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Traditional Public Schools: What Does the Empirical
Evidence Tell Us?**



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Executive Summary

The Impacts of Public Charter Schools on Students and Traditional Public Schools: What Does the Empirical Evidence Tell Us?

The goal of this BRIEF was to compile and analyze the available evidence of the impacts of public charter schools on students and schools. Using a series of five common claims made by proponents and opponents of public charter schools as an organizer, the existing empirical evidence was reviewed. The analysis revealed that student performance in charter schools is very mixed. In some cases studies have found positive effects in achievement, others negative effects, and still others no effects. The presence of charter schools has resulted in positive changes in some traditional public schools, while in other cases there appear to be no impacts, either positive or negative. Public charter schools, at least those found in urban areas, tend to serve more disadvantaged and minority students.

Taken in the aggregate, the empirical evidence to date leads one to conclude that we do not have definitive knowledge about the impacts of public charter schools on students and existing schools. But in reviewing the existing evidence, one is also struck by the fact that the impacts of charter schools appear to be very contextual. Some public charter schools are better than others. Some are very successful in meeting student needs, and others are not very successful. In other words, public charter schools vary in quality like traditional public schools. Success depends upon a variety of factors. Consequently, the impacts of public charter schools should not be painted with one broad brush stroke. Each should be judged on its own evidence and performance.

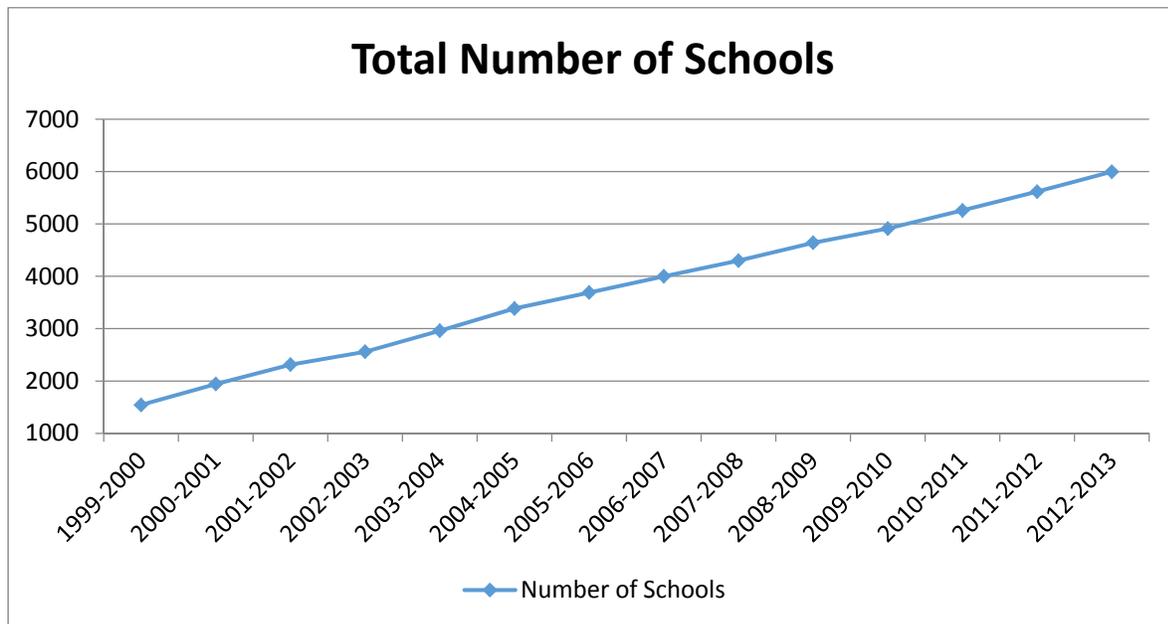
Impacts of Public Charter Schools on Students and Traditional Public Schools: What Does the Empirical Evidence Tell Us?

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Introduction

The goal of this **BRIEF** is to provide an objective review of the empirical evidence on the impacts of public charter schools. One of the potentially most significant reforms taking place in public education today is the growth in public charter schools. Since the first charter school law was passed in 1991 in Minnesota, the number of public charter schools has increased steadily. According to the National Alliance for Public Charter Schools (2013), the number of public charter schools nationwide has grown from approximately 1,500 in 2000 to almost 6,000



by 2013, a fourfold increase. Currently these 6,000 schools enroll approximately 2.3 million students. A majority of these schools have been established as elementary public charter schools, with less than 20% established as either middle or secondary schools. Over one-half (55%) of the public charter schools are located in large urban settings and cities, while only approximately 16% are located in rural areas of the country.

