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## AN ALTERNATIVE PATHWAY INTO TEACHING: PLACING TOP UNIVERSITY GRADUATES IN VULNERABLE SCHOOLS IN CHILE

Summary: Chilean students perform poorly in international learning assessments, and the achievement gap between income groups is large. To remedy this situation, the Inter-American Development Bank is supporting a program, Enseña Chile, that recruits top university graduates and places them for two years in the most vulnerable schools.

Enseña Chile, a program modeled after the highly successful Teach for America, started selecting top university graduates in 2008 for classroom placement in the 2009 academic year. This monograph describes the program as is being implemented in Chile, as well as its quasi-experimental evaluation design. It also summarizes baseline results and provides background information on the students, teachers and schools benefited by the program.

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## Poor and Highly Unequal Student Learning Results

Chile has participated in several international assessments of student learning: two rounds of PISA (OECD's Programme for International Student Assessment), one round of TIMSS (Trends in Mathematics and Science Study), and two rounds of LLECE (the Latin American Laboratory for the Evaluation of Educational Quality). The results from these assessments are quite disappointing for a country famous for its education reforms and its economic stability. Even though Chilean students experienced the largest increase in reading scores between the 2000 and 2006 rounds of PISA, Chile continues to be ranked low compared to developed countries: 39th in eight-grade mathematics and

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37th in eight-grade science out of 45 countries in 2003 TIMSS, 40th in science, 38th in reading, and 47th in mathematics out of 57 countries that participated in 2006 PISA. Compared to Latin American countries, Chile ranks second after Cuba in the SERCE exam. Still, results show poor academic achievement in absolute terms. For example, 65% of 3rd grade students achieved the second level (out of four) or below in mathematics, while for 6th grade this percentage was close to 50%.

In addition to the low performance, Chile shows one of the largest achievement gaps between high and low income students. Chile is among the countries in PISA with the highest between-school variation in student performance, and most of this between-school variance is explained by the students' socioeconomic background (PISA, 2007). The same result was found in TIMSS 2003, where Chile had among the largest differences in mathematics student achievement between students from high-resource and low-resource households.



The relevance of socioeconomic factors in Chilean student achievement is also corroborated using national data such as SIMCE (Sistema Nacional de Medición de la Calidad de la Educación or National System for the Measurement of Educational Quality) and PSU (Programa de Selección para Universidades or University Selection Test). In a recent analysis of test results from 2000-2006 SIMCE and from 2004-2007 PSU done by Manzi et al. (2008)<sup>1</sup>, results suggests that (i) the between-school variance is large and ranges from 25% to 47%; (ii) the school

effects increase in relevance as students move up in the school system; (iii) a very large share of the between-school variance is explained by socioeconomic factors; and (iv) once socioeconomic status is controlled for, the type of school does not explain much of the between-school variance suggesting a highly segregated educational system along socioeconomic lines.

Although many of the socioeconomic factors are beyond the reach of educational policies, 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. Having three years of good teachers 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). 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). Chile is no exception: municipal schools—which tend to serve predominantly disadvantaged students, have teachers who are more likely to have only a high school diploma, who miss classes more often due to health problems, who report not having time to plan

their lessons, and who feel more unsecure to implement the curriculum than teachers in subsidized and unsubsidized private schools (Bravo, Peirano and Falck, 2006).

To help close the socioeconomic achievement gap in Chile, Enseña Chile (ECh) with the support of the Inter-American Development Bank (IDB) is focusing on placing human capital of the highest quality in the most vulnerable urban and rural schools in the country and creating, in the longer run, a corps of alumni that will become leaders and remain committed to contribute to the reduction of educational inequalities.

