sensitive to information about potential dissuading factors. Yet, this finding suggests that EpA will not be able to maximize the number of top candidates that it can select through more aggressive marketing alone; it must also either directly address or otherwise compensate for these factors dissuading applicants from teaching.

Appendices

Appendix A. References

- Alfonso, M., and A. Santiago. 2010. *Selection into Teaching: Evidence from Enseña Perú*. IDB Technical Note. Washington, DC: Inter-American Development Bank.
- Angrist, J.D. 2001. Estimation of Limited Dependent Variable Models with Dummy Endogenous Regressors. *Journal of Business and Economic Statistics* 19 (1): 2–16.
- Angrist, J.D., G.W. Imbens, and D.B. Rubin. 1996. Identification of Causal Effects Using Instrumental Variables. *Journal of the American Statistical Association* 91(434): 444–55.
- Auguste, B.G., P. Kihn, and M. Miller. 2010. *Closing the Talent Gap: Attracting and Retaining Top-third Graduates to Careers in Teaching: An International and Market Research-based Perspective*. McKinsey & Company.
- Bacolod, M. 2007. Who Teaches and Where They Choose to Teach: College Graduates of the 1990s. *Educational Evaluation and Policy Analysis* 29(3): 155–68.
- Barber, M., and M. Mourshed. 2007. *How the World's Best-performing Schools Systems Come Out on Top*. McKinsey & Company.
- Bertrand, M., and S. Mullainathan. 2001. Do People Mean What They Say? Implications for Subjective Survey Data. *The American Economic Review* 91(2): 67–72.
- Boyd, D., H. Lankford, S. Loeb, and J. Wyckoff. 2005. The Draw of Home: How Teachers' Preferences for Proximity Disadvantage Urban Schools. *Journal of Policy Analysis and Management* 24(1): 113–32.
- Brewer, D.J. 1996. Career Paths and Quit Decisions: Evidence from Teaching. *Journal of Labor Economics* 14(2): 313–39.
- Bruns, B., D. Evans, and J. Luque. 2011. *Achieving World-class Education in Brazil: The Next Agenda*. Washington, DC: World Bank.
- Bruns, B., D. Filmer, and H.A. Patrinos. 2011. *Making Schools Work: New Evidence on Accountability Reforms*. Washington, DC: World Bank.
- Cameron, A.C., and P. K. Trivedi. 2005. *Microeconometrics: Methods and Applications*. Cambridge, UK: Cambridge University Press.

- Chetty, R., J.N. Friedman, and J.E. Rockoff. 2011. *The Long-term Impacts of Teachers: Teacher Value-added and Student Outcomes in Adulthood*. NBER Technical Report. Cambridge, MA: National Bureau of Economic Research.
- Corcoran, S.P., W.N. Evans, and R.M. Schwab. 2004a. Changing Labor-market Opportunities for Women and the Quality of Teachers, 1957-2000. *The American Economic Review* 94(2): 230–35.
- Corcoran, S.P., W.N. Evans, and R.M. Schwab. 2004b. Women, the Labor Market, and the Declining Relative Quality of Teachers. *Journal of Policy Analysis and Management* 23(3): 449–70.
- Dobbie, W. 2011. *Teacher Characteristics and Student Achievement: Evidence from Teach for America*. Harvard University Working Paper (July).
- Dolton, P., and W. von der Klaauw. 1995. Leaving Teaching in the UK: A Duration Analysis. *The Economic Journal* 105(429): 431–44.
- Dolton, P., and W. von der Klaauw. 1999. The Turnover of Teachers: A Competing Risks Explanation. *The Review of Economics and Statistics* 81(3): 543–50.
- Farkas, S., J. Johnson, A. Duffett, and T. Foleno. 2001. *Trying To Stay Ahead of the Game: Superintendents and Principals Talk about School Leadership*. New York: Public Agenda.
- Ganimian, A.J. 2011. ¿Qué motiva a universitarios de primer nivel a dedicarse a la docencia? Resultados preliminares de Enseñá por Argentina. *Educar* 47(2): 297–326.
- Greenberg, D., and J. McCall. 1974. Teacher Mobility and Allocation. *The Journal of Human Resources* 9(4): 480–502.
- Gritz, R.M., and N.D. Theobald. 1996. The Effects of School District Spending Priorities on Length of Stay in Teaching. *The Journal of Human Resources* 31(3): 477–512.
- Hanushek, E.A., and R.R. Pace. 1995. Who Chooses to Teach (and Why)? *Economics of Education Review* 14(2): 101–17.
- Hanushek, E.A., and S.G. Rivkin. 2007. Pay, Working Conditions, and Teacher Quality. *The Future of Children* 17(1): 69–86.
- Hanushek, E.A., J.F. Kain, and S.G. Rivkin. 2004. Why Public Schools Lose Teachers. *The Journal of Human Resources* 39(2): 326–54.
- Hill, H.C., L. Kapitula, and K. Umland. 2011. A Validity Argument Approach to Evaluating Teacher Value-added Scores. *American Educational Research Journal* 48(3): 794–831.

