



# NEPC Review: K-12 School Choice Calculator (Reason Foundation and EdChoice, January 2024)



Reviewed by:

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March 2024

**National Education Policy Center**

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# Acknowledgements

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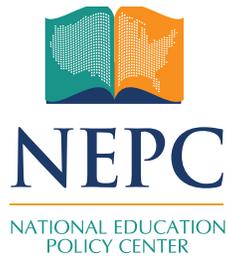
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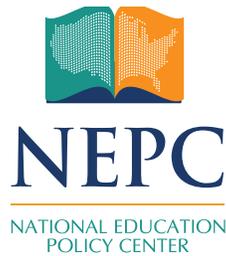
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## Summary

A new calculator from the Reason Foundation and EdChoice’s Fiscal Research and Education Center is offered as a tool to assist state policymakers and choice advocates in providing more accurate estimates of the expenses of adopting publicly financed private-school choice (i.e., voucher) programs. While the calculator embeds a reasonable set of assumptions, it fails to solve the central problem state policymakers face: How are they to determine estimates of students who will enroll, and what percentage of them will be students leaving public versus private schools? The calculator and associated materials provide little guidance to help users devise those estimates, and there is little empirical research available on the topic. In addition, the calculator overstates the spending reductions that result when a current public-school student switches to a private school—first, by overestimating student-level variable spending and second, by assuming that local revenues as well as state aid would be reduced. It also ignores overhead expenses of operating such a program. It’s possible that, used judiciously, the calculator might help policymakers move their estimates of program expenditures closer to the reality that unfolds. However, what is more reliably clear is that using the calculator can reveal to policymakers the high additional expenditures triggered when large numbers of students already enrolled in private schools accept proffered public subsidies through voucher, education savings account, or tuition tax credit programs.



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## I. Introduction

A recent article in *Education Week* noted: “Private school choice has gained considerable political momentum this year, with North Carolina most recently passing a universal education savings account program that mirrors recently passed equivalents in Arkansas, Arizona, Florida, and Utah.”<sup>1</sup>

One recurring issue with the rollout of such financial programs is that state officials have tended to significantly underestimate total government expenditures associated with implementing or expanding them. Many states have faced significant spending overruns largely because leaders underestimated the number of private-school students who would be eligible and apply for vouchers or tuition tax credits.

A new calculator from the Reason Foundation and EdChoice’s Fiscal Research and Education Center, with documentation provided by Martin Lueken,<sup>2</sup> is intended to help state policymakers and choice advocates more accurately estimate both gross and net expenses when they adopt publicly financed private-school choice programs. The calculator requires users to select plan type (universal or income-based, for example), the amount of tuition to be provided, and participation rates for students in both private and public schools.

## II. Findings and Conclusions of the Report

Neither the calculator nor accompanying materials offer findings or policy conclusions. Rather, the tool is simply provided to allow interested users to make their own determinations by entering context-specific data.

The calculator’s output emphasizes short-run net expenses (which it calls “fiscal costs”) and long-run net expenses. Short-run net expenses assume that only a share of public-school spending could be reduced for each student moving to private schools, but long-run net expenses assume that eventually, the full amount of public-school spending for each child moving to private schools (each “switcher”) could be reduced.

Both estimate one year’s expenses and expected savings for an incoming cohort of new participants.

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

The calculator refers to what it calls net fiscal “costs,” discussed in more detail below. However, these aren’t really costs by any economic definition of “cost.” Instead, the calculator simply estimates how much more tax money will be needed to fund existing private-school students who apply for and gain public support. Under most voucher plans the payment rate for private-school choice students is less than the current expenditures for public-school students, and so the difference for each student switching from public to private school is calculated as savings—as a spending reduction.

### **IV. The Report’s Use of Research Literature**

The calculator does not rely heavily on research literature, in part because while that literature does establish terms and definitions for “switchers” and “uptake” and other terms characterizing the choice movement, it provides little guidance for determining what those rates should be for a calculator of this type. The “About” section explains that the initial settings in the calculator, which assume 1% of public-school students switching to private schools and 20% of current private-school students accessing public funds, are drawn from Scafidi and Butcher’s analysis of the New Hampshire program.<sup>3</sup> The section also notes that other programs report higher rates of private-school students taking advantage of choice programs (up to 60% in Arizona).<sup>4</sup> The report’s author has perhaps written most extensively in this area, and this report cites his 2018 piece on estimating fiscal effects as the basis for the calculator design elements.<sup>5</sup>