## Reducing Educational Inequalities from Within the System by Placing Top University Graduates in Vulnerable Schools

### Teach for America

Teach for America (TFA) is an organization created almost 20 years ago 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 goal is to significantly impact children's academic achievement and aspirations. It also seeks 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 in TFA as teachers, affecting the lives of 3 million students (Teach for America, 2010). In 2008, TFA received 35,000 applications for 4,100 positions, and 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, particularly in math and science, in improving student achievement in standardized tests (Decker, Mayer and Glazerman, 2004; Kane, Rockoff and Staiger, 2006; Xu, Hannaway and Taylor, 2009). These studies have also found that 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 (Xu et al., 2009), and that TFA corps members work in the highest-need classrooms in the country (Decker et al., 2004).

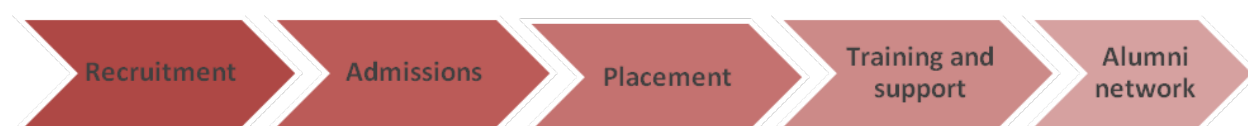
TFA's success has spawned similar initiatives. Teach First started operations in 2001 in the United Kingdom. Due to the demand from social entrepreneurs from around the world, TFA and Teach First joined forces and created in 2007 Teach for All, an umbrella network of organizations interested in adopting the TFA and Teach First models in their countries.

## Enseña Chile

Modeled after TFA and among the first social enterprises in the Teach for All network, Enseña Chile has the objective of building a “movement to eliminate educational inequity by enlisting our nation's most promising future leaders in the effort” (Recart, 2009). To reach this goal, ECh recruits outstanding recent college graduates and working professionals from all backgrounds and career interests to commit to teach for at least two years in low income urban and rural public schools. ECh also provides training and the ongoing support necessary to ensure the recruits’ success as teachers. ECh started activities in 2008 by first promoting the program in the top 12 Chilean universities, with a particular focus on math and science departments—areas where there are considerable teacher shortages in Chile.

ECh has a very rigorous selection process that allows them to identify those college graduates with competencies to become not only great teachers but also leaders and entrepreneurs. The seven competencies, adapted by ECh from TFA, are: leadership, perseverance, high achievement, respect for low-income communities, critical thinking, organizational skills, and commitment to ECh’s vision. All seven 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 and a group interview. Applicants that score above a threshold determined by TFA are invited to participate in pre-service training (called summer institute or instituto de verano). This intensive training session, based on the Teaching as Leadership (TAL) model developed by TFA and adapted by ECh, lasts four weeks and covers topics such as lesson planning, classroom management, leadership, communication, and language differences. In addition, ECh corps members have the opportunity to teach to students from a low-income community. ECh 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.

**Figure 1: Enseña Chile's Process**



Source: Recart (2009).

Together with the recruitment and admissions stages, ECh selects the schools where its professionals will be placed. In order to become an ECh beneficiary, a school must: (i) have owners and/or principals committed to ECh’s mission, (ii) serve a low-income community<sup>2</sup>, (iii) have SIMCE scores below the national average; (iv) allow periodical evaluations, (v) have teacher shortages in one or more subjects at the primary or secondary levels; and (vi) be within ECh’s geographic areas of operation. Once schools that meet these criteria have been selected, ECh places its corps members according to their area of expertise and the schools’ teaching needs.

During the first year of operations, over 700 college graduates applied to ECh but only 42 had the skills required to be admitted to the program. In March 2009, ECh corps members that successfully completed the summer institute were assigned to classrooms in 15 schools (10 municipal and 5 subsidized private) located in Metropolitan Santiago (10 schools), Araucanía (3 schools, 2 rural) and De Los Ríos regions (2 schools, both rural). Table 1 shows the results from the 2008-09 selection process. The 27 corps members currently teaching come from a variety of academic backgrounds, including biology, anthropology, engineering, journalism, and philosophy.

