

# **KENTUCKY NEEDS CHARTER SCHOOLS NOW MORE THAN EVER**

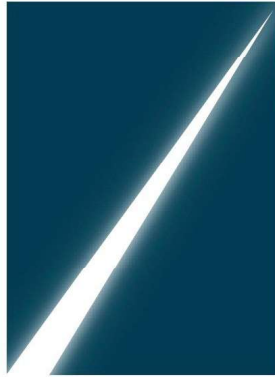
**Recent Federal Test Score Results Show Charters  
Moving Ahead of Traditional Public Schools**

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**A Bluegrass Institute Policy Point**

**By Richard G. Innes • July 2023**

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# **Kentucky Needs Charter Schools Now More Than Ever**

## ***Recent Federal Test Score Results Show Charters Moving Ahead of Traditional Public Schools – Including Those in Kentucky***

### **Executive Summary**

At the close of the Kentucky Legislature’s 2023 regular session, a number of the state’s legislators commented that the 2024 legislative session was going to see significant action to improve parent choice options for the state’s public school students. The promise couldn’t be timelier. Kentucky increasingly finds itself in an ever-shrinking group of states that offers students and parents virtually no choices about where to attend school.

Furthermore, as we point out in our May 2021 report, “Florida Versus Kentucky: School choice improves public school performance, too,” offering a lot of school choice is associated with notably better performance in a state’s public school system, as well.<sup>1</sup> Thus, better parental choice can have multiple positive impacts on all school systems.

One of the key parent choice options lacking in Kentucky is for public charter schools. Although the state enacted charter school legislation in 2017, it failed to establish a stable funding mechanism for those schools at that time. In 2022, the legislature attempted to correct this funding problem with the passage of House Bill 9, but that legislation is currently under a court challenge. In consequence, six years after passage of the enabling legislation, Kentucky still doesn’t have any charter schools.

Specific evidence about the positive performance of charter schools continues to accumulate. Shortly before this Policy Point was finalized, the well-known Center for Research on Education Outcomes (CREDO) at Stanford University issued its third report in a series covering charter school performance. The new report is titled “AS A MATTER OF FACT: THE NATIONAL CHARTER SCHOOL STUDY III.”<sup>2</sup> A few key comments include:

***“...the typical charter school student in our national sample had reading and math gains that outpaced their peers in the traditional public schools (TPS) they otherwise would have attended.”***

***“Black and Hispanic students in charter schools advance more than their TPS peers by large margins in both math and reading.”***

***“Charter school students in poverty had stronger growth.”***

***“English-language learner students attending charter schools had stronger growth.”***

***“...compared to their TPS peers, urban charter school students had 29 additional days of growth per year in reading and 28 additional days of growth in math, both of which were significant.”***

This doesn’t mean that across the nation charter schools outperformed in every area. CREDO found charters still have issues serving learning disabled students, for example. But the comments above deal with areas of major concern regarding Kentucky’s traditional public school system.

This Policy Point, however, isn't going to focus on the CREDO study. Instead, it adds other new evidence from the 2022 National Assessment of Educational Progress (NAEP) that shows charter school students in two southern states with significant charter programs are leaving the Bluegrass State's children behind.

Consider the 2022 NAEP Grade 4 Reading Assessment scoring data shown in Table 1. As the yellow bracket and arrow highlights, **the published NAEP Grade 4 Reading Scale Scores for Black students in charter schools in both Florida and Georgia are actually slightly higher than the score white students in Kentucky's regular schools posted!**

Table 1

Average public school scale scores for NAEP grade 4 reading, by school is identified as charter or not, race/ethnicity used to report trends, and jurisdiction: 2022					
		Charter school		Not a charter school	
		Race/ethnicity used to report trends, school reported			
		White	Black	White	Black
Year	Jurisdiction	Average scale score	Average scale score	Average scale score	Average scale score
2022	National public	231	198	226	198
2022	Florida	234	224	234	206
2022	Georgia	‡	224	229	201
2022	Kentucky	‡	‡	220	200

‡ Reporting standards not met.

NOTE: Black includes African American. Some apparent differences between estimates may not be statistically significant - More on that found in main body of this report.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2022 Reading Assessment.

