

Metadata for PPE Evidence Tracker

Tracker overview: This public-facing tracker contains studies funded by J-PAL's [Post-Primary Education Initiative](#) (PPE), which are also summarized on J-PAL's website [here](#). Each funded study meeting the inclusion criteria below is listed in a row, alongside its associated researchers, thematic areas, and information on related working or published papers. Thematic areas in Column E are categorized based on the key demarcation of themes that initially motivated the creation of PPE, and under which projects have subsequently been organized.

Inclusion criteria: Studies are included on this sheet if they either have resulted in a working or published paper, or have an associated J-PAL-authored evaluation summary.

Intended uses: This sheet is meant to display the key research outputs that resulted from PPE-funded projects. We hope that policymakers, practitioners, researchers, and other interested parties can use this sheet to identify research products associated with PPE across a variety of topic areas and geographies, and can use this information to supplement J-PAL policy products to learn more about the key actors and policy takeaways from randomized evaluations in post-primary education.

Acknowledgements: We would like to acknowledge generous support from the Bill & Melinda Gates Foundation, the Douglas B. Marshall, Jr. Family Foundation, Echidna Giving, Google.org, the MacArthur Foundation, and the UK Foreign, Commonwealth & Development Office, all of whom without this research would not have been possible.

Frequency of updates: This sheet will be updated annually.

Last update: April 10, 2025 c/o Nicah Santos

Contact email: PPE@povertyactionlab.org

Evaluation	Country	Region	Researchers	Priority Areas / Cross-Cutting Themes	Working Paper	Published Paper	J-PAL Evaluation Summary Link	Paper abstract
A/B Testing Education Production: Bridge Academies	Kenya & Nigeria	Africa	Joost de Laat, Michael Kremer	Pedagogy, Education technology, Curriculum	<p>*New* Nudging Parents out the Door: The Impacts of Parental Encouragement on School Choice and Test Scores (November 2024)</p> <p>*New* The Long-Term Distributional Impacts of a Full-Year Interleaving Math Program in Nigeria (November 2023)</p>		<p>Online in three parts:</p> <p>Kenya I</p> <p>Kenya II</p> <p>Nigeria</p>	<p>This study reports the findings from a year-long randomized evaluation assessing the impact of assigning 62 classrooms in Nigeria to receive either blocked or interleaved math problem sets. Blocked practice sessions focused on a single skill at a time. Interleaved problem sets alternated between different skills within a practice session. On tests of short-term retention, interleaved practice increased test scores by 0.29 standard deviations. In contrast, we find no evidence that interleaving improves average performance on a cumulative assessment measuring retention of material over the academic year. We find some evidence of large impacts on the cumulative assessment at the bottom of the distribution, but these impacts appear to be offset by negative impacts at the top.</p>
An Impact Evaluation of Bridge International Academies	Kenya	Africa	Isaac Mbiti, Michael Kremer, Anthony Keats, Owen Ozier	Education technology, Teacher selection/development, Curriculum	Can Education be Standardized? Evidence from Kenya (September 2022)			<p>We examine the impact of enrolling in schools that employ a highly-standardized approach to education, using random variation from a large nationwide scholarship program. Bridge International Academies not only delivers highly detailed lesson guides to teachers using tablet computers, it also standardizes systems for daily teacher monitoring and feedback, school construction, and financial management. At the time of the study, Bridge operated over 400 private schools serving more than 100,000 pupils. It hired teachers with less formal education and experience than public school teachers, paid them less, and had more working hours per week. Enrolling at Bridge for two years increased test scores by 0.89 additional equivalent years of schooling (EYS) for primary school pupils and by 1.48 EYS for pre-primary pupils. These effects exceed the 90th percentile of studies examined by Evans and Yuan (2020) and the 99th percentile of treatment effects of large sample studies reviewed in the same study. Enrolling at Bridge reduced both dispersion in test scores and grade repetition. Test score results do not seem to be driven by rote memorization or by the income effects of the scholarship.</p>
Biased Beliefs and the Dynamic Role of Information in College Choice	Chile	LAC	Claudia Allende, Magdalena Bennett	Demand-side intervention			Online	

Evaluation	Country	Region	Researchers	Priority Areas / Cross-Cutting Themes	Working Paper	Published Paper	J-PAL Evaluation Summary Link	Paper abstract
Can Incentives Mitigate Educational Triage in Upper Primary: Evidence from Uganda	Uganda	Africa	Adrienne Lucas, Daniel Gilligan, Naureen Karachiwalla, Ibrahim Kasirye, Derek Neal	Demand-side intervention, Governance		Educator Incentives and Educational Triage in Rural Primary Schools (December 2019, Journal of Human Resources)	Online	In low-income countries, primary school student achievement is often far below grade level and dropout rates remain high. Further, some educators actively encourage weaker students to drop out before reaching the end of primary school to avoid the negative attention that a school receives when its students perform poorly on their national primary leaving exams. We report the results of an experiment in rural Uganda that sought to both promote learning and reduce dropout rates. We offered bonus payments to grade six (P6) teachers that rewarded each teacher for the math performance of each of her students relative to comparable students in other schools. This Pay for Percentile (PFP) incentive scheme did not improve overall P6 math performance, but it did reduce dropout rates. PFP treatment raised attendance rates a full year after treatment ended from .56 to .60. In schools with math books, treatment increased these attendance rates from .57 to .64, and PFP also improved performance on test items covered by P6 books. PFP did not improve any measure of attendance, achievement, or attainment in schools without books.
Cash Transfers, Growth Mindsets, and Student Learning	Kenya	Africa	Stefan Dercon, Robert Garlick, Mahreen Mahmud, Kate Orkin	Demand-side intervention, Marginalized populations	*Updated* Aspiring to a Better Future: Can a Simple Psychological Intervention Reduce Poverty? (December 2024)		Online	How do aspirations influence investment decisions for people living in poverty? Does this change as peoples economic conditions improve? To answer these questions, we design a workshop teaching techniques to raise aspirations and plan to achieve them. We cross-randomise this with large unconditional cash transfers in a 415-village, 8,300-person, 1.5-year experiment in Kenya. The workshop substantially raises aspirations, investment, and living standards. But the workshop+cash produces similar effects to cash alone, potentially because cash raises aspirations. Thus, helping people living in poverty set higher aspirations can raise investment and living standards, but improving economic conditions can activate the same process.

Evaluation	Country	Region	Researchers	Priority Areas / Cross-Cutting Themes	Working Paper	Published Paper	J-PAL Evaluation Summary Link	Paper abstract
Developing Systems to Reduce Student Absenteeism in Developing Countries	Argentina	LAC	Alejandro Ganimian	Demand-Side Interventions, Student Motivation/Effort, Education Technology		*New* The impact of combining performance-management tools and training with diagnostic feedback in public schools: Experimental evidence from Argentina (April 2024, Economics of Education Review)		Providing principals with low-stakes information on their students' test scores has been shown to improve school management, instruction, and achievement in upper-middle income countries. We evaluate this approach by itself ("diagnostic feedback" or T1) and combined with tools and training ("performance management" or T2) through an experiment in 396 public primary schools in Salta, Argentina. After two years, T1 had null or adverse effects on students' performance in school, but T2 reduced grade repetition (especially, among cohorts with more exposure), even a year after the interventions ended. We cannot rule out small-to-moderate effects on achievement. T2 also impacted teacher quality, student beliefs, bullying and discrimination, and extracurricular activities for high-exposure cohorts. Our results suggest that tools and training can effectively complement information in contexts of low principal capacity.
Do Students Benefit from Blended Instruction?	India	South Asia	Andreas de Barros	Teacher selection/development, Pedagogy	*Updated* Explaining the Productivity Paradox: Experimental Evidence from Educational Technology (September 2023)	Which Students Benefit from Computer-Based Individualized Instruction? Experimental Evidence from Public Schools in India (February 2023, Journal of Research on Educational Effectiveness)	Online	This is one of the first studies to evaluate the impact of computer-based individualized instruction in a developing country. We randomly assigned 1,528 students in grades 6–8 in 15 "model" public schools in Rajasthan, India who were using a computer-adaptive learning software to: a control group, in which they were only able to access the activities for their enrolled grade level; or a treatment group, in which they were able to access exercises appropriate for their performance level. After 9 months, computer-based individualized instruction had a null average effect on math achievement. However, treatment students with low initial performance outperformed their control counterparts by 0.22 standard deviations. Our results suggest that computer-based individualized instruction is most beneficial for low-performing students.

