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Educational Poverty in Italy

Evidence and Implications
for Policy-Makers

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re:search

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re:search is a digital policy paper series that aims to disseminate the findings of research sponsored by Bocconi University in a way that is accessible to both policy-makers and the wider public. Its purpose is to bridge the gap between the academic and policy worlds, while informing decision-making and public discourse.

Introduction

Educational poverty is one of the greatest challenges of our times, in several countries around the world. Despite the growing number of children and youth enrolled in primary and secondary schools, learning outcomes remain alarmingly low, particularly for those in vulnerable and underprivileged communities, facing obstacles to accessing quality education. This may be due to several factors such as limited resources, conflicts, gender inequality, and discrimination.

In Italy, for instance, 9.5% of students graduate from high school without acquiring the essential skills (INVALSI). The situation is even worse in developing countries. A striking example is Nigeria, where more than 80% of students cannot read a single word by the end of Grade 3 (UNESCO).

This has become a real emergency, often defined by researchers in the field as a “learning crisis.” Lack of access to quality education perpetuates a cycle of inequality that prevents children from acquiring critical knowledge and skills and denies them the opportunity to explore, develop, and pursue their talents and aspirations. This crisis has the potential to hinder social mobility and exacerbate inequalities for many generations to come.



Listen to Lucia Corno, Executive Director of LEAP, describe the aim of this book: to provide evidence that measures the impact of policies to combat educational poverty.

Traditionally, efforts to address educational poverty have focused on quantity, trying to answer questions such as “What is the impact of building new schools?” or “What happens if we increase the number of teachers or textbooks?” However, solutions aimed at increasing the quantity of educational opportunities and infrastructures are not enough to solve this problem, as evidenced by the fact that students’ basic skills are declining significantly for the same number of years spent in school. So, what if we try to approach the problem from a qualitative perspective? For example, by studying the impact of initiatives to provide innovative and highly transformative tutoring programs. Or by identifying the key barriers to aspiration faced by disadvantaged children in order to understand how to give everyone an equal chance to succeed.

In this book, we present the work carried out by the Laboratory of Effective Anti-Poverty Policies at Bocconi University (LEAP). Through our projects, we offer scientific evidence that measures the impact of innovative policies and best practices aimed at enhancing education quality. Using rigorous quantitative methods and sophisticated experimental protocols, we provide policymakers with scientific and pragmatic insights into what works and what doesn’t, helping them design efficient and effective solutions. By sharing results and interventions, we encourage dialogue, debate, and the development of policies to ensure that the potential of all children, regardless of background or social position, is realized.

Inclusion, Integration and Stereotypes

Diversity and inclusion in education are essential to creating equitable learning environments that benefit all students. By embracing diversity and promoting inclusion, education systems can empower all students to thrive academically, contribute to society and reach their full potential. Nevertheless, challenges persist, particularly for students from marginalized groups. These students are often confronted with social prejudices, biases, and stereotypes that have a negative impact on their learning experiences, their educational opportunities, and their overall well-being. Female students, for example, may face gender stereotypes and be perceived as less interested in science subjects than male students. Students from immigrant backgrounds or low-income households may also face limitations on their prospects and ambitions.

LEAP fully recognizes the importance of this issue and is actively working with Italian education stakeholders to promote scientific research to evaluate effective policies that create safe and supportive learning environments, provide culturally responsive teaching methods, and offer language support services. In particular, LEAP's work has focused on one of the most important moments in the lives of Italian students: the choice of high school. Choosing which high school to attend determines students' educational and professional trajectories and has a

significant impact on their future opportunities and career prospects. After completing middle school (*scuola media*), Italian students must choose between three different types of high school: vocational (*istituto professionale*), technical (*istituto tecnico*), and academic (*liceo*). Although all three tracks last five years, they differ significantly in terms of curriculum, difficulty, and prestige. Academic schools are designed primarily for students who wish to pursue a university degree and are often considered the most prestigious track, offering a higher quality of education and career prospects. Technical schools combine theoretical knowledge with practical training for specific non-manual occupations. Vocational schools are designed for students who intend to pursue manual occupations, providing them with practical skills and often preparing them for early entry into the labor market.

While students are free to choose any track – as there is no selection or screening based on ability – several factors come into play to influence their final decision. For example, by making recommendations based on their assessment of students' abilities and aspirations, teachers and parents play a crucial role in this process. It is important to recognize that bias and stereotypes can also influence these inputs, shaping the choices students make and leading to substantial discrepancies between their actual abilities and their ambitions. As a result, students may find them-

selves on paths that do not match their true potential because of societal bias, discrimination, or preconceived stereotypes.

Bridging the aspiration gap

At the beginning of the 2016-2017 school year, immigrant children represented 7.2% of the Italian high school student population, yet they often face discrimination based on perceived cultural differences. Such stereotypes often create a barrier that limits the number and type of opportunities available to immigrant students compared to their native-born peers, calling for action to ensure that every child has the right to reach their full potential. This is the underlying motivation behind the study that LEAP researchers conducted in 70 schools in Italy to test the impact of an innovative tutoring program aimed at improving the educational outcomes of immigrant students.

The results showed that males in the treatment group were 44% less likely to be retained in school and 12% more likely to attend an academic or technical high school – rather than a vocational high school – than males in the control group.

These extraordinary results are evidence of the effectiveness of career counseling and academic tutoring in reducing educational segregation between immigrant and native-born students. They also suggest that effective policy interventions are needed to address the educational aspirations of students and to improve their educational outcomes.

