

Doubling the Reach: How the Education Innovation and Research Program Improved Learning for 50,000 Students



Introduction

Improving K–12 education is vital to our nation's economic mobility and social well-being. Nationally, only 34% of 8th grade students are [proficient](#) in reading, math, and science, while 15% of students fail to [graduate](#) high school on time.

The numbers are even lower for students of color. Only 22% of Latino and 15% of African–American 8th grade students are [proficient](#) in reading, with slightly lower proficiency rates in [math](#) and [science](#). The high school graduation rate for African–American and Latino students mirrors this trend, with approximately 20% failing to [graduate](#) on time.

Luckily, a growing number of local, state, and federal government agencies are investing taxpayer dollars in evidence–based solutions. According to Results for America's [2019 Invest in What Works Standard of Excellence](#), 35 of the largest federal social services programs – including the Education and Innovation Research (EIR) program and the Replication and Expansion of High–Quality Charter Schools program – prioritized evidence of effectiveness in some way when allocating grant dollars.

An increasing number of elementary and secondary schools are using federal funds like these to implement evidence–based approaches. Since 2010, EIR (and its predecessor, the i3 program) has shifted more than \$1.95 billion dollars toward what works in education. For example, a \$50 million scale–up grant in FY10 made it possible for KIPP public charter schools, which are organized around an evidence–based model, to double the number of students it served, from 28,000 in 2010 to over 80,000 in 2016.

This evidence of impact and success positioned KIPP to successfully win over \$218 million from 2010–2018 from the U.S. Department of Education's Replication and Expansion of High–Quality Charter Schools program, which helps charter school management organizations open or expand one or more high–quality charter schools.

The Impact Snapshot below tells the story of how the evidence definitions and tiered–evidence funding framework within the federal grant programs described above helped improve student outcomes by shifting increasing amounts of federal taxpayer funds toward evidence–based solutions like KIPP's.

Knowledge is Power Program (KIPP)

[KIPP is a national nonprofit organization that operates pre-K through 12th grade public charter schools grounded](#) in five core principles: high expectations, choice and commitment, increased instructional time, power to lead, and focus on results.

During the 2019–2020 school year, KIPP [operated](#) 242 schools that serve over 100,000 [students](#) in 28 [regions](#) across the country. Eighty-eight percent of KIPP students are eligible for free or reduced price lunch, 95 percent are Black or Latino, 17 percent are English learners, and 11 percent receive special education services. KIPP increased its reach and impact on students over the last 10 years by grounding its whole school model in data and evidence and evaluating whether it was achieving its intended results.

Since 2010, numerous [studies](#), including three randomized controlled trials (RCTs), have evaluated the effectiveness of the KIPP public charter school model on student outcomes. An independent [summary](#) of the most rigorous RCTs found that they produce sizable, statistically significant effects on reading and math achievement with "increases of between 5 and 10 percentile points (compared to the control group) as measured two to three years after random assignment." One RCT also found that KIPP middle schools 6 percentage point impact on four-year college enrollment.

The first rigorous, independent [evaluation of 22 KIPP middle schools](#),¹ conducted in 2010, found that KIPP produced positive, statistically significant, and substantial impacts on student achievement in reading and math all four years after students first entered KIPP. More specifically, by year three of the study, half of KIPP schools in the sample:

- Produced math impacts of 0.48 standard deviations or more, equivalent to the effect of moving a student from the 30th percentile to the 48th percentile on a typical test distribution, representing 1.2 years of accumulated extra growth over the three year period; and
- Showed three-year reading effects of 0.28 standard deviations or more, representing an estimated 0.9 years of additional instruction, or about one-third of the black-white gap in reading achievement in fourth grade and eighth grade.

