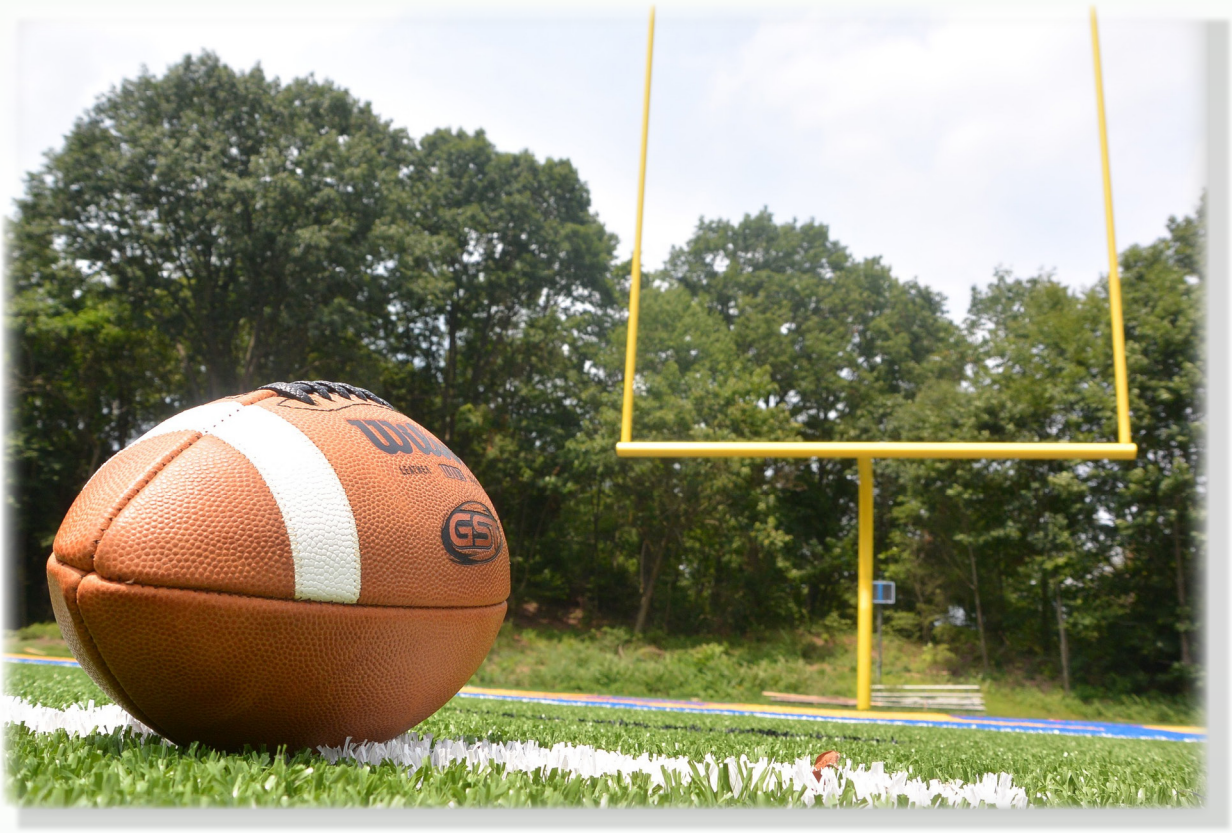
NEPC Review: Do Impacts on Test Scores Even Matter? (American Enterprise Institute, March 2018)