Public charter schools have both proponents and critics. Proponents often cite one set of research studies as evidence of their success. Critics, on the other hand, cite studies by other researchers as evidence of their ineffectiveness. In many cases, the research cited either by proponents or critics is limited to the findings from the study of only one charter school, or just a few schools. In other cases only charter schools in one particular urban city or charter schools in a particular state are studied. In some cases the research cited has been conducted or funded by advocacy organizations known to either support or oppose public charter schools. Only in a few cases have researchers attempted to develop more generalizable knowledge by examining the evidence across multiple states and multiple studies.

Consequently policy makers are often confronted with what appears to be conflicting findings as they deliberate public charter schools policy making. Which evidence should be believed? Is some evidence better than others? To explore answers to these questions, a review of the existing empirical evidence was undertaken by Maine Education Policy Research Institute (MEPRI) researchers at the request of the Joint Standing Committee on Education and Cultural Services in the Maine State Legislature. MEPRI is a nonpartisan research institute charged with conducting research and analyses for the Joint Standing Committee.

In this review every attempt has been made to identify existing evidence, and each study was reviewed for its design, fidelity, and findings. What follows is a summary of these analyses reported in terms of the some of the most common claims made in the public charter schools debate. These claims are:

1. Public charter schools produce better student academic performance.
2. Public charter schools increase competition, resulting in improvements in public schools.
3. Student performance improves over time in public charter schools.
4. Public charter schools enroll the best students from traditional public schools.
5. Public charter schools have detrimental financial impacts on traditional public schools.

Each of these claims is examined in the following pages by compiling and reviewing existing empirical evidence surrounding them. Although a plethora of reports and studies were

collected for this BRIEF, only those that were based on empirical evidence and deemed to reflect standard research principles and procedures were analyzed, regardless of the study findings. Advocacy-based reports, and reports based on anecdotal evidence alone were excluded.

Claim 1: Public charter schools produce better student academic performance.

By far the impacts of charter schools on student achievement have marshaled the most interest and scrutiny by proponents and critics alike. Proponents, like the Stand for Children national organization (2013), point to research evidence and conclude “Studies conducted by nationally prominent research organization show that public charter schools are successfully closing achievement gaps for students of color, English language learners, and students in poverty “ (p.1). Critics like the Education Justice Organization (2013), on the other hand, look at the research and conclude in part that “...charter schools do not, on average, show greater levels of student achievement, typically measured by standardized test score, than public schools, and may even perform worse” (p.1).

Which is the case? Are public charter schools more effective in improving student achievement or not? In reality, both the proponents and critics alike are partially correct. The results for public charter schools appear to be mixed. Some researchers have found that public charter schools improve student achievement. For example, a study of a group of charter schools in Texas found statistically significant positive changes in achievement for their students (Booker et. al., 2004). Grongberg and Jansen (2005) found similar results when they studied high school charter schools. And in the case of CMOs—charter management organizations that manage several charter schools—Furgeson et. al. (2011) found that some were very successful in improving student achievement.

However, there also is a body of research that shows that charter public schools have adverse effects on student achievement, or produce mixed results. For example, Mills (2013) examined 10 years of achievement data for Arkansas grades three through grade eight, comparing charter school students with students in traditional public schools. He concluded, “Our findings are that charter schools have small but statistically significant negative impacts on

student achievement for both math and literacy. Such negative effects, however, tend to decline with the number of years of charter operation” (p.321). Mills’ findings have been duplicated in other quasi-experimental studies. Sass (2006) found in a study of Florida charter schools that charter school students experienced less gains than students in traditional public schools, although the gains were positive in most cases by the charter’s fifth year of operation. Bifulco and Ladd (2006) examined 90,000+ third grade students, each over four years, and found that achievement of charter school children lagged behind the performance of students in traditional public schools.

Why do the results from these studies appear to vary so much and produce mixed or conflicted findings? Some of the differences in findings can be attributed to differences in measures of achievement used in the various studies, or differences in types of charter schools studied, or differences in the demographics of students attending different charter schools. In light of these differences it may be useful to look for guidance in assessing the achievement impacts by examining studies that employ what researchers deem to be very rigorous research designs. Two of these designs are experimental studies and meta-analysis studies. While it is safe to say that more research is needed over time before we may conclude with some certainty about the impacts of charter schools on student achievement, these types of studies are considered by researchers to produce the best evidence to date on the achievement impacts.

