



PERFORMANCE OF CHARTER SCHOOLS COMPARED WITH TRADITIONAL PUBLIC SCHOOLS

DECEMBER 16, 2015

Dr. Robert J. Rodosky, Executive Director

Department of Accountability, Research and Planning

Jefferson County Public Schools

EXECUTIVE SUMMARY

SCOPE AND RATIONALE

This report reviews charter schools compared to traditional public schools in four distinct sections including: (1) an overview of charter school structures, policies, growth, and debate across the U.S. to provide background and context, (2) a detailed review of the empirical literature comparing performance outcomes of charter schools with traditional public schools on students served, achievement, postsecondary success, school climate and behavior, and organizational viability, (3) a discussion of best practices as well as challenges across public education (charter and traditional), and (4) a general conclusions drawn from the collective body of research and policy.

Our purpose is to inform ourselves more fully in order to make the best decisions possible for our students and community on how our public schools should operate.

WHAT ARE CHARTER SCHOOLS?

Charter schools operate as alternatives to traditional public schools in many states. Charter schools across the nation are held to the following criteria (Cunningham, 2013; USED, 2014):

- public school open to all children,
- tuition free,
- state law must be enacted to develop charter schools,
- “chartered” (contract) and monitored by state-determined authorizer (s),
- bound by a charter (performance contract) with an authorizer,
- receive some funding from state and/or district based on student enrollment numbers,
- held to same federal laws of accountability and anti-discrimination as traditional public schools.

WHAT DO WE KNOW ABOUT CHARTER SCHOOL PERFORMANCE RELATIVE TO TRADITIONAL SCHOOLS?

Students Served

Key Questions. Do charter schools and traditional schools serve students in various subgroups in different ways? Of special education students in particular, do charter schools serve more (or less) students with certain types of disabilities, and do charter schools provide the same types of services to these students?

Conclusions. Lottery-based schools, and smaller individual charters, may serve fewer students in need relative to traditional public schools, especially students with disabilities and English language learners. Larger charter schools, particularly those operated by CMOs and required by law, have shown higher enrollments of minority and low-income students. Students with special needs and English language learners do not enroll in charters as frequently overall as traditional public schools. The research reviewed here suggests that charter school structure, charter laws, and demographic composition of the city in which schools reside does impact the extent to which schools enroll a diverse student population.

Achievement

Key Questions. Overall, how do students perform academically in charters compared with traditional public schools? Is the performance of charter students in different subgroups (e.g., minorities, low-income, special education) higher, lower, or similar to those in traditional public schools?

Conclusions. Overall performance is inconsistent across districts and states based on several comprehensive studies we reviewed. The CREDO (2013) study on 27 states found significantly higher performance in math but less consistent performance for reading; the Betts and Tang (2014) meta-analysis summary of 52 individual studies found more consistently positive results for reading and few significant results for math. The CREDO (2013) study and Betts and Tang (2014) both did consistently report more positive findings for specific subgroups (e.g., black and ELL students); conversely, they found more negative results for white and Asian students in charter schools. However, the reasons for such differences between subgroups are not clear based on these studies. Part of these inconsistencies can be attributed to differences in research methodologies, but a larger factor simply is differences between charter schools and between district and state laws and policies under which they operate. We are never truly comparing apples-to-apples.

Postsecondary Success

Key Questions. (1) Do these students graduate from high school at higher rates?, (2) how many charter students go on to college compared to traditional public school students?, (3) of students who attend college, how many persist to graduation?, and (4) are these students able to find employment?

Conclusions. Collectively, the six available studies on this issue show a slight (not always statistically significant), positive trend for students graduating from charter schools. This statement must be balanced with the fact that this research covers a small number of charter schools primarily from two states. In addition, the studies do not contribute substantially to the overall picture - three studies found support for higher graduation rates, but the remaining three did not show significantly higher graduation rates among charters. One study showed higher college enrollment, one did not, and one study showed mixed results.

School Climate and Behavior

Key Questions. (1) Do students show more or less behavior incidents (e.g., disruptive behavior, unexcused absences, fighting)?, (2) do students show higher or lower rates of attendance?, (3) do charter schools suspend or expel students (or in specific subgroups) at similar rates?, (4) do students persist in charter schools over time?, and (5) how do students and families perceive charter school environments?

Conclusions. Overall, we are left with far more questions than answers about how students behave and are treated in charter schools based on five small studies. The limited data available presently suggests that student behavior does not show significant differences between charter and traditional schools in number of absences, incidents, and suspensions. Conversely, students seem to exit charter schools more frequently than traditional schools based on attrition rates in several school districts. Families of accepted charter students in some middle schools seem more satisfied compared to those not accepted, even when student achievement outcomes were lower.

Organizational Viability

Key Questions. (1) Do charter schools differ from traditional schools in terms of size (e.g., enrollments, individual class size)?, (2) do charter schools and organizations differ in number and type of staff employed?, and (3) do charter schools implement different practices (e.g., pupil spending, financial focus, teaching) compared to traditional schools?

Conclusions. Charter schools tend enroll fewer students than traditional schools overall; however, class sizes are not significantly and meaningfully lower. Charter schools vary considerably in staff positions employed, such as number of central office staff to school staff.

ARE THERE PRACTICES ASSOCIATED WITH GREATER SUCCESS IN CHARTER SCHOOLS AND TRADITIONAL SCHOOLS?

What Works in Schools? Research-Based Best Practices	
School-Level	Classroom-Level
✓ Strong, consistent leadership	✓ Use of data to guide and revise instruction
✓ Specific, achievable goals (SMART)	✓ Frequent teacher feedback
✓ Systems-approach	✓ Increased instructional time
→ best practices (e.g., business/financial, academic, needs assessment)	✓ High-dosage tutoring
→ regular, high accountability system-wide for adults and students	✓ High expectations for academics and behavior
→ strong processes	
→ transparency	
✓ High student/family engagement	

SUMMARY AND CONCLUSIONS

- Charter schools vary considerably across districts and states in terms of funding, extent of implementation, teacher preparation, and organizational management – all due to differences in charter laws per state.
- Charter school performance presents some evidence of success but an *almost equal number* of studies showing no differences, or lower performance, on measures of students served, academic, postsecondary, student behavioral, and organizational success.
- Conclusion 1: Charter schools do not show sufficient and consistent evidence of success worthy of implementing the significant changes necessary to bring about a separate system, particularly in a highly constrained budget environment.
- Conclusion 2: Organizational practices of successful charter schools and traditional public schools, some of which we already implement, could be scaled up system-wide.

TABLE OF CONTENTS

EXECUTIVE SUMMARY	i
Scope and Rationale.....	1
What are Charter Schools?	2
Why Does Debate Persist?	5
Dissatisfaction and Political Climate	5
Inconsistent Outcomes	6
Expectations and Implicit Assumptions	7
What Do We Know About Charter School Performance Relative to Traditional Schools?	7
Students Served	8
Achievement	13
Postsecondary Success	23
School Climate and Behavior	26
Organizational Viability	29
Are There Practices Associated with Greater Success in Charter Schools and Traditional Schools?	29
Research on Best Practices	30
What Works for Schools and Students?	30
Summary and Conclusions.....	32
Charter Organizational Structures across States	32
Charter School Performance across States	32
Best Educational Practices	32
Policy Considerations and District Choices	33
Conclusion and Position on Charter School Implementation	35
Bibliography	36

LIST OF TABLES

Table 1. General Requirements and Restrictions on Charter Schools for Major Policy and Business Practice Areas	4
Table 2. Estimates of public charter schools evaluated in empirical research and performance areas reviewed	7
Table 3. Possible reasons and evidence for enrollment differences in students with disabilities	12
Table 4. Summary of significant results for charter impacts by student groups (Source: CREDO, 2013; Figures 29 through 41 and Tables 18 and 19).....	16
Table 5. Summative conclusions on effect size differences and statistical significance ($p < .05$) per subgroup for math and reading achievement (Source: Betts and Tang, 2014; Table 6 summary).	18
Table 6. 2003 4th grade NAEP assessment results for district affiliated charter and independent charter schools compared to traditional public school district (PSD).	21
Table 7. Six studies: Educational attainment rates of charter students compared with traditional students.	25
Table 8. Key Research-Based Practices that Improve Schools and Students	31

LIST OF FIGURES

Figure 1. Number of new U.S. charter schools between 2006-07 through 2012-13 (Source: Chart from November 3, 2014 issue of U.S. News and World Report based on NCES data).....	3
Figure 2. Gleason et al. 2010 studies: Race/ethnicity of all charter study applicants, charter admitted students, and non-admitted students.	9
Figure 3. Scott, 2012: Percent of students with disabilities enrolled in traditional public schools and charter schools by disability type for school year 2009-10 from GAO analysis.....	11
Figure 4. Number of charter schools that performed better, worse or no different from comparison traditional public schools in reading. (Source: Figure 27, CREDO, 2013; adapted with dashed line)	14
Figure 5. Number of charter schools that performed better, worse or no different from comparison traditional public schools in reading. (Source: Figure 28, CREDO, 201; adapted with dashed line)	15
Figure 6. Charter school and non-charter school achievement results for NAEP and for AYP (Source: National Alliance for Charter Schools).	21

SCOPE AND RATIONALE

This report reviews charter schools compared to traditional public schools in four distinct sections including:

Section 1 - Overview of charter school structures, policies, growth, and debate across the U.S. to provide background and context,

Section 2 - Detailed review of the empirical literature comparing performance outcomes of charter schools with traditional public schools on students served, achievement, postsecondary success, school climate and behavior, and organizational viability,

Section 3 - Discussion of best practices as well as challenges across public education (charter and traditional),

Section 4 - General conclusions and position based on the collective body of research and policy.

Why did we undertake this report given the volume of other available sources (research-based and otherwise)? Our purpose is simple – to provide a single source with information on charter models and policies, available research on charter school impact across districts and states, and a synthesis of key practices shown to move students forward. We set out to inform ourselves more fully in order to make the best decisions possible for our students and community on how our public schools should operate. We try to be comprehensive and fair in this report by including positive and negative evidence for charter schools, especially when reviewing empirical research. However, we do not assume that we have successfully covered every possible study, report, or angle.

Charter school performance outcomes included in Section 2 come only from research-based studies and technical reports. In particular, several seminal research reviews served as primary sources because they applied comprehensive (meta-analytic) statistical techniques to assess performance of multiple charter schools in many districts and states.

In Section 3, the report attempts to examine common, underlying factors that may lead to success or failure of various organizations and schools (charter or traditional public schools). We highlight practices that research suggests are most beneficial at school/organizational and classroom levels which have the greatest likelihood of helping students to be more successful.

Our review has helped us to be more informed, weigh the evidence, and define our position. In Section 4, we describe this position, point to key pieces of evidence that led us to this conclusion, and pose questions for policy consideration.

WHAT ARE CHARTER SCHOOLS?

Charter schools operate as alternatives to traditional public schools in many states. While several definitions of “charter school” exist, the following definition highlights common characteristics.

A charter school is a publicly funded school that is typically governed by a group or organization under a legislative contract (or charter) with the state or jurisdiction. The charter exempts the school from certain state or local rules and regulations. In return for flexibility and autonomy, the charter school must meet the accountability standards stated in its charter...[which is] reviewed periodically by the group that granted it and can be revoked if ... standards are not met.

– National Center for Education Statistics (NCES), 2014b.

Charter schools across the nation are held to the following criteria (Cunningham, 2013; USED, 2014):

- public school open to all children,
- tuition free,
- state law must be enacted to develop charter schools,
- “chartered” (contract) and monitored by state-determined authorizer (s),
- bound by a charter (performance contract) with an authorizer,
- receive some funding from state and/or district based on student enrollment numbers,
- held to same federal laws of accountability and anti-discrimination as traditional public schools.

The charter school movement in the United States has expanded across a 20 year period with substantial growth in the last ten years in particular. In 1994, congress enacted the first federal charter school grant program. By 2006, 40 states and the District of Columbia held charter school laws (Consoletti & Allen, 2007). Currently, 42 states and the District of Columbia have enacted charter laws (NCES, 2014a).

Figure 1 depicts the increase in public charter schools across seven years based on a recent national review of schools models (NCES, 2014). On average, the opening of new charter schools has increased at a rate 6.6% per year over this period. Given the rate of increase per year in Figure 1, we can estimate that the number of public charters in operation by the end of 2014-15 will be approximately **6,908** with an enrollment of over **2.5 million** students. Still, charter school options and student enrollment only comprise **6%** of the approximately **98,454** public schools in the U.S. currently (NCES, 2014).

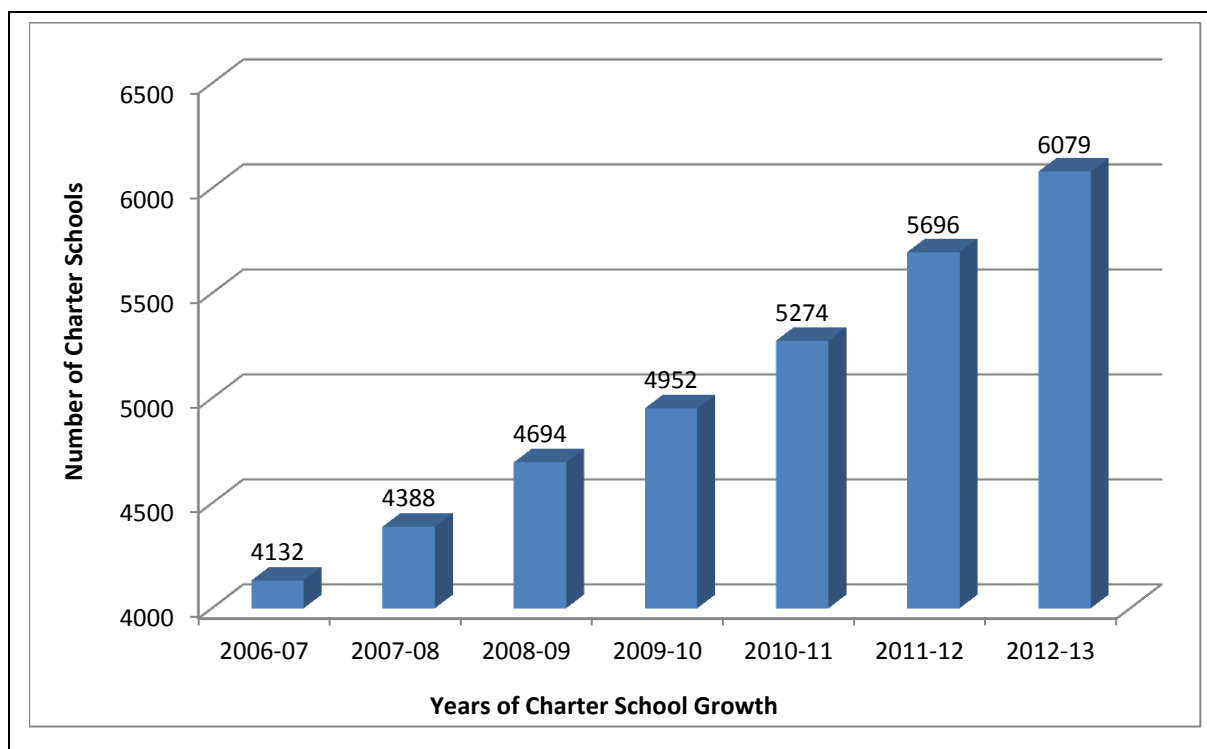


Figure 1. Number of new U.S. charter schools between 2006-07 through 2012-13 (Source: Chart from November 3, 2014 issue of U.S. News and World Report based on NCES data)

While all of these charter schools nationwide follow basic criteria, various models exist that differ in organizational structure, mission, policies, and funding sources within each state. The landscape largely has been complicated by enormous variability in state and local laws specifying who can implement charters, how charters receive funding, and how many can operate simultaneously. **Error! Reference source not found.** below presents general policy and business practice categories for requirements and restrictions on how charters open, fund, and maintain schools. Columns 2 and 3 of **Table 1** reflect a synthesis of information and data presented in several different sources (Cunningham, 2013; Miron and Gulisano, 2013; NAPCS, 2014, January; NCES, 2014a).

