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Charter School Research: Questions to Ask When to Understand the Findings

As the National School Boards Associations' Center for Public Education's report [Charter Schools: Finding Out the Facts](#) notes the quality of research on charter schools varies dramatically where all too frequently research is written with an ideological bias or weak methodology. However, even with high-quality research, there are limitations that all readers but especially policymakers, should be aware of before making any determination on what the study is actually saying about the effectiveness of charter schools. Here are a few questions you should be asking when reading research about charter schools:

The following materials outline the key issues in understanding charter school research and are followed by the underlying rationale behind each of the points.

1. Who wrote the study and how was it funded?

As the Center recommends in their report [Finding Credible Research](#), when reading any research it is important to know who wrote it and who paid for it. Knowing such information will provide some insight into whether the findings may be biased based on the author's background or the funder's mission. Many charter schools studies are written and funded by organizations that have a predefined bias for or against charter schools, which may be reflected in the research findings.

Examples:

The report [How Are Dayton Charter Schools Doing?](#) was funded and written by the [Fordham Institute](#) which [advocates](#) for expanding school choice and is an authorizer of charter schools in Ohio.

The book [The Charter School Dust Up](#) was funded and written by researchers from the [Economic Policy Institute](#) that typically have opposed charter schools.

2. Where is the research published?

No matter the author's background or the funder's mission it is always important to examine where the study has been published. Peer reviewed academic journals should provide the greatest likelihood of unbiased research. However, even so-called peer reviewed journals can have their own slant either for or against charter schools. So it is important to examine the mission of the journal as well as past reports to gain a better perspective of any possible bias.

Reports from research organizations such as [RAND](#) are likely to provide an unbiased look at charter schools. However, they should not be confused with so-called Think Tank organizations such as the [Brookings Institute](#) and the [American Enterprise Institute](#) that do extensive quality research as well but may still have at an ideological point of view. Reports from advocacy organizations such as the [National Education Association](#) and the [Center for Education Reform](#) should be interpreted with the most caution since they come from an explicit point of view and represent the research to support that view. Yet, this does not mean reports from these organizations cannot be useful. They just need to be interpreted with greater caution.

Examples:

The study [The Unknown World of Charter High Schools](#) was published in the journal [Education Next](#). Although Education Next is an academic peer reviewed journal many on the editorial staff are known for advocating free market solutions in education.

The report [Charter Schools in Eight States](#) was written and published by the research organization [RAND Corporation](#) which has a well established reputation for high quality and independent research.

The report [Evaluating the Impact of Charter Schools on Student Achievement](#) was published by the [Great Lakes Center for Education Research and Practice](#) whose members consist of the [National Education Association](#) and their state affiliates in the Midwest and has historically opposed charter schools.

3. What is the study measuring?

Beyond determining potential bias, it is critical to know exactly what the study is measuring. Some studies examine a single charter school or a small group of charter schools while others examine all charters within a district or state. Very few studies of charter schools are able to examine charters across states but there are some.

Examining a Single or Small Group of Charters

Knowing what charters are being studied enables you to determine whether the findings can be attributable to charters in your district, state or even the nation as a whole. Generally speaking, if a study is only examining the impact of a single or a small number of charters the findings typically would not answer the questions: What is the impact of charter schools nationwide? Or what is the impact of Charter Schools within my state? In most cases examining a small number of charters cannot even answer the question: What is the impact of charter schools in my district? Typically research based on a small number of charters schools can answer a question such as: What are the characteristics that made those particular charters effective? These are important distinctions policymakers need to make when using research to make decisions about charter schools.

Example:

The report [Student Characteristics and Achievement in 22 KIPP Middle Schools](#) found that most KIPP schools (KIPP is a national network of charter schools) had a substantial impact on their students' math and reading achievement. With that said, these results can only be used to evaluate the impact of KIPP schools and cannot be used to evaluate the impact of charter schools in general since KIPP schools are not representative of charter schools at a local, state, or national level.

Examining Charters at the District and State Level

On the other hand, if the study is examining a representative sample of charters within a district or state—meaning the charters being studied have similar characteristics as all charters within the district or state-- then it is quite likely the findings can be applied to either the district or state. Such studies would be able to answer the questions: What is the impact of Charter Schools within my state? Or what is the impact of Charter Schools within my district? Keep in mind though, that they still do not tell us anything about the effectiveness of charter schools in general. Even if the studies are not representative, they can provide insight into what works in an effective charter school what does not.

