



# MAKING MONEY MATTER: THE GROWING CONSENSUS

## EXECUTIVE SUMMARY

New analyses by researchers across the ideological spectrum have found that increasing overall funding for schools can improve student achievement, particularly for low-income students. However, the growing consensus is that strategic state policies are needed to substantially increase *the size of the impact* of additional funding. These policies include student-centered funding that directs new resources to students who have the greatest needs, accountability for student outcomes, incentivizing proven strategies, competition and choice, and enabling schools to learn from one another.

An [accompanying tool](#) allows policymakers to assess where their respective states are in adopting policies that maximize the impact of school funding.

## MONEY MATTERS, BUT POLICIES DETERMINE HOW MUCH

For many years, the question of whether money matters in education has produced fiercely partisan answers. Some have argued that increased funding is necessary to improve inadequate student outcomes. Others have noted that, despite significant increases in school spending nationwide over several decades, student achievement has remained largely flat.<sup>1</sup> Now, with the use of more sophisticated research methods, school finance experts from across the ideological spectrum are reaching a consensus: Increased spending can improve student achievement, but state policies are needed to significantly increase the impact by encouraging the most effective use of the additional resources.

**Recent analyses show funding impact:** Kirabo Jackson and Claire Mackevicius looked at various studies and found that increased spending raised test scores by 0.032 of a standard deviation (SD).<sup>2</sup> Danielle Handel and Erik Hanushek also conducted a meta-analysis and found an impact of 0.056 SD.<sup>3</sup> Together, these analyses found that spending an additional \$4,000 per student—\$1,000 each year over four years—improved test scores by 0.044 SD, as shown in Table I.<sup>4</sup>

A *full* standard deviation moves a student from the 50<sup>th</sup> percentile on test scores up to the 84<sup>th</sup> percentile, a large improvement in achievement. An impact of 0.044 SD equals a change of less than 2 percentile points.<sup>5</sup>

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<sup>1</sup> See, e.g., Eric A. Hanushek, "[The Failure of Input-Based Schooling Policies](#)," *The Economic Journal* (2003).

<sup>2</sup> See, e.g., C. Kirabo Jackson & Claire L. Mackevicius, "[What Impacts Can We Expect from School Spending? Evidence from Evaluations in the U.S.](#)" (2023).

<sup>3</sup> Danielle V. Handel & Eric A. Hanushek, "[U.S. School Finance: Resources and Outcomes](#)," *National Bureau of Economic Research* (2023).

<sup>4</sup> Both studies examined spending increases for four years. Handel and Hanushek looked at a 10-percent increase in spending. In 2018, average spending per student in the United States was \$12,585; 10 percent is \$1,258, or \$5,032 over four years. See U.S. Department of Education, "[Expenditures per Pupil for Elementary and Secondary Public Schools](#)." Jackson and Claire Mackevicius looked at a spending increase of \$1,000 over four years, or \$4,000. Since Handel and Hanushek found an impact of 0.070 SD for spending \$5,032, the impact for \$4,000 can be estimated at 0.056 SD. Averaging that with Jackson and Mackevicius' 0.032 SD yields 0.044 SD.

<sup>5</sup> See "[Standard Normal Distribution \(Z\) Probabilities](#)."



**Extra boost for low-income students:** Notably, the impact is nearly double for low-income students.<sup>6</sup> “There is a consensus that a spending increase for low-income students tends to help,” said Chad Aldeman.<sup>7</sup>

**A large range of results:** However, these results may overestimate the impact of general spending increases because they are the *average* from various studies. Dr. Hanushek included studies with a “startling” range of results: -0.244 SD to 0.543 SD. Dr. Jackson concluded that the impact could be anywhere from -0.004 to 0.067 SD. This means that the actual change in student achievement from a spending increase could be *zero* depending on the circumstances.