A small number of studies have been designed to examine student performance using an experimental design, the gold standard for research studies seeking to establish cause and effect. A major challenge in examining the impacts of charter schools on student performance is in obtaining equivalent comparison groups. Because public charter schools are schools of choice, it is difficult to identify equivalent groups in existing traditional school for comparisons. But a method used to avoid selection bias is to examine performance from over-subscribed public charter schools, public charter schools that were not able to admit all the students who applied to their school because of space limitations. As Clark et al. (2011) state in reviewing early studies,

The previous fixed effects analyses potentially provide meaningful external validity through the inclusion of a relatively broad geographic sample of schools, but their internal validity may be compromised if students attending charter schools in a given year differ from those who do not in ways that are not fully captured by the fixed effects models. In contrast, the lottery-based studies potentially provide strong internal validity by comparing lottery applicants who were randomly admitted to charter schools to those who were not (p.1)

From a research point of view, the lottery-based studies provide the opportunity to compare two equivalent groups using an experimental design with the only difference in the students being whether they were admitted or not admitted to the charter school.

Four experimental studies are particularly noteworthy. The first was a 2005 study by Hoxby and Rockoff of three charter schools in Chicago. In the words of the researchers,

We use the "lotteried-out" students as a control group for the "lotteried-in" students because randomization makes the groups similar on unobservable characteristics, such as motivation, as well as on observable traits, such as race and prior achievement. We estimate both the effect of attending charter schools (the treatment-on-the-treated effect) and the effect of being offered the chance to attend a charter school (the intent-to-treat effect). We show that, compared to their lotteried-out fellow applicants, students who apply to and attend charter schools starting in the elementary grades score about six national percentile rank points higher in both math and reading. These effects are for students who have spent an average of two years in charter school (p.1).

Thus, the researchers found that students enrolled in the Chicago charter schools in the study performed 5-6 percentile points better in reading and mathematics than their non-admitted cohorts.

A second study by Hoxby and his colleagues (Hoxby, Muraka, & King; 2009) of a larger number of urban schools in New York City found that upper elementary grade students (grades 4-8) in public charter schools outperformed similar grade students who were not admitted to the charter school. And a third study of oversubscribed charter schools in Boston found that students admitted to the charter schools performed better than students not admitted to the schools by approximately one-quarter standard deviation. After examining student achievement data for students in grades 4-8 and grade 10 in oversubscribed charter schools,

the researchers concluded,

On balance, our lottery-based findings provide strong evidence that the charter model has generated substantial test score gains in high-demand Charter Schools with complete records. On the other hand, these results should not be interpreted as showing that Boston Charters always produce test score gains (p.39).

A fourth study, and one potentially producing more generalizable findings, included 36 middle schools across 15 states. The study compared the two-year performance of over 1,700 middle school students who were admitted to charter schools to over 1,100 who applied but were not admitted to these charter schools. The researchers reported that:

We found that, on average, the charter schools in the study had an insignificant or negative impact on student achievement in reading and math. Impacts generally did not vary across subgroups defined by students' race, or gender. However, impacts were insignificant or positive for more disadvantaged students and negative for more advantaged students, and this same pattern persisted across groups defined by baseline test scores. There was also considerable variation in impacts across schools. Those in urban areas or serving more disadvantaged populations had more positive (or less negative) impacts than those in non-urban areas or serving more advantaged populations (p.23).

Thus, the evidence from experimental studies of the impacts of public charter schools appears to provide mixed results. Some found positive effects on student achievement, while a multi-state study reported positive results for some disadvantaged students and negative results for some advantaged students.

A second type of more rigorous research design is called a meta-analysis, which uses a technique involving examining results across multiple studies using a standard statistical procedure. Traditionally, the technique of meta-analysis has involved reviewing research studies on a topic and counting the number of studies that found positive results and the number that found negative results. The conclusion reached from the meta-analysis was in favor of whichever group of studies was larger. This technique is still used, but a more sophisticated methodology has been used in current meta-analyses, one that involves conducting statistical analyses using the individual empirical results from multiple studies. All three of the meta-analyses reported here used both methodologies in their analyses.