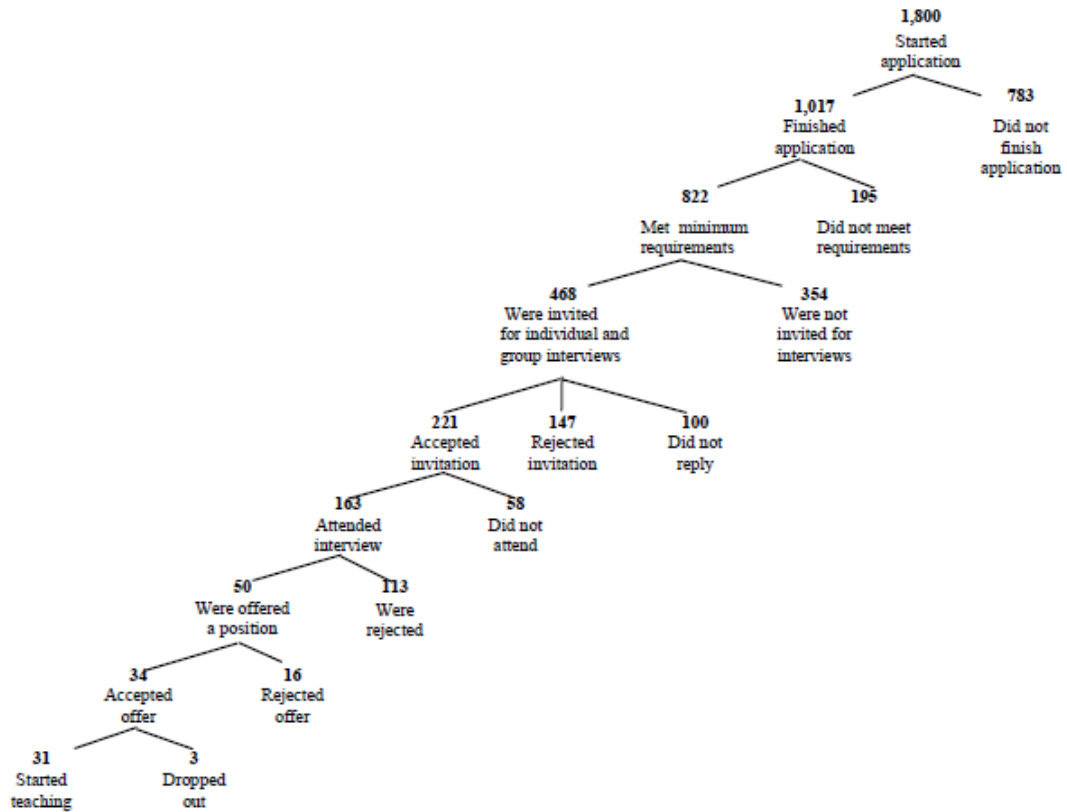
- Imbens, G.W., and J.D. Angrist. 1994. Identification and Estimation of Local Average Treatment Effects. *Econometrica* 62(2): 467–75.
- Jackson, C.K. 2010. *Match Quality, Worker Productivity, and Worker Mobility: Direct Evidence from Teachers*. NBER Technical Report. Cambridge, MA: National Bureau of Economic Research.
- Johnson, S.M., M.A. Kraft, and J. P. Papay. 2011. How Context Matters in High-need Schools: The Effects of Teachers’ Working Conditions on Their Professional Satisfaction and Their Students’ Achievement. *Teachers College Record* 114(10): 1–39.
- Kane, T.J., and D.O. Staiger. 2008. *Estimating Teacher Impacts on Student Achievement: An Experimental Evaluation*. NBER Technical Report. Cambridge, MA: National Bureau of Economic Research.
- Kane, T.J., and D. Staiger. 2012. *Gathering Feedback for Teachers: Combining High-quality Observations with Student Surveys and Achievement Gains*. Policy and Practice Brief, Bill and Melinda Gates Foundation.
- Kane, T.J., D.F. McCaffrey, T. Miller, and D. Staiger. 2013. *Have We Identified Effective Teachers? Validating Measures of Effective Teaching Using Random Assignment*. MET Project Research Paper, Bill and Melinda Gates Foundation.
- Kershaw, J.A., and R.N. McKean. 1962. *Teacher Shortages and Salary Schedules*. RAND Corporation Research Memorandum.
- Lankford, H., S. Loeb, and J. Wyckoff. 2002. Teacher Sorting and the Plight of Urban Schools: A Descriptive Analysis. *Educational Evaluation and Policy Analysis* 24(1) 37–62.
- Liu, E., S.M. Johnson, and H.G. Peske. 2004. New Teachers and the Massachusetts Signing Bonus: The Limits of Inducements. *Educational Evaluation and Policy Analysis* 26(3): 217–36.
- Louzano, P., V. Rocha, G.M. Moriconi, and R.P. de Oliveira. 2010. Quem quer ser professor? atratividade, seleção e formação docente no brasil. *Estudos em avaliação educacional* 21(47): 543–68.
- Metzler, J., and L. Woessmann. 2012. The Impact of Teacher Subject Knowledge on Student Achievement: Evidence from Within-teacher Within-student Variation. *Journal of Development Economics* 99(2): 486–96.
- Mourshed, M., C. Chijioke, and M. Barber. 2010. *How the World’s Most Improved School Systems Keep Getting Better*. McKinsey & Company.
- Murnane, R.J. 1981. Teacher Mobility Revisited. *The Journal of Human Resources* 16(1): 3–19.