Table 1. General Requirements and Restrictions on Charter Schools for Major Policy and Business Practice Areas

Major Areas of Policy and Business Practice	Requirements and Restrictions	Some State Facts
Authorizers	<ul style="list-style-type: none"> ▪ Determined by state law ▪ Review charter applications, establish charter contract, monitor performance/compliance ▪ Most common authorizers include <ul style="list-style-type: none"> - State education agency or board - Local education agency or board - Independent entity (e.g., university, charter board, municipality) 	
Charter Applicants	<ul style="list-style-type: none"> ▪ Must be non-profit ▪ Most common applicants to start charter schools <ul style="list-style-type: none"> - Local education agency or board - Community members (e.g., parents, teachers, business leaders) - Service organization - University or center 	
Funding Sources and Formulas	<ul style="list-style-type: none"> ▪ Per-pupil spending <ul style="list-style-type: none"> - May be set in state law or in contract with authorizer - State and/or local funding formula types include: <ul style="list-style-type: none"> ✓ a <u>portion</u> of state/district per-pupil funds goes to charters ✓ <u>fixed</u> amount statewide goes to charters (irrespective of districts) ✓ <u>same</u> amount of per-pupil funds as district goes to charters ▪ Start-up costs <ul style="list-style-type: none"> - Federal funding through Title V-B-1 under ESEA (nonprofits only) - Acceptance of state and local funding depends on laws ▪ Operating and facility costs <ul style="list-style-type: none"> - Federal funding through Title V-B-2 under ESEA (nonprofits only) - State direct funding (bonds, grants) depending on laws - Local funds contributed depending on laws from: <ul style="list-style-type: none"> ✓ private donors ✓ private loans ✓ portion of per-pupil allocation 	<p>15% Average revenue reduction relative to traditional schools</p> <p>Percent of states using formulas</p> <p>20% Portion</p> <p>68% Same</p> <p>12% Fixed</p>
Caps	<ul style="list-style-type: none"> ▪ Limits per year in some states by law on <ul style="list-style-type: none"> - total charters in operation - new charters (compared to conversion charters) - years of operation pending performance or available funding - number of schools per single authorizer - number of students per charter 	<p>35 Number of states that apply caps</p>
Teachers	<ul style="list-style-type: none"> ▪ Certification requirements vary per state depending on law ▪ Compensation structures most frequently are based on <ul style="list-style-type: none"> - years of service, level of education - school need (specific skill, qualification, location) - student performance ▪ Collective bargaining rights are less common in charters across states 	<p>Certified teachers in charters</p> <p>14 States require of ALL teachers</p> <p>24 States require of SOME teachers per school</p> <p>5 States do NOT require any</p> <p>72% States exempt charters from collective bargaining</p>
Management	<ul style="list-style-type: none"> ▪ Day-to-day business operations managed by applicant or other non-profit or for-profit under contract with applicant ▪ Federal grant funds cannot be used for day-to-day management of individual schools 	<p>Non-profit vs For-profit management</p> <p>201 Number of non-profit EMOs</p> <p>97 Number of for-profit EMOs</p>

Sources: Cunningham, 2013; Miron and Gulisano, 2013; NAPCS, 2014, January; NCES, 2014a

Several features of **Error! Reference source not found.** warrant further explanation.

1. As noted under Column 2-Row 2, only non-profit agencies can apply for federal charter grants (Title V-B-1 and Title V-B-2 funds under ESEA) administered by the Secretary of Education to begin a charter school (USED, 2014)¹. Most frequently, state education agencies (SEA) make applications for federal funds; depending on charter laws within a state, a charter school developer structured as a non-profit agency (e.g., local education agency; groups such as teachers, administrators and other school staff, parents, or other members of the local community) also may apply directly for funds to initiate charter schools (Skinner, 2014; USED, 2014).
2. While non-profits are the only agencies eligible to receive federal funding, hold a charter, and monitor accountability, these agencies can enter into contracts with other groups (including for-profits) to operate and manage a charter school on a day-to-day basis (USED, 2014). Column 3 in Table x shows that non-profit education management organizations (EMOs) are more prevalent overall than for-profits, although for-profits operate in much higher numbers in certain states, such as Michigan, Arizona, and Florida (Miron and Gulosino, 2013).
3. Regarding funding, per-pupil dollar amounts reflect a combination of state dollars and district-level dollars gained from property tax revenue and/or other local tax sources. These per-pupil funds go with the student to the charter school in varying amounts depending on state law. The majority of states (68%) require districts to provide charters with the same level of per-pupil funding as given to local traditional public schools. States that require fixed amounts across charters per student generally fund at lower levels relative to traditional district schools (Cunningham, 2013).
4. In contrast to traditional public schools, some charter schools do not require teachers to hold a degree from a teacher preparatory program or formal certification through a state-authorized credentialing agency. Only 14 states with charter laws require all teachers working within charter schools to hold certification, while the remaining 29 states only require some portion of teachers, or no teachers at all, working in charter schools to be certified.

The degree of differences between state laws and charter school models clearly can be overwhelming and confusing. This circumstance has fueled strong debate over whether charter schools are a reasonable alternative to traditional public schools. In the next section, we examine issues around this debate.

WHY DOES DEBATE PERSIST?

Three different circumstances primarily contribute to interest in, and debate around, charter schools: (1) dissatisfaction with traditional schools by parents and lawmakers, (2) inconsistent research outcomes on charter effectiveness, and (3) misinformation and sometimes flawed assumptions. We present background and context around these issues.

Dissatisfaction and Political Climate

As noted by researchers, policy organizations, and the federal government, achievement trends in public education have remained relatively flat across states for approximately 50 years (e.g., Boser, 2014;

¹ Title V-B-1 funds are intended to support planning, program design, and initial implementation of charter programs, and Title V-B-2 funds are intended to support facilities acquisition, construction, and renovation.

Coulson, 2014; Haskins, 2006; Jennings, 2012; National Commission on Excellence in Education, 1983). These reports are used as evidence by lawmakers and policy groups to demonstrate need for reform, particularly for school choice and charter school options. Parents and lawmakers alike have sought alternatives to traditional school models with the expectation that these alternatives will increase student performance through greater options and autonomy over curriculum, school environment, and spending decisions (Public School Review, 2008).

In addition, some federal efforts at improving public education trends largely have been met with criticism and distrust at the state and community levels. For example, the No Child Left Behind Act of 2001 was intended to push states to improve opportunities and fairness for all students through better accountability procedures, more rigorous content expectations, and consequences for schools who do not meet requirements. While most of these actions were put in place across states, student outcomes have not shown dramatic increases that were projected, and states have been left with unwieldy accountability systems disproportionately focused on yearly state assessment results. In 2010, state chiefs, along with the National Governor's Association and a several national education organizations, attempted to get in front of speculated changes to NCLB by Congress that potentially would mandate federal standards by developing their own set of common standards that states could voluntarily implement. These standards, also known as the Common Core State Standards by the Council of Chief State School Officers, were intended to provide a basic but shared framework of content expectations around which teachers could expand and align their own curriculum. Most states initially were on board quickly in order to retain some level of local control, but this support has dwindled in some sectors and become a political hot button with the increased perception that common standards are an imposition. These perceptions and public mistrust in traditional education approaches have contributed to interest in alternative education models, such as charter schools.

Inconsistent Outcomes

The substantial increase in charter schools across the U.S. would seem to bring greater clarity to the question of whether these models “work better” than traditional public schools because there are now more schools to study. However, a number of issues make deriving a single conclusion on charter school efficacy very difficult. First, the growth of charter schools has outpaced research on their effectiveness. Thus, much of public knowledge and opinion is based on information reported in the media and by policy organizations rather than on empirical data. Second, while solid empirical studies do exist, these have been balanced with other studies that suffer from weak methodological approaches and incomplete data, as noted by Betts and Tang (2014). Third, a disproportionate number of charter schools have been established at the *middle school level* and in *urban districts*, which means that the majority of research studies also have been focused on middle schoolers in large cities. For all of these reasons, the empirical literature on charter schools has been plagued by several persistent issues common to many areas of social science research: (1) challenging and varied methodologies leading to concerns over research quality, (2) incomplete and incomparable data, and (3) differential performance by achievement area, school level, student group, districts, and states.

The complexities (e.g., differences in school size, student populations, curriculum, assessments, policies and laws, years of operation, charter organizational structure) inherent in developing unambiguous research challenge the ability to draw clear conclusions about effectiveness of the “charter model”. As a result, making broad inferences about charter outcomes, even when they are valid, reliable, and statistically significant, often is inappropriate. All of these issues in conducting sound research on charter school efficacy lead to inconsistent outcomes. Incongruent results have contributed to emotional, politically charged debates.

Expectations and Implicit Assumptions

The combination of frustration with progress in traditional public schools and inconsistent research outcomes has contributed to enduring perceptions and sometimes contradictory arguments about charter schools. One of the most common assertions can be summed up as follows:

The main argument initially offered for creating charter schools focused on a desire to create greater flexibility for innovation within public education. It was hoped that successful innovations could be adapted to benefit public education more broadly.

- National Education Association, Charter Schools 101

The argument has been that requirements imposed on schools by federal, state, and local education laws and policies inhibit their ability to best serve students and to be innovative in practice in ways that will truly improve academic success. Removing these restrictions at the school-level and allowing teachers and leaders more flexibility would directly contribute to students' academic progress. This perspective is aligned with a "value-added" approach (CREDO, 2013)². As research outcomes presented later will show, support for this assumption has been mixed, especially if practices implemented are not research-based.

These issues underscore an important theme that will be reiterated frequently throughout this paper – conclusions about whether charter schools are a good idea always must be evaluated within the context of: (1) the specific variables under study, (2) implemented laws and policies, and (3) political/public climate. Thus, it is nearly impossible to produce a single "yes" or "no" answer as to whether charter schools are effective or appropriate for all districts and states.

WHAT DO WE KNOW ABOUT CHARTER SCHOOL PERFORMANCE RELATIVE TO TRADITIONAL SCHOOLS?

Given these qualifications, can we identify any aspects of charter schools that consistently function better or worse compared to traditional public schools? In this section, we examine some of the more recent empirical studies of charter schools across states in effort to synthesize statistical trends.

To date, approximately 60 peer-reviewed research studies exist on charter school performance. **Table 2** reflects *estimates* of the scope of these studies based on a literature review. The majority of individual studies analyzed in these reviews are based on data collected between 2006 and 2013 – the years in which states have seen the largest growth in charter school implementation.

Table 2. Estimates of public charter schools evaluated in empirical research and performance areas reviewed

31	States (and District of Columbia)
220	Districts
4500	Schools
97	For-profits
201	Non-profits

² "Value-added" refers to the impact of a factor directly on performance independent of other possible influences (Chetty, Friedman, and Rockoff, 2013).

These studies have spanned a number of states, districts, and schools operating under for-profit or non-profit business models via management organizations or independently.

Several research reviews have applied meta-analytic techniques to look at outcomes based on “effect size” across a series of individual studies. Meta-analysis has been referred to as “conducting research on previous research” (Greenland and O’Rourke, 2008). In brief, applying one of several common meta-analysis methods helps to hone in on the question “How much better or worse?” by analyzing these sets of studies together to reveal significant patterns across all of the data. As a result, the differences between tests used, students included, years of data available, and so on have less of an impact so that more accurate estimates of performance can be measured. Conclusions based on meta-analysis often are statistically stronger than analysis of single studies because this method pools the number of participants and impacts. A more detailed, technical description of meta-analytic statistical techniques can be found in several sources (e.g., Borenstein, Hedges, Higgins, and Rothstein, 2009; Psychological Science, 2012).

Key outcome measures evaluated across the majority of research studies include student achievement, diversity, and behavior as well as fiscal viability of schools. We review findings per outcome based on several major studies³.

Students Served

Although achievement tends to be the factor of most interest to stakeholders and studied most frequently by researchers, we begin with an examination of *who* attends charter schools because findings on student success must be explained within the context of school enrollment composition regardless of school type.

Two key questions on students served include: (1) how are students admitted to charter schools compared with traditional public schools?, and (2) do charter schools and traditional schools serve students from different races/ethnicities, socioeconomic backgrounds, and with varying special needs in the same ways? Further information on achievement and behavior outcomes by student characteristics will be discussed under those later sections.

Race/Ethnicity and Poverty

Several studies have examined characteristics of different student groups relative to traditional public schools. A 2010 study commissioned by the Institute of Education Sciences (IES) with a focus on lottery-based charter schools (36 middle schools across 15 states) reported on characteristics for student applicants and students admitted compared to those not admitted (Gleason, Clark, Tuttle, and Dwyer, 2010). **Figure 2** presents race/ethnicity characteristics of student applicants, admitted students, and non-admitted students for the charter middle schools analyzed.

³ Several university centers and independent research groups regularly contribute primary research or reviews of research on charter school impact. These organizations include: Center for Reinventing Public Education (University of Washington-Bothell); National Education Policy Center (University of Colorado-Boulder); Center for Research on Education Outcomes (Stanford University); Mathematica Policy Research; National Bureau of Economic Research.