Education Innovation and Research (EIR) Grant Program

The Predecessor: Investing in Innovation (i3) Fund

The *American Recovery and Reinvestment Act of 2009* created the [Investing in Innovation Fund](#) (i3) program based on the thesis that ED wanted to incentivize innovation in the

¹ This study was a comparison group study where the treatment group self-selected into KIPP and the comparison group did not. As such, the study cannot entirely rule out the possibility that the better outcomes observed for the treatment group were due, in part, to the stronger family support and motivation that led to selecting into KIPP.

education space, but also wanted to attenuate the government's risk to the potential award. Hence, it created a tiered framework under which the amount of an award was linked to the prior evidence underlying the proposed project. The i3 program was funded at the following levels from FY10–FY16:

Fiscal Year	Appropriation	Total # New Awards	Scale-Up	Validation	Development
FY16	\$102,875,168	15	2	3	10
FY15	\$123,057,474	14	3	4	7
FY14	\$128,960,723	26	1	4	21
FY13	\$135,448,231	25	0	7	18
FY12	\$143,202,997	20	0	8	12
FY11	\$148,064,455	23	1	5	17
FY10	\$645,978,395	49	4	15	30

The i3 program defined three levels of evidence and allocated the following three types of grants to applicants based on the evidence level their proposed intervention met:

- **Development** grants to applicants seeking to support high-potential and relatively untested practices, strategies, or programs whose efficacy should be systematically studied (average grant amount: \$2 million –\$3 million);
- **Validation** grants to applicants seeking to support practices, strategies, or programs that showed promise, but for which there was only moderate evidence (average grant amount: \$9 million – \$15 million); and
- **Scale-up** grants to applicants seeking to expand practices, strategies, or programs for which there was strong evidence (average grant amount: \$20 million+).

Importantly, the i3 program also [required](#) all of its grantees to conduct a rigorous, independent evaluation because core to the program was advancing the quality of evidence through learning. The evaluation must have addressed the estimated impact of the i3-supported effort (as implemented at the proposed level of scale) on a relevant outcome. All grantees were required to make their evaluation findings broadly available digitally and free of charge, through formal (e.g., peer-reviewed journals) or informal (e.g., newsletters) mechanisms. For Scale-up and Validation grants, grantees needed to ensure

that the data from their evaluations were made available to third-party researchers consistent with applicable privacy requirements.

In FY10, the ED's i3 program determined that KIPP's public charter school model met its definition of strong evidence and awarded KIPP a five-year, \$50 million Scale-up grant based on the evidence from its 2010 Mathematica evaluation and other studies (see [here](#) pp. 18–22).

Shift in 2015: Education Innovation and Research (EIR) Program

The bipartisan Every Student Succeeds Act of 2015 (ESSA) authorized a new [Education Innovation and Research](#) (EIR) program to replace the i3 program. Congress has funded the EIR program at the following levels from FY17–FY20:

Fiscal Year	Appropriation	Total # New Awards	Expansion	Mid-phase	Early-phase
FY20	\$190,000,000	TBD	TBD	TBD	TBD
FY19	\$125,000,000	42	1	6	35
FY18	\$115,368,326	18	3	5	10
FY17	\$95,005,093	16	1	6	9

Like i3, EIR also defines three levels of evidence and allocates three types of grants to applicants based on the evidence level their proposed intervention met:

1. **Early-phase grants** which fund the development, implementation, and feasibility testing of a program, which prior research suggests has promise, for the purpose of determining whether the program can successfully improve student achievement or attainment for high-need students.
 - a. **Evidence requirement:** Early-phase grants are awarded to proposed interventions that **demonstrate a rationale** (see definition [here](#)).
 - b. **Average grant amount:** \$2 million – \$4 million.

2. **Mid-phase grants** which fund implementation at a regional or national level and a rigorous evaluation of a program that has been successfully implemented under an Early-phase grant, or other effort meeting similar criteria, for the purpose of measuring the program's impact and cost effectiveness, if possible using existing administrative data.
 - a. **Evidence requirement:** Mid-phase grants are awarded to proposed interventions that demonstrate a statistically significant effect on improving student outcomes or other relevant outcomes based on **moderate evidence** (see definition [here](#)) from at least one well-designed and well-implemented

experimental or quasi-experimental design study for at least one population or setting.
b. Average grant amount: \$7 million – \$8 million.

3. Expansion grants which fund implementation at a national level and a rigorous replication evaluation of a program that has been found to produce sizable, important impacts under a Mid-phase grant, or other effort meeting similar criteria, for the purposes of determining whether such impacts can be successfully reproduced and sustained over time and identifying the conditions in which the program is most effective.

a. Evidence requirement: Expansion grants are awarded to proposed interventions that demonstrate a statistically significant effect on improving student outcomes or other relevant outcomes based on **strong evidence** (see definition [here](#)) from at least one well-designed and well-implemented experimental study for at least one population and setting.

b. Average grant amount: \$13 million – \$15 million.