**Table 1: The Numbers Behind Enseña Chile’s 2009 Selection Process**

Selection Stages	
Started application	708
Finished application	326
Called for interview	150
Interviewed	94
Selected in interview	42
Started summer institute	31
Started school year 2009	29
Finished school year 2009	23

Source: Recart (2009)

## Evaluation Design

The evaluation objectives are to estimate the impact of ECh corps members, as compared to traditionally certified teachers, on (i) student achievement, using value added measures; (ii) students’ intrapersonal abilities; (iii) students’ behaviors (motivation, expectations, attendance, etc.); (iv) school organization; and (v) other teachers’ behaviors.

Since the assignment of ECh corps members has not been at random, the evaluation relies on propensity score matching (PSM) to generate comparison groups. PSM estimates the probability of being treated given certain observable characteristics, and therefore allows comparing a treated school with an untreated school that shares similar observable characteristics but has not been benefited by the program. As described in greater detail by Dehejia and Wahba (1999), matching based on observable pre-treatment characteristics approximates randomization by balancing the observables between the treatment and control schools.

To determine the evaluation and replacement samples, the propensity score has been estimated using a Probit model where the dependent variable is a dummy indicating whether the school has applied to be in the ECh program or not. The independent variables are size, levels offered (primary, humanities-sciences

secondary or technical professional secondary), administration (municipal or subsidized private), socioeconomic level, geographic location (urban or rural) and SIMCE average score in math and language<sup>3</sup>. Results from this model are shown in Table 2.

After estimating the Probit model, done at the school level, the probability of applying to ECh was computed for each school. The matching algorithm used to create the control group is nearest neighbor. This means that for each of the observed values of treatment schools one selects the control that has the closest propensity score in terms of Euclidian distance, making sure that it shares some of the characteristics (region, geographic location, administration, socioeconomic level, and students' gender) of the treated school. After this procedure, two control schools were assigned to each ECh school.

**Table 2: Results from the Probit Model for Selecting the Control Group**

Variable	Marginal Effect	Probability of Null Effect
Size	0.001%	1.4%
Level: Elementary	0.474%	8.7%
Level: Humanities-Sciences Secondary	0.210%	60.1%
Level: Technical-Professional Secondary	2.153%	4.9%
SIMCE Language	0.031%	10.4%
SIMCE Math	-0.025%	10.3%
Municipal	0.809%	4.7%
Rural	-0.580%	12.9%
Socioeconomic Group A	65.427%	0.0%
Socioeconomic Group B	37.732%	0.0%
Socioeconomic Group C	43.631%	0.0%

Source: Grupo Educativo (2009).

The unit of analysis is each classroom where there is an ECh corps member teaching. Thus, to select the control classroom the following steps have been taken: (i) the control classroom must be of the same grade as the treated classroom; (ii) assuming that schools use the same criteria to assign students to sections, the control classroom must be in the same section as the treated classroom—that is, if the treated classroom is 7 “B” then the control classroom is 7 “B”<sup>4</sup>; and (iii) in the case of high schools, also the control classroom must be in the same concentration (Humanities, Sciences, Arts) as the treatment classroom. It is important to highlight that one classroom can receive more than one treatment if there are two ECh corps members teaching different subjects. Each classroom has a control in a non-treated school. In addition, for some ECh treated classrooms there is a second control group: an untreated classroom within the same ECh school. Provided students' allocation between classrooms was random, one expects that the students in these classrooms share the same characteristics as the treated students. The intended evaluation sample is shown in Table 3.

**Table 3: Intended Sample, 2009 Evaluation Round**

	Total	Treatment	Within-School Control	External Control
Schools	30	15	n/a	15
Classrooms	308	132	44	132
Classrooms evaluated with SEPA	83	33	17	33
Classrooms with abilities tests	199	88	23	88
Students*	10,780	4,620	1,540	4,620
Students tested with SEPA	2,251	895	461	895
Students tested for abilities	6,965	3,080	805	3,080
Subject-classroom-teacher**	590	224	142	224

\* The number of students is calculated assuming 35 students per classroom.