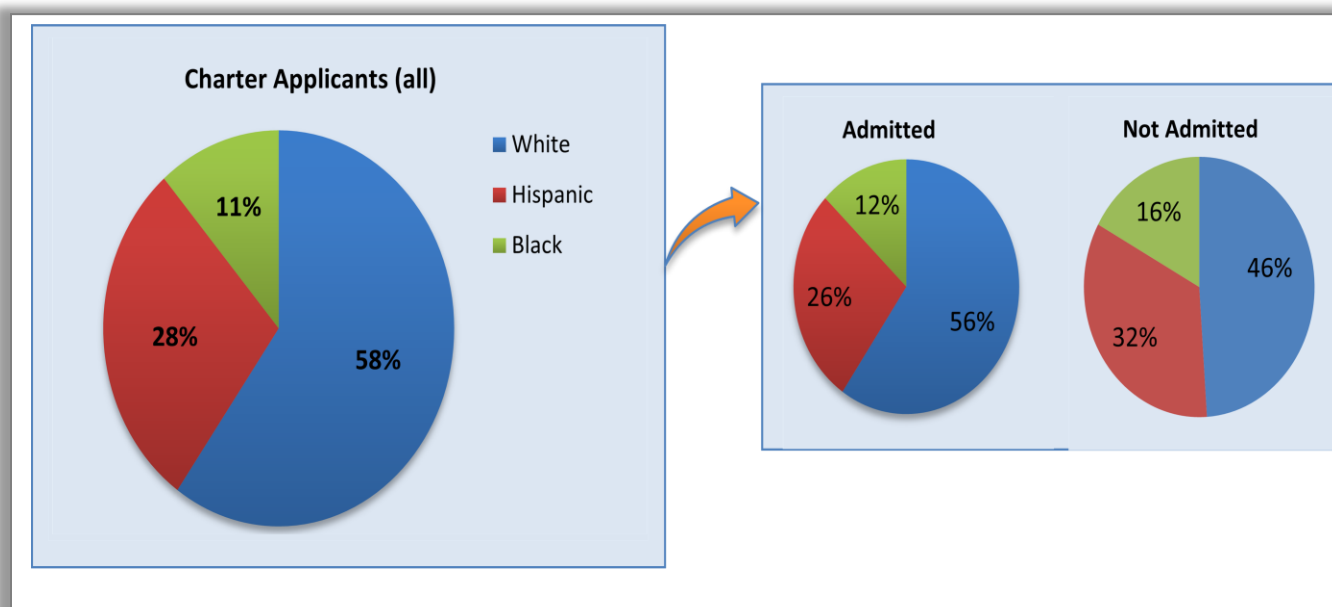


Figure 2. Gleason et al. 2010 studies: Race/ethnicity of all charter study applicants, charter admitted students, and non-admitted students.

The only other characteristic available across schools and students analyzed in the Gleason et al. 2010 study included free-reduced lunch status (Admitted to charter = 33%; Not-admitted = 45%). The charter schools investigated in these studies enrolled disproportionately lower numbers of minority and low-income students than their traditional school district counterparts. As noted above, this study focused on middle schools only.

In comparison, other research has identified charter schools that enroll higher numbers of minority and/or low-income students relative to traditional public schools, especially among those charter schools operating in larger cities and districts. For instance, a study of Boston public schools compared to their district charters by MIT researchers indicated that the greatest number of applicants and enrolled students as of 2013 were identified as African-American at approximately 60% (Cohodes, Setran, Walters, Angrist, and Pathak, 2013). Other racial/ethnic groups applied and enrolled in the following approximate proportions: Latino/a (20%), White (13%), and Asian (2%). Two important points should be noted regarding Boston charters: (1) the majority of them, and all investigated in the Cohodes et al. 2013 study in particular, are at the middle and high school levels only, and (2) the proportion of students by race/ethnic groups in charter schools parallels the distribution of students in Boston Public schools with White being the smallest demographic group enrolled. Thus, enrollment proportions may be tied to the demographic distribution of Boston, especially given the lottery requirements of Boston charter schools.

Additional research highlighting larger enrollments of minority students also suggests that this practice is more common in larger cities and in districts where charter laws require schools to serve these students. A 2012 study concluded that *charter school management organizations* (CMO), also referred to as education management organizations, tend to serve a higher proportion of minority (e.g., black, Hispanic) and low-income students⁴. However, many of these same schools enrolled fewer special education students and English-language learners than other schools in the same host district areas as

⁴ Charter school management organizations, or CMOs, manage multiple charter schools and create new schools using a common business structure and charter model.

well as charters not under CMO management (Furgeson, Gill, Haimson, Killewald, McCullough, Nichols-Barrer, Teh, and Verbitsky-Savitz, 2012).

Taken together, these research studies on enrollment of minority and low-income students appear contradictory. Individual charter schools within districts have had difficulty achieving diversity, while those charter schools operated by education management organizations serve more at-risk students. It may be the case that CMOs are more successful at enrolling these students due to their larger size and infrastructure or charter laws in place in districts where CMOs are allowed to operate.

Special Needs Students

Additional key questions have emerged on special needs students regarding how well charter schools serve this population: (1) is the number of students with disabilities who attend charter schools proportionate to those who attend traditional public schools?, (2) do charter schools serve more (or less) students with certain types of disabilities?, and (3) do charter schools provide the same types of services to these students as traditional public schools?

A study conducted by the United States Government Accountability Office (GAO) in 2012 provides insight into some of these questions (Scott, 2012). Enrollment percentages by common disability types are presented in **Figure 3**. Outcomes reflect GAO analysis of 40 states' data from two USED databases – EDFacts and Common Core of Data.

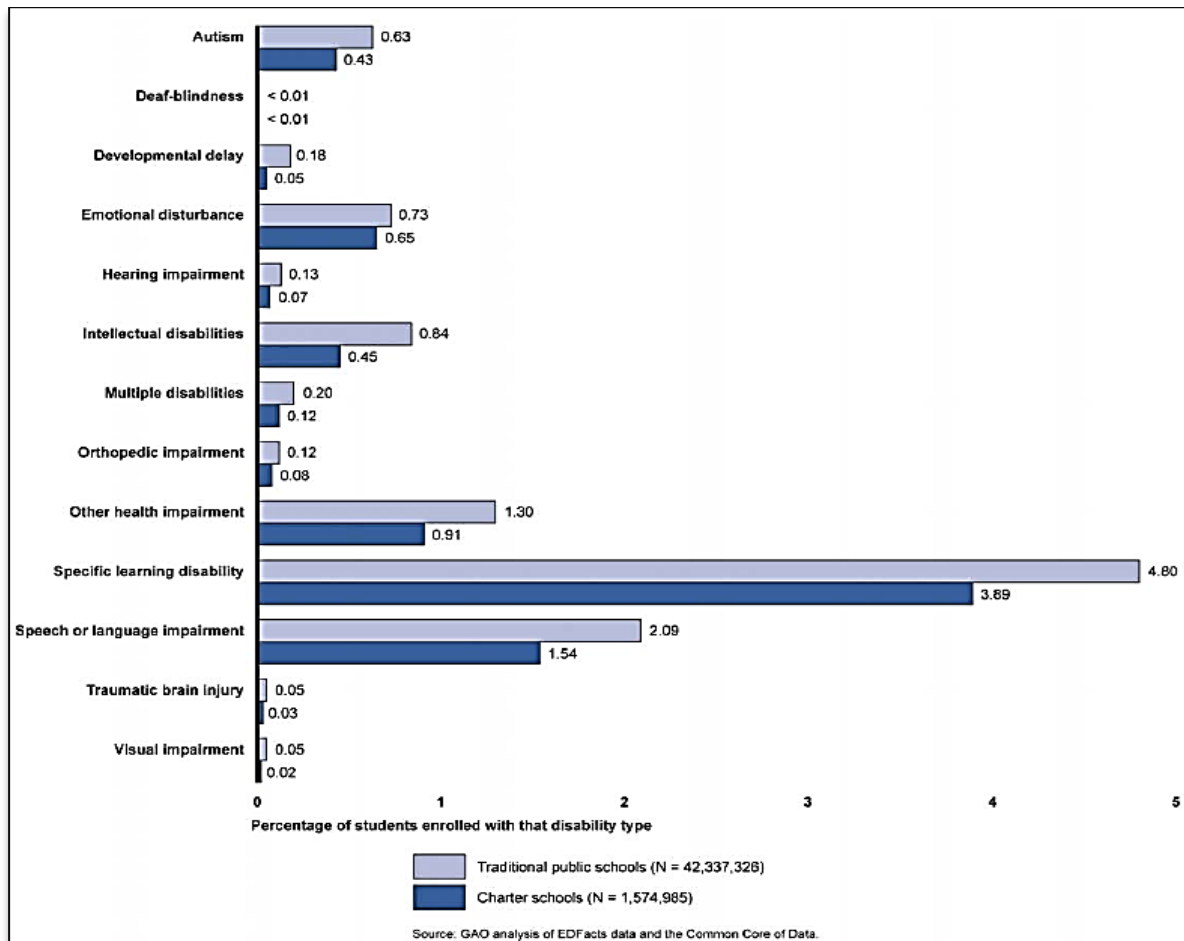


Figure 3. Scott, 2012: Percent of students with disabilities enrolled in traditional public schools and charter schools by disability type for school year 2009-10 from GAO analysis.

Clearly, charter schools in the GAO analyses enrolled a lower percentage of students with disabilities overall compared to traditional schools based on two years of data (Scott, 2012). One exception to this trend included enrollment of students with disabilities at a rate of 20% or higher by a few charter schools (11.7%) compare to the local district schools. Interviews with USED by the GAO indicated an increase in disability-specific charter schools (e.g., schools for students with autism) in some states. Other studies have suggested similar findings on enrollment of students with disabilities - lower rates in general charter schools and a few charter schools nationwide specializing in students with disabilities (Miron, Urschel, Mathis, & Tornquist, 2010; O'Connor, J., & Gonzalez, 2011).

Some charter schools studied also differed in amount of time they include students with special needs in regular classrooms (instead of self-contained classrooms). In the GAO study, time spent in regular classrooms by special needs students is *higher* compared to traditional public schools. Specifically, 80% of special needs students spent over half of their day in regular classrooms compared to 62% of students in traditional public schools. Research suggests that time in regular classrooms benefits students with many types of disabilities (e.g., Baker, Wang, and Wahlberg, 1994; Wolfe and Hall, 2003). The potentially lower number of students with *severe* disabilities in charter schools may explain the higher regular classroom time numbers (i.e., fewer students may require comprehensive, self-contained services).

Charter schools may “mainstream” special education students more frequently if student individualized education plans (IEPs) are less prescriptive. However, this inference cannot be confirmed because the GAO study did not disaggregate classroom time by type of disability or by “mainstream” vs “inclusive” classroom formats.

One concern that arises from these findings is *why* fewer students with disabilities are enrolled in charter schools. Several studies suggest that a host of reasons may exist, although formal research on these questions remains sparse. **Table 3** presents some of this research.

Table 3. Possible reasons and evidence for enrollment differences in students with disabilities

Possible Reasons for Enrollment Differences in Students with Disabilities	Evidence
Do some charter schools intentionally implement exclusive practices?	Scott, 2012. Evidence for exclusion is based only on anecdotal accounts from parent organizations.
Are some charter schools simply less equipped to meet needs of special education students?	Scott, 2012. Yes. Approximately half of charter schools in this study cited insufficient resources for students with severe disabilities as greatest challenge. Study authors also noted that the Office of Civil Rights indicated “...there is nothing in its regulations or guidance... that [limits] obligations of recipients to provide nondiscriminatory admissions... because of factors such as a lack of resources”.
Do parents of students with disabilities prefer traditional public schools due to actual or perceived concerns about services offered by charters?	Scott, 2012. Parents of students with disabilities do consider multiple factors in any school selection, including breadth of services, transportation availability, or number of other students with like-needs.
Do laws and policies of states and/or LEAs impact enrollment of students with disabilities in charter schools?	Scott, 2012. Of charter schools studied, state funding formulas for special education, extent of LEA authority and policy, and charter law structures varied widely. For example, some states only allow for charter middle and high schools; others limit charter ability to make final placement decisions for students with disabilities. CREDO, 2013. Schools within some LEAs coordinate to “meets student needs in the best way possible”; thus, placement depends on district determination of school capacity.

Summary of Students Served

Key Questions . Do charter schools and traditional schools serve students in various subgroups in different ways? Of special education students in particular, do charter schools serve more (or less) students with certain types of disabilities, and do charter schools provide the same types of services to these students?

Conclusions . Lottery-based schools, and smaller individual charters, may serve fewer students in need relative to traditional public schools, especially students with disabilities and English language learners.

Larger charter schools, particularly those operated by CMOs and required by law, have shown higher enrollments of minority and low-income students. Students with special needs and English language learners do not enroll in charters as frequently overall as traditional public schools, which may result from fewer resources at some charters to support students, parent concerns over services. Actual evidence for exclusion or discouragement of applications is hard to confirm. The research reviewed here suggests that charter school structure, charter laws, and demographic composition of the city in which schools reside does impact the extent to which schools enroll a diverse student population.

Achievement

Student achievement, of course, has received the greatest analytic attention. The key question is how do students perform academically in charters compared with traditional public schools? Most studies examining achievement in charter schools have focused on state achievement assessments. Synthesis of this research can be difficult because studies vary widely in scope, types of charter schools included, student population, years of data reviewed, and so on. For this reason, we focus on several major research reviews: (1) a national charter school study conducted by the Center for Research on Educational Outcomes (CREDO) at Stanford University, (2) two meta-analytic reviews of existing research on achievement outcomes (Betts and Tang, 2014; Gleason et al., 2010), and (3) technical reports produced by the National Center for Education Statistics (NCES) comparing state achievement results to those on the National Assessment of Educational Progress, or NAEP (NCES, 2006; 2014).

National Charter School Study: CREDO

The 2013 CREDO study is one of the most comprehensive, longitudinal research evaluations to date on achievement impact. This group analyzed districts and schools in 25 states, the District of Columbia, and the New York City school system (27 total). The study included most charter school students in the 27 participants states (Colorado and Illinois included all charter students statewide). Researchers matched each charter student with traditional public school students on demographic characteristics and achievement levels. This approach allowed researchers to directly compare “like” students whose primary difference was whether they were in a charter school or traditional school. When combined with the non-charter public schools for comparison, the CREDO study included 79% of tested public school students with a matched student dataset of over 5 million student-level observations. We present cumulative findings first, followed by more in-depth significant findings.

Summary of CREDO Findings. Conclusions from three types of analyses are presented below.

(1) Cumulative

Results across states and students over at least four growth periods were as follows:

- Reading – positive growth; charter students outperformed traditional school counterparts (1 standard deviation above on average; significant at $p \leq .01$)
- Math – negative growth; charter students performed lower than traditional students (1 standard deviation *below* on average; significant at $p \leq .01$)

These results across states paralleled their counts of individual state results showing proportionately more positive results for reading (16 states with positive results; 9 negative; 2 no change) and more negative/similar results for math (12 positive; 14 negative; 1 no change).

(2) Charter vs local traditional public schools

Charter performance relative to their *local market* comparison schools (per district) varied substantially (see Figures x and x below). More charters did show growth relative to their local schools, but less than half of charters showed achievement gains overall (relative to student achievement prior to charter admittance).