Even after allowing for the statistical sampling errors present in all NAEP scores, the Black students in Florida and Georgia have erased their achievement gap with whites in Kentucky. A Black-white gap education gap eliminated – that's astonishing!

Here are some more points:

- **The NAEP Grade 4 Reading Assessment tells us that the 5-point difference in the 231 score for charter school whites and the 226 score for whites across the nation in non-charter public schools also is statistically significant. In other words, white students in charters nationwide now outperform whites in the traditional public education system in Grade 4 NAEP reading.**
- **After considering the sampling errors in the reported scores, Black students in Georgia's charter schools statistically significantly outperform Georgia's Black students in that state's traditional public schools.**
- **The 18-point difference in scores for Black students in Florida's charter schools versus Black students in Florida's traditional public schools is also statistically significant.**

- **The large, 24-point difference between Florida’s charter school Black students’ scores and Kentucky’s Black student scores is also statistically significant.**
- **Georgia’s charter school Black students statistically significantly outscore Kentucky’s Black students, too.**

We expand on this summary of NAEP Grade 4 Reading results in the main body of this report, but it’s already clear in the bullet comments above that, compared to Kentucky’s public school students and to non-charter students in their states, Georgia’s and Florida’s charter school students are moving ahead on the NAEP.

In addition, the good news for charter school students isn’t restricted to fourth-grade reading.

Examination of results for the **2022 NAEP Grade 4 Math Assessment** reveals some similar findings:

- **Charter school Black students in both Florida and Georgia outscored Kentucky's Black students in Grade 4 math and in both cases the differences are statistically significant. In fact, the difference between Georgia charter Black students and Kentucky's Black students is really large – 33 NAEP Scale Score points!**
- **As with Grade 4 reading, Georgia's charter school Black students statistically tied Kentucky's whites, as well. Another achievement gap is shattered.**
- **Overall, whites in public charter schools across the nation outscore Kentucky's white students by a statistically significant amount.**
- **Whites in Florida's charter schools also outscore Kentucky's whites by a statistically significant amount.**
- **Across the nation, the charter school Black students’ score for NAEP Grade 4 Math is also statistically significantly larger than the national non-charter Black students’ score.**

So, in a number of ways, just as with Grade 4 reading, NAEP Grade 4 Math results also cancel an often-heard narrative that charter schools don’t outperform traditional public schools.

The eighth grade situation is also interesting. The **2022 NAEP Grade 8 Reading Assessment** shows:

- **Black students in both Florida's and Georgia's charters outscored Kentucky's Black students and Florida's Blacks did so by a statistically significant amount.**
- **Florida's charter school Black students are statistically significantly tied with Kentucky's whites. Again, another achievement gap is eliminated.**
- **Nationwide, public charter school Black students outscored Kentucky's Black students by a statistically significant amount.**
- **Nationwide, public school charter whites also outscore Kentucky’s whites by a statistically significant amount.**

Finally, good news for charter schools holds up for **2022 NAEP Grade 8 Math**, too:

- **Charter school Black students in both Florida and Georgia outscored Kentucky’s Black students by a statistically significant amount.**
- **Across the entire nation, charter school Black students outscore Kentucky’s Black students.**
- **Nationally, public charter school whites also outscore Kentucky’s whites.**

These important charter school performances show what can happen if a state has a solid charter school program. The fact that Kentucky's legislation passed in 2017 and the state's supporting regulations for charter schools were modeled around similar legislation from Georgia should have already set the Bluegrass State up to also begin seeing some of its own gaps close. If the continuing bickering about adult interests can finally be overcome, then what works better for students in states like Georgia and Florida could be created in Kentucky, too.

## **Why Kentucky needs charter schools – a more detailed look at the NAEP evidence**

Although Kentucky has had laws enabling charter schools on the books since 2017 and the implementing regulations have been in place nearly as long, fierce resistance by certain adult interests, most recently using the court system, has prevented any permanent charter school funding sources from being established. As a direct consequence, there currently are no charter schools in the commonwealth.

This lack of an important parent choice option has served turf-protecting adults in the state's traditional public school system at serious cost to students and parents in the commonwealth.

