

NEPC Review: Apples to Apples: The Definitive Look at School Test Scores in Milwaukee and Wisconsin for 2024 (Wisconsin Institute for Law & Liberty, March 2025)



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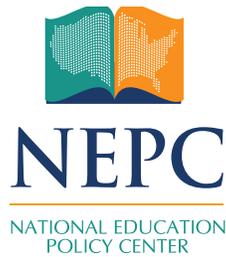
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Summary

The growth of school choice programs, including publicly funded private school vouchers and charter schools, raises questions about the relative effectiveness and cost of these options. A recent Wisconsin Institute for Law & Liberty (WILL) report analyzes publicly available test score data in Wisconsin to investigate these questions. The report uses statistical adjustments to compare test scores across Wisconsin public schools, private “choice” schools, and charter schools. Based on these analyses and the per-pupil funding amounts for each program, the report concludes that choice schools (private schools and charters) are relatively more effective, lower cost options that provide “more bang for the buck.” However, the statistical analyses are unable to overcome fundamental limitations inherent in the publicly available data, and the report also suffers from a lack of systematic fiscal analyses—meaning that it fails to provide strong evidence for either of its central claims. The report also lacks important methodological details, further limiting the usefulness of the results to inform policymakers or the public about the relative cost and performance of Wisconsin schools.



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I. Introduction

Student enrollment in publicly funded private school choice programs and charter schools continues to grow.¹ High-quality research studying the impacts of such programs is critical, heightening interest in recent empirical research on Wisconsin's programs, which include the country's longest-running voucher program.

Wisconsin currently has four publicly funded private school choice programs: the Milwaukee Parental Choice Program (MPCP), the Racine Parental Choice Program (RPCP), the Wisconsin Parental Choice Program (WPCP), and the Special Needs Scholarship Program (SNSP). In 2023-2024 these programs enrolled 54,822 students across 383 schools.² Eligibility for the MPCP, RPCP, and WPCP programs is based on family income, while the SNSP is open to all families with qualifying students.³ Eligible families in each program enroll their children in a participating private school and the state pays tuition on their behalf. The MPCP, RPCP, and SNPS programs have no enrollment limits while the 2024-2025 enrollment in WPCP could not exceed 9% of a district's prior year enrollment—a restriction that will increase to 10% in 2025-2026 and be removed beginning in 2026-2027.⁴

In 2023-2024, there were 236 public charter schools operating in Wisconsin that enrolled approximately 49,000 Wisconsin students (this includes 62 virtual charter schools serving nearly 13,000 students).⁵ Total public-school enrollment in Wisconsin in 2023-2024 was approximately 814,000 students.⁶ Thus, approximately 6% of Wisconsin public school students were enrolled in charter schools, while a number equivalent to about 7% of total public

school enrollment were enrolled in one of the state’s private school choice programs (nearly 55,000 students).

Private schools enrolling at least 20 choice students in Grades 3-12 must administer state end-of-year assessments to all choice students, and since 2015-2016 accountability reports equivalent to those for public schools have been published.⁷ The report reviewed here, titled *Apples to Apples: The Definitive Look at School Test Scores in Milwaukee and Wisconsin for 2024*, authored by Dr. Will Flanders and published by Wisconsin Institute for Law & Liberty (WILL),⁸ compares test scores across school sectors using state report cards and other publicly available state data. This is the seventh such annual report published by WILL since its first report in 2017, based on 2015-2016 data.⁹ My 2017 review of that first report found that its methods and data—similar but not identical to those used in the new report—limited its ability to demonstrate the relative effectiveness of the charter and private schools participating in Wisconsin’s voucher programs.¹⁰

II. Findings and Conclusions of the Report

The report aims to assess schools “on a level playing field” and compare the “relative effectiveness of the state’s existing choice programs.”¹¹ The choice programs include private choice schools and three types of charter schools: district, independent, and virtual.¹² The report summarizes its primary conclusion—that private choice schools and charter schools are more effective and less expensive than traditional public schools—in its concluding section:

...after controlling these [student demographic] factors, a choice and charter advantage remains...Once again, our *Apples to Apples* report shows that these [choice and charter] schools also continue to provide a better ‘bang for the buck’ to taxpayers by achieving better academic results at these lower costs.¹³