(3) Student subgroups

Minority and low-income students enrolled in charter schools showed greater gains than their matched comparison students in traditional public schools. However, student gains still fell far below white and Asian students in traditional public schools; thus, achievement gaps remained.

Within Local Education Markets. CREDO researchers examined academic performance within local education markets in each state to look at relative gains by comparing reading and math growth performance of charter schools with *all* other public schools in the same geographic area. **Figure 4** and **Figure 5** below (taken directly from the CREDO report on pages 58-59) show standardized achievement scores to demonstrate where charter schools fall relative to a zero point (which indicates “no difference in achievement between charter and traditional school”). The graphs represent two issues: (1) how many students in charter schools improved in achievement (number of bars to right of zero point)?, and (2) is achievement worse (dark-colored bars), the same as (medium-colored bars), or better (light-colored bars) relative to traditional public schools?

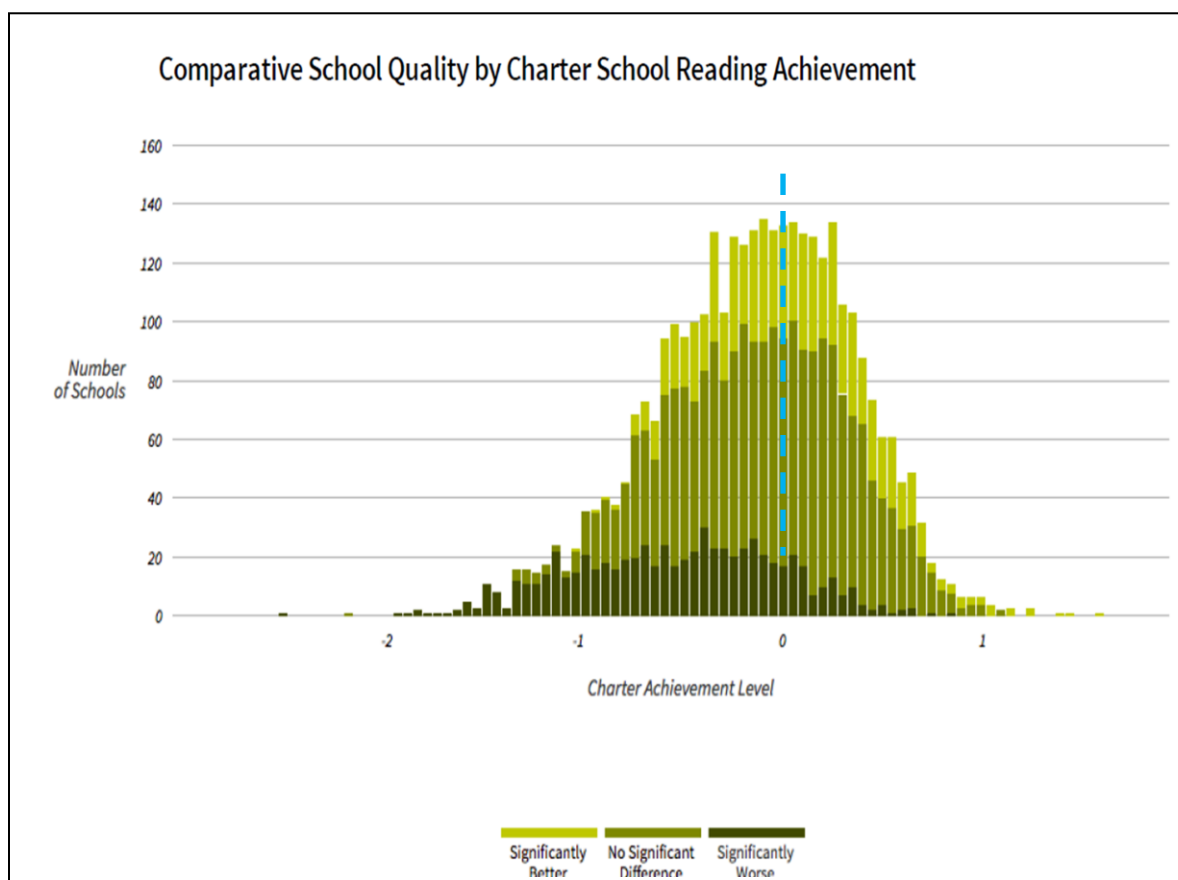


Figure 4. Number of charter schools that performed better, worse or no different from comparison traditional public schools in reading. (Source: Figure 27, CREDO, 2013; adapted with dashed line)

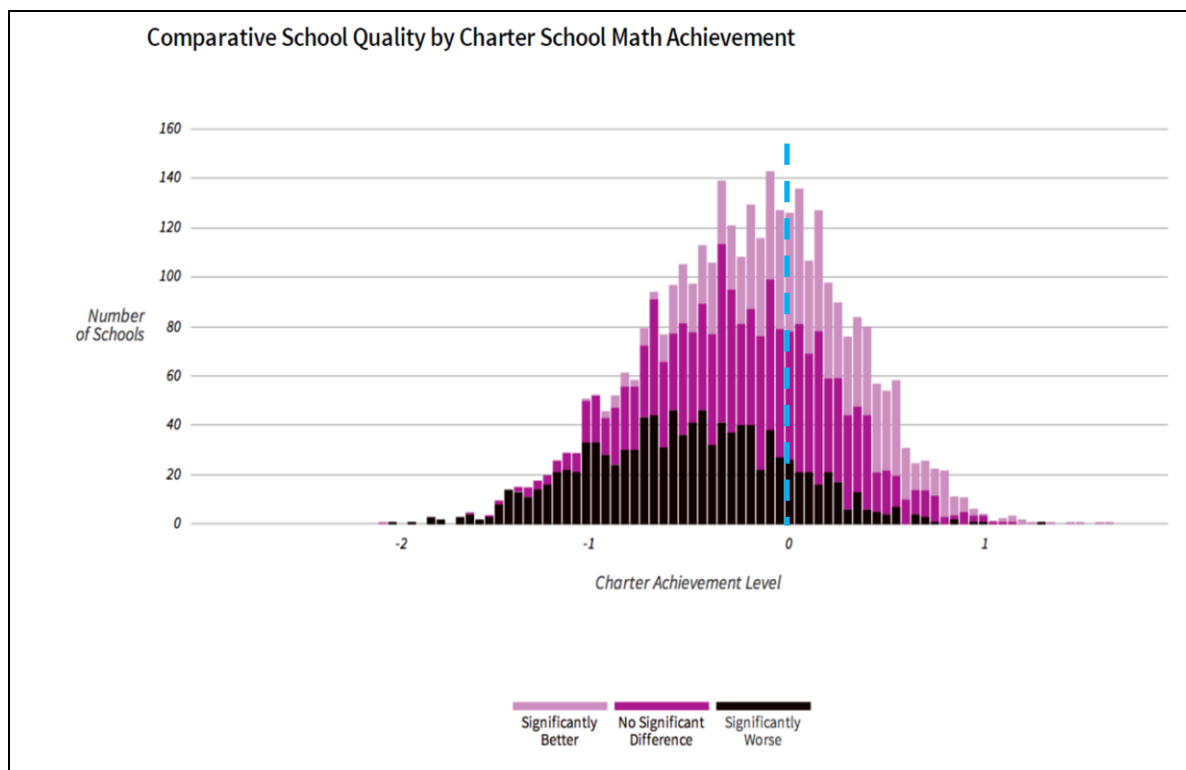


Figure 5. Number of charter schools that performed better, worse or no different from comparison traditional public schools in reading. (Source: Figure 28, CREDO, 201; adapted with dashed line)

The curves presented in **Figure 4** and **Figure 5** are fairly wide and display a mix of highlighting, which indicates that, across states and schools, charter performance relative to their local market comparison schools is quite varied. Regarding the first issue on improved achievement, less than half of charter schools fall to the right of (above) the zero point, which reflects those schools with students that did show academic growth over time. Thus, a little less than half of students across the charter schools in the study improved in math and reading overall. However, one very important fact to keep in mind is that the curves also indicate that students in over half of *all* schools (charter and traditional) *did not improve in achievement*. When directly comparing charter achievement results with local traditional schools, a larger number of charters did show better math and reading performance relative to their comparison schools (more light-colored bars, fewer dark-colored bars overall). Conversely, weaker charters showed much less growth than their market counterparts (dark-colored bars are mostly on the left-side of the zero point).

Student Subgroups. **Table 4**, extracted from several tables and figures in the CREDO report, presents summative conclusions for charter impact on achievement by student race/ethnicity, poverty, and special education status. The table represents two different analyses both focused on indicating whether charter students showed academic gains, losses, or were similar relative to matched traditional students. The left-hand portion of the table shows conclusions on charter student growth relative to their matched pairs in traditional public schools, while the right-hand columns show student growth compared to white students only in traditional public schools. CREDO researchers not only derived effect sizes based on standard deviation comparisons with traditional public school students, but they also produced a “days of learning” metric as a means of thinking about how much more (or less) learning students received in charter schools relative to traditional schools. In other words, how many more days of learning would be needed to get the same academic result? While days are listed with

growth outcomes, it is important to recognize that these numbers are *estimates* corresponding with effect size differences, not an absolute measure of academic gain.

Table 4. Summary of significant results for charter impacts by student groups (Source: CREDO, 2013; Figures 29 through 41 and Tables 18 and 19)

Student Group	Growth Relative to Matched-Comparison Traditional Public School Students		Growth Relative to White Traditional Public School Students	
	Reading	Math	Reading	Math
White	Negative (-14 days)	Negative (-50 days)	Negative (-14 days)	Negative (-50 days)
Black	Positive (+14 days)	Positive (+14 days)	Negative (-86 days)	Negative (-101 days)
Black students in poverty	Positive (+29 days)	Positive (+36 days)	Negative (-151 days)	Negative (-151)
Black non-poverty	No difference	No difference	Negative (-101 days)	Negative (-115 days)
Hispanic	No difference	No difference	Negative (-43 days)	Negative (-50 days)
Hispanic in poverty	Positive (+14 days)	Positive (+20)	Negative (-101 days)	Negative (-94 days)
Hispanic non-poverty	Negative (-7 days)	Negative (-29 days)	Negative (-65 days)	Negative (-86 days)
Hispanic ELL	Positive (+50 days)	Positive (+43 days)	No difference	No difference
Hispanic non-ELL	Positive (+7 days)	No difference	Negative (-29 days)	No difference
Asian	No difference	Negative (-29 days)	Positive (+58 days)	Positive (+101 days)
Students in poverty overall	Positive (+14 days)	Positive (+20 days)	Not reported	Not reported
English language learners overall	Positive (+36 days)	Positive (+36 days)	Not reported	Not reported
Special education	No difference	Positive (+14 days)	Not reported	Not reported

Note: In cases where differences were not statistically significant, CREDO labeled student outcomes between charters and traditional schools as “similar” or “no difference”. The phrase “no difference” was applied in all cases above.

The results in the left-hand columns of the table would seem to suggest two conclusions: (1) charter schools produced more academic growth overall, and (2) many minority students as well as those in poverty benefit substantially from charter school attendance. However, analyses presented in the right-hand columns make clear that these gains still do not remove academic gaps when compared with white students in the same districts, as alluded to by the researchers in the following statement:

For many student groups, the impact of attending a charter school is positive. However, these results need to be considered in the context of the academic learning gaps between most student populations and the average white TPS student in our data. For example, Hispanic students in poverty see positive benefits from attending charter schools, but even with this large boost, Hispanic students in poverty at charters still have lower learning gains than white students at TPS.

– CREDO, 2013, p. 74

Furthermore, it is not clear based on this study why certain demographic groups benefit that much more or less from charter school enrollment than others; thus, more research is needed.

CREDO (2013) Caveats and Limitations. Beyond these high-level analyses on the 27-state charter study, many other in-depth analyses also were conducted showing greater variability in achievement outcomes. The complexities of the CREDO study, and risks involved in settling on sweeping conclusions on charter efficacy, cannot be overstated. For instance, their achievement data also were disaggregated by number of years in operation; management organizational status; within-state district comparisons; and state assessment versus NAEP assessment comparisons. Each set of analyses on reading and math data yielded slightly different results – reading outcomes were not consistently positive, and math results were not consistently negative.

In addition, the CREDO study requires several other caveats. First, the fact that charter students were matched directly with non-charter students in the same district is a pro and a con – on one hand, it allows for a strong comparison; on the other hand, results are mostly relevant to the communities in which students reside and may not be as generalizable across all charter schools in all districts. Second, the numbers of grade levels in each charter school varied widely with some being multi-grade schools and other only elementary, middle, or high schools. Charter schools at the middle school level seem to be highest in number nationwide. Third, as happens everywhere, these schools experienced a reasonable amount of mobility in their student populations; thus, growth estimates are based on changing students and demographics over time.

2014 Meta-Analysis of the Literature: Betts and Tang

We next turn to the Betts and Tang (2014) meta-analytic review. This meta-analysis looked at statistical trends across 52 individual research studies. As with the CREDO (2013) study, charters analyzed within these individual studies varied in size, grade spans, student demographics, and charter management structure. A meta-analysis of existing research must contend with additional variability created by differences in research design, methods, and analytic procedures, although statistical standardization helps to reduce the impact of these differences.

Summary of Betts and Tang Meta-Analysis. Two types of analyses are presented below.

(1) Cumulative

Results across studies, states, and students were as follows:

- Overall reading and math - across locations and years, studies showed positive trends in math and in reading achievement relative to their comparison schools.
- Math in middle school - Significant charter school gains outpacing traditional schools mostly were identified in math for middle schools.

- Reading - cumulative effect size analyses for reading were not significant, although many individual studies showed statistically significant results.
- (2) Student subgroups
Black students, English language learners, and students in special education showed more consistent positive achievement gains, while white and Asian students showed much less achievement growth relative to traditional schools

At this level of summary, the pattern of findings on achievement impact seems reversed from those presented on the CREDO (2013) study, which found more consistent positive outcomes for reading and fewer positive outcomes for math. As with the CREDO study, many studies reviewed by Betts and Tang (2014) disaggregated achievement results to assess how different student groups perform, and we will review some of these more specific analyses here to make a more in-depth comparison.

Student Subgroups. Betts and Tang (2014) examined effect sizes for studies of selected subgroups (primarily at-risk, or gap, students) from various states and district schools. **Table 5** shows summative conclusions (positive or negative achievement relative to traditional schools) based on whether the majority of achievement outcomes per student group showed gains or losses overall.

Table 5. Summative conclusions on effect size differences and statistical significance ($p < .05$) per subgroup for math and reading achievement (Source: Betts and Tang, 2014; Table 6 summary).

Student Subgroup	Reading	Math
White	Negative *	Negative *
Asian	Negative *	Negative *
Black	Positive	Positive *
Hispanic	Negative	Negative
Native American	Negative	Negative *
English language learners	Positive	Positive *
Free/reduced price lunch status	Positive *	Positive
Special education	Positive *	Positive *

Note: An asterisk (*) denotes statistically significant difference.