Meanwhile, as Kentucky continues to deny parents the option of charter schools, important results for charters are happening elsewhere.

Most notably, states with top-performing charter school systems are starting to show some really significant achievements on the National Assessment of Educational Progress (NAEP). In addition, as discussed below, in some cases the overall national average performances in charter schools now surpass performances for similar student groups in the nation's traditional public school systems. Thus, while Kentucky continues to dither about even having charter schools, charter school students in some other states are starting to reap real benefits from their schools of choice.

As we will see below, the NAEP provides a number of examples where charter students now clearly outperform Kentucky's traditional public school students. In some cases, Black students in top-performing charter school states now perform equally as well as Kentucky's traditional white students. That erasure of an achievement gap is noteworthy.

### **About the NAEP**

Before discussing specific test results, a few general words about the NAEP are in order.

To begin, this federal testing program has been in existence for many decades. It started to report state-level results with the 1990 administration of a Grade 8 NAEP Math Assessment. Two years later, NAEP added state-level testing in Grade 4 for both math and reading. State-level NAEP testing of Grade 8 reading was added in 1998.<sup>3</sup> So, the NAEP isn't some new and relatively untried program. It has credibility.

As school choice started to take hold, the NAEP began to report separate scores for students in charter schools. Unfortunately, due to small numbers of students in charters, NAEP reporting for this group has often been limited. In many cases, due to small numbers of students in many charter school samples, the resulting sampling errors in the scores were too large to provide reasonably accurate score estimates, and the NAEP suppressed such scores for charter school students in its reports.

To an unfortunate extent, limited reporting of charter school performance continues today. We'll see some examples below of such score omissions even for two top-performing charter school states in the NAEP: Florida and Georgia.

In the early years of NAEP, reporting was primarily conducted with paper reports. Over time, the NAEP's reports increasingly have been posted online, generally in PDF format. More recently, a powerful web tool, the NAEP Data Explorer, was introduced.<sup>4</sup> This tool allows access to scores, standard errors in those

scores and a lot more such as an array of analysis tools that can graph results and compute the statistical significance between different scores. The NAEP Data Explorer was used to assemble all the data tables presented in this Policy Point.

It needs to be stressed that the issue of statistical significance is important with the NAEP. Because the NAEP is a sampled assessment that does not test all students, all of the reported scores are properly only considered to be estimates of the average performance that would be found if the entire student group was tested. The NAEP provides a measure of the size of those measurement errors using a metric called the “Standard Error.” According to discussion in the 1998 NAEP Reading Report Card, using the NAEP’s standard errors we can be 95% certain that the true average score that would be achieved if all students were tested would lie within plus or minus two standard errors of the published NAEP score.<sup>5</sup>

For example, in 2022, across the nation the average NAEP Scale Score for white students in charter schools in Grade 4 NAEP Reading was 231 and the standard error was 2.0. So, we can be 95% certain that the actual average score for all white students in charter schools lies somewhere between 231 plus and minus 2 times 2.0, or between 227 and 235.

In some cases, but not all, the NAEP Data Explorer allows quick determination of statistical significance between multiple sets of published NAEP data points.

In other cases, when comparing scores from two different groups, such has been done frequently to assemble this Policy Point, the use of standard errors to determine statistical significance requires a manual procedure involving the calculation of a statistic called the “Standard Error of the Difference.” A discussion of this process is presented in Attachment 1 below for those interested in this level of detail.<sup>6</sup>

### **Looking at the data**

With the background on NAEP complete, here are the scores and standard errors for some key charter school states, the entire national public school sample, and the state of Kentucky for NAEP Grade 4 Reading in 2022.



NAEP Grade 4 Reading

Table 2

Average scale scores and standard errors for NAEP grade 4 reading, by school identified as charter or not, race/ethnicity used to report trends, and jurisdiction: 2022									
		Charter school				Not a charter school			
		Race/ethnicity used to report trends, school-reported				Race/ethnicity used to report trends, school-reported			
		White		Black		White		Black	
Year	Jurisdiction	Average scale score	Standard Error	Average scale score	Standard Error	Average scale score	Standard Error	Average scale score	Standard Error
2022	National public	231	(2.0)	198	(2.4)	226	(0.4)	198	(0.7)
2022	Florida	234	(4.8)	224	(6.8)	234	(1.9)	206	(2.4)
2022	Georgia	‡	†	224	(4.0)	229	(2.3)	201	(1.9)
2022	Kentucky	‡	†	‡	†	220	(1.6)	200	(2.6)

† Not applicable.  
 ‡ Reporting standards not met.

