Pocket Lit Review of Recent Studies Relevant to the Education Program

March 2018

SLED

STRATEGY LEARNING EVALUATION

Contents

Charter School studies

- *Charter Schools and the Achievement Gap* – Sarah Cohodes, Brookings – Winter 2018
- *Bigger Bang, Fewer Bucks? The Productivity of Public Charter Schools in Eight U.S. Cities* – Corey DeAngelis et al., University of Arkansas – February 2018 (WFF Funded)
- *An Evaluation of the i3 Validation Grant: Scaling the New Orleans Charter Restart Model* – Macke Raymond, CREDO Stanford University – February 2018

Private School Choice studies

- *The Effect of the DC School Voucher Program on College Enrollment* – Matthew Chingos, Urban Institute – February 2018 (WFF Funded)
- *Do Voucher Students Attain Higher Levels of Education?* – Patrick Wolf et al., University of Arkansas – February 2018 (WFF Funded)

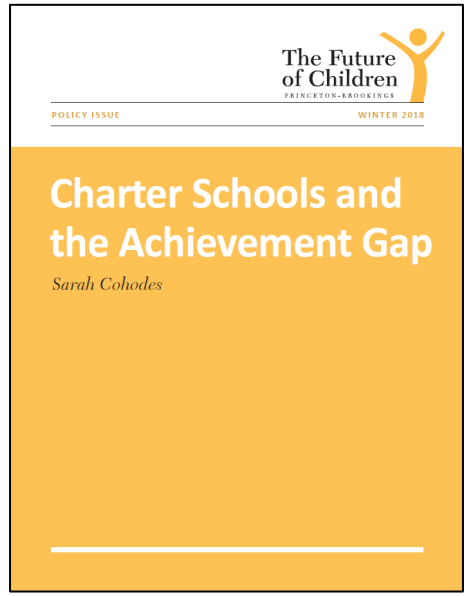
What we do in this pocket review

- **Summary:** We read the article
  - What'd they ask?
  - How'd they do the study?
  - Location
  - Who's in the sample?

- **Key highlights:** Excerpt highlights and/or provide short summary

Charter Schools and the Achievement Gap (Cohodes)

What'd they ask?	• Do students who attend charter schools have better outcomes than those who attend district schools? • Do "no excuses" charters differ from other charter schools?
How'd they do the study?	• This paper is a summary of high-quality research that explores a range of questions related to student outcomes associated with attending "no excuses" charter schools.
Location	• The research included in the summary studied schools in a number of locations across the U.S.
Who's in the sample?	• Students in grades 3-12. It also has outcomes for students after they graduated high school.



"No excuses schools emphasize high expectations for both academics and behavior, longer school days and years, and frequent observations of teachers to give feedback, tutoring, and data-driven instruction that uses assessment to frequently update teachers." (p. 6)

Highlights and Summary of Key Points (Cohodes)

Main highlight	• Across most high-quality research – *on average* – there is not much difference between student outcome for students attending charter schools versus district schools. "however, much of the same research also finds that **a subset of charter schools has significant positive impacts on student outcomes.** These are typically urban charter schools serving minority and low-income students that use a *no excuses* curriculum" (p.3).
	• "**Attending an urban, high-quality charter school can have transformative effects on individual students' lives.** Three years attending one of these high-performing charter schools produces test-score gains about the size of the black-white test-score gap. The best evidence we have so far suggests that these test-score gains will translate into beneficial effects on outcomes like college-going, teen pregnancy, and incarceration" (p. 14).

Highlights and Summary of Key Points (Cohodes)

Impacts on HS Graduation, College, and Earnings	• Only two larger scale studies exist that look at the longer-term outcomes for charter students; one on Texas data and one on Florida data. Some other non-test outcomes data do exist in smaller studies too. • **Florida:** "In the Florida study, charters had beneficial effects on aspects of educational attainment, including high school graduation (six percentage points), college-going (eight percentage points), and college persistence (12 percentage points). Examining earnings up to three years after college graduation (assuming on-time progression), attending a charter was associated with an increase of more than $2,300 in annual earnings, and was concentrated in students who attended college" (p. 5). • **Texas:** "In Texas, attending a charter school for one year was associated with an increase in high school graduation (1.2 percentage points) and two-year college attendance (1.5 percentage points), but a decrease in average annual earnings from age 24 to age 26 of about $100–$200, depending on the specification. The Texas study attempted to distinguish between no excuses charter schools and regular charter schools … and found that the negative earnings effects were concentrated in regular charters" (p. 5-6).