The findings in **Table 5** by subgroup mostly parallel the results of the CREDO study presented previously in Table x in terms of which subgroups showed better achievement growth. In charter schools reviewed, black students, English language learners, and students in special education showed more consistent positive achievement gains, while white and Asian students showed much less achievement growth relative to traditional schools. Betts and Tang note that positive effect size differences were larger for those studies of urban districts and schools. Unfortunately, as with the CREDO (2013) study, the Betts and Tang review cannot address why certain subgroups might perform better.

Concerning special education students, studies included in this meta-analysis suggest that performance of these students in charter schools is comparable or better than those in traditional public schools (e.g., Betts and Tang, 2014). Betts and Tang state that: “Students in special education attending the charter schools included in the reviewed studies do as well as or, in the studies that pool all grades, better than their counterparts in district-run public schools in both math and reading” (p.31). However, as noted previously under Students Served, these findings must be taken within context of enrollment: (1) fewer students with disabilities enroll in charter schools, (2) fewer students with severe disabilities in

particular enroll in charter schools, and (3) results only reflect those students who take regular state assessments (not the 1% who may take the alternate assessments aligned with alternate standards).

Betts and Tang (2014) Caveats and Limitations. Individual studies included in the Betts and Tang (2014) review exhibited a high degree of variability in terms of student demographic composition (e.g., number of students per subgroup), charter organizational structure, school-levels, and admission procedures. In addition, the vast majority of studies reviewed charters in large urban districts. Betts and Tang (2014) repeatedly point to factors such as these throughout their paper. In the beginning of their conclusion section, they make the following statement that emphasizes the mixed nature of their results:

The overall tenor of our results is that charter schools are in some cases outperforming traditional public schools in terms of students' reading and math achievement, and in other cases performing similarly or worse.

-Betts and Tang, 2014, p.53

Evaluation of Charter Middle Schools: Gleason et al. (2010)

We also look at achievement findings from a narrower meta-analysis that examined middle schools only, but the evaluation consisted of 36 charter middle schools across 15 states (Gleason et al., 2010). The study included lottery-based charter schools with the criterion that schools had to be oversubscribed (more applicants than they could accommodate) for inclusion. Student test scores during their second year after lottery admittance were the target for achievement evaluation.

Summary of Gleason et al. Meta-Analysis. Two types of analyses are presented below.

(1) Cumulative

Results across middle schools, states, and students were as follows:

- Reading and math across schools – no trends were significant.
- Reading and math between schools – proportionately higher number of charter schools showed decline in achievement (both significant at $p < .001$).

(2) Student subgroups

- Low income – positive impact on student achievement for lower income students (significant at $p < .05$) and negative impact on students with higher income (significant at $p < .01$).
- Disadvantaged students – positive impact in math for schools with higher proportions of disadvantaged students (low-income and low-achieving), but negative impact on achievement overall for schools serving fewer disadvantaged students.

Individual School Impact. While overall effect size was not significant when pooling students and schools, individual schools impacted achievement in significant ways. Specifically, Gleason et al. (2010) found that more charter schools showed declines in student achievement than gains, and these differences were statistically significant.

- Reading – 61% of schools showed decline in student achievement, 39% of schools improved
- Math – 64% of schools showed no improvement or declined, 36% of schools improved

These findings showing negative achievement impact of charter schools contrast those of CREDO (2013) and Betts and Tang (2014).

Student Subgroups. Gleason et al. performed several subgroup analyses on achievement scores for charter middle schools including income level, proportion of disadvantaged students served, prior achievement levels, and race/ethnicity. As noted above, achievement impact of charter middle schools in this study was linked directly with student income level (as measured by free-reduced lunch participation status). Students eligible for free-reduced lunch showed higher achievement gains (increase of between 0.5 to 2 standard deviations) in math and reading, while non-eligible students declined in achievement (decrease of over 1 standard deviation). Gleason et al. found the same type of inverse relationship when examining Year 2 test scores compared to students' previous achievement prior to charter admission – more students with higher previous achievement actually declined, while students with lower achievement showed increased scores. In contrast to CREDO (2013) and Betts and Tang (2014), however, Gleason et al. did not find a significant impact of charter schools (positive or negative) on students of various race/ethnic groups. Given the inverse patterns found for disadvantaged students, it seems that charter middle schools in this study had a greater effect on students with these characteristics (lower income and achievement).

Gleason et al. (2010) Caveats and Limitations. Aside from the more narrow scope of this meta-analytic study (middle schools only, 36 schools, oversubscribed lotteries), several other features of the study limit extension of results across charter schools in general. First, Gleason et al. (2010) examined achievement based on a single year of test score outcomes after winning lottery admittance to a charter (as opposed to multiple years of data). Second, we do not know from this study whether charter school characteristics contributed to any achievement differences found. As stated by Gleason et al., “Because this analysis was correlational, we could not determine whether the school characteristics themselves directly influenced charter school effectiveness...” (p. 11). A large number of students in these charter schools already were high achieving prior to admittance, and even students who were lottery losers (comparison group) also tended to be high achievers (70% of applicants met state proficiency requirements). Finally, compared to their local traditional schools, over half of students in these charter schools were white (approximately 38% non-white), and only one-third were eligible for free-reduced price lunch. Thus, while results suggest that these charter schools offered an advantage to disadvantaged students, outcomes may be influenced simply by disproportionate sample sizes *within* the charter schools as well as *relative* to comparison schools.

National Assessment of Educational Progress (NAEP) Comparisons

In addition to meta-analytic studies on state achievement data, some researchers, policy organizations, and individual states have made comparisons with the National Assessment of Educational Progress (NAEP). This assessment, developed and managed by NCES for the U.S. Department of Education, is administered to samples of 4th, 8th, and 12th grade students nationwide periodically in reading, math science, writing, the arts, civics, economics, geography, U.S. history, and in Technology and Engineering Literacy (TEL). Due to its longevity (administered in some fashion since 1969), researchers and states often use NAEP as a comparative data source against state achievement data.

The NCES has not conducted its own investigation of charter school achievement on NAEP since 2006. At that time, NCES published a pilot study comparing 150 public charter students to 6,764 public non-charter students on the 2003 administration of fourth-grade NAEP assessments in reading and math (NCES, 2006). Findings from this study showed that students from charter schools (district affiliated and independent combined) performed slightly lower (average 4.5 pts) on NAEP assessments relative to public non-charters. When splitting charters into district affiliated charters versus charters operating independently from the public school district (PSD), the following patterns emerged shown in **Table 6**.

Table 6. 2003 4th grade NAEP assessment results for district affiliated charter and independent charter schools compared to traditional public school district (PSD).

	PSD Non-Charter vs Charter	PSD Non-Charter vs Independent Charter
Reading	Non-significant differences	Significantly lower
Math	Non-significant differences	Significantly lower

NCES conducted additional analyses to determine whether differences among students and school functioning affected achievement outcomes across all of the charters in the study. Based on these analyses, they concluded that the amount of variability among charter students and schools did potentially confound achievement results. At best, we can say that the impact of these charters on 4th grade achievement was not strong enough to overcome the other differences present in school populations, characteristics, and policies in this study.

Several other groups post data dashboards on charter schools that include state vs. NAEP achievement results as well (e.g., Massachusetts Department of Elementary and Secondary Education, 2014; National Alliance for Charter Schools, 2014; USC/School Performance Dashboard, 2014). For example, the National Alliance for Charter schools publishes data by state, school, and district as well as providing a national picture based on NAEP and federally required Adequate Yearly Progress (AYP) results, as shown in **Figure 6**.

Charter Schools			Non-Charter Schools		
Metrics	#	%	Metrics	#	%
NAEP Proficiency			NAEP Proficiency		
Fourth Grade Reading		29.0%	Fourth Grade Reading		33.0%
Fourth Grade Math		34.0%	Fourth Grade Math		40.0%
Eighth Grade Reading		27.0%	Eighth Grade Reading		32.0%
Eighth Grade Math		31.0%	Eighth Grade Math		34.0%
Eighth Grade Science		24.0%	Eighth Grade Science		31.0%
AYP			All Public Schools		
Number of Schools with AYP data	4,726		Metrics	#	%
Schools Making AYP	2,430	51.4%	AYP		
Schools Failing to Make AYP	2,296	48.6%	Number of Schools with AYP data	97,666	
			Schools Making AYP	39,057	40.0%
			Schools Failing to Make AYP	57,843	59.2%

Figure 6. Charter school and non-charter school achievement results for NAEP and for AYP (Source: National Alliance for Charter Schools).

Figure 6 illustrates several points. First, results on NAEP proficiency conflict with results on AYP when comparing the charter schools in the sample reported here with the non-charter school group. Student proficiency (as measured by NAEP assessments against NAEP content frameworks) across grades and content areas is significantly higher for non-charter schools. Conversely, a higher proportion of charter

schools met AYP compared to all public schools. Qualifications to these achievement outcomes are evident, however, including substantial differences in sample size and school populations as well as the different purposes of NAEP (as a sampling assessment) and AYP (as a multi-measure approach to accountability).

Massachusetts is an example of a state with a large number of charter schools (although state law does limit the number of new charters relative to traditional schools). NAEP assessment results in Massachusetts' charters have been consistently higher on average than many traditional public schools. Massachusetts public schools overall have received high ratings among state rankings of public schools systems in several national comparisons (e.g., EdWeek's *Quality Counts* in 2013 and 2014; NCES *The Condition of Education*, 2014).

One final consideration on evaluating charter school efficacy based on achievement outcomes concerns validity. The "charter" of some charter schools is focused on student performance in other areas, as economist Jonah Rockoff underscores in a comment for a Wall Street Journal article:

...urban charters are doing well on standardized tests and the others are not. The major hole here is that many non-urban charters are serving students/parents that really do not like standardized testing and want to get away from it, so the idea that all charters are focused on tests as outcomes and we should hold them to account for it is misguided. Governments might still care — they might not like charters that focus on fine arts to the detriment of math — but that doesn't mean parents are making mistakes by choosing them.

- Bialik, Wall Street Journal, November 2010

To Rockoff's point, although public charters must meet basic federal accountability requirements, the primary objective of some charter schools is not just to improve standardized test performance in math and reading, which makes using state assessment results as the principal yardstick for success less valid.

Summary of Achievement

Key Questions. Overall, how do students perform academically in elementary and secondary charters compared with traditional public schools? Is performance of charter students in different subgroups (e.g., minorities, low-income, special education) higher, lower, or similar to traditional public schools?

Conclusions. Overall performance is inconsistent across districts and states based on several comprehensive studies we reviewed. The CREDO (2013) study on 27 states found significantly higher performance in math but less consistent performance for reading; the Betts and Tang (2014) meta-analysis summary of 52 individual studies found more consistently positive results for reading and few significant results for math. Part of these inconsistencies can be attributed to differences in research methodologies, but a larger factor simply is differences between charter schools and between the districts and states in which they operate. We are never truly comparing apples-to-apples.

The CREDO (2013) study and Betts and Tang (2014) both did consistently report more positive findings for specific subgroups (e.g., black and ELL students); conversely, they found more negative results for

white and Asian students in charter schools. However, the reasons for such differences between subgroups are not clear based on these studies. One potential basic reason may be the makeup of student populations in those schools, districts, and communities. Across research on charter school achievement, studies show that charter applicants (lottery winners and losers) have significantly higher pre-test scores compared to non-applicants. In other words, charters tend to enroll higher performing students from the start. If many charters serve a higher proportion of black and Hispanic students, it stands to reason that a larger number of students in these subgroups also may show higher achievement, which means that the charter school may not be the contributing factor to increased achievement growth among these subgroups so much as the higher achievers are self-selecting into charter schools.

Related to these last points, a second very important issue noted by researchers of both reports is that “better” is relative – some charters outperformed their comparison schools statistically but performance of both was rather low overall, and achievement gaps between minority and white non-poverty students still were not eliminated in most charters studied. Thus, “positive growth” does not equate with “high performance” in some cases.

Comparisons of charter and traditional students on NAEP assessment outcomes have been fewer in number than state assessment evaluations. However, these results also have been mixed with studies conducted by NCES and some national organizations indicating higher achievement outcomes in math and reading for traditional public schools students on average. Some state-level results, such as in Massachusetts, more consistently have demonstrated higher performance for charter students.

Comprehensive studies and meta-analysis reviews of data allow researchers to make more accurate estimations of the magnitude of impact. However, as the research reviewed here demonstrates, this methodological benefit still does not allow for summative, yes/no conclusions on charter school efficacy due to the array of differences among charter schools in various regions. Furthermore, determinations of effectiveness based yearly achievement scores is a very narrow measure of success.

In the next sections, we examine other measures of performance, although less research exists for charter schools in these areas.

Postsecondary Success

While student achievement outcomes during K-12 enrollment tell us something about school impact, longer term “system” outcomes such as high school graduation rates, college enrollment and persistence rates, and employment and earnings, can tell us a lot more about how well schools actually prepare their students. Several key questions on charter school impact on educational attainment include: (1) do these students graduate from high school at higher rates?, (2) how many charter students go on to college compared to traditional public school students, (3) of students who attend college, how many persist to graduation?, and (4) are these students able to find employment?

Only a handful of states with charter schools (e.g., Florida, Georgia, Massachusetts) regularly publish educational attainment of students after 12th grade. This circumstance partly stems from the fact that many states still are in the infancy of determining a statewide college-career readiness metric required of all of their public schools. Thus, “readiness” at graduation may not be comparable between traditional public schools and charter schools unless a common measure is in place. Many states also are

early in the implementation of statewide longitudinal data systems (SLDS) to reliably track the same students over time once they exit public schools to career and college.⁵

These limitations in common state metrics and data systems limit the ability to conduct reliable empirical research studies; as a result, only six studies exist to date that have tracked charter students beyond the K-12 window, some of which investigated single schools. These studies collectively represent approximately **4 percent** of all charter school students. Thus, it is imperative to conduct more research across states looking at postsecondary outcomes to accurately measure educational attainment impact of charters compared to traditional public schools. This issue really represents a true deficit in our knowledge of long-term charter school impacts.

⁵ These statements are based on state accountability model reports and SLDS grantee progress reports available through U.S. Department of Education.

Table 7 presents overall outcomes of the six studies on educational attainment rates. The *largest numbers* of charters were included in two consecutive regional studies by Booker, Sass, Gill, and Zimmer (2011; 2014) and in a study by Furgeson et al. (2012) on charters operated by non-profit charter management organizations. The three remaining studies were limited to a small number of (one- to six-) schools and educational attainment outcomes (Angrist, Cohodes, Dynarski, Pathak, & Walters, 2013; Dobbie & Fryer, 2013; McClure, Strick, Jacob-Almeida, & Reicher, 2005). Further description of these studies follows

Table 7. Six studies: Educational attainment rates of charter students compared with traditional students.