- Murnane, R.J. 1991. *Who Will Teach? Policies that Matter*. Cambridge, MA: Harvard University Press.
- Murnane, R.J., and R J. Olsen. 1989. The Effect of Salaries and Opportunity Costs on Duration in Teaching: Evidence from Michigan. *The Review of Economics and Statistics* 71(2): 347–52.
- Murnane, R.J., and R J. Olsen. 1990. The Effects of Salaries and Opportunity Costs on Length of Stay in Teaching: Evidence from North Carolina. *The Journal of Human Resources* 25(1): 106–24.
- Navarro, J.C. 2002. *Quienes son los maestros? Carreras e incentivos docentes en América Latina*. Washington, DC: Inter-American Development Bank.
- Podgursky, M., R. Monroe, and D. Watson. 2004. The Academic Quality of Public School Teachers: An Analysis of Entry and Exit Behavior. *Economics of Education Review* 23(5): 507–18.
- Rivkin, S.G., E.A. Hanushek, and J.F. Kain. 2005. Teachers, Schools, and Academic Achievement. *Econometrica* 73(2): 417–58.
- Rumberger, R.W. 1987. The Impact of Salary Differentials on Teacher Shortages and Turnover: The Case of Mathematics and Science Teachers. *Economics of Education Review* 6(4): 389–99.
- Sanders, W.L., and S.P. Horn. 1998. Research Findings from the Tennessee Value-Added Assessment System (TVAAS) Database: Implications for Educational Evaluation and Research. *Journal of Personnel Evaluation in Education* 12(3): 247–56.
- Santibañez, L. 2006. Why We Should Care if Teachers Get A's: Teacher Test Scores and Student Achievement in Mexico. *Economics of Education Review* 25(5): 510–20.
- Schochet, P.Z. 2008. *Technical Methods Report: Guidelines for Multiple Testing in Impact Evaluations*. NCEE 2008-4018. National Center for Education Evaluation and Regional Assistance.
- Schueler, B. 2012. *Sticker Shock? Examining Information Effects on Citizen Support for Increased Public School Funding*. Harvard Graduate School of Education.
- Stinebrickner, T.R. 1999. Estimation of a Duration Model in the Presence of Missing Data. *The Review of Economics and Statistics* 81(3): 529–42.
- Stinebrickner, T.R. 2001a. Compensation Policies and Teacher Decisions. *International Economic Review* 42(3): 751–79.