Highlights and Summary of Key Points (Cohodes)

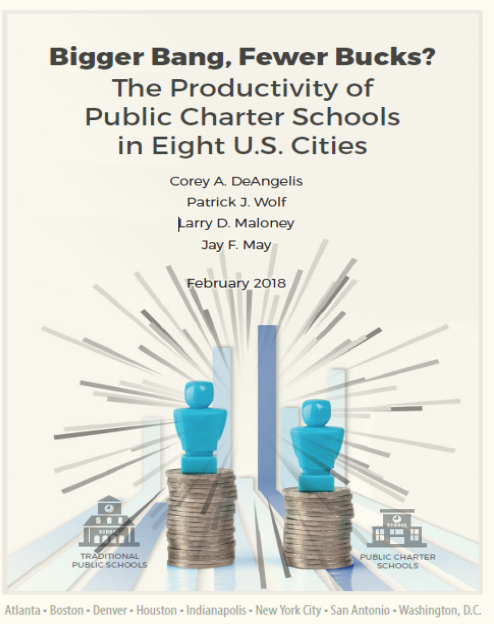
Can District Schools Do No Excuses Practices?	• "One recent experiment tested the proposition that successful **charter school practices can be *injected* into traditional public schools**… • "Harvard's Roland Fryer and colleagues worked with the Houston Independent School District (HISD) to turn around poorly performing district schools…" • "The researchers found that at the elementary and the secondary levels, **students in schools that adopted the charter practices had positive math test-score gains of about 15 percent of a standard deviation per year of attendance.** Impacts on reading were positive but not statistically significant. Though the impacts weren't quite as large as some of the gains found from attending a no excuses charter school, this experiment offers direct evidence that traditional public schools can successfully implement charter school practices and have beneficial impacts on student test scores" (p.10).
Do charters help/harm district performance?	• "A recent example from New York City examined what happens when charter schools open in new neighborhoods. **Student achievement increased at traditional public schools near charters, and the closer the charter school, the larger the effects**" (p. 12). • "Though not as robust as lottery-based methods for estimating charter impacts directly, the methods used for competition studies are likely the best available to researchers for that purpose. As a whole, **they suggest that charters have no negative achievement effects on district schools, and may even have some benefits for student achievement**" (p. 12).

Highlights and Summary of Key Points (Cohodes)

Impacts on College Going Rates and Persistence	• **"In Chicago, as in Boston and New York,** recent lottery-based evidence from the Noble Network of high school charters shows college-going gains for charter students. Attending a Noble high school **increased college enrollment by 13 percentage points**, with most of the increase coming at four-year, relatively selective institutions. Persistence in college also increased, with a 12 percentage point increase in attending four or more semesters of higher education" (p. 7)

Bigger Bang, Fewer Bucks? (DeAngelis et al.)

What'd they ask?	• Do public charter schools demonstrate a productivity advantage in various cities across the U.S.?
How'd they do the study?	• This paper attempts to measure the cost-effectiveness **AND** return-on-investment (ROI) of public charter schools in terms of academic performance per dollar spent.
Location	• The research examined 8 WFF cities: Atlanta, Boston, Denver, Houston, Indianapolis, New York, San Antonio, and Washington D.C.
Who's in the sample?	• Academic results represent students in grade 8 (NAEP) and students in grades 3-10 (CREDO Urban Charters)[1]. The study also estimates the returns to schooling investment in terms of yearly income relative to the average worker in each state[2].



"This report further supports the existing evidence that public charter schools result in a bigger bang for fewer bucks than traditional public schools. Our evidence indicates that charter schools, on average, yield a more efficient allocation of educational resources than does the traditional way of delivering public education through geographically defined school district" (p. 21).

Highlights and Summary of Key Points (DeAngelis et al.)

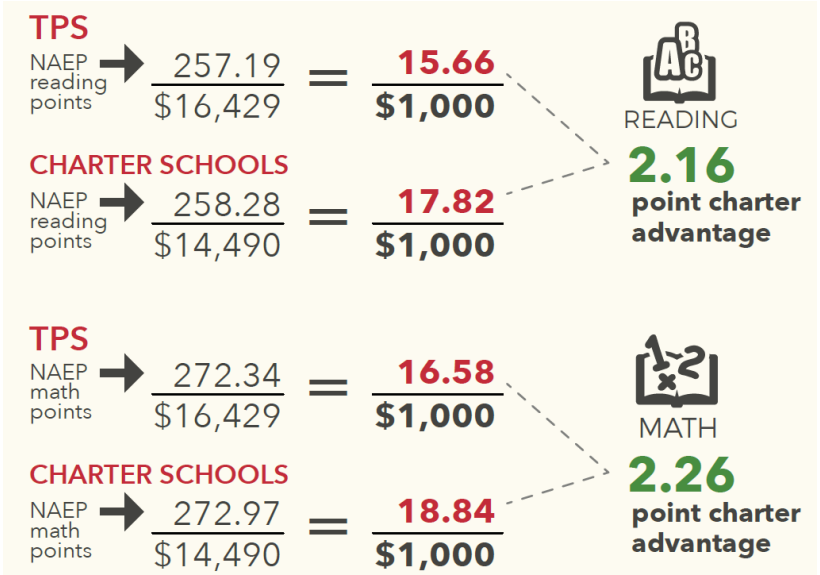
Main highlight	• **Charters found to be more productive – i.e. greater return on each dollar invested.**

	• Across the 8 cities studied, the charter sector outperformed the local district on both productivity metrics (cost-effectiveness and ROI).
	
	  • **Cost-Effectiveness** – "The public charter school sector delivers a cross-city average of an additional 4.34 NAEP points per $1,000 funded in reading [4.37 in math], representing a productivity advantage of 32 percent for charters" (p. 5).
	
