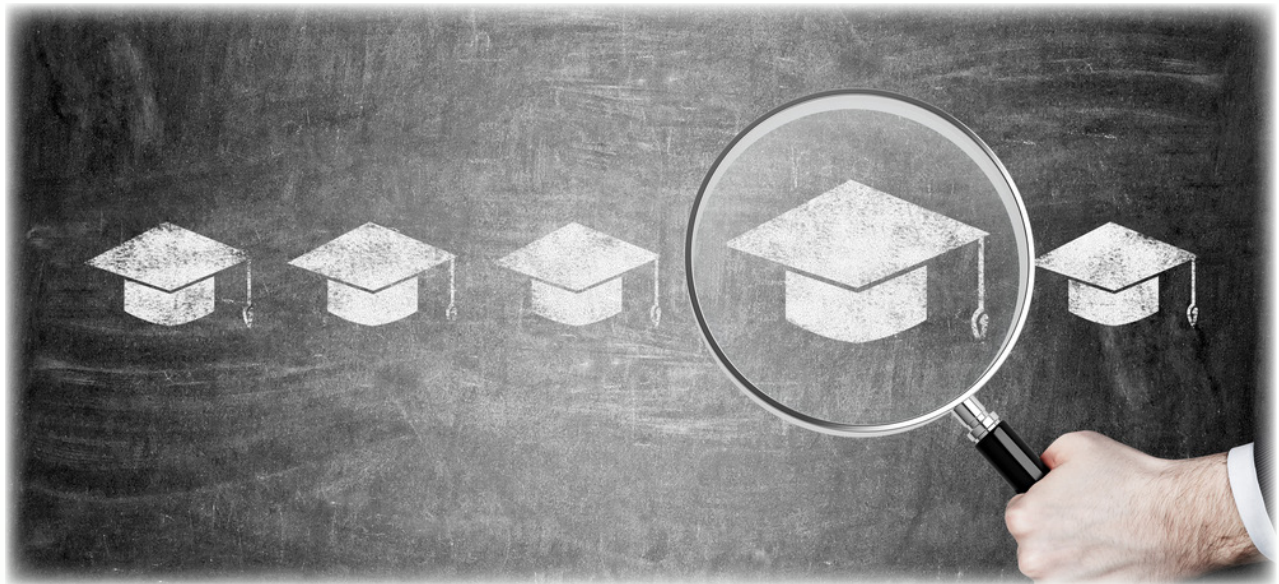


NEPC REVIEW: EDUCATION FREEDOM AND STUDENT ACHIEVEMENT: IS MORE SCHOOL CHOICE ASSOCIATED WITH HIGHER STATE-LEVEL PERFORMANCE ON THE NAEP? (UNIVERSITY OF ARKANSAS, MARCH 2021)



Reviewed by:

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June 2021

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Executive Summary

A new School Choice Demonstration Project report, *Education Freedom and Student Achievement: Is More School Choice Associated with Higher State-Level Performance on the NAEP?*, ranks states based on their expansion of market-oriented school policies such as vouchers, charters, homeschooling, and inter-district choice. It then compares this “education freedom” ranking to National Assessment of Education Progress (NAEP) scores, finding a positive correlation between “freedom” and these scores, and then hints at a causal relationship between “education freedom” and student learning. Ultimately, the report concludes that increasing school choice can spur broad test score improvements as well as being desirable for the sake of having school choice. However, the report ignores relevant peer-reviewed research that has found negative consequences of school choice reforms, and significant methodological flaws cast doubt on its findings. Major flaws include issues related to independent variable construction, the use of an unusually combined dependent variable, and the inclusion of a student group that is untested via the NAEP. Moreover, the methodology fails to scrutinize dubious findings emerging from their models; instead, the report uses such findings to buttress its concluding claim that a package of school choice reforms is desirable and beneficial. These shortcomings undermine the report’s conclusions and render it useless for purposes of guiding policymaking.