The meta-analyses examined for this BRIEF also produce mixed results. The three were

selected for review because they are considered to be rigorous, unbiased studies. The first meta-analysis was conducted by Betts and Tang (2011) for the National Charter School Research Project (NCSRP) researchers from the University of Washington Center on Reinventing Public Education (CRPE). Researchers examined the value-added effects of charter schools by analyzing 25 empirical studies, some of which have been described above. The researchers found overall effect sizes in the range of 0.020-0.055 in favor of charter school elementary and middle students reading and mathematics achievement. Effect sizes are standard deviation units, with positive effect sizes denoting positive results. These types of results will be discussed more in subsequent paragraphs, but in the case of this meta-analysis the researchers concluded in part that:

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. There are several important cases of grade spans in which charter schools are outperforming or performing about as well as traditional public schools. Elementary school math and reading, middle school math and, only if we include the KIPP school estimates, middle school reading all exhibit this pattern of students performing better at charter schools than at traditional public schools. At the high school level, there is no overall significant effect of charter schools, but there is considerable heterogeneity, suggesting that in some locations charter high schools are outperforming, while in others they are underperforming (p.55).

The second and third meta-analyses were conducted by the same organization, the Center for Research on Education Outcomes (CREDO) at Stanford University. The first study, reported in 2009, analyzed charter school performance in 16 states, states that at the time of the analysis enrolled 70% of the charter school children nationwide. The overarching conclusion from the meta-analysis was that student performance was not better in charter schools. Using the traditional counting method of analyses, the researchers found:

The group portrait shows wide variation in performance. The study reveals that a decent fraction of charter schools, 17 percent, provide superior education opportunities for their students. Nearly half of the charter schools nationwide have results that are no different from the local public school options and over a third, 37 percent, deliver learning results that are significantly worse than their student would have realized had they remained in traditional public schools. These findings underlie the parallel findings of significant state-by-state differences in charter school performance and in the national aggregate performance of charter schools. The policy challenge is how to deal constructively with varying levels of performance today and

into the future.

Using the more sophisticated meta-analysis technique, the researchers found:

The national pooled analysis of charter school impacts showed the following results:

Charter school students on average see a decrease in their academic growth in reading of .01 standard deviations compared to their traditional school peers. In math, their learning lags by .03 standard deviations on average. While the magnitude of these effects is small, they are both statistically significant.

The effects for charter school students are consistent across the spectrum of starting positions. In reading, charter school learning gains are smaller for all students but those whose starting scores are in the lowest or highest deciles. For math, the effect is consistent across the entire range.

Charter students in elementary and middle school grades have significantly higher rates of learning than their peers in traditional public schools, but students in charter high schools and charter multi-level schools have significantly worse results.

Charter schools have different impacts on students based on their family backgrounds. For Blacks and Hispanics, their learning gains are significantly worse than that of their traditional school twins. However, charter schools are found to have better academic growth results for students in poverty. English Language Learners realize significantly better learning gains in charter schools. Students in Special Education programs have about the same outcomes.

Students do better in charter schools over time. First year charter students on average experience a decline in learning, which may reflect a combination of mobility effects and the experience of a charter school in its early years. Second and third years in charter schools see a significant reversal to positive gains.

Thus, the overall findings from this 2009 analysis indicate that the charter schools were not having positive impacts on student performance, and in some cases negative effects. It should be noted that some individual studies found positive gains, but when analyzed in the aggregate, the results were not positive.

In 2013 the same organization at Stanford University repeated their earlier analysis using student performance data from charter and traditional schools in 25 states. In this second meta-analysis, the researchers found small but statistically significant positive effects in favor of charter schools. The analysis of performance at the student level revealed 0.01 standard

deviation improvements in reading when comparing the performance of students in charter school with those in traditional public schools. Performance in mathematics was approximately the same in both types of schools, public charter schools and traditional public schools, but mathematics performance did improve from the 2009 study. Accordingly, the researchers concluded:

In the aggregate, both reading and math results show improvement compared to the results reported in Multiple Choice. The analysis of the pooled 27 states shows that charter schools now advance the learning gains of their students' more than traditional public schools in reading. Improvement is seen in the academic growth of charter students in math, which is now comparable to the learning gains in traditional public schools. On average, students attending charter schools have eight additional days of learning in reading and the same days of learning in math per year compared to their peers in traditional public schools. In both subjects, the trend since 2009 is on an upward trajectory, with the relative performance of the charter sector improving each year. Related results for different student groups indicate that black students, students in poverty, and English language learners benefit from attending charter schools. However, charter school quality is uneven across the states and across schools (p.3).

Thus, based on the most recent meta-analysis the researchers have concluded that charter schools are showing positive effects on student learning. And even though most reviewers of these research studies would agree that they were well done, there are two important concepts to be kept in mind when formulating conclusions based on the findings in these studies. These two concepts are **statistical significance** and **effect size**.