The main findings reported are comparisons of test scores (proficiency rates on state tests) and school growth ratings across school types after adjusting for differences in student demographics. Comparisons are reported separately for Milwaukee schools and statewide for all other schools. The report finds that private schools have statistically significantly higher proficiency rates in math and English Language Arts (ELA) and higher growth ratings than traditional public schools, both statewide and in Milwaukee. Results are more mixed for charter schools. In Milwaukee, where there are no virtual charters, district and independent charters have statistically significantly higher proficiency rates and growth scores than traditional public schools in both subjects. Statewide, district charters have statistically significantly higher ELA proficiency rates relative to traditional public schools, traditional public schools have statistically significantly higher math proficiency rates than independent and virtual charters, and district and independent charters have statistically significantly higher growth ratings. The remaining statewide comparisons are not statistically significant. The report also finds strong negative associations between school proficiency rates and schools’ percentage of Black students and percentage of low-income students, statewide and in Milwaukee. The report focuses on the statistical significance of the differences between schools

and does not comment on whether the magnitude of the differences should be considered practically meaningful.

III. The Report’s Rationale for Its Findings and Conclusions

The conclusions are based on analyses of publicly available aggregate school-level data from the Wisconsin Department of Public Instruction (DPI) for the 2023-2024 school year, although specific data files and variables used are not specified. The primary outcomes are proficiency rates on the Wisconsin end-of-year mathematics and ELA standardized tests administered in Grades 3-11 and the state’s school growth score derived from these tests.¹⁴

The report uses a statistical technique known as multiple linear regression analysis to compare test score outcomes after adjusting for differences in a small number of school-level characteristics. The school-level characteristics included in the regression models are: grade level, percentage of students identified as English learners, percentage of economically disadvantaged students, percentage of Black students, percentage of Hispanic students, percentage of students with a disability, and district “fixed-effects” to account for district-specific differences.¹⁵ The percentage of students with a disability is imputed (estimated) for private schools, because an earlier report by WILL suggested the percentage of students with a disability in private schools is inaccurately reported in DPI data.¹⁶ Detailed results for the growth score comparisons are not provided, but appear to be based on regression models controlling for the same set of variables.¹⁷

Support for the claim that choice schools are more cost effective (the “lower-cost option”) appears to be based on the fact that choice program vouchers in 2024-2025 and the per-pupil funding provided to independent charter schools are both lower than the average state and local per-pupil funding for public school students.¹⁸ However, there is no systematic analysis of the overall cost of private choice schools or charter schools relative to public schools.

IV. The Report’s Use of Research Literature

The report does not cite or discuss any prior research literature on the effectiveness of private school choice programs or charter schools. Public charter schools have been part of US education for nearly 35 years and there is a large body of research on their relative effectiveness.¹⁹ There are also previously published studies about the effects of school voucher programs, including the Wisconsin parental choice programs.²⁰ Prior research consistently highlights the variability of the relative effectiveness of charter schools and private school vouchers across different contexts. The report does not discuss how these contexts might apply to Wisconsin or how features of the Wisconsin school choice programs, such as income eligibility limits or public accountability requirements, could inform policies in other contexts.

V. Review of the Report's Methods

This report seeks to answer an important and timely question: Which types of Wisconsin schools are most effective? Answering this question requires making a causal inference, namely, inferring how students would have performed academically (as measured by state tests) in a traditional public school relative to how they would have performed if attending a charter school or using a voucher to attend a choice school. The report correctly recognizes that directly comparing average test score outcomes across sectors is unlikely to provide a valid estimate of that causal effect because students enrolled in traditional public schools, charter schools, and choice schools differ systematically. If we observe differences in average scores across sectors, we cannot be sure whether this is due to differences in relative school effectiveness, pre-existing differences in the students choosing to enroll in different schools, or a combination of these and other factors.

To address this concern, the report uses multiple linear regression to compare aggregate test score outcomes across school sectors while adjusting for school-level differences in a small number of student demographic characteristics. The use of linear regression is a reasonable approach but cannot overcome the limitations of the publicly available data used in the report. Ultimately, the data and methods face the same two primary shortcomings described in my review of the 2017 version of the report: selection bias and a reliance on aggregate proficiency rates. Analyzing growth measures partially addresses these shortcomings, but the growth data have substantial missing data that limit their utility. The report also omits important methodological details, making it impossible to fully interpret or evaluate the results. Details on these shortcomings follow.

