

Online Appendix

Appendix A: Description of Pennsylvania School System

Pennsylvania has large, urban school districts (Pittsburgh and Philadelphia) as well as smaller school districts serving suburban and rural areas. Pennsylvania also has a mix of district-run schools and charter schools (both of which are publicly funded). As of 2016, around 8% of children living in Pennsylvania attend a charter school, slightly higher than 6% in the US overall. Since 2010, Pennsylvania has passed reforms to improve the rigor of their standardized tests, similar to the other states that have adopted the 2010 Common Core Curriculum. Moreover, the demographics of its population are similar to the demographics of the US as a whole: in 2019, Pennsylvania had a poverty rate of 12.2% (slightly higher than the U.S. rate of 11.8%) and was 18.2% nonwhite (slightly lower than the US rate of 23.5%).

Appendix B: Description of School Name Matching

DonorsChoose provided a list of 2,783 unique schools from Pennsylvania, from which at least one teacher has posted a project. For all records, we received the school name as well as its DonorsChoose hashed identifier. For 2,547 records (91.5%), we also received the school's NCES (National Center of Education Statistics) identifier. The NCES ID is a unique federally assigned identifier. With the NCES ID, we instantly matched DonorsChoose records about teachers and projects with school-level data from federal and state sources (which also use NCES IDs as unique identifiers). For the 236 records (8.5%) without an NCES ID, we manually matched using the following process. We typed the school's name into the NCES school-lookup tool (<https://nces.ed.gov/ccd/schoolsearch/>). In some cases, there were multiple schools with a matching (or close to matching) name in Pennsylvania; we resolved this by looking at the location data (address) provided both by DonorsChoose and the NCES lookup tool.

After manually looking up the 236 unidentified records, we found:

- 118 records (50%) had no NCES ID associated with the name, 74 (31%) were preschools that do not have NCES IDs and 44 (19%) were not schools but rather learning or community centers that do not have NCES IDs.
- 79 records (33%) were schools for which we found the NCES ID, and successfully matched.
- 39 records (17%) had names that would suggest they are qualifying K-12 schools, but for which we could not find the NCES ID.

Overall, out of the 2,783 records provided by DonorsChoose, 2,665 are K-12 schools that qualify for our study predicting student performance outcomes on the PSSA and Keystone exams. Of the 2,665 schools, we have NCES IDs that enable matching DonorsChoose records with federal- and state-level data on school attributes and performance outcomes for 2,626 schools (98.5% match).

Appendix C: Funding Events

DonorsChoose had several funding events throughout the study period. Not all qualified as treatment in our analysis. In Table A1, we list all funding events from 2012-2013 to 2017-2018. If the event was anticipated, we do not include it. If it was not possible to anticipate, it was included as a treatment effect on project funding. The Ripple event on March 27, 2018 is not technically included in our analysis because the impact of projects funded through this event are not materialized until the 2018-2019 school year.

Table A1 Funding Events Summary

Date	Event	Location	Anticipated	Include	Twitter
August 4, 2014	Staples	Philadelphia	No significant increase in projects posted.	Yes	None
August 22-24, 2014	Gates Foundation	US	No significant increase in projects posted.	Yes	<i>Through 8/24, we're throwing a back-to-school philanthropic sale! Nearly all projects are half-off-donate today (August 22, 2014)</i>
September 18, 2014	Google	Pittsburgh	No significant increase in projects posted.	Yes	<i>Hey, Pittsburgh! @Google just gave over 50,000 and #flashfunded every project in the city! (September 19, 2014)</i>
August 21-22, 2015	Gates Foundation	US	Yes, a significant increase in projects posted.	No	<i>Enter JUMPSTART at checkout today, and your donation will be matched by @gatesfoundation! (August 21 2015) and Thanks to additional funding from @Gates-Foundation we're extending the JUMPSTART promo code for a few more hours! (August 22, 2015)</i>
March 10, 2016	Best School Day	US	No significant increase in projects posted.	Yes	<i>50 philanthropists have helped us fully fund 11,000 classrooms today. Happy #BestSchoolDay! (March 10, 2016)</i>
August 25, 2016	Gates Foundation	US	Yes, a significant increase in projects posted.	No	<i>Right now, donations to projects on our site are being matched thanks to @gatesfoundation (August 25, 2016)</i>
November 29, 2016	Giving Tuesday	US	Yes, Twitter post one week prior.	No	<i>Only one week until #GivingTuesday! Who's made their plan for the big day? (November 22, 2016)</i>
March 29, 2017	Best School Day	US	No significant increase in projects posted.	Yes	<i>Tomorrow, your donations will be matched on EVERY project. #BestSchoolDay is back! (March 28, 2017)</i>
August 23, 2017	Gates Foundation	US	Yes, a significant increase in projects posted.	No	<i>Help schools get student-ready! All day, claim your #BestSchoolYear match thanks to @gatesfoundation (August 23, 2017)</i>
October 18, 2017	Fill Every Shelf	US	Yes, a significant increase in projects posted.	No	<i>Are you ready to #FillEveryShelf? Tomorrow and Thursday, all book projects are matched! (October 17, 2017)</i>
November 28, 2017	Giving Tuesday	US	Yes, Twitter post one week prior.	No	<i>It's Black Friday, and you know what that means... Only 4 days until #GivingTuesday! (November 24, 2017)</i>
January 25, 2018	First Million Projects	US	No significant increase in projects posted.	Yes	<i>Our community has hit an incredible milestone: you've funded the #FirstMillion classroom projects! To celebrate, donations to every live DonorsChoose project are doubled tomorrow. Here's to the next million! (January 24, 2018)</i>
March 27, 2018	Ripple	US	No significant increase in projects posted.	Yes	<i>We can't believe that just happened. With the largest single donation in our history, @Ripple just funded EVERY SINGLE CLASSROOM PROJECT on our site. Happy #BestSchoolDay! (March 28, 2018)</i>

Appendix D: Model Free Results

Figure A1 provides model free evidence on the performance changes between funded and non-funded schools. We first calculated yearly performance changes for each school as compared to its performance in the previous year. We then performed t-tests on the differences between average yearly performance changes between funded and non-funded schools. The performance metrics are the SPP score, and percents of students scoring proficient and above or basic and above in each subject of the Keystone and PSSA exams. Out of the 13 performance metrics, funded schools demonstrate larger changes (significant at 0.1 level) on four outcome metrics (SPP, percents scoring basic and above for Keystone Biology, PSSA ELA, and PSSA Science), and smaller changes (significant at 0.1 level) on two outcome metrics (i.e., percents scoring proficient and above, and basic and above for PSSA Math), and statistically non-different changes on seven metrics, compared to non-funded schools. This evidence seems to point towards a direction that funded projects make some positive impact, but the results are mixed. It is unclear whether these differences can be explained by changes in school characteristics (for example, a larger enrollment of students from low-income families) or changes in district funding, both of which are controlled for in our fixed effects models with and without the instrument.