NOTE: Black includes African American. Some apparent differences between estimates may not be statistically significant.  
 SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2022 Reading Assessment.

Something stands out right away with this data: Black students in charter schools in both Florida and Georgia appear to outscore Kentucky’s white students, 224 versus 220.

But, is the 4-point difference statistically significant?

Looking first at Georgia, we see that state’s Black student score has an associated standard error of 4.0 and Kentucky’s white student score has a standard error of 1.6. Using the procedure in the 1998 NAEP Reading Report Card indicates that the score difference of just 4 points is not statistically significant. Likewise, due to its even larger standard error of 6.8 points, the Florida charter school Black student score is not statistically significantly different from Kentucky’s white student score.

But, that’s not the end of the discussion!

- **NAEP tells us that, within its ability to measure, Black students in charter schools in both Florida and Georgia are now tied in performance with Kentucky’s white students and, in a real sense, have remarkably erased an academic achievement gap.**

There’s another way to consider this data.<sup>7</sup> Note in Table 2 that Black students in charter schools in Georgia have a 23-point score advantage over Black students in that state’s non-charter schools. If Kentucky implements charter schools, especially given that Kentucky’s charter school system is designed to be similar to Georgia’s, it’s possible Bluegrass State Black students in charters would enjoy a similar performance advantage over Black students in the non-charter schools. So, applying this to the data in Table 2, Kentucky’s Black charter student score for NAEP Grade 4 Reading might be around 223, not 200.

That would slightly exceed the 2022 Kentucky white students' performance, erasing the achievement gap.

Next, consider the nationwide difference in scores for charter school whites versus whites in non-charter schools. Thanks to the very low standard error in the non-charter white student's score:

- **The NAEP reports that the 5-point difference in the 231 score for charter school whites and the 226 score for whites across the nation in non-charter public schools is statistically significant. In other words, charters now do outperform for white students nationwide in NAEP Grade 4 Reading.**

Next, how do Black students in Georgia's charters compare to Black students in that state's traditional schools? Is the rather large, 23-point score difference statistically different?

- **After considering the standard errors in the reported scores, the Black students in Georgia's charter schools do statistically significantly outperform their traditional public school racial counterparts.**

What about Black student versus Black student in Florida? Will the big standard error in the Florida charter school Black students' score wipe out statistical significance?

- **The 18-point difference in scores for Black students in Florida's charter schools versus Black students in Florida's traditional public schools is so large that it's statistically significant despite the rather notable measurement error in the charter school Black students' score.**

That result for Florida makes us wonder: Do Black students in Florida's charters also outscore Black students in Kentucky's traditional schools?

- **The large, 24-point difference between Florida's charter school Black students' score and Kentucky's Black students' score is statistically significant despite the rather notable standard error for Florida's charter Black students' score.**
- **This means Georgia's charter school Blacks also statistically significantly outscore Kentucky's Black students, too, as the Georgia measurement error is much lower than Florida's.**

#### **NAEP Grade 4 Math**

Now, consider the Grade 4 NAEP Math picture. Table 3 has the data.