	  • **Return-on-Investment** – "On average, each dollar invested in a child's K-12 schooling results in $4.67 in lifetime earnings in TPS and $6.44 in lifetime earnings in public charter schools, demonstrating a 38 percent public charter school advantage" (p.6). Difference equals $1.77.

Highlights and Summary of Key Points (DeAngelis et al.)

Main highlight	• **Large differences in productivity across cities**
	• The estimates vary between cities substantially. • For example, **Indianapolis** charters were the most cost-effective with a difference of 11.69 additional NAEP reading points per $1,000 in per pupil revenue, while the other cities ranged between 0.56 (**Houston**) and 5.63 (**San Antonio**) in additional reading points per $1,000 in per pupil revenue.
	• The study importantly builds upon a prior study by the same authors that found that charter schools in 12 out of 14 major metropolitan areas, including the 8 studied here, **receive on average $5,721 less per pupil in revenue compared to TPS**. The difference in per pupil revenue represents an average 29 percent funding inequity.

Highlights and Summary of Key Points (DeAngelis et al.)

Main highlight	• **<u>Cost Effectiveness</u>.** The study uses a cost-benefit ratio of NAEP math and reading achievement by sector to average per-pupil revenues by sector. Cost-Effectiveness for each sector is equal to [NAEP Achievement Points]/[Per-Pupil Revenue]. The study uses 8th grade NAEP. • For NAEP reading, the average public charter school sector produced 17.76 NAEP reading points per $1,000 funded compared to 13.42 points in the average TPS sector for a difference of 4.34 NAEP reading points. This difference represents a "32 percent public charter school sector advantage over TPS in cost-effectiveness."
Atlanta example	

Highlights and Summary of Key Points (DeAngelis et al.)

Main highlight

- **Cost-Effectiveness** comparisons in the 8 cities

Table 2: NAEP Math Achievement Levels per Thousand Dollars Funded

	Traditional Public Schools			Public Charter Schools			Difference
Location	NAEP Score	Per Pupil Revenue	NAEP Points per $1,000 Funded	NAEP Score	Per Pupil Revenue	NAEP Points per $1,000 Funded	NAEP Points per $1,000 Funded
Indianapolis	277.90	$14,388	19.32	280.21	$8,810	31.81	12.49
San Antonio	281.66	$12,097	23.28	280.61	$9,629	29.14	5.86
Denver	266.78	$14,027	19.02	269.47	$11,083	24.31	5.30
Washington, D.C.	263.13	$35,261	7.46	267.82	$21,387	12.52	5.06
Boston	279.48	$22,389	12.48	290.82	$18,475	15.74	3.26
New York City	273.44	$26,289	10.40	278.51	$21,281	13.09	2.69
Atlanta	272.34	$16,429	16.58	272.97	$14,490	18.84	2.26
Houston	282.11	$10,829	26.05	282.92	$10,604	26.68	0.63
AVERAGE	274.61	$18,963	14.48	277.92	$14,470	19.21	4.73
STUDENT-WEIGHTED AVERAGE	274.62	$22,480	12.22	277.27	16,718	16.59	4.37

Highlights and Summary of Key Points (DeAngelis et al.)

Main highlight	• **Return-on-Investment (ROI) – This is a bit complicated and uses a lot of assumptions.**
	• A simple description of the calculation is the [Income Returns on Investment]/[Cost Investment]. More specifically, the study looks at [Estimated additional lifetime earnings accrued through higher cognitive ability as measured by test scores]/[The average 13 year investment in education]. The earnings are relative to the average worker in each state. • **The estimated public charter school ROI benefit is larger than the cost-effectiveness benefit**. On average across the cities, each dollar invested in a child's K-12 schooling results in $6.44 in additional lifetime earnings in public charter schools compared to only $4.67 in additional lifetime earnings in TPS. The difference between the two sectors means that charter schools average a higher return of $1.77 additional earnings per dollar invested. Stated another way, a 13-year investment in public charters yields ROIs that are 38 percent higher than a TPS investment.

Highlights and Summary of Key Points (DeAngelis et al.)

Atlanta example	• The ROI difference (Charter – TPS) is $0.81 (18 percent) for a full charter (13 year) investment. Otherwise stated, a charter educated worker would be estimated to earn an additional $0.81 per dollar invested in their education over a TPS educated worker.

In TPS Full Time: $16,429 * 13 years = **$213,572**

Lifetime earnings amount:

$1,158,067 * [1 - (0.145 SD) * (0.13/SD) * (0.70))]^{13} = **$974,409**

ROI for TPS:

$974,409 / $213,572 = **$4.56**

In Charter Full Time: $14,490 * 13 years = **$188,369**

Lifetime earnings amount:

$1,158,067 * [1 - (0.114 SD) * (0.13/SD) * (0.70))]^{13} = **$1,011,249**

ROI for Charter:

$1,011,249 / $188,369 = **$5.37**

In Charter Half Time: ($14,490 * 6.5 years) + ($16,429 * 6.5 years) = **$200,970**

Lifetime earnings amount:

