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Selection into Teaching: Evidence from Enseña Perú

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ABSTRACT

Having a good teacher is the most important school-related factor for student achievement, to the point of closing the gap between low and high-income students. However, the empirical literature is almost silent regarding teacher selection. This paper estimates a teacher selection model using recruitment data from Enseña Perú, a program that recruits top university graduates from all majors and places them in vulnerable schools. Our results suggest that candidates with volunteering experience and who finished their college degree in the top third of their class are significantly more likely to be selected into the program. Teacher recruitment policy that identifies these qualities, which might be related to leadership, high motivation, social commitment and deep content knowledge, could considerably improve the quality of the teaching force.

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1. Introduction

There is consensus in the literature that a good teacher is the single most important within-school factor that can help close the achievement gap. Seminal research using data from Tennessee found that if two comparable eight-year old students were placed with different teachers, one a low performer and the other a high performer, their outcomes would diverge by more than 50 percentile points within three years. In this study teacher quality comes out a more efficient measure to increase student attainment than reducing class size from 23 to 15 students, an alternative that improves the performance of an average student by eight percentile points (Sanders and Rivers, 1996). Using panel data to estimate the variation in fixed teacher effects, while controlling for student fixed characteristics and classroom specific variables on student test scores, Rockoff (2004) finds a strong and statistically significant difference among teachers: a one standard deviation increase in teacher quality raises reading and math test scores by approximately 0.20 and 0.24 standard deviations respectively on national standardized scales. In addition he finds a statistical significant positive effect of teaching experience on reading test scores, controlling for fixed teacher quality. This means that students placed with low-performing teachers several years in a row suffer from a mostly irreversible educational loss (McKinsey, 2007). The importance of a good teacher has also been tracked over several countries. A recent paper using a dataset from Peru that tested both students and their teachers in math and reading finds that one standard deviation in subject-specific teacher achievement increases student achievement by about 10 percent of a standard deviation (Metzler and Woessmann, 2010).

A good teacher can also help close the attainment gap caused by other determinants such as family background. Estimates of teacher performance suggest that having three years of good teachers (from the 85th percentile) in a row would overcome the average achievement deficit between low-income children and children from higher-income families (Hanushek, 2002; Hanushek et al., 2005). And evidence from Chile suggests that having at least three highly rated teachers in the DocenteMás teacher evaluation program seems to close the achievement gap between low-income and middle-income students (SIMCE, 2008). In other words, high-quality teachers can make up for deficits observed in the schooling of children from disadvantaged

backgrounds. Yet disadvantaged students are very often taught by the least skilled teachers (Boyd et al., 2005, Hanushek et al., 2004).

An analysis of results from PISA 2006 and TIMSS 2003² suggests that Finland and Singapore are the top performing school systems. These systems share a common thread: they consistently attract more able people into teaching, leading to better student outcomes. To achieve this, they have made entry into teacher training highly selective and have developed effective processes for selecting the right applicants to become teachers. In Singapore, for example, the teacher selection process begins with an evaluation of resumes, followed by literacy assessment tests, interviews, and monitoring during their first year of teaching. Teacher applicants must be in the top third of their age cohort, and should have attitude, aptitude and personality that make them effective teachers. These traits are identified during the interview process and monitored during their first year as teachers. The end result of this process is that only 1 out of 6 candidates is accepted to become a teacher. Finland follows a similar process, where teaching applicants must pass a national screening test, a university-based assessment test, interviews, and group work. Only 1 out of 10 applicants is accepted into teaching in the Finnish system (McKinsey, 2007).

Although we know the importance of good teachers and that effective teaching recruitment mechanisms allow countries such as Finland and Singapore outperform the rest of the world, the empirical literature is almost silent regarding teacher selection. The common framework used to analyze teacher recruitment is that of labor supply and demand, which assumes that individuals will become teachers if teaching represents the most desirable activity—in terms of ease of entry and overall compensation—to pursue among all activities available to them. Guarino, Santibanez and Daley (2006) conducted an extensive review of the literature on teacher recruitment and found that most studies have investigated what factors affect an individual's decision to choose teaching as a career. Their review suggests that individuals with higher opportunity costs (males, individuals with higher measured academic ability) are less likely to enter the teaching profession. It also suggests that schools with higher proportions of minority, low-income, and low-performing students are more difficult to staff.