Before delving into this study, it is important to note that in schooling systems such as the Italian one, students have to make an early decision about the type of high school they want to attend, as described in the introduction to this section. In this context, children from disadvantaged backgrounds may systematically choose schools of lower quality, leading



Goals and Gaps: Educational Careers of Immigrant Children is authored by LEAP Scientific Director **Eliana La Ferrara** and LEAP Affiliates **Michela Carlana** and **Paolo Pinotti**. For more information, you can find the peer-reviewed paper linked above.



to so-called “educational segregation” – which ultimately has long-term effects on the skills and career paths of children from immigrant families, reducing social mobility and creating unequal opportunities. For this reason, we try to approach this issue from the point of view of immigrant students, looking at the discrimination they face from teachers in assessing their abilities, especially when choosing a high school track. We start from the evidence that immigrant students are over-represented in vocational schools compared to their equally capable Italian peers, who are predominantly enrolled in technical institutes and academic high schools. This trend emerges clearly from the analysis of standardized test scores. We compare average enrollment probabilities for native and immigrant students, conditional on their initial ability as measured by standardized test scores at the beginning

of middle school. The findings show that Italian students consistently have better employment prospects than immigrant students as a result of their educational choices. This is one of the main motivations behind the launch of the key intervention evaluated in this project, the Equality of Opportunity for Immigrant Students Program (EOP), developed in partnership with the Italian Ministry of Education. The program was designed to align the goals and aspirations of talented immigrant students with their skills and to encourage them to make educational choices that reflect their abilities and dreams.

What did the program consist of? EOP had two components: (i) psychologically based career counseling, and (ii) academic tutoring sessions. The first component comprised a total of 13 sessions designed to help high-achieving immigrant students identify educational and occupa-



● THE SETTING

This program (or *treatment*) targeted students in Grades 7 and 8 – the last two years of middle school when students have to choose their high school path – from 70 schools in five major cities in northern Italy: Milan, Turin, Genoa, Brescia, and Padua. Once selected, schools were randomized and assigned to a treatment group (where students took part in the EOP program) or a control group (where the EOP program did not take place). This randomization process is essential to ensure that participants are assigned to treatment groups in an unbiased and unpredictable manner, allowing the impact of the program to be estimated and potential confounding factors to be minimized. In the treatment schools, the results of the INVALSI standardized tests allowed the selection of the ten best-performing immigrant students, defined as “high achievers,” to be invited to participate in the program. A comparable group of high achievers was also selected in the control schools. In both sets of schools, these top ten immigrant students were interviewed, and their academic performance and school choices were tracked through administrative records, allowing for a rigorous estimation of the effect of the treatment.

tional goals that matched their talents. The approach was not to push students unconditionally into more challenging school paths, but to make them aware of existing opportunities and their own skills so that they could make more informed choices. Two meetings with parents were also organized, given their key role in the decision-making process. The second component, the academic tutoring part, was motivated by the concern that participants who enrolled in the academic track as a result of the program might later have difficulties in completing this (more demanding) high school. Therefore, students participated in tutoring sessions in which they were taught useful methods for studying multiple subjects.

By comparing students in the treatment and control groups (i.e., “high achievers” who took part in the tutoring sessions with those who did not), we found robust results indicating that EOP was remarkably successful in reducing educational segregation. We showed that by the end of Grade 8, the gap between immigrant males in the treatment group and their native counterparts was closing, with immigrant males choosing to enroll in challenging school paths at the same rate as native males of comparable ability. We also followed EOP students through their first two years of high school and found that, despite their choice of more challenging schools, EOP students did not have higher dropout rates or higher numbers of retakes compared to non-EOP immigrant students of similar ability. Thus, aspirations were not only higher, but also attainable. These findings have clear and important policy implications, pointing to the effectiveness of programs that combine career counseling and academic tutoring. The program tested in this study proved effective in reducing the gap between native and immigrant students not only in short-term educational outcomes but also in high school career choices, providing policymakers with a powerful tool to reduce inequalities that have potential long-term effects on employment outcomes.

When parents and peers reinforce gender norms

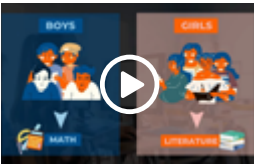
Gender segregation in various fields of study remains a significant problem, with men typically underrepresented in health and education, and women significantly underrepresented in high-return fields such as science, technology, engineering and mathematics (STEM). This problem remains widespread worldwide, leading to inequality and negatively impacting productivity. These same patterns of gender segregation can be seen in young children, especially at the time of choosing a high school. The consequences of gender discrimination lead to a potential mismatch of talents and interests, as individuals are steered away from areas where they could excel and make a significant contribution. But what is the role of parents and peers in shaping children’s gender-stereotyped choices of study? Does the influence of parents or peers directly limit their choices by transmitting societal gender stereotypes? By conducting a “lab-in-the-field” experiment, we sought to understand the role of parents and peers in creating early gender barriers. Our experiment shows that gender discrimination has a relevant effect on students’ choices, reflecting the gender stereotype that boys are good at science and girls at humanities.

It turns out that boys are more likely to choose mathematics and girls literature, with peer pressure leading girls to study less mathematics to avoid interactions in male-dominated contexts. These conclusions are relevant to policymakers because they suggest that policies aimed at reducing gender stereotypes could help redistribute talent across educational fields, reduce gender inequality, and thereby increase productivity.

But let us return to the setting of our experiment. A “lab-in-the-field” is an innovative research method in the social sciences in which scientific investigations are conducted in real-world settings while maintaining the experimental control typically



Parents and Peers: Gender Stereotypes in the Field of Study is authored by LEAP Executive Director Lucia Corno and LEAP Affiliate Michela Carlana. For more information, you can read the working paper linked above or watch the video.



associated with laboratory experiments. First, we focus on the influence of mothers and fathers on their children, particularly on their choice of high school, and examine whether adolescents conform their behavior to gender stereotypes – associating boys with scientific fields and girls with humanistic fields. Second, we examine how peers influence students' choices: girls' choices of math may signal “undesirable” traits such as competitiveness and ambition, while boys' choices of literature challenge traditional gender stereotypes. Finally, we seek to understand whether the disclosure of personal career choices to peers influences students' choices, with girls avoiding math and boys avoiding literature. We find that students tend to conform to gender-stereotypical choices. Specifically, girls overwhelmingly choose literature and boys overwhelmingly choose

math when asked to consider the recommendation of parents of the same gender. This effect is particularly pronounced when students believe that their parents would suggest a choice consistent with traditional gender roles.