Evaluation	Country	Region	Researchers	Priority Areas / Cross-Cutting Themes	Working Paper	Published Paper	J-PAL Evaluation Summary Link	Paper abstract
Does Certification Increase Returns to Human Capital? A Field Experiment	India	South Asia	Deepshikha Batheja, Sarojini Hirshleifer, Opinder Kaur	Private Schools, Gender	*New* Does signaling college-level human capital matter? An experimental study in India			We measure the impact of two main signals of tertiary-level human capital accumulation, college quality and certification, on hiring in India. Using a correspondence experiment, we send 16,944 resumes to 1412 job postings for recent engineering graduates at small and medium firms. In precisely estimated results, we find that these employers do not respond to signals of tertiary education quality. Specifically, there is no impact on callbacks of having graduated from a mid-tier college ranked in the top 300 relative to an unranked college outside of the top 1000, despite significant government investment in college rankings. There is also no impact of scoring in the highest as opposed to the lowest quartile of a post-tertiary certification test that has been taken by millions of graduating students. There is evidence that women modestly benefit in the first stage of hiring in this market, with this effect concentrated in some regions.
Education Mismatch and Motivational Messages in the Dominican Republic	Dominican Republic	LAC	James Berry, Giacomo De Giorgi, Christopher Neilson, Sebastián Otero	Teacher selection/development, Gender			Online	

Evaluation	Country	Region	Researchers	Priority Areas / Cross-Cutting Themes	Working Paper	Published Paper	J-PAL Evaluation Summary Link	Paper abstract
Effective Teacher Coaching - Improving student outcomes in Mexico	Mexico	LAC	Susan W. Parker, Lucrecia Santibañez	Teacher Selection/Development, Student Motivation/Effort	*New* Can Hybrid Teacher Coaching Improve Student Outcomes? Experimental Evidence from Secondary Schools in Mexico (January 2025)			Evaluations of teacher coaching in developed contexts have shown that teacher coaching improves both teacher qualifications and student performance on standardized tests (Kraft, Blazar and Hogan 2018). Yet, existing studies from developing contexts show widely diverging impacts of teacher coaching and its costs, casting doubt on the feasibility of in person teacher coaching in developing contexts. We add to this emerging literature by implementing a hybrid pilot teacher-coaching program using primarily online/web based communications in the state of Sonora, Mexico. The coaching program was designed by specialists in mathematics education and consisted of 4 cycles of planning-reflection-feedback to be implemented by 9th grade teachers. The pilot was conducted in 67 secondary schools, with 33 schools assigned to the treatment group and 34 to the control group. Results from achievement tests applied at the end of the year in mathematics and in analytic reasoning to 9th graders suggest positive results of coaching on both tests on the order of 0.05-0.06 standard deviations, although the experiment was slightly underpowered. Costs per student were about \$5US, implying feasibility of hybrid teacher coaching for implementation in developing contexts.

Evaluation	Country	Region	Researchers	Priority Areas / Cross-Cutting Themes	Working Paper	Published Paper	J-PAL Evaluation Summary Link	Paper abstract
Empowering Adolescent Girls: Evidence from a Randomized Control Trial in Sierra Leone	Sierra Leone	Africa	Imran Rasul, Oriana Bandiera, Niklas Buehren, Markus Goldstein	Gender, Demand-side intervention, Vocational/entrepreneurial education	The Economic Lives of Young Women in the Time of Ebola: Lessons from an Empowerment Program (March 2019) Do School Closures During an Epidemic have Persistent Effects? Evidence from Sierra Leone in the Time of Ebola (July 2020)		Online	School closures are a common short run policy response to viral epidemics. We study the persistent post-epidemic impacts of this on the economic lives of young women in Sierra Leone, a context where women frequently experience sexual violence and face multiple economic disadvantages. We do so by evaluating an intervention targeting young women that was implemented during the 2014/15 Ebola epidemic in Sierra Leone. This provided them a protective space where they can find support, receive information on health/reproductive issues and vocational training. Our analysis document the impacts of the intervention on 4700 young girls and women aged 12 to 25 tracked from May 2014 on the eve of the Ebola crisis, to the post-epidemic period in 2016. In control villages, school closures led young girls to spend significantly more time with men, teen pregnancies rose sharply, and school enrolment among young girls dropped by 17pp post-epidemic, long after schools had reopened. These adverse effects on enrolment are halved in treated villages because the intervention breaks this causal chain: it enables girls to allocate time away from men, reduces out-of-wedlock pregnancies by 7pp, and so increases re-enrolment rates post-epidemic. A long term follow up in 2019/20 shows persistent impacts of the intervention on the human capital accumulation of young girls, time they spend with men, and quality of partners matched with. Our analysis has important implications for school closures in response to the current COVID-19 pandemic in contexts where young women face sexual violence. highlighting the
Empowering Girls in Rural Bangladesh	Bangladesh	South Asia	Rachel Glennerster, Erica Field, Nina Buchmann	Demand-side intervention, Curriculum, Gender		A Signal to End Child Marriage: Theory and Experimental Evidence from Bangladesh (October 2023, American Economic Review)	Online	The Child marriage remains common even where female schooling and employment opportunities have grown. We introduce a signaling model in which bride type is imperfectly observed but preferred types have lower returns to delaying marriage. We show that in this environment the market might pool on early marriage even when everyone would benefit from delay. In this setting, offering a small incentive can delay marriage of all treated types and untreated non- preferred types, while programs that act directly on norms can unintentionally encourage early marriage. We test these theoretical predictions by experimentally evaluating a financial incentive to delay marriage alongside a girls' empowerment program designed to shift norms. As predicted, girls eligible for the incentive are 19% less likely to marry underage, as are non preferred type women ineligible for the incentive. Meanwhile, the empowerment program was successful in promoting more progressive gender norms but failed to decrease adolescent marriage and increased dowry payments.

Evaluation	Country	Region	Researchers	Priority Areas / Cross-Cutting Themes	Working Paper	Published Paper	J-PAL Evaluation Summary Link	Paper abstract
Encouraging Youth Entrepreneurship in Kenya	Kenya	Africa	Edward Miguel, Isaac Mbiti, Joan Hamory Hicks, Michael Kremer	Teacher Selection/Development, Pedagogy, Curriculum	*New* Vocational Education in Kenya: Evidence from A Randomized Evaluation Among Youth		Online	This paper describes the Technical and Vocational Vouchers Program (TVVP) in Kenya and provides early results from the intervention. Implementation began in 2008 with the recruitment of approximately 2,160 out-of-school youths (ranging in age from roughly 18 to 30). Of the 2,160 youths that applied to the TVVP, a random half were awarded a voucher for vocational training, while the other half served as the control group. Of the voucher winners, a random half were awarded a voucher that could only be used in public (government) institutions, while the other half received a voucher that could be used in either private or public institutions. The program also included a cross-cutting information intervention, which exposed a randomly selected half of all treatment and control individuals to information about the actual returns to vocational education. We find that voucher winners were significantly more likely to enroll in vocational education institutions and were able to acquire an additional 0.6 years of education. However, the information treatment did not affect educational attainment. We find limited evidence that the program increased earnings, although we found the program led to a significant increase in wage earnings among wage earners.
Evaluating a School-Based Gender Sensitization Program in India	India	South Asia	Seema Jayachandran, Diva Dhar, Tarun Jain	Gender, Curriculum		Reshaping Adolescents' Gender Attitudes: Evidence from a School-Based Experiment in India (March 2022, <i>American Economic Review</i>)	Online	This paper evaluates an intervention in India that engaged adolescent girls and boys in classroom discussions about gender equality for two years, aiming to reduce their support for societal norms that restrict women's and girls' opportunities. Using a randomized controlled trial, we find that the program made attitudes more supportive of gender equality by 0.18 standard deviations, or, equivalently, converted 16 percent of regressive attitudes. When we resurveyed study participants two years after the intervention had ended, the effects had persisted. The program also led to more gender-equal self-reported behavior, and we find weak evidence that it affected two revealed-preference measures.