Probability theory underlies statistical analyses of research evidence and is used to determine if a finding is *statistically significant*. Statistical significance testing is a statistical procedure applied to results from studies to determine if the results are by chance or if they represent real changes or difference. In other words, just because there is a difference in performance—in this case between students in charter schools and those in traditional public schools—the results might still be by chance. The test of statistical significance analyzes the probability that the results are by chance. If the probability is below 5% then the researcher may conclude that a difference is real, and not just chance.

Whether the probability in any particular case is below 5% depends in part on sample sizes. Larger sample sizes increase the chance the researcher will find the probability to be less

than 0.05. In all three of the meta-analysis studies described above, the sample sizes were very large and the findings were statistically significant. However, the actual differences in performance between public charter school students and traditional public school students were very small. Because the sample sizes were very large, the statistical analysis was able to detect small differences that may have been disregarded as random chance if the sample size were smaller. Consequently, sample sizes may have contributed to finding statistically significant results.

This artifact of research using large samples highlights the importance of the second key concept, Effect Size. A result may be statistically significant, but is it of practical significance? Should policy or programs be changed based on the research results? To answer this type of question, researchers have created a way to measure *practical significance*. It is called Effect Size. Instead of measuring differences based on sample size, Effect Size captures the magnitude of differences and this difference is measured in terms of standard deviations. Larger standard deviations would translate into greater levels of practical significance. Cohen (1969) deems Effect Sizes below .20 to be *small* in terms of practical significance.

A re-examination of the Effect Sizes in these meta-analyses reveals very small differences in standard deviations. For example, in the most recent Stanford University study, the differences in performance between charter school student performance and student performance in traditional public schools were found to be 0.01 in reading. This means that reading performance of charter school students was one-percent of a standard deviation better than reading performance of other students in traditional public schools. This Effect Size is far below the .20 Effect Size Cohen characterized as being *small*. To help translate what this means, the Stanford researchers converted this difference into days of learning. They concluded that the 0.01 standard deviation in reading translates into approximately 7 days of learning each school year. So applying this conversion metric to the two CREDO studies, the 2009 results show that learning of charter school students is seven days behind traditional public school students, whereas in 2013 the charter school students are seven days ahead in learning compared to their classmates in traditional public schools.

Thus, while all three meta-analyses report statistically significant changes (some positive

and some negative), the practical importance of these changes is small in all cases. This does not mean these studies should be discounted as not being important, but rather that it might be better to exercise a degree of caution in attaching meaning to the results, at least these results from the meta-analyses.

The same may be said for the evidence on the effectiveness of virtual charter schools. Molar (2013) describes virtual education in the following way:

Virtual education takes many forms and serves many purposes. Formats include full-time online K-12 schools as well as single courses that allow students to explore a subject not available in their brick-and-mortar schools. Virtual education is also sometimes used by students to make up credits for a required course they earlier failed. Some virtual education programs require students and teachers to be online at the same time (synchronous education); others allow students and teachers to visit online courses at their own convenience (asynchronous education). Others combine online work with traditional, in-person classroom instruction (blended instruction). Providers include public entities, non-profit and for-profit organizations (p. i).

Recently these type of virtual schools have received considerable attention and press coverage, and quite a bit of it has been unfavorable. However, it is important to note that there has been little rigorous research conducted on the impacts of these charter schools on student achievement. After reviewing studies conducted over a decade, a U.S. Department of Education study (2010) report concluded:

Few rigorous research studies of the effectiveness of online learning for K–12 students have been published. [Italics in original.] A systematic search of the research literature from 1994 through 2006 found no experimental or controlled quasi-experimental studies comparing the learning effects of online versus face- to-face instruction for K–12 students that provide sufficient data to compute an effect size (p.xiv).

A more recent study conducted by CREDO (2011) of the virtual charter schools in Pennsylvania found that student performance in these schools was lower than for their classmates in traditional public schools. Based on an examination of Pennsylvania charter schools over a four year period, the researchers determined:

Two types of charter schools are authorized in Pennsylvania: physical brick and mortar schools and cyber, or virtual, schools. The student populations at the two types of schools differ. The typical cyber charter student is white and ineligible for subsidized meals, while

the typical brick and mortar charter student is black and receiving free or reduced-priced lunches. Furthermore, the starting score for cyber students is significantly higher than for brick and mortar charter students in both reading and math. Additionally, cyber students are more likely to be repeating a grade than brick and mortar charter students... The learning gains for students in brick and mortar charter schools in Pennsylvania were not significantly different from their traditional public school counterparts in reading. Brick and mortar charter students learned significantly less on average than their counterparts in math. Cyber charter students have significantly smaller gains in reading and math than those of their traditional public school peers.