- Stinebrickner, T.R. 2001b. A Dynamic Model of Teacher Labor Supply. *Journal of Labor Economics* 19(1): 196–230.
- Vegas, E., S. Loeb, P. Romaguera, A. Paglayan, N. Goldstein, A. J. Ganimian, A. Trembley, and A. Jaimovich. 2012. *What Matters Most in Teacher Policies? A Framework for Building a More Effective Teaching Profession*. Washington, DC: World Bank.
- Wooldridge, J.M. 2010. *Econometric Analysis of Cross-section and Panel Data*. Cambridge, MA: MIT Press.

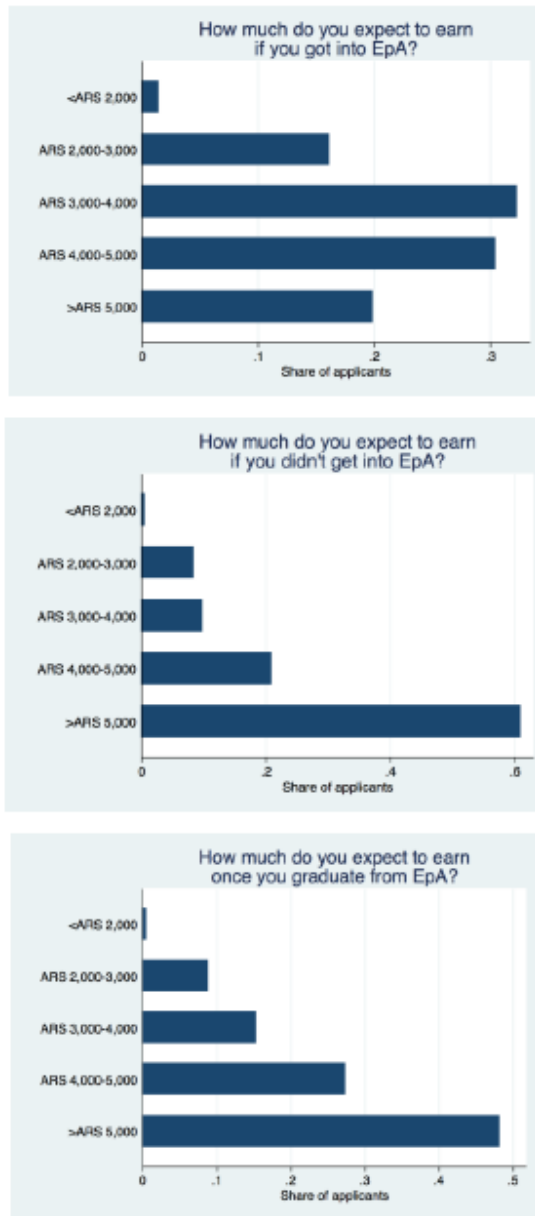
Appendix B. Tables and Figures

Figure 1. Selection Process of *Enseñá por Argentina* in 2012



Source: Prepared by the authors based on the *Enseñá por Argentina* database.