Evaluation	Country	Region	Researchers	Priority Areas / Cross-Cutting Themes	Working Paper	Published Paper	J-PAL Evaluation Summary Link	Paper abstract
Evaluating the Impact of a Growth Mindset Intervention in Argentina	Argentina	LAC	Alejandro Ganimian, Rachel Glennerster, Anja Sautmann	Demand-side intervention, Student Motivation/Effort, Curriculum	*New* Growth-Mindset Interventions at Scale: Experimental Evidence From Argentina (2020)		*New* Online	This is one of the first evaluations of a "growth-mindset" intervention at scale in a developing country. I randomly assigned 202 public secondary schools in Salta, Argentina, to a treatment group in which Grade 12 students were asked to read about the malleability of intelligence, write a letter to a classmate, and post their letters in their classroom, or to a control group. The intervention was implemented as intended. Yet, I find no evidence that it affected students' propensity to find tasks less intimidating, school climate, school performance, achievement, or post-secondary plans. I rule out small effects and find little evidence of heterogeneity. This study suggests that the intervention may be more challenging to replicate and scale than anticipated.
Evaluation of a Growth Mindset Intervention in Bangladesh Secondary Schools	Bangladesh	South Asia	Thomas H. Polley, Erica Field	Student motivation/effort, Demand-side intervention	*Updated* Believing is achieving: Targeting Beliefs about Intelligence to Increase Learning in Bangladeshi Secondary Schools (November 2018)			Growth mindset interventions attempt to increase the perceived returns to effort by teaching students that the brain physically grows more powerful while we study. Such interventions have been shown to increase learning, especially among vulnerable populations, in the United States but their mechanisms are not thoroughly understood and they've yet to be tested in a developing country setting. I evaluate the impact of a growth mindset intervention in secondary schools in Dhaka using a field experiment designed to isolate the central claim in the literature that the intervention's impacts are due to changing students' beliefs about the malleability of intelligence. I do this by including a placebo arm that includes all of the same messaging on the returns to effort but makes no comment on whether the brain actually changes when we learn. I find the intervention increases test scores by 0.12 σ on average and that the impact is heterogeneous across initial effort and gender, with the hardest working students at baseline receiving no impact and with a larger impact on girls than boys. Furthermore I find growth mindset significantly outperforms the placebo and I cannot reject that the placebo had no effect, corroborating theory.
Examining the Impact and Cost-effectiveness of Supplementary Math Courses with a Focus on Girls	Benin	Africa	Leonard Wantcheckon, Markus Olapade, Romaric Samson	Demand-side intervention, Gender			Online	

Evaluation	Country	Region	Researchers	Priority Areas / Cross-Cutting Themes	Working Paper	Published Paper	J-PAL Evaluation Summary Link	Paper abstract
Financial Aid and College Access in the Dominican Republic	Dominican Republic	LAC	Christopher Neilson, Sebastián Otero, Juan Ariel Jiménez	Governance, Teacher selection/development			Online	
Gender Violence and School Achievement in Mozambique	Mozambique	Africa	Selim Gulesci, Sofia Amaral, Aixa Garcia-Ramos, Maria Micaela Sviatschi, Alejandra Ramos	Gender, Curriculum	*New* Gender-Based Violence in Schools and Girls' Education: Experimental Evidence from Mozambique (November 2024)		Online	
Getting Low-Income Adolescents Back to School: The Returns to Secondary School	Tanzania	Africa	Ketki Sheth, James Ward Khakshi	Demand-Side Interventions to Reach Disadvantaged Populations, Private Schools, Marginalized Populations, Gender			*New* Online	
Getting Rural Workers into Urban Jobs: Evidence from a Training and Placement Program in India	India	South Asia	Clément Imbert, Roland Rathelot	Vocational/entrepreneurial education		*New* Can information about jobs improve the effectiveness of vocational training? Experimental evidence from India (June 2024, <i>Journal of Development Economics</i>)		Using a randomised experiment, we show that providing better information about prospective jobs to vocational trainees can improve their placement outcomes. The study setting is the vocational training programme DDU-GKY in India. We find that including in the training two information sessions about placement opportunities make trainees 17% more likely to stay in the jobs in which they are placed. We argue that this effect is likely driven by improved selection into training. As a result of the intervention, trainees that are over-optimistic about placement jobs are more likely to drop out before placement.

Evaluation	Country	Region	Researchers	Priority Areas / Cross-Cutting Themes	Working Paper	Published Paper	J-PAL Evaluation Summary Link	Paper abstract
How Do Principals Reward Teachers? Understanding Subjective Performance Pay	Pakistan	South Asia	Christina Brown, Supreet Kaur	Governance	<p>*Updated*</p> <p>Inducing Positive Sorting through Performance Pay: Experimental Evidence from Pakistani Schools (January 2023)</p> <p>Subjective versus Objective Incentives and Employee Productivity (February 2022)</p> <p>Understanding Gender Discrimination by Managers (April 2022)</p>		Online	Pakistan ranks in the lowest decile in female labor force participation, and even in sectors where women are more prevalent, such as teaching, they earn 70 cents for each dollar men earn. While we have extensive evidence on the prevalence of gender bias in hiring, promotions and wages, we know less about the mechanisms underlying this bias and the extent to which certain personnel policies may mitigate or exacerbate these biases. To test this, I conduct a large scale field experiment with 3,600 employees in 250 schools and randomly vary i). how often managers observe a given employee and ii). whether manager evaluations affect employee's pay or are just used for feedback. First, I find when there are no financial stakes associated with performance evaluations, there is no gender bias. This is true both using data from actual performance evaluations, controlling for the aspects of performance I observe, and for randomized vignettes varying the gender of the teacher. In contrast, when principals' evaluations determine teachers' end of year raise, we see that female teachers receive 10% lower raises, controlling for productivity. However, when principals are randomly assigned to conduct more frequent classroom observations of teachers, this lowers their evaluations of male teachers and results in gender parity in evaluation scores even under financial stakes. Combined this suggests that improving the accuracy of manager information could close the gender gap in performance evaluations, even in high stakes settings.
Impact and Mechanisms: Why Education Matters for Women Empowerment. Evidence from a Field Experiment in Niger	Niger	Africa	Elise Huillery, Bastien Michel, H��l��ne Giacobino	Gender, Demand-side intervention		Schoolgirls, Not Brides: Education as a Shield against Child Marriage (October 2024, <i>American Economic Journal: Applied Economics</i>)	Online	This paper examines whether eliminating financial and logistical barriers to secondary education can reduce child marriage. Using a randomized controlled trial including 285 localities in Niger, which ranks last in gender development indices, we show that offering a scholarship upon admission to middle school halves both school dropout and child marriage. It also raises girls' aspirations for themselves as well as mothers' aspirations for their daughter, plausibly due to changes in girls' human capital and preferences. As we find no evidence of displacement effects on non-beneficiary adolescent girls, the scholarship creates unambiguously large social benefits.

Evaluation	Country	Region	Researchers	Priority Areas / Cross-Cutting Themes	Working Paper	Published Paper	J-PAL Evaluation Summary Link	Paper abstract
Impacts of Post-Secondary Vocational Scholarships in Colombia	Colombia	LAC	Carlos Medina, Christian Posso, Eric Bettinger, Juan Saavedra, Michael Kremer	Vocational/Entrepreneurial Education, Marginalized Populations	*New* School Vouchers, Labor Markets and Vocational Education			We provide evidence on the long-run impact of vouchers for private secondary schools, evidence collected twenty years after students applied for the vouchers. Prior to the voucher lottery, students applied to either an academic or vocational secondary school, an important mediating factor in the vouchers' impacts. We find strong tertiary education and labor market effects for those students who applied to vocational schools with almost no impact on those who applied to academic schools. The labor market gains for vocational students are strongest at the top of the distribution and null at the bottom of the distribution. We find additional long-run impacts on consumption, and teen-age fertility. The expected net present value of benefits to participants and to taxpayers was large and positive implying that the program was welfare improving unless net externalities were large and negative.
Improving Job Matching Among Youth	Iraq	MENA	Rebecca Dizon-Ross	Vocational/entrepreneurial education, Education technology			Online	
Improving Post-Primary Education Delivery through Technology and Pedagogy	Pakistan	South Asia	Adrienne Lucas, Sabrin Beg	Curriculum, Demand-side intervention		*New* Engaging Teachers with Technology Increased Achievement, Bypassing Teachers Did Not (May 2022, <i>American Economic Journal: Economic Policy</i>)	Online	Using two RCTs in middle schools in Pakistan, we show brief, expert-led, curriculum based videos integrated into the classroom experience improved teaching effectiveness—student test scores in math and science increased by 0.3 standard deviations, 60% more than the control group, after 4 months of exposure. Students and teachers increased their attendance, and students were more likely to pass the government high-stakes exams. In contrast, similar content when provided to students on personal tablets decreased student scores by 0.4SD. The contrast between the two effects shows the importance of engaging existing teachers and the potential for technology to do so.