\*\* One teacher can teach multiple classrooms and multiple subjects, so each combination was considered as an individual observation even though the teacher is the same. This implies that some teachers have to reply several times to each questionnaire.

Source: MIDE-UC (2009a, 2009b) and Observatorio Social (2009).

The evaluation design incorporates different sources of data, therefore allowing estimating the impact of ECh on student achievement controlling for student backgrounds and other determinants of educational quality. Student achievement is measured in mathematics and Spanish applying standardized tests to students in grades 7, 8 and 9. These tests, called Pruebas SEPA, are aligned with the national curriculum and allow for the computation of value added—that is, they provide information regarding student achievement in each school year as well as the student’s progress throughout the school year<sup>5</sup>. At baseline, the SEPA tests measure content knowledge from the grade immediately before the current grade. At follow-up, the tests measure content knowledge that should have been taught and learned in the evaluated grade.

Students’ cognitive and non-cognitive skills are measured with two self-applied instruments, one for intellectual abilities and another for intrapersonal abilities. The instrument for intellectual abilities consists of 12 analogy items (4 verbal and 8 figural) that have to be answered in 15 minutes. The instrument for intrapersonal abilities measures the student’s development level in four dimensions: self-esteem (10 items), academic self-efficacy (14 items), social abilities (20 items), and metacognitive abilities (18 items). Each item is an affirmation, and the student must indicate the frequency (from 1 to 4) at which this affirmation applies in relation to how he/she feels and normally behaves. The intellectual and intrapersonal abilities tests are applied only to students in grades 9 to 12 (1st to 4th grade in secondary school level).

Lastly, the students’ socioeconomic background is measured through questionnaires to students and parents<sup>6</sup>. These questionnaires also collect information on expectations and motivation, study habits, school attendance, and academic background. Questionnaires are also applied to teachers and school principals. Teacher questionnaires include two types of questions: those related to his/her background, opinion about the school and the school leadership, and job satisfaction, and those related to the classrooms and subjects he/she teaches. Therefore, each teacher has to answer these questions *n* times, according to the *n* classrooms/subjects within the sample that he/she teaches.



Baseline data was scheduled to begin collection in April-May 2009. However, teacher strikes, the swine (H1N1) flu epidemic, and the presidential election delayed considerably the data collection process both at baseline and follow-up. Baseline data were collected between June and August 2009 and follow-up data between November and December 2009. The delay in data collection resulted in a final sample considerably smaller than originally intended, as will be discussed in the next section.

## Baseline Results

As previously mentioned, the baseline collection process suffered from delays and other complications that affected the sample size. Two ECh schools that declined participation in the study were not included in the baseline sample (one of these schools was later incorporated in the follow-up sample). In addition, there was a major attendance problem due to the reasons mentioned above and, on average, between 20% and 30% of students were not in school on the days of the baseline application. Thus, the final student sample represents 75% of the intended sample (Table 4).

**Table 4: Baseline Sample**

	Total	Treatment	Within-School Control	External Control
Schools	39	14	n/a	25
Classrooms	251	119	n/a	117
Classrooms evaluated with SEPA	64	28	7	29
Classrooms with abilities tests	169	76	59	84
Students	6,944	3,480	n/a	3,464
Students tested with SEPA-Language	1,724	760	238	726
Students tested with SEPA-Math	1,696	755	229	708
Students tested for intellectual abilities	4,681	2,117	323	2,241
Students tested for intrapersonal abilities	4,706	2,111	335	2,260
Subject-classroom-teacher*	146	61	n/a	85

\*One teacher can teach multiple classrooms and multiple subjects, so each combination was considered as an individual observation even though the teacher is one. This implies that some teachers have to reply several times to each questionnaire.

Source: Enseña Chile Baseline Database.

Since one does not know whether attendance on the day of the baseline application was at random, to make the baseline results presented here representative the sample is further reduced to only those classrooms that have had attendance of more than 6 students representing at least 60% of the classroom's enrollment. After this process, there are 96 representative treated classrooms that have a representative control classroom. Of these, only 13 classrooms have SEPA tests.