**Evidence-based investments produce much larger results:** Equally important, research has found that specific strategies can produce much larger changes at the same cost. For example, [Success For All](#), a whole school model using strong instruction and small group tutoring, improves student achievement by 0.243 SD. Reducing class size to 15 students can raise test scores by 0.20 SD. As shown below in Table I, the impact from these two interventions is more than five times that of the results found for a general funding increase. In other words, at least 80 percent of the potential impact of a funding increase is lost.<sup>8</sup>

**Table I: Impact of General Funding Increases vs. Evidence-Based Interventions**

Investment Type	Total Cost (2018 dollars)	Effect Size	Effect At \$4,000
General Funding Increase (Jackson & Mackevicius)	\$4,000	0.032	0.032
General Funding Increase (Handel & Hanushek)	\$5,032	0.070	0.056
<i>General Funding Increase Average</i>			0.044
Class Size Reduction To 15 Students	\$5,638	0.280	0.199
Success for All—Whole School Intervention	\$3,293	0.200	0.243
<i>Evidence-Based Intervention Average</i>			0.221

**Importance of state policy:** Considering these facts, a diversity of scholars has agreed that states need to focus on the policies that drive upward the impact of increased spending, ideally to the highest range of previous studies and closer to the results from evidence-based investments.

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**“To be most effective... spending increases should be coupled with systems that help ensure spending is allocated toward the most productive inputs.”**  
—Dr. Kirabo Jackson

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According to Dr. Jackson, “Importantly, we find that how the money is spent may be important. As such, to be most effective it is likely that spending increases should be coupled with systems that help ensure spending is allocated toward the most productive inputs.”<sup>9</sup>

Dr. Julien Lafortune, another funding expert, said, “The research does not say that spending will *always* translate into improved outcomes, nor that how money is spent does not matter. The effects identified in the research are averages; some types of spending are likely more important for outcomes than

<sup>6</sup> See *supra*, Jackson & Mackevicius.

<sup>7</sup> Interview with Chad Aldeman, Edonomics Lab (Oct. 17, 2022).

<sup>8</sup> See *supra* note 4 for an explanation of the effect size for general funding increases. The impact of the evidence-based interventions is for specific locations, not statewide implementation for which there can be additional challenges that reduce the effect size. See Geoffrey D. Borman & Gina M. Hewes, [The Long-Term Effects and Cost-Effectiveness of Success for All](#) (2002). For comparison purposes, all spending figures are converted into 2018 dollars using the [implicit price deflator](#). The average impact for reading and math is used.

<sup>9</sup> C. Kirabo Jackson, Rucker C. Johnson & Claudia Persico. “[The Effects of School Spending on Educational and Economic Outcomes: Evidence from School Finance Reforms](#),” *The Quarterly Journal of Economics* (2016).



others, and some districts may allocate resources in more efficient ways.... Clearly, how dollars are spent matters.”<sup>10</sup>