Evaluation	Country	Region	Researchers	Priority Areas / Cross-Cutting Themes	Working Paper	Published Paper	J-PAL Evaluation Summary Link	Paper abstract
Improving Secondary School Governance and Pedagogy at Scale: A Randomized Evaluation of the Madhya Pradesh School Quality Assessment Program	India	South Asia	Karthik Muralidharan, Abhijeet Singh	Education technology, Governance, Pedagogy, Marginalized populations	*Updated* Improving Public Sector Management at Scale? Experimental Evidence on School Governance in India (March 2023)		*New* Online	We present results from a large-scale experimental evaluation of an ambitious attempt to improve management quality in Indian schools (implemented in 1,774 randomly-selected schools). The intervention featured several global "best practices" including comprehensive assessments, detailed school ratings, and customized school improvement plans. It did not, however, change accountability or incentives. We find that the assessments were near-universally completed, and that the ratings were informative, but the intervention had no impact on either school functioning or student outcomes. Yet, the program was perceived to be successful and scaled up to cover over 600,000 schools nationally. We find using a matched-pair design that the scaled-up program continued to be ineffective at improving student learning in the state we study. We also conduct detailed qualitative interviews with frontline officials and find that the main impact of the program on the ground was to increase required reporting and paperwork. Our results illustrate how ostensibly well-designed programs, that appear effective based on administrative measures of compliance, may be ineffective in practice.
Improving Secondary School Learning Outcomes Through Customized Computer-based Supplementary Instruction: A Randomized Evaluation of Mindspark	India	South Asia	Karthik Muralidharan, Abhijeet Singh	Education technology, Pedagogy, Marginalized populations		Disrupting Education? Experimental Evidence on Technology-Aided Instruction in India (April 2019, <i>American Economic Review</i>)	Online	We study the impact of a personalized technology-aided after-school instruction program in middle-school grades in urban India using a lottery that provided winners with free access to the program. Lottery winners scored 0.37 sigma higher in math and 0.23 sigma higher in Hindi over just a 4.5-month period. IV estimates suggest that attending the program for 90 days would increase math and Hindi test scores by 0.6 sigma and 0.39 sigma respectively. We find similar absolute test score gains for all students, but much greater relative gains for academically-weaker students. Our results suggest that well-designed, technology-aided instruction programs can sharply improve productivity in delivering education.

Evaluation	Country	Region	Researchers	Priority Areas / Cross-Cutting Themes	Working Paper	Published Paper	J-PAL Evaluation Summary Link	Paper abstract
Improving Social Mobility by Helping Students Make Informed College Choices	China	Asia	Ao Wang, Stefano DellaVigna	Demand-Side Interventions, Marginalized Populations	Cognitive Distortions in Complex Decisions: Evidence from Centralized College Admission			Constructing optimal rank-order lists in centralized matching systems often entails sophisticated risk-taking consideration. We empirically study an admission system that employs a constrained Deferred Acceptance Algorithm to understand how students construct their lists. Students appear overly cautious with their top choices and most of them do not always put safer choices at a lower-ranked spot on the list. We propose that the Model of Directed Cognition could explain such choices. Applicants using the model myopically focus on the spot they are contemplating and neglect its impact on the rest of the list. To differentiate from alternative hypotheses, we deploy an in-field experiment that pinpoints a core prediction of our model concerning framing effects and find clear evidence of it. Structural estimation suggests that 45%~55% of the sample are better described by our model and that this boundedly rational decision rule explains 83% of outcome inequality across socioeconomic groups.
Information Targeting, School Choice, and School Quality	Ghana	Africa	Adrienne Lucas, Kehinde Ajayi, Willa Friedman	Demand-side intervention	When Information Is Not Enough: Evidence from a Centralized School Choice System (October 2020)	The Importance of Information Targeting for School Choice (May 2017, <i>American Economic Review</i>)	Online	#####
Informing Students of their Potential Ability: Experimental Evidence from Argentina	Argentina	LAC	Alejandro Ganimian	Demand-side intervention, Student motivation/effort, Curriculum		*Updated* Growth Mindset Interventions at Scale: Experimental Evidence from Argentina (July 2020, <i>Educational Evaluation and Policy Analysis</i>)	*New* Online	This is one of the first evaluations of a "growth-mindset" intervention at scale in a developing country. I randomly assigned 202 public secondary schools in Salta, Argentina, to a treatment group in which Grade 12 students were asked to read about the malleability of intelligence, write a letter to a classmate, and post their letters in their classroom, or to a control group. The intervention was implemented as intended. Yet, I find no evidence that it affected students' propensity to find tasks less intimidating, school climate, school performance, achievement, or post-secondary plans. I rule out small effects and find little evidence of heterogeneity. This study suggests that the intervention may be more challenging to replicate and scale than anticipated.
Leading school recovery from COVID-19	India	South Asia	Ketki Sheth, Lee Crawford, Todd Pugatch	Governance			Online	

Evaluation	Country	Region	Researchers	Priority Areas / Cross-Cutting Themes	Working Paper	Published Paper	J-PAL Evaluation Summary Link	Paper abstract
Learning Beyond School: Another Chance for Out of School Adolescent Girls	Pakistan	South Asia	Adrienne Lucas, Sabrin Beg	Gender, Marginalized populations			Online	
Learning to See a World of Opportunities	Colombia	LAC	Nava Ashraf, Gharad Bryan, Alexia Delfino, Leonardo Iacovone, Emily Holmes, Ashley Pople	Curriculum, Pedagogy, Marginalized populations	Learning to see the world's opportunities: The impact of imagery on entrepreneurial success (May 2022) *New* Learning to See the World's Opportunities: Memory, Mental Experiencing, and the Economic Lives of the Vulnerable (September 2024)		Online	Recent work in neuroscience and psychology has underscored the impact of visualizing future scenarios on decision making, via mental simulation, emotional amplification, and consolidation of memory. We show evidence of the path and importance of imagery-based decision making for the vital economic activity of entrepreneurship. We also highlight that the use and impact of this ability is highly heterogeneous depending on people's life experiences, and it has the potential to benefit vulnerable populations the most. First, using a data set of roughly 2,000 would-be entrepreneurs in Colombia, we show that measures of imagery use correlate strongly and positively with economic outcomes. Second, we design a training curriculum to teach visualization skills, and test it using a randomized control trial in which the same entrepreneurs were given access to either the imagery-based entrepreneurial training program, a placebo program of traditional business skills training, or no program at all. In follow-up surveys conducted 8 and 14 months after the intervention, those who participated in the imagery training demonstrated a strengthened capacity for using visualization and significantly improved economic outcomes compared to the placebo. For individuals with high levels of baseline trauma, imagery addresses their deficit in positive imagery. Women in the imagery training improve along all margins compared to men, and are negatively impacted by traditional business training. Improved entrepreneurial outcomes appear to be driven by enhanced ability to obtain credit, build savings, and undertake creative marketing with
Leveraging Technology to Increase Student Effort and Improve Learning Outcomes: Incentives for Student Effort	India	South Asia	Sarojini R. Hirshleifer, Karthik Muralidharan (advisor)	Education technology, Demand-side intervention, Curriculum	Incentives for Effort or Outputs? A Field Experiment to Improve Student Performance (October 2021)		Online	This randomized experiment implemented with school children in India directly tests an input incentive designed to increase effort on learning activities against both an output incentive that rewards test performance and a control. Students in the input incentive treatment perform .58σ better than those in the control, and .34σ better than students in the output incentive treatment. Thus, the input incentive is approximately twice as cost-effective as the output incentive. The input incentive increases the intensive margin of student effort on the learning activity, and it is particularly effective for students that are present-biased as measured at baseline.

Evaluation	Country	Region	Researchers	Priority Areas / Cross-Cutting Themes	Working Paper	Published Paper	J-PAL Evaluation Summary Link	Paper abstract
Medium-term Impact of Apprenticeship on Youth	Côte d'Ivoire	Africa	Bruno Crépon, Patrick Premand	Vocational/entrepreneurial education	Direct and Indirect Effects of Subsidized Dual Apprenticeships (November 2019)	*New* Direct and Indirect Effects of Subsidized Dual Apprenticeships (October 2024, <i>The Review of Economic Studies</i>)	Online	Traditional apprenticeships based on private arrangements are widespread in developing countries. Public interventions have attempted to address failures in the apprenticeship markets to expand access or improve training quality. Subsidized dual apprenticeships have the potential to address financial constraints for youths and firms' inability to commit to provide general skill training. This paper analyzes the impact of subsidized dual apprenticeships combining on-the-job and theoretical training in Côte d'Ivoire. We set up an experiment that simultaneously randomized whether interested youths were assigned to a formal apprenticeship, and whether apprenticeship positions opened by firms were filled with formal apprentices. We document direct effects for youths and indirect effects for firms, such as whether they substitute between traditional and subsidized apprentices. In the short run, youths increase their human capital investments and we observe a net entry of apprentices into firms. Substitution effects are limited: the intervention creates 0.74 to 0.77 new position per subsidized apprentice. The subsidy offsets forgone labor earnings. Four years after the start of the experiment, treated youths perform more complex tasks and their earnings are higher by 15 percent. We conclude that subsidized dual apprenticeships expand access to training, upgrade skills and improve earnings for youths without crowding out traditional apprentices.