In addition, and given that students in virtual school are typically different from a majority of students attending traditional public schools, these researchers matched students in the two types of schools and analyzed their academic performance. They found that:

In every subgroup with significant effects, cyber charter performance is lower than the brick and mortar performance. English Learner students at both types of charter schools have similar learning gains to fluent speakers in traditional public schools in math (p.10).

But aside from this analysis of Pennsylvania virtual schools, far too little rigorous research has been conducted on virtual charter schools. A recently published meta-analysis of virtual charter schools by the National Education Policy Center (2013) concludes:

In short, given the results of the few rigorous K-12 studies that have been done, there is insufficient evidence for policymakers to promote major online initiatives in either elementary or secondary schools (p.62).

Virtual charter schools, while experiencing considerable growth in numbers in recent year, are still in need of rigorous study to determine their impacts on student learning.

In summary, the evidence on the impacts of charter schools on student learning is neither clear nor conclusive. Some studies point to positive results while others have reported mixed or negative results. And if these results are combined with those found in meta-analysis studies, it may be wise to conclude that the jury is still out on the impacts of public charter schools on student performance.

Claim 2: Public charter schools increase competition resulting in improvements in public school performance.

Proponents of public charter schools often put forth the claim that the existence of

charter schools increases competition. Traditional public schools will feel compelled to modify their programs and structures, or add new programs to better respond to their student needs. As a result student performance will improve in these non-charter schools. However, a review of existing empirical evidence reveals the results are mixed in this area. Some results supported this claim. For example, a study of Florida charter schools uncovered a small positive impact in student achievement for students in traditional public schools (Sass, 2006). After examining student performance over a five year period of time, Sass concluded, "... competition from charter schools is associated with modest increases in math scores and unchanged reading scores in nearby traditional public schools" (p.91). Similar results were found by Hoxby in a Michigan study (2003). After examining evidence over a four year period of time, Hoxby concluded, "Overall, the picture that one draws from Michigan is the following. Public schools that were subjected to charter competition raised their productivity and achievement in response, not only exceeding their own previous performance but also improving relative to other Michigan schools not subject to charter competition" (p.333).

In contrast, another Michigan study found no significant improvements (Bettinger, 2005). After comparing test scores for students attending charter schools and those attending public schools, Bettinger concluded, "The results suggest that charter schools have had no significant effect on test scores in neighboring public schools" (p.133). And negative effects were found in an Ohio study (Carr & Ritter, 2007). Using a time series design to examine four years of achievement data, the researchers concluded, "...that charter school competition has a consistently small but significant negative effect on the proficiency passage rates of nearby traditional public schools" (p.1).

One possible reason for these mixed results may be related to how much the traditional schools change the way they conduct business. A study by Holly, Egalite, and Lueken (2013) reports that the presence of public charter schools in the urban districts they considered had spurred competition and innovation in traditional public schools. However, the data used in the study consisted of news reports and website minutes of board meetings, not what would be considered a rigorous examination of the evidence. In a more rigorous study of public charter

schools in Massachusetts, New Jersey, and Washington D.C. researchers concluded, “We found that charter competition has not induced large changes in district-wide operations, despite the fact that a significant number of students have left district schools” (Teske, Schneider, Buckley & Clark, 2000, p.1). In another study, Arsen and Ni (2012) found that their analysis of statewide data on Michigan school districts did not support the hypothesis that the presence of public charter schools resulted in the reallocation of district resources toward more achievement-oriented activities.

Thus, it is still unclear whether charter schools create enough competition to force traditional schools to change practices. After reviewing the existing evidence, what Arsen and Ni concluded in 2008 appears to be still true today. They said, “We find that results from available empirical studies are mixed and do not yet allow for firm conclusions about the effects of competition on traditional schools and non-choosing students” (p.1).

Claim 3: Student performance in public charter schools improves over time.