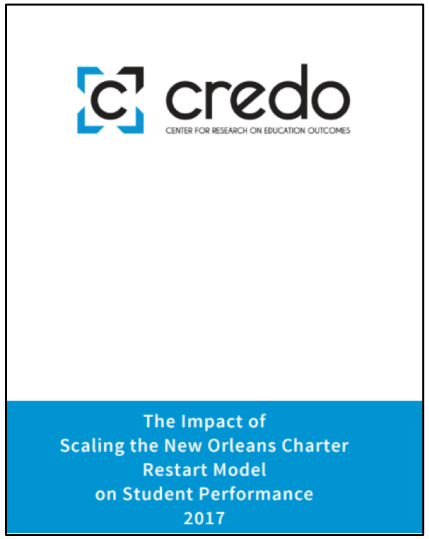
$1,158,067 * [1 - (0.145 SD) * (0.13/SD) * (0.70))]$^{6.5}$ +
$1,158,067 * [1 - (0.114 SD) * (0.13/SD) * (0.70))]$^{6.5}$ = **$992,658**

ROI for Half in Each:

$992,658 / $200,970 = **$4.94**

An Evaluation of the i3 Validation Grant: Scaling the New Orleans Charter Restart Model (Raymond)

What'd they ask?	• What are the policy and administrative prerequisites necessary to support, scale, and sustain the charter restart model effectively (CRM)? • What was the academic progress of students attending charter restart schools? Was this progress better, worse, or similar than other available options?
How'd they do the study?	• The evaluation contains three reports including: 1) a report examining organizational capacity for charter restart; 2) a study of implementation that examines school policy and practices; and 3) a student impact study that examined academic progress of students in charter restarts. A • Mixed methods (surveys, interviews, observations) and the student impact study employed a quantitative approach
Location	• New Orleans and Tennessee (Memphis and Nashville)
Who's in the sample?	• 21 schools from across New Orleans and Tennessee were included in the evaluation. These schools served 9,127 students.

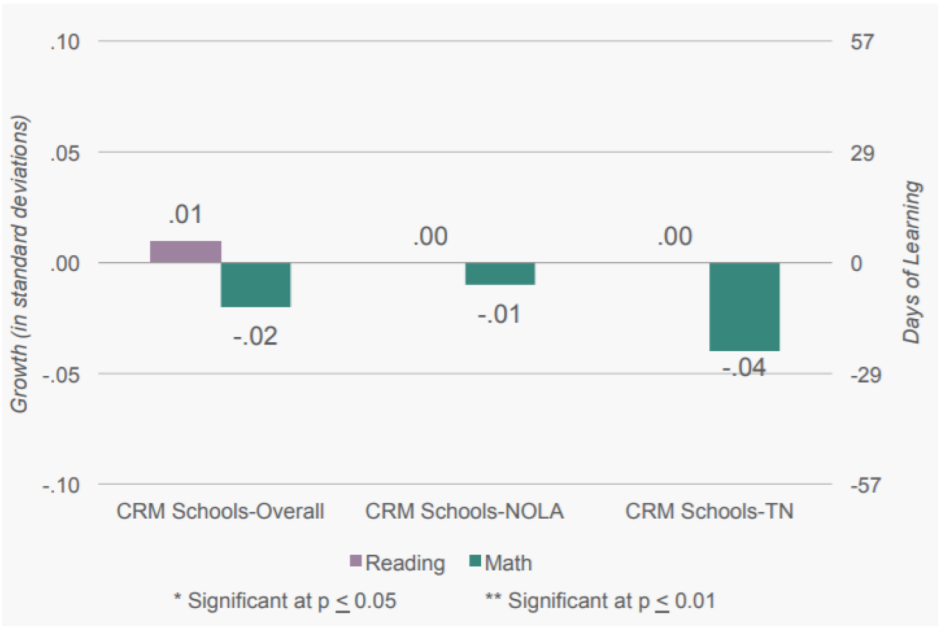


"The original aspirations for the program -- namely, that students in previously struggling schools would reach the top tiers of performance in their respective cities within five years -- were more aspirational than realistic. None of the 21 schools in the evaluation met the original targets outlined in the proposal in both reading or math. It bears noting that none of the comparison peers met the same targets either." - CREDO Press Release

Highlights and Summary of Key Points (Raymond)

Main highlight	• No overall academic performance effect **OVERALL** for students attending CRM schools relative to non-CRM students (**but there are some other positive findings**)
	• "**Over all schools and all years of study**, the student academic progress in charter restart model (CRM) schools **did not differ** from that observed in the non-CRM schools in their local ecosystems" (p. 13).

Figure 1. Relative Learning Gains of CRM Students Benchmarked Against Learning Gains of Virtual Twin Controls