Evaluation	Country	Region	Researchers	Priority Areas / Cross-Cutting Themes	Working Paper	Published Paper	J-PAL Evaluation Summary Link	Paper abstract
Meet Your Future: Job Search Effort and Aspirations of Young Jobseekers	Uganda	Africa	Livia Alfonsi, Mary Namubiru, Sara Spaziani	Vocational/entrepreneurial education	*Updated* Meet Your Future: Experimental Evidence on the Labor Market Effects of Mentors (September 2024)		Online	Can personalized mentorship by experienced workers improve young job seekers' labor market trajectories? To answer this question, we designed and randomized "Meet Your Future", a mentorship program which assisted a subset of 1,112 vocational students during their school- to-work transitions in urban Uganda, where youth unemployment is high. The program improved participants' labor market outcomes. Relative to the control, mentored students were 27% more likely to work three months after graduation; after one year, they earned 18% more. Call transcripts from mentorship sessions and survey data reveal that mentorship primarily improved outcomes through information about entry level jobs and labor market dynamics, and not through job referrals, information about specific vacancies, or through building search capital. Consistent with this finding, mentored students revise downward their overly optimistic beliefs about starting wages and revise upward beliefs about the returns to experience. As a result, they lower their reservation wages and turn down fewer job offers. The results emphasizes the role of distorted beliefs among job seekers in prolonging youth unemployment and proposes a cost effective and scalable policy with an estimated internal rate of return of 300%.
Mitigating Peer Violence and Crime in Post Primary Schools	Turkey	Europe	Elif Kubilay, Sule Alan	Student Motivation, Pedagogy	Empowering Adolescents to Transform Schools: Lessons from a Behavioral Targeting (March 2024)	*New* Empowering Adolescents to Transform Schools: Lessons from a Behavioral Targeting (February 2025, <i>American Economic Review</i>)		We test the effectiveness of a behavioral program grounded in the idea that status granting and self-persuasion might yield a robust behavioral change in disadvantaged adolescents. We enlist socially connected senior middle school students with high emotional intelligence as "student-teachers" and entrust them with delivering a curriculum to their junior peers. The program empowers student-teachers, leading them to improve their social environment. It reduces disciplinary incidents and anti-social behavior among student-teachers and their friendship networks. The intervention significantly enhances the likelihood of admission to selective high schools for student-teachers, offering a cost-effective way to help disadvantaged adolescents escape neighborhood disadvantages.

Evaluation	Country	Region	Researchers	Priority Areas / Cross-Cutting Themes	Working Paper	Published Paper	J-PAL Evaluation Summary Link	Paper abstract
Negotiating a Better Future	Zambia	Africa	Nava Ashraf, Kathleen McGinn, Remmy Mukonka, Corrine Low	Demand-side intervention, Curriculum, Gender	Negotiating a Better Future: How Interpersonal Skills Facilitate Intergenerational Investment (May 2019)	Negotiating a Better Future: How Interpersonal Skills Facilitate Intergenerational Investment (May 2020, <i>The Quarterly Journal of Economics</i>)	Online	Using a randomized controlled trial, we study whether a negotiation skills training can improve girls' educational outcomes in a low-resource environment. We find that a negotiation training given to eighth-grade Zambian girls significantly improved educational outcomes over the next three years, and these effects did not fade out. To better understand mechanisms, we estimate the effects of two alternative treatments. Negotiation had much stronger effects than an informational treatment, which had no effect. A treatment designed to have more traditional girls' empowerment effects had directionally positive but insignificant educational effects. Relative to this treatment, negotiation increased enrollment in higher-quality schooling and had larger effects for high-ability girls. These findings are consistent with a model in which negotiation allows girls to resolve incomplete contracting problems with their parents, yielding increased educational investment for those who experience sufficiently high returns. We provide evidence for this channel through a lab-in-the-field game and follow-up survey with girls and their guardians.
Not Informed, Not Allowed, or not Wanted? Understanding Supply and Demand-side Constraints to Vocational Training and Post-Placement Tenure for India's Young Rural Females on Project	India	South Asia	Rohini Pande, Soledad Artiz Prillaman (Harvard), Charity Troyer Moore (Harvard/EPoD)	Vocational/entrepreneurial education, Demand-side intervention, Gender	What Constrains Young Indian Women's Labor Force Participation? Evidence from a Survey of Vocational Trainees (January 2017)			How do young men and women fare under India's vocational (skills) training and job placement programs, and what constrains their subsequent job take-up and retention? Evidence for Policy Design (EPoD) partnered with a large, government-funded skills training and job placement program to survey 2,610 former vocational trainees in 2016. We find a large male-favored gender gap in job placement: at 85%, young men are 13% points more likely than young women to receive a job offer. Young men are also 26% points more likely to accept jobs (with rates at 70% for males and 56% for females). We also identify high drop-out rates after vocational training: 74% of respondents who accepted a job after training had left it by the time of the survey (on average, 9 months after completing training), and only 20% of this group that had left their jobs were employed. Furthermore, there are stark gender differences in the reasons trained youth refuse jobs and subsequently drop out of the labor force. For young women, family concerns are the primary reason, while compensation and personal preferences are the primary reasons young men cite for refusing and leaving jobs after vocational training. However, for both young men and women, access to post-migration support is correlated with longer post-placement job tenure.

Evaluation	Country	Region	Researchers	Priority Areas / Cross-Cutting Themes	Working Paper	Published Paper	J-PAL Evaluation Summary Link	Paper abstract
Parent Child Preferences and School Choice: Evidence from Kenyan Schools	Kenya	Africa	Edward Miguel, Stephanie Bonds	Student motivation/effort	*Updated* Information, Student-Parent Communication, and Secondary School Choice: Experimental Evidence from Kenya (April 2023)		Online	Secondary school dropout rates are high in low-income countries, and information gaps about school characteristics may be an important contributing factor. If school choices are made with imperfect information, households may choose schools that are too expensive, not a good fit academically, or too costly to commute to, increasing the likelihood of the students dropping out. These information gaps may be further exacerbated when students and parents fail to communicate before making high stakes schooling decisions. I study the importance of these information and communication gaps in the transition from primary to secondary school using a field experiment with 3,000 Kenyan students and their parents. The intervention consisted of an informational meeting for 8th graders before they applied to secondary school, and randomly varied whether the parent participated in the meeting for a facilitated conversation with the student. I find that informational meetings with students led them to apply to more commutable schools without compromising school quality. Moreover, including the parents in these meetings improved parental knowledge about costs and led to better alignment of school preferences between the students and their parents. This ultimately led students to enroll in lower cost schools, which could generate meaningful savings.
Post-Training Assistance in Skills Development Programs	India	South Asia	Jeremy Magruder, Gaurav Chiplunkar	Vocational/entrepreneurial education			Online	
Pricing of Private Education in Urban India: Demand, Use, and Impact	India	South Asia	James Berry, Priya Mukherjee	Private schools, Student motivation/effort, Gender	Pricing Private Education in Urban India: Demand, Use and Impact (February 2019)		Online	Private education services—including both private schools and after-school tutoring—forms a substantial part of the education sector in the developing world. We conduct a field experiment to study the role of prices in the market for tutoring in Delhi's slums. Using a two-part pricing design, we identify whether higher willingness to pay is associated with higher attendance in tutoring classes and whether prices have causal impacts on attendance and dropout. We find that higher willingness to pay is associated with higher attendance, but that lower prices reduce dropout. Using assigned prices as instruments for take-up of the classes, we find no evidence that tutoring impacts average test scores.

Evaluation	Country	Region	Researchers	Priority Areas / Cross-Cutting Themes	Working Paper	Published Paper	J-PAL Evaluation Summary Link	Paper abstract
Pygmalion Effect & Education Networks: Evidence from Public Schools in Pakistan	Pakistan	South Asia	Minahil Asim, Ronak R Jain, Vatsal Khandelwal	Student Motivation/Effort, Marginalized Populations, Curriculum, Pedagogy, Governance	*New* Great Expectations? Experimental Evidence from Schools in Pakistan (September 2024)			We study the effect of communicating student-specific teacher expectations on academic performance. We randomize whether students (a) receive high-performance expectations, (b) are additionally paired with a classmate for encouragement, (c) receive information about past performance, or (d) receive no message. Expectations increase math scores by 0.19σ , with especially large effects among students who randomly received ambitious expectations and were predicted to perform poorly. Information provision has comparably large effects (0.16σ), particularly in schools with low parental literacy. However, pairing students only improves scores when peers have similar characteristics. Our findings highlight low-cost, sustainable ways of leveraging teachers to improve performance.
Returns to Post-Primary Education in Peru	Peru	LAC	Francisco Gallego, Christopher Neilson, Oswaldo Molina	Student motivation/effort, Demand-side intervention			Online	
Returns to Secondary Education: Unpacking the Delivery of Secondary Schooling in Ghana	Ghana	Africa	Elizabeth Spelke, Esther Duflo, Mark Walsh, Pascaline Dupas	Vocational/Entrepreneurial education, Curriculum	*New* The Impact of Secondary School Subsidies on Career Trajectories in a Dual Labor Market: Experimental Evidence from Ghana (Nov 2023)		*New* Online	In 2008, we randomly awarded secondary school scholarships among 2,064 Ghanaian youths. This paper leverages 15 years of follow-up data to assess how free secondary education shapes early career trajectories. Winning a scholarship increases the probability of secondary school graduation from 45% to 73%, and increases knowledge and skills. However, the labor market entry of secondary school graduates is gradual, as they repeatedly attempt to qualify for tertiary programs that are gateways for government jobs. The scholarship doubles the probability of completing tertiary for women, but leaves it unchanged for men. There are no labor market impacts for men at any point. In contrast, earnings gains of around 24% arise in 2020 and grow to 30% in 2023 for female scholarship recipients, who are twice as likely as non-recipients to have a government job. We use a simple Harris-Todaro style model of a dual labor market with credit constraints to (a) explain the gendered impacts and (b) discuss the impact that generalized free secondary education would be expected to have in general equilibrium, under different regimes of hiring in the government sector