The National Alliance for Public Charter Schools reports that approximately 150 public charter schools closed in 2011-12. Closures resulted for a variety of reason, including low enrollments and financial conditions, but a major reason was low student performance. Many proponents of public charter schools argue that while some schools may struggle in the early years of their existence that performance improves over time. In some cases this is true, but the empirical evidence suggest that this is not necessarily the normal trend for public charter schools. One five-state analysis reported that the so-called list of “High Fliers” and “Bottom Dwellers” in terms of school performance did not change over a five year period of time (Fordham, 2013). The analysis of charter schools in the five cities of Albany, Chicago, Cleveland, Denver and Indianapolis revealed that charter schools performing well tended to continue to perform well while charter schools performing poorly tended to continue to perform poorly. Results from the major 2013 CREDO study discussed earlier corroborate these findings. Another part of their analysis was to examine how student performance changes over time in new and continuing public charter schools. The results revealed three key findings. First, “...there appears to be no structural ‘new school’ phenomenon of wobbly performance for

several years” (p.5). Some public charter schools produce good student performance from the first day of enrollment while other struggle and some fail to improve. Second, the analysis revealed that the best trajectory for improved performance was found in schools that grew one grade at a time instead of multiple grades all at once.

Third, to examine if performance improves over time, the researchers divided the schools in quintiles in terms of student performance. Quintile 1 included schools that had low student performance. Quintile 5 included schools with the highest performance. The researchers concluded that:

Taking the first available performance measure and using it to predict one-year increments going forward, 80 percent of schools in the bottom quintiles of performance remain low performers through their fifth year. Additionally, 94 percent of schools that begin in the top quintile remain there over time.

If we wait until the third year to start the predictions (i.e. use two growth periods as the basis of setting the initial performance for the subsequent conditional probabilities), the patterns are even stronger: 89 percent of low performing schools remain low performing and 97 percent of all the high flyers persist at the top of the distribution.

Only the schools in the 2nd quintile show any substantial pattern of movement, with half of the schools moving to a higher quintile (mostly to the 3rd) and half remaining in the bottom two quintiles.

Thus, the evidence indicates that some public charter schools can perform well even in their first year of existence, and that the first year is a very good indicator of how the school will perform over time. Higher performing schools remain higher performing, and lower performing schools remain lower performing. Most assuredly there are exceptions to this general rule, but in a majority of cases first year performance appears to be a good barometer of later performance.

Claim 4: Public charter schools enroll the best students from traditional public schools.

Opponents of public charter schools often argue that charter schools take the best students from traditional public schools. In other words, they “cream the best crop” of students, leaving more disadvantaged students in the traditional public schools. While it appears this perception is fairly widespread, the empirical evidence does not support this claim.

Cowen and Winters (2013) conducted an analysis of five years of data on Florida students who had moved to charter schools. They concluded:

The better students are performing relative to their peers, the less likely they are to move into a charter. There are higher rates of minority students in the charter sector, and Hispanics appear especially likely to transfer. On the other hand, special-needs students are less likely to be in charters. White students are more likely to enter a charter school with more white students than minority students who are more likely to move into charters with more minority students. These findings suggest that charter schools do not “cream skim” the best students away from the traditional sector, although there is evidence that charters do not provide an educational home for all.” (p.210)

Cowen and Winters’ findings from Florida appear to mirror those found nationwide. A majority of public charter schools nationwide enroll more disadvantaged and minority students than traditional schools. According to the National Alliance for Public Charter Schools (2013), in 2010-2011 “... public charter schools across the nation enroll, on average, a greater percentage of low income students (46 percent versus 41 percent), Black and Latino students (27 percent versus 15 percent and 26 percent versus 22 percent, respectively), and students who perform lower on standardized assessments before transferring to charter schools “(p1).

The 2013 CREDO study by Stanford found similar student demographics for public charter school students. Their analysis of student demographic data across 27 states found that a majority of students in charter schools are students in poverty, as defined as qualifying for free or reduced lunches. Typically students in poverty struggle more in terms of achievement. Additionally, they found that in the charter schools they studied across the country, a slightly higher percent of the students were special needs students and English Language learners.

The flip side to the selection bias argument is the argument that charter schools “push out” lower performing students. That is, charter schools counsel out students who are not performing well in the charter school in order to improve their overall school academic performance and at the same time reduce the costs of educating more challenging students. Few researchers have systematically examined if this phenomena exists, but a recent study by Zimmer and Guarino (2013) provides some evidence that this does not appear to be happening in at least one urban district. The researchers studied the movement of students in a large

(anonymous) urban school district over a seven year period of time. From their analysis of student demographic and academic performance data, the researchers concluded:

[O]ur analysis suggests that there is no evidence consistent with the claim that charter schools are in general or at the individual level pushing out low-performing students". Although there needs to be more research in other districts or states, our results weaken the 'push out' argument against the establishment of charter schools in general (p.476).