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May 2018

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Summary of Review

A new report from the American Enterprise Institute (AEI), *Do Impacts on Test Scores Even Matter? Lessons from Long-Run Outcomes in School Choice Research*, examines whether student achievement scores on math and English language arts tests align with "long-run" attainment outcomes such as high school graduation rates, college enrollment, and college graduation rates. Drawing on a systematic review of the literature, it concludes that the impacts of school choice programs on test scores are not well connected to such attainment outcomes, which are presented as more positive. This review considers two issues with the report: consistency and evidence. Regarding consistency, the report's suggestion that achievement scores should play a smaller role in determining the efficacy of school choice models represents a stunning effort to move the goalposts in search of new justifications for supporting their preferred policies. After decades of pro-school-choice research and advocacy promoting test score comparisons with public schools as the primary measurement for evaluating school choice models (e.g., charters and school vouchers), the AEI report now suggests that less attention be given to these learning outcomes. Regarding evidence, the AEI report is riddled with numerous internal inconsistencies in its discussion and treatment of a set of studies that were selected by questionable methods. In view of the 180-degree turn based on questionable evidence, the report — despite the authors' assertions — is of little use to policymakers.

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I. Introduction

A new report[1] published by the American Enterprise Institute (AEI) surveys studies of the impact of school choice options to see if there is a link between impacts on test scores and longer-term outcomes. The authors consider measures such as high school graduation rates, college attendance, and college graduation rates. They call these metrics "attainment outcomes." Using a vote-counting approach, the report examines "39 unique impact estimates across studies of more than 20 programs" (p. 2), encompassing various methodologies for analyzing and comparing outcomes of school choice models relative to public school counterparts. For years, school choice advocates have argued for the use of test scores to evaluate achievement outcomes. Finding that there is little apparent relationship between student achievement scores and attainment outcomes, this report argues that the focus on achievement test results to evaluate the effectiveness of school choice models is misplaced.

This review focuses on two essential aspects of the AEI report (hence: "the report"). First, this review notes a number of errors and questionable methodological decisions which, when seen in light of what even the authors acknowledge as non-robust findings, casts serious doubt on the validity of its conclusions, and the value of the authors' recommendations for policymakers. Perhaps more important, this review notes that the AEI report signals a sea change for school choice advocates who had previously championed test scores to prove the success of their policies. Considering that recent results of studies showed detrimental impacts of vouchers on student achievement, this report is, in effect, an attempt to move the goalposts.

Indeed, this is a significant shift considering that, for the last two decades, choice ad-

vocates (including some authors of the this report) have argued that policies such as vouchers and charters produced substantial and significant gains in learning as measured by students' test scores. They have implicitly asserted and explicitly demonstrated that the scores should be the metric by which we evaluate school choice programs.[2] This is despite the fact that many parents who send their children to a school of choice report test scores as "one of the least important pieces of information" for choosing a school.[3] Additionally, choice advocates have argued that the use of vouchers produces achievement scores that are twice as large as class size reduction efforts[4] and significantly cheaper.[5] In fact, an author of the AEI report made this argument as early as two months prior to the publication of this new report.[6] Indeed, in a large part due to such advocacy, a whole generation of school reforms has elevated test scores as the predominant metric by which to judge the worth of policies, as well as of schools, teachers, and even in some cases subjection of public schools to choice regimes through federal policies like No Child Left Behind (NCLB). In the last few years, though, as voucher programs have expanded beyond small, local programs, larger-scale studies have consistently found large, negative effects from voucher programs on student achievement.[7] Now, as evidenced by this report, school choice advocates are shifting the goalposts, arguing — from a rather inadequate and questionable empirical base — that "attainment" outcomes are far preferable to measures of student learning. However, as we show in this review, there are serious concerns with the logic and analysis undergirding the 180-degree turn proposed in the AEI report.

II. The Report's Findings, Conclusions, and Rationale

The report is based on a literature review that compiled a set of published evaluations of school choice programs which include measures of both learning ("achievement") and non-cognitive outcomes ("attainment") such as high school graduation, college enrollment and completion. Including studies that encompass both sets of measures allows the authors to observe the degree to which achievement and attainment impacts are correlated in the different studies. Using a basic vote-counting "meta-analysis," they suggest that achievement impacts "appear to be almost entirely uncorrelated with attainment impacts" (p. 2). Thus, they argue, the "findings beg serious questions about using standardized tests as the exclusive or primary metric on which to evaluate school choice programs" (p. 2). The findings appear to emerge more from an eyeball test rather than from a sophisticated correlational analysis.