Table 3

Average scale scores for NAEP grade 4 math, by school is identified as charter or not, race/ethnicity used to report trends, and jurisdiction: 2022									
		Charter school				Not a charter school			
		Race/ethnicity used to report trends, school-reported				Race/ethnicity used to report trends, school-reported			
		White		Black		White		Black	
Year	Jurisdiction	Average scale score	Standard Error	Average scale score	Standard Error	Average scale score	Standard Error	Average scale score	Standard Error
2022	National public	247	(1.8)	218	(1.6)	245	(0.3)	216	(0.5)
2022	Florida	256	(4.7)	229	(4.9)	252	(1.7)	225	(1.8)
2022	Georgia	‡	†	243	(3.7)	246	(1.2)	221	(1.9)
2022	Kentucky	‡	†	‡	†	237	(1.6)	210	(2.0)

See Table 2 for notes

Some observations:

- Charter school Black students in both Florida and Georgia outscored Kentucky's Black students in Grade 4 math; in both cases the differences are statistically significant. In fact, the difference between Georgia charter Black students and Kentucky's Black students is really large – 33 NAEP Scale Score points!
- As with Grade 4 reading, Georgia's charter school Blacks statistically tied Kentucky's whites, as well.
- Overall, whites in public charter schools across the nation outscore Kentucky's white students by a statistically significant amount.
- Whites in Florida's charter schools also outscore Kentucky's whites by a statistically significant amount.
- Furthermore, across the nation the charter school Black students' score is also statistically significantly larger than the national non-charter Black students' score. For Grade 4 math, this is counter to an often-heard narrative that charter schools don't outperform traditional public schools.

### NAEP Grade 8 Reading

Next, we look at NAEP Grade 8 Reading results, as detailed in Table 4.

Table 4

Average scale scores for NAEP grade 8 reading, by school is identified as charter or not, race/ethnicity used to report trends, and jurisdiction: 2022									
		Charter school				Not a charter school			
		Race/ethnicity used to report trends, school-reported				Race/ethnicity used to report trends, school-reported			
		White		Black		White		Black	
Year	Jurisdiction	Average scale score	Standard Error	Average scale score	Standard Error	Average scale score	Standard Error	Average scale score	Standard Error
2022	National public	270	(1.8)	248	(1.5)	267	(0.3)	242	(0.6)
2022	Florida	271	(7.1)	257	(3.4)	265	(1.7)	246	(2.2)
2022	Georgia	‡	†	256	(16.9)	272	(1.9)	246	(2.0)
2022	Kentucky	‡	†	‡	†	262	(1.4)	239	(2.5)

See Table 2 for Notes

Some observations:

- **Black students in both Florida's and Georgia's charters outscored Kentucky's Black students by a statistically significant amount.**
- **Florida's charter school Black students are statistically significantly tied with Kentucky's whites.**
- **Nationwide, public charter school Black students outscored Kentucky's Black students by a statistically significant amount.**
- **National public school charter whites outscore Kentucky's whites by a statistically significant amount.**

**NAEP Grade 8 Math**

Finally, Table 5 shows the NAEP Grade 8 Math data.

Table 5

Average scale scores for NAEP grade 8 math, by school is identified as charter or not, race/ethnicity used to report trends, and jurisdiction: 2022									
		Charter school				Not a charter school			
		Race/ethnicity used to report trends, school-reported				Race/ethnicity used to report trends, school-reported			
		White		Black		White		Black	
Year	Jurisdiction	Average scale score	Standard Error	Average scale score	Standard Error	Average scale score	Standard Error	Average scale score	Standard Error
2022	National public	286	(1.8)	256	(1.5)	284	(0.4)	252	(0.6)
2022	Florida	276	(5.9)	260	(3.2)	282	(2.2)	254	(2.4)
2022	Georgia	‡	†	267	(7.7)	285	(1.6)	256	(1.5)
2022	Kentucky	‡	†	‡	†	274	(1.4)	248	(2.3)

See Table 2 for Notes

Some observations:

- **Charter school Black students in both Florida and Georgia outscored Kentucky's Black students by a statistically significant amount.**
- **Across the entire nation, charter school Black students outscore Kentucky's Black students.**
- **National public charter school whites also outscore Kentucky's whites.**

## **Summary**

Despite sometimes rather large statistical sampling errors in the NAEP scores for charter school student groups, we have seen in many cases that students from these innovative public schools in both Georgia and Florida outperform traditional public school students in Kentucky.

We have also seen that in a number of cases across the entire nation, charter school students outperform their counterparts in the nation's non-charter public schools. Thus, frequent claims that charter schools don't outperform increasingly are becoming outdated as more recent data show charter schools are moving ahead enough that even NAEP's sampling errors are no longer large enough to hide this important development in the school choice landscape.

