

The data don't show Alaska charter schools are more effective

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Summary

Some, including the governor, have recently inferred from a study of charter schools' academic ranking that the education provided by Alaskan charter schools is superior to that provided in neighborhood schools and therefore charter schools should be modeled more widely here. Peterson and Shakeel, with sponsorship by the Walton Family Foundation, reported that Alaskan charter schools held top rank in reading and mathematics on the National Assessment of Educational Progress. Nevertheless, the authors wrote that they remained puzzled by the high ranking of Alaska charter schools in an otherwise academically low-ranking state.

We examine results from Alaska's in-state academic assessments of public school students during the 2018-2019 school year to determine how much of the charter schools' good performance might be attributable to characteristics that students bring to the schools versus the education the schools provide.

The governor drew an invalid conclusion that Peterson had found Alaskan charter schools more effective than neighborhood schools. Peterson did not compare charter and neighborhood schools, but simply compared charter schools across the country. We find that, after accounting for students' socioeconomic status, the charter schools and neighborhood schools in Alaska communities which had charter schools at the time of the Peterson study do not statistically differ in the percentage of their students scoring proficient in the English language arts standards. We find instead that proficiency declines as family income declines.

Interestingly, when it comes to their high proportions of students with white skin color and higher family income, Alaska charter school student bodies look like private schools in the Lower 48 states more than they resemble charter school students in the Lower 48. Nevertheless, a majority of Alaska charter students assessed in 2024 fell below state standards.

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When we first heard about Peterson and Shakeel's reports that charter schools in Alaska hold the top academic rank among the states, we were not totally surprised.^{3,4} We know many bright students who come from Alaska charter schools. And we know that some Alaska charter schools have large numbers of students scoring proficient in the state's academic standards.

However, we became skeptical of claims by some readers, most notably Governor Dunleavy, about the meaning of the Peterson reports.^{5,6,7} The governor claimed that Peterson's top ranking of Alaska charter schools on federal tests showed the charters were very effective, and especially superior to Alaska neighborhood schools which rank near the bottom nationally in reading and math. We were skeptical of the governor's take-away from Peterson's reports because much of the difference in academic scores among the two types of schools instead is likely attributable to the different preparedness and levels of parental involvement that students themselves bring to school rather than the differences in education the schools provide. Furthermore, the reports' authors were themselves puzzled about the high rank they'd assigned to Alaska charter schools.^{3,4}

In a personal communication on April 29, 2024, Dr. Peterson was unable to provide additional information regarding data which may have shed light on the Alaska results. Dr. Peterson was unable to provide sample sizes, names of the sampled charter schools, or their test score summaries, while citing the federal educational testing agency's restrictions on sharing data. Without these data we cannot conclude how confident we should be about his results. It is possible that Alaska's high ranking could be driven by a few charter schools, but it is impossible to say for certain without more information. How Alaska's charter school rank was determined cannot be replicated or verified by independent researchers outside of the department where the study originated.

Since comparisons of the academic scores of Alaska's charter schools with other Alaska schools have not been made, we make the comparisons ourselves.⁸

How we look at the data

To determine whether charter schools outperform neighborhood schools on state standards assessments, the performance of all schools reported for the state 2018-2019 PEAKS ELA (Performance Evaluation for Alaska's Schools, English Language Arts) assessment from the Alaska Department of Education and Early Development's report card to the public is examined here.⁹ That year was within the time frame of the federal data in Peterson's reports. The department reported the performance of each school under the "2018-2019 Performance Evaluation for Alaska's Schools (PEAKS)" tab.⁹ Those data for almost every K-12 public school in the state allow analysis of test scores and students' demographic characteristics.