Figure 2. Salary Expectations for Applicants to *Enseñá por Argentina* in 2012



Source: Prepared by the authors based on the *Enseñá por Argentina* (EpA) database.

Table 1. Balancing Checks at Baseline

	All	T0	T1	T2	T1-T0	T2-T0	F-Test	P-Value	Number	
Percent Argentine	0.93 (.254)	0.93 (.259)	0.92 (.273)	0.94 (.228)	-0.01	0.02	0.95	0.39	1,017	
Percent from Province of Buenos Aires	0.45 (.498)	0.44 (.496)	0.46 (.498)	0.47 (.500)	0.02	0.04	0.44	0.65	1,017	
Percent from City of Buenos Aires	0.51 (.500)	0.52 (.500)	0.51 (.500)	0.49 (.500)	-0.01	-0.03	0.37	0.69	1,017	
Percent females	0.70 (.458)	0.68 (.467)	0.69 (.463)	0.73 (.443)	0.01	0.05	1.33	0.26	1,017	
Average age	29.60 (5.85)	29.79 (5.47)	29.26 (6.04)	29.76 (6.05)	-0.52	-0.03	0.84	0.43	1,003	
Percent from competitive college	0.55 (.498)	0.54 (.499)	0.52 (.500)	0.58 (.494)	-0.02	0.04	0.96	0.38	1,017	
Percent majoring in science, technology, engineering or math	0.13 (.339)	0.13 (.336)	0.14 (.352)	0.12 (.328)	0.01	-0.01	0.37	0.69	1,017	
Percent majoring in education	0.05 (.214)	0.04 (.197)	0.05 (.222)	0.05 (.222)	0.01	0.01	0.37	0.69	1,017	
Average college grade point average (out of 10)	7.39 (.900)	7.41 (.903)	7.39 (.926)	7.38 (.872)	-0.02	-0.03	0.07	0.93	1,000	
Percent with graduate degree	0.41 (.492)	0.40 (.490)	0.45 (.497)	0.39 (.487)	0.05	-0.01	1.39	0.25	1,017	
Percent who are working	0.58 (.493)	0.63 (.484)	0.54 (.498)	0.58 (.494)	-	0.09**	-0.05	2.61	0.07	1,017
Percent who applied to teach	0.14 (.348)	0.13 (.336)	0.14 (.352)	0.15 (.357)	0.01	0.02	0.31	0.73	1,017	
Percent who are teaching	0.26 (.436)	0.29 (.452)	0.25 (.431)	0.23 (.423)	-0.04	-0.05	1.32	0.27	1,017	
Percent who have taught	0.53 (.499)	0.54 (.499)	0.52 (.500)	0.53 (.499)	-0.02	-0.00	0.18	0.83	1,017	
Percent with teaching degree	0.16 (.369)	0.16 (.371)	0.14 (.352)	0.18 (.385)	-0.02	0.02	0.81	0.45	1,017	
Percent who volunteered	0.46 (.498)	0.47 (.499)	0.49 (.500)	0.44 (.496)	0.02	-0.03	0.91	0.40	1,017	
Percent that sees education as driver of change	0.88 (.320)	0.88 (.330)	0.88 (.320)	0.89 (.310)	0.01	0.02	0.23	0.79	1,017	
Percent concerned about pay	0.19 (.395)	0.21 (.406)	0.18 (.386)	0.19 (.393)	-0.03	-0.02	0.37	0.69	1,017	
Percent concerned about two-year commitment	0.05 (.218)	0.06 (.239)	0.04 (.204)	0.05 (.209)	-0.02	-0.01	0.57	0.56	1,017	
Percent concerned about not knowing schools	0.13 (.332)	0.15 (.355)	0.14 (.346)	0.09 (.289)	-0.01	-0.06**	3.05	0.05	1,017	
Percent concerned about friends and family	0.29 (.451)	0.27 (.443)	0.33 (.471)	0.25 (.436)	0.06*	-0.01	2.62	0.07	1,017	
Percent concerned about fit with career goals	0.17 (.378)	0.16 (.363)	0.16 (.369)	0.20 (.402)	0.01	0.05	1.38	0.25	1,017	
Percent concerned about full-time requirement	0.10 (.303)	0.08 (.277)	0.08 (.277)	0.14 (.348)	0.00	0.06**	3.37	0.03	1,017	

Source: Prepared by the authors based on the *Enseña por Argentina* database.