Evaluation	Country	Region	Researchers	Priority Areas / Cross-Cutting Themes	Working Paper	Published Paper	J-PAL Evaluation Summary Link	Paper abstract
Scalable Low-technology Interventions to Track and Minimize Learning Loss during the COVID-19 Pandemic	Botswana	Africa	Peter Bergman, Noam Angrist	Pedagogy, Education technology, Teacher selection/development, Student motivation/effort, Gender, Marginalized populations	Stemming Learning Loss During the Pandemic: A Rapid Randomized Trial of a Low-Tech Intervention in Botswana (August 2020) School's Out: Experimental Evidence on Limiting Learning Loss Using "Low-Tech" in a Pandemic (November 2020)	Experimental evidence on learning using low-tech when school is out (June 2022, <i>Nature Human Behavior</i>)	Online	The COVID-19 pandemic closed schools at one point for over 1.6 billion children, with potentially long-term consequences. This paper provides some of the first experimental evidence on strategies to minimize the fallout of the pandemic on learning. We evaluate two low-technology interventions to substitute schooling during this period: SMS text messages and direct phone calls. We conduct a rapid trial in Botswana to inform real-time policy responses, collecting data in multiple waves. We find that phone calls and SMS messages result in cost-effective learning gains of 0.12 standard deviations. We cross-randomize targeted instruction, customizing instruction to a child's learning level using data collected during the trial. We find evidence that targeted instruction can be more effective than non-targeted instruction, especially for SMS messages which have no effect on their own if they are not targeted. Learning gains are robust to a variety of tests, such as randomized problems of the same proficiency and measures of effort on the test. Parents update their beliefs about their child's learning in tandem with progress and they feel greater self-efficacy to support their child's learning. The "low-tech" interventions tested have immediate policy relevance and could have long-run implications for the role of technology and parents as substitutes or complements to the traditional education system.
SMS-Based School-Parents Communication Technology	Chile	LAC	Claudia Martínez A., Taryn Dinkelman	Demand-side intervention, Education technology, Student motivation/effort	Reducing Parent-School Information Gaps and Improving Education Outcomes: Evidence from High Frequency Text Messages (November 2021)		Online	We conducted an experiment in low-income urban schools in Chile to test the effects and behavioral changes triggered by a program that sends attendance, grade, and classroom behavior information to parents via weekly and monthly text messages. Our 18-month intervention raised average math scores by 0.09 of a standard deviation and increased the share of students satisfying attendance requirements for grade promotion by 4.7 percentage points. Treatment effects were larger for students at higher risk of later grade retention and dropout. Our results demonstrate that communicating existing school information to parents frequently can shrink parent-school information gaps and improve school outcomes in a light-touch, scalable, and cost-effective way.

Evaluation	Country	Region	Researchers	Priority Areas / Cross-Cutting Themes	Working Paper	Published Paper	J-PAL Evaluation Summary Link	Paper abstract
Soft versus Hard Skills in Entrepreneurial Success: Evidence from Post-Secondary Entrepreneurship Training Interventions in Uganda	Uganda	Africa	Paul Gertler, Dana Carney	Vocational/entrepreneurial education, Curriculum	Making Entrepreneurs: Returns to Training Youth in Hard Versus Soft Business Skills (May 2021)		Online	We study the medium-term impacts of the Skills for Effective Entrepreneurship Development (SEED) program, an innovative in-residence 3-week mini-MBA program for high school students modeled after western business school curricula and adapted to the Ugandan context. The program featured two separate treatments: the hard-skills MBA features a mix of approximately 75% hard skills and 25% soft skills; the soft skills curriculum has the reverse mix. Using data on 4400 youth from a nationally representative sample in a 3-arm field experiment in Uganda, the 3.5 year follow-up demonstrated that training was effective in improving both hard and soft skills, but only soft skills were directly linked to improvements in self-efficacy, persuasion, and negotiation. The skill upgrade was rewarded in substantially higher earnings; 32.1% and 29.8% increases in earnings for those who attended hard- and soft-training, respectively, most of which, was generated through self-employment. Furthermore, youth in both groups were more likely to start enterprises and more successful in ensuring their businesses' survival. The program led to significantly larger profits (24.2% and 27.2% for hard- and soft- treatment arms respectively) and larger business capital investments (38.4% and 32.6% for SEED hard and SEED soft, respectively). Both SEED curricula were very cost-effective; two months worth of the extra earnings caused by the training alone would exceed the cost of the program. These benefits abstract from the job- and business-creation benefits of the program, which were substantial: relative to the control group. SEED entrepreneurs

Evaluation	Country	Region	Researchers	Priority Areas / Cross-Cutting Themes	Working Paper	Published Paper	J-PAL Evaluation Summary Link	Paper abstract
Solar-powered Videos, Integrated Textbooks and the Elasticity of Human Capital to Financial Incentives: Evidence from a Randomized Evaluation in Tanzania	Tanzania	Africa	Hee Kwon Seo	Governance, Demand-side intervention	Do School Electrification and Provision of Digital Media Deliver Educational Benefits? (September 2017)		Online	This paper reports results from a one-year pilot study that evaluated impacts of partial school electrification and provisions of language-varied educational videos on achievements of O-level (11th-grade) students in northern Tanzania. The GivePower school program randomized 164 schools into six groups: G1 schools received two 0.12 kWh solar home systems including lights and TVs ("facilities"); G2, solar facilities and English videos; G3, solar facilities and bilingual videos; G4, English videos only; G5, bilingual videos only; and control schools. Solar facilities provided lights to 20% of classrooms and offices in recipient schools on average. Videos included two sets: one set, solving past 10 years of biology and geography exams; another set, encouraging self-esteem, habit formation, future orientation and other cognitive-behavioral character traits. After one year, the treatments did not produce significant achievement gains, although G2 schools (solar and English videos) reported large and significant increases in video-based instruction hours, and G3 schools (solar and Bilingual videos) suggested the highest test score gains. I estimate the impact of solar-facilities-enabled programs, averaged across video-provision status, to be 0.05 σ on O-level test scores and 2.8 percentage points (pp) on pass rates, and rule out impacts larger than 0.13 σ and 6.7 pp in the first year. Second year results are expected to be announced in 2018.
Solid Foundations and the Transition to Post-Primary School	Uganda	Africa	Jason Kerwin, Rebecca Thornton, Victoria Brown	Curriculum, Pedagogy, Teacher Selection/Development	*New* The Impact of Teacher Effectiveness on Student Learning in Africa (April 2017) *New* Reading for Life: Lasting Impacts of a Literacy Intervention in Uganda (May 2023)	*New* Making the Grade: The Sensitivity of Education Program Effectiveness to Input Choices and Outcome Measures (May 2021, <i>The Review of Economics and Statistics</i>).		The literature provides several examples of programs that affect educational outcomes in developing country contexts in the short run, but evidence of long-run effects remains scarce. We study the Northern Uganda Literacy Project (NULP)—an early grade reading intervention for children in grades one to three with large short-term impacts (1.3 SD in Leblango and 0.7 SD in English). We follow students eight years after the program began (and five years after it ended) and find 55% of the effect remains in Leblango and 79% remains in English. These effects represent 4.4 extra years of Leblango learning and 1.5 extra years of English learning compared to the control group. We find no spillover effects on math or sexual behavior. The control group exhibits dismal grade progression and retention both before and during the COVID-19 pandemic. While the NULP had no impact on attendance or remaining in school, it modestly improved grade progression.