Selection Bias

To provide valid estimates of the relative effectiveness of different school sectors, the regression models would need to adjust for every factor that determines which type of school a student will attend and that relates to test score performance (that is, every possible confounder). Because the report relies on only a small number of school-level variables, it is extremely unlikely that the models adjust for all possible confounding variables. Therefore, the reported differences in proficiency rates or growth scores cannot be attributed solely to differences in school effectiveness. The limited number of school-level variables is further exacerbated by missing data for private schools. In 2023-2024 nearly all eligible public-school students participated in state testing (95.4%) while test participation rates among private choice students declined to 79.7%.²¹ The proficiency data therefore do not represent the performance of all private school choice students, further undermining the claim to make an apples-to-apples comparison.

Aggregate Percentage Proficient

Aggregate proficiency rates have severe statistical and interpretational limitations because they provide information about only a single point in the test score distribution and because results are highly dependent on the judgmentally set proficiency cut score. These limitations

were summarized in my prior review and the same limitations apply to the current report.²² A further limitation is that Wisconsin changed the location of Forward Exam proficiency cut scores in 2024. The report acknowledges that changes to the proficiency cut scores in 2024 make it impossible to directly compare proficiency rates in 2024 to prior years but does not acknowledge that this also undermines comparisons of *within-year differences* in proficiency rates across years. Thus, the report’s claim that the differences between school sectors is the “largest in the years this report has been conducted” is not based on a meaningful comparison, as it could be due to the changed proficiency cut score.

Missing Growth Data

Comparing growth rates across school sectors could theoretically provide a better estimate of relative school effectiveness by incorporating additional control variables and by not relying on proficiency cut scores. However, my review of the Wisconsin value-added model technical documentation and private choice enrollment figures suggests that an even larger share of private choice students are missing from the growth data than are missing from the proficiency data. These calculations are described in the Appendix. This undermines the claim that the data accurately represent private choice student performance and that comparing growth scores across sectors provides a fair comparison. Additionally, the report does not provide enough detail about how the growth data were analyzed or which schools and students are represented to allow meaningful interpretation of comparisons, even among different types of public schools.

Cost Analysis

The claim that choice schools achieve better outcomes at lower costs rests on two premises. First, that these schools achieve better outcomes and second, that they do so at a lower cost. The limitations described above call into question the validity of the first premise. In support of the second premise, the report compares per-pupil funding for the choice programs and independent charter schools to average per-pupil district funding. However, there is no formal analysis of the systemwide costs of different school sectors or acknowledgement of additional funding sources schools may receive, rendering this an incomplete and unconvincing argument.²³

Methodological Omissions

The report omits critical details about statistical analyses, further limiting the utility of the presented findings. The report does not describe the specific data files and variables used in the analyses, making it impossible to reproduce the results. In addition, the report does not include sample sizes for any of the analyses indicating the number of schools and students included in the results. This makes it impossible to know the extent to which the results are representative of all schools and students in Wisconsin.²⁴

VI. Review of the Validity of the Findings and Conclusions

The results presented do not support the report’s claim to make a “comprehensive analysis of Wisconsin’s school performance” indicating the “relative effectiveness” and costs of different school sectors. The report correctly highlights the inappropriateness of making direct comparisons of average test scores across sectors and takes reasonable steps to account for this issue based on the available data. However, the statistical analyses are unable to overcome the same fundamental limitations inherent in the publicly available data that also weakened the 2017 version of the report. First, the limited number of school-level variables available and the missing private school data mean that the reported differences across school sectors should not be interpreted as direct estimates of relative school effectiveness. Second, the reliance on percentage proficient metrics makes it difficult to meaningfully interpret the reported proficiency differences (or compare them to prior versions of the report). Third, the lack of technical details and limitations of the growth data mean that this new aspect of the analysis also cannot support claims about relative school effectiveness. Finally, there is no systematic analysis to support the claim that private and charter schools are the “lower-cost option” or provide more “bang for the buck.”

VII. Usefulness of the Report for Guidance of Policy and Practice

The report offers policymakers little to no guidance in this crucial area. School choice policies should be based on a comprehensive analysis of costs and benefits that includes empirical evidence about how well different schooling models are working. While this report takes a reasonable approach to analyzing publicly available data to provide such evidence, the limitations of the data prevent the results from providing meaningful insight into the relative effectiveness and costs of Wisconsin schools. The report provides a useful overview of different school choice options in Wisconsin and raises important questions about their efficacy. Yet even as a descriptive analysis, the results are of minimal use without additional details about the data and methods.