On average, girls are 20% less likely than the control group to choose the male-typed task (math) when considering their mothers' recommendations. In contrast, boys' task choices are not influenced by their mothers' recommendations, but rather by consideration of their fathers' suggestions. When boys believe that their father would recommend math, they are 16% more likely to choose math than similar students in the control group.

Regarding the influence of peers on students' decisions, the results suggest an-

THE SETTING

The experiment involved 2,500 Italian middle school students who participated in classroom-based experiments designed to simulate the actual choice of high school. The students were informed that they had been selected to answer six multiple-choice questions: three in mathematics and three in literature, of equal difficulty for each subject. In addition, before starting the task, students had to choose one of these two areas by selecting the subject in which they expected to get a higher number of correct questions. In this way, students were incentivized to choose the subject in which they felt more comfortable, either math or literature. Before making their choice, students were randomly assigned to different treatment groups. For example, some students were asked to indicate what they thought their mothers or fathers would recommend if they had to choose between math and literature. By looking at how students responded to these different treatments before making their choice, we can understand how parents and peers influence students' decision making.

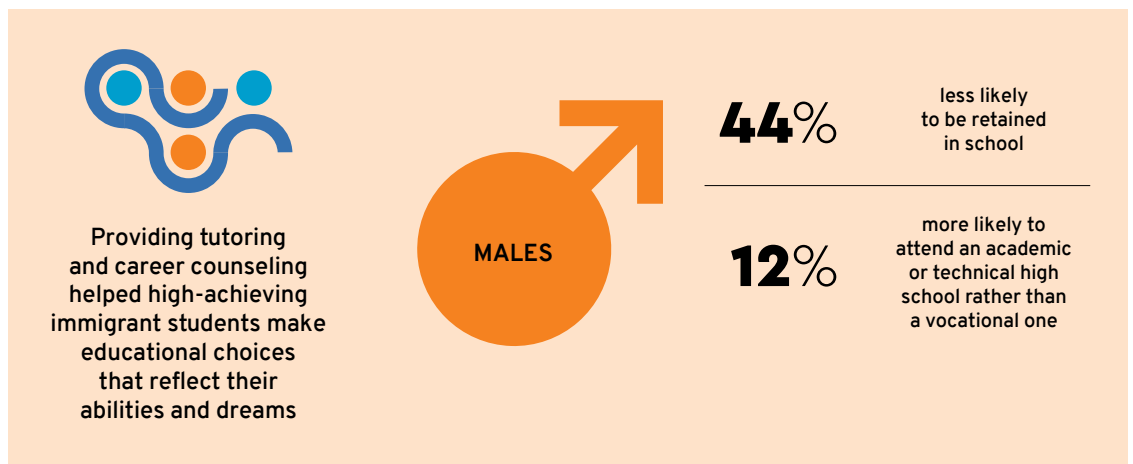
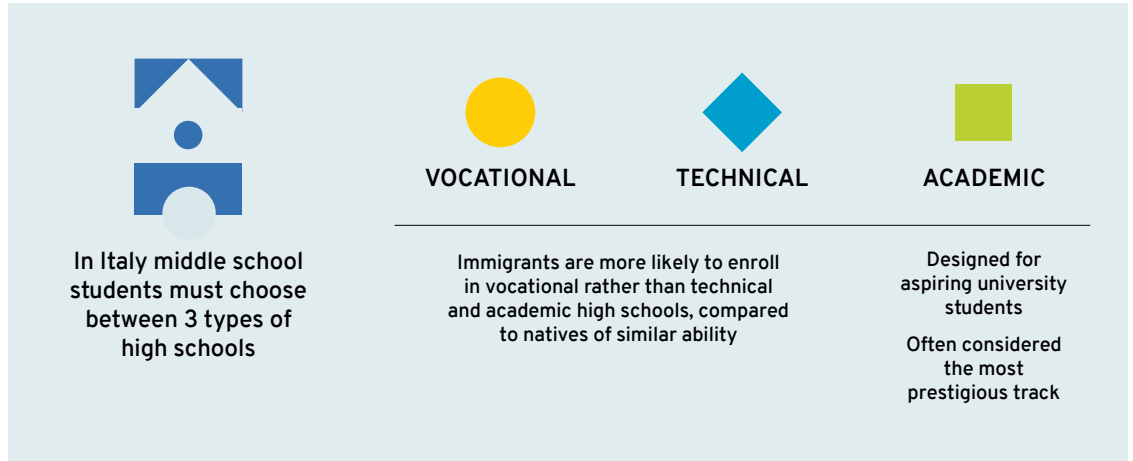


other interesting story. The study findings indicate that students, both boys and girls, do not change their decisions if they anticipate that their classmates will be aware of their choice.

However, when girls are aware that they will have to interact with classmates who have chosen the same subject, we observe a substantial 41% decrease in the likelihood that girls will choose math. But why? This effect is primarily driven by girls who anticipate that choosing math would put them in a gender minority, as they expect their math classmates to be mostly boys.

These results from the experiment underscore the crucial role that parents and peer interaction play in adolescents' decision-making process regarding their choice of field of study. This gender-based

discrimination in the choice of high school perpetuates existing gender inequalities and reinforces societal norms and expectations about gender roles. By systematically keeping girls out of STEM fields, society limits their potential and restricts their career choices. This gender segregation of subjects and educational pathways not only restricts individual freedom, but also perpetuates unequal opportunities and reinforces the gender gap in various professional fields. Overcoming this problem requires promoting equal access to a wide range of subjects and empowering students to make choices based on their interests, aptitudes and ambitions, rather than on predetermined gender norms. Promoting a more balanced and inclusive approach to subject choice in high schools can help break down barriers and foster a more diverse and inclusive society.