The education department only reported characteristics of those who took the tests. Consequently, analyses here are generally for students in grades 3 to 9 during the 2018-2019 school year. Correspondence schools are omitted because their students were not included in Peterson's study, do not take the tests he examined, and have very low participation rates on Alaska state standards assessments. Furthermore, the analysis here for 2018-2019 includes schools only in districts where charters are an option to ensure that the student populations served by charters and neighborhood schools were similar.^{8,10}

At first glance, charter schools might seem responsible for the better performance they report. For example, at charter schools, 52.5% (1,866 out of 3,554) of students were proficient on the English language arts assessment versus 40.1% (18,655 out of 46,574) of students at neighborhood schools in 2018-2019. The difference remained similar in 2024, although majorities in neither public charter schools nor non-charters met the state standards.^{11,12}

However, the performance differences also might be explained by demographics of the two school types' student bodies, that is, what students themselves bring to school. To see the effect of school type on performance, we calculate how much the charter schools outperformed neighborhood schools if their students were to come with the same characteristics. That is, we ask whether charter schools students perform any better than expected given their student populations.

What the data show

In short, the answer is no, charter school students likely do not perform better than neighborhood schools after accounting for characteristics of students. A linear model which predicts school performance (i.e., percent of students proficient on the English language arts PEAKS assessment) as a function of the percentage of the school's students eligible for free or reduced-price lunch and the type of school demonstrates that the effect of school type was not statistically significant (p -value = 0.57, $df = 259$), whereas the percentage of the school on free and reduced lunch is statistically significant (p -value $< 2 \times 10^{-16}$). Models which include chronic absenteeism rate, percentage of the school's students who are English language learners (ELL), and percentage of the school which was special education (SPED) were also made. While these latter variables are statistically significant, school type never is. No model other than the model with school type alone yields a statistically significant result for school type. In summary, no evidence shows that charter schools outperform neighborhood schools in terms of English language arts proficiency once we consider their students' socioeconomic make-up.⁸

Student scores fell with the family income index at rates that were similar for both the charter schools and the neighborhood schools in 2019 (Figure 1). Figure 1 also shows the overlap between charters and neighborhood schools in their percentage of students who met the state English language arts standard. On average, every 1% increase in the assessed student population eligible for free or reduced-price lunch corresponds to a 0.65% decrease in the percentage proficient on the English language arts assessment. Points above the line correspond to schools whose performance is better than average, and points below the line correspond to schools whose performance is worse than average, given the percentage of the school eligible for free and reduced-price lunch. If charter schools were truly better than neighborhood schools we would see the charter school data points (red dots) consistently above the neighborhood school data points (blue dots). This, however, is obviously not the case.