Appendix: Percent of Students Included in Growth Metrics

As noted in the main text, a smaller share of choice students participated in state testing relative to public school students in 2023-2024: Wisconsin DPI reported that while 95.4% of public school students participated in state testing in 2023-2024, only 79.7% of private choice students participated. The school growth ratings produced for Wisconsin schools (and analyzed in the report) are based on the Wisconsin value-added model. Calculating the percent of students represented in the value-added models (and thus school growth ratings) is also important for evaluating the validity of aggregate growth scores but harder to determine as it does not appear to be publicly reported and the report does not provide any relevant sample sizes. In this Appendix I use information from Wisconsin's value-added model technical report and publicly reported school enrollment data to estimate the percent of public school and private choice students included in the school growth data.

To be included in the value-added analysis (and hence a school's growth rating), a student must have a current year test score, a prior year test score, and have full academic year (FAY) enrollment status at the school, meaning they were enrolled from late September through the completion of state testing.²⁵ Because required state testing begins in third grade, value-added data are only available for students enrolled in Grades 4-11. The state's value-added technical report lists the number of public school and private choice students included in the value-added calculations by grade level and subject for 2023-2024.²⁶ To determine the total number of students enrolled at each grade level in 2023-2024 I used public school enrollment files published by DPI and facts and figures documents for each choice program published by DPI.²⁷ I compiled the data from these different sources for comparison in Table A1.

The first two rows of Table A1 report the total number of choice students and public school students included in the value-added calculations for math (these are from Table 1 on page 6 of the value-added technical report; figures for students included in the ELA value-added analysis were similar). The next two rows report the total number of students enrolled in fall 2023 in the four choice programs and in public schools, based on DPI enrollment data. The final two rows report the number of students included in the value-added calculations as a percentage of enrolled students at each grade and overall. The value-added sample sizes for public school students represent approximately 87.2% of Grade 4-11 public school student enrollment, but only 63.3% of private choice student enrollment.

The percentages reported in Table A1 suggest that a substantial proportion of private choice students (about 37%), and a modest share of public school students (about 13%), are not represented by the school growth metrics used in the report, which are based on value-added scores. Because the students missing from the value-added calculations are unlikely to be a random sample, this poses a serious threat to the validity of comparing growth scores across school sectors, as the growth data may not accurately represent all students. Ultimately, without additional information about the samples of schools and students included in the analyses in the report, it is impossible to know the extent to which the results accurately represent the population of public school and choice students in Wisconsin.

Two limitations of the calculations in Table A1 are worth noting. First, these calculations did not use student-level data and are based on fall 2023 enrollment counts rather than the count of FAY students in spring 2024. Second, the school growth ratings are based on complex calculations using the value-added results that include averaging across multiple years. Thus, the values in Table A1 may not exactly indicate the percentage of public and choice students represented in the value-added models used to produce school growth scores. However, the values in Table A1 likely provide a good approximation of the percentage of enrolled students in 2023-2024 that are represented by the growth data and suggest this is an important limitation of the data.

Two possible reasons that private choice students are less likely to be included in the 2023-2024 value-added calculations are: a) test participation rates among choice students in 2023-2024 were lower, and b) private choice students may not have a prior year score if they attended private school in the prior year but did not participate in a choice program (and therefore were not required to participate in state testing).

Table A1: Value-Added Sample Sizes and Enrollments, by Grade and School Sector

	GRADE								
	4	5	6	7	8	9	10	11	TOTAL
Included in Value-Added									
Choice Students	2688	2656	2769	2560	2439	2189	2295	2101	19697
Public School Students	51227	51937	51724	51881	52618	52683	54340	53996	420406
Enrolled (Fall 2023)									
Choice Students	4428	4270	4431	3999	3750	3963	3366	2927	31134
Public School Students	56073	56459	56984	57663	59154	65035	65303	65585	482256
Percentage Represented									
Choice Students	60.7%	62.2%	62.5%	64.0%	65.0%	55.2%	68.2%	71.8%	63.3%
Public School Students	91.4%	92.0%	90.8%	90.0%	89.0%	81.0%	83.2%	82.3%	87.2%

Note. The “Percentage Represented” row is calculated as the “Included in Value-Added” row divided by the “Enrolled (Fall 2023)” row, by school sector.