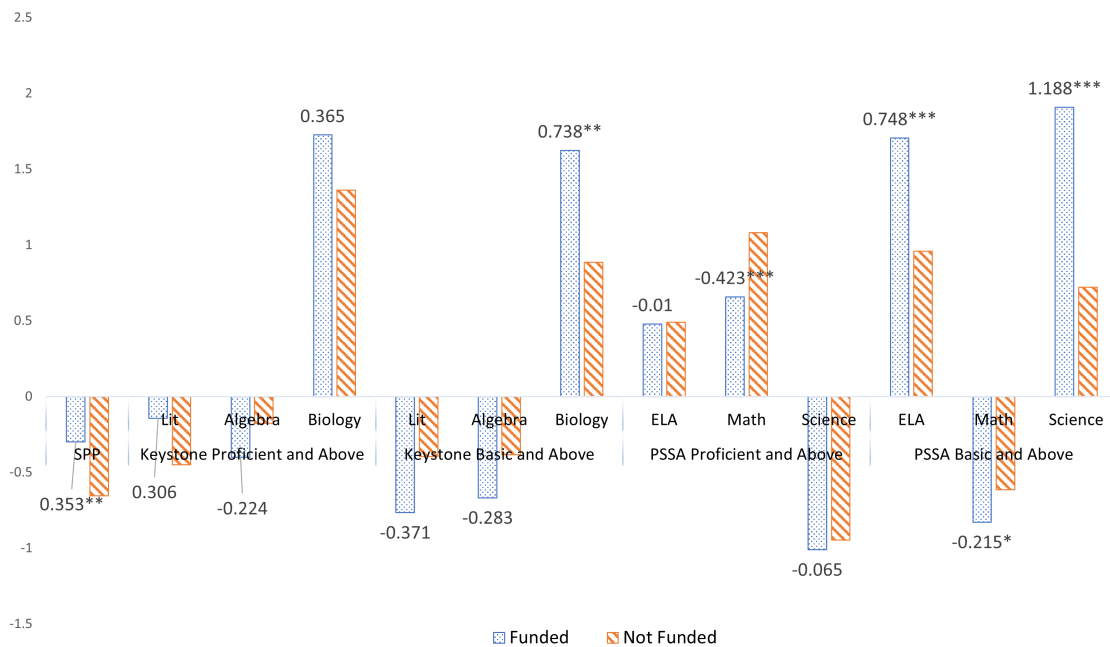


Figure A1 Comparison of Average Performance Changes: Funded vs. Non-Funded Schools

Notes. This figure displays average yearly changes of school performance between funded and non-funded schools. School performance metrics are the SPP score, and percents of students scoring proficient and above or basic and above in each subject of the Keystone and PSSA exams. Results from t-tests on the differences between funded and not-funded schools are shown. ***, $p < 0.01$. **, $p < 0.05$, *, $p < 0.1$.

Appendix E: Supplemental Figures and Tables

Table A2 Summary Statistics by Posting and Funding Status

	Not Posted			Posted			Posted & Not Funded			Funded		
	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD
<i>School Attributes</i>												
Enrollment	12,104	561.4	473.1	5,703	618.2	426.1	1,022	602.8	491.1	4,681	621.6	411.1
Percent FRPL	11,816	40.9	24.2	5,549	61.8	30.3	1,003	47.9	27.1	4,546	64.8	30.1
Percent Asian/Pac. Isl.	12,100	2.8	4.4	5,702	3.5	36.9	1,022	3.0	30.3	4,680	3.7	37.2
Percent Black	12,100	9.4	4.4	5,702	26.3	6.7	1,022	14.2	4.6	4,680	28.9	7.1
Percent Hispanic	12,100	7.0	18.4	5,702	12.9	32.2	1,022	9.3	24.3	4,680	13.7	33.1
Percent Native American	12,100	0.2	12.4	5,702	0.2	20.2	1,022	0.2	16.4	4,680	0.2	20.8
Student-Teacher Ratio	12071	14.8	23.6	5,692	15.4	36.9	1,020	14.9	30.3	4,672	15.5	37.2
<i>District Annual Expenditure per Student (in \$1,000)</i>												
Salary	12,063	7.1	1.5	5,696	6.7	1.5	1,022	6.9	1.5	4,674	6.6	1.5
Supplies	12,063	0.6	0.2	5,696	0.5	0.2	1,022	0.6	0.2	4,674	0.5	0.2
Property	12,063	0.2	0.3	5,696	0.2	0.4	1,022	0.2	0.2	4,674	0.2	0.4
SPP	10,337	74.4	12.5	4,972	66.4	14.0	893	71.7	12.9	4,079	65.2	14.0
Keystone % Advanced												
Literature	1,805	8.2	6.9	902	5.8	6.1	174	7.2	6.0	728	5.5	6.1
Algebra	1,807	18.5	13.7	903	14.1	13.3	174	16.3	12.4	729	13.6	13.4
Biology	1,805	23.4	15.5	902	16.8	14.6	174	21.3	14.3	728	15.7	14.5
Keystone % Proficient+												
Literature	1,805	73.6	17.6	902	66.2	22.1	174	72.5	17.7	728	64.7	22.8
Algebra	1,807	65.8	20.3	903	56.4	24.8	174	63.9	21.1	729	54.6	25.3
Biology	1,805	62.9	21.1	902	52.3	25.9	174	61.8	21.5	728	50.0	26.4
Keystone % Basic+												
Literature	1,805	93.1	8.6	902	89.8	11.7	174	92.7	8.0	728	89.0	12.4
Algebra	1,807	91.4	10.4	903	87.4	13.5	174	91.1	9.5	729	86.5	14.2
Biology	1,805	85.2	15.7	902	77.3	22.1	174	84.4	17.3	728	75.5	22.8
PSSA % Advanced												
ELA	5,833	21.0	12.2	3,584	14.3	11.5	588	18.2	11.3	2,996	13.5	11.3
Math	5,833	19.7	13.3	3,584	13.2	11.9	588	16.9	12.1	2,996	12.4	11.7
Science	5,418	37.4	18.2	3,445	25.2	18.9	553	32.5	17.7	2,892	23.8	18.9
PSSA % Proficient+												
ELA	5,833	66.0	16.1	3,584	52.4	21.4	588	61.2	17.8	2,996	50.7	21.6
Math	5,833	48.3	19.5	3,584	35.7	21.7	588	43.9	20.0	2,996	34.1	21.7
Science	5,418	74.7	18.5	3,445	60.0	25.0	553	70.3	20.7	2,892	58.0	25.2
PSSA % Basic+												
ELA	5,833	92.6	7.0	3,584	86.2	11.8	588	90.6	9.0	2,996	85.3	12.1
Math	5,833	75.9	16.1	3,584	62.7	22.5	588	71.7	18.5	2,996	60.9	22.8
Science	5,418	89.6	12.4	3,445	81.1	18.8	553	87.4	15.6	2,892	79.9	19.1
<i>DonorsChoose Activities</i>												
No. Project Posted	12,104	0.0	0.0	5,703	5.3	11.2	1,022	1.3	0.7	4,681	6.1	12.2
No. Project Funded	12,104	0.0	0.0	5,703	0.0	0.0	1,022	0.0	0.0	4,681	4.6	9.3
Total \$ Funded	12,104	\$0.0	\$0.0	5,703	\$1,492.4	\$3,327.5	1,022	\$0.0	\$0.0	4,681	\$1,818.3	\$3,591.3
Total Students Reached	12,104	0.0	0.0	5,703	0.0	0.0	1,022	0.0	0.0	4,681	451.9	984.2

Notes: SPP, Pennsylvania School Performance Profile. ELA, English language arts. Proficient +, proficient and above. Basic +, basic and above. Data are from 2012–2013 school year to 2017–2018 school year. Data are only available starting from 2014–2015 school year for Keystone/PSSA test scores.