Socioeconomic Status and ELA Proficiency

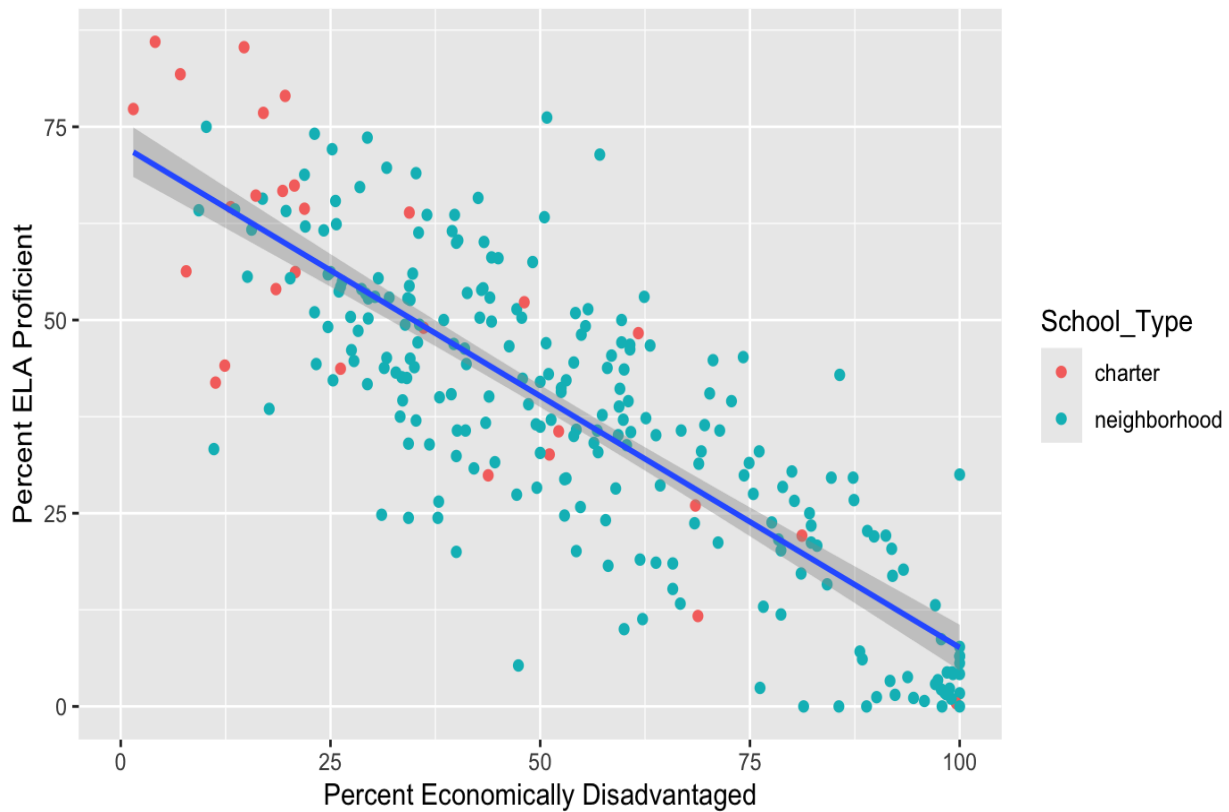


Figure 1. Graph shows a decline in schools’ percentages of third to ninth grade participating students who scored proficient or better on the state’s 2019 PEAKS assessment of English language arts with increasing school percentages of students poor enough to be eligible for free or reduced-priced lunch, aka economically disadvantaged. Each point shows a public school in Alaska school districts having charter schools. Neighborhood schools are considered non-charter, brick-and-mortar schools including alternative and lottery schools managed by the school district. Data are from the Department of Education and Early Development.

Consistent with the 2019 findings are those from the education department’s 2022 data. They show academic proficiency is associated with family income and skin color (Table 1.) Charter schools with greater percentages of white students and wealthier students perform better.

Table 1. Correlations among 30 charter schools between their percentage of participating third to ninth grade students who scored at or above proficient in state English language and math standards in 2022 and two student characteristics reported by the Department of Education and Early Development.

	Pearson correlation		Spearman rank correlation	
	Economically disadvantaged	White	Economically disadvantaged	White
ELA	- 0.61	0.74	- 0.43	0.58
Math	- 0.46	0.54	- 0.38	0.55

We discovered that charter schools, on average, have very different student bodies than neighborhood schools. For example, charter schools have far fewer economically disadvantaged students and English language learners. Here is a summary of how students differed between charter and neighbor schools in grades 3 to 9 in Alaska’s brick-and-mortar public schools:

- Neighborhood schools were 52.2% economically disadvantaged (30,780 out of 58,929 students) compared to 31.3% in charter schools (1,219 out of 3895 students) in 2019.
- Data from 2022 show that 24 out of the state’s 30 charter schools, that is, some 80%, had percentages of economically disadvantaged students that were less than the statewide average of 45% economically disadvantaged.⁹
- Neighborhood schools were 15.5% English language learners (9,150 out of 58,929 students) compared to 9.3% in charter schools (363 out of 3,895 students) in 2019.

However, those summary averages are highly influenced by a few outliers and thereby obscure some large discrepancies.

- Of the charter schools, 46.4% (13 out of 28) had economically disadvantaged rates below 20%, compared to just 3.5% of neighborhood schools (15 out of 426) in 2019.
- Only 10.7% of charter schools (3 out of 28) had English language learners percentages above 10%, compared to 36.9% of neighborhood schools (157 out of 426) in 2019.