Educational Attainment Measure	Study	Outcomes
High school graduation rates	Booker et al. (2011)	Charter students in both regions were 7-15 percent more likely to graduate high school with a standard diploma.
	Angrist et al. (2013)	Charter students did not graduate at significantly higher rates in six lottery-based Boston charter schools; however, lottery winners were more likely to pass the Massachusetts high school exit examination and to take an Advanced Placement (AP) exam.
	Ferguson et al. (2012)	Charter students from six CMOs did not graduate at significantly higher rates than matched-comparison students.
College enrollment	Booker et al. (2011)	Charter students in both regions were 8-10 percent more likely to attend college
	Dobbie & Fryer (2013)	In both studies, more charter school winners expressed <i>plans to enroll</i> in college compared to lottery losers (not actual enrollment).
	McClure, Strick, Jacob-Almeida, & Reicher, 2005	
	Angrist et al. (2013)	Actual college enrollment rates of charter students were comparable to non-charter peers for six lottery-based Boston charter schools; however, more lottery winners (17%) tended to enroll in <u>four-year</u> colleges over two-year colleges.
	Ferguson et al. (2012)	Charter students from six CMOs did not enroll in college at significantly higher rates than matched-comparison students.
College persistence	Booker et al. (2014)	Charter students in Florida were more likely to stay enrolled in college.
Employment/earnings	Booker et al. (2014)	Charter students in Florida were more likely to earn higher wages annually at ages 23 to 25.

The Booker et al. studies focused primarily on educational attainment (i.e., high school graduation, college enrollment, and college persistence). They examined students in multiple charter schools in Florida and in Chicago (Florida = 176 charters; Chicago = 25 charters). In each study, the researchers tracked students enrolled in charters in Grade 8 through graduation and their postsecondary choices. Some 8th grade students continued enrollment in charter high schools, while others enrolled in traditional public schools allowing for a direct comparison.

In the Dobbie and Fryer (2013) and McClure et al (2005) studies, each study focused on a single charter school. Response rates from lottery losers was lower in comparison (approximately 60% in the McClure et al. 2005 study) limiting ability to accurately determine intentions of lottery losers.

Furgeson et al. (2012) looked at a multitude of school factors in CMOs that operated across 14 states. However, they only were able to obtain reliable educational attainment outcomes from six CMOs operating in three states. Across these CMOs, school impacts tended to be more positive than negative, but average impact on high school graduation and college enrollment rates were not statistically significant compared to matched-comparison students. These outcomes indicate that some individual schools within CMOs performed quite well in terms of graduation rates and college enrollment, but other charter schools within CMOs did not show very different attainment rates relative to non-charters or (in one CMO case) they produced a large negative impact on high school graduation rates.

Furgeson et al. (2012) also made comparisons between achievement scores (9th grade test scores) and graduation rates in three CMOs. Within these schools with available data, the researchers found that “impacts on test scores do not always correspond to impacts on attainment” (p.68). Booker et al. (2011) and Wolf, Gutmann, Puma, Kisida, Rizzo, Eissa, and Carr (2010) found similar discrepancies between grade-level achievement outcomes and attainment rates⁶. Achievement and attainment comparisons should be examined more broadly in other charter schools because they underscore a potential disconnect between yearly test scores and actual educational attainment as measures of school impact on student success.

Summary of Postsecondary Success

Key Questions. (1) Do these students graduate from high school at higher rates?, (2) how many charter students go on to college compared to traditional public school students?, (3) of students who attend college, how many persist to graduation?, and (4) are these students able to find employment?

Conclusions. Collectively, the six studies reviewed here show a slight (not always statistically significant), positive trend for students graduating from charter schools. This statement must be balanced with the fact that this research covers a small number of charter schools primarily from two states. In addition, the studies do not contribute substantially to the overall picture - three studies found support for higher graduation rates, but the remaining three did not show significantly higher graduation rates among charters. In addition, one study showed higher college enrollment, one did not, and one study showed mixed results.

Another critical question that we cannot clearly answer with any of the current research is whether charter schools are directly responsible for greater postsecondary success of these students or if the students themselves would be successful in any environment. In other words, are charter students (and their families) who choose to apply to charter schools and persist through college really comparable to non-charter students? It is entirely possible that many of these students differ in motivation, interest level, and/or family engagement.

School Climate and Behavior

Aside from achievement and educational attainment, non-academic outcomes are a useful measure of charter impact as well, such as rates of student behavior incidents or absences, school policies on behavior, and student/family satisfaction with and persistence in a charter school. Families may select charters over traditional schools due to perceived environment differences in addition to academic focus. For example, families of students who exhibit behavior issues may believe that an alternative setting would assist students in managing their behavior and making better choices. Alternatively,

⁶ Wolfe et al (2010) examined school choice based on a scholarship program; thus, it was not exclusively a charter school study.

families may believe that a charter school enrolls students with fewer behavior incidents overall and, consequently, there may be fewer distractions from academics.

The key questions around student behavior and related policies and climate in charter schools compared to traditional schools include: (1) do students show more or less behavior incidents (e.g., suspensions)?, (2) do students show higher or lower rates of attendance?, (3) do charter schools suspend or expel students (or in specific subgroups) at similar rates?, (4) do students persist in charter schools over time? and, (5) how do students and families perceive the school environment? Only five research studies could be identified relating to student behavior, attendance, or school climate for charter schools in particular. As a result, the ability to answer some of these questions is quite limited.

Student Absences and Behavior Issues

An unpublished study by Imberman (2007) on a single school district examined attendance rates and student behavior in district charters and non-charters ⁷. In addition, he analyzed attendance and behavior incidents of 4th through 8th graders prior to charter school entry, as well as before and after attendance rates and behavior infractions of non-charter students in the district switching between traditional schools. Traditional school students showed attendance dips and behavior infraction increases, followed by more stable attendance and behavior patterns, after switching to charter schools. Traditional school students who switched to other traditional schools showed more substantial attendance and behavior problems prior to changing schools, but attendance and behavior showed similar stabilized patterns after switching as those students who had moved to charter schools. Thus, most student attendance and behavior issues improved after transitioning to other schools, both charter and traditional. This outcome may suggest that the original school simply was not a good fit for these students.

The Gleason et al. (2010) study on lottery-based charter middle schools examined a few non-academic outcomes, including student absences and suspensions. Unfortunately, the study did not report out actual rates of absences or suspension between students accepted versus those not accepted to charter schools; however, the authors noted “There was no evidence that study charter schools had any impact on the majority of these outcomes” based on statistical tests of these charter impacts.

Dobbie and Fryer (2013) examined behavioral outcomes at the Promise Academy in the Harlem’s Children Zone using a student self-report survey on 6th grade lottery winners and losers (approximately 350 respondents each). The majority of these students were at-risk (i.e., black, Hispanic, and/or under free-reduced lunch status). Survey results indicated that males enrolled in the Promise Academy (lottery winners) reported fewer incarceration incidents compared to males not admitted to the school (4.3 percentage points lower), and admitted females reported fewer pregnancies compared to female lottery losers (12.1 percentage points less likely to become pregnant). However, additional survey measures of Promise Academy lottery winners and losers showed no differences in their ratings on “peer quality” (attitudes of peers on academics, attendance, crime, educational attainment) or on levels of engagement in other risky behaviors (e.g., drug and alcohol use, gang involvement, fighting).

The study by Furgeson et al. (2012) on charter management organizations found evidence that charter schools operated by CMOs tend to implement comprehensive disciplinary policies more frequently. The authors report that CMO-operated charters with comprehensive behavior policies tend to have marginally higher math and reading achievement scores. However, no data were published in this report on the corresponding impact of these policies on rates of student behavior incidents nor does this study

⁷ Imberman (2007) did not provide a definition or description of the scope of “student behavior”.

provide information on the scope of the policies implemented (e.g., use of suspension or expulsion, restorative practices).

In fact, we could not identify any other empirical research studies to date on charter schools reporting on actual rates of behavior incidents (e.g., disruptive behavior, unexcused absences, fighting) or disciplinary response by schools (e.g., rates of in-school or out-of-school suspension, expulsion, community service hours). Some charter schools have provided their own reports, a few policy organizations have written statements, and news media have published articles based on interviews and open records requests. These types of sources represent less verifiable reports often based on anecdotal data.

Student Attrition

A separate finding from Imberman's (2007) study concerned student attrition from charters vs. traditional schools. In particular, a higher number of students voluntarily exited the charter schools in this district compared with non-charters schools. A study by Hanushek, Kain, Rivkin, and Branch (2007) showed similar results in a study of Texas charter schools. They found that approximately 7% of 4th through 7th grade students transition out of Texas traditional public schools each year compared with 18% of charter students.

Family Satisfaction

Gleason et al. (2010) examined *satisfaction* with charter schools by surveying students and their families. Specifically, lottery winners (students admitted to the charters), lottery losers (applied but attend non-charters), and their parents provided their perceptions of and satisfaction with their schools. Lottery winners and their parents provided significantly higher positive ratings of their charter schools (Parent satisfaction: Lottery winners = 70%, Lottery losers = 37%) *in spite of the fact that student outcomes were no different or lower* than local traditional schools (i.e., achievement, attendance, suspensions, well-being). Other parent factors also showed significant differences by families of lottery winners: (1) higher perceptions of student adjustment, (2) greater reported attendance at school events and volunteerism, but (3) lower reported participation in school parent-teacher association (PTA). Thus, family engagement and satisfaction may not be tied as much to student performance, at least for the parents surveyed in these 36 charter middle schools. This outcome may simply reflect a common psychological phenomenon known as "cognitive dissonance reduction"⁸ (Cooper, 2007; McLeod, 2013).

Summary of School Climate and Behavior

Key Questions. (1) Do students show more or less behavior incidents (e.g., disruptive behavior, unexcused absences, fighting)?, (2) do students show higher or lower rates of attendance?, (3) do charter schools suspend or expel students (or in specific subgroups) at similar rates?, (4) do students persist in charter schools over time? and, (5) how do students and families perceive charter school environments?

Conclusions. Overall, we are left with far more questions than answers about how students behave and are treated in charter schools. The limited data available presently suggests that student behavior does not show significant differences between charter schools and traditional schools in terms of the number of absences, incidents, and suspensions. Conversely, students seem to exit charter schools more frequently than traditional schools based on attrition rates in several school districts. Families of

⁸ "Cognitive dissonance reduction" refers to the tendency for people to seek out information and situations that support our beliefs and avoid those that do not

accepted charter students seem to be more satisfied with their schools compared to those not accepted.

Organizational Practices

Most of the research presented thus far targeted student performance. In this section, we look at research on organizational management and finance issues related more directly to school performance. Of course, organizational function can indirectly impact student success as well, such as consistency in practices and policies, long-term funding sustainability, or resource availability for student support.

Resources and Funding

Furgeson et al. (2012) examined the organizational structure of charters managed by large and small CMOs operating as for-profit and non-profits (39 CMOs total). For example, they evaluated CMOs on per-pupil expenditures and school size relative to traditional public schools with the following outcomes.

- \$10,331 – median per-pupil across 39 CMOs in study (\$10,938 = TPS national average in 2013 per National Education Association).
- \$5K - \$20,000 – range of per-pupil spending across 39 CMOs in study (\$6,949 - \$19,752 is range for TPS in 2013 per National Education Association)

School Size and Structure

Furgeson et al. (2012) also reviewed other organizational and school factors, such as central office size and school size. Central office size tends to be variable, although schools operated by CMOs tend to have smaller enrollments relative to host district schools.

- Central office vs School-based staff ratios - varies widely across charters and CMOs (larger CMOs do not always have larger central office staff and visa versa)
- 389 vs 982 (average number of students enrolled in charter schools relative to TPS)
- 20.9 vs 23.3 (average number of charter students per classroom relative to TPS)

Although student-teacher ratios tend to be lower among CMOs, differences between classroom sizes in charter schools compared to traditional public schools are not that different based on the 39 CMOs reviewed by Ferguson et al. (2012).

Summary of Organizational Practices

Key Questions. (1) Do charter schools differ from traditional schools in terms of size (e.g., enrollments, individual class size)?, (2) do charter schools and organizations differ in number and type of staff employed?, and (3) do charter schools implement different practices (e.g., pupil spending, financial focus, teaching) compared to traditional schools?

Conclusions. Charter schools tend enroll fewer students than traditional schools overall; however, class sizes are not significantly and meaningfully lower. Charter schools vary considerably in staff positions employed, such as number of central office staff to school staff.

ARE THERE PRACTICES ASSOCIATED WITH GREATER SUCCESS IN CHARTER SCHOOLS AND TRADITIONAL SCHOOLS?

The review thus far suggests that performance outcomes for charter schools frequently vary in the same way as they do for traditional public schools and for much of the same reasons. Some schools are quite

successful, some schools are not – just as they are in the traditional sector. Alex Medler, Vice President for Policy and Research for the National Association of Charter School Authorizers, stated in a Wall Street Journal interview: “As a researcher, I generally point out that there is more variation within the group of charters than there is between the group of charters and other groups. Furthermore, the variation in performance within the charter sector doesn’t appear to be random, so what is going on in different places where they do *well* or *poorly*?” (Bialik, 2010). Medler’s question really gets at differences in *practices* that may lead to better student outcomes, not just school models.

This question necessarily leads to several other similar questions: What really works to improve student success? Is it the buildings and organizational models that truly lead to better outcomes? Can we identify practices in successful charters and in traditional public schools that would benefit all public school students?

In this section, we examine structures and practices that may contribute to better student success irrespective of whether schools implement a charter or traditional public school model.

Research on Best Practices

To determine “what works”, it’s worthwhile to review literature on best practices that cross-cut several areas, such as educational practices, organizational management and leadership.

Education agencies, such as state departments of education and education management organizations, also have promoted the use of best practices through publication of individual school practices. For example, the Massachusetts Department of Elementary and Secondary Education (ESE) hosts a website called “Charter Schools Best Practices” (<http://www.doe.mass.edu/charter/bestpractices/>) that includes a searchable database by topic or school. The ESE states on their website: “In part, charter schools were established to stimulate the development of innovative programs within public education and to provide models for replication in other public schools.”

Charter schools functioning under certain types of organizational management structures appear to operate more effectively, which may contribute to greater achievement gains.

What Works for Schools and Students?

The literature cited above points to various fields that highlight similar practices as improving organizational and individual learning and improvement. Education research also has identified many of these same practices. **Table 8** provides a synthesis of practices that show the most gain at the school-level and at the classroom-level to increase performance.