² PISA stands for Programme for International Student Assessment. PISA is conducted every three years by the OECD and is an international examination that measures competencies in science, language and math among 15-year old school students. TIMSS stands for Trends in International Mathematics and Science Study, is conducted by the International Association for the Evaluation of Educational Assessment (IEA), and is applied every four years to 4th and 8th graders.

As Guarino et al.'s review shows, most of the literature has focused on supply issues and does not allow for understanding how candidates who are already willing to work in education are selected. In addition, the literature is generally silent regarding decisions made by recruiters. That is, it does not provide answers to why a school district selects candidates with a particular profile. Therefore, policy implications are often restricted to those that could increase the relative attractiveness of teaching as compared to other occupations and do not provide guidance on how to improve teacher hiring decisions.

Harris, Rutledge, Ingle and Thompson (2006) are one of the few authors that analyze hiring decisions made by school principals. Using data from a school district in Florida that gives considerably hiring autonomy to school principals, they provide evidence regarding the characteristics that principals look for in teacher applicants and the tools that principals use to identify these characteristics. They found that principals consider the four characteristics of effective teachers (teacher experience, subject-matter knowledge, pedagogical skills and verbal/quantitative ability) when evaluating teaching candidates, but that they look for these characteristics as part of a mix of personal and professional qualities. In particular, principals most often report strong teaching skills, caring, knowledge of subject, working well with others, experience, enthusiasm, and communication skills. They also found that the most important tool that principals use when hiring teachers is the interview. This tool is especially well suited for identifying those personal characteristics such as caring, enthusiasm and motivation that are generally unobservable in resumes.

Our paper makes a contribution to the literature on the demand side of the teacher labor market by estimating a teacher selection model using recruitment data from Enseña Perú, a program that recruits top university graduates from all majors and places them—after a short but intensive training session—in vulnerable schools in the country. These professionals work as classroom teachers for two years. The goal of the paper is to learn from Enseña Perú and to constitute a first step in generating evidence that can help education policymakers in the design of successful teacher recruitment and selection processes. We find that in Enseña Perú the interview plays a key role in identifying candidates with typically unobserved qualities that could make them excel as teachers or could make them be less efficient than desired. Our econometric model indicates that candidates with volunteering experience and who have finished their college degree in the top third of their class are significantly more likely to be selected into the program,

suggesting that the program is selecting high caliber candidates that appear to possess leadership, social commitment, and high motivation capabilities. The paper develops as follows. In the next section, we provide a brief description of the program, highlighting its selection process. In section 3, we describe the empirical approach and sources of data. Section 4 presents the results, and section 5 concludes.

2. The Program Enseña Perú

2.1. The Model and Its Inspiration

Enseña Perú is an NGO that has the objective of contributing to the reduction of educational inequities in Peru. To achieve this goal, the organization recruits outstanding recent college graduates and working professionals from all backgrounds and career interests to commit to teaching for at least two years in schools that serve low-income communities. Enseña Perú also provides training and the necessary ongoing support to ensure the recruits' success as teachers. The organization started its activities in 2009 by first promoting the program in the top public and private Peruvian universities.

Enseña Perú is based on the Teach for America (TFA) model. TFA started in 1989 in the United States with the mission of introducing high quality human capital to solve the systemic problem of inequities in public education. TFA recruits outstanding college graduates to teach for two years in urban and rural schools serving students from low-income families. Its main goals are to significantly impact children's academic achievement and aspirations and to generate a critical mass of professionals deeply aware of the problems faced by public education, so that they can become agents of change that can then promote and implement solutions from their respective professions and areas of influence. This model has had a major impact in the United States. At the classroom level, TFA is the organization that provides the largest number of teachers to low-income schools. About 17,000 people have participated as TFA teachers, affecting the lives of 3 million students (Teach for America, 2010). In 2008, TFA received 35,000 applications for 4,100 positions; approximately 11% of Ivy League seniors applied to

become TFA corps members. In 2009, TFA placed approximately 7,500 professionals in 2,500 schools, benefiting 450,000 students (Ripley, 2010).