Aspirations and Expectations

Education is not just a matter of subjects, grades, curricula, and teachers. It is a complex territory where the hopes, ambitions, fears, and dreams of children and adolescents intertwine and shape the trajectory of their young lives. There are two important factors that guide students in their educational choices: their aspirations and their expectations. Aspirations reflect students' dreams and desires, which are not always fully grounded. Expectations, on the other hand, are rooted in the student's life circumstances, including financial or family constraints. Both aspirations and expectations are by their nature subjective and are also influenced by others, in particular by family members, peers, teachers, and society in general. Students internalize and respond to expectations, often aligning their aspirations with the outcomes they are expected to achieve.

For example, families may have optimistic expectations about their children's abilities and skills, leading them to choose schools that are far beyond their capabilities. Another example goes in the opposite direction: individuals from disadvantaged socioeconomic backgrounds may bear the burden of lower educational and career aspirations, despite their individual potential or ability. These circumstances illustrate

the important role of aspirations and expectations in determining the kind of high school students choose. The implications go beyond the individual level, however, as societal and economic indicators are inextricably linked to the aspirations and achievements of young students. When individuals choose paths that do not match their skills and abilities, or when talented students are limited in their opportunities, society itself is affected. On the one hand, there may be students who struggle and fail in ambitious courses that they cannot complete. On the other hand, socioeconomic inequalities can prevent young people from developing their talents, climbing the social ladder, innovating and contributing to collective prosperity, thereby perpetuating intergenerational inequalities. Expectations and aspirations are therefore critical factors that shape students' personal perspectives and directly affect societal growth. We will examine these effects through two practical examples: how limited awareness of high school career options can lead to skills mismatches in the labor market, and how a one-minute motivational video can change a student's perception of his or her own abilities and aspirations.

Limited awareness and the role of beliefs

Human capital can be defined as “the stock of knowledge, skills and other personal characteristics embodied in people that helps them to be productive” (OECD), and it influences a wide range of private and social outcomes, such as income inequality and employment rates. The accumulation of human capital is particularly important during the school years, when young students make choices that shape their futures.

Yet evidence of widespread skill mismatches is growing, where workers have different levels and types of skills from the ones needed for their job. Studying the process of school choice is an essential element of any long-term strategy to address skills mismatch, as the main investment in human capital and the production of skills takes place in schools.

As already mentioned, Italian students must select their high school track at a very early stage, choosing between curricula which impart different and increasingly specialized knowledge and skills,

both in terms of their nature (general or technical) and in terms of their subject matter (humanities, scientific, professional, etc.). Thus, the early specialization of curricula makes the choice of the high school track a springboard for the process of investing and accumulating the human capital of Italian students. Nevertheless, such life-changing decisions are made at a time when children may still feel uncertain about the future consequences of alternative paths and have limited knowledge about the implications of this decision. For example, students and their families may not be aware of the existence of specific schools or careers that might be a good match for them. Students may also be unsure about the consequences of choosing an alternative curriculum, e.g. the chances of being able to continue studying or finding employment when they graduate.

These situations of uncertainty are often defined by the term “limited awareness,” which denotes situations of incomplete knowledge about choice alternatives or choice consequences. Limited awareness in the context of such important and life-defining decisions, such as choosing a



The Evolution of Awareness and Belief Ambiguity in the Process of High School Track Choice is authored by LEAP Affiliate Pamela Giustinelli and Nicola Pavoni. For more information, you can read the working paper linked above.

THE SETTING

In the context of the city of Vicenza, we tried to understand the mechanisms behind high school track choice by surveying and analyzing the awareness of 900 families of eighth-graders regarding the high school tracks and curricula available. The focus on Grade 8 is motivated by existing evidence that families tend to put more effort into high school selection during the fall and winter of the last year of middle school.

high school track, can lead to uninformed decisions, ultimately affecting human capital investments and long-term outcomes and impacting on the problem of skills mismatch.

To understand these mechanisms and examine their impact in a real-world scenario, we conducted a study in the Italian city of Vicenza. The study's first major objective was to understand students' and parents' awareness of the different options available for this important decision. For each available high school track, we asked the following question at various points in the decision-making process: "Do you know or have you heard the name of [track choice]?" In general, the students and parents in our sample showed limited knowledge of the different tracks available, with only 2% of students claiming to be un-

ware of an option within the general track (i.e., licei), making it a fairly well-known option. However, the number of students who were unaware of the existence of lower-level options (i.e., vocational schools or istituti professionali) rose to a striking 10% of the total.

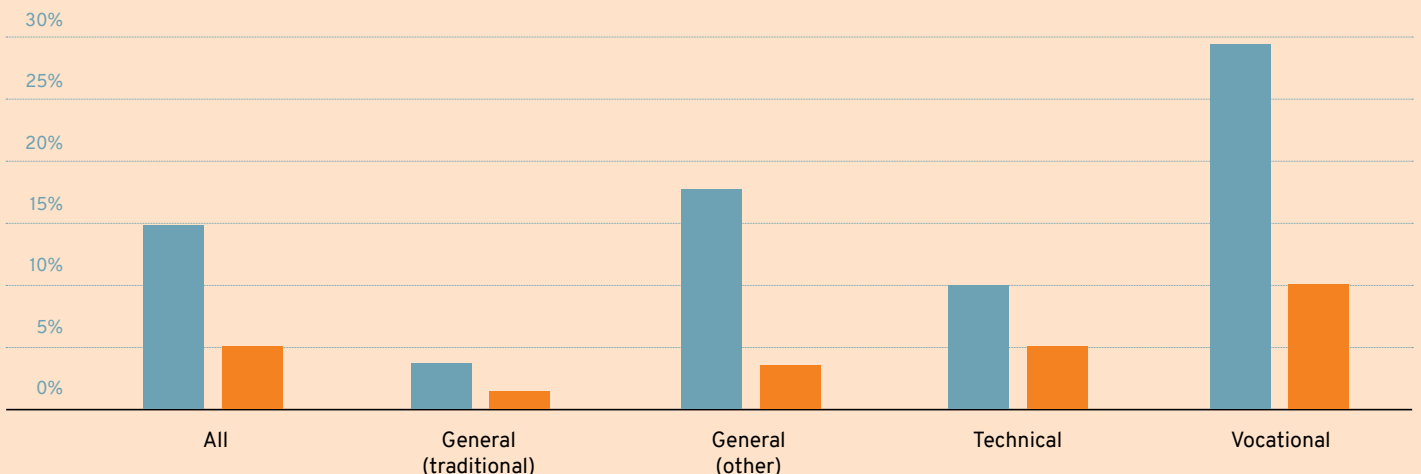
But how does parents' awareness of the different options compare with students' awareness over the course of the decision-making process? By asking this question at different points in time, we find that children are initially less aware of the different schooling options than their parents, but as enrolment approaches, they learn more and more and develop higher levels of awareness than their parents about the curricula of all tracks.