In 2018, Abt Associates, under contract with the U.S. Department of Education's Institute of Education Sciences, released [an evaluation](#) of the i3 program which analyzed the evaluation of every i3 grant from 2010–2016. What they found was striking. According to the study:

- **Virtually all i3 grants were rigorously and independently evaluated.** Ninety-seven percent of i3 implementation evaluations were considered high quality, and 97 percent reported findings that were independent.
- **The overwhelming majority of i3 grantees implemented their projects appropriately.** Seventy-eight percent of i3-funded interventions were implemented with adequate fidelity.
- **1 in 5 i3 grantees achieved positive results**, which is a higher rate of success than most government-funded programs. Twelve of the 67 impact evaluations (18 percent) found a statistically significant positive impact on at least one student academic outcome.
- **Most importantly, i3 grantees with the most evidence prior to getting a grant achieved better results**, showing the pay-off from requiring applicants to demonstrate evidence of effectiveness in order to receive a grant. In specific terms:
 - 50% of Scale-up grants improved student outcomes;
 - 40% of Validation grants improved student outcomes; and
 - 8% of Development grants improved student outcomes.

These success rates are quite high compared to those found in most government grant programs (see discussion [here](#)). This is especially true when considering that each grant was subject to a rigorous (experimental or quasi-experimental) evaluation by an outside, independent contractor, not simply an internal evaluation. KIPP's public charter school model was one of the successful interventions that achieved results, even as it rapidly expanded.

Outcomes for KIPP Students: Better Academic Achievement for Twice as Many Students

KIPP used its \$50 million i3 Scale-up grant to train 1,000 additional school principals and expand its evidence-based school model from 99 schools serving 28,000 students in 19 states and the District of Columbia in 2010 to 200 schools serving 80,000 students in 25 states in 2016. In effect, the federal i3 program was responsible for doubling KIPP's reach in 5 years.

According to an independent [evaluation](#)² of KIPP's i3 grant activities by Mathematica in 2015, academic outcomes improved for students attending all KIPP schools. Specific information about improvement at each grade span is highlighted below.

Elementary Grades. KIPP elementary schools had positive, statistically significant, and educationally meaningful impacts on three of four measures of reading and mathematics skills, as measured by the Woodcock-Johnson III assessment. Specifically, that means that three years after entry, being offered admission to a KIPP elementary school leads to:

- an increase in a student's Letter-Word Identification score from the 78th percentile to the 84th percentile; the equivalent of 0.25 standard deviation units on the Letter-Word Identification test;
- an increase in a student's Passage Comprehension score from the 48th to the 57th percentile; the equivalent of 0.22 standard deviations on the Passage Comprehension test in reading; and
- an increase from the 58th to the 68th percentile on the Calculation math test; the equivalent of a 0.28 standard deviation increase.

"Ms. M teaches us how super-tiny-specific-things make our whole world work. I just want to know it all! I go home at night and watch science shows and write down the interesting things, and put the notes in my secret box. One day I'm going to teach science to high schoolers. They will learn so much from me that they will all want to go to college to become scientists. I guess I'm a really big nerd. That's good, right?"

~ [Jennifer Gonzalez](#), Third Grade, KIPP Austin



² This study was a comparison group study. See footnote 1 for additional information.

Middle Grades. KIPP middle schools had positive, statistically significant, and educationally meaningful impacts on student achievement in math, reading, science, and social studies, as measured by standardized state assessments. Specifically, that means that two years after entry, being admitted to a KIPP middle school leads to:

- an increase in students' average math score of 0.24 student standard deviation, the equivalent to a student moving from the 40th to the 50th percentile in the state;
- an increase in students' average reading score of 0.18 student standard deviation, the equivalent to a student moving from the 37th to the 44th percentile in the state;
- an increase of 0.25 standard deviations in science, equivalent to moving the average student from the 48th percentile to the 58th percentile in the state; and
- an increase of 0.25 standard deviations in social studies, the equivalent to moving the average student from the 51st to the 61st percentile in the state.