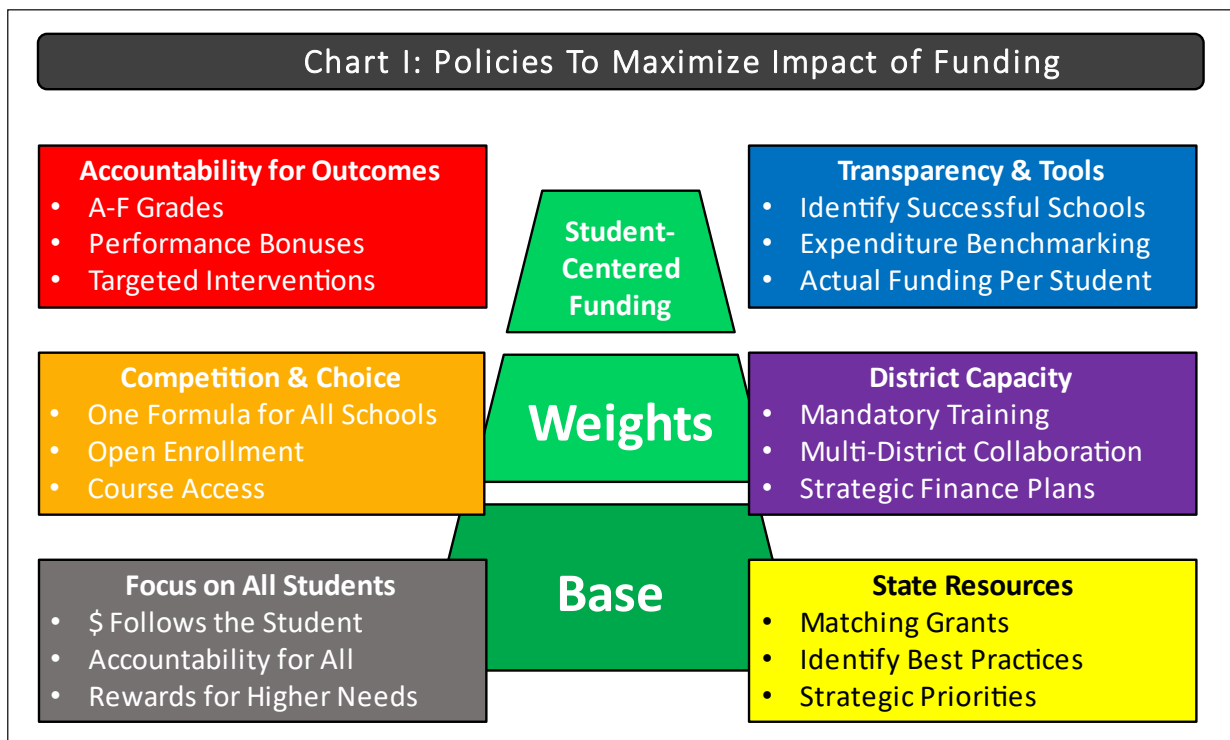
Dr. Hanushek said, “The new evidence on spending impacts, like the historical evidence, does not indicate that spending does not matter. Nor does it indicate that spending cannot matter. It does indicate that simply adding more resources without addressing how the resources will be used provides little assurance that student achievement will improve.”<sup>11</sup>

## POLICIES THAT MAXIMIZE FUNDING IMPACT

What are the policies states can consider to maximize the impact of funding increases? As shown in Chart I and described below, states can give schools greater flexibility on inputs and hold schools accountable for outcomes. They also can enable school leaders to identify and effectively implement the investments that work best for their specific circumstances. This [accompanying tool](#) allows policymakers to evaluate where their states are in adopting the policies.

### Student-Centered Funding

**Student-centered funding formula:** To make the best use of available resources, school leaders need a simple and transparent student-centered funding formula, whereby schools are funded based on the number and characteristics of the students they serve. This often requires a state to collapse its many separate funding programs so that nearly all funding flows through a single formula.<sup>12</sup>



There are several reasons to give *greater flexibility* rather than mandating the specific evidence-based interventions that produce the most bang for the buck. First, school leaders can evade accountability by blaming poor outcomes on the forced use of certain programs. Second, there is no single strategy that will work in every school. At a minimum, schools need to have some options. Third, large-scale adoption of a specific approach can produce unintended

<sup>10</sup> Julien Lafortune, [Understanding the Effects of School Funding](#), Public Policy Institute of California (2022) (emphasis in original).

<sup>11</sup> See *supra*, Handel & Hanushek, “U.S. School Finance: Resources and Outcomes.”

<sup>12</sup> See ExcelinEd, [Student-Centered State Funding](#) (2017).



consequences. For example, California mandated statewide class size reduction, only to find that the best-funded schools recruited the most effective teachers away from high-poverty schools, leaving the most vulnerable students worse off.<sup>13</sup>

**Substantial funding weights for students with greater needs:** As Dr. Lafortune stated: “Given the research showing that increased funding matters even more for low-income students, states need to direct resources to those students.”<sup>14</sup> This is typically done by using a funding “weight,” which is multiplied against a base amount per student in the student-centered funding formula. For example, nearly all states provide extra funding for low-income students, using an average weight of 1.22, or 22 percent above base. States also have funding weights for students with disabilities and English language learners.<sup>15</sup>

According to Dr. Hanushek, “Funding should always differentiate for students who have higher needs, and this includes funding weights for low-income students.”<sup>16</sup>

**Money follows the student:** In a student-centered funding formula, funding flows to districts which, in turn, distribute resources to schools. Without additional requirements, districts could use the additional money they receive for higher-need students on, for example, general operating expenses. To ensure that supplemental funds benefit low-income and other higher-need students, states need to require that each individual school receives the funding generated by the students attending that school.<sup>17</sup>