Regarding student learning, independent studies have found that TFA corps members are more effective than traditional teachers in some subject areas. Decker, Mayer and Glazerman (2004), in an experimental evaluation, found that TFA's goal of serving low-income schools is met since their corps members work in the highest-need classrooms in the country. They also found that TFA teachers differ from other teachers in the same schools, with TFA teachers having stronger academic backgrounds but less education-specific training than control teachers. Their results also indicate that TFA teachers generated larger math achievement gains of about one additional month of math instruction, but that TFA teachers did not have an impact on reading achievement.³ Boyd, Grossman, Lankford, Loeb and Wyckoff (2006) used data from students and teachers in grades three through eight in New York City to compare the performance of teachers entering the profession in the city from different pathways, including TFA. They found that TFA teachers perform somewhat worse in English than college recommended teachers⁴ in their first year of teaching, but that they catch up to some degree in later years. In addition, their results indicate that TFA teachers have higher performance in middle school math than college-recommended and temporary-license teachers even in their first year of teaching. Another study using data from New York City was conducted by Kane, Rockoff and Staiger (2006). They used test scores in grades four through eight to estimate certified, uncertified, and alternatively certified teachers' value-added in math and reading, controlling for students prior-year test scores, classroom and school related factors, and teachers' experience. Results suggest that there is a positive effect for TFA teachers on student math achievement compared to certified teachers, but no differences in reading. Findings also indicate that the TFA effect was slightly smaller for elementary school teachers than for middle school teachers and that TFA's high turnover rate could be easily compensated by their higher effectiveness, particularly in math. Lastly, a study conducted by Xu, Hannaway and Taylor (2009) looked at the relative effectiveness of TFA teachers in secondary schools using individual student level data linked to teacher data from the state of North Carolina for the school years

³ In addition, impacts are similar for different types of teachers (all teachers and novice), for different subgroups of students (across gender, across racial/ethnic groups, across students with different baseline achievement scores, and across students in different grades), and are not sensitive to different assumptions.

⁴ College recommended teachers are those who fulfil certification requirements at a university-based program that is registered with the state of New York.

2000-01 through 2005-06. Their findings indicate that TFA teachers differ significantly from non-TFA teachers in their demographic characteristics, academic preparation, experience, and in the classes and students they teach—they are placed in the most demanding classrooms in the lowest-performing schools. Their results also suggest that TFA teachers are more effective than traditional teachers, particularly in math and science. Moreover, the impact of having a TFA teacher is twice as large as that of having a teacher with three or more years of experience relative to a new teacher. To sum up, the studies reviewed here indicate that, overall, TFA teachers have some impact on math achievement and no impact on reading achievement and that these effects tends to be larger in middle and high school. This effect appears to be mostly due to TFA’s recruitment practices that allow them to identify teachers who are ultimately effective in producing achievement gains (Boyd et al., 2010).⁵

Following the success of TFA, social entrepreneurs in different countries of the world have decided to adapt this model to their local context. One of the first adaptations was Chile, with Enseña Chile starting operations in 2008. At this moment, there is an ongoing quasi-experimental evaluation of Enseña Chile to determine its impact on student achievement and on cognitive and non-cognitive skills. Preliminary results indicate that Enseña Chile has been very successful in its targeting: schools where Enseña Chile professionals are placed have students with below national average achievement in math and Spanish, with poor study habits, and with low educational expectations (Alfonso, Santiago and Bassi, 2010). Enseña Perú, in its adaptation of the TFA model, has benefited from the regional leadership of Enseña Chile.

2.2. How Enseña Perú Works

Enseña Perú follows a very rigorous selection process that allows identification of college graduates with competencies to become not only great teachers, but also leaders and entrepreneurs. The eight competencies are: leadership and achievements, perseverance, critical thinking, ability to influence and motivate others, organizational and planning skills, respect for low-income communities, ability to relate with others at all levels, and deep commitment to the program’s vision. All eight competencies are measured in two stages, the first consisting of an evaluation of the candidate’s resume and two essays and the second of an individual interview

⁵ The coefficient on TFA when not controlling for teacher characteristics measures both selection and preparation. Once teacher characteristics are controlled for, the coefficient on TFA is reduced to half its size.

and a group interview. Applicants that score above a threshold are invited to participate in pre-service training (called *Summer Institute* or *Instituto de Verano*).⁶ This intensive training session lasts four weeks and covers topics such as lesson planning, classroom management, leadership, communication, and language differences. In addition, during this time Enseña Perú corps members have the opportunity to teach to students from a low-income community. Enseña Perú corps members' training extends beyond those initial four weeks: they receive tutoring and mentorship and participate in in-service training activities throughout their two-year assignment.