By collecting some basic socioeconomic data, we were able to understand that female students show greater knowledge of



"Do you know or have you heard the name of [track choice]?"
% of students who answered "Never" at the beginning and at the end of the decision-making process

- The graph shows the percentage of students that answered "Never" to the question "Do you know or have you heard the name of [track choice]?" over time.
- The first bar represents responses collected in the first round of the survey, at the beginning of the decision-making process. The second bar shows the responses from the third wave of the survey, just before the actual decision was made. Remarkable is the difference between the knowledge of general choices (licei) and that of vocational ones.





The results of this paper were featured in the national media and contributed to the public debate on the choice of high school track by Italian students. You can find an article from *Corriere della Sera* by clicking on the link above.

the alternatives of the general higher education track than male students throughout the period. Foreign-born children and children from lower socioeconomic backgrounds learn significantly less about the available choices over the period, focusing their learning mostly on vocational tracks. This reinforces their belief that easier tracks that prepare them for the job market are more appropriate for them than more challenging tracks that prepare them for university. These findings demonstrate the importance of individual and family socioeconomic background in shaping students' perceptions of high school track choices. The second main goal of the study was to elicit and analyze the confidence levels of students and their parents regarding the expected chances of successfully completing each type of high school track if they were to choose it. Parents' pessimism about children's chances of doing well in ambitious and demanding programs was greater than children's pessimism, while parents' optimism about chil-

dren's performance in vocational programs was greater than children's optimism. What can we conclude from looking at this evidence?

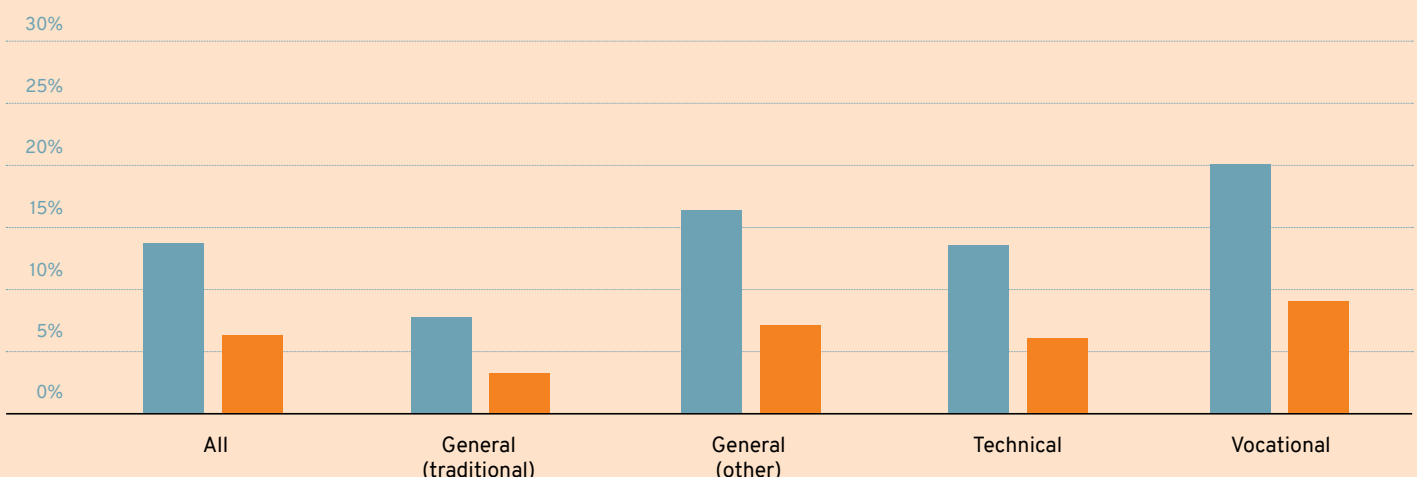
External factors such as family, economic status, or other circumstances can be important in forming beliefs that influence the choice of high school track. The entire decision-making process is often biased by limited awareness of the choices available to both students and families. Moreover, beliefs about medium-term outcomes, such as successful completion of each track, may be ambiguous and imprecise, leading to inappropriate choices, which in the long run may be a potential source of the large skills mismatch observed in Italy.

Therefore, successful policies to mitigate this problem must address the issue of limited awareness and ambiguity by providing effective guidance and complete information that leads students and their



“Do you know or have you heard the name of [track choice]?”
% of parents who answered “Never” at the beginning and at the end of the decision-making process

- The graph shows the percentage of parents that answered “Never” to the question “Do you know or have you heard the name of [track choice]?”. Compared to the same question asked to students, it is clear that children are less aware of the different school options than parents at the beginning of the decision process.





Can a Short Video Boost Aspiration in Children? Evidence from Naples is authored by LEAP Affiliate Selene Ghisolfi and Raffaella Dimastrochicco. For more information, you can read the working paper linked above.

families to make educational and career decisions that are better aligned with available and projected labor market opportunities.

A short video can go a long way

Can a one-minute motivational video treatment interpreted by a role model increase aspirations for school and work in elementary and middle school students? The present research suggests that it can, and that the treatment also enhances participants' measures of self-efficacy and grit and can have positive effects on effort, cognitive task performance, and trust and reciprocity toward others. From a policy perspective, this pilot study provides evidence of the short-term effectiveness of a very brief, replicable, and inexpensive intervention delivered in a developed country.