Non-response was a large problem for parent and teacher questionnaires. The response rate among parents was of approximately 35% of the intended sample. This means that of the 119 treated classrooms, only 6 are representative and have a representative control classroom.

## Student Characteristics, Test Scores, Study Habits, Educational Expectations and Opinions about Classroom Environment

Students in the sample come from very humble backgrounds: 21% of their fathers and mothers have completed at most 6 years of schooling, 16% of the fathers report being unemployed, and 24% have monthly household incomes of less than US\$190. There are differences between treated and control classrooms at baseline, with control classrooms having students with better socioeconomic indicators (Table 5).

Table 6 shows the test results for treatment and control classrooms. It is important to highlight that there are no statistically significant differences at baseline between treatment and control classrooms in all SEPA tests and the self-esteem and self-efficacy tests. The SEPA results for the unrepresentative sample (163.7, 164.7 and 174.7 for Spanish in 7th, 8th and 9th grade respectively, and 164.5, 167.8 and 178.1 for Mathematics in 7th, 8th and 9th grade respectively) are considerably below the national average (168.1, 171.0 and 180.0 for 7th, 8th and 9th grade Spanish, and 167.2, 172.4 and 180.0 for 7th, 8th and 9th grade Mathematics).



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Photo: EnseñaChile

**Table 5: Student Socioeconomic Characteristics**

	Treatment	Control	Full Sample
<b>Father's Schooling</b>			
6 years or less	23%	20%	21%
Between 7 and 11 years	52%	41%	46%
12 years (high school diploma)	17%	26%	21%
More than 12 years	4%	8%	5%
<b>Mother's Schooling</b>			
6 years or less	23%	18%	21%
Between 7 and 11 years	52%	52%	52%
12 years (high school diploma)	18%	24%	21%
More than 12 years	7%	8%	7%
<b>Father's Employment Status</b>			
Full-time worker	48%	71%	58%
Part-time worker	10%	7%	8%
Unemployed	20%	13%	16%
Not employed, not looking	4%	2%	3%
Other	19%	8%	14%
<b>Monthly Household Income</b>			
Less than Ch\$100,000 (US\$190)	28%	19%	24%
Between Ch\$100,000 and \$200,000	41%	44%	42%
Between Ch\$200,001 and \$300,000	20%	19%	20%
Between Ch\$300,001 and \$400,000	6%	6%	6%
More than Ch\$400,0001 (US\$765)	6%	12%	6%

Source: Enseña Chile Baseline Database.

**Table 6: Test Results**

	Treatment	Control	Full Sample
Self-Esteem	22.2	22.3	22.3
Self-Efficacy	37.6	37.8	37.7
Social Abilities	49.7*	50.2*	50.5
Meta-cognitive Strategies	46.6*	47.4*	47.0
SEPA Spanish	170.0	169.9	169.9
SEPA Mathematics	172.7	174.3	173.5

\* The differences between treatment and control are statistically significant.

Source: Enseña Chile Baseline Database.

Students' study habits and own assessments about their studies are presented in Table 7. Students in the sample show an important degree of confidence in their learning abilities, with 86% of the sample agreeing that they are able to learn just like their peers, 88% agreeing that they can learn a subject, even if it is difficult, if they put effort and study, and 64% agreeing that they do their homework even if they find it difficult. However, 34% agree that they have little comprehension of what is being taught in their classes, 39% agree that they have difficulties concentrating and paying attention in school, 27% agree that their workbooks are incomplete, 28% does not prepare for their exams with enough time, and 25% does not take notes of what is being taught in class. Therefore, it seems that about one-third of the students in the sample do not have good study habits. In spite of these study habits, 91% of the students in the sample think it is important to get good grades.