The authors acknowledge that, after years of study, research finds that "program impacts of achievement are inconsistent, perhaps weakly positive" (p. 1). However, they argue that findings on attainment are more consistently positive in the school choice literature. They do not offer reasons why this discrepancy may be true for the school choice literature, as opposed to other areas where the links between achievement and life outcomes such as earnings, arrests, or civic engagement are clearer. Instead, after decades of idolizing standardized achievement outcomes and promoting their use as the best way to measure and evaluate school choice options, they contend that test scores are actually just an "interim

measure" (p. 1), and weakly related to more important outcomes later in life. But, instead of analyzing the correlation of achievement measures in school choice programs with later life outcomes, the report focuses on arguing that achievement and attainment measures are not highly correlated, at least in the school choice studies they collected. The report concludes that policymakers' primary focus should not be on the negative effects that school choice has on achievement scores.

The report points to potentially "massive" implications for education policy, and in particular policies regarding the evaluation of school choice programs. Despite having been some of the leading voices for treating test scores as "the coin of the realm" in evaluating school choice,[8] the authors argue with no apparent irony that "These findings appear to go against the grain of the current logic model of education policy. Much of the federal and state education policy of the past two decades has been driven by the assumption that test scores are a meaningful and important measure of what children need to know" (p. 3).

III. The Report's Use of Research Literature

The report is based on a systematic review of an eclectic set of studies on "school choice," broadly construed. Rather than focusing on the more traditional understanding of school choice models like charter schools and private school vouchers, the report — for reasons that are not clear — also includes studies that examine the impacts of early college high schools (part of the small-schools model), magnet schools, and vocational schools.

The report utilizes a number of search terms and strategies to identify studies of different types of school choice programs. The studies examine both achievement and attainment. Search terms include "school choice," "charter school," and "school voucher" paired with "attainment" or "graduation." Based on the results of these searches, the report compiles the first 200 studies highlighted by Google Scholar. This reflects the current popularity of the term "attainment" with school choice advocates and researchers who have been arguing to look beyond "achievement." In fact, "achievement" is not used as a search term, nor are other possibly relevant terms such as "magnet school," "open enrollment," "outcomes," "college," or "earnings." The analysis then applies additional collection strategies, such as looking for further reports from individual authors or from research centers identified in their search. This raises questions about the possibility of selection bias or cherry-picking. Curating 36 studies that match the inclusion criteria, the report codes the results reported within the studies into four broad categories: "significantly positive, insignificantly positive, insignificantly negative, and significantly negative" (p. 1). The codes are based on the programs' impacts on both achievement and attainment measures.

IV. Review of the Report's Methods

Overall, the rationale is that choice school achievement test results are not aligned with attainment results and thus are not aligned with later life outcomes. However, in making this argument, the report quickly bypasses notable research that shows a notable link between achievement growth and later life outcomes such as earnings and the likelihood of becoming a teenage parent, without considering why research on school effects should defy these larger findings.[9]

In addition to the broader concern regarding the sudden and seemingly opportunistic reversal of relying on test scores, the analyses presented in this report also raise a number of substantial questions and concerns. First, the "meta-analytical" approach presented in this report is really just a simple vote-counting procedure that may mask actual patterns in the data. The report does a fair job of explaining the limitations of the dataset which precluded a more sophisticated meta-analysis. While "insignificant" essentially means "no discernable impact," the bigger concern is that the crude approach of placing each study into one of four broad classifications might obscure their actual distribution — for instance, if studies in each category are skewed toward one end of those categories, the results from this simplistic approach might appear as the reverse of what they really are (as with Simpson's Paradox). Without seeing the data, readers are unable to observe the more nuanced and precise distribution of the findings.