The report does include some discussion of literature on the assumptions around how much public-school expense might be reduced per student switching. Supporting citations include two non-peer reviewed reports<sup>6</sup> and Bifulco and Reback’s 2014 peer-reviewed study of charter school expansion in Albany, NY.<sup>7</sup> That study details the cost structure of schooling to explain why, at least in the short run, as each student exits a school (whether as a function of choice/switching, or other enrollment decline), school spending cannot be not fully reduced at the average per-pupil total expense. On the one hand, there are fixed overhead costs like central administration and the operations of buildings. And there are also costs—like classes and/or groups of particular children—that do not vary by each individual who comes or

goes. As such, there will be varied degrees of spending that can be immediately reduced as (or if) enrollments decline. From this literature, the report derives the following definitions:

- “Short-run variable cost estimates comprise three categorical expenditures: Instruction, Instructional Support Services, and Student Support Services. The analysis assumes all other categorical expenditures as fixed. This approach is also more cautious than methods used by other economists.”
- “Because a fundamental economic principle maintains that all costs are variable in the long run, the analysis uses the average total per-student cost for public schools to generate estimates for long-run fiscal effects.”

However, rather than “short” versus “long” run *cost* differences, the two calculations more accurately reflect hypothetical net government *spending* increases or decreases.

The calculator provides an option to estimate spending on a program including children with disabilities, citing the related average per-pupil spending: “To estimate average total per-pupil costs for students with special needs, the analysis applies a factor of 1.91 to the per-pupil current expenditures for all students in the public K-12 school system.” This ratio is drawn from the 1990s Special Education Expenditures Project and is commonly cited.<sup>8</sup> However, the costs of serving children with disabilities appropriately varies widely by disability type and setting, and programs may or may not require compliance under special education laws. To provide any reasonable estimates of spending or costs for children with disabilities in private schools under a voucher system and the fiscal impact on district schools would require better understanding which types of students with disabilities switch and which stay.<sup>9</sup> Importantly, the resource cited is the “special education **expenditures** project” and not the special education **cost** project.<sup>10</sup> This distinction is substantive and discussed in the next section.

## V. Review of the Report’s Methods

A review of the simplistic assumptions behind the calculator requires a preliminary discussion of terminology. First, spending and cost are two different things. The calculator addresses only spending, whether a direct expenditure on children attending public schools or provided with tuition for private schools (voucher), or an indirect expenditure of tax dollars by providing tuition tax credits.<sup>11</sup>

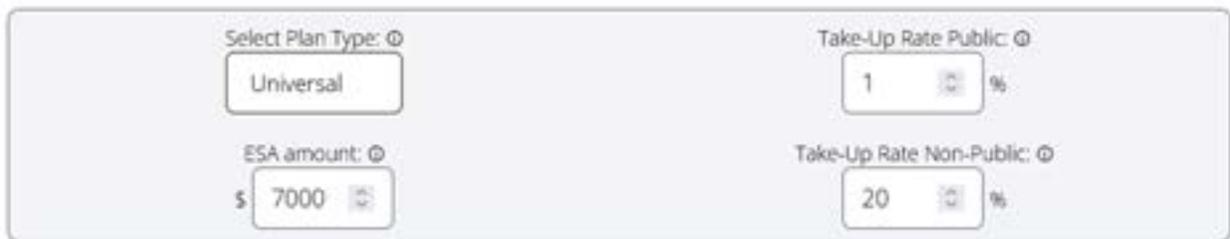
What we choose to spend, regardless of quality or quantity of service, is simply what we chose to spend and not a reflection of “cost” per se. Cost necessarily assumes some connection to quality and quantity of output.<sup>12</sup> That is, it costs a specific amount to provide a service of X level of quality to Y number of students. If we spend less than it would cost to achieve that level of quality, we will receive a service of lower quality. That said, we can spend more and find ourselves still receiving only that same level of quality because of inefficient spending choices. It is possible to spend more than cost for X level of quality, but not less.