Notes and References

- 1 From fall 2010 to fall 2021, public charter school enrollments increased by 1.9 million students, while the number of students attending traditional public schools declined by 2.0 million students. Based on data from <https://nces.ed.gov/fastfacts/display.asp?id=30> accessed on May 13, 2025.

For data about state programs using public funds for private school attendance, see Lieberman, M. (2025). Private school choice will keep expanding in 2025: Here's where and how. *Education Week*. Retrieved May 13, 2025, from <https://www.edweek.org/policy-politics/private-school-choice-will-keep-expanding-in-2025-heres-where-and-how/2025/01>

- 2 Data obtained from https://dpi.wi.gov/sites/default/files/imce/parental-education-options/Choice/Data_and_Reports/2023-24/2023-24_summary_mpcp_wpcp_rpcp_snsnp.pdf on May 13, 2025. Although enrollment data for the most recent year (2024-2025) are now available, I focus primarily on 2023-2024 enrollments because this is the year of test score data analyzed in the report under review. Program-specific enrollments in 2023-2024 were 28,972 (MPCP), 4,034 (RPCP), 19,180 (WPCP), and 2,636 (SNSP).
- 3 The income limits in 2024-2025 for new choice program students in a family of four were \$90,000 for MPCP and RPCP (300% of the Federal Poverty Level) and \$66,000 for the WPCP (220% of the Federal Poverty Level). If a student's parents/legal guardians reside in the same household and are married, family income can be \$7,000 higher and still maintain eligibility. There is no income eligibility limit for continuing choice students or for students participating in the SNSP program. To be eligible for the SNSP, a student must have a current individualized education plan (IEP) or services plan in effect.

Wisconsin Department of Public Instruction (n.d.). *2024-25 income limits for new students: Milwaukee (MPCP), Racine (RPCP), and Wisconsin Parental Choice Program (WPCP)*. Retrieved May 13, 2025, from https://dpi.wi.gov/sites/default/files/imce/parental-education-options/Choice/Student_Application_Webpage/income_limit_all_programs_2024-25_final.pdf

For a comprehensive summary of eligibility requirements and program details, see Lewis, M.M. & Mead, J.M. (2025). *NEPC review: Thousands served: Students with disabilities in Wisconsin's parental choice programs*. Boulder, CO: National Education Policy Center. Retrieved May 13, 2025, from <https://nepc.colorado.edu/review/disability>

- 4 Toniolo, M. (2025, January). *Private school choice and special needs scholarship programs*. Madison, WI: Wisconsin Legislative Fiscal Bureau. Retrieved on May 13, 2025, from https://docs.legis.wisconsin.gov/misc/lfb/informational_papers/january_2025/0031_private_school_choice_and_special_needs_scholarship_programs_informational_paper_31.pdf

- 5 Data on total charter school enrollments obtained from:

Wisconsin Department of Public Instruction (January, 2025). *Quick facts: Wisconsin charter schools*. Retrieved May 13, 2025, from https://dpi.wi.gov/sites/default/files/imce/parental-education-options/Charter-Schools/pdf/Wisconsin_Charter_Schools_Quick_Facts_Updated.pdf

Wisconsin Department of Public Instruction (nd). *Wisconsin public school open enrollment by the numbers: 1998-99 to 2023-24*. Retrieved May 13, 2025, from <https://dpi.wi.gov/sites/default/files/imce/open-enrollment/pdf/psoe-at-a-glance-2023-24.pdf>

- 6 Data on total public school enrollment obtained from <https://wisedash.dpi.wi.gov/Dashboard/dashboard/18110> on May 13, 2025.
- 7 Toniolo, M. (2025, January). *Private school choice and special needs scholarship programs*. Madison, WI: Wisconsin Legislative Fiscal Bureau. Retrieved on May 13, 2025, from <https://docs.legis.wisconsin.gov/misc/>

lfb/informational_papers/january_2025/0031_private_school_choice_and_special_needs_scholarship_programs_informational_paper_31.pdf