Example:

The report [How New York City's Charter Schools Affect Student Achievement](#) found that New York City Charter Schools were more effective than the traditional public schools attended by students who had attempted to enroll in the charter school but were not admitted due to lack of space. Keep in mind, the findings can only apply to the effectiveness of charter schools in New York City and do not provide any insights into the effectiveness of charter schools in the rest of the New York state or in any other state.

Examining Charters Nationwide

To answer the question whether charter schools are more effective than traditional public schools nationwide, the study needs to include a representative sample of charters across states. Unfortunately, as of this writing no such study exists. As a matter of fact, only a few studies are able to effectively study the impact of charters across state lines. This is because charters school laws and the students that attend charter schools vary dramatically from state to state so it is quite difficult to make apples to apples comparisons.

Example:

The report [Charter Performance in 16 States](#) is one of the few studies to effectively compare the achievement of chart schools across state lines. While the report includes 70 percent of charter school students, the findings are not necessarily representative of all charter school students since not all states with charter schools were included. But since all schools within participating states were included in the study, findings are representative at the state level for each of the 16 states.

Note: Making accurate comparisons of charter schools across state lines is extremely difficult and always comes with caveats since state charter laws and characteristics vary greatly from state to state.

4. How are charter schools being compared?

When you read charter schools are more effective or not as effective the question you should immediately ask is: *Compared to what?* Unfortunately, it is not always easy to determine what charters are being compared to or how. Knowing this information can dramatically change how the findings are interpreted.

Comparing Charters to the Average Traditional Public School

For example, comparing charter schools to the average traditional public school does not provide an apples to apples comparison since charter schools are much more likely to enroll poor and minority students than the average traditional public school. So, such comparisons would provide misleading results.

Example:

The report [Choice Without Equity](#) found that charter schools are more racially segregated than traditional public schools. However, the report compared the racial composition of charter schools to the average traditional public schools to come to their conclusion. A more accurate comparison would be to compare the racial composition of charter schools to the traditional public schools those students would have otherwise attended.

Comparing Charters to Similar Traditional Public Schools

The most accurate comparisons are able to compare the results a student attending a charter school made to the results they likely would have made if they had attended their neighborhood traditional public school. Although this is the best way to isolate the impact of the charter school, it is also the most difficult study to design. This is because students are not randomly assigned to charters and traditional public schools so any difference in results between the two schools could be attributable to unobserved characteristics such as motivation and parental support at home.

Researchers have developed several methods to minimize the impact of these characteristics on their findings but each have their limitations which are not always made clear in the research. The following are three of the most common methods used in charter school research. I will first refer to the method's technical name which you would likely encounter in your readings but then I will explain in common terms what the method is actually measuring and describe its strengths and weaknesses.

- **Lottery studies:** These are studies that compare the achievement growth of students who attended charter schools to those students who applied to the charter school but did not gain admission through the school's lottery.

- *Strengths:* Lottery studies are the closest method to a randomized experiment -- the gold standard in research -- when it comes to studying the impact of charter schools. In randomized experiments, subjects of a study are randomly assigned to different treatments in order to isolate the impact of the treatment (in this case charter schools) being studied. In lottery studies there should be minimal difference in student characteristics between those students who applied and gained entry via a lottery and those students who did not. So the method compares the achievement of similar students.
 - *Weaknesses:* Charter schools that receive more applications for admissions than spots available are likely to be the more effective charter schools since demand outweighs supply. The findings would only apply to those charter schools with a lottery. So, lottery studies are not typically effective at making general findings about a large number of charters.
 - *Example:* [How New York City's Charter Schools Affect Student Achievement](#) is an example of a study that utilized the lottery method. Although the study provides valid results for the impact of charter schools in New York City, they do not provide insight on how effective charter schools are outside New York City.
- ***Propensity score matching:*** Compares the achievement of students who attend a charter school to similar students in traditional public schools who would be just as likely to attend a charter school based on their observed characteristics such as race and previous achievement.
 - *Strengths:* Compares the achievement of all charter school students to similar students in traditional public schools. Comparisons can be made for all grade levels and for a large number of schools.
 - *Weaknesses:* Cannot account for unobserved differences between students who attend charter schools and similar students in traditional public schools. For example, students in charter schools may be more motivated than students in traditional public schools even if they have similar observable characteristics.
 - *Example:* [Charter Performance in 16 States](#) uses a sophisticated type of propensity score matching technique to match students in charter schools to 'virtual twin' traditional public schools in order to determine if students made greater academic gains attending the charter school than if they remained in their neighborhood traditional public school. Although the study's technique likely makes for more accurate comparisons between charter schools and traditional public schools than more typical propensity score matching techniques, they cannot fully account for non-observable student characteristics such as motivation.
- ***Regression models:*** These are statistical models used to measure the impact a single or multiple factors have on a subject being studied. There are many types of these models but so-called 'student fixed effects' models are specifically important in charter school research. These models compare the achievement gains of a student when they were enrolled in a charter school compared to the gains those same students made while enrolled in a traditional public school.