Evaluation	Country	Region	Researchers	Priority Areas / Cross-Cutting Themes	Working Paper	Published Paper	J-PAL Evaluation Summary Link	Paper abstract
Stimulating Curiosity in the Classroom: A Randomized Educational Intervention in Turkey	Turkey	MENA	Sule Alan	Student motivation/effort, Pedagogy, Demand-side intervention	Nurturing Childhood Curiosity to Enhance Learning: Evidence from a Randomized Pedagogical Intervention (January 2023)	*New* Nurturing Childhood Curiosity to Enhance Learning: Evidence from a Randomized Pedagogical Intervention (April 2024)	*New* Online	We evaluate a pedagogical intervention that aims to improve the learning quality of elementary school children by nurturing their curiosity. The pedagogy, aimed primarily at science teaching, was practiced by children's teachers for an entire academic year. We test the effectiveness of this pedagogy using objective test scores and a novel measure of curiosity. Our curiosity measure involves first creating a sense of information deprivation, then quantifying the urge to acquire information and the ability to retain information. We find that the intervention increases curiosity, the ability to retain knowledge, and science test scores. The intervention also makes friendship networks a potent tool to disseminate knowledge within classrooms. Our research design establishes the causal link between the urge to know and deep learning. The evidence can help design better pedagogical tools to increase pupil and teacher engagement and the quality of learning worldwide.
Street Smart or School Smart?	India	South Asia	Abhijit Banerjee, Esther Duflo, Elizabeth Spelke, Alejandro Ganimian	Curriculum, Vocational/entrepreneurial education	The Untapped Math Skills of Working Children in India: Evidence, Possible Explanations, and Implications (August 2017)	*New* Children's arithmetic skills do not transfer between applied and academic mathematics (February 2025, Nature)		It has been widely documented that many children in India lack basic arithmetic skills, as measured by their capacity to solve subtraction and division problems. We surveyed children working in informal markets in Kolkata, West Bengal, and confirmed that most were unable to solve arithmetic problems as typically presented in school. However, we also found that they were able to perform similar operations when framed as market transactions. This discrepancy was not explained by children's ability to memorize prices and quantities in market transactions, assistance from others at their shops, reliance on calculation aids, or reading and writing skills. In fact, many children could solve hypothetical transactions of goods that they did not sell. Our results suggest that these children have arithmetic skills that are untapped by the school system.
Structured Study Time, Self-efficacy, and Tutoring	USA	North America	Esther Duflo, Abhijit Banerjee	Student motivation/effort, Pedagogy, Education technology			Online	

Evaluation	Country	Region	Researchers	Priority Areas / Cross-Cutting Themes	Working Paper	Published Paper	J-PAL Evaluation Summary Link	Paper abstract
STRYDE: Soft skills training in Tanzania	Tanzania	Africa	Annekathrin Schoofs, Margherita Calderone, Nathan Fiala, Rachel Steinacher	Vocational/Entrepreneurial education, Education technology	*New* Making Intense Skills Training Work at Scale: Evidence on Business and Labor Market Outcomes in Tanzania			Improving youth labor market outcomes is a primary concern for countries around the world. We conduct a randomized controlled trial in Tanzania on an intense gender-sensitive skills training program that worked with over 53,000 youth in the region. After two years, we find the program increased women's economic outcomes, including income, savings, as well as engagement in the labor market, and quality of jobs for all participants. We find no significant effects on economic outcomes for male participants. We also find significant effects on hard skills for both women and men and soft skills for women in terms of self-awareness and confidence. In a cross-experiment with micro-grants, we find smaller but economically significant effects on all outcomes for both genders. From a monetary perspective the training program is very cost-effective, paying for itself within 32 months when targeting both women and men.
Targeted Teaching to Improve Learning in Secondary School	India	South Asia	Sabrin Beg, Anne Fitzpatrick, Jason Kerwin, Adrienne M. Lucas, and Khandker Wahedur Rahman	Pedagogy	Teacher Flexibility and School Productivity: Remedial Secondary Education in India (January 2023) *New* When Given Discretion Teachers Did Not Shirk: Evidence from Remedial Education in Secondary Schools (December 2024)		Online	Public education in developing countries is often deficient, leading to increasing learning deficits as students age. A trade-off exists between ensuring uniformly high standards and introducing reforms that allow teachers flexibility. Through a 300 school RCT in Odisha, India, we compare the effects on Class 9 students of T1) rigidly defined remedial lessons that take time away from the curriculum, T2) teacher determined remedial lessons, or T3) control. Both interventions increased students test scores 0.11SD, about 60 percent of a year of learning, with gains throughout the learning distribution. The quality of implementation was high in both arms. Few teachers took advantage of the flexibility offered and defaulted into the regimented version.

Evaluation	Country	Region	Researchers	Priority Areas / Cross-Cutting Themes	Working Paper	Published Paper	J-PAL Evaluation Summary Link	Paper abstract
Targeting & Incentives in Ghana's National Apprenticeship Program	Ghana	Africa	Isaac Mbiti, Morgan Hardy, Jamie McCasland	Teacher selection/development, Pedagogy, Education technology	<p>*Updated* The Apprenticeship-to-Work Transition: Experimental Evidence from Ghana (May 2019)</p> <p>Are small firms labor constrained? Experimental evidence from Ghana (March 2022)</p> <p>Can Financial Incentives to Firms Improve Apprentice Training? Experimental Evidence from Ghana (June 2023)</p>	<p>*New* Are Small Firms Labor Constrained? Experimental Evidence from Ghana (April 2023, American Economic Journal: Applied Economics)</p> <p>*New* Can Financial Incentives to Firms Improve Apprenticeship Training? Experimental Evidence from Ghana (March 2024, American Economic Review: Insights)</p>	Online	This paper examines the effects of a government-sponsored apprenticeship training program designed to address high levels of youth unemployment in Ghana. The study exploits randomized access to the program to examine the short-run effects of apprenticeship training on labor market outcomes. The results show that apprenticeships shift youth out of wage work and into self-employment. However, the loss of wage income is not offset by increases in self-employment profits in the short run. In addition, the study uses the randomized match between apprentices and training providers to examine the causal effect of characteristics of trainers on outcomes for apprentices. Participants who trained with the most experienced trainers or the most profitable ones had higher earnings. These increases more than offset the program's negative treatment effect on earnings. This suggests that training programs can be made more effective through better recruitment of trainers.
Teacher Training to Transform Classrooms, Teachers and Communities in Uganda	Uganda	Africa	Nava Ashraf, Abhijit Banerjee, Vesall Nourani	Pedagogy, Demand-side intervention, Curriculum	<p>*Updated* Learning to Teach by Learning to Learn (February 2025)</p>		Online	Massive learning gaps persist in most developing countries, undermining rapid gains in school attendance. While a pedagogy based on rote learning of facts is often cited as a factor for limited school effectiveness, evidence of success of introducing new pedagogies to teachers is scarce. Indeed, most in-service teacher interventions evaluated in the literature have been ineffective. In this paper, we report on the randomized evaluation in Uganda of an intervention in which teachers were trained in a "learning how to learn" approach. The curriculum, called Preparation for Social Action, trained teachers to teach students to learn like scientists: posing sharp questions, framing specific hypotheses, using evidence and data gathered from everyday life whenever possible. We find evidence that the approach was adopted in class, with dramatic effects on learning: The intervention raised the pass rate in the national exam that determines progression from elementary to secondary school from 51% to 75%, which places the program in the top five percentile of all rigorously evaluated education interventions in terms of learning-adjusted years of schooling per USD.

Evaluation	Country	Region	Researchers	Priority Areas / Cross-Cutting Themes	Working Paper	Published Paper	J-PAL Evaluation Summary Link	Paper abstract
The Impact of Mentoring and Life Skills Training	India	South Asia	Eric Edmonds, Jessica Leight, Maheshwar Shrestha, Benjamin Feigenberg	Private schools; Demand-Side Interventions to Reach Disadvantaged Populations	Advancing the Agency of Adolescent Girls (May 2021)	*New* Advancing the Agency of Adolescent Girls (July 2023, <i>The Review of Economics and Statistics</i>)	Online	More than 98 million adolescent girls are not in school. Can girls influence their schooling without changes in their family's economic environment? In Rajasthan, India, we examine the impact of a school-based life skills program that seeks to address low aspirations, narrow societal roles for girls and women, restricted networks of social support, and limited decision-making power. We find the intervention causes a 25 percent decline in school dropout that persists from seventh grade through the transition to high school. Improvements in socio-emotional support among girls exposed to the intervention seem especially important in their decision to stay in school.
The Impact of School Fee Loans on Educational Outcomes in Uganda	Uganda	Africa	Catherine Wolfram, Paul Gertler, Brett Green	Private schools, Demand-side intervention	Digital Collateral (July 2023)	*New* Digital Collateral (August 2024, <i>The Quarterly Journal of Economics</i>)	Online	A new form of secured lending utilizing "digital collateral" has recently emerged, most prominently in low and middle income countries. Digital collateral relies on "lockout" technology, which allows the lender to temporarily disable the flow value of the collateral to the borrower without physically repossessing it. We explore this new form of credit both in a model and in a field experiment using school-fee loans digitally secured with a solar home system. We find that securing a loan with digital collateral drastically reduces default rates (by 19 pp) and increases the lender's rate of return (by 38 pp). Employing a variant of the Karlan and Zinman (2009) methodology, we decompose the total effect and find that roughly one-third is attributable to (ex-ante) adverse selection and two-thirds is attributable to (interim or ex-post) moral hazard. Access to a school-fee loan significantly increases school enrollment and school-related expenditures without detrimental effects to households' balance sheet.