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I. Introduction

School choice policies remain controversial as questions over their equity, effectiveness, and costs to public schools persist. As choice options expanded in the 1990s, proponents of vouchers published studies, often not peer-reviewed, highlighting positive impacts on test scores,¹ despite substantial research finding little or no such effects.² More recently, choice advocates have shifted to evaluate other student outcomes such as graduation rates, college enrollment, parental sovereignty, or have sometimes moved away from measured outcomes altogether while promoting choice for the sake of choice.³ However, while the metrics have changed, concerns about negative impacts of choice policies endure. For example, several recent rigorous studies have shown large, often negative, consequences from voucher and charter programs, including increased segregation and lower test scores.⁴

Against this backdrop, a new report by the University of Arkansas's School Choice Demonstration Project (SCDP), *Education Freedom and Student Achievement: Is More School Choice Associated with Higher State-Level Performance on the NAEP?*,⁵ returns to examining the relationship between state school choice policies and test scores. The report assumes that school choice is equivalent to "education freedom" and uses this ideologically charged and highly debatable term throughout. It finds a positive correlation between more expansive choice policies—as measured by the "Education Freedom Index" (EFI) that it creates—and students' National Assessment of Education Progress (NAEP) scores. It concludes that an expanded education marketplace—one that includes a myriad of options such as vouchers, charters, and homeschooling—creates the necessary competition that will improve outcomes both for students who leave public schools and students who remain in them.

The report uses a series of regression models to compare the effects of “education freedom” with other factors such as per-pupil spending and class size. This methodology requires a series of choices to be made about how to define and measure all the variables. The conclusions that can be reached are thus dependent on the choices made and on the limitations and requirements of statistical modeling. Ignoring this subjectivity, the report relies on simplistic and unjustified methodological choices to arrive at conclusions inconsistent with compelling work in this field. These significant methodological flaws, combined with inattention to the larger research base on school choice, undermine this report’s validity and conclusions.

II. Findings and Conclusions of the Report

The report draws its scope and tone from *The Education Freedom Index*,⁶ a report published by the Manhattan Institute in 2000 that ranked states according to their adoption of school choice policies. The 2000 Education Freedom Index (EFI) was correlated with student scores on the NAEP and SAT. The new report updates the 2000 EFI by scoring how well a state provides—together—vouchers, charter schools, homeschooling, and inter/intra-district choice. It combines rankings on these components to determine updated EFI rankings for each state.

The report then correlates each state’s EFI rankings with its combined math and reading scores on the NAEP, and finds significant associations between states’ EFI and its test scores.⁷ It also presents and reflects on a finding that “higher educational expenditures are negatively and significantly associated”⁸ with the test score outcomes, while higher student/teacher ratios are more weakly/inconsistently associated with these outcomes than the EFI. Accordingly, the report suggests that efforts to increase funding for schools and reduce class sizes—efforts it calls “substitutes for school choice policies”⁹—do not provide the same level of improvement on NAEP that school choice does.

The report ultimately concludes that a multi-pronged approach to increase choice options creates competitive pressure on public school districts that, in turn, “can be useful in spurring broad improvements in student learning along with being desirable in their own right.”¹⁰

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

The report claims that states’ embrace of deregulation and market-oriented educational reforms is correlated with higher NAEP scores and, thus, warrants these reforms’ expansion.

It determines that, when offered together as “education freedom,” multiple forms of competition increase NAEP scores both for students participating in forms of school choice and, also, for students remaining in public schools.¹¹ In other words, it claims that the competitive pressure that increased choice creates on traditional public schools explains test score “gains” for students enrolled in those schools. The report claims that the benefits of com-

petitive pressure on improving test scores is “vast and definitive.”¹² Yet, it cites only two articles¹³ defending that claim and fails to reference any competing findings that show that the impact of competitive pressure is anything but definitive and, moreover, that the varied ways in which competitive pressure is measured (and often mis-measured) in schools raises questions about using such metrics in policymaking.¹⁴

The main conclusions of the report are drawn from regression analyses that use a constructed measure of “education freedom” as the primary independent variable. Its main dependent variables draw upon available state-level NAEP performance data; it uses a measure of average student performance and a measure designed to assess student growth.