Note: Standard deviations in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. STEM = science, technology, engineering and math.

Table 2. Survey Responses about Motivations

Group 0: Control	Share of Applicants	Number
Working close to home	0.14 (.348)	1,017
Initial pay	0.12 (.321)	1,017
Pay increases	0.10 (.299)	1,017
Benefits	0.10 (.293)	1,017
Working at a public school	0.18 (.380)	1,017
Being on a school calendar	0.08 (.278)	1,017
<hr/>		
Group 1: Working Conditions	Share of Applicants	Number
Being assigned to multiple schools	0.00 (.054)	1,017
Working in City/Province of Buenos Aires	0.01 (.098)	1,017
Being assigned to a private school	0.01 (.076)	1,017
Waiting to be assigned for up to a month	0.00 (.069)	1,017
Switching schools from one year to another	0.00 (.062)	1,017
<hr/>		
Group 2: Pay	Share of Applicants	Number
Making ARS 3,000 per month	0.03 (.169)	1,017
Making ARS 4,788 after 15 years	0.03 (.171)	1,017
Making ARS 5,780 by end of career	0.03 (.177)	1,017
Ways to increase teacher pay	0.01 (.112)	1,017
Getting certified to receive benefits	0.02 (.142)	1,017

Source: Prepared by the authors based on the *Enseñá por Argentina* database.
Note: Standard deviations in parentheses.

Table 3. 2SLS Treatment-on-the-Treated Estimates

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Expressed	Expressed	Expressed	Expressed	Revealed	Revealed	Revealed	Revealed
Treated (working conditions)	0.250*** (0.0378)	0.254*** (0.0375)			0.00623 (0.0578)	0.00878 (0.0565)		
Offered (pay)	0.203*** (0.0236)	0.203*** (0.0239)			-0.0110 (0.0360)	-0.0206 (0.0360)		
Female		-0.0400* (0.0214)		-0.0321 (0.0212)		0.0580* (0.0322)		0.0573* (0.0322)
Age		-0.000916 (0.00173)		-0.00152 (0.00172)		-0.0114*** (0.00261)		-0.0114*** (0.00261)
Attended a competitive college		0.00262 (0.0200)		0.00804 (0.0198)		0.0419 (0.0301)		0.0419 (0.0302)
College grade point average (out of 10)		0.0110 (0.0112)		0.00865 (0.0111)		0.0577*** (0.0169)		0.0582*** (0.0169)
Currently working		0.0356* (0.0202)		0.0400** (0.0201)		0.0171 (0.0305)		0.0178 (0.0306)
Currently teaching		-0.00165 (0.0250)		-0.00916 (0.0247)		0.00464 (0.0376)		0.00645 (0.0376)
Has a teaching degree		-0.0469 (0.0286)		-0.0424 (0.0283)		-0.0305 (0.0431)		-0.0312 (0.0431)
Applied to teach		-0.000889 (0.0316)		-0.00484 (0.0313)		-0.0124 (0.0476)		-0.0149 (0.0476)
Treated (pay)			0.309*** (0.0355)	0.308*** (0.0358)			-0.0167 (0.0549)	-0.0310 (0.0545)
Offered (working conditions)			0.154*** (0.0230)	0.158*** (0.0232)			0.00383 (0.0355)	0.00568 (0.0354)
Constant	0.00289 (0.0164)	-0.0398 (0.106)	0.00289 (0.0162)	-0.0136 (0.105)	0.321*** (0.0251)	0.166 (0.159)	0.321*** (0.0251)	0.161 (0.160)
Observations	1,017	987	1,017	987	1,017	987	1,017	987

Source: Prepared by the authors based on the *Encuesta por Argentina* database.