- *Strengths:* No need to compare the results to students in traditional public schools because students act as their own comparison group since the model compares the achievement the student made while in a charter school compared to when they attended a traditional public school. Unobserved characteristics are not a problem in a student fixed effects model. This model is especially helpful in determining the impact of charter schools on those students who dropped out of a charter school to attend a traditional public school.
- *Weaknesses:* Can only judge charters on those students who also attended a traditional public school. It could be the case that students who transferred out of charter school and into a traditional public school do not have the same academic achievement as those students who remained in the charter school. Hence, estimates may not provide an accurate assessment of the impact of the charter school.
- *Example:* The report [The Impact of Charter Schools on Student Achievement](#) used regression models to compare the achievement students made while attending a charter school to their achievement when they transitioned into a traditional public school.

These are just three of the most common models¹ used to evaluate the impact charter schools have on their students' achievement. However, researchers are continually developing new models to better isolate the impact charter schools on student outcomes. Yet, there are no perfect models so it is important to understand the limitations of whatever model is used.

5. What does the research actually find?

What the data shows and what the authors highlight as an important finding is not always the same, especially in research on charter schools. It is important to look carefully at all the findings to determine for yourself what is most important. A couple questions you should ask: How large is the impact of charter schools on student outcomes, if any? And how large is the variation of that impact from school to school? These questions are not always explicitly answered by authors yet every reader should find the answer.

Look Beyond Average Effectiveness of Charters

For example, research may show that charters schools are more effective than traditional public schools on average. The words '*on average*' are key here. Averages can hide a lot of information especially for policymakers. For example, a number of studies show that charter schools *on average* have a greater impact than traditional public schools. However, many of the same studies show there is a huge variation in the effectiveness of charters schools. In these studies, it can be determined that most charter schools are just as or less effective than traditional public schools yet there are a few highly effective charters. This can happen if the effect of a few charter schools on the high end is great enough to pull up the overall average. So even though research may show charters are on average more effective it does not mean that most charters or even a large number of charters are more effective than traditional public schools. The same is

¹ For more information about these models check out the Center for Reinventing Education's report [The Effect of Charter Schools on Student Achievement: A meta-analysis of the literature](#) (2011) pages 8-12.

true when looking at specific student groups. It may be that charters are more effective for the average student but the average may mask the fact that the charter is not as effective educating different groups of students.

Example:

[Charter Performance in 16 States](#) is a good illustration of the importance of looking beyond averages. The report found on-average charter schools are more effective than traditional public schools. However, when they examined charter schools individually they found that just 17 percent of charter schools were more effective while 37 percent were less effective traditional public schools. Even when comparing the effectiveness of charter schools by state the report found that only in five states charter schools outperformed traditional public schools while in six states charter schools were less effective. In four states charter schools were just as effective as traditional public schools.

Furthermore, the same study found that on-average charters are more effective at teaching English Language Learners (ELL) nationally yet in several states with significant Hispanic populations—who make up the majority of ELL students-- their charter schools were less effective at educating their Hispanic students than traditional public schools.

Size of the Impact on Student Achievement

Even in those studies that find charters are more effective, it is important to find out how much more effective. Unfortunately, many authors do not always describe the impact in practical terms. Typically they'll report the size of the impact in what researchers call 'effect size'². A rule of thumb is if the effect size is less than .1, the impact is not very large. However, an effect size between .1 and .2 is fairly large, similar to the impact most research shows results from lowering class size by 5 students. Effect sizes greater than .2 are quite large and are only typically seen in the most effective educational programs.

Example:

The report [The Effect of Charter Schools on Student Achievement](#) found that when, taken all quality research on charter schools, 'on-average' the overall effect size of charter schools is .05 in elementary school math, which would be considered a relatively small effect size. However, the same report found that KIPP charter schools by themselves have an effect size of .223 in math which is quite large. Taken together the report shows that the average charter school has a small positive impact on student achievement but KIPP charter schools have large positive impact.

Looking beyond the averages and knowing how large the actual impact charter schools have on student outcomes is imperative in fully understanding the research on charter schools.

² Effect sizes are given in terms of standard deviations.