Furthermore, not only do charter school students in Alaska differ from neighborhood school students in Alaska, Alaska charter students are also whiter and richer than other charter students in the Lower 48 states (Figure 2).

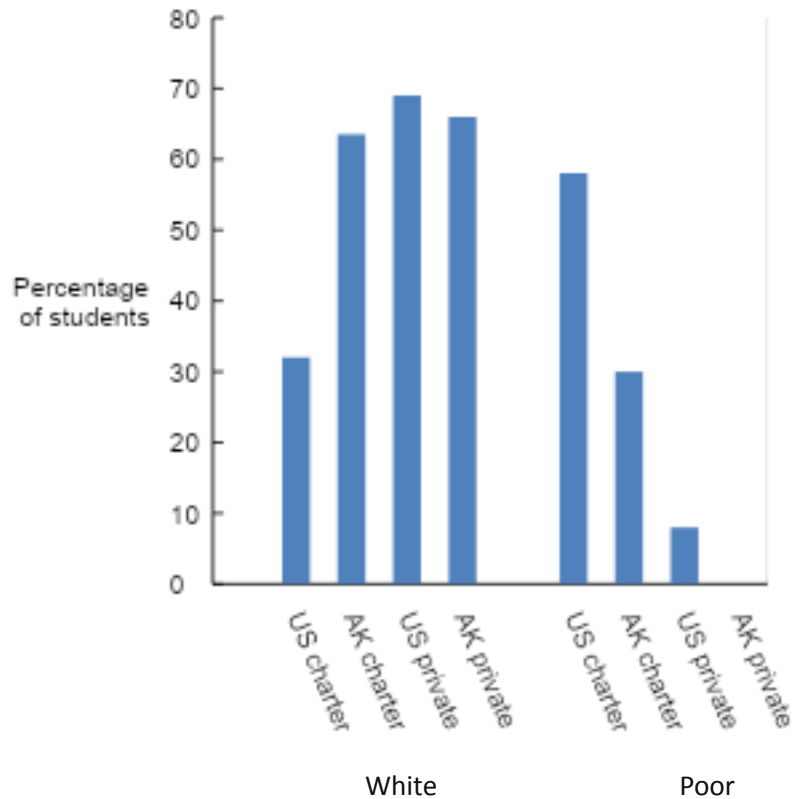


Figure 2. Charter schools in Alaska are whiter and richer than in the Lower 48 states on average. Instead, Alaska charter students’ color and family income look more like private and religious schools in the Lower 48 states. Alaska’s 30 charter schools have twice the percentage of white students than Lower 48 charter schools. Alaska’s charter schools also have half the percentage of poor students compared to Lower 48 charter schools.^{13,14,15} Poor means eligible for free or reduced-price school lunch. Sources are US News & World Report and Alaska Department of Education and Early Development.^{9,13} Alaska private school data are not available.

What the data mean

From the Peterson study, the governor drew an invalid conclusion that Alaskan charter schools are more effective than neighborhood schools. Much of the governor’s response to the Peterson reports contrasted how Alaska’s charter schools ranked best among other states while Alaska neighborhood, non-charter public schools lay at the bottom rung on federal tests.^{5,6,7} However, Peterson did not compare Alaska’s charter schools to Alaska’s neighborhood schools, but rather compared Alaska’s charter schools to the charter schools of other states. Moreover, Peterson’s weighted charter school rankings and the federal tests’ unweighted results, including the unweighted Alaska results, are not comparable measures. Peterson’s reports ranked the performances of charter schools after controlling for many important factors that affected the relationship between states and performance. Comparing Peterson’s Alaska’s top performance

ranking ^{3,4} to rankings reported by the federal testing agency is meaningless because the agency's rankings do not control for any other variables.