Throughout the report, discrepancies, mistakes and/or mis-reporting provide readers with a shoddy representation of what the studies actually report. For example, in an analysis of Cullen, Jacob and Levitt[10], the report states that "winning a lottery to attend one's school of choice had negative but insignificant effects on language arts and reading scores and a significant negative impact on high school graduation" (p. 9). However, this appears to include a typo in that the Cullen *et al.*, study actually found that reading (ELA) and *math scores* were both negative but insignificant. Additionally, the authors suggest that Furgeson *et al.*,[11] found that students attending "CMO 6 [one of six charter management organizations included in the study] had negative and insignificant impacts on ELA and negative but significant impacts on math" (p. 11). Yet the study cited actually found impacts that were reversed from what the AEI report indicates. According to Furgeson *et al.*, ELA had negative and significant impacts and math gains were negative and insignificant.

The authors describe their vote-counting method as including only those studies that reported findings on both student achievement as well as attainment. While the report does mention other studies that include only achievement or only attainment results, these studies are not included in the overall analysis. However, the report does include Mayer *et al.*,[12] and Chingos and Peterson[13]) in their count of 39 studies, despite the fact that Mayer *et al.*, only report impacts on achievement data and Chingos and Peterson only report attainment data. In essence, the report counts the two studies as separate, but combines them to advance an argument as the two studies drew from the same data set but focused on different areas.

And while the authors of the AEI report suggest that the push to rely on achievement measures is misguided, they do not acknowledge that they themselves have been among the loudest voices pushing for them.[14] While it is clear that the report is moving the goalposts to

further an ideological argument of justifying school choice models, what is also clear is that few people outside of voucher advocacy-research circles argue for "exclusive or primary" use of test scores to evaluate these programs. And while the "findings" of the report align with what educators have been suggesting regarding achievement tests for decades, the authors slight the fact that the attainment results are also quite mixed.

The authors' approach to the collection and screening of the assembled studies also raises a number of concerns. For example, the authors specifically search for studies from specific research centers, even though these research centers are often agenda-driven — suggesting possible cherry-picking. Moreover, the report then employs screens to filter out studies that do not meet certain methodological criteria, leaving only 36 studies to be included in the "meta-analysis." Consequently, it is worth keeping in mind that the focus on studies of means-tested programs, and often popular ones that are oversubscribed (which is useful for randomized evaluations) may also bias the set of studies used for the report. This is particularly important, given that the authors note that "due to the small number of studies examined, any statistical test of association is extremely sensitive to the inclusion of even one additional study" (p. 18).

The authors specifically search for studies from specific research centers, even though these research centers are often agenda-driven — suggesting possible cherry-picking.

The report points out the possibility of selection bias in comparing students who attend charter schools with those who do not choose to attend them, noting that "students who select to attend schools of choice are different — by virtue of their choice of school — than students who elected to or who had no choice but to attend school elsewhere" (p. 6). The report also suggests that "Students who select schools of choice may naturally score differently on tests and graduate at different rates than students who do not exercise school choice, in ways that researchers cannot observe" (p. 6). The authors then go on to suggest that random assignment — or the "gold standard" in education research — is an ideal method that "eliminates the problem of selection bias" (p. 6). And while the method may compare students with similar levels of motivation to attend a school through choice mechanisms, it fails to address the essential issue of the weak external validity of such studies, in addition to other aspects of these studies that may compromise their usefulness.[15] For instance, knowledge of being in the treatment group may very well skew the metrics purportedly being measured in the same way that knowing you are receiving an actual experimental drug as opposed to a placebo in a medical trial would undermine the comparison.

The authors point out that NCLB placed an increased focus on English language arts (ELA) and math. The report seeks to determine if there are connections between increased test scores in those two subjects and more long-term outcomes. However, because of their focus on different patterns in the achievement/attainment dichotomy, the authors never really address the prior question of why so many school choice studies (and vouchers in particular) produce different results across subjects. The theory of vouchers is that they should produce greater benefits for students using them. Yet prior research has never explained why that might happen in one subject and not another. Thus, the current study ignores that question,

but reproduces the issue, as the individual studies reviewed often show impacts (positive or negative) in achievement, or attainment, but not both. Indeed, as with earlier studies of math and reading achievement, the findings for this report in both achievement (in either of the two subjects) and attainment are quite inconsistent, with no reasonable explanation for why that would be the case.