Table A3 Impact of Funded Projects on School Performance

	Keystone										PSSA									
	Proficient and Above					Basic and Above					Proficient and Above					Basic and Above				
	Lit.	Algebra	Biology	Lit.	Algebra	Biology	ELA	Math	Sci.	ELA	Math	Sci.	ELA	Math	Sci.					
N(Proj)	0.257* (0.142)	0.948** (0.413)	0.890** (0.381)	0.505* (0.258)	0.453* (0.262)	0.939** (0.447)	0.201* (0.118)	-0.087 (0.127)	0.035 (0.176)	0.290*** (0.112)	0.133 (0.127)	0.701*** (0.190)	0.290*** (0.112)	0.133 (0.127)	0.701*** (0.190)					
N(Stud)	-4.356*** (0.906)	-0.302 (2.899)	1.250 (2.824)	0.342 (2.027)	2.028 (1.792)	-4.756 (3.234)	-4.661*** (1.060)	-5.865*** (1.151)	-7.762*** (1.744)	-3.081*** (1.101)	-4.314*** (1.120)	-5.213*** (1.844)	-3.081*** (1.101)	-4.314*** (1.120)	-5.213*** (1.844)					
FRPL	0.012 (0.008)	0.007 (0.016)	-0.013 (0.017)	0.025** (0.011)	0.004 (0.009)	-0.008 (0.016)	-0.000 (0.007)	0.009 (0.009)	-0.004 (0.011)	0.000 (0.005)	0.009 (0.007)	-0.003 (0.010)	0.000 (0.005)	0.009 (0.007)	-0.003 (0.010)					
Asian	-0.057 (0.071)	0.229 (0.298)	-0.070 (0.239)	-0.023 (0.166)	-0.029 (0.162)	-0.414* (0.216)	0.026 (0.073)	0.024 (0.082)	0.224** (0.089)	-0.184*** (0.043)	0.063 (0.063)	-0.208*** (0.076)	-0.184*** (0.043)	0.063 (0.063)	-0.208*** (0.076)					
Black	-0.280*** (0.048)	0.161 (0.194)	-0.060 (0.155)	-0.025 (0.123)	0.121 (0.108)	-0.057 (0.193)	-0.297*** (0.056)	-0.282*** (0.050)	-0.237*** (0.070)	-0.176*** (0.051)	-0.294*** (0.056)	-0.204*** (0.073)	-0.176*** (0.051)	-0.294*** (0.056)	-0.204*** (0.073)					
Hisp.	-0.169*** (0.049)	-0.252 (0.193)	-0.114 (0.151)	-0.052 (0.136)	-0.058 (0.127)	0.043 (0.166)	-0.238*** (0.051)	-0.287*** (0.054)	-0.149** (0.068)	-0.077* (0.044)	-0.226*** (0.052)	0.025 (0.068)	-0.077* (0.044)	-0.226*** (0.052)	0.025 (0.068)					
Native	0.390* (0.209)	0.389 (0.571)	0.490 (0.632)	0.518 (0.436)	0.023 (0.394)	-0.191 (0.416)	-0.002 (0.103)	-0.075 (0.135)	0.076 (0.104)	0.026 (0.074)	0.063 (0.080)	-0.073 (0.112)	0.026 (0.074)	0.063 (0.080)	-0.073 (0.112)					
PTR	-0.002 (0.004)	0.001 (0.024)	-0.016 (0.017)	-0.008 (0.013)	-0.013 (0.012)	0.015 (0.018)	-0.008 (0.013)	-0.022*** (0.007)	-0.011 (0.012)	0.030 (0.022)	-0.017 (0.013)	-0.042* (0.025)	0.030 (0.022)	-0.017 (0.013)	-0.042* (0.025)					
Salary	0.356*** (0.161)	-0.242 (0.386)	0.991** (0.369)	-0.195 (0.206)	0.879** (0.439)	0.256 (0.348)	0.318 (0.254)	0.147 (0.172)	0.582*** (0.233)	0.736** (0.342)	0.429* (0.237)	1.001* (0.551)	0.736** (0.342)	0.429* (0.237)	1.001* (0.551)					
Supplies	-0.655 (0.586)	1.175 (1.096)	2.040* (1.165)	-1.403 (0.987)	-1.868** (0.920)	-1.251 (1.031)	-0.646 (0.542)	-1.161** (0.549)	0.256 (0.746)	-1.079** (0.463)	-0.747 (0.588)	-0.740 (0.631)	-1.079** (0.463)	-0.747 (0.588)	-0.740 (0.631)					
Property	-0.228 (0.195)	0.114 (0.388)	-1.180*** (0.374)	-0.272 (0.396)	-0.415 (0.353)	-0.079 (0.419)	-0.277 (0.177)	-0.319** (0.144)	-0.290 (0.267)	-0.040 (0.121)	-0.407** (0.184)	0.179 (0.177)	-0.040 (0.121)	-0.407** (0.184)	0.179 (0.177)					
School FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes					
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes					
Const	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes					
N	15,303	2,703	2,703	2,703	2,706	2,703	9,413	9,413	8,859	9,413	9,413	8,859	9,413	9,413	8,859					
R-sq	0.290	0.131	0.082	0.083	0.066	0.099	0.056	0.118	0.095	0.274	0.062	0.190	0.274	0.062	0.190					

Notes: SPP, Pennsylvania School Performance Profile. Lit., literature. ELA, English language arts. Sci., science. Expend., expenditure. Standard errors are clustered by schools. ***, p < 0.01. **, p < 0.05. *, p < 0.1.

Table A4 Impact of Funded Projects/Dollar Amount/Students Reached on School Performance

	SPP						Keystone						PSSA					
	Proficient and Above			Basic and Above			Proficient and Above			Basic and Above			Proficient and Above			Basic and Above		
	Lit.	Algebra	Biology	Lit.	Algebra	Biology	ELA	Math	Sci.	ELA	Math	Sci.	ELA	Math	Sci.	ELA	Math	Sci.
Panel A. Impact of Funded Projects Controlling for Posted Projects																		
Num of Projects Funded	0.491*	0.906	1.134	-0.476	0.575	0.541	0.786	0.532**	-0.055	-0.257	0.399**	0.381	0.305	0.381	0.305	0.381	0.305	0.381
(log scaled)	(0.295)	(0.663)	(0.735)	(0.672)	(0.450)	(0.438)	(0.710)	(0.248)	(0.282)	(0.354)	(0.200)	(0.330)	(0.244)	(0.330)	(0.244)	(0.330)	(0.244)	(0.330)
Num of Projects Posted	-0.236	0.213	-0.196	1.439**	-0.074	-0.092	0.161	-0.341	-0.034	0.301	-0.113	0.330	-0.177	0.330	-0.177	0.330	-0.177	0.330
(log scaled)	(0.267)	(0.606)	(0.646)	(0.614)	(0.397)	(0.376)	(0.588)	(0.227)	(0.252)	(0.325)	(0.161)	(0.274)	(0.215)	(0.274)	(0.215)	(0.274)	(0.215)	(0.274)
School FEs, Year FEs, Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	15303	2703	2706	2703	2703	2706	2703	9413	9413	8859	9413	8859	9413	8859	9413	8859	9413	8859
R-sq	0.291	0.131	0.082	0.162	0.083	0.066	0.099	0.056	0.118	0.095	0.275	0.062	0.062	0.190	0.062	0.190	0.062	0.190
Panel B. Impact of Funded Dollar Amount on School Performance																		
Total Dollar Amount	-0.009	0.220***	0.154**	0.155**	0.088*	0.046	0.094	0.025	-0.002	-0.013	0.027	0.043	0.045*	0.043	0.045*	0.043	0.045*	0.043
(log scaled)	(0.028)	(0.070)	(0.068)	(0.067)	(0.045)	(0.048)	(0.069)	(0.023)	(0.027)	(0.035)	(0.017)	(0.032)	(0.023)	(0.032)	(0.023)	(0.032)	(0.023)	(0.032)
School FEs, Year FEs, Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	15303	2703	2706	2703	2703	2706	2703	9413	9413	8859	9413	8859	9413	8859	9413	8859	9413	8859
R-sq	0.290	0.132	0.082	0.160	0.083	0.065	0.096	0.055	0.118	0.095	0.273	0.062	0.062	0.187	0.062	0.187	0.062	0.187
Panel C. Impact of Students Reached (self-reported) on School Performance																		
Num of Students Reached	0.007	0.303***	0.243***	0.228***	0.111**	0.109*	0.197**	0.036	-0.029	-0.001	0.038	0.087*	0.039	0.087*	0.039	0.087*	0.039	0.087*
(log scaled)	(0.037)	(0.087)	(0.090)	(0.083)	(0.053)	(0.056)	(0.084)	(0.031)	(0.036)	(0.046)	(0.024)	(0.045)	(0.032)	(0.045)	(0.032)	(0.045)	(0.032)	(0.045)
School FEs, Year FEs, Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	15303	2703	2706	2703	2703	2706	2703	9413	9413	8859	9413	8859	9413	8859	9413	8859	9413	8859
R-sq	0.290	0.133	0.083	0.160	0.083	0.066	0.098	0.055	0.118	0.095	0.273	0.062	0.062	0.187	0.062	0.187	0.062	0.187

Notes: SPP, Pennsylvania School Performance Profile. Lit., literature. ELA, English language arts. Sci., science. Expend., expenditure. Standard errors are clustered by schools. ***, p < 0.01. **, p < 0.05. *, p < 0.1.