However, it is important to recognize that this is only one study. Although it is well done, from a methodological point of view, more research is needed in this area before patterns may be apparent.

Thus, a majority of students enrolled in charter schools are not the higher performing students. Quite to the contrary, they are more likely to be members of minorities and children in poverty, and some have special needs or English language challenges. These student demographics are not too surprising in light of two other pieces of information. Many charter schools are established specifically to address needs of some students. As the National Alliance for Public Charter Schools reports (2013), "Many charter operators make the strategic decision to open charter schools in underserved neighborhoods with high concentrations of low income, minority, and low performing students" (p.1).

In addition, the public policy laws governing public charter schools in most states prohibit selectivity in student enrollments, and most employ a lottery system to govern (at least in part) student enrollments. However, it is also important to recognize that a majority of public charter schools are found in urban settings. The Stanford analysis revealed that over one-half of all the public charter schools they studied across the 27 states were in urban areas, and only 16% were in rural settings.

To date there is very little reliable information specifically on the student demographics and academic performance of students enrolled in more rural public charter schools. An examination of the student performance data in some studies suggest many students in rural charter schools also struggle academically, but it not known at this time if the student demographics in more rural public charter schools mirror the student demographics in urban charter schools. Thus, while evidence suggests that traditional public schools do not experience

an exodus of higher performing students to public charter schools, this finding does come with a caveat. Less information is known about the performance of students leaving traditional rural public schools for public charter schools.

Claim 5: Public charter schools have detrimental financial impacts on sending public schools.

Many opponents of public charter schools argue that charter schools have detrimental effects on the traditional public schools that students are leaving to enroll in public charter schools, and that this may negatively affect the remaining students in the traditional school. The empirical evidence for this claim appears to be mixed and very localized. That is to say, some studies have reported negative effects in particular cities and particular states. For example, a study of public charter schools and traditional public schools in one county in North Carolina found that enrollments had declined in the traditional public schools while per pupil expenditure levels were affected in only some of the schools (Cho et al, 2013). The study by Bifulco and Reback (2011) of Albany and Buffalo, two cities considered by the researchers to have high concentrations of charter schools, found “...that charter schools have had negative fiscal impacts on these two school districts...” (p.1). They estimated that the negative fiscal impacts ranged from \$633-\$1,070 in per pupil expenditures for traditional public schools, depending upon city.

An Ohio study, using data provided by the Ohio Department of Education, found that funding public charter schools resulted in a 6.5% loss in state aid for students in traditional public schools (Innovation Ohio, 2013). The study by Teske and others (Teske et al, 2000) of schools in two states and the District of Columbia, albeit urban school districts, found that most districts did not see reductions in expenditures, in part because of strategies implemented for increasing their enrollments. And the study of Michigan schools, by Arsen and Ni (2012) reported that public charter schools did, “...clearly generate fiscal stress in districts” (p.3).

Thus, the evidence to date of the impacts of public charter schools on traditional public schools is at best unclear. At least in urban settings, the presence of public charter schools does not appear to have major impacts on student demographics in traditional public schools.

However, in the area of potential financial impacts, the existence of public charter schools does appear to result in lower per pupil expenditures in traditional public schools. Additional research is needed on the potential impacts on rural traditional public schools, but it is likely to uncover similar financial impacts, given the strong relationship between student enrollments and expenditures found in most states.

Summary

The goal of this **BRIEF** was to compile and analyze the empirical evidence of the impacts of public charter schools on students and schools. The analysis revealed that student performance in charter schools is very mixed. In some cases studies have found positive effects in achievement, others negative effects, and still others no effects. The presence of charter schools have resulted in positive changes in some neighboring traditional public schools, while in other cases there appear to be negative impacts, or no impacts (either positive or negative). Public charters schools, at least those found in urban areas, tend to serve more disadvantaged and minority students.

Taken in the aggregate, the empirical evidence to date leads one to conclude that we do not have definitive knowledge about the impacts of public charter schools on students and schools. But in reviewing the existing evidence, one is also struck by the fact that the impacts of charter schools appear to be very contextual. Some public charter schools are better than others. Some are very successful in meeting student needs, and others are not very successful. In other words, public charter schools are just like traditional public schools. Success depends upon a variety of factors. Consequently, the impacts of public charter schools should not be painted with one broad brush stroke. Each should be judged on its own evidence and performance.

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