The report concedes that separately, the components of its EFI (vouchers, charters, homeschooling, and inter/intra district choice) do not significantly correlate with NAEP improvements. It also concedes that its correlational analyses do not justify a conclusion about a causal relationship between “education freedom” and changes in NAEP scores. But at times the report does present its findings as supporting such a relationship. Further, as this report has subsequently garnered media attention, the stated cautions regarding causality were sometimes forgotten or minimized. In a recent *Wall Street Journal* editorial, for example, this report is presented with a causal-implying tagline of, “a new study shows better test results in states with more options” and the article goes on to suggest that “expanding school choice creates incentives that help all children.”¹⁵ This broad claim that expanding school choice improves test scores overlooks the fact that the report, itself, found that the individual components of the EFI do not play a significant role in improving test scores. It was only after combining all the components (including forms of school choice that have no direct involvement with NAEP—i.e., homeschooling), and controlling for several out-of-school and in-school factors that the report could finally arrive at the broad claim.

IV. The Report’s Use of Research Literature

It is indeed worthwhile for researchers to examine the relationship between school choice programs and student achievement outcomes. Given that many U.S. states now provide for various school choice programs to operate simultaneously, it would be helpful for policymakers to be able to discern whether these programs, as a package, are associated with changes in student achievement.

However, the report suffers from its failure to address the robust and rigorous research on the effects of school choice on test scores.¹⁶ Conspicuously missing, for example, is a 2014 study by Lubienski and Lubienski¹⁷ that provided a national evaluation of NAEP scores disaggregated by school choice models and public schools. This study found that public schools outperform private and charter schools when controlling for socioeconomic factors. The report’s models ultimately return results (e.g., that increased per-pupil spending negatively affects test scores) that are counterintuitive and inconsistent with the Lubienskis’ findings. Rather than using prior research to explore and correct possible weaknesses in its models, the report proceeds to draw uncritical conclusions from those models. In so doing, it follows

a pattern of questionable “advocacy research”¹⁸ to claim that school choice models produce better NAEP results with greater efficiency.

This approach is facilitated by the report’s almost exclusive reliance on research reports published by advocacy organizations such as EdChoice and the Fordham Institute. Although scholars have consistently critiqued these reports for methodological and other weaknesses,¹⁹ the report borrows heavily from them to create the “education freedom index” through which it ranks states.

V. Review of the Report’s Methods

Of the many methodological shortcomings of the report, the most significant relates to its construction of its state “Education Freedom Index” (EFI). It adopts each of the component rankings (on vouchers, charters, homeschooling, and inter/intra district choice) from rankings created by advocacy organizations,²⁰ and then combines them to create the EFI. Moreover, although all four of the components plausibly fall under the school choice umbrella, the report fails to adequately justify the decision to weight them all equally. Homeschooling, in particular, is an uncommon choice among families,²¹ and homeschooled students do not take the NAEP. It is strange to include it at all in the index. The homeschooling component is further complicated by unclear measurement: Although states are ranked for the “quality” of their homeschool law,²² what “quality” means is undefined outside of the views of pro-homeschool organizations such as the Home School Legal Defense Association (HSLDA). The combination of equal weighting, inclusion of an entire category of students that do not take the NAEP, and unclear measurements call into question the precision and validity of the main independent variable.

The way the report uses NAEP achievement test results as a dependent variable is also puzzling. It combines students’ average math and reading achievement (and their combined, average NAEP gains) for each state. This unusual combination introduces unnecessary complexity regarding how to weight these measures and how to interpret the outcomes. It is unclear why reading and math were not modeled separately as they typically are—even in other pro-choice writings.²³ Separate models for reading and math would have allowed results to be checked for consistency. This, in turn, might have led readers to have greater confidence in the quality of the models.