Even if we had found that charter schools performed better after correcting for student demographics, we still could not assume that charter schools were necessarily the cause of the performance improvement. Observational studies like Peterson's and ours are not experiments with control groups. Consequently, neither Peterson, nor Governor Dunleavy, nor we can conclude that good academic performance is necessarily attributable to the school rather than to other important influences, like students' background, using only current data. Indeed, to show that charter schools themselves were causing the difference in performance compared to neighborhood schools, one instead would have to randomly assign some students to charter schools and others to neighborhood schools. After a time, you would compare the results and only then start to attribute performance differences to the type of school. This can be done by comparing students who got into charter schools with those who entered the lottery but did not get in. However such a test has not been conducted for Alaska.

Before the state uses the results of Peterson's study to change policies for charter schools, Alaskans should first determine whether charters are more effective by using a larger, more comprehensive, complete, and transparent data set. So far, we have not seen evidence that charter schools outperform neighborhood schools after controlling for students' characteristics. The Peterson study seems to raise more questions than answers about Alaskan schools and student performance.

Notes

1. Beth Zirbes teaches high school students in mathematics and statistics in Fairbanks. She has a bachelor's degree in mathematics from Gustavus Adolphus College in St. Peter, Minnesota, and master's degrees in both mathematics and statistics from the University of Alaska, Fairbanks.
2. Mike Bronson volunteers with the Anchorage branch of the National Association of Colored People. He holds a biology doctorate degree from the University of California.
3. Peterson, P. E. and M. D. Shakeel. 2023. The nation's charter report card: a new ranking of states by charter student performance. *Journal of School Choice*, 18(1):30-66, published online November 13, 2023. Supported by the Walton Family Foundation.
<https://www.tandfonline.com/action/doSearch?AllField=charter+report+card>
4. Peterson, P.E. and M. D. Shakeel. 2023. The Nation's Charter Report Card: first-ever state ranking of charter student performance on the National Assessment of Educational Progress. *Education Next*, 24(1):24-33.
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<https://gov.alaska.gov/governor-dunleavy-looks-to-continue-moving-alaska-forward-during-2024-legislative-session/>
6. Dunleavy, M. 2024. Alaskan families want and deserve education reform.
<https://gov.alaska.gov/education-reform/>
7. Dunleavy, M. 2025. Alaska's charter schools are leading the nation. It's time to expand their reach. *Anchorage Daily News*, January 12.

<https://www.adn.com/opinions/2025/01/11/opinion-alaskas-charter-schools-are-leading-the-nation-its-time-to-expand-their-reach/>

8. Zirbes, B. 2024. Analysis of the Harvard charter school study. Association of Alaska School Boards. 4 pp. <https://aasb.org/analysis-of-the-harvard-charter-school-study/>

9.

<https://education.alaska.gov/compass/Report/2018-2019/56/560050#2018-2019-performance-evaluation-for-alaska-s-schools-peaks>

10. https://education.alaska.gov/alaskan_schools/charter/charter-directory

11. Students participating in the AK STAR state standards assessments in 2024. The average percentages of students scoring \geq proficient, listed in the bottom rows, were calculated after weighting each school’s percentage \geq proficient by its number of test participants. The 95 percent confidence intervals for charter school students in grades 3 to 9 are ± 2 percent. The 95 percent confidence intervals for the statewide averages for students in grades 3 to 9, shown in the bottom row, are ± 0.5 percent using Wilson score interval calculations.¹⁶

School type	Grades 3 to 9				Grade 4		
	ELA % \geq proficient	Math % \geq proficient	No. students participating in ELA test	Percentage participating	ELA % \geq proficient	Math % \geq proficient	No. students participating in ELA test
Charter	45	45	3,601	80	43	43	568
All state	32	31	54,592	80	31	33	8,202

12. Alaska English language arts and mathematics state standards assessment results for charter schools in 2024.

Charter schools enrolled 4,477 students at the time of the tests. Reports on the tests represented 3,601 students in 30 charter schools listed by the education department.^{9,10}