- 8 Flanders, W. (March, 2025). *Apples to apples: The definitive look at school test scores in Milwaukee and Wisconsin for 2024*. Milwaukee, WI: Wisconsin Institute for Law & Liberty. Retrieved May 13, 2025, from <https://will-law.org/wp-content/uploads/2025/03/ApplestoApples202553.pdf>
- 9 Disruptions to testing caused by the COVID-19 pandemic prevented reports from being published in two years. Flanders, W. (March, 2025). *Apples to apples: The definitive look at school test scores in Milwaukee and Wisconsin for 2024*. Milwaukee, WI: Wisconsin Institute for Law & Liberty. Retrieved May 13, 2025, from <https://will-law.org/wp-content/uploads/2025/03/ApplestoApples202553.pdf>
- 10 Shear, B.R. (2017). *NEPC review: Apples to apples: The definitive look at school test scores in Milwaukee and Wisconsin*. Boulder, CO: National Education Policy Center. Retrieved May 13, 2025, from <https://nepc.colorado.edu/thinktank/review-milwaukee-vouchers>
- 11 Flanders, W. (2025, March). *Apples to apples: The definitive look at school test scores in Milwaukee and Wisconsin for 2024*. Milwaukee, WI: Wisconsin Institute for Law & Liberty. Retrieved May 13, 2025, from <https://will-law.org/wp-content/uploads/2025/03/ApplestoApples202553.pdf>
- 12 The report describes both Instrumentality and non-Instrumentality charter schools as “district charters” because both are authorized by public school districts. Independent charter school authorizers are prohibited from establishing virtual charters; therefore, although not stated in the report, virtual charter schools are a subset of district charters. The report does not provide details about virtual charter schools or explain the rationale for considering them separately, although the report notes that virtual charters became more popular during the COVID-19 pandemic. It is worth noting that some private choice schools also enroll virtual (online) choice students, but this is not discussed in the report.

Kava, R. (2025, January). *Charter schools*. Madison, WI: Wisconsin Legislative Fiscal Bureau. Retrieved May 13, 2025, from https://docs.legis.wisconsin.gov/misc/lfb/informational_papers/january_2025/0033_charter_schools_informational_paper_33.pdf
- 13 Flanders, W. (2025, March). *Apples to apples: The definitive look at school test scores in Milwaukee and Wisconsin for 2024*. Milwaukee, WI: Wisconsin Institute for Law & Liberty. Retrieved May 13, 2025, from <https://will-law.org/wp-content/uploads/2025/03/ApplestoApples202553.pdf>
- 14 The report does not state explicitly which tests are included in the analyses. Based on the statement in the report that the data are from “DPI’s WISEDash system” (p. 5), it is assumed that these results are based on the Wisconsin Student Assessment System (WSAS) results. As part of the WSAS, public school and choice students in 2023-2024 were required to take the Wisconsin Forward Exam in English Language Arts and Mathematics in grades 3-8, the PreACT Secure in Reading and Mathematics in grades 9-10, and the ACT with writing in grade 11. Based on the overview from <https://dpi.wi.gov/assessment> accessed on May 13, 2025.

Flanders, W. (2025, March). *Apples to apples: The definitive look at school test scores in Milwaukee and Wisconsin for 2024*. Milwaukee, WI: Wisconsin Institute for Law & Liberty. Retrieved May 13, 2025, from <https://will-law.org/wp-content/uploads/2025/03/ApplestoApples202553.pdf>
- 15 These are the variables included in the detailed regression results in Table A1 in the Appendix of the report. They differ slightly from the list of control variables listed on page 5 of the report.
- 16 The decision to treat the percentage of students with a disability as missing for private schools, despite this data being reported by DPI, is based on the following 2025 report by School Choice Wisconsin and Wisconsin Institute for Law & Liberty finding that disability rates are underreported for private choice schools:

School Choice Wisconsin and Wisconsin Institute for Law & Liberty. (2025, January). *Thousands served:*

Students with disabilities in Wisconsin's parental choice programs. Retrieved May 13, 2025, from <https://will-law.org/wisconsin-school-choice-programs-serve-thousands-of-disabled-students/>

The validity of this claim and flaws in the methods used in that study were described in this review published by the NEPC: Lewis, M.M. & Mead, J.M. (2025). *NEPC review: Thousands served: Students with disabilities in Wisconsin's parental choice programs.* Boulder, CO: National Education Policy Center. Retrieved May 13, 2025, from <https://nepc.colorado.edu/review/disability>