Table A5 Impact of Funded Projects on School Performance (with Instruments)

	PSSA												
	Keystone						PSSA						
	Proficient and Above		Basic and Above		Proficient and Above		Basic and Above		Proficient and Above		Basic and Above		
	Lit.	Algebra	Biology	Lit.	Algebra	Biology	ELA	Math	Sci.	ELA	Math	Sci.	
Num of Projects Funded (log scaled)	0.977*** (0.252)	2.317*** (0.733)	1.433* (0.804)	2.273*** (0.730)	1.071** (0.496)	1.123** (0.495)	1.915*** (0.739)	0.313 (0.206)	0.003 (0.214)	-0.330 (0.306)	0.608*** (0.188)	0.110 (0.228)	1.464*** (0.322)
Num of Students (log scaled)	-4.481*** (0.907)	-4.259 (2.619)	-0.375 (2.898)	1.043 (2.918)	0.260 (2.019)	1.927 (1.800)	-4.903 (3.226)	-4.675*** (1.058)	-5.877*** (1.151)	-7.716*** (1.749)	-3.121*** (1.094)	-4.311*** (1.119)	-5.311*** (1.823)
Percent FRPL	0.011 (0.008)	0.007 (0.016)	0.008 (0.016)	-0.011 (0.017)	0.026** (0.011)	0.005 (0.009)	-0.007 (0.016)	-0.000 (0.007)	0.009 (0.009)	-0.004 (0.011)	0.000 (0.005)	0.009 (0.007)	-0.004 (0.010)
Percent Asian	-0.047 (0.071)	0.149 (0.267)	0.224 (0.298)	-0.083 (0.239)	-0.029 (0.169)	-0.035 (0.162)	-0.424* (0.219)	0.026 (0.073)	0.024 (0.082)	0.223** (0.089)	-0.183*** (0.043)	0.063 (0.063)	-0.207*** (0.075)
Percent Black	-0.280*** (0.048)	-0.131 (0.177)	0.022 (0.195)	-0.077 (0.159)	-0.033 (0.124)	0.112 (0.109)	-0.069 (0.196)	-0.297*** (0.056)	-0.282*** (0.050)	-0.235*** (0.070)	-0.177*** (0.051)	-0.294*** (0.056)	-0.206*** (0.073)
Percent Hispanic	-0.169*** (0.049)	-0.253 (0.178)	-0.211 (0.192)	-0.115 (0.152)	-0.052 (0.135)	-0.057 (0.126)	0.043 (0.164)	-0.239*** (0.051)	-0.288*** (0.054)	-0.147** (0.068)	-0.078* (0.044)	-0.225*** (0.052)	0.022 (0.068)
Percent Native	0.405* (0.212)	-0.179 (0.471)	0.426 (0.580)	0.595 (0.613)	0.561 (0.444)	0.074 (0.401)	-0.117 (0.421)	-0.000 (0.103)	-0.074 (0.134)	0.072 (0.103)	0.030 (0.073)	0.063 (0.080)	-0.064 (0.108)
Pupil Teacher Ratio	-0.001 (0.004)	0.001 (0.024)	0.013 (0.024)	-0.016 (0.018)	-0.008 (0.013)	-0.013 (0.012)	0.015 (0.018)	-0.008 (0.013)	-0.022*** (0.007)	-0.012 (0.012)	0.031 (0.022)	-0.018 (0.013)	-0.040* (0.024)
District Expnd. - Salary	0.363** (0.162)	-0.257 (0.283)	0.986** (0.388)	0.459 (0.376)	-0.202 (0.209)	0.871** (0.443)	0.244 (0.355)	0.314 (0.253)	0.144 (0.172)	0.594** (0.234)	0.724** (0.341)	0.430* (0.237)	0.974* (0.549)
District Expnd. - Supplies	-0.744 (0.588)	0.993 (1.250)	0.029 (1.088)	1.834 (1.158)	-1.488 (0.984)	-1.973** (0.919)	-1.396 (1.037)	-0.637 (0.543)	-1.154** (0.549)	0.230 (0.746)	-1.055** (0.462)	-0.749 (0.587)	-0.686 (0.632)
District Expnd. - Property	-0.253 (0.199)	0.102 (0.752)	-1.185*** (0.385)	-0.285 (0.376)	-0.250 (0.396)	-0.422 (0.350)	-0.088 (0.421)	-0.279 (0.177)	-0.320** (0.144)	-0.284 (0.268)	-0.045 (0.121)	-0.407** (0.184)	0.167 (0.177)
School Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Const	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	15,303	2,703	2,706	2,703	2,703	2,706	2,703	9,413	9,413	8,859	9,413	9,413	8,859
R-sq	0.289	0.127	0.081	0.154	0.080	0.062	0.095	0.056	0.118	0.095	0.273	0.062	0.186

Notes: SPP, Pennsylvania School Performance Profile. Lit., literature. ELA, English language arts. Sci., science. Expnd., expenditure. The instrument variable is the number of projects posted eligible for unanticipated funding events. The instrumented variable is the number of projects funded. Both measures are log scaled. Implemented using Stata's XTIVREG package. Standard errors are clustered by schools. ***, p < 0.01. **, p < 0.05. *, p < 0.1.

Table A6 Alternative Specifications and Alternative IVs

	Keystone												
	SPP					PSSA							
	Proficient and Above		Basic and Above		Proficient and Above		Basic and Above		Basic and Above				
	Lit.	Algebra	Biology	Lit.	Algebra	Biology	ELA	Math	Sci.	ELA	Math	Sci.	
Panel A. Impact of Funded Projects on School Performance Controlling for Lagged Performance (w/IV)													
Num of Projects Funded	0.644**	2.234***	1.409*	2.026**	0.610	0.533	1.379*	0.285	0.055	-0.525	1.016***	-0.162	2.483***
(log scaled)	(0.284)	(0.863)	(0.851)	(0.844)	(0.588)	(0.612)	(0.767)	(0.273)	(0.275)	(0.423)	(0.244)	(0.280)	(0.458)
School FEs, Year FEs, Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	9936	1991	1993	1992	1991	1993	1992	6956	6956	6536	6956	6956	6536
R-sq	0.328	0.218	0.144	0.093	0.135	0.115	0.086	0.059	0.031	0.119	0.296	0.057	0.232
Panel B. Impact of Having At Least One Funded Project on School Performance (w/IV)													
Funded	2.788***	3.934***	2.433*	3.860***	1.819**	1.907**	3.251***	0.740	0.007	-0.797	1.438***	0.261	3.532***
(log scaled)	(0.751)	(1.289)	(1.377)	(1.207)	(0.847)	(0.861)	(1.211)	(0.488)	(0.506)	(0.736)	(0.456)	(0.538)	(0.819)
School FEs, Year FEs, Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	15303	2703	2706	2703	2703	2706	2703	9413	9413	8859	9413	9413	8859
R-sq	0.273	0.115	0.075	0.143	0.068	0.050	0.073	0.054	0.118	0.094	0.256	0.062	0.146
Panel C. Impact of Funded Projects on School Performance Controlling for Dollar Amount (w/IV)													
Num of Projects Funded	2.037***	3.515**	1.990	4.066**	1.765	2.313**	3.793**	0.513	0.024	-0.629	1.153***	-0.086	2.882***
(log scaled)	(0.478)	(1.687)	(1.815)	(1.751)	(1.181)	(1.176)	(1.767)	(0.419)	(0.431)	(0.614)	(0.373)	(0.448)	(0.629)
School FEs, Year FEs, Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	15303	2703	2706	2703	2703	2706	2703	9413	9413	8859	9413	9413	8859
R-sq	0.290	0.122	0.080	0.148	0.077	0.059	0.092	0.056	0.118	0.094	0.273	0.062	0.189
Panel D. Use the Number of Projects Eligible for Each Funding Event as a Separate IV													
Num of Projects Funded	0.995***	2.292***	1.440*	2.059***	0.797	1.062**	1.716**	0.317	-0.133	-0.576*	0.736***	-0.080	1.826***
(log scaled)	(0.254)	(0.725)	(0.804)	(0.768)	(0.527)	(0.525)	(0.814)	(0.207)	(0.214)	(0.316)	(0.203)	(0.241)	(0.345)
School FEs, Year FEs, Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	15303	2703	2706	2703	2703	2706	2703	9413	9413	8859	9413	9413	8859
R-sq	0.288	0.127	0.081	0.156	0.082	0.063	0.096	0.056	0.118	0.093	0.271	0.061	0.182
Panel E. Excluding Funding Events with Celebrity Involvement from the IV													
Num of Projects Funded	1.631***	3.050***	2.457**	2.556**	0.311	0.893	2.297**	0.583	0.329	-0.217	1.160***	0.872*	1.434**
(log scaled)	(0.441)	(0.995)	(1.170)	(1.066)	(0.782)	(0.819)	(0.967)	(0.392)	(0.380)	(0.587)	(0.388)	(0.471)	(0.600)
School FEs, Year FEs, Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	15303	2703	2706	2703	2703	2706	2703	9413	9413	8859	9413	9413	8859
R-sq	0.284	0.119	0.075	0.152	0.082	0.064	0.091	0.054	0.117	0.095	0.261	0.055	0.186