Motivation, aspirations, and self-esteem are fundamental factors that significantly influence a student's academic per-

formance and future choices, including those related to education and career. Students who do not believe in their ability to succeed may put less effort into their schooling, have lower cognitive skills, or have difficulty interacting effectively with their peers, all of which can severely hamper their overall achievement.

Poverty plays a significant role in this dynamic, first because it often leads to lower aspirations among students from lower socioeconomic backgrounds. The economic constraints faced by poorer families often prevent children from pursuing ambitious educational paths, resulting in lower aspirations. Lower aspirations tend to lead students to choose academic tracks that are generally perceived as less challenging and that provide quicker and more direct access to the labor market. Consequently, this chain of events from lower aspirations to limited educational investment can lead to lower wages and overall reduced opportunities, creating what is often defined as



an “aspiration trap.” This helps explain why poor people tend to have lower aspirations than people from higher socioeconomic backgrounds.

In response to this challenge, we explored a novel approach aimed at mitigating the effects of the “aspiration trap” and raising the aspirations and self-confidence of students from disadvantaged backgrounds. We conducted an experiment in primary and secondary schools in Naples, Italy, purposively selected in high-poverty, high-crime neighborhoods and serving primarily students from low socioeconomic backgrounds, many of whom are immigrants or first-generation citizens. The intervention involved exposing students to short, one-minute motivational videos featuring actors and actresses sharing their stories of overcoming adversity and discovering their passion, which ultimately leads to happiness. The idea is to expose students to successful stories of “role models,” defined as a person, real or fictional, who shares the target audience’s experience and with whom they can identify. The message is that even if their situation at school and at home is difficult and they have a sense of being out of place, they can still be successful in life.

The results of this pilot project are promising. We found that exposure to a one-minute motivational video increased students’ academic and career aspirations, effectively shifting them toward more challenging and ambitious high school tracks (licei) and increasing their preference for academic tracks by 33.5%. In addition, when male students watched videos featuring female actresses, gender bias decreased.

It’s important to note, however, that these positive results came with some trade-offs, as the treatment video also increased feelings of competitiveness and performance anxiety, especially among female students. The significance of these findings is that it is possible to raise the expectations and self-confidence of children in a simple way. Such interventions may be particularly effective if they are delivered before important decisions are made, for example during educational guidance or skill-building activities. From a policy perspective, these findings are important because they highlight the effectiveness of a brief, replicable, and cost-effective intervention, providing valuable insights for resource-constrained settings, particularly in disadvantaged contexts. These findings provide strong motivation for further research and exploration in this area.

Tutoring Programs

The past few years have brought unprecedented challenges to the field of education. With the outbreak of the COVID-19 pandemic, the world witnessed a striking shift from traditional in-person learning to distance learning. While the safety measures of school closures were essential to contain the spread of the virus, they had serious implications for a wide range of outcomes, particularly learning outcomes. To mitigate learning losses, many countries have turned to online learning platforms for their potential to support students not only during crises like the COVID-19 pandemic, but also when access to traditional schooling is hindered, such as in conflict zones or areas with limited infrastructure. In this chapter, we will focus on one particular strategy that has emerged as a potential solution to the educational setbacks faced by students during and after the pandemic: tutoring programs. When effective and affordable, these programs can provide targeted academic support to students and help them bridge the learning gaps caused by school closures.

The disruption of regular in-person instruction and the difficulties associated with remote learning have left many children struggling to keep up with their academic curriculum. But the impact goes far beyond grades and academic performance. It's now clear that the pandemic has had a negative psychological and social impact on children and adolescents, with reports of increased rates of depression, anxiety and social isolation among young people during and after the closures. In addition, the lack of in-person interactions and extracurricular activities has hindered the development of critical socio-emotional skills in younger children. The combination of these effects paints a troubling picture. The cohorts of students affected by prolonged school closures are at risk of long-term consequences for their educational careers, with implications for human capital accumulation. As their educational and socio-emotional development has been severely disrupted, their future prospects are in question. Evaluating the effectiveness of tutoring programs will highlight their importance as a means of responding to crises and addressing the educational needs of vulnerable and at-risk students.

Online tutoring during the pandemic

The Tutoring Online Program (TOP) project emerged as a pioneering response to the educational challenges posed by the COVID-19 pandemic in Italy, one of the first countries in Europe to be significantly affected. With Italian schools closed for an extended period of time, equivalent to more than a third of the entire school year in 2020, there was an urgent need for innovative solutions to address the learning gaps that had emerged. The TOP program was developed to address this emergency and consisted of a novel and innovative program of online tutoring led by university students. Three-hour weekly sessions have been shown to have a significant impact on students' academic performance (+4.7%), well-being (+26%), and socio-emotional skills (+21.1%).

Let's take a step back to describe the study's context. On March 5, 2020, Italian schools closed due to the COVID-19 emergency and shifted to online learning, never to reopen. International studies show that the shift to online learning disproportionately affected disadvantaged students. For example, before the school closures in Italy, 12.8% of children participating in the TOP project sought help with their homework from someone other than their

parents or siblings (such as other family members or after-school programs); after the closures, this number dropped to 2.9%. Those who did their homework alone increased from 55.3% to 62.1%. Something had to be done.

The TOP project started out with a clear mission to provide targeted support to middle school students in Grades 6 to 8 who come from disadvantaged backgrounds characterized by socioeconomic disparities, language barriers or learning difficulties. What makes TOP truly unique are its two defining features: the program's reliance on online tutoring, and the fact that tutors are not professional educators but volunteer university students.