- 17 Comparisons of average growth metrics across school sectors are presented in Table 3 of the report. The headings of Table 3 appear to be incorrect and likely should read “Statewide Growth” and “Milwaukee Growth”, rather than “Relationship to ELA Proficiency” and “Relationship to Math Proficiency”, respectively. Although Table 3 is titled “Regression Analysis: Growth,” the report does not explicitly state whether the comparisons in Table 3 use regression adjustments and if so, which variables are included. There are no detailed regression results in the Appendix for the growth comparisons and Table 3 does not include the relationship between growth rates and “% Black” or “% Low Income” as Tables 1 and 2 do.
- 18 The report notes that for the 2024-2025 school year, private schools accepting MPCP, RPCP, and WPCP choice students received tuition payments of \$12,731 per student for students in grades 9-12 and \$10,237 per student for students in grades K-8; schools enrolling students in the SNSP could be reimbursed 100% for expenses up to \$23,113 (and for 90% of expenses beyond that); and independent charter schools received \$11,729 per student. The report states that, “on average, traditional public schools receive \$15,569 in state and local funding per student” (p. 4). The tuition payments and charter school funding match amounts reported by the DPI. To substantiate the funding for traditional public schools the report links to a DPI website with a series of financial reports. Running the “Comparative Revenue Per Member” report for the year 2023 (the most recent available as of May 13, 2025) the value \$15,569 can be derived by adding the state averages across districts of State Revenue Per Member, Property Tax Revenue Per Member, and Other Local Revenue Per Member. It is not clear that directly comparing these different types of per-pupil expenditures is truly an apples-to-apples comparison of the overall cost of educating students across different school sectors.

Flanders, W. (2025, March). *Apples to apples: The definitive look at school test scores in Milwaukee and Wisconsin for 2024.* Milwaukee, WI: Wisconsin Institute for Law & Liberty. Retrieved May 13, 2025, from <https://will-law.org/wp-content/uploads/2025/03/ApplestoApples202553.pdf>

Toniolo, M. (2025, January). *Private school choice and special needs scholarship programs.* Madison, WI: Wisconsin Legislative Fiscal Bureau. Retrieved on May 13, 2025, from https://docs.legis.wisconsin.gov/misc/lfb/informational_papers/january_2025/0031_private_school_choice_and_special_needs_scholarship_programs_informational_paper_31.pdf

Data from <https://sfs.dpi.wi.gov/SFSdw/CompRevReport.aspx> retrieved on May 13, 2025.

Kava, R. (2025, January). *Charter schools.* Madison, WI: Wisconsin Legislative Fiscal Bureau. Retrieved May 13, 2025, from https://docs.legis.wisconsin.gov/misc/lfb/informational_papers/january_2025/0033_charter_schools_informational_paper_33.pdf

- 19 For recent reviews of research on charter schools, see for example: Cohodes, S. & Parham, K. (2021). Charter schools' effectiveness, mechanisms, and competitive influence. *National Bureau of Economic Research.* Retrieved May 13, 2025, from <https://doi.org/10.3386/w28477>

Dallavis, J.W. & Berends, M. (2023). Charter schools after three decades: Reviewing the research on school organizational and instructional conditions. *Education Policy Analysis Archives*, 31. Retrieved May 13, 2025, from <https://doi.org/10.14507/epaa.31.7364>

Zimmer, R., Buddin, R., Smith, S.A., & Duffy-Chipman, D. (2021). Nearly three decades into the charter school movement, what has research told us about charter schools? In B.P. McCall (Ed.), *The Routledge Handbook of*

the Economics of Education (1st ed., pp. 73–106). London: Routledge. Retrieved May 13, 2025, from <https://doi.org/10.4324/9780429202520-4>

- 20 For a summary of recent empirical research on the effects of school voucher programs, see: Cowen, J. (2023, August). *Research on school vouchers suggests concerns ahead for education savings accounts*. Washington, D.C.: Brookings Institute. Retrieved May 27, 2025, from <https://www.brookings.edu/articles/research-on-school-vouchers-suggests-concerns-ahead-for-education-savings-accounts/>.