Notes: SPP, Pennsylvania School Performance Profile. Lit., literature. ELA: English language arts. Sci., science. Expend., expenditure. Standard errors are clustered by schools. ***, p < 0.01. **, p < 0.05. *, p < 0.1.

Table A7 First Stage Results for Instrumented Panel Data Regressions

	SPP	Keystone	PSSA
Num of Projects Eligible for Funding Events (log scaled)	0.746*** (0.019)	0.693*** (0.042)	0.688*** (0.020)
Num of Students (log scaled)	0.123** (0.053)	0.117 (0.166)	0.104 (0.075)
Percent Free or Reduced-Price Lunch	0.000 (0.000)	-0.001 (0.001)	0.001 (0.001)
Percent Asian	-0.000 (0.004)	0.016 (0.015)	0.001 (0.006)
Percent Black	0.005 (0.004)	0.005 (0.009)	0.004 (0.004)
Percent Hispanic	0.002 (0.003)	-0.002 (0.009)	0.002 (0.004)
Percent Native	-0.013* (0.007)	-0.066*** (0.022)	-0.014 (0.011)
Pupil Teacher Ratio	-0.001*** (0.000)	0.000 (0.001)	-0.000 (0.001)
District Expnd. - Salary	0.022* (0.012)	0.005 (0.015)	0.015 (0.013)
District Expnd. - Supplies	0.018 (0.033)	0.130** (0.057)	-0.052 (0.041)
District Expnd. - Property	0.005 (0.015)	-0.006 (0.019)	-0.002 (0.010)
School Fixed Effects	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes
Const	Yes	Yes	Yes
N	15303	2703	9413
R-sq	0.336	0.280	0.341
Weak Instrument Test			
Cragg-Donald Wald F-stat	4848.5	713.213 [†]	3195.78 [†]
Stock-Yogo weak IV critical values			
10% maximal IV size	16.38	16.38	16.38
20% maximal IV size	6.66	6.66	6.66
25% maximal IV size	5.53	5.53	5.53

Notes: [†] F-stats shown are for percentages of students scoring proficient and above in Literature. F-stats are very similar for other outcomes, i.e., percentages scoring basic and above and in other subjects. SPP, Pennsylvania School Performance Profile. Expnd., expenditure. Standard errors are clustered by schools. ***, p< 0.01. **, p< 0.05, *, p< 0.1.

Table A8 Subsample Analyses: Conditional on At Least One Posted Project

	SPP												PSSA																												
	Keystone						PSSA						Keystone						PSSA																						
	Proficient and Above			Basic and Above			Proficient and Above			Basic and Above			Proficient and Above			Basic and Above			Proficient and Above			Basic and Above																			
	Lit.	Algebra	Biology	Lit.	Algebra	Biology	Lit.	Algebra	Biology	Lit.	Algebra	Biology	Lit.	Algebra	Biology	Lit.	Algebra	Biology	Lit.	Algebra	Biology	Lit.	Algebra	Biology	Lit.	Algebra	Biology	Lit.	Algebra	Biology	Lit.	Algebra	Biology								
Panel A. Subsample: Schools With At Least One Posted Project (w/ IV)																																									
Num of Project Funded	0.945***	2.535***	1.614**	2.371***	1.213**	1.252**	2.027***	0.295	-0.012	-0.390	0.440**	0.103	1.089***	(0.262)	(0.750)	(0.800)	(0.736)	(0.509)	(0.504)	(0.744)	(0.210)	(0.216)	(0.308)	(0.187)	(0.319)																
School FEs, Year FEs, Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
N	10451	1879	1881	1880	1879	1881	1880	1879	1881	1880	1879	1881	1880	1879	1881	1880	1879	1881	1880	1879	1881	1880	1879	1881	1880	1879	1881	1880	1879	1881	1880	1879	1881	1880	1879	1881	1880	1879	1881	1880	1879
R-sq	0.288	0.136	0.103	0.143	0.092	0.068	0.097	0.057	0.117	0.093	0.304	0.070	0.229																												
Panel B. Subsample: Schools and School-Years With At Least One Posted Project (w/ IV)																																									
Num of Project Funded	1.174***	3.166***	2.141	1.962	2.401**	2.244**	2.648*	0.068	-0.220	-0.632	0.324	-0.363	0.829*	(0.415)	(1.380)	(1.494)	(1.482)	(1.115)	(1.081)	(1.604)	(0.336)	(0.329)	(0.475)	(0.292)	(0.489)																
School FEs, Year FEs, Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	4968	899	900	899	899	900	899	899	900	899	900	899	899	900	899	900	899	899	900	899	900	899	900	899	899	900	899	900	899	900	899	900	899	900	899	900	899	900	899	900	899
R-sq	0.236	0.160	0.136	0.107	0.127	0.089	0.123	0.073	0.088	0.116	0.381	0.105	0.306																												

Notes: SPP, Pennsylvania School Performance Profile. Lit., literature. ELA, English language arts. Sci., science. Controls the same as before. The sample in Panel A (B) includes only schools (schools and school-years) that have posted on DonorsChoose during the study window. Schools (schools and school years) that have never posted are excluded. Standard errors are clustered by schools. ***, p < 0.01. **, p < 0.05. *, p < 0.1.