**Table 7: Students' Study Habits and Self-Assessments about Learning Abilities**

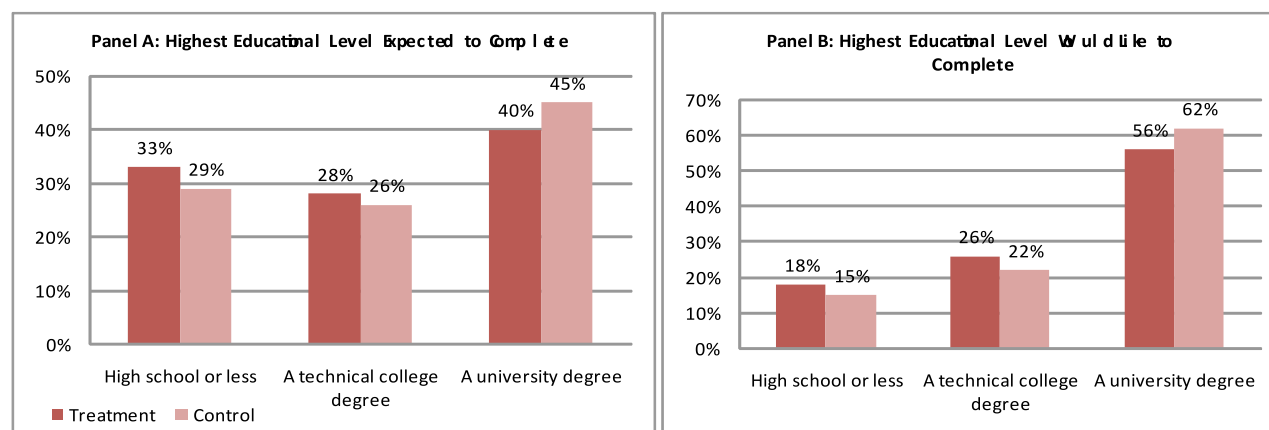
	Completely Disagree	Disagree	Neither Agree nor Disagree	Agree	Completely Agree
I am able to learn just like my classmates	2%	3%	10%	40%	46%
Even if a subject is difficult, with effort and study I can understand it	1%	3%	10%	48%	40%
In general, I have little comprehension of what is being taught in my classes	12%	25%	29%	26%	8%
I have difficulties concentrating and paying attention in class	14%	23%	24%	26%	13%
In general, I do my homework even if I find it difficult	4%	8%	24%	41%	23%
My workbooks tend to be incomplete	23%	27%	24%	20%	7%
I like to prepare for my exams with enough time	9%	19%	33%	25%	14%
It is important that I get good grades	2%	1%	6%	27%	64%
I take notes of everything taught in my classes	9%	16%	33%	28%	14%

Source: Enseña Chile Baseline Database.

The students' educational expectations are shown in Figure 2. Educational expectations at baseline differ between treatment and control groups. A larger share of students in the control group believes they are going to finish a technical or university degree, 71%, compared to 68% of treatment students. Likewise, 62% of control students would like to finish a college degree compared to 56% of treated students. Lastly,

students' perceptions about the classroom environment are presented in Table 8. It shows that, in general, students behave in classes in a way that makes teaching and learning difficult.

**Figure 2: Students' Educational Expectations**



Source: Enseña Chile Baseline Database.

**Table 8: Students' Perceptions About Classroom Environment**

	Completely Disagree	Disagree	Neither Agree nor Disagree	Agree	Completely Agree
Teachers have difficulties starting their daily lessons in my classroom	6%	16%	31%	29%	18%
There is a good relationship between most students and teachers	6%	11%	25%	37%	22%
There is a good relationship between most students	4%	8%	20%	42%	26%
Teachers have difficulties teaching in my classroom	7%	16%	33%	27%	16%
There are fights between classmates during class time	17%	25%	30%	19%	9%
Classes are frequently interrupted by the teacher to quiet students down	3%	10%	24%	38%	25%
Some teachers have to raise their voices to keep the class in order	8%	16%	24%	32%	20%
Most teachers have difficulties maintaining order in the classroom	6%	17%	29%	29%	19%

Source: Enseña Chile Baseline Database.