Table 8. Key Research-Based Practices that Improve Schools and Students

What Works in Schools? Research-Based Best Practices	
School-Level	Classroom-Level
✓ Strong, consistent leadership	✓ Use of data to guide and revise instruction
✓ Specific, achievable goals (SMART)	✓ Frequent teacher feedback
✓ Systems-approach	✓ Increased instructional time
→ best practices (e.g., business/financial, academic, needs assessment)	✓ High-dosage tutoring
→ regular, high accountability system-wide for adults and students	✓ High expectations for academics and behavior
→ strong processes	
→ transparency	
✓ High student/family engagement	

Many charters in districts showing higher success have improved over time with longer implementation (CREDO, 2013). Corresponding with these improvements, teachers also will gain greater experience and professional learning during this time. This factor can be pointed to as one reason for differences between charter school performance because, overall, teachers who work in charter schools have about 10 years less experience on average (NCES, 2014).

SUMMARY AND CONCLUSIONS

This report served several purposes: (1) review charter school models and circumstances around their implementation nationwide, (2) present a comprehensive review of the literature on various areas of charter school performance, (3) identify overall effective practices in education and other organizations, and (4) draw conclusions on what works best, especially for our own district, based on the summary of information and research. We took this approach to provide readers with a comprehensive set of sources and evidence on charter schools as well as to inform ourselves on our path to define our position.

Charter Organizational Structures across States

Our review demonstrated that the charter school structure varies considerably across districts and states in terms of funding, extent of implementation, teacher preparation, and organizational management – all due to differences in charter laws per state. As a result, it is inappropriate to draw single yes/no conclusions about a model for charter schools.

Charter School Performance across States

Our review of the empirical research literature on charter school performance presents some evidence of success. Of charter schools scrutinized through research, many individual charter schools within states have shown significant gains in achievement, particularly with minorities, as well as some evidence of good postsecondary attainment and improved student behavior.

- Elementary schools seem to have shown greater academic gains (although more charter schools exist at middle and high school levels).
- Certain student groups (e.g., minorities, students in poverty) have shown significant academic growth relative to similar students in traditional public schools across studies; however, substantial achievement gaps still exist between charter minority students and traditional non-minority students even with this growth.
- Charter schools in operation for longer periods of time are more frequently the ones with better eventual gains.

On balance, we also found an *almost equal number* of studies on other charter schools across and within states showing no differences, or lower performance, on measures of academic, postsecondary, student behavioral, and organizational success. Even the large, comprehensive meta-analytic research studies produced highly mixed results. At best, we can point to organizational features and practices that may have contributed to student success in some higher performing charter schools. Many of the same practices also have been found effective in traditional public schools over the years.

The varied performance results emphasize that charter outcomes always must be taken within the context of the factors surrounding the school and district in question (e.g., school size and grade-levels; admittance procedures; charter contract implemented; state and district laws and requirements; performance of surrounding public schools; demographic composition of the region; economic cost to communities and host districts). All of these factors are at least as important to weigh as academic performance when lawmakers and other stakeholders consider charter implementation in their own region.

Best Educational Practices

The mixed performance results also led us to focus on overarching practices that could be applied in districts and schools *regardless of school structure*. These organizational features and practices include:

- Strong, consistent leadership
- Specific, achievable goals
- System-approach
 - ✓ Best practices
 - ✓ Regular, high accountability system-wide
 - ✓ Strong, consistent processes
 - ✓ Transparency
- High student/family engagement
- High level of needs delivery to students and staff
- More intense focus on individualized core instruction, maybe for longer hours

Policy Considerations and District Choices

The collective research on charter schools, including several major meta-analytic studies, shows little evidence of consistency in charter impacts on student success. In particular, the attention given to a set of charter schools showing achievement growth in minority and low-income student test scores does not offset the equally numerous schools who have shown inconsistent impact on at-risk students over years, no real difference in impact relative to traditional public schools, or who have closed due to failure.

General Considerations

This circumstance begs a critical question – why invest a substantial amount of time, resources, and dollars to implement a *second* education system that may or may not work? Furthermore, if some public charter schools are effective and some traditional public schools are effective while many schools under each model are not, why not focus on the most effective practices? Across the business and medical arenas, effective practices, models, treatment approaches, or programs adopted by organizations generally are supported by consistent trends if not unambiguous outcomes. In some cases when costs and consequences are low, then taking risks to implement an alternative approach may be worthwhile. In contrast, if not implementing a practice will be met with certain failure (i.e., patient death), then the risk is worth implementation. Students’ education and their futures do not qualify as low cost any more than not implementing a high-risk education model will lead to certain failure.

One final issue for consideration is this - implementing charter schools still does not address root cause. Not only do similar issues plague some charter schools as much as good practices permeate some traditional public schools, but the central mechanisms that both of these school systems feed into still exist. That is, local agencies (e.g., local government, host districts), state and federal agencies (e.g., departments of education and workforce), and lawmaking bodies (i.e., legislatures) largely remain intact even when individual schools fail whether they are charter schools or traditional public schools. Community issues around valuing education, diversity, and equity continue to persist. Thus, the long-standing model for public education oversight is in direct competition with real and meaningful change at the school level. Creating separate but not-so-equal schools will not overcome these issues.

Kentucky-Specific Considerations

In addition to general policy impact, we suggest several issues specific to Kentucky’s current K-12 education laws and accountability system that will require thoughtful consideration by legislators before entertaining the idea of a charter school law statewide.

1. How will school-level exemptions impact a district’s ability to meet the Kentucky Board of Education’s Strategic Priorities and Delivery Targets? If waivers are allowed for meeting certain

strategic priorities, how will we make reasonable districtwide and statewide comparisons of student progress in these areas?

2. How will charter schools fit into our new statewide teacher effectiveness system?

The Kentucky Board of Education adopted a model for measuring teacher effectiveness in 2013 with the expectation that districts statewide will implement this model fully by 2015-16. What will be the expectation for charter schools relative to this model? This may be a component of the Kentucky Unbridled Learning Accountability System that a charter school would be allowed to modify instead of implementing the Professional Growth and Effectiveness System model plan, a point suggested by the Prichard Committee in their November 2014 *Exploring Charter Schools in Kentucky Informational Guide*. However, what then would be the impact on making comparisons with remaining traditional public schools in the same district who have implemented the Professional Growth and Effectiveness System?

3. How would we ensure that charter schools would be able to receive appropriate funding to support the innovative practices that they propose to implement?

Our current budget constraints at the state level, and correspondingly at the district level, make it exceedingly difficult to effectively support basic programs and practices necessary for meeting accountability, let alone additional programs that would truly provide meaningful student support. Given that charter revenue is partly based on per-pupil funding, how do we expect to provide dollars long-term to grow and sustain charter schools in ways that support their primary purpose – reduce achievement gaps and provide alternate, innovative practice? If we cannot confirm this support up front, are we not then implementing an unequal second system?

Conclusion and Position on Charter School Implementation

The above review leads us to the conclusion that, overall, charter schools do not show sufficient and consistent evidence of success worthy of implementing such as significant change. Making momentous decisions for change that do not provide clear, alternative support to our students, such as adopting a separate system within the district, seems irresponsible, particularly within a highly constrained budget environment. However, certain organizational practices of successful charter schools and traditional public schools, some of which we already implement at the district level, could be scaled up system-wide.

BIBLIOGRAPHY

- American School Board Journal. (2014, June). Trends: Chicago charter schools expel 11 times as many students as public. pp 16.
- Angrist, J. A., Pathak, P. A., & Walters, C. R. (2011). Explaining charter school effectiveness. National Bureau of Economic Research (Working Paper #17332).
- Baker, E.T., Wang, M.C. and Walberg, H.J. (1994). The effects of inclusion on learning. *Educational Leadership*, 52(4), 33-35
- Barnett, W. S., & Lamy, C. E. (2014, September). Review of "Seeds of Achievement". National Education Policy Center. Funding from The Great Lakes Center for Education Research and Practice.
- Bethke, J., Harvie, B., & Mazur, P. (2007). Assessment of special education and Limited English Proficient Populations in Massachusetts charter schools.
- Betts, J. R., & Tang, Y. E. (2011). The effects of charter schools on student achievement: A meta- analysis of the literature. Seattle, Wa: Center for Reinventing Public Education, University of Washington-Bothell.
- Betts, J. R., & Tang, Y. E. (2014, August). A meta-analysis of the literature on the effect of charter schools on student achievement: Working paper. Center for Reinventing Public Education.
- Betts, J. R., & Atkinson, J. R. (2012). Better Research Needed on the Impact of Charter Schools. *Science*, 335, 171–172.
- Bialik, C. (2010, November). The conflicting charter-school numbers. Wall Street Journal. Retrieved from <http://blogs.wsj.com/numbers/the-conflicting-charter-school-numbers-1014/>
- Bifulco, R. & Ladd, H. F. (2006). Charter schools in North Carolina. Paper presented at the 2006 National Conference on Charter School Research at Vanderbilt University.
- Bifulco, R. & Reback, R. (2011). Fiscal impact of charter schools: Lessons from New York. Retrieved from <http://www.columbia.edu/~rr2165/pdfs/nycharterfiscal.pdf>
- Booker, K., Sass, T., Gill, B., & Zimmer, R. (2011). The Effects of Charter HighSchools on Educational Attainment. *Journal of Labor Economics*, 29 (2), 377–415.
- Booker, K., Sass, T., Gill, B., & Zimmer, R. (2014). Charter High Schools' Effects on Long-Term Attainment and Earnings. Mathematica Policy Research Working Paper. http://www.mathematica-mpr.com/~media/publications/PDFs/education/charter_longterm_wp.pdf
- Borchardt, J. (2014, December 18). Gov John Kasich vows to get tough on charter schools, hints at tax reform in 2015 budget. Cleveland.com. Retrieved from http://www.cleveland.com/open/index.ssf/2014/12/gov_john_kasich_vows_to_get_to.html
- Boser, U. (2014, July). Return on Educational Investment 2014: A District-by-District Evaluation of U.S. Educational Productivity. Center for American Progress. Retrieved from <https://www.americanprogress.org/issues/education/report/2014/07/09/93104/return-on-educational-investment-2/>
- Bracey, G. W. (2005). Charter schools' performance and accountability: A disconnect. Policy Brief, EPSL-0505-113-EPRU. Tempe, AZ: Education Policy Studies Laboratory
- Braun, H., Jenkins, F., Grigg, W., & Tirre, W. (2006). A closer look at charter schools using hierarchical linear modeling. Washington, DC: NCES.
- Bump, S. (2014, December 18). State Needs to Improve Charter School Data. State Department of Massachusutts. <http://www.mass.gov/auditor/news-and-updates/press-releases-2014/bump-state-needs-to-improve-charter-school-data.html>
- Camilli, G. (2013). Review of KIPP Middle Schools. Boulder, CO: National Education Policy Center. [Retrieved from http://nepc.colorado.edu/files/ttr-kipp-mathematica.pdf](http://nepc.colorado.edu/files/ttr-kipp-mathematica.pdf)
- Candal, C. S. (2014, July). Seeds of achievement: Appletree's early childhood D.C. charter schools. Pioneer Institute for Public Policy Research. No. 120.
- Cesar, S. (2014, November 20). Charter schools break law by making parents volunteer, report says. Los Angeles Times. Retrieved from <http://www.latimes.com/local/lanow/la-me-ln-charter-schools-volunteer-20141120-story.html>
- Center for Education Reform. (2013). Charter School Laws Across the States Ranking and Scorecard. Retrieved from <http://www.edreform.com/2013/01/2013-charter-law-ranking-chart/>
- Center for Research on Education Outcomes (CREDO). 2009. Multiple Choice: Charter School Performance in 16

States. Stanford, CA: CREDO.

Center for Research on Education Outcomes (CREDO). 2011. Charter school performance in Pennsylvania. Stanford, CA: CREDO.

Center for Research on Education Outcomes (CREDO). 2013. Charter school performance in Michigan. Stanford, CA: CREDO.

Center for Research on Education Outcomes (CREDO). 2013. National Charter School Study. Stanford, CA: CREDO.

Cheng, A., Hitt, C., Kisida, B., Mills, J. (2014, July). No excuses charter schools: A meta-analysis of the experimental evidence on student achievement. University of Arkansas: Department of Education Reform (EDRE)

Chetty, R., Friedman, J., and Rockoff, J. (2013, September). Measuring the Impacts of Teachers I: Evaluating Bias in Teacher Value-Added Estimates. National Bureau of Economic Research, Retrieved from <http://www.nber.org/papers/w19423>

Chicago Public Schools. (2014, February 26). CPS Releases Outreach Plan to Strengthen its Suspension and Expulsion Reduction Plan, Which Has Already Reduced Out of School Suspensions by 36% over Three Years for High School Students. Retrieved from http://www.cps.edu/News/Press_Releases/Pages/PR1_02_26_2014.aspx

Chudowsky, N. & Ginsberg, A. (2012). Who attends charter schools and how are those students doing: Exploratory analysis of NAEP data. Retrieved from <http://www.nagb.org/content/nagb/assets/documents/commission/researchandresources/charter-schools-naep-data-analysis.pdf>

Cohodes, S., Setran, E. M., Walters, C., Angrist, J., & Pathak, P. A. (2013). Charter school demand and effectiveness: A Boston update. Boston, MA: Boston Foundation.

Consoletti, A & Allen, J. (Ed.). (2007). 2007 Annual survey of America's charter schools. The Center for Education Reform.

Cooper, J (2007), *Cognitive dissonance: Fifty years of a classic theory*, London: Sage publications, ISBN 978-1-4129-2972-1, retrieved 6 March 2013

Coulson, A. (2014, March). State Education Trends: Academic Performance and Spending Over the Past 40 Years. Policy Analysis, 746. Washington, D.C: Cato Institute.

DeNardo, M., Chowdry, S., Udo, J., & Rocco, D. (2014, October 27). Palmer Charter High School shuts down suddenly, leaving students hamstrung. CBS Philadelphia. Retrieved from <http://philadelphia.cbslocal.com/2014/10/27/palmer-charter-high-school-shuts-down-suddenly-leaving-students-and-parents-hamstrung/>

DeSilver, D. (2014, January 13). Who's poor in America? 50 years into the 'War on Poverty', a data portrait. Pew Research Center. Retrieved from <http://www.pewresearch.org/fact-tank/2014/01/13/whos-poor-in-america-50-years-into-the-war-on-poverty-a-data-portrait/>

Dillon, S. (2007, November 8). Ohio goes after charter schools that are failing. New York Times.

Editorial Projects in Education Research Center. (2011, May 25). Issues A-Z: Charter Schools. Education Week. Retrieved from <http://www.edweek.org/ew/issues/charter-schools/>

Enyedy, N. (2014, November). New interest, old rhetoric, limited results, and the need for a new direction for computer-mediated learning. National Education Policy Center. Funding from The Great Lakes Center for Education Research and Practice.

Find April 2014 ASBJ article

Fisher, D., Roach, V., & Frey, N. (2002) Examining the general programmatic benefits of inclusive schools. *Inclusive Education*, 6 (1), 63-78.