The report offers a few speculations for the disparate results on achievement and attainment, such as measurement error (which is then dismissed). Yet it ignores other possibilities. For instance, it is possible that attainment is a better reflection of socioeconomic status than is achievement, since peer groups may have a substantial influence on graduation and college aspirations, for instance. Many of the studies included do not consider the socioeconomic status of the students or the schools being studied. But it is possible that moving disadvantaged students from a less to a more academically inclined peer environment may increase aspirations (such as finishing high school or enrolling in college). If this is the case, this could mean children are enrolling in college, but are not as prepared for completion from a quality program, which could saddle them with debt and/or a less valuable degree.

V. Review of the Validity of the Findings and Conclusions

There are two overarching themes that provoke serious hesitation when considering the findings. First, there are a number of internal errors, including misreporting of data from the studies used in an analysis that also employs questionable methodological decisions. Second, considering that school choice advocates have a long, and recent, history of promoting student achievement results as the fundamental metric for measuring and comparing schools, moving the goalposts as the report does represents a striking departure for school choice advocacy.

The report chronicles the findings of each of the 36 studies included in the "meta-analysis" and summarizes the findings one-by-one, noting the impacts on achievement scores as well as on attainment outcomes according to type of school choice model. It then provides a summary of all of the findings at the end of the report. However, there are considerable discrepancies between the detailed discussion of the findings and the final summary of those findings that are explicated below. In the "Summary and Results" section of the report the following is presented:

- Among math impact estimates,
  - 11 were positive and significant
  - 15 were positive and insignificant (this differs from their earlier summary that adds up to 14)
  - 6 are negative and insignificant (this differs from their earlier summary that adds up to 7)
  - 1 was negative and significant (this differs from their earlier summary that adds up to 2)

- Among ELA impact estimates,
  - 11 were positive and significant
  - 13 were positive and insignificant (this differs from their earlier summary that adds up to 12)
  - 7 were negative and insignificant (this differs from their earlier summary that adds up to 8)
  - 3 were negative and significant
- Among high school graduation impact estimates,
  - 16 were positive and significant (this differs from their earlier summary that adds up to 17)
  - 13 were positive and insignificant (this differs from their earlier summary that adds up to 11)
  - 3 were negative and insignificant (this differs from their earlier summary that adds up to 2)
  - 2 were negative and significant (this differs from their earlier summary that adds up to 3)
- Among college attendance impact estimates,
  - 9 were positive and significant
  - 7 were positive and insignificant
  - 3 were negative and insignificant
  - 0 were negative and significant
- Among college graduation impact estimates,
  - 3 were positive and significant (this differs from their earlier summary that adds up to 4)
  - 5 were positive and insignificant (this differs from their earlier summary that adds up to 4)
  - 3 were negative and insignificant
  - 0 were negative and significant

In the discussion of impacts in math, the authors suggest that there are 34 findings, whereas in their summary of those findings they suggest there are only 33. In their discussion of impacts on high school graduation rates in the body of the report, the authors suggest that there are 33 findings, whereas in their summary of those findings they suggest there are actually 34.

While there are no apparent internal discrepancies in college attendance impacts, each of the other summaries of achievement and attainment categories includes errors. The most notable is in high school graduation rates. This is noteworthy for two reasons: (1) there is inconsistent reporting in every category of coding; and (2) given that the intent of the report is to highlight the importance of using attainment measurements like high school gradua-

tion to evaluate school choice, it is surprising to see that such a category had more internal reporting errors than any other category.