Further, the “cost” of a program or service of X quality includes all that goes into fully providing that service. If, for example, we choose to provide families of children in New Hampshire with \$4,600 per child to go to private school, that \$4,600 is likely only a small partial payment toward the total cost. Full tuition for most New Hampshire private schools far exceeds that amount, and even full tuition rarely if ever covers full annual operating costs of private schools.<sup>13</sup> A handful of recent, independent analyses of New Hampshire public schools found that even the minimum cost of providing public schooling in the state was more than double the voucher amount.<sup>14</sup>

Under-subsidized education savings accounts, tuition tax credit or voucher programs require families and/or institutions to pay the difference, which may include additional transportation expenses not incurred while students attended public schools. The calculator does not consider these “costs” but instead considers only how much money a state chooses to give families—who might use it for private schooling, at whatever level they can afford. The state might choose to spend less than it actually costs to provide equal quality education, like the New Hampshire example above, in order to achieve a spending reduction and false perception of net savings. Unless someone else makes up the difference, the result will be lower quality education.

One could, for example, reduce expenditures by simply paying parents to remove their children from school with no questions asked as long as the amount paid to parents was less than the amount spent to continue educating them in the public system. Doing so might reduce short-term government expenditures—but potentially at a significant long-term societal cost.

It is a problem that the school choice calculator focuses only on reduction in net expenditures with no concern for “cost” or quality expectations. The basic inputs to the calculator tool are shown here:



The image shows a screenshot of the School Choice Calculator interface. It features four input fields arranged in a 2x2 grid. The top-left field is labeled 'Select Plan Type: @' and has a dropdown menu with 'Universal' selected. The top-right field is labeled 'Take-Up Rate Public: @' and has a numeric input field with '1' and a percentage sign. The bottom-left field is labeled 'ESA amount: @' and has a numeric input field with '\$ 7000' and a percentage sign. The bottom-right field is labeled 'Take-Up Rate Non-Public: @' and has a numeric input field with '20' and a percentage sign.

Source: <https://www.schoolchoicecalculator.com/>

Users set several variables as they use the calculator. Plan Types include: universal (any/all school aged eligible); income based (eligibility based on family income at or below X); grade level based; or special education private school. The ESA (Education Savings Account) amount or voucher level indicates state funding set per participating child. Take-Up Rates reflect the percentage of public-school students likely to switch to private school and the percentage of existing private-school students likely to participate in the program. Default values (which offer some guidance, explained in the “About” page<sup>15</sup>) are shown above.

Reasonable national data sources were used to determine calculations involving a) existing

public-school expenditures per pupil,<sup>16</sup> b) income levels of families of school-aged children,<sup>17</sup> c) total current public-school enrollments<sup>18</sup> and special education enrollments,<sup>19</sup> and d) total current private and homeschooled school enrollments in each state.<sup>20</sup>

However, stakeholders interested in using the calculator receive little guidance in estimating the percentages of likely private- and public-school applicants, nor are they informed about how one factor might affect another. For example, it might be useful to discuss how voucher amounts can influence percentages of applicants (though literature to support such estimates is admittedly sparse to nonexistent). The calculator's options to limit eligible populations by income thresholds, disability status and grade range rely on a simple reduction of the total eligible population to the share of the population in each category, but changing the eligibility pool in combination with the rate at which a voucher is provided will most certainly affect the uptake rates of current public- and private-school students.

A sample illustration demonstrating what percentage of students currently in public or private schools would qualify by disability, grade range, or income status at specific thresholds might be useful. Other helpful information would include ranges of tuition by private-school type and the average public-school expenditure per pupil embedded in calculations. While it is possible to make some inferences from the available output, more explicit guidance as users determine inputs would be helpful.

The calculator's estimate of effect on short-term expenditures when public-school students switch to private schools assumes a prorated, per-pupil reduction of public-school spending, whether from state or local sources. This may be a reasonable representation of expenditures that could be reduced, but it isn't necessarily what state policymakers are interested in, nor are the reductions necessarily realized. The state aid reduction for each individual switcher might be more or less fully realized, depending on the state's funding formula. In many cases, it may be less than the state pays for vouchers.<sup>21</sup> State policymakers are more interested in how a program will affect the state budget, or how much additional state revenue will be needed to fund it, or what percentage of state education spending the gross (not net) funding increase will represent.

## **VI. Review of Validity of Findings and Conclusions**

The calculator is what it is, and is documented accurately, using data that are reasonable for such illustrations. However, it falls short in providing precise fiscal information for state legislatures. Any conclusions or findings to be drawn from the calculator hinge entirely on the user's inputs.

Existing evidence on actual private-school sector spending shows that on average, private independent schools spent nearly double that of neighboring public districts while conservative Christian schools spent much less per pupil.<sup>22</sup> Voucher levels will determine which types of schools can be accessed and by whom, in terms of the price-quality relationship and in terms of religious affiliation.