Together with the recruitment and admissions stages, Enseña Perú selects the schools where its professionals will be placed. Differently from Enseña Chile, which operates in three regions of the country, Enseña Perú has decided during its first year of implementation to work in the Province of Callao, just outside the capital city of Lima. The organization has reached an agreement with Callao's Regional Government, and another agreement with two organizations that manage public schools (Fe y Alegría and Coprodeli). As a result of these agreements, Enseña Perú is working in 10 schools of which two are public, one is associated with Fe y Alegría, and seven are associated with Coprodeli. These schools are located in low-income communities and serve low-income students.

Figure 1: Enseña Perú's Process



Source: Recart (2009).

Table 1 shows the results from Enseña Perú's 2009-10 selection process. During the first year of operations, over 2,200 college graduates applied to Enseña Perú but only 51 had the skills required to be admitted to the program. However, given budgetary constraints, the organization extended invitations to participate in the program to 42 of these candidates. In March 2010, the 26 Enseña Perú corps members that accepted the invitation and successfully completed the

⁶ This compares to how traditional teachers are selected in Peru. Starting in 2010 with the new Carrera Pública Magisterial, teaching candidates must first successfully pass a national examination testing for communication skills (25 points), logical-mathematical skills (25 points), general pedagogical knowledge (30 points), and discipline-specific pedagogical knowledge (20 points). Those who achieve a minimum threshold of 70 points go onto the next stage, which consists mostly of background evaluation (educational level; academic merit; professional experience; professional performance—such as attendance, use of educational resources, generation of adequate learning environments—and teaching aptitude—measured with a written evaluation on disciplinary content knowledge, evaluation of ICT use, evaluation of pedagogical capabilities, and evaluation of basic use of English or native language). The process does not include interviews, and since it is newly implemented we cannot infer right now the quality of the new teachers entering the profession. See <http://www.minedu.gob.pe/carrerapublica/index.php>

summer institute were assigned to classrooms in the 10 schools described above. This means that Enseña Perú's selection process is extremely competitive, admitting into the program only 1.1% of candidates who initially applied.⁷

3. Empirical Strategy

The objective of this paper is to analyze the different stages of Enseña Perú's recruitment process to identify which of the candidates' characteristics are significantly related to the probability of being selected into the program. For this, we use Enseña Perú's selection database which contains the responses to the background questionnaire that all candidates must complete online as part of their application process. There are questions related to the candidate's demographic characteristics, academic background, job experience, and volunteer/social services experience. The questionnaire finishes by asking the candidates to identify their main defect and the three traits they believe are most important to face the challenge of teaching in a vulnerable school. To our knowledge, no previous study on teacher recruitment and selection has analyzed these typically unobserved attributes of teaching candidates. This database includes 2,265 candidates that started their application and 733 candidates that have a complete application form.

These data are complemented with a survey designed by us and applied by Instituto Apoyo. In this online survey, we asked the candidates about their socioeconomic background and their work and educational expectations. Of the 733 candidates with a complete application form, 463 answered the Apoyo questionnaire. It is important to highlight that this questionnaire was applied once the candidates had already completed their online application, so those who answered it are individuals highly interested in the program.

To estimate the probability of being selected into the program, we use a Probit model depicted in equation (1):

$$(1) \quad \text{Pr}(Y_i) = \alpha + \beta X_i + \tau E_i + \phi S_i + \gamma Q_i + \mu$$

where the dependent variable Y_i is a dummy that equals 1 if the candidate with complete application (step 3 in table 1) is interviewed (step 6) and 0 if the candidate is not interviewed. Additionally, we run a second Probit where the dependent variable is a dummy that equals 1 if

⁷ It is important to highlight here the limited scalability of Enseña Perú. The Peruvian education system has approximately 350,000 teachers and 8 million students. Given Enseña Perú's selectivity and growth prospects, at most it will be able to impact 1% of students and represent 0.5% of teachers, considerably below TFA's impact in the US.

the candidate with complete application is selected in the interview (step 7) and 0 if he/she is not. Among the right-hand-side variables we include the candidate's demographic characteristics X_i , his/her educational background E_i , socioeconomic background S_i , and job and volunteering experiences Q_i . The sample on which equation (1) is estimated consists of 461 candidates with complete applications (step 3) that replied to the Apoyo questionnaire and have information on all the variables included in the model.