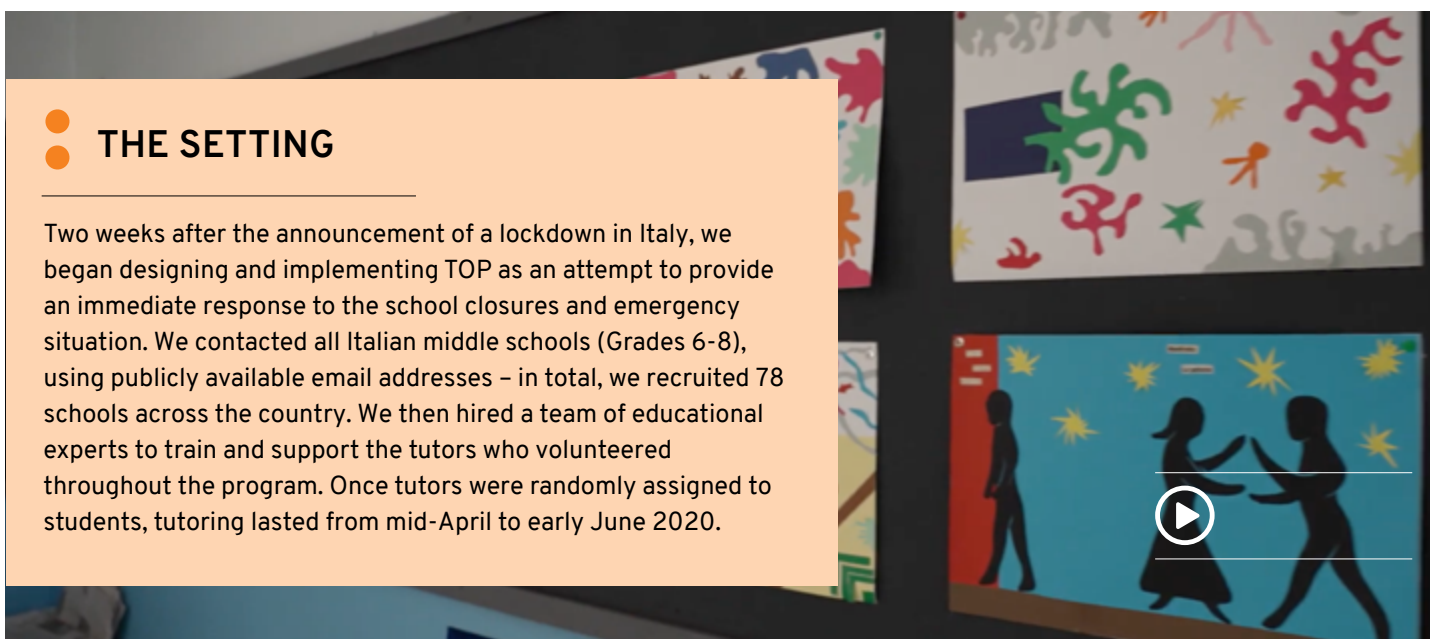
These volunteers are trained and mentored by educational experts to develop the skills needed to provide effective online tutoring. Four weeks after the Italian government announced the school closures, we contacted all middle school principals and asked them to provide a list of potential student beneficiaries. At the same time, we invited all students enrolled at three major universities in Milan to volunteer as tutors for at least three hours a week until the end of the school year.



Apart but Connected: Online Tutoring and Student Outcomes during the COVID-19 Pandemic is authored by LEAP Affiliates Michela Carlana and Eliana La Ferrara. For more information, you can read the discussion paper linked above.

THE SETTING

Two weeks after the announcement of a lockdown in Italy, we began designing and implementing TOP as an attempt to provide an immediate response to the school closures and emergency situation. We contacted all Italian middle schools (Grades 6-8), using publicly available email addresses – in total, we recruited 78 schools across the country. We then hired a team of educational experts to train and support the tutors who volunteered throughout the program. Once tutors were randomly assigned to students, tutoring lasted from mid-April to early June 2020.





The results of this study made a significant contribution to the public debate, with national media coverage. The study's findings were featured in *La Repubblica* and *Il Sole 24 Ore*, among others.

Half of the selected students were randomly selected to be paired with a tutor, while the other half formed the control group. This experimental method, also called a Randomized Control Trial (RCT), allowed the researchers to compare who received tutoring with who didn't and estimate the program's impact.

The results were striking: students assigned to an online tutor showed significant and substantial improvements compared to those without tutors. An intensive program of six hours per week doubled the improvement in academic performance. During a psychologically challenging period such as isolation, participating students not only improved their grades, but also showed significantly higher levels of happiness and fewer signs of depression.

They were less likely to drop out of school after middle school, and they reported an increased sense of control over their lives. Participating students also increased the amount of time they spent on homework and committed to taking regular online classes.