In addition, data from media outlets and state data reports, including a recent overview reported in *Education Week*,<sup>23</sup> are providing increasing evidence on public and private school uptake rates that might be used to inform calculator settings. For example, in Arkansas, in the fall of 2023, 95% of students seeking vouchers had not previously attended public schools.<sup>24</sup> In Iowa, 60%<sup>25</sup> and New Hampshire, 89% of students seeking vouchers had not attended public schools.<sup>26</sup> What has typically been reported are the shares of applicants or recipients in a current entering cohort—potentially useful information for calculator users who must determine specific inputs.

To better understand the calculator’s functions, I used it to devise illustrations with some reported figures for several states (see Appendix table). With media reports used to derive cohort and single-year estimates of net as well as gross expenditures, the table shows estimates the calculator would have produced—given this input data. For the years reported in the table, federally reported spending and enrollment data were drawn from sources used for the calculator. Notably, there’s a lag in data reporting and these programs affect private-school enrollments to some extent.

As is detailed in the illustrative table in the Appendix:

- Florida’s most recent cycle (2023) enrolled just under 123,000 new recipients (in a cumulative total of 340,731<sup>27</sup>).
- 69% of those (just under 85,000) were previously enrolled in private schools, constituting about 21.5% of the state’s private school enrollment at the time. Here, the default value of 20% in the calculator appears reasonable. (The state reports that enrollment grew to 445,067 in 2022-23.<sup>28</sup>)
- With the remainder of new recipients crudely determined as switchers (meaning the total would include homeschooled students and others not yet in public or private schools), that percentage becomes 1.3% of public-school enrollments.
- At Florida’s \$8,000 voucher rate (similar to the calculator default rate), this creates a gross spending of just under \$1 billion for this cohort. The cumulative cohorts of 340,731 have a gross spending just over \$2.7 billion.
- This yields a 7.8% gross increase in **state education expense** for this cohort.
  - The calculator’s short-run net spending change of 3.2% falsely assumes an immediate reduction of not only the state aid per pupil for the switchers, but also the local revenue of the public district, albeit prorated to include only variable expense. Even then, a net increase of 3.2% is quite large.

Again, this calculation is purely illustrative, with messy, imprecise, and incomplete information. But media reports of presumably more accurate total spending estimates for Florida indicate:

When it was signed into law last year, it was estimated that Florida’s “vouchers for everybody” would cost between \$200 and \$700 million a year. However, once this school year started with everybody eligible, the cost exploded, and is

now estimated at between \$2.8 and \$4.2 billion, and about 70 percent of the new recipients were already attending private schools before vouchers.<sup>29</sup>

Here, the calculator's billion dollar estimate proved much closer to reality than the state's original estimate of hundreds of millions.

Together, the calculations for individual states suggest that with reasonably accurate data inputs, the calculator can get the user closer to an accurate estimate—but not quite there, and not if data entered before the fact is far from accurate. The problem lies in forecasting enrollment estimates and uptake rates before they start coming in. For example, New Hampshire's meager \$4,600 voucher rate yielded a very small number of students switching out of public schools, with new enrollees being primarily students already attending private schools. And notably, when gross spending increases are compared to state education expense, Florida and Arizona have shown nearly 8% or more in state education spending increases, quite a large and unexpected outcome for two states that have systematically reduced their effort to fund public schooling over time.<sup>30</sup> In other words, voucher programs represent unprecedented spending increases for these states, and are likely to be felt elsewhere in the state budgets.

## VII. Usefulness for Guidance of Policy and Practice

As a simple calculator of gross and net spending changes incurred by states, the tool can perhaps be useful for policymakers and advocates in coming closer to reasonable estimates—if they have access to accurate data on uptake rates. But the calculator must be interpreted narrowly as just that: a calculator of the potential total additional expenditures to serve a specific group of students at a specific point in time (for example, an entering cohort for a given year). The calculator might be more useful as policy guidance if it at least additionally displayed gross increases in state spending on vouchers as a percentage of existing state education aid. The net short-term reductions are both imprecise and not fully realized. And overall, several factors suggest it should be used with extreme caution.