In an expanded specification, we also include the typically unobserved attributes of the candidates (main qualities for facing the challenge of teaching at a vulnerable school and the candidate's main defect). For this, we first analyze all long-form responses using the qualitative data analysis program N-Vivo. This allows us to identify common patterns among these long-form responses and create meaningful categories. As a result of this process, we end up with 68 traits for facing the challenge of teaching at a vulnerable school and with 33 categories of defects that synthesize the responses to these questions of the 463 candidates who answered the Apoyo questionnaire. These categories are later grouped into 3 overall qualities (autonomy, social and work ethic) and 4 defects (autonomy, dependency, work ethic, and "does not mention a defect").

4. Results

The descriptive characteristics of Enseña Perú's candidates are shown in table 2. We can clearly see that those candidates with complete applications have demographic, educational and socioeconomic characteristics and work and volunteering experiences that are more diverse than those candidates that are selected in the interview (stage 7). For example, there is a largest share of women and Lima residents among those selected at the interview stage than among those with complete applications. There is also a large difference regarding educational background—length of postsecondary studies (PSE), percentage that finished PSE in the top third of their class—and regarding socioeconomic background—percentage of mothers with PSE, percentage of fathers that are employed, percentage of households with more than 8 household goods of different types (such as cars, computers, etc.). A considerably higher percentage of candidates selected after the interview have had volunteering experiences, teaching/research assistance experience, and have taught some class/course/subject. Lastly, there are interesting differences

regarding the usually unobservable variables, particularly main defects of the candidates: a higher percentage of candidates selected in the interview report having defects related to too much autonomy (such as perfection, exigency, pride) and related to poor work ethic (such as disorganization) than all candidates with complete information, but a lower percentage of them reports a defect related to dependency (such as anxiety, impatience, indecisiveness, negativity, shyness) than all candidates.

Table 3 presents the regression results from the basic specification depicted in equation (1). Column A shows the results for the probability of being interviewed by Enseña Perú (achieving stage 6) among those with complete applications. Column B includes the results of estimating the Probit for the probability of being selected in the interview (stage 7) among candidates with complete applications.

Although we have found considerable differences in the descriptive statistics between candidates with complete applications and those interviewed and selected in the interview, when we control for all intervening factors we find first that residence in Lima significantly increases the probability of being interviewed by 13.4% compared to those who live in other provinces in the country. It also significantly increases the probability of being selected in the interview by 6.6%. At face value, one could think that this variable is capturing socioeconomic effects. However, when we exclude residence in Lima from the models we do not find the maternal educational and parental employment status to be statistically significant, and the effect from household goods does not increase in size. Thus, the “living in Lima” variable does not seem to be capturing income effects and could be instead identifying Enseña Perú’s recruiting strategy during its first year of operations, the location of their summer institute (where selected professionals must live for a month during the summer),⁸ or the quality of the universities attended by the candidates since Lima concentrates the largest share of prestigious universities in Peru.

Second, the number of household goods increases significantly the probability of being interviewed and the probability of being selected in the interview by 14.0% and 4.6%, respectively. Excluding this variable from the model does not turn the other variables that measure socioeconomic background (mother’s education, and parental employment status)

⁸ Enseña Perú conducted all of its recruitment activities (socialization of the program and interviews) in Lima. The summer institute is held also in a school in Callao, outside Lima. This could change in the 2010 interview and selection process since they are actively recruiting candidates, for later placement, in Arequipa.

statistically significant, so the number of household goods does not appear to be capturing the effects of these other observed socioeconomic variables. This finding could mean that the program tends to select those candidates who have more wealth, but since this variable is unobserved to the selection committee⁹ it could be approximating other still unobserved characteristics (to the econometrician but not the selection committee) of the candidates.

Third, those candidates with complete application that finish their undergraduate degree in the top third of their class have a probability of being interviewed and of being selected in the interview that is 12.2% and 4.6% significantly higher than those who finish the lowest two thirds. The fact that those candidates that finish in the top third of their class have a significantly higher probability of overcoming both selection cut-points could be suggesting that Enseña Perú is selecting top performing candidates that have high motivation, effort, hard work, and desire to overcome difficulties. High academic achievement and its related unmeasured qualities are critical for a successful application of the the Teaching as Leadership model that Enseña Perú has adapted.

Lastly, the candidates that have participated in volunteering activities have a probability of being selected in the interview—but not of being interviewed—that is 5.0% significantly higher than that of the candidates that do not have volunteering experience. This variable could be a proxy of commitment to social equity, respect for low income communities, humility and leadership. The fact that this variable is only significant in the model that predicts the probability of passing the interview cut-point corroborates this hypothesis, since the selection model that Enseña Perú uses looks in the interviews for these qualities that very rarely are displayed in the candidates' resumes.