Table A9 Heterogeneous Impact of Funded Projects on School Performance (with Instruments)

	SPP												PSSA											
	Keystone						Keystone						PSSA						PSSA					
	Proficient and Above			Basic and Above			Proficient and Above			Basic and Above			Proficient and Above			Basic and Above			Proficient and Above			Basic and Above		
	Lit.	Algebra	Biology	Lit.	Algebra	Biology	ELA	Math	Sci.	ELA	Math	Sci.	ELA	Math	Sci.	ELA	Math	Sci.	ELA	Math	Sci.			
Panel A. Schools with High Percentages of Free and Reduced-Price Lunch (Top tercile)																								
Num of Projects Funded	0.858**	2.078*	1.516	1.858*	1.733*	2.084**	2.735**	0.086	0.118	-0.377	0.282	1.031**	0.086	0.118	-0.377	0.282	1.031**	0.086	0.118	-0.377	0.282	1.031**		
(log scaled)	(0.333)	(1.239)	(1.191)	(1.006)	(0.916)	(0.907)	(1.370)	(0.268)	(0.234)	(0.400)	(0.256)	(0.442)	(0.268)	(0.234)	(0.400)	(0.256)	(0.442)	(0.268)	(0.234)	(0.400)	(0.256)	(0.442)		
School FEs, Year FEs, Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
N	5249	848	852	848	848	852	848	3428	3428	3279	3428	3279	3428	3428	3279	3428	3428	3279	3428	3279	3428	3279		
R-sq	0.233	0.164	0.193	0.122	0.170	0.166	0.120	0.074	0.088	0.111	0.401	0.332	0.074	0.088	0.111	0.401	0.332	0.074	0.088	0.111	0.401	0.332		
Panel B. Schools with Medium Percentages of Free and Reduced-Lunch Students (Middle tercile)																								
Num of Projects Funded	-0.080	2.885**	2.877**	3.802**	0.423	0.158	1.527*	0.165	-0.048	-0.403	-0.083	-0.203	0.165	-0.048	-0.403	-0.083	-0.203	0.165	-0.048	-0.403	-0.083	-0.203		
(log scaled)	(0.623)	(1.360)	(1.453)	(1.530)	(0.486)	(0.627)	(0.838)	(0.507)	(0.619)	(0.733)	(0.265)	(0.437)	(0.507)	(0.619)	(0.733)	(0.265)	(0.437)	(0.507)	(0.619)	(0.733)	(0.265)	(0.437)		
School FEs, Year FEs, Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
N	5114	932	931	932	932	931	932	3168	3168	2957	3168	2957	3168	3168	2957	3168	2957	3168	3168	2957	3168	2957		
R-sq	0.269	0.149	0.069	0.188	0.073	0.036	0.129	0.059	0.155	0.082	0.269	0.134	0.059	0.155	0.082	0.269	0.134	0.059	0.155	0.082	0.269	0.134		
Panel C. Schools with Low Percentages of Free and Reduced-Lunch Students (Bottom tercile)																								
Num of Projects Funded	0.181	0.121	0.204	-0.500	0.102	0.815*	-0.353	0.660	-0.294	0.392	0.149	0.201	0.660	-0.294	0.392	0.149	0.201	0.660	-0.294	0.392	0.149	0.201		
(log scaled)	(0.727)	(1.098)	(1.094)	(1.351)	(0.692)	(0.473)	(0.750)	(0.426)	(0.545)	(0.572)	(0.188)	(0.438)	(0.426)	(0.545)	(0.572)	(0.188)	(0.438)	(0.426)	(0.545)	(0.572)	(0.188)	(0.438)		
School FEs, Year FEs, Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
N	4929	917	917	917	917	917	917	2810	2810	2617	2810	2617	2810	2810	2617	2810	2617	2810	2810	2617	2810	2617		
R-sq	0.386	0.148	0.110	0.228	0.096	0.061	0.120	0.043	0.162	0.091	0.173	0.091	0.043	0.162	0.091	0.173	0.091	0.043	0.162	0.091	0.173	0.091		

Notes: SPP, Pennsylvania School Performance Profile. Lit., literature. ELA, English Language Arts. Sci., science. The instrument variable is the number of projects posted eligible for unanticipated funding events. The instrumented variable is the number of projects funded. Both measures are log scaled. FEs, fixed effects. Same set of control variables are included as in the main paper. Standard errors are clustered by schools. ***, p < 0.01. **, p < 0.05. *, p < 0.1.

Table A10 Impact of Project Themes on School Performance

	PSSA											
	Keystone						PSSA					
	SPP			Keystone			PSSA			PSSA		
	Proficient and Above			Basic and Above			Proficient and Above			Basic and Above		
	Lit.	Algebra	Biology	Lit.	Algebra	Biology	ELA	Math	Sci.	ELA	Math	Sci.
Knowledge Retention	0.086 (0.109)	0.594** (0.289)	0.167 (0.333)	0.044 (0.320)	0.384** (0.192)	0.358 (0.242)	0.718** (0.361)	0.182** (0.077)	0.111 (0.075)	0.129 (0.092)	0.034 (0.085)	0.124 (0.150)
Repeated and Shared Use of Resources	0.045 (0.117)	0.105 (0.359)	0.561 (0.375)	0.528 (0.397)	-0.144 (0.260)	-0.084 (0.251)	0.170 (0.416)	0.003 (0.087)	-0.041 (0.089)	0.142 (0.145)	0.044 (0.097)	0.514** (0.148)
Differentiated Learning	0.049 (0.092)	0.095 (0.337)	-0.212 (0.307)	-0.205 (0.285)	0.385* (0.216)	0.450** (0.190)	-0.123 (0.287)	-0.081 (0.068)	-0.076 (0.071)	-0.093 (0.105)	-0.024 (0.080)	-0.114 (0.109)
Streamline Work Process	0.102* (0.061)	-0.121 (0.155)	-0.008 (0.183)	-0.087 (0.169)	-0.126 (0.113)	-0.097 (0.145)	-0.124 (0.199)	-0.019 (0.042)	-0.031 (0.042)	0.004 (0.074)	-0.013 (0.053)	0.026 (0.077)
School Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	15,303	2,703	2,706	2,703	2,703	2,706	2,703	9,413	9,413	8,859	9,413	8,859
R-sq	0.291	0.130	0.081	0.159	0.085	0.070	0.101	0.056	0.118	0.277	0.061	0.193

Notes: Lit., literature. ELA, English language arts. Sci., science. The instrument variable is the number of projects posted eligible for unanticipated funding events. The instrumented variable is the number of projects funded. Both measures are log scaled. Same set of control variables are included as in previous tables. Standard errors are clustered by schools. ***, p < 0.01. **, p < 0.05. *, p < 0.1.