Aside from the discrepancy between their discussion of the findings and the summary of the same findings, there are also discrepancies in how the authors report the total number of estimates. The report includes "studies of more than 20 programs, which provide 39 unique estimates of the impact that school choice programs have had on achievement and attainment" (p. 5) but later states, "we identify 36 unique estimates of impacts on reading and math [achievement] tests from studies that also examine impacts on attainment" (p. 14, brackets added). It is not readily clear why the authors' summation of estimates varies in the report, and points to the need for a clear and careful representation of the studies analyzed.

In short, the AEI report concludes that achievement scores are not correlated with attainment scores and, as a result, evaluations of school choice models should focus less on achievement scores and place more focus on attainment measurements such as high school graduation, college enrollment, and college graduation rates. Presumably, the focus on attainment measurements is warranted simply as, according to the report's authors, the results are better. Considering the long-standing tradition of school choice advocates (including authors of the report) assuming and asserting that achievement scores should be the central measurement when comparing school models, the report represents an about-face for evaluating school choice programs, and a sea change among reform advocacy.

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

In view of the multiple issues, translating these results into policy is not justified. Indeed, as the authors acknowledge, the results are actually not very robust. That is, the findings are relatively tenuous because of the small number of studies used in the vote-counting "meta-analysis," so that "any statistical test of association is extremely sensitive to the inclusion [or exclusion] of even one additional study" (p. 18). Yet the concluding discussion vastly overstates the strength of these findings, asserting that the "policy implications from this analysis are clear" (p. 20). They are not, because the findings are not particularly compelling.

The findings for both achievement and attainment are mixed, with no clear patterns. Still, they note, "While the difference in skewness is not major, it nevertheless implies that some studies have found positive effects on attainment without finding positive effects on achievement—as was the case with the evaluation of the DC Opportunity Scholarship Program" (p. 15). However, while the evaluation of the DC voucher program did indeed find impacts for attainment, those findings are less clear than what is implied in the AEI report. The authors argue that achievement can be "noisy" while attainment metrics are more clear-cut and precise. But achievement measures are typically standardized across schools, while the high school graduation rate in DC (a measure of attainment) was in fact self-reported by parents responding to a survey. Aside from ques-

tions about accuracy and incentives in such reporting, it is useful to note that schools may also have different (non-standardized) graduation requirements. Furthermore, instead of metrics such as learning measures, they suggest as alternatives even less reliable or valid metrics such as parental satisfaction.

Overall, the authors of the AEI report do not really answer the question in their title: "Do impacts on test scores even matter?" Instead, they simply look for patterns in a rather blunt vote-counting exercise with a small number of studies, and promote other metrics which may or may not be useful. The report's suggestion that policymakers should pay less attention to achievement scores in school choice models — especially since those scores are not producing the results that pro-school choice advocates promised — raises significant questions about the reasons for this sea change.

Considering that the report seeks to refocus attention on more long-term educational outcomes like high school graduation and college attendance metrics, it is useful in that it confirms that the benefits of choice models in education remain mixed at best. Additionally, the report is useful as a continued example of the evolving justifications for school choice — even if the goalposts must continually be moved around the field to find new justifications when the previous goals no longer seem to cast such favorable light on their preferred policy.

Notes and Resources

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2 See, for example: Friedman Foundation. (n.d.). *Gold standard studies*. Retrieved April 9, 2018, from http://www.edchoice.org/Research/Gold-Standard-Studies;

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10 Cullen, J.B., Jacob, B.A., & Levitt, S. (2006). The effect of school choice on participants: Evidence from randomized lotteries. *Econometrica, 74*(5), 1191-1230.

11 Furgeson, J., et al. (2012). *Charter-school management organizations: Diverse strategies and diverse student impacts*. Princeton, NJ: Mathematica.

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13 Chingos, M.M., & Peterson, P.E. (2015). Experimentally estimated impacts of school vouchers on college enrollment and degree attainment. *Journal of Public Economics, 122*, 1-12.

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