

The Road to Charter School Quality Kentucky Board of Education November 2016



US Public School Choice

Public vs. Private Schooling

- 10% students attend private schools
- 80% private schools religious based

Limited use of education vouchers (<2%)

Since 1991, 44 states allow charter schools

- Independent public schools
- Revocable permits -- charter
- "Flexibility for Accountability"

Today, 6700+ charter schools, some in networks (CMOs)



Today's Questions

- How well do charter schools educate students?
- Do charter schools improve over time?
- Is the sector as a whole getting better?
- Do policy factors drive quality?
- Are CMOs a reliable path to quality?



Conclusions

- Charter schools best serve students in historically challenged communities.
- Charter school quality is set early in the operating life of schools.
- Charter sector is improving by small amounts quality is controlled and driven by authorizing.
- CMO quality is a function of flagship quality.



National **Snapshot of** Charter School Performance 2013



- Have data sharing agreements with 27 of the 44 states that allow charter schools
- Receive yearly records of all students with
 - Demographics
 - Participation in support programs
 - Scores on state accountability tests
- Focus on academic growth on tests
 - Need two successive years to create one growth measure

• Other outcomes matter but not well measured **c** credo

Study Design Virtual Control Records (VCRs)



Match Rate = 84%



Study Sample

	TPS	Feeders	Charters
Number of schools	67,817	29,797	5,068
Average enrollment per school	537	677	336
Total number of students enrolled	36,438,832	20,172,202	1,704,418
Students in Poverty	49%	54%	54%
English Language Learners	10%	13%	9%
Special Education Students	12%	11%	8%
White Students	50%	40%	35%
Black Students	15%	17%	29%
Hispanic Students	27%	34%	28%
Asian/Pacific Islander Students	5%	5%	3%
Native American Students	1%	1%	1%



Model Specification

$$\Delta A_{i,t} = \theta A_{i,t-1} + \beta X_{i,t} + \rho Y_t + \sigma S + \gamma C_{i,t} + \varepsilon_{i,t}$$
(1)

where the dependent variable is

$$\Delta A_{i,t} = A_{i,t} - A_{i,t-1}$$

And A_{it} is the z-score for student i in period t;

 A_{it-1} is the z-score for student i in period t – 1;

 $X_{\rm it}$ is a set of control variables for student characteristics and period,

Y_t is a year fixed effect,

S is a state fixed effect;

C is an indicator variable for whether student i attended a charter in period t; and

 ε is the error term.

Errors are clustered around charters schools and their feeder patterns.

c crea

(2)

National Results – Using 27 States



c credo

Subgroup Findings

Student Group	Reading	Math
White	Negative	Negative
Black	Positive	Positive
Hispanic	Similar	Similar
Asian	Similar	Negative
Students in Poverty	Positive	Positive
English Language Learners (ELL)	Positive	Positive
Special Education	Similar	Positive



Impacts by State

Reading State Charter Impacts



Math State Charter Impacts





National Impact of Urban Charters - Reading



National Impact of Urban Charters - Math

ALL REGIONS ALBUQUERQUE ATLANTA AUSTIN BAYAREA BOSTON CENTRAL CA CHICAGO CLEVELAND COLORADO SPRINGS COLUMBUS DALLAS DC DENVER DETROIT EL PASO FORT MYERS FORT WORTH HOUSTON INDIANAPOLIS JACKSONVILLE LAS VEGAS MEMPHIS MESA MIAMI MILWAUKEE MINNEAPOLIS NASHVILLE NEW ORLEANS NEW YORK CITY NEWARK ORLANDO PHILADELPHIA PHOENIX SAN ANTONIO SAN JOSE SOUTHERN CA STLOUIS ST PETERSBURG TAMPA TUCSON WEST PALM BEACH



What Makes Good Charter Schools?

Where are Charter Schools Working Well?

- Strong performance in urban areas
 - Strong human capital systems
- High impacts with minorities and poverty students
- Double-impact with minority-poverty
- Double impact with minority English Learners
 - New blend of culture and focused instruction
 - Opportunity for knowledge transfer





Do Charter Schools Get Better Over Time

Study Approach

What happens to quality as schools mature?

- Examined first growth period for 912 charter schools
- Divided first year observations into 5 Quintiles of Quality
- Held quintile boundaries constant and watched schools grow up



1-Year Conditional Probabilities

	If the school's starting quintile is:									
	Ç	21	ç	22	Ç	23	Q4		Q5	
	In which quintiles does the school appear the following year?									
Age of School	1-2	3-5	1-2	3-5	1-2	3-5	1-2	3-5	1-2	3-5
2	0.66	0.33	0.41	0.60	0.22	0.78	0.13	0.87	0.08	0.92
3	0.72	0.29	0.46	0.54	0.27	0.74	0.14	0.87	0.05	0.95
4	0.77	0.23	0.50	0.51	0.22	0.79	0.09	0.91	0.05	0.95
5	0.74	0.26	0.59	0.40	0.27	0.73	0.15	0.86	0.04	0.95
6	0.80	0.19	0.51	0.49	0.23	0.77	0.09	0.91	0.06	0.94
No. of Schools	921									

Early signals of quality, both high and low, are consistent predictors of quality over time.

*Results shown are for math.



2-Year Conditional Probabilities

	If the school's starting quintile is:									
	Ç	21	Ç	2 2	Ç	23	Q4		Q5	
	In which quintiles does the school appear the following year?									
Age of School	1-2	3-5	1-2	3-5	1-2	3-5	1-2	3-5	1-2	3-5
3 - 4	0.82	0.19	0.74	0.26	0.20	0.80	0.15	0.84	0.00	1.00
4 - 5	0.85	0.15	0.73	0.28	0.18	0.82	0.09	0.91	0.03	0.97
5 - 6	0.91	0.10	0.65	0.35	0.23	0.76	0.08	0.92	0.02	0.99
6 - 7	0.84	0.15	0.56	0.44	0.19	0.82	0.05	0.96	0.04	0.97
No. of Schools	577									

Quality becomes even more consistent when viewed over a two-year time span.

*Results shown are for math.



Is the Charter Sector Improving?

2009 Results Using 16 States





Where Does Change Happen?



16 States-Results

Overall Charter Improvement -- Reading





Focus on CMOs

How does attendance in a CMO affiliated school compare to an independent charter?



Students who attend CMO affiliated charter schools had stronger growth in math but weaker growth in reading than those who attend non-CMO affiliated charter schools. All charter schools do better that TPS in reading but lag in math.



Replication Success by Year



Conclusions

- Charter school sector has improved since 2009.
- Some improvement driven by individual schools getting better, but larger gains come from closures.
- Significant benefit for disadvantaged students.
- Same variation in quality applies to CMOs.
- State policy / Authorizer performance matters!!







Thank You

Implications

Alternative Charter School Closure Scenarios

Sc	enario	Reading	Math
А	Growth Less Than -0.4 Standard Deviation Units	70	100
В	Significantly Lower Growth Than TPS	667	1,046
С	Bottom 10% of Schools By Growth and Quality Level	342	338
D	Achievement Less than -0.4 Standard Deviation Units	475	589
Е	Bottom 10% of Achievement	342	338



Implications

Simulated Charter Impacts Based on Closure Scenarios- Math