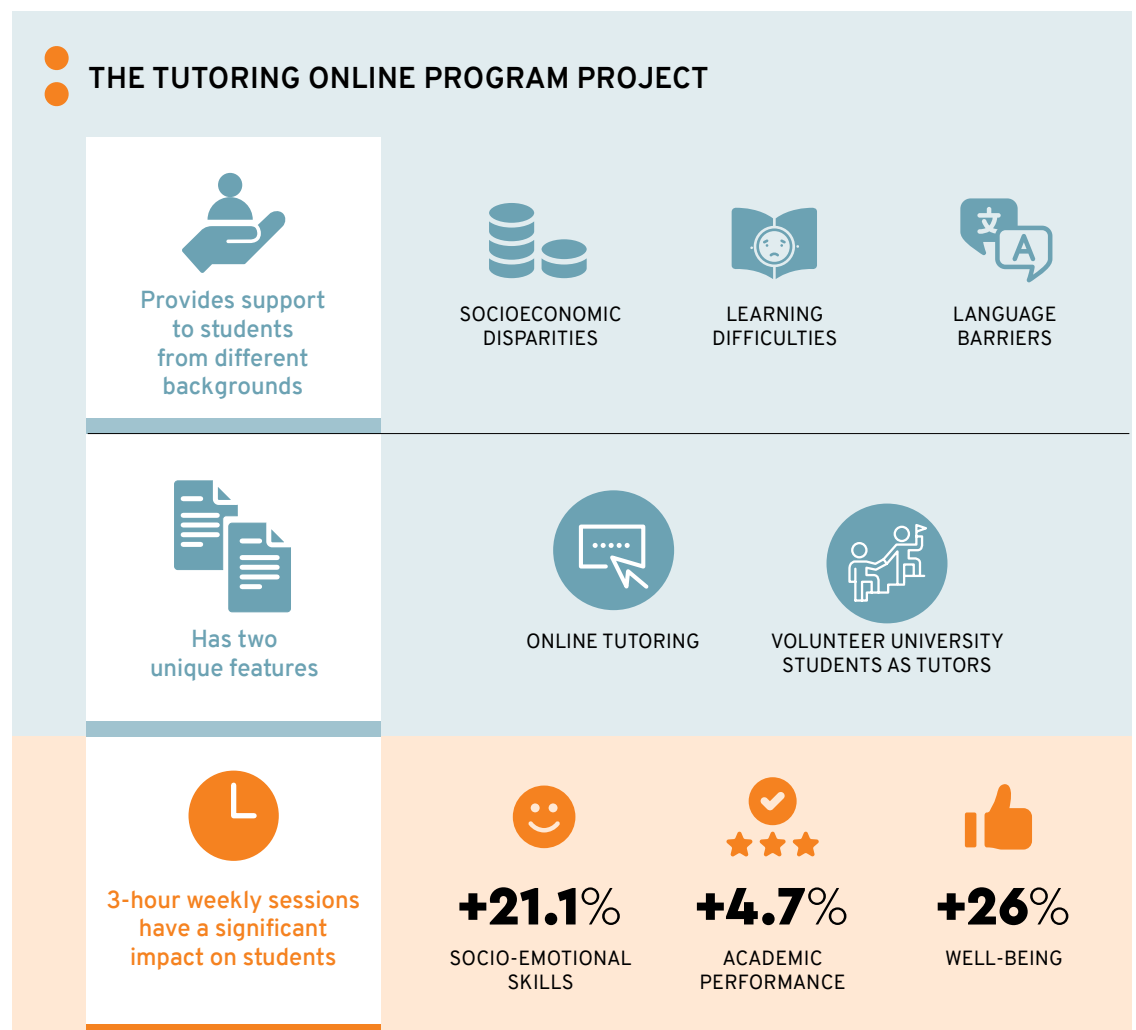
These extraordinary results have clear policy implications, providing strong evidence for the effectiveness of online tutoring programs that are led by peers rather than by professional adults. The choice of volunteer tutors offers several advantages. First, it makes tutoring initiatives highly cost-effective, one of the biggest barriers to large-scale implementation, ensuring a rapid and scalable response to educational shocks in a significant number of circumstances and allowing students in disadvantaged areas to be reached efficiently through virtual learning. In addition,



tutoring can sometimes be stigmatized as something that is done by students in need and is taken out of the regular classroom setting.

Because online tutoring is less observable by peers than in-person tutoring, this intervention model may reduce the sense of stigma that can be associated with any tutoring program, thereby increasing its effectiveness. Moreover, university students who volunteer to participate in the program are intrinsically motivated to give back to their communities. As a result, students are more likely to benefit from their dedication and enthusiasm, resulting in a quality interpersonal connection that is essential for effective tutoring.

The importance of such policy implications provides strong motivation to further evaluate the effectiveness of online tutoring programs in different contexts, such as with a larger sample or in low-income countries, where the reality poses budgetary and geographical constraints. LEAP researchers have not only scaled up TOP in Italy, reaching nearly 3,000 students, but are currently adapting this intervention in the context of the Dominican Republic, where it could provide valuable solutions to educational challenges.



Conclusions

Educational poverty is one of the emerging and most critical dimensions of poverty in today's world, in both developing and developed countries, requiring urgent action by policymakers. Its impact is not only on short-term educational attainment, but also on long-term career prospects and human capital accumulation. Throughout the pages of this book, we have touched on several forms of educational poverty, looking at their causes and pragmatic ways to address them. Stereotypes related to gender, ethnicity, or vulnerable populations remain a relevant issue in the lives of many children, limiting and often shaping their educational paths. Expectations also play an important role in shaping aspirations in an environment where information about school options is limited and strongly influenced by parents and peer groups. In this context, programs such as the Equality of Opportunity for Immigrant Students Program (EOP) and the Tutoring Online Program (TOP) have emerged as effective tools to address the learning gaps exacerbated by challenging circumstances. These programs have been shown to significantly improve academic performance, student well-being, and socio-emotional growth.



Listen to **Luca Privinzano**, Associate Director of Research at LEAP, explain how the research presented in this book provides valuable insights for policymakers.

As a research community, we need to work together with policymakers and all stakeholders to identify ways to address issues related to educational poverty, which affects millions of children in Italy, and design transformative and effective policies based on real evidence provided by rigorous and reliable methods. Scientific impact and policy evaluation methods are powerful tools in the hands of policymakers, not only for education policy, but for answering fundamental questions about all forms of poverty. Investing in effective policies is particularly important in fragile contexts and where governments are often constrained by budget. The scientific methods we presented go in exactly this direction. These pragmatic approaches to policy allow us to better understand the impact of interventions and make decisions based on a thorough understanding of what works and what doesn't.

LEAP's mission is to build a proper evaluation culture in decision-making by promoting rigorous economic research and impact evaluation methods as the gold standard in the formulation of public policies, especially in Italy, which lags behind in the use of such methods. By embracing this approach, the academic community, together with institutional stakeholders and civil society, can collectively build a better future where every individual, regardless of their circumstances, has the freedom to dream big and reach their full potential. Through this unwavering commitment to evidence and equity, we can fight poverty and prejudice and promote a more inclusive and just society for all.

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About the Authors



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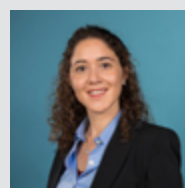
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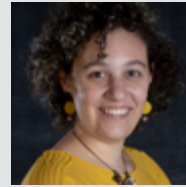


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