Frankenberg, E., & Siegel-Hawley, G. (2009). Equity overlooked: Charter schools and the Civil Rights Policy. UCLA: The Civil Rights Project. Retrieved from <http://www.civilrightsproject.ucla.edu/research/deseg/equity-overlooked-report-2009.pdf>

Frankenberg, E., Siegel-Hawley, G., Wang, J. (2010). Choice without equity: Charter school segregation and the need for civil rights standards. Los Angeles, CA: The Civil Rights Project/Proyecto Derechos Civiles at UCLA; www.civilrightsproject.ucla.edu.

Frogger, A., & Speering, J. (2014, December 22). ASD riles parents, community with school takeover. ASD riles parents, community with school takeover. The Tennessean. Retrieved from <http://www.tennessean.com/story/opinion/contributors/2014/12/22/asd-riles-parents-community-school-takeover/20648199/>

Full Inclusion of All Students with Learning Disabilities in the Regular Education Classroom. (2012, June). Learning Disabilities Association of America. Retrieved from <http://ldaamerica.org/advocacy/lda-position-papers/full->

inclusion-of-all-students-with-learning-disabilities-in-the-regular-education-classroom/

Furgeson, Gill, Hamson, Killewald, McCullough, Nichols-Barrer, The, Verbitsky-Savitz, (2012). Charter school management organizations: Diverse strategies and diverse student impacts. Center on Reinventing Public Education.

Glass, G.V. (2006). The financial impact of Ohio's charter schools. The Buckeye Institute for Public Policy Solutions.

Gleason, P., Clark, M., Tuttle, C. C., and Dwoyer, E. (2010). The evaluation of charter school impacts: Executive summary (NCEE 2010-4030). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education.

Greenland S, O' Rourke K: Meta-Analysis. Page 652 in Modern Epidemiology, 3rd ed. Edited by Rothman KJ, Greenland S, Lash T. Lippincott Williams and Wilkins; 2008.

Hammond, B. (2014, November 25). Charter school enrollment in Oregon hits new high, 5 percent of public school students. Oregon Live. Retrieved from

http://www.oregonlive.com/education/index.ssf/2014/11/charter_school_enrollment_in_o.html

Hanushek, E., Kain, J., Rivkin, S. & Branch, G.F. (2007). Charter School Quality and Parental Decision Making with School Choice. Working Paper 11252. Cambridge, MA: National Bureau of Economic Research.

Harris, E.A. (2014, October 8). 17 charter schools approved for New York City, expanding a polarizing network. New York Times. Retrieved from <http://www.nytimes.com/2014/10/09/nyregion/17-new-charter-schools-approved-for-new-york-city.html?action=click&contentCollection=N.Y.%20%2F%20Region&module=RelatedCoverage®ion=Marginalia&pgtype=article>

Haskins, R. (2006). The Education Flatline: Causes and Solutions. Washington, D.C.: Brookings Institution.

Hiaasen, S. & McGrory, K. (2011). Florida charter schools: Big money, little oversight. The Miami Herald, <http://www.miamiherald.com/2011/09/19/v-fullstory/2541051/florida-charter-schools-big-money.html>.

Higgins, (2014, December 4). Michigan Charter School Law Gets Failing Grade. Detroit Free Press. Retrieved from <http://www.freep.com/story/news/local/michigan/2014/12/04/charter-school-michigan-authorizer-academics-accountability-report/19867297/>

Hoxby, C., Murarka, S., and Kang, J. (2009, September). How New York City's charter schools affect achievement. Cambridge, MA: New York City Charter Schools Evaluation Project.

Institute on Race and Poverty. (2010, May). The state of public schools in post-Katrina New Orleans: The challenge of creating equal opportunity. University of Minnesota Law School. Retrieved June 10, 2010 from:

http://www.irpumn.org/uls/resources/projects/NEW_ORLEANS_FULL_REPORT.pdf.

Krainin, T. (2014, December 20). How I Put Away My Atari 2600 and Learned to Love School Choice. Reason: Free Minds and Free Markets. Retrieved from <http://reason.com/blog/2014/12/20/the-rise-of-charter-schools>

Lake, R.J., Jochim, A., & DeArmond, M. (2015, Winter). Fixing Detroit's broken school system. Education Next, 15 (1). Retrieved from <http://educationnext.org/fixing-detroits-broken-school-system/#>

Lavery, L., & Carlson, D. (2014, March 18). Dynamic participation in interdistrict open enrollment. Educational Policy. Retrieved from <http://epx.sagepub.com/content/early/2014/02/26/0895904813518103.abstract>

Lawyers Committee for Civil Rights under Law, NAACP, National Council for Educating Black Children, National Urban League, Rainbow PUSH Coalition, Schott Foundation for Public Education (2010). Civil rights framework for providing all students an opportunity to learn through the reauthorization of the Elementary and Secondary Education Act. Retrieved online from

<http://www.otlcampaign.org/sites/default/files/resources/CivilRights%20framework-FINAL7-25-10.pdf>.

Livingston, D. (2014, March 30). Board member says little control over charter use of public funds (part 2 of 3). Akron Beacon Journal. Retrieved from <http://www.ohio.com/news/local/ohio-s-urban-districts-cut-services-to-provide-busi>

Livingston, D. (2014, March 31). Ohio's urban districts cut services to provide busing to privately run charter schools (Part 3 of 3). Akron Beacon Journal. Retrieved from <http://www.ohio.com/news/local/ohio-s-urban-districts-cut-services-to-provide-busing-to-privately-run-charter-schools-part-3-of-3-1.477343>

Lopez, F. (2014, September). Review of "A meta-analysis of the literature on the effect of charter schools on student achievement". Boulder, CO: National Education Policy Center. Retrieved from <http://nepc.colorado.edu/thinktank/review-meta-analysis-effect-charter>.

Massachusetts Charter Schools. Massachusetts Charter School Financial Dashboard. Boston: Massachusetts Department of Elementary and Secondary Education. Retrieved on December 8, 2014 from <http://www.doe.mass.edu/charter/finance/dashboard/>

Mathematica (2013). KIPP middle schools: Impacts on achievement and other outcomes. Retrieved from http://www.kipp.org/files/dmfile/KIPP_Middle_Schools_Impact_on_Achievement_and_Other_Outcomes1.pdf Washington, DC: Mathematica.

Mathematica and Center for Reinventing Public Education (2011). Charter school management organization: Diverse Strategies and Diverse Student Impacts. Retrieved from http://www.edweek.org/media/%28cmo_final%20_report%2011%2002%2011.pdf.

McLeod, S. (2014). Cognitive Dissonance. Retrieve from <http://www.simplypsychology.org/cognitive-dissonance.html>

Milwaukee Public Radio. (2014, November 20). Milwaukee voucher program turns 25 (5-part series). Retrieved from <http://wuwfm.com/term/milwaukee-voucher-program-turns-25>

Miron, G., & Urschel, J. L. (2010, June). Equal or fair? A study of revenues and expenditures in American charter schools. Great Lakes Center for Education Research and Practice.

Miron, G., Coryn, C., & Mackety, D.M. (2007). Evaluating the impact of charter schools on student achievement: A longitudinal look at the Great Lakes States. The Evaluation Center, Western Michigan University, Kalamazoo, MI.

Miron, G., Gulosino, C. (2013, November). Profiles of for-profit and nonprofit education management organizations: fourteenth edition - 2011-12. Boulder, CO: National Education Policy Center.

Miron, G., Urschel, J. L., Mathis, W.J., & Tornquist, E. (2010). Schools without diversity: Education management organizations, charter schools, and the demographic stratification of the American school system. Boulder and Tempe: Education and the Public Interest Center & Education Policy Research Unit. Retrieved from <http://nepc.colorado.edu/publication/schools-without-diversity>

Moore American. (2014, November 12). Study outlines options for cost savings in Oklahoma's school districts. Retrieved from http://www.mooreamerican.com/news/study-outlines-options-for-cost-savings-in-oklahoma-school/article_9bb9af6e-b695-5a5e-8740-2fb4887bb227.html

National Alliance for Public Charter Schools. (2014). The Public Charter Schools Dashboard. Washington, DC. Retrieved December 8, 2014 from <http://dashboard.publiccharters.org/dashboard/home>

National Alliance for Public Charter Schools. (2014, January). Measuring up to the model: A ranking of state charter school laws (5th ed). Washington, DC.

National Center for Education Statistics (2006). A Closer Look at Charter Schools Using Hierarchical Linear Modeling (PDF). Washington, D.C.: U.S. Government Printing Office. Retrieved January 21, 2008.

National Center for Education Statistics. (2014a). State Education Reforms Table Library: Table 4.4. Washington, D.C.: U.S. Department of Education. Retrieved from <http://nces.ed.gov/programs/statereform/tables.asp?group=4>

National Center for Education Statistics. (2014b). The Condition of Education 2014 (NCES 2014–083). Washington, D.C.: U.S. Department of Education.

National Commission on Excellence in Education. (1983, April). A Nation at Risk: The Imperative for National Reform. Retrieved from <http://www2.ed.gov/pubs/NatAtRisk/risk.html>

National Education Association (2008). Charter schools. Retrieved April 23, 2008, from National Education Association Web site: <http://www.nea.org/charter/index.html>

Ovaska, S. (2014). Virtual success or state money pit? The Times News. Retrieved from <http://www.thetimesnews.com/opinion/opinion-columns/virtual-success-or-state-money-pit-1.390924>

Peyser, J. A. (2014, Winter). Boston and the charter school cap. Education Next. Retrieved from <http://www.educationnext.org>

Powers, J. (2015, January). Review of No Excuses Charter Schools. National Education Policy Center.

Prothero, A. (2014, October 27). Charter school holdouts: States that prohibit them, and why. Education Week. Retrieved from http://blogs.edweek.org/edweek/charterschoice/2014/10/charter-school_holdouts_states_that_prohibit_them_and_why.html?qs=charter+school+holdouts

Prothero, A. (2014, September 17). Charter school laws due for a tune-up, report says. Education Week. Retrieved from http://blogs.edweek.org/edweek/charterschoice/2014/09/charter_school_laws_due_for_a_tune-up_report_says.html?r=1762302572&cmp=ENL-EU-NEWS1&preview=1

Protheroe, N. (2011). Concerns in Education: What do we know about charter schools? Alexandria, VA: Education Research Service.

Psychological Science. (2012, January 6). Meta-Analysis Helps Psychologists Build Knowledge. Retrieved from <http://www.psychologicalscience.org/index.php/news/releases/meta-analysis-helps-psychologists-build-knowledge.html>

Public School Review, (2008). What is a charter school? Retrieved April 23, 2008, from Public School Review Web site: <http://www.publicschoolreview.com/articles/3>

Scott, G. (2012, June). Charters schools: Additional federal attention needed to help protect access for students with disabilities. Washington, DC. United States Government Accountability Office. Retrieved from <http://www.gao.gov/products/GAO-12-543>

Shanklin, M., & Deslatte, A. (2008, April 16). Florida lawmakers spar over charter school accountability. Orlando Sentinel.

Shrom, T., & Hartman, W. (2014). Property tax restrictions on school board fiscal authority in Pennsylvania. *Educational Considerations*, 41 (2), 1-7.

Singer, S. (2014, November 12). Can charter and district school officials find common ground? Palm Beach Post. Retrieved from <http://opinionzone.blog.palmbeachpost.com/2014/11/12/can-charter-and-district-school-officials-find-common-ground/>

Skinner, R. R. (2014, April 22). Charter school programs authorized by the Elementary and Secondary Education Act (ESEA Title V-B): A primer. Congressional Research Service Report. Retrieved from <http://www.crs.gov>

Southern Poverty Law Center (2010). Children with disabilities face discrimination in New Orleans schools. Retrieved from <http://www.splcenter.org/get-informed/news/splc-complaint-children-with-disabilities-face-discrimination-in-new-orleans-school>.

Staub, D. & Peck, C.A. (1994). What are the outcomes for nondisabled students? *Educational Leadership*, 52(4), 36-40

Stuit, D. A., & Smith, T. M. (2009). Teacher turnover in charter schools. Nashville, TN: Vanderbilt University.

Taylor, K. (2014, November 21). New York Chancellor Is Criticized for Remarks on Charter Schools. New York Times. Retrieved from http://www.nytimes.com/2014/11/22/nyregion/new-york-chancellors-remarks-anger-charter-school-advocates.html?_r=1

Taylor, K. (2014, October 30). New York City comptroller to audit Success Academy Charter Network. New York Times. Retrieved from <http://www.nytimes.com/2014/10/31/nyregion/city-comptroller-to-audit-success-academy-charter-network.html?action=click&contentCollection=N.Y.%20%2F%20Region&module=RelatedCoverage®ion=Margin&pgtype=article>

The Hechinger Report, (2014, November 3). Number of U.S. Charter Schools Up 7 Percent, Report Shows. U.S. News and World Report. Retrieved from <http://www.usnews.com/news/articles/2014/11/03/number-of-us-charter-schools-up-7-percent-report-shows>

Tirrozi, G. N. (2014, August 26). Charter school activists suffer from truth deprivation. *Education Week*, 34 (22), 22-23.

USC Rossier School of Education. USC/School Performance Dashboard. Los Angeles: University of Southern California. Retrieved on December 8, 2014 from <http://school-performance.usc.edu/>

Veauthierand, J. C., & Bell, K. S. (2014, March 29). More than 100 publicly funded charter schools fail to disclose who is in charge (part 1 of 3). Akron Beacon Journal. Retrieved from <http://www.ohio.com/news/local/more-than-100-publicly-funded-charter-schools-fail-to-disclose-who-is-in-charge-part-1-of-3-1.476978>

Werner, K. G. (2013). The Dirty Dozen: How charter schools influence school enrollment. *Teacher College Record*. Published: April 22, 2013. ID Number: 17104. Retrieved <http://www.tcrecord.org/Content.asp?ContentID=17104>

WFSA-NBC News. (2014, December 22). Republicans to Bring Up Charter School Bill in 2015. Retrieved from <http://www.wsfa.com/story/27684013/republicans-to-bring-up-charter-school-bill-in-2015>

Wolfe, P. & Hall, T. (2003). Making Inclusion a Reality for Students With Severe Disabilities. *Teaching Exceptional Children*, 35(4), 56-61.

Yeh, S. (2010). The cost-effectiveness of 22 approaches for raising student achievement. *Journal of Education Finance*, 36 (1), 38-75.

Yettick, H. (2014, June 6). Study sheds light on nation's most common school choice policy. *Education Week*. Retrieved from http://blogs.edweek.org/edweek/inside-school-research/2014/06/open_enrollment.html

Zarling, P. (2014, October 23). Most voucher students came from private schools. *Green Bay Press Gazette*. Retrieved from <http://www.greenbaypressgazette.com/story/news/education/2014/10/23/voucher-students-came-private-schools/17793217/>