Ignored entirely are other potential program expenses as such programs are adopted and/or expanded, including 1) additional administrative management/oversight of the choice programs,<sup>31</sup> and 2) any additional transportation expenses that might be incurred if children with disabilities were included.<sup>32</sup>

Perhaps more important, but less immediately measurable with any degree of precision, are the larger, long-term, societal and economic impacts. As explained in an earlier review of a proposal for New York state to adopt an ESA program:

Like most such fiscal impact analyses, the report focuses on reducing public expenditures without regard to actual cost, quality and the public good. In 1997, Levin and Driver laid out a framework for more broadly evaluating the costs and benefits of choice programs, including the extent to which those programs affect equity and social cohesion, as well as whether they were efficient in their

production of outcomes.<sup>33</sup>

All of the estimates in the illustrative table result in significant increases in state education expenses, sometimes quite large. Moreover, recent evidence has mounted that the outcomes of children attending private schools, particularly under large statewide voucher programs, are strongly negative—especially for mathematics outcomes.<sup>34</sup> It seems wholly illogical that state policymakers would increase state expense on education by billions of dollars over time, only to result in significant reductions in mathematics achievement in the short term and the state's economic health in the longer term.<sup>35</sup>

In summary: It's possible that, used judiciously, the calculator might help policymakers move their estimates of program cost closer to the reality that unfolds. However, what is more reliably clear is that using the calculator can reveal to policymakers the high additional expenditures triggered when large numbers of students already enrolled in private schools take advantage of voucher, education savings account, or tuition tax credit programs.

## Appendix

Table 1. Estimated Program Expenses for Select States (Source notes in brackets [])

INPUTS	State			
	FL [1]	IA [2]	AZ [3&4]	NH [5]
Take-Up Public (% of current public school students switching)	1.3%	1.4%	2.0%	0.1%
Take-Up Private (% of current private school students applying)	21.5%	24.7%	40.7%	8.9%
ESA or Voucher Amount per Child	\$8,000	\$7,635	\$7,500	\$4,600
Current Public School Spending per Pupil (also includes federal aid)	\$10,401	\$12,695	\$9,611	\$19,443
<b>UNDERLYING DATA</b>				
Total Public Enrollment (21-22, CCD) [6]	2,833,186	510,661	1,133,284	170,005
Total Private School Enrollment (19-20, PSU) [7]	395,043	42,573	59,171	17,934
<b>BUDGET IMPACT CALCULATIONS</b>				
Short-Run Gross Spending Change	\$983,160,000	\$133,612,500	\$354,000,000	\$8,280,000
Short-Run Net Spending Change	<b>\$960,905,885</b>	<b>\$99,175,357</b>	<b>\$314,845,897</b>	<b>\$7,537,452</b>
Long-Run Net Spending Change	<b>\$814,342,920</b>	<b>\$52,489,632</b>	<b>\$207,408,919</b>	<b>\$6,457,719</b>
<b>PRIOR SPENDING</b>				
Current State & Local Spending (fy21, F33) [8]	\$29,583,495,000	\$7,066,705,000	\$8,612,065,000	\$3,292,748,000
Current State Aid (fy21, F33) [8]	\$12,590,082,000	\$4,020,897,000	\$4,160,409,000	\$1,093,455,000
<b>PROPORTIONAL CHANGES</b>				
% Increase (Short Run Net / Current State & Local)	3.2%	1.4%	3.7%	0.2%
% Increase (Long Run Net / Current State & Local)	2.8%	0.7%	2.4%	0.2%
% Increase [of state] (Short Run Net / State Aid)	7.6%	2.5%	7.6%	0.7%
% Increase [of state] (Long Run Net / State Aid)	6.5%	1.3%	5.0%	0.6%
Gross % Increase [of state] (Short Run Gross / State Aid)	7.8%	3.3%	8.5%	0.8%
<b>UPTAKE ESTIMATE CALCULATIONS</b>				
Cohort Enrollees (accepted applications)	122,895 [1&2]	17,500 [1&2]	47,200 [1&3]	1,800 [1&5]
% Cohort Currently enrolled in Private Schools	69%	60%	51%	89%
Estimated Private School Uptake Total	84,798	10,500	24,072	1,596
Private School Uptake Total as % of Private School Enrollment	21.5%	24.7%	40.7%	8.9%
Switchers as % of Public Schooled (includes new/entering)	1.3%	1.4%	2.0%	0.1%

Note: Results of this calculator reflect one year only and do not produce projections for multiple years. To project future years, users may change inputs accordingly to align with their expectations for their program.

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- 11 Notably, the calculator does not take into consideration local property tax exemptions that most states grant to

private schools and religious institutions and schools in each jurisdiction. To the extent that increased public financing encourages growth of the private school sector, churches and schools may acquire new properties and programs and seek tax exemption for them—generating additional fiscal impact on local communities.