Table A11 Heterogeneous Impact of Project Themes on School Performance

	SPP										PSSA														
	Keystone					Proficient and Above					Basic and Above					Proficient and Above					Basic and Above				
	Lit.	Algebra	Biology	Lit.	Algebra	Biology	ELA	Math	Sci.	Yes	ELA	Math	Sci.	Yes	ELA	Math	Sci.	Yes	ELA	Math	Sci.				
Panel A. Schools with High Percentages of Free and Reduced-Price Lunch (Top tercile)																									
Knowledge Retention	0.001	0.895**	0.182	0.048	0.809**	1.026*	0.168*	0.120	0.182	0.164	0.014	0.221	0.182	0.164	0.014	0.221	0.182	0.164	0.014	0.221	0.182				
	(0.132)	(0.416)	(0.490)	(0.405)	(0.336)	(0.597)	(0.092)	(0.078)	(0.156)	(0.116)	(0.106)	(0.182)	(0.156)	(0.116)	(0.106)	(0.182)	(0.156)	(0.116)	(0.106)	(0.182)	(0.156)				
Repeated or Shared Use of Resources	0.071	0.136	0.862	0.870	-0.377	-0.253	-0.116	-0.057	0.152	0.047	0.076	0.371**	0.152	0.047	0.076	0.371**	0.152	0.047	0.076	0.371**	0.152				
	(0.137)	(0.515)	(0.530)	(0.552)	(0.403)	(0.349)	(0.104)	(0.092)	(0.183)	(0.104)	(0.122)	(0.179)	(0.183)	(0.104)	(0.122)	(0.179)	(0.183)	(0.104)	(0.122)	(0.179)	(0.183)				
Differentiated Learning	0.066	-0.417	-0.364	-0.734**	0.399	0.517**	-0.380	-0.056	-0.203	-0.098	-0.010	-0.165	-0.203	-0.098	-0.010	-0.165	-0.203	-0.098	-0.010	-0.165	-0.203				
	(0.103)	(0.280)	(0.331)	(0.320)	(0.294)	(0.217)	(0.394)	(0.075)	(0.124)	(0.076)	(0.096)	(0.126)	(0.124)	(0.076)	(0.096)	(0.126)	(0.124)	(0.076)	(0.096)	(0.126)	(0.124)				
Streamline Work Process	0.086	-0.157	-0.155	-0.202	-0.118	-0.105	-0.286	-0.028	0.043	-0.011	-0.023	-0.049	0.043	-0.011	-0.023	-0.049	0.043	-0.011	-0.023	-0.049	0.043				
	(0.069)	(0.179)	(0.231)	(0.175)	(0.167)	(0.204)	(0.257)	(0.049)	(0.089)	(0.048)	(0.062)	(0.092)	(0.089)	(0.048)	(0.062)	(0.092)	(0.089)	(0.048)	(0.062)	(0.092)	(0.089)				
School FEs, Year FEs, Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes				
N	5260	854	858	854	854	858	3433	3433	3284	3433	3433	3284	3284	3433	3433	3284	3284	3433	3433	3284	3284				
R-sq	0.234	0.171	0.192	0.134	0.178	0.177	0.075	0.089	0.115	0.404	0.106	0.335	0.115	0.404	0.106	0.335	0.115	0.404	0.106	0.335	0.115				
Panel B. Schools with Medium Percentages of Free and Reduced-Lunch Students (Middle tercile)																									
Knowledge Retention	0.327	0.258	0.437	0.208	-0.152	0.388	0.355*	0.316	-0.337	0.028	0.281*	-0.260*	-0.337	0.028	0.281*	-0.260*	-0.337	0.028	0.281*	-0.260*	-0.337				
	(0.233)	(0.671)	(0.828)	(0.654)	(0.223)	(0.284)	(0.183)	(0.229)	(0.267)	(0.094)	(0.168)	(0.156)	(0.267)	(0.094)	(0.168)	(0.156)	(0.267)	(0.094)	(0.168)	(0.156)	(0.267)				
Repeated or Shared Use of Resources	-0.064	0.507	0.576	0.299	0.103	-0.066	0.213	0.340	0.221*	0.205	0.179	0.221	0.221*	0.205	0.179	0.221	0.221*	0.205	0.179	0.221	0.221*				
	(0.293)	(0.861)	(0.902)	(0.878)	(0.373)	(0.343)	(0.238)	(0.276)	(0.324)	(0.125)	(0.210)	(0.182)	(0.324)	(0.125)	(0.210)	(0.182)	(0.324)	(0.125)	(0.210)	(0.182)	(0.324)				
Differentiated Learning	-0.307	2.621*	2.311	1.455	-0.169	0.235	-0.453**	-0.508**	0.343	-0.195*	-0.286*	0.083	0.343	-0.195*	-0.286*	0.083	0.343	-0.195*	-0.286*	0.083	0.343				
	(0.273)	(1.409)	(1.780)	(1.332)	(0.497)	(0.530)	(0.198)	(0.233)	(0.263)	(0.105)	(0.159)	(0.172)	(0.263)	(0.105)	(0.159)	(0.172)	(0.263)	(0.105)	(0.159)	(0.172)	(0.263)				
Streamline Work Process	-0.186	0.065	0.460	-0.215	0.073	0.149	-0.021	-0.299*	-0.161	-0.035	-0.030	0.035	-0.161	-0.035	-0.030	0.035	-0.161	-0.035	-0.030	0.035	-0.161				
	(0.177)	(0.496)	(0.548)	(0.514)	(0.190)	(0.241)	(0.115)	(0.162)	(0.192)	(0.060)	(0.130)	(0.116)	(0.192)	(0.060)	(0.130)	(0.116)	(0.192)	(0.060)	(0.130)	(0.116)	(0.192)				
School FEs, Year FEs, Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes				
N	5114	932	931	932	931	932	3170	3170	2959	3170	3170	2959	2959	3170	3170	2959	2959	3170	3170	2959	2959				
R-sq	0.269	0.154	0.080	0.200	0.074	0.038	0.062	0.159	0.083	0.271	0.062	0.135	0.083	0.271	0.062	0.135	0.083	0.271	0.062	0.135	0.083				
Panel C. Schools with Low Percentages of Free and Reduced-Lunch Students (Bottom tercile)																									
Knowledge Retention	0.089	-0.139	-0.049	-0.995	-0.010	-0.334	0.278	-0.026	0.269	0.027	0.007	0.089	0.269	0.027	0.007	0.089	0.269	0.027	0.007	0.089	0.269				
	(0.335)	(0.506)	(0.452)	(0.720)	(0.301)	(0.234)	(0.252)	(0.299)	(0.307)	(0.103)	(0.196)	(0.165)	(0.307)	(0.103)	(0.196)	(0.165)	(0.307)	(0.103)	(0.196)	(0.165)	(0.307)				
Repeated or Shared Use of Resources	-0.265	-0.619	0.269	-0.151	-0.169	-0.375	-0.007	-0.140	-0.091	0.126	-0.015	0.095	-0.091	0.126	-0.015	0.095	-0.091	0.126	-0.015	0.095	-0.091				
	(0.370)	(0.682)	(0.462)	(0.682)	(0.316)	(0.363)	(0.237)	(0.329)	(0.334)	(0.097)	(0.169)	(0.209)	(0.334)	(0.097)	(0.169)	(0.209)	(0.334)	(0.097)	(0.169)	(0.209)	(0.334)				
Differentiated Learning	0.238	1.561	-0.316	0.935	0.515*	0.451**	-0.084	0.177	0.128	-0.006	0.149	-0.034	0.128	-0.006	0.149	-0.034	0.128	-0.006	0.149	-0.034	0.128				
	(0.309)	(1.115)	(0.370)	(0.631)	(0.269)	(0.208)	(0.173)	(0.278)	(0.207)	(0.086)	(0.162)	(0.148)	(0.207)	(0.086)	(0.162)	(0.148)	(0.207)	(0.086)	(0.162)	(0.148)	(0.207)				
Streamline Work Process	0.058	-0.400	-0.273	-0.196	-0.205	-0.320	-0.057	0.129	-0.256*	0.002	0.040	-0.171	-0.256*	0.002	0.040	-0.171	-0.256*	0.002	0.040	-0.171	-0.256*				
	(0.263)	(0.561)	(0.507)	(0.805)	(0.273)	(0.282)	(0.146)	(0.170)	(0.141)	(0.045)	(0.102)	(0.127)	(0.141)	(0.045)	(0.102)	(0.127)	(0.141)	(0.045)	(0.102)	(0.127)	(0.141)				
School FEs, Year FEs, Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes				
N	4929	917	917	917	917	917	2810	2810	2616	2810	2810	2616	2616	2810	2810	2616	2616	2810	2810	2616	2616				
R-sq	0.387	0.156	0.110	0.233	0.101	0.076	0.045	0.162	0.094	0.174	0.062	0.095	0.094	0.174	0.062	0.095	0.094	0.174	0.062	0.095	0.094				

Notes: Lit., literature. ELA, English language arts. Sci., science. FEs, fixed effects. Controls same as before. Standard errors are clustered by schools. ***, p < 0.01. **, p < 0.05. *, p < 0.1.