Table 4 presents the results for the expanded specification, which also includes as explanatory variables the generally unobservable qualities for facing difficulties as teachers and the candidate's main defect. The only generally unobservable characteristic that is statistically significant for being interviewed is indicating a work ethic defect (such as being disorganized). Those who report having a work ethic defect have a 33.2% higher estimated probability of being interviewed than those candidates who report no defect. However, this variable becomes insignificant for predicting the probability of being selected in the interview. As with the volunteering variable before, the fact that the work ethic defect becomes insignificant for passing

⁹ All socioeconomic background variables were collected using the Apoyo questionnaire, and Enseña Perú selection committee did not have access to them until December 2009 when the selection process was over (it concluded in November).

Enseña Perú's second cut-point appears to suggest that once again the interview is able to filter those candidates that have qualities that could negatively affect their performance as teachers.

5. Conclusions

In today's knowledge-based societies, closing the achievement gap between low-income and high-income students is critical. Otherwise, efforts to reduce poverty and improve productivity and economic competitiveness will be fruitless. Having a good teacher is the single most important school-related factor for student achievement, even to the point of equalizing the gap between students from poor and higher-income socioeconomic backgrounds. Teacher quality is thus a tool for providing equal education opportunities. Enseña Perú is one model in the direction of helping close the achievement gap in Perú. This organization, inspired after Teach for America, places human capital of the highest quality—selected after a highly competitive process—in vulnerable schools in the country.

This paper makes a contribution to the literature on teacher recruitment by estimating a teacher selection model using data from Enseña Perú. Results indicate first that there is alignment between Enseña Perú's recruitment objectives and the descriptive characteristics of the candidates that successfully pass the program's selection thresholds. Second, the findings suggest that candidates with volunteering experience and who finished their college degree in the top third of their class are significantly more likely to be selected into the program. Thus, the organization is able to select high caliber individuals that appear to exhibit high motivation, effort, hard work, desire to overcome adversities, social commitment, respect for low income communities, humility and leadership.

The paper also constitutes a first step in generating evidence that can help education policymakers in the design of successful teacher recruitment and selection processes. Findings presented here indicate that interviews are crucial for selecting teaching candidates. Enseña Perú appears to use the interview stage of their selection process quite effectively, identifying candidates with personalities, attributes and attitudes that can make them effective teachers. And we know from other research that candidates selected into similar programs, such as Enseña Chile and Teach for America, have considerably higher educational expectations for all their students and a higher impact on student achievement than traditionally hired teachers (Alfonso et

al., 2010; Decker et al., 2004; Kane et al, 2006; and Xu et al., 2009). Thus, one policy implication is that to improve the quality of the teaching force, teacher recruitment policies in the region need to be revised to include processes that could identify these leadership, high motivation, social commitment and deep content knowledge qualities that are related to improved student achievement.

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Table 1: Enseña Perú's 2009-10 Selection Process

Selection Stages	N
Step 1: Started application	2265
Step 2: Finished application	810
Step 3: Completed applications	733
Step 4: Selected for interview	331
Step 5: Invited to interview ^a	256
Step 6: Interviewed	153
Step 7: Selected in interview	51
Step 8: Invited to participate in program ^b	29
Step 9: Accepted invitation and started summer institute	27
Step 10: Successfully completed summer institute	26

^a Of the candidates that successfully pass the resume and essays evaluation, only those that Enseña Perú has the capacity for interviewing are invited to the interview. These are those candidates who have the highest score in the evaluation according to a TFA rubric that has been adapted by Enseña Perú.

^b Of the candidates that successfully pass the interview, only those that Enseña Perú has the capacity for supporting both technically and financially are invited into the program. Again, these are those candidates who have the highest score in the interview according to a TFA rubric that has been adapted by Enseña Perú.

Source: Enseña Perú's selection database.