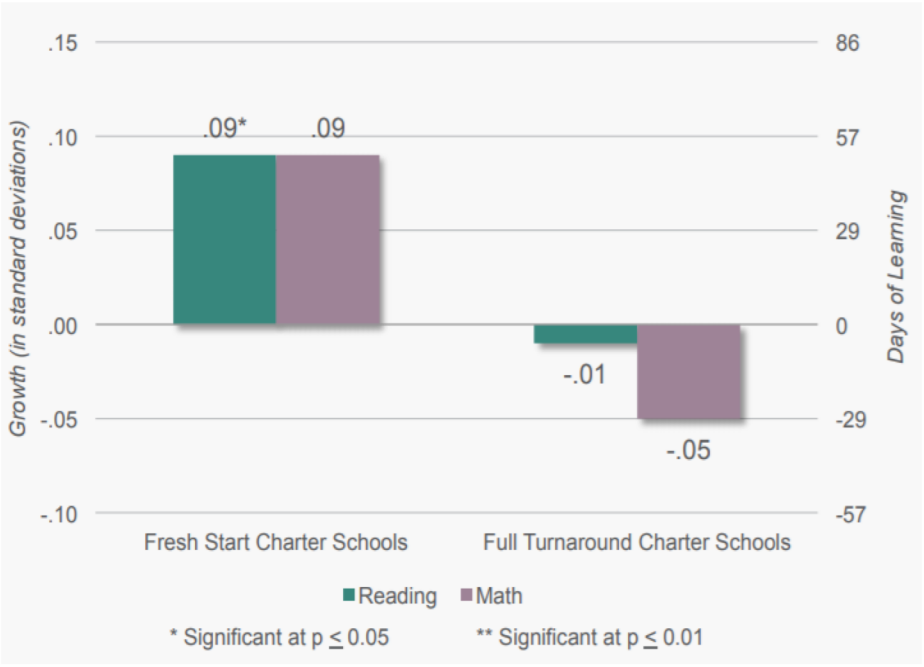
Highlights and Summary of Key Points (Raymond)

Main highlight	• **Students from Closing schools were still better off, however, when comparing to how they would have done in the Closing school (had it stayed open).**
	• Those who went to a CRM-school: "Despite the CRM schools' inability to achieve the proposed performance targets, the analysis showed incremental improvement occurred in both New Orleans and Tennessee. The CRM schools in both New Orleans and Tennessee showed significantly higher academic growth compared to the Closing schools they replaced" (p. 14). • Those who went to another non-CRM school: "…even students from Closing schools who did not attend a CRM school, but rather a different, non-CRM school, performed similarly to their matched peers, which represents an improvement relative to their Closing school's performance" (p. 14). – the point is that prior to closure students were losing ground (-0.11 read; -0.15 math), but now they are doing the same as the comparison

Highlights and Summary of Key Points (Raymond)

Main highlight	• **Fresh Start Schools had Higher Growth than Full Turnarounds.** "The first approach (Fresh) allowed for schools to grow one grade per year, while in the second approach (Full) schools took on the full range of targeted grades. Students in fresh restart CRM schools demonstrate significantly stronger academic growth in math and reading when compared to the students in full turnaround CRM schools" (p. 15).

Figure 2: Learning Gains of CRM Students Benchmarked Against Learning Gains of TPS Students-Overall



Highlights and Summary of Key Points (Raymond)

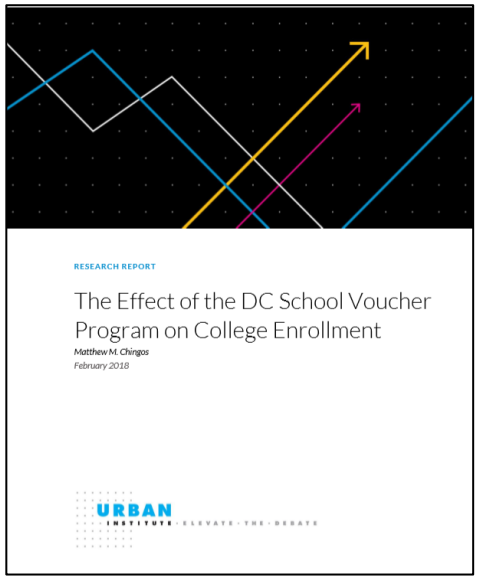
Main highlight	• **Identifying High-Quality Operators was a Challenge** • "Despite a rigorous and fine-tuned design for selection processes to identify charter operators for turnaround schools, **the selection process as implemented in New Orleans suffered a loss of integrity for a period of time**. The resulting turnaround operators from that period did not have the necessary skills, experience, and capacities to perform their roles successfully. To their credit, NSNO and RSD have revised their approach and selected stronger partners to conduct the difficult work of school turnaround in later cohorts." (p. 6)
	• **Systems-Level Support is a Needed Ingredient for Success** • "Due to the lack of a harbormaster organization, many of the systems-level interventions that were observed in New Orleans were not attempted in Tennessee. The ASD evolved over time to a compliance agent and withdrew attention from their turnaround charters to mobilize more effectively in their direct-run schools. For much of the evaluation period, ASD charters reported little benefit to their operations from ASD" (p. 7).

Highlights and Summary of Key Points (Raymond)

Main highlight	• **Managing Human Capital Pipelines and Change is a Huge Challenge** • "The **limitations of human capital pipelines** in both New Orleans and Tennessee impacted every CRM school. Principals struggled to find teachers who both fit their schools' culture and who also could produce student results....Principal turnover also plagued CRM schools" (p. 10).
	• **Amongst Operational Factors Three are Connected to Student Outcomes.** • The implementation study found that **CRM schools with local rather than non-local CMOs**, schools with lower principal turnover, and schools with less frequent board meetings, demonstrated greater learning gains for their students. (p. 11)

The Effect of the DC School Voucher Program on College Enrollment (Chingos)

What'd they ask?	• Do students who were offered a voucher to attend private schools in the District of Columbia enroll in college at higher or lower rates than students who were not offered a voucher?
How'd they do the study?	• Tracks **college enrollment** for students who applied for scholarships in 2004 or 2005 in grades 3-12, now college-age or older. Can't yet examine college graduation and success. • Control group is students who applied for a voucher but were not offered one. • Uses National Student Clearinghouse data for college enrollment and type.
Location	• Washington, D.C.
Who's in the sample?	• Among '04 and '05 applicants with baseline data (2,282) follows 1,601 students who can be tracked post-graduation at least 2 years.