Note: Standard deviations in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. 2SLS = two-stage least squares regressions.

Table 4. 2SLS Treatment-on-the-Treated Estimates: Expressed Preferences

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Expressed	Expressed	Expressed	Expressed	Expressed	Expressed	Expressed	Expressed	Expressed	Expressed
Treated (working conditions)	0.0907*** (0.0343)		0.0885** (0.0345)		0.0863** (0.0383)		0.0921*** (0.0346)		0.0938*** (0.0343)	
× Female	-0.165*** (0.0537)	0.0420 (0.0527)								
Female	0.00858 (0.0244)	-0.0368 (0.0238)								
Treated (pay)		0.194*** (0.0317)		0.191*** (0.0322)		0.191*** (0.0363)		0.192*** (0.0318)		0.190*** (0.0316)
× College grade point average			0.0303 (0.0264)	-0.0140 (0.0268)						
College grade point average (out of 10)			-0.00392 (0.0129)	0.00541 (0.0123)						
× Selection score					0.0556** (0.0283)	-0.0450 (0.0279)				
Selection score					0.0003 (0.0126)	0.0215* (0.0122)				
× Applied to teach							0.0570 (0.0775)	-0.0256 (0.0703)		
Applied to teach							-0.0227 (0.0315)	-0.00978 (0.0312)		
× Currently working									-0.0645 (0.0499)	0.147*** (0.0483)
Currently working									0.0419* (0.0228)	-0.00457 (0.0221)
Constant	0.0951*** (0.0210)	0.105*** (0.0203)	0.130 (0.0959)	0.0397 (0.0915)	0.103*** (0.0140)	0.0843*** (0.0132)	0.104*** (0.0132)	0.0809*** (0.0126)	0.0759*** (0.0182)	0.0823*** (0.0174)
Observations	1,017	1,017	1,000	1,000	827	827	1,017	1,017	1,017	1,017

Source: Prepared by the authors based on the *Encuesta por Argentina* database.
 Note: Standard deviations in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. 2SLS = two-stage least squares regressions.

Table 5. 2SLS Treatment-on-the-Treated Estimates: Revealed Preferences

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Expressed	Expressed	Expressed	Expressed	Expressed	Expressed	Expressed	Expressed	Expressed	Expressed
Treated (working conditions)	0.0164 (0.0502)		0.0210 (0.0500)		-0.0407 (0.0503)		0.0121 (0.0506)		0.0165 (0.0502)	
× Female	0.0275 (0.0786)	-0.0452 (0.0791)								
Female	0.0606* (0.0358)	0.0760** (0.0358)								
Treated (pay)		-0.0246 (0.0477)		-0.0247 (0.0479)		0.0253 (0.0490)		-0.0195 (0.0478)		-0.0193 (0.0478)
× College grade point average			0.0113 (0.0383)	-0.0808** (0.0399)						
College grade point average(out of 10)			0.0595*** (0.0187)	0.0793*** (0.0183)						
× Selection score					-0.0372 (0.0371)	-0.0259 (0.0376)				
Selection score					0.251*** (0.0165)	0.247*** (0.0164)				
× Applied to teach							-0.0899 (0.113)	-0.0298 (0.106)		
Applied to teach							-0.0156 (0.0460)	-0.0258 (0.0469)		
× Currently working									-0.111 (0.0729)	-0.0269 (0.0731)
Currently working									0.0237 (0.0334)	0.00611 (0.0334)
Constant	0.273*** (0.0308)	0.271*** (0.0305)	-0.125 (0.139)	-0.262* (0.136)	0.400*** (0.0183)	0.385*** (0.0179)	0.318*** (0.0193)	0.326*** (0.0190)	0.301*** (0.0265)	0.319*** (0.0263)
Observations	1,017	1,017	1,000	1,000	827	827	1,017	1,017	1,017	1,017

Source: Prepared by the authors based on the *Enseña por Argentina* database.

Note: Standard errors in parentheses. *p<0.10, ** p<0.05, *** p<0.01. 2SLS = two-stage least squares regressions.