Table 2: Sample Descriptive Characteristics

	Selection Stages						
	3	4	5	6	7	8	9
Demographic characteristics							
Female	58.7	64.2	63.2	66.7	67.4	67.7	69.6
Single (not married)	96.3	97.1	97.3	97.6	95.4	94.1	95.7
Range of age	15-35	18-33	18-33	18-33	20-32	21-32	22-32
Average age	25.3	24.8	24.9	25.0	24.7	25.1	25.2
Lives in Lima	71.1	74.2	74.6	83.7	93.0	94.1	91.3
Educational Background							
Technical tertiary (0 to 4.5 years of PSE)	6.1	4.6	4.9	3.3	0.0	0.0	0.0
BA (4.5 to 6 years of PSE)	58.8	61.7	61.1	61.0	53.5	44.1	47.8
Masters or PhD (6 to 12.5 years of PSE)	28.7	26.7	27.6	28.5	39.5	50.0	47.8
Finished college in top third of class	65.4	75.0	76.8	77.2	81.4	76.5	73.9
Has intermediate/advanced knowledge of English	55.1	64.2	65.4	64.2	69.8	70.6	69.6
Participated in college sports	28.3	24.6	23.2	23.6	23.3	26.5	21.7
Worked as TA or RA	44.3	47.1	49.2	48.0	55.8	55.9	56.5
Has taught a class, topic, subject	80.1	78.8	78.9	79.7	86.1	85.3	82.6
Participated in debates, forums, presentations	76.7	78.3	83.8	87.0	88.4	85.3	82.6
Socioeconomic characteristics							
Mother is employed	59.2	59.2	58.4	60.2	62.8	64.7	73.9
Father is employed	78.0	77.1	77.8	82.1	74.4	73.5	65.2
Household owns between 8 and 12 goods	30.2	40.0	49.7	76.4	76.7	85.3	78.3
Mother has less than complete secondary schooling	21.6	19.6	17.8	17.9	14.0	8.8	13.1
Mother has complete secondary schooling	17.1	15.8	17.8	17.1	16.3	11.8	13.0
Mother has complete or incomplete technical tertiary education	28.7	27.9	29.2	26.0	18.6	20.6	21.7
Mother has complete or incomplete university education	32.6	36.7	35.1	39.0	51.2	58.8	52.2
Job and volunteering experiences							
Has between 1 and 5 years of work experience	63.5	69.2	69.2	64.2	65.1	58.8	47.8
Has 6 or more years of work experience	13.2	10.8	11.4	14.6	14.0	17.7	17.4
Has volunteering experience	73.9	78.8	82.2	79.7	90.7	88.2	82.6
Qualities for facing teaching challenge							
Autonomy	47.5	60.0	50.0	55.0	44.4	45.5	65.2
Social attributes	32.2	21.8	27.4	22.5	33.3	27.3	21.7
Work ethic	20.2	18.2	22.6	22.5	22.2	27.3	13.0
Defects							
Autonomy	48.4	50.9	53.2	50.0	55.6	54.5	26.1

Dependency	24.7	20.0	14.5	17.5	11.1	27.3	30.4
Poor work ethic	18.8	23.6	25.8	30.0	33.3	18.2	43.5
No response	8.1	5.5	6.5	2.5	0.0	0.0	0.0
Candidates in Enseña Perú and Apoyo Databases	463	240	185	123	43	34	23

Source: own computations base don Enseña Perú's selection database and Apoyo database.

Table 3: Probability of Being Interviewed and of Selection in Interview – Basic Specification

	Panel A Interviewed (stage 6)		Panel B in Interview (stage 7)		Selected
	Coefficient	Marginal effect	Coefficient	Marginal effect	
Female	0.1665 (0.1429)	0.0517	0.0276 (0.1989)		0.0030
Single	0.4949 (0.3961)	0.1291	-0.2872 (0.5071)		-0.0385
Age	0.0525 (0.2633)	0.0165	0.7752 (0.4919)		0.0842
Age squared	-0.0015 (0.0051)	-0.0005	-0.0166* (0.0097)		-0.0018
Lives in Lima	0.4602*** (0.1633)	0.1342	0.7612*** (0.2787)		0.0662
BA (4.5 to 6 years of PSE)	0.0662 (0.2131)	0.0207	0.1757 (0.3432)		0.0187
Masters or PhD (6 to 12.5 years of PSE)	-0.0354 (0.2376)	-0.0111	0.3689 (0.3637)		0.0457
Finished college in top third of class	0.4075*** (0.1499)	0.1221	0.4700** (0.2227)		0.0461
Has intermediate/advanced knowledge of English	0.0972 (0.1468)	0.0304	0.0902 (0.2094)		0.0097
Mother has complete secondary schooling	-0.0884 (0.2230)	-0.0272	-0.1816 (0.3264)		-0.0179
Mother has complete or incomplete technical tertiary education	-0.2140 (0.2046)	-0.0651	-0.4710 (0.3201)		-0.0441
Mother has complete or incomplete university education	-0.0080 (0.2033)	-0.0025	0.0344 (0.2912)		0.0038
Mother is employed	-0.0837 (0.1420)	-0.0264	0.0658 (0.1982)		0.0071
Father is employed	0.1738 (0.1676)	0.0527	-0.2423 (0.2212)		-0.0294
Household owns between 8 and 12 different types of goods	0.4634*** (0.1559)	0.1396	0.4495* (0.2402)		0.0455
Has between 1 and 5 years of work experience	0.0494 (0.1661)	0.0155	0.0002 (0.2312)		0.0000
Has 6 or more years of work experience	0.3042 (0.2560)	0.1024	0.3258 (0.3720)		0.0429
Has volunteering experience	0.1926 (0.1562)	0.0585	0.5635** (0.2591)		0.0502
Constant	-2.8164 (3.4003)		-11.705* (6.1306)		
Number of observations		461		461	
Pseudo R-squared		0.0879		0.1644	