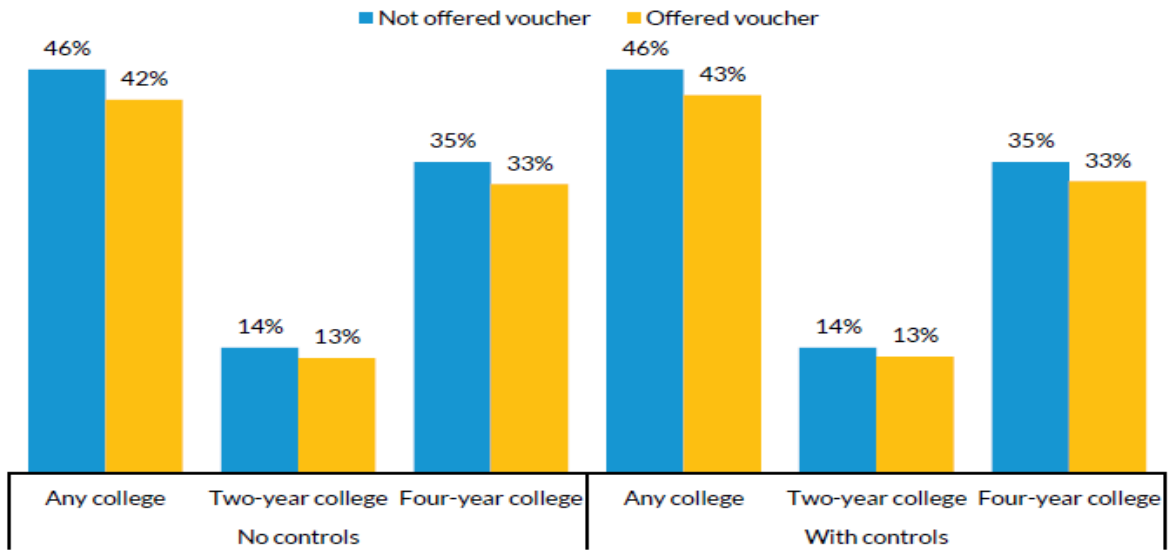


Highlights and Summary of Key Points (Chingos)

Main highlight	• **There is no significant difference in college enrollment for the voucher program (within 2 years).**
	  • Estimates are based on offer of a voucher (point of randomization), not on actual use of vouchers.
	  • Although students offered vouchers enrolled in college at slightly lower rates in Fig. 3, none of the differences are statistically significant.

FIGURE 3

Effect of OSP Voucher Offer on College Enrollment within Two Years of Expected High School Graduation



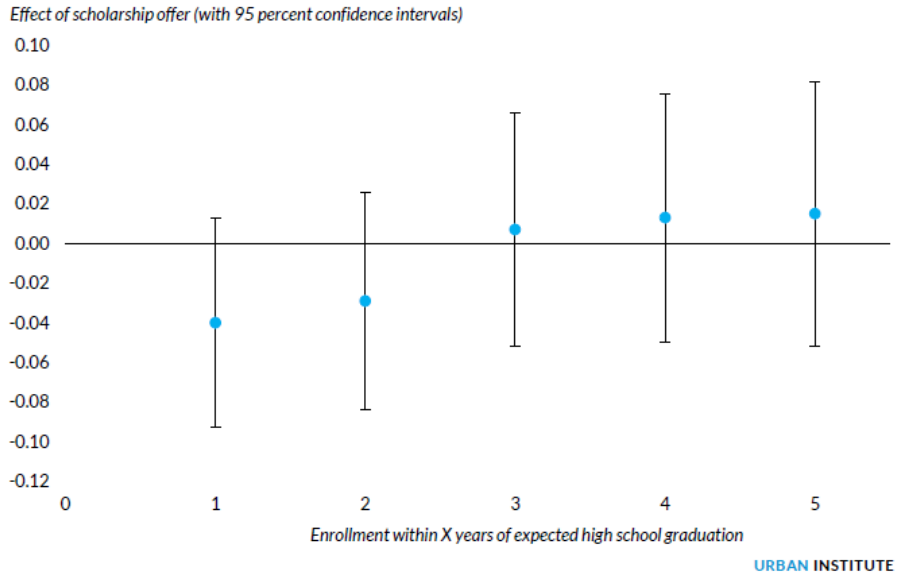
Highlights and Summary of Key Points (Chingos)

Main highlight

- **No effect of the voucher program on college enrollment (within 5 years)**
  - Chingos also examined whether college enrollment impacts differed with each year beyond high school graduation.
  - Although point estimates (blue dot) trend from slightly negative to slightly positive, none of the effects are statistically significant.