Another major methodological concern relates to how the report’s models are specified and the omission of other variables that can determine outcomes on measured achievement. Findings that are counterintuitive and/or inconsistent with prior, high-quality research indicate the need to at least examine and perhaps modify the models. For example, the finding that per-pupil spending is negatively related to school achievement suggests that taking money *away* from schools improves students’ test performance. While this finding is not impossible, it is inconsistent with several other studies that find that increased funding increases test scores and graduation rates.²⁴ This inconsistency raises concerns—that the report ignores—about the integrity of its models. In the best-case scenario, this finding was

the result of a “tipping effect” caused by the presumably high correlation that pupil expenditure has with the student-to-teacher ratio variable. In the worst-case scenario, the model, data, or both are bad. In either case, the report fails to explore, or mention, the body of work showing that higher school funding is associated with better outcomes.²⁵ While the report controls for “state-level measures of per-pupil spending,”²⁶ using state-level averages can be exceedingly problematic given the wild variance of funding that districts, even within the same state, receive. For example, across the country, schools that predominantly serve non-White students receive \$23 billion less per year in funding than schools that predominantly serve White students.²⁷ This type of variance is lost as statistical noise as a result of the lack of nuance in the report’s method.

Finally, as noted, the report draws heavily from its predecessor report published in 2000, which sought to correlate school choice with increased NAEP *and* SAT scores. The 2021 report, however, does not attempt to correlate SAT scores nor does it disclose that SAT scores were part of the initial rankings in 2000. Why not? The failure to disclose the full scope of the previous study and to adequately replicate it raises concerns about the decision to omit SAT scores as a dependent variable.

VI. Review of the Validity of the Findings and Conclusions

Ultimately, its significant major methodological shortcomings and questionable statistical analyses create doubt about the validity of the report’s findings and conclusions. So, also, does its failure to incorporate the relevant scholarly literature that contradicts its conclusions. Ultimately, the report’s models—and the conclusions to which those models lead—are unconvincing.

Importantly, combined NAEP scores may obscure better—or worse—outcomes of the expansion of choice models. The case of Arizona highlights this point. The report ranked Arizona number one state in the nation for “education freedom.” Yet disaggregation of the full NAEP data unearths unimpressive student outcomes. At no time since the inception of NAEP have Arizona’s fourth grade students’ math achievement scores exceeded the national average. Arizona’s fourth and eighth grade reading scores have always been below the national average and, with minor exceptions, its eighth grade math scores have also consistently been below the national average.²⁸ In other words, a focus on combined NAEP scores masks a nuanced understanding of a state’s educational landscape.

While the report concedes that its analyses are not causal,²⁹ its general tone asserts that the expansion of school choice will lead to higher test scores and that reforms such as increased funding, smaller class sizes, and government regulation of school choice will not. The report’s conclusion, for example, abandons all concern about the inability to infer causal relationships from correlational research, describing as “reality” that “school choice has its best chance to influence NAEP scores and gains across an entire state by delivering competitive pressure to district-run public schools.”³⁰ Based on these claims, the report encourages school choice supporters to support policy that includes a broad mix of district, charter,

private and homeschool options. Finally, it troublingly partners ideological reforms with patriotic symbolism by closing with, “When educational freedom rings loudly and broadly, students, families, and communities benefit.”³¹ Such rhetoric can, as described above, get echoed in the popular press in such a way as to downplay any caveats of causality in the aim of promoting ideological reforms.

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

By its very terms, the report is not useful to guide policy. An association between two variables that emerges from this sort of regression analysis can, at best, suggest a causal relationship that should then be examined using a stronger research design. The report essentially acknowledges this but then pronounces school choice as a miracle cure for what ails American education. That said, this report may be useful in its provision of a concise ranking of states that have, and have not, adopted and expanded market-oriented educational reforms. Additionally, its inclusion of, and comparison to, the 2000 “Education Freedom Index” (EFI) rankings might allow researchers to explore the political influences in each state and the resulting changes in states’ EFI rankings. Ultimately, however, the report’s associational research design, as well as its failure to recognize prior research with results that contradict its ideological position favoring school choice, combined with significant shortcomings in its methodology and analysis, all render it useless for purposes of guiding policy.

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