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  - 19 U.S. Department of Education, IDEA Section 618 State Part B Child Count and Educational Environments, 2021-22. Retrieved February 20, 2024, from <https://data.ed.gov/dataset/idea-section-618-state-part-b-child-count-and-educational-environments/resources>
  - 20 Private school enrollment: U.S. Department of Education, National Center for Education Statistics, Private School Universe Survey (PSS), 2019-20. Cited in: Reason Foundation, EdChoice & Fiscal Research & Education Center (n.d.). Methodology for estimating fiscal effects of ESA programs [web page]. Retrieved January 29, 2024, from <https://www.schoolchoicecalculator.com/methodology>
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- 21 Marshall, A. (2024, January 29) Report: 39% of TN school districts receive less in per-student funding than students using proposed private school vouchers. *90.3 WPLN News*. Retrieved February 18, 2024, from <https://wpln.org/post/report-39-of-tn-school-districts-receive-less-in-per-student-funding-than-students-using-proposed-private-school-vouchers/>
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- 27 New report shows nearly 123,000 new students received Florida school vouchers in 2023. NBC 6 South Florida. Retrieved January 29, 2024, from <https://www.nbcmiami.com/news/local/new-report-shows-nearly-123000-new-students-received-florida-school-vouchers-in-2023/3112869/>
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- 30 Baker, B.D., Di Carlo, M., & Weber, M. (2024). *The adequacy and fairness of state school finance systems, school year 2020-21*. Albert Shanker Institute. Retrieved January 29, 2024, from <https://www.schoolfinancedata.org/the-adequacy-and-fairness-of-state-school-finance-systems-2024/>

The census fiscal survey data this study tracked indicates that K-12 state revenues in Arizona and Florida have increased by 8% or more three times in the past decade of available data (2011 to 2021). But adoption and expansion of universal vouchers would likely have these states increasing spending by that amount for multiple years when they've never done so in the past. For the past several years in Florida, prior to adopting the universal voucher program, state revenue increases have ranged from 1.3 to 4.1%. That is, it would be rather unprecedented for Florida to increase public support for K-12 education by anywhere near 8% for more than one year at a time.

- 31 Program revenues often pay external organizations for management and other services.
- 32 See:
  - Baker, B.D. (2019). *NEPC review: California charter schools: Costs, benefits, and impact on school districts*. Boulder, CO: National Education Policy Center. Retrieved January 29, 2024, from <http://nepc.colorado.edu/thinktank/ca-charters>
  - Bifulco, R. & Reback, R. (2014). Fiscal impacts of charter schools: Lessons from New York. *Education Finance and Policy*, 9(1), 86-107.
  - Ladd, H.F. & Singleton, J.D. (2020). The fiscal externalities of charter schools: Evidence from North Carolina. *Education Finance and Policy*, 15(1), 191-208.
- 33 Baker, B.D. (2021). *NEPC review: Education savings accounts: How ESAs can promote educational freedom*

for New York families. Boulder, CO: National Education Policy Center. Retrieved February 19, 2024, from <http://nepc.colorado.edu/thinktank/esas>

Levin, H.M. & Driver, C.E. (1997). Cost of an educational voucher system. *Education Economics*, 5(3), 265-283.

See also:

Levin, H.M. (2002). A comprehensive framework for evaluating educational vouchers. *Educational Evaluation and Policy Analysis*, 24(3), 159-174.

34 Cowen, J. (2023, April 19) How school voucher programs hurt students. *Time Magazine*. Retrieved January 29, 2024, from <https://time.com/6272666/school-voucher-programs-hurt-students/>

35 In an earlier think tank review, I reviewed a report by Corey DeAngelis which calculated long-term economic benefits of adopting a tuition tax credit program in Pennsylvania. But, the assumed benefits were based on achievement gains from selected charter school research. It ignored the mounting achievement losses from large-scale voucher programs. Substituting the negative voucher effect for the incorrectly used charter school estimates, I noted:

“If we substitute -.15 for the negative effects on math achievement (assuming it equally important to reading for long-term wages) from the Indiana voucher study, we find that lifetime wages of the individual are reduced by over 16% (to about \$1,041,218 from the baseline of \$1,244,910).”

Baker, B.D. (2020). *NEPC review: Unleashing educational opportunity: The untapped potential of expanded tax credit scholarships*. Boulder, CO: National Education Policy Center. Retrieved January 29, 2024, from <http://nepc.colorado.edu/thinktank/tax-credits>