Table 6. 2SLS Treatment-on-the-Treated Estimates: Effects on Top-Ranked Requested Change

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	highinipay	highinipay	clusterassn	clusterassn	betterresou	betterresou	meritpay	meritpay
Working conditions	-0.0553** (0.0275)		0.0551** (0.0226)		0.00436 (0.0266)		-0.0149 (0.0130)	
Pay		0.0589** (0.0257)		-0.00954 (0.0217)		0.0746*** (0.0249)		0.0426*** (0.0122)
Observations	1,017	1,017	1,017	1,017	1,017	1,017	1,017	1,017

Source: Prepared by the authors based on the *Encuesta por Argentina* database.

Note: Marginal effects; standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. 2SLS = two-stage least squares regressions.

Appendix Table A1. Balancing Checks on Scores at Baseline

	T0	T1	T2	T1-T0	T2-T0	F-Test	P-Value	Number
Average score on accomplishments (Stage 1)	3.24 (.389)	3.24 (.370)	3.26 (.342)	0.00	0.02	0.30	0.74	827
Average score on leadership (Stage 1)	2.77 (1.12)	2.74 (1.02)	2.53 (1.04)	-0.03	-0.24**	3.97	0.02	827
Average score on perseverance (Stage 1)	3.06 (1.00)	3.07 (1.01)	3.02 (1.12)	0.01	-0.05	0.21	0.81	827

Source: Prepared by the authors based on the *Enseña por Argentina* database.

Note: Standard deviations in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. The score for accomplishments ranges from 1 to 5 points. The other two scores range from 1 to 4 points.

Appendix Table A2. Balancing Checks Due to Attrition

	Non-Dropouts	Dropouts	Difference	Number
Percent Argentine	0.93 (.259)	0.92 (.273)	-0.01	1,017
Percent from Province of Buenos Aires	0.44 (.496)	0.46 (.498)	0.02	1,017
Percent from City of Buenos Aires	0.52 (.500)	0.51 (.500)	-0.01	1,017
Percent females	0.68 (.467)	0.69 (.463)	0.01	1,017
Average age	29.79 (5.47)	29.26 (6.04)	-0.52	1,012
Percent from competitive college	0.54 (.499)	0.52 (.500)	-0.02	1,017
Percent majoring in science, technology, engineering, or math	0.13 (.336)	0.14 (.352)	0.01	1,017
Percent majoring in education	0.04 (.197)	0.05 (.222)	0.01	1,017
Average college grade point average (out of 10)	7.41 (.903)	7.39 (.926)	-0.02	1,003
Percent with graduate degree	0.40 (.490)	0.45 (.497)	0.05	1,017
Percent who are working	0.63 (.484)	0.54 (.498)	-0.09**	1,017
Percent who applied to teach	0.13 (.336)	0.14 (.352)	0.01	1,017
Percent who are teaching	0.29 (.452)	0.25 (.431)	-0.04	1,017
Percent who have taught	0.54 (.499)	0.52 (.500)	-0.02	1,017
Percent with teaching degree	0.16 (.371)	0.14 (.352)	-0.02	1,017
Percent who volunteered	0.47 (.499)	0.49 (.500)	0.02	1,017
Percent that sees education as driver of change	0.88 (.330)	0.88 (.320)	0.01	1,017
Percent concerned about pay	0.21 (.406)	0.18 (.386)	-0.03	1,017
Percent concerned about two-year commitment	0.06 (.239)	0.04 (.204)	-0.02	1,017
Percent concerned about not knowing schools	0.15 (.355)	0.14 (.346)	-0.01	1,017
Percent concerned about friends and family	0.27 (.443)	0.33 (.471)	0.06*	1,017
Percent concerned about fit with career goals	0.16 (.363)	0.16 (.369)	0.01	1,017
Percent worried about full-time requirement	0.08 (.277)	0.08 (.277)	0.00	1,017

Source: Prepared by the authors based on the *Enseñá por Argentina* database.
 Note: Standard deviations in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.