Evaluation	Country	Region	Researchers	Priority Areas / Cross-Cutting Themes	Working Paper	Published Paper	J-PAL Evaluation Summary Link	Paper abstract
The Impacts of Automated Essay Scoring on Writing Skills and Access to College	Brazil	LAC	Bruno Ferman	Education technology, Pedagogy	Artificial Intelligence, Teacher Tasks and Individualized Pedagogy (March 2021)		Online	<p>This paper investigates how educational technologies that use different combinations of artificial and human intelligence are incorporated into classroom instruction, and how they ultimately affect learning.</p> <p>We conducted a field experiment in Brazil to study two technologies that allow teachers to outsource grading and feedback tasks on writing practices for a national post-secondary admission exam. The first technology provides instantaneous grades and feedback using only artificial intelligence. The second uses human graders as an additional resource to enhance grading and feedback quality in aspects in which artificial intelligence arguably falls short. Both technologies significantly improved students' essay scores, and the addition of human graders did not improve effectiveness in spite of increasing perceived feedback quality. Both technologies also similarly helped teachers engage more frequently on personal discussions on essay quality with their students. Taken together, these results indicate that teachers' task composition shifted towards nonroutine activities and this helped circumvent some of the limitations of artificial intelligence. We present evidence that this happened without increases in teachers' workload. Our results illustrate a setting where artificial intelligence had first-</p> <p>We study the impact of the COVID-19 pandemic and associated school closure on primary school children's learning and mental wellbeing in Assam, India. Using a comprehensive dataset that tracked and repeatedly surveyed approximately 5000 children across 200 schools between 2018 and 2022, we find that children lost the equivalent of nine months of learning in mathematics and eleven months in language, during the pandemic. Children lacking resources and parental support experienced the largest losses. Regular practice, teacher interaction, and technology were associated with less learning loss. Over the same period, children's psychological wellbeing improved. Our research provides valuable insights for designing post-emergency programs.</p>
The role of community mobilization during the pandemic in India	India	South Asia	Andrea Guariso, Martina Björkman Nyqvist	Remedial education/Academic recovery, Gender, Pedagogy		*New* The impact of the COVID-19 pandemic on children's learning and wellbeing: Evidence from India (September 2023, Journal of Development Economics)		<p>We study the impact of the COVID-19 pandemic and associated school closure on primary school children's learning and mental wellbeing in Assam, India. Using a comprehensive dataset that tracked and repeatedly surveyed approximately 5000 children across 200 schools between 2018 and 2022, we find that children lost the equivalent of nine months of learning in mathematics and eleven months in language, during the pandemic. Children lacking resources and parental support experienced the largest losses. Regular practice, teacher interaction, and technology were associated with less learning loss. Over the same period, children's psychological wellbeing improved. Our research provides valuable insights for designing post-emergency programs.</p>

Evaluation	Country	Region	Researchers	Priority Areas / Cross-Cutting Themes	Working Paper	Published Paper	J-PAL Evaluation Summary Link	Paper abstract
TOP: Tutoring Online Project During the Coronavirus Emergency in Italy	Italy	Europe	Eliana La Ferrara, Michela Carlana	Demand-side intervention, Student motivation/effort, Marginalized populations	Apart but Connected: Online Tutoring and Student Outcomes during the COVID-19 Pandemic (February 2021) *New* Italy: Tutoring Online Program (TOP): A Successful Global Experience (September 2023)		Online	In response to the COVID-19 outbreak, the governments of most countries ordered the closure of schools, potentially exacerbating existing learning gaps. This paper evaluates the effectiveness of an intervention implemented in Italian middle schools that provides free individual tutoring online to disadvantaged students during lock-down. Tutors are university students who volunteer for at least 3 hours per week. They were randomly assigned to middle school students, from a list of potential beneficiaries compiled by school principals. Using original survey data collected from students, parents, teachers and tutors, we find that the program substantially increased students' academic performance (by 0.26 SD on average) and that it significantly improved their socio-emotional skills, aspirations, and psychological well-being. Effects are stronger for children from lower socioeconomic status and, in the case of psychological well-being, for immigrant children.
Unintended Consequences of Youth Entrepreneurship Programs: Experimental Evidence from Rwanda (October 2023)	Rwanda	Africa	Moussa Blimpo, Todd Pugatch	Curriculum, Pedagogy, Teacher selection/development	Unintended Consequences of Youth Entrepreneurship Programs: Experimental Evidence from Rwanda (October 2023)	Entrepreneurship Education and Teacher Training in Rwanda (March 2021), Journal of Development Economics	Online	We assess, via a field experiment, how a comprehensive teacher training program affects the delivery of a major entrepreneurship curriculum reform in Rwanda. The reform introduced interactive pedagogy and a focus on business skills in the country's required upper secondary entrepreneurship course. We randomly split a sample of 207 schools into treatment and control. Both groups received the government's standard training. In addition, the treatment group was assigned intensive training organized by an NGO for two years. The training consisted of (i) six training sessions during school breaks, ii) exchange visits each term where teachers provided feedback to their peers, and (iii) outreach and support from NGO staff at least twice per year. The control group received only the default government training, which was not specific to entrepreneurship and lacked each of these elements. The program increased teachers' use of active instruction, consistent with the reform's features. These effects on pedagogy did not translate into improvements in student academic outcomes or skills. While still in secondary school, treated students increased participation in their own businesses by 5 percentage points, or 17% of the control mean. Wage employment (at others' firms) declined by a commensurate amount in response to treatment, leaving no effect on overall income. These results suggest substitution between entrepreneurship and employment among students in treated schools.

Evaluation	Country	Region	Researchers	Priority Areas / Cross-Cutting Themes	Working Paper	Published Paper	J-PAL Evaluation Summary Link	Paper abstract
What about the parents? Designing Post-primary Policies that Encourage Parent Investment	Malawi	Africa	Rebecca Dizon-Ross, James Berry, Maulik Jagnani	Demand-side intervention	*Updated* Not Playing Favorites: An Experiment on Parental Fairness Preferences (February 2020; Forthcoming in the American Economic Journal) Using Randomized Information Shocks to Understand How Parents' Investments Depend on Their Children's Ability (April 2022)	Parents' Beliefs about Their Children's Academic Ability: Implications for Educational Investments (August 2019, American Economic Review)	Online	Schools worldwide distribute information to parents about their children's academic performance. Do frictions prevent parents, particularly low-income parents, from accessing this information to make decisions? A field experiment in Malawi shows that, at baseline, parents' beliefs about their children's academic performance are often inaccurate. Providing parents with clear, digestible performance information causes them to update their beliefs and adjust their investments: they increase the school enrollment of their higher-performing children, decrease the enrollment of lower-performing children, and choose educational inputs that are more closely matched to their children's academic level. Heterogeneity analysis suggests information frictions are worse among the poor.
What is it about Mindset?	Brazil	LAC	David Yeager, Eric Bettinger, Guilherme Lichand, Mari Rege	Demand-Side Intervention, Student Motivation/Effort, Education Technology, Curriculum		*New* Measuring student mindsets at scale in resource-constrained settings: A toolkit with an application to Brazil during the pandemic (August 2024, Journal of Research on Adolescence)		Mounting evidence that growth mindset—the belief that intelligence is not fixed and can be developed—improves educational outcomes has spurred additional interest in how to measure and promote it in other contexts. Most of this research, however, focuses on high-income countries, where the most common protocols for measuring and intervening on student mindsets rely on connected devices—often unavailable in low- and middle-income countries' schools. This paper develops a toolkit to measure student mindsets in resource-constrained settings, specifically in the context of Brazilian secondary public schools. Concretely, we convert the computer-based survey instruments into text messages (SMS). Collecting mindset survey data from 3570 students in São Paulo State as schools gradually reopened in early 2021, we validate our methodology by matching key patterns in our data to previous findings in the literature. We also train a machine learning model on our data and show that it can (1) accurately classify students' SMS responses, (2) accurately classify student mindsets even based on text written in other media, and (3) rate the fidelity of different interventions to the published growth mindset curricula.