These important charter school performances show what can happen if a state has a solid charter school program. The fact that Kentucky's legislation passed in 2017 and the state's supporting regulations for charter schools were modeled around similar legislation in Georgia should have set Kentucky up for a high-performance charter school program by now. If the bickering about adult interests is finally overcome, the state can begin to enjoy what already is working better for students in states like Georgia and Florida.

## Attachment 1

### Procedure to Determine Statistical Significance for Two NAEP Data Points

This is a snapshot of the procedure to determine statistical significance between two NAEP scores outlined on Page 177 in the NAEP 1998 Reading Report Card for the Nation and the States.<sup>8</sup>

As an example of comparing groups, consider the problem of determining whether the average reading scale score of Group A is higher than that of Group B. Suppose that the sample estimates of the average scale scores and standard errors were as follows:

Group	Average Scale Score	Standard Error
A	218	0.9
B	216	1.1

The difference between the estimates of the average scale scores of Groups A and B is two points (218 – 216). The standard error of this difference is

$$\sqrt{(0.9^2 + 1.1^2)} = 1.4$$

Thus, an approximate 95 percent confidence interval for this difference is

plus or minus two standard errors of the difference

$$2 \pm 2 \times 1.4$$

$$2 \pm 2.8$$

$$(-0.8, 4.8)$$

The value zero is within the confidence interval; therefore, there is insufficient evidence to claim that Group A outperformed Group B.

In essence this amounts to first calculating the difference in the scores, then calculating the Standard Error of the Difference, and finally determining if the difference in scores is greater than an amount equal to two times the Standard Error of the Difference. If the score difference is larger than two times the Standard Error of the Difference, the difference is statistically significant.

## Endnotes

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- <sup>1</sup> Innes, Richard G., “Florida Versus Kentucky: School choice improves public school performance, too,” Bluegrass Institute for Public Policy Solutions, Bowling Green, Kentucky, May 2021. Online at: <https://static1.squarespace.com/static/5f986190ec1e7d424e58d7f2/t/6090301bdad6d84a16df9887/1620062243113/KYvsFL.pdf>.
- <sup>2</sup> Raymond, Margaret E., Ph.D., Et al., “As a Matter of Fact: The National Charter School Study III 2023,” Center for Research on Education Outcomes (CREDO), Stanford University, Stanford, CA, Online at: <https://ncss3.stanford.edu/wp-content/uploads/2023/06/Credo-NCSS3-Report.pdf>.
- <sup>3</sup> See: An Overview of NAEP, online at: [https://nces.ed.gov/nationsreportcard/subject/about/pdf/naep\\_overview\\_brochure\\_2021.pdf](https://nces.ed.gov/nationsreportcard/subject/about/pdf/naep_overview_brochure_2021.pdf), and first listings of various individual test results for states in the NAEP Data Explorer, online here: <https://www.nationsreportcard.gov/ndecore/landing>.
- <sup>4</sup> The NAEP Data Explorer entry web page can be accessed here: <https://www.nationsreportcard.gov/ndecore/landing>.
- <sup>5</sup> Donahue, P. L., Voelkl, K. E., Campbell, J. R. and Mazzeo, J., “The NAEP 1998 Reading Report Card for the Nation and the States,” NCES 1999–500, U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, Washington, DC: 1999. Page 187. Online at: <http://nces.ed.gov/nationsreportcard/pdf/main1998/1999500.pdf>.
- <sup>6</sup> Idem. [Donahue] Page 177.
- <sup>7</sup> This alternative analysis was suggested by Bluegrass Institute Scholar Dr. John Garen.
- <sup>8</sup> Idem. [Donahue] Page 177.

[https://acrobat.adobe.com/id/urn:aaid:sc:US:02bfcc5e-c8c1-42e7-8967-54edea39a60?mc\\_cid=58133649e0&mc\\_eid=fbac46c0fb](https://acrobat.adobe.com/id/urn:aaid:sc:US:02bfcc5e-c8c1-42e7-8967-54edea39a60?mc_cid=58133649e0&mc_eid=fbac46c0fb)

<https://tinyurl.com/mpuhtcsn>