Charter school	School district	ELA % \geq proficient	No. students participating in ELA test	Math % \geq proficient	No. students participating in math test	School's student participation rate, ELA	School enrollment at test time
AK Choice K-12 Learning, homeschoolers	ASD	41.2	51	31.3	48	0.32	157
Anchorage STREaM Academy	ASD	37.7	159	36.5	159	0.91	174
Alaska Native Cultural Charter School	ASD	23.5	162	16.7	162	0.99	163
Aquarian Charter School	ASD	67.3	202	65.8	202	0.97	209
Eagle Academy Charter School	ASD	75.6	127	84.3	127	0.99	128
Frontier Charter School, homeschoolers	ASD	45.2	93	41.1	95	0.27	347
Highland Academy Charter School	ASD	32.2	87	25.6	86	0.91	96
Rilke Schule German School of Arts & Sciences	ASD	59.8	251	59.7	253	0.97	258
Winterberry Charter School	ASD	35.4	127	18.1	127	0.76	168
Boreal Sun Charter	FBNSBSD	34.3	105	27.6	105	0.95	110
Chinook Montessori Charter School	FBNSBSD	48.6	105	49.0	104	1.00	105
Discovery Peak Charter School	FBNSBSD	27.2	125	24.8	125	0.99	126
Effie Kokrine Charter School	FBNSBSD	18.2	55	5.5	55	0.93	59
Watershed Charter School	FBNSBSD	60.2	133	71.4	133	1.00	133
Juneau Community Charter School	JSD	48.1	52	34.5	55	0.87	60
Montessori Borealis Charter School	JSD	41.8	122	28.7	122	0.98	125
Aurora Borealis Charter School	KPBSD	69.7	119	89.9	119	0.99	120
Fireweed Academy	KPBSD	55.2	58	47.4	57	1.00	58
Kaleidoscope School of Arts & Science	KPBSD	13.3	83	13.3	83	0.98	85

Note 12 continued

Charter school	School district	ELA % ≥ proficient	No. students participating in ELA test	Math % ≥ proficient	No. students participating in math test	School's student participation rate, ELA	School enrollment at test time
Soldotna Montessori Charter School	KPBSD		not reported				1
Ketchikan Charter School	KGBSD	25.7	136	28.3	138	0.97	140
Tongass School of Arts & Sciences Charter	KGBSD	18.4	76	23.7	76	1.00	76
Ayaprun Elitnaurvik Yup'ik Immersion School	Lower Kuskokwim SD	8.7	115	8.7	115	1.00	115
Hooper Bay Charter School	Lower Yukon SD		not reported				68
Academy Charter School	MSBSD	65.7	169	78.7	169	0.95	177
American Charter School	MSBSD	58.7	126	71.4	126	0.95	133
Birchtree Charter School	MSBSD	48.5	227	52.7	226	0.95	238
Fronteras Spanish Immersion Charter	MSBSD	42.8	187	41.2	187	0.95	196
Knik Charter	MSBSD	29.0	93	21.3	94	0.95	98
Knik Charter Correspondence	MSBSD		not reported				15
Midnight Sun Family Learning Center	MSBSD	48.3	116	49.1	116	0.96	121
Twindly-Bridge Charter School, homeschoolers	MSBSD	52.4	82	35.9	78	0.23	358
Anvil City Science Academy	NCSD	<u>41.4</u>	58	<u>45.8</u>	59	<u>0.97</u>	60
Average among schools:		42		41		0.89	
Average among students:		43		45		0.80	

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13. <https://www.usnews.com/education/k12/elementary-schools/alaska/charter>
 14. <https://www.greatschools.org/alaska/#Students>
 15. <https://nces.ed.gov/nationsreportcard/subject/publications/stt2022/pdf/2023011AK4.pdf>
 16. <https://www.statskingdom.com/proportion-confidence-interval-calculator.html>