FIGURE 4

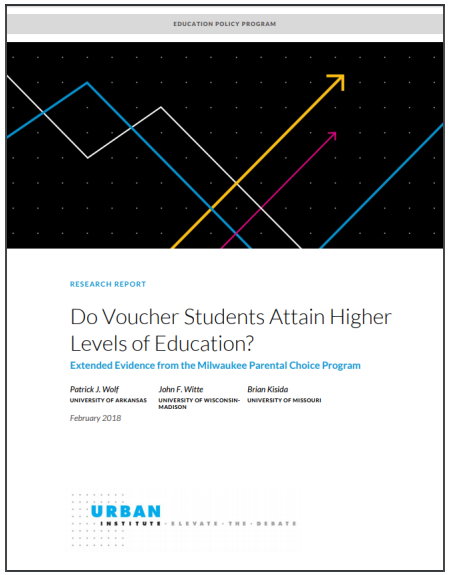
Effect of OSP Voucher Offer on College Enrollment within 1–5 Years of High School Graduation



This graph shows the yearly difference in the likelihood of enrolling in college between those offered a voucher and the control group

Do Voucher Students Attain Higher Levels of Education (Wolf et al.)

What'd they ask?	• Do students who participate in the Milwaukee Parental Choice Program (MPCP) have better outcomes (college enrollment, persistence, graduation) than similar students in Milwaukee Public Schools (MPS)?
How'd they do the study?	• The researchers conducted a quasi-experimental study that matched a representative sample of MPCP students who were enrolled in the voucher program in 2006 with a similar group of MPS students. Students were tracked over 11 years beginning in 2006.
Location	• The research included in this summary studied schools participating the MPCP and matched students in MPS.
Who's in the sample?	• All 801 9th grade MPCP students in 2006 and a matched sample of MPS students. • A random sample of 1,926 students in the MPCP in grades 3-8 in 2006 and a matched sample from MPS



"The Milwaukee Parental Choice Program (MPCP), the first modern private school choice program in the United States, has grown from 341 students attending 7 private schools in 1990 to 27,857 students attending 126 private schools today " (p. v).

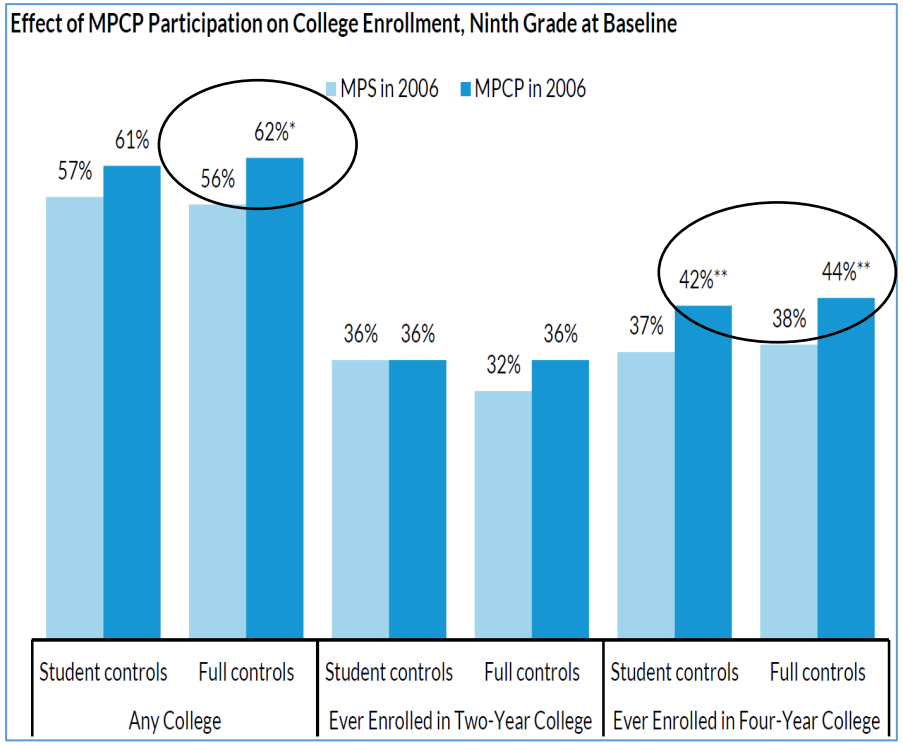
Highlights and Summary of Key Points (Wolf et al.)