*** Significant at 0.01, ** significant at 0.05, * significant at 0.1. Standard errors in parentheses. Source: own computations based on Enseña Perú's selection database and Apoyo database.

Table 4: Marginal Effects of Probability of Being Interviewed and Probability of Selection in Interview – Expanded Specification

	Panel A		Panel B	
	Interviewed (stage 6)		Selected in Interview (stage 7)	
	Coefficient	Marginal effect	Coefficient	Marginal effect
Female	0.1187 (0.1461)	0.0364	-0.0104 (0.2034)	-0.0007
Single	0.5255 (0.4078)	0.1326	-0.2263 (0.5111)	-0.0182
Age	0.0334 (0.2736)	0.0103	0.8047 (0.5099)	0.0531
Age squared	-0.0011 (0.0052)	-0.0003	-0.0171* (0.0100)	-0.0011
Lives in Lima	0.4959*** (0.1666)	0.1412	0.7720*** (0.2826)	0.0398
BA (4.5 to 6 years of PSE)	0.0369 (0.2140)	0.0114	0.1498 (0.3469)	0.0097
Masters or PhD (6 to 12.5 years of PSE)	-0.1187 (0.2399)	-0.0361	0.2710 (0.3691)	0.0200
Finished college in top third of class	0.3953*** (0.1521)	0.1167	0.4603** (0.2265)	0.0272
Has intermediate/advanced knowledge of English	0.0882 (0.1485)	0.0272	0.0787 (0.2126)	0.0052
Mother has complete secondary schooling	-0.1382 (0.2268)	-0.0413	-0.2355 (0.3344)	-0.0135
Mother has complete or incomplete technical tertiary education	-0.2597 (0.2093)	-0.0771	-0.5247 (0.3279)	-0.0287
Mother has complete or incomplete university education	-0.0303 (0.2068)	-0.0094	0.0152 (0.2986)	0.0010
Mother is employed	-0.0984 (0.1441)	-0.0306	0.0330 (0.2025)	0.0022
Father is employed	0.1669 (0.1692)	0.0499	-0.2219 (0.2257)	-0.0165
Household owns between 8 and 12 different types of goods	0.4673*** (0.1576)	0.1384	0.4624* (0.2421)	0.0282
Has between 1 and 5 years of work experience	0.0710 (0.1685)	0.0218	0.0241 (0.2366)	0.0016
Has 6 or more years of work experience	0.2949 (0.2618)	0.0978	0.3096 (0.3812)	0.0254
Has volunteering experience	0.1806 (0.1584)	0.0541	0.5668** (0.2668)	0.0299
Quality: Autonomy	0.0189 (0.1770)	0.0058	0.1217 (0.2571)	0.0080
Quality: Social attributes	-0.1912 (0.1990)	-0.0574	0.0048 (0.2822)	0.0003
Defect: Autonomy	0.5888 (0.3987)	0.1817	4.9114 (6.4274)	0.7278
Defect: Dependency	0.6576	0.2256	5.1226	0.9818

Defect: Work ethic	(0.4156) 0.9521**	0.3315	(6.4316) 5.3131	0.9838
Constant	(0.4075) -3.1289		(6.4080) -17.2459	
	(3.5429)		(--)	
Number of observations	461		461	
Pseudo R-squared	0.1082		0.1862	

*** Significant at 0.01, ** significant at 0.05, * significant at 0.1. Standard errors in parentheses.
Source: own computations based on Enseña Perú's selection database and Apoyo database.