A [subsequent, rigorous study](#) of students who applied to 13 KIPP middle schools found even more significant positive effects -- that attending a KIPP school led to a 10–13 percentage point improvement in the likelihood of enrolling in college. According to the study "for a given black or Hispanic student . . . the impact of attending a KIPP middle school would be almost large enough to offset the nationwide racial disparity in college enrollment rates."

High Schools. KIPP high schools had positive, statistically significant, and educationally meaningful impacts on student achievement in math, English language arts, and science, as measured by state assessments, for students new to the network. Specifically, that means that having the opportunity to attend a KIPP high school:

- boosts new entrants' high school math scores by 0.27 standard deviation units, a representing an increase from the 48th to the 59th percentile;
- boosts new entrants' English language arts scores by 0.18 standard deviations, the equivalent to an increase from the 47th to the 54th percentile; and
- boosts new entrants' science scores by 0.31 standard deviations, the equivalent to an increase from the 42nd to the 54th percentile.

For high school students who were *continuing* from a prior KIPP school, KIPP high schools had positive and significant effects on college preparation, including more discussions about college, increased likelihood of applying to college, and more advanced coursetaking. 93 percent of students in the study applied to at least one college or university by the spring of their senior year, compared with 88 percent of comparison students. Students with the opportunity to attend a KIPP high school enroll in schools more likely to offer advanced placement (AP) or international baccalaureate courses (97 percent versus 89 percent), and the number of AP courses and exams students have taken or intend to take is correspondingly higher.



"On March 29th, 2014, my life changed forever. I was admitted to Georgetown University and awarded several scholarships. I saw myself at Georgetown, and I knew my KIPP team and family were committed to my success and believed I would get there. They lifted me up, making me the first in my family to attend a four-year university, and I'm excited to use my life and experience to help bring the American Dream closer for all."

~ [Josué Coronado](#), Georgetown University, KIPP Houston Alumnus

Postscript: Building Evidence to Increase Impact

Given KIPP's successful expansion of its evidence-based public charter school model, it's not surprising that between FYs 10-18 KIPP has been awarded over \$218 million from ED's [Replication and Expansion of High-Quality Charter Schools Program](#), which was authorized by ESSA to "open and prepare for the operation of one or more replicated high-quality charter schools or to expand one or more high-quality charter schools."

The chart below shows how KIPP's Replication and Expansion grant awards have increased over time, as their evidence of effectiveness has grown.

Grants for Replication and Expansion of High-Quality Charter Schools Funding Since FY 2010		
Fiscal Year	KIPP Grant Award	Increase in # of Schools Opened & Students Served
FY18	\$87,993,936	+9 expanded schools +# of students TBD (Grant is for SYs 2021-22 and 2022-23)
FY16	\$48,750,000	+48 new schools and 1 expanded school +4,893 students
FY14	\$30,500,000	+29 new schools and 5 expanded schools +13,675 students
FY12	\$22,709,013	+34 new schools and 2 expanded schools +13,590 students
FY11	\$12,738,736	+16 new schools +3,627 students
FY10	\$15,765,378	+20 new schools and 10 expanded schools +12,242 students

KIPP's steady demonstration of results and building of evidence through its i3 grant (and other evaluations before and after i3) showed ED that the KIPP model was ready to be expanded even further.

Conclusion

Local, state, and federal governments can and should help advance economic mobility by prioritizing evidence of effectiveness in all of their grant-making decisions.

Harnessing the power of evidence and data to help all of our nation's students learn is a moral, social, and economic imperative.

The U. S. Department of Education's use of evidence in awarding grants through the Investing in Innovation Fund and Education Innovation and Research program has resulted in more students achieving at higher levels, while simultaneously building evidence of what works in education.

Bipartisan leadership in Congress and enduring commitment by civil servants across administrations at ED show that local, state, and federal government agencies that invest taxpayer dollars in what works is not only possible — it should be the “new normal.”

Results for America

Results for America is helping decision-makers at all levels of government harness the power of evidence and data to solve our world's greatest challenges. Our mission is to make investing in what works the "new normal," so that when policymakers make decisions, they start by seeking the best evidence and data available, then use what they find to get better results.

Invest in What Works Policy Series

This Federal Impact Snapshot is part of Results for America's Invest in What Works policy series launched in 2012 to help local, state, and federal policymakers harness the power of evidence and data to increasingly shift taxpayer dollars toward results-driven, evidence-based solutions.

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