## Teachers' Expectations about their Students

One of ECh's core values is believing that all students can excel as long as their teachers have high expectations for them and motivate them to work hard. Thus, one expects to find significant differences between treatment and control teachers at baseline regarding the expectations they have on their students' educational possibilities. There are no significant differences between ECh teachers and control teachers in the probability that their best students will attain a score that will allow them to enter a university<sup>7</sup>. However, there are significant differences in the probability that they will finish college if they enter university. Also, there are statistically significant differences in the probability that their students will have access to student loans and/or scholarships (Table 9).

**Table 9: Teachers' Expectations of their Students Educational Possibilities**

	Treatment	Control
Thinking about the best 5 students in this class		
1. Probability of Finishing College		
Low	7%	9%
Medium	20%	64%
High	73%	27%
2. Probability of Obtaining a Student Loan		
Low	0%	5%
Medium	0%	55%
High	100%	41%
3. Probability of Receiving a Scholarship		
Low	0%	32%
Medium	20%	41%
High	80%	27%

Source: Enseña Chile Baseline Database.

## 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. Among all the school-related factors that affect student learning, having a good teacher is the single most important one that can help close the achievement gap.

Enseña Chile is one step in the direction of helping close the achievement gap in Chile. This organization, modeled after Teach for America, places human capital of the highest quality—selected after a highly competitive process—in the most vulnerable urban and rural schools in the country. The analysis of the baseline database suggests that ECh is serving students who are very disadvantaged socioeconomically. In addition, baseline results indicate that students in ECh benefited schools have lower performance in Math and Spanish than the Chilean average, that an important share of them has poor study habits and that they have relatively low educational expectations. In spite of this, ECh corps members have the conviction that they can turn the tide around and increase their students' odds of continuing their education past high school.

It is still premature to speculate the effect of ECh corps members on student academic achievement and cognitive and non-cognitive abilities. Nonetheless, preliminary—and uncontrolled—results from the follow-up wave seem to suggest that although control schools continue to have slightly better results in Math and Spanish, ECh-treated schools have made greater gains in Spanish test scores. In the particular case of 9th grade Spanish, the progress made by students with ECh teachers is significantly larger than that of students in control schools (MIDE-UC, 2010b). Also at follow-up, students in treated schools have significantly higher intellectual abilities and academic self-efficacy scores than control schools (MIDE-UC, 2010a). The forthcoming analysis of the follow-up study will give us a fuller picture of the effect of ECh corps members on student achievement, cognitive and non-cognitive abilities, and a wide array of other measures.

## Notes

1. To measure socioeconomic status, the authors constructed an individual socioeconomic index for each database. This index consists of the father's educational level, the mother's educational level, and the family's self-reported income.
2. The school must enroll students that belong to socioeconomic groups A and B according to SIMCE's definition.
3. For this model, the variables for school size, levels, administration and geographic location come from the 2008 Enrollment Statistics of the Ministry of Education of Chile. The variables for socioeconomic level and SIMCE average score come from the SIMCE school database.

4. If the control school does not have the required classroom, then it has to be replaced by another section in the same level. For example, if the ECh treated classroom is 7“C” and there is no 7“C” in the control school then 7“B” is selected. If 7“B” is not available, 7“A” must be selected. If there are not enough classrooms to meet this requirement, the first control has to be supplemented with classrooms from the second control option.
5. SEPA is an external and standardized student assessment system developed by the Center for Measurement of the Catholic University of Chile (MIDE-UC).
6. Questionnaires for parents were distributed to students, to be given in turn to their parents/guardians.
7. The lack of difference in teachers’ expectations about students’ scores that would allow them to enter university could be due to the fact that the baseline data were mostly collected between July and August. Anecdotal evidence from ECh corps members suggests that these professionals were surprised at their students’ low academic level, which was even below what they expected. Thus, teachers’ expectations could have differed if baseline data had been collected in March.

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