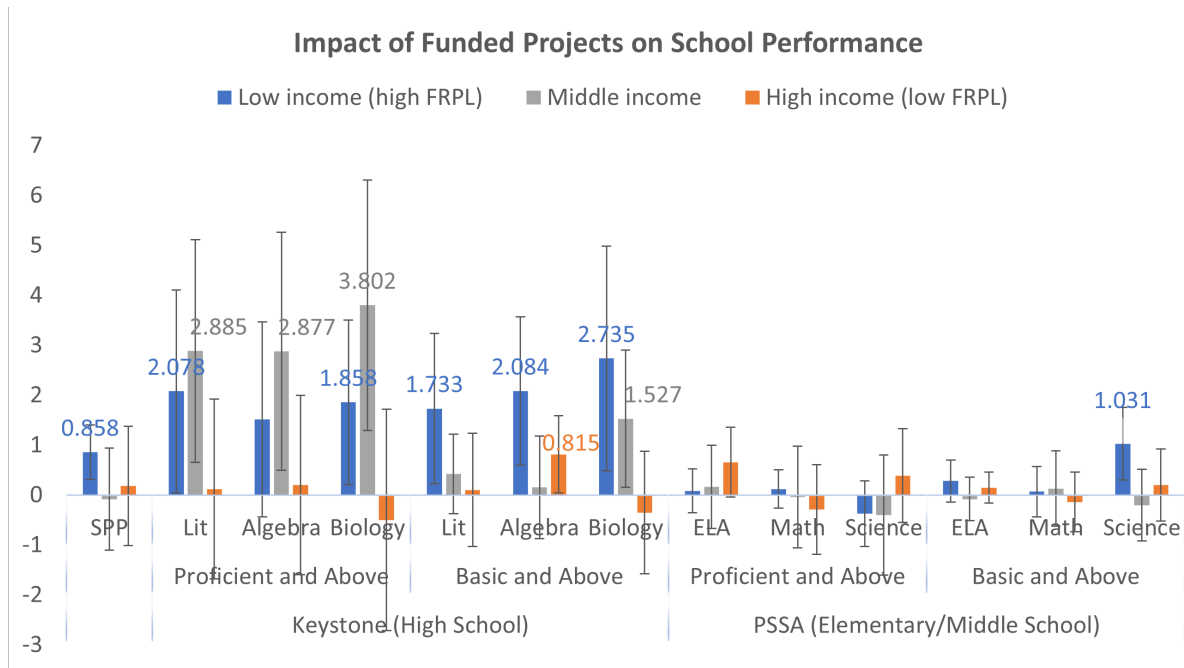


Figure A2 Impact of Funded Projects on School Performance Stratified by FRPL Percentage

Notes. This figure displays the effects of the number of funded projects (log-scaled) on school performances stratified by percentages of free-and-reduced-lunch students. Bars represent 90% confidence intervals. For clearer illustration, estimates that are significant at p-value=0.1 level are called out.

Appendix F: Themes for Textual Analysis

Table A12 Themes 1 and 2 for Textual Analysis

Channels	Keywords and Examples
<p>1. Knowledge Retention</p>	<p>Meaning: Resources secured were used in a way that improved student retention of knowledge, either by improving the efficiency of a single learning opportunity or making it more efficient for students to have multiple learning opportunities for the same knowledge.</p> <p>Words: comprehend, comprehension, concentrate, concentration, deep understand, focus, forget, foundation, grasp, hard work, hard worker, internalize, memorable, memory, practice, promote growth, recall, recognition, recognize, remember, reread, retention, review, see example, see examples, stamina, strengthen, visual, visualize, visually, work hard</p> <p>Example Statement 1: “Students have been using the headphones every day as they work on the computers to listen to stories read aloud, practice their reading and concentrate on details to help them comprehend their texts. With the headphones, the classroom stays quiet and students’ work remains private, allowing for better focus and increased learning. Our class is full of students who are concentrating and highly engaged in the reading process!”</p> <p>Example Statement 2: “With your donations we were able to purchase a snack station of granola bars, fruit snacks, and dried cereal. Our school serves a cold breakfast each morning during a very short window of time. Many students miss this fifteen-minute window because they come to school late. It is very tough for kids to sit through three hours of school on an empty stomach while wait for lunch. Thanks to you, students who come in late still have an opportunity to have a breakfast during class time. I cannot tell you how these snacks and cereals have helped students focus on their class work and less on their rumbling stomachs.”</p>
<p>2. Repeated or Shared Use of Resources</p>	<p>Meaning: Resources secured were used frequently and repeatedly within the teacher’s own classes to increase the intensity of impact, or shared widely across the teacher’s school to increase the breadth of impact.</p> <p>Words: daily, each afternoon, each day, each morning, every day, every morning, every student, every week, everyday, everyone, extra, future, incorporate, left over, many time, more students, next year, repeatedly, share, unlimited, use again, weekly, whole class, whole school, year, years</p> <p>Example Statement 1: “My students have been working hard and using the Chromebooks almost every day. I am continuing to build up my supply of classroom Chromebooks and hope one day to have 30 Chromebooks in my room for every student to be able to use on a daily basis. Using technology in my classroom has changed the way I teach and my students learn. It has made the content of history more relevant as we explore new and different materials. It has given every student a voice as I use new tech tools like NearPod, EdPuzzle, Flipgrid, and PearDeck where every student can log in and reply. Students are excited to use the Chromebooks each day and often look forward to lessons where they engage in with technology.”</p> <p>Example Statement 2: “This document projector is available to all staff members at our school and can serve our entire student population of more than 300 students. It is being used in core classes as well as special classes such as art and music. The document projector makes instruction so much easier for our teachers. Lessons have become more streamlined and student-centered, and teacher demonstrations can happen faster, giving the students more time for guided practice. Our students have less trouble viewing live demonstrations, following along with the text as it’s read aloud, or presenting their work for all their peers to see clearly. This helps eliminate confusion which minimizes behavior issues and improves student comprehension of the class material.”</p>

Table A13 Themes 3 and 4 for Textual Analysis

Channels	Keywords and Examples
3. Differentiated Learning	<p>Meaning: Resources secured were used in way that enabled the teacher to customize students' learning experiences, providing a learning experience that corresponded to the level of the student in a particular topic.</p> <p>Words: extra help, independent, independently, individualize, individually, language learner, language learners, level, low level, privacy, private, small group, small groups, special education, special need, without help</p> <p>Example Statement 1: "My students were so excited when our new reading games were delivered! They love playing with the games during independent center time. My students are able to practice their reading skills such as rhyming words, beginning sounds, sight words and sequencing while enjoying the games. These games are allowing even my students who are several reading levels behind, feel like they can complete the activities without my help. When my students are busy playing these educational games, it allows me time to work with smaller groups for guided reading. I have my students work in small groups to practice their reading skills with other children who are on the same level."</p> <p>Example Statement 2: "I can't thank each of you enough for helping our class get a kidney table! I have been able to pull small groups during reading and math class to work on different skills. Our reading class has 26 students, so meeting with small groups to differentiate instruction before was very difficult. Having this table has enabled me to pull small groups to differentiate instruction daily! We now can use leveled readers in class which gives me the opportunity to read with small groups depending on their reading levels. In math class, I can now pull different students up to meet with me and classmates to work on different math skills. They are feeling more comfortable communicating with each other too! They are now talking about math more and more!"</p>
4. Streamline Process	<p>Meaning: Resources secured were used in way that enabled the teacher to reduce non-learning, off-task, or down-time time in the classroom.</p> <p>Words: disruption, disruptive, distract, distraction, efficiency, efficient, efficient operation, efficient operations, eliminate, faster, frustrate, inefficiency, inefficient, manual, manually, operational efficiency, quicker, reduce inefficiency, reduce inefficient, reduce waste, save, save time, simpler, simplify, speed up, streamline, tedious, transition, waste</p> <p>Example Statement 1: "The white board has been such a great addition to our classroom...I am able to switch up the colors to highlight specific details and differentiate various aspects of our learning. Because of your generosity, I no longer hear students complain that they cannot see. I do not have to use chalk, which leaves behind the dusty marks. We do not have to waste time cleaning our boards or picking up broken pieces of chalk. The markers have helped us eliminate all of this and it is great!"</p> <p>Example Statement 2: "Receiving the glue, scissors, headphones, and paper cutter have saved time doing the various activities we do in the class. I no longer have to borrow items from other teachers and my students no longer have to borrow from classmates. These materials have changed the atmosphere in my classroom. My students are so excited to be able to use scissors that work and not have to wait to share when having to cut something."</p>