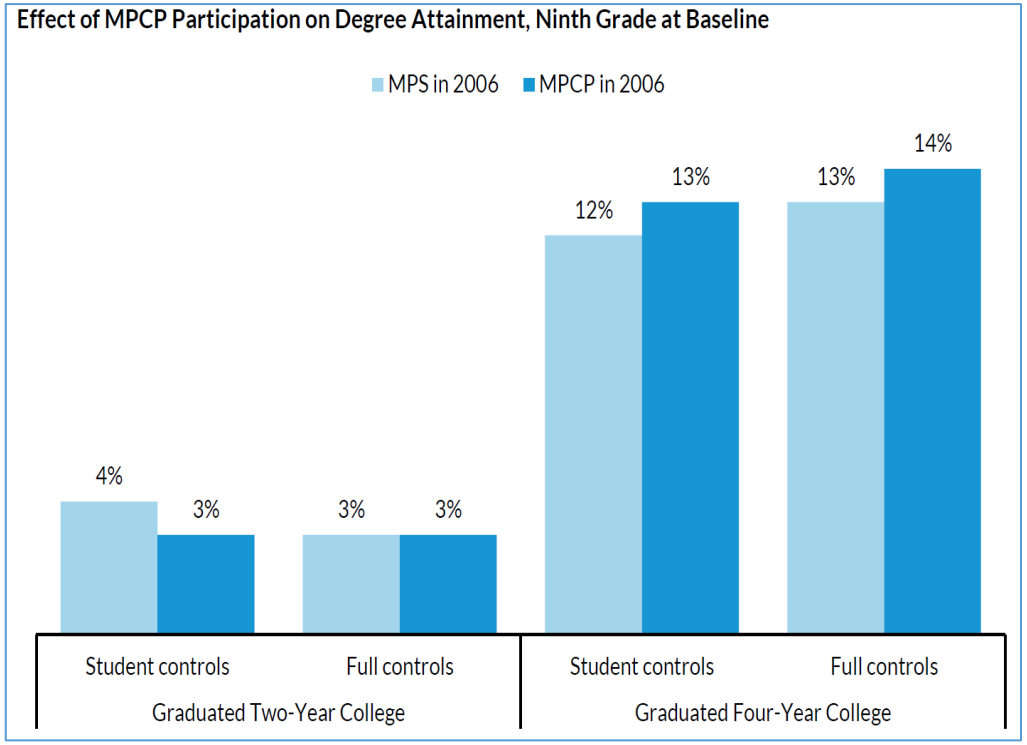
Main highlight	• **Mixed results – Some findings null and some favor voucher students**: "We find that students in the MPCP program have greater educational attainment than the comparison group. MPCP students are more likely to enroll, persist, and have more total years in a four-year college than their MPS peers. We do not find evidence that MPCP students are significantly more likely to graduate from college" (p. 2).
	• "For all students in either group, both two- and four-year college graduation rates are very low. The highest estimated rate for four-year graduation for any students is 14 percent" (p. 16).
	• "Student attainment levels may be the most consequential outcome for individual students and their surrounding communities over the long term. Students with higher levels of attainment live longer, lead healthier lives, earn more income, and avoid welfare and the criminal justice system at higher rates than their peers with lower levels of attainment" (p. 1).

Highlights and Summary of Key Points (Wolf et al.)

Main highlight

- **Higher enrollment in college for voucher students, but no difference in degree attainment**





Highlights and Summary of Key Points (Wolf et al.)

Main highlight	• **Sample 1: Ninth Grade Sample (p. 20)** • **Voucher students are more likely than MPS students to:** • Graduate high school (86% vs 79%) • Enroll in any college (62% vs 56%) • Enroll in a 4-year college (44% vs 38%) • Complete at least 1 year in a 4-year college (44% vs 37%) • **There is no statistically significant difference between voucher students and MPS students on the following:** • Enrolling in a 2-year college • Completing at least 1 year in a 2-year college • Total years spent in a 2-year college • Total years in a 4- year college • Graduating from a 2-year college • Graduating from a 4-year college

Highlights and Summary of Key Points (Wolf et al.)

Main highlight	• **Sample 2: Third through Eighth Grade Sample (p. 22)** • **MPCP students are more likely than MPS students to:** • Enroll in any college (47% vs 43%) • Enroll in a 4-year college (30% vs 25%) • Complete at least 1 year in a 4-year college (30% vs 25%) • Total years in a 4-year college (81% vs 68%) • **There is no statistically significant difference between MPCP and MPS students on the following:** • Enrolling in a 2-year college • Completing at least 1 year in a 2-year college • Total years spent in a 2-year college • Graduating from a 2-year college • Graduating from a 4-year college

How do these studies fit into the larger body of voucher research?

- Peterson and Chingos (2012): use of a privately-funded voucher in New York boosted the African-American *college-going rate* by 8.7 percentage points (24 percent), from 36.2% to 44.9%, but no significant overall impact

- Wolf (2010) findings on *high school graduation* in initial DC OSP study (+12 percentage points offer, +21 percentage points use) (so the new study reviewed above follows the students through longer but finds that there is not a college enrollment benefit.)

- Wolf (2012) found that voucher usage in Milwaukee *boosted graduation*, *college enrollment*, and *college persistence* by 4-7 percentage points. (so the new study reviewed above follows the students through longer but finds that there is not a college graduation benefit.)

- Wolf (2016) found that persistent voucher usage in Milwaukee was linked to reduced *criminal activity* through and beyond 12th grade, especially for boys.

Links

- https://futureofchildren.princeton.edu/news/charter-schools-and-achievement-gap
- http://www.uaedreform.org/downloads/2018/02/bigger-bang-fewer-bucks-the-productivity-of-public-charter-schools-in-eight-u-s-cities.pdf
- http://nolai3eval.stanford.edu/sites/default/files/downloads/CRM%20Executive%20Summary.pdf
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