For a recent review of voucher programs internationally, see: Shakeel, M D., Anderson, K.P. & Wolf, P.J. (2021). The participant effects of private school vouchers around the globe: A meta-analytic and systematic review. *School Effectiveness and School Improvement*, 32(4), 509–542. Retrieved May 13, 2025, from <https://doi.org/10.1080/09243453.2021.1906283>

- 21 Wisconsin Department of Public Instruction. (2024, October). *DPI releases standardized testing results for the 2023-24 school year*. Retrieved on May 13, 2025, from <https://dpi.wi.gov/news/releases/2024/student-assessment-results-forward>

- 22 Ho, A.D. (2008). The problem with “Proficiency”: Limitations of statistics and policy under No Child Left Behind. *Educational Researcher*, 37(6), 351–360. Retrieved on May 13, 2025, from <https://doi.org/10.3102/0013189X08323842>

Holland, P.W. (2002). Two measures of change in the gaps between the CDFs of test-score distributions. *Journal of Educational and Behavioral Statistics*, 27(1), 3–17. Retrieved on May 13, 2025, from <https://doi.org/10.3102/10769986027001003>

Shear, B.R. (2017). *NEPC Review: Apples to apples: The definitive look at school test scores in Milwaukee and Wisconsin*. Boulder, CO: National Education Policy Center. Retrieved May 13, 2025, from <https://nepc.colorado.edu/thinktank/review-milwaukee-vouchers>

- 23 For a more detailed analysis of the problem with directly comparing per-pupil funding across public and private sectors, see: Weber, M. (2025). *NEPC review: Fiscal effects of school choice: The costs and savings of private school choice programs in America through FY 2022*. Boulder, CO: National Education Policy Center. Retrieved May 27, 2025, from <https://nepc.colorado.edu/review/fiscal-effects>

- 24 At a more technical level, the use of imputation and “fixed effects” are not described with enough detail to fully understand the results presented. There are different ways to carry out imputation for missing data; stating that imputation was used is not sufficient to know what analysis was conducted and how it impacted the results. The use of district fixed effects to account for systematic differences between districts is reasonable. However, independent charter schools and private schools are not administered by public-school districts and no information about how these schools were assigned to districts for the purpose of the analysis was provided. In addition, for virtual charter schools administered by a district, the school may enroll students from many different districts across the state and thus it may not be fair to compare them to other schools within the same district. These issues are not discussed in the report.

- 25 Education Analytics. (2024, October). *Technical report on the Wisconsin value-added model: Academic year 2023-24*. Retrieved May 13, 2025, from https://dpi.wi.gov/sites/default/files/imce/accountability/pdf/WI_DPI_School_VA_Technical_Report_2024_Final.pdf

- 26 See Tables 1 and 2, pages 6-10 from: Education Analytics. (2024, October). *Technical report on the Wisconsin value-added model: Academic year 2023-24*. Retrieved May 13, 2025, from https://dpi.wi.gov/sites/default/files/imce/accountability/pdf/WI_DPI_School_VA_Technical_Report_2024_Final.pdf

- 27 Public school enrollment counts obtained from: https://dpi.wi.gov/sites/default/files/wise/downloads/enrollment_certified_2023-24.zip on May 13, 2025. Enrollments in the private school choice programs by grade level are from:

Wisconsin Department of Public Instruction. (2024, October). *MPCP facts and figures for 2023-24*. Retrieved May 13, 2025, from https://dpi.wi.gov/sites/default/files/imce/parental-education-options/Choice/Data_and_Reports/2023-24/2023-24_mpcp_facts_and_figures.pdf

Wisconsin Department of Public Instruction. (2024, October). *WPCP facts and figures for 2023-24*. Retrieved May 13, 2025, from https://dpi.wi.gov/sites/default/files/imce/parental-education-options/Choice/Data_and_Reports/2023-24/2023-24_wpcp_facts_and_figures.pdf

Wisconsin Department of Public Instruction. (2024, October). *RPCP facts and figures for 2023-24*. Retrieved May 13, 2025, from https://dpi.wi.gov/sites/default/files/imce/parental-education-options/Choice/Data_and_Reports/2023-24/2023-24_rpcp_facts_and_figures.pdf

Wisconsin Department of Public Instruction. (2024, October). *Special Needs Scholarship Program (SNSP) facts and figures 2023-24*. Retrieved May 13, 2025, from https://dpi.wi.gov/sites/default/files/imce/parental-education-options/SNSP/snsp_facts_and_figures_for_2023-24.pdf