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**Competency-based funding:** Finally, states can delink funding from traditional seat-time measures, which essentially promote student attendance instead of learning. Instead, states can remove barriers and create incentives so that students have the time and individualized support needed to become fully competent before moving on to more content.<sup>18</sup>

### Accountability for Outcomes

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**A-F school grades:** Policymakers can drive improved use of resources by holding district and school leaders accountable for student outcomes. This includes using A-F school grading so that parents are informed each year in clear terms how their children’s schools are doing on rigorous outcomes.<sup>19</sup>

The A-F grade for each school also needs to reflect how well the school is doing with low-income and other higher-need students. If a school is persistently poorly performing, either overall or with student subgroups, the state can provide support and direction with increasing intensity.<sup>20</sup>

**Performance bonuses:** States can further ensure that resources produce results by linking a meaningful portion of funding to student outcomes. For each student who enters college prepared or who secures a decent paying job, the state can provide a bonus. When schools succeed with students who are low-income or have higher needs, the

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<sup>13</sup> See *supra*, Lafortune.

<sup>14</sup> Interview with Dr. Julien Lafortune (Oct. 7, 2023).

<sup>15</sup> See ExcelinEd, Supplemental Funding for Low-Income Students (2023).

<sup>16</sup> Interview with Eric Hanushek (Mar. 8, 2023).

<sup>17</sup> Florida has this requirement. See [Equity in School-Level Funding Act](#), Florida Statutes Ch. 1011.69.

<sup>18</sup> See ExcelinEd, [Moving Beyond Seat Time](#) (2018).

<sup>19</sup> See ExcelinEd, [A-F School Grading](#).

<sup>20</sup> See ExcelinEd, [School Interventions](#) (2016).



performance bonuses need to be significantly higher. The impact of the funding is guaranteed, as it only goes out to schools if there are improved outcomes.<sup>21</sup>

## Evidence-Based Practices

**Matching grants:** Rather than mandate specific interventions, states can provide seed funding for an array of evidence-based strategies that address unmet priorities. Seed funding lets districts voluntarily participate but requires them to pay for a portion of the cost. States can also make it easy for schools to identify evidence-based best practices and how best to implement them.<sup>22</sup>

**Financial transparency:** States can help schools identify comparable schools that are producing better outcomes with the same or fewer resources, helping them to learn what these other schools are doing. A transparent financial reporting system can enable schools to compare themselves on key expenditures and examine the cost-effectiveness of specific programs.<sup>23</sup>

## Competition and Choice

As in other sectors, competition can be a major driver for better use of resources. Schools that are producing better results can attract more students, creating pressure on other schools to do better—or lose students. State policy needs to allow families to enroll in any school in the state, regardless of where they live.<sup>24</sup>

Whatever choice a state provides—open enrollment, charter or private school choice—a student-centered funding formula, as described above, ensures that money follows students to high-performing schools that want to serve more students.

Having a substantial funding weight for higher-need students is also critical so that schools have the resources needed to attract and serve these students. As noted by Dr. Hanushek, “States that are adopting universal Education Savings Accounts should provide substantially greater scholarships for low-income students.”<sup>25</sup>

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## CONCLUSION

There is a growing consensus that additional resources can improve student outcomes, particularly for low-income students. Equally clear is that state policies are critical for raising impact to the higher range of previous efforts and closest to what the most effective strategies can produce. These state policies serve to direct resources to the students who have the greatest needs and also to incentivize schools to learn from each other and produce better results.

<sup>21</sup> See ExcelinEd, [Rewarding Success for All Students](#) (2021). In Texas, for a student who graduates college, career or military ready, a district receives \$3,000. If that student is economically disadvantaged, the district receives an additional \$2,000; for a student with disabilities, the district receives another \$2,000.

<sup>22</sup> Tennessee did this with some of its federal stimulus funding. See ExcelinEd, [Leveraging Federal Stimulus Funds](#) (2021).

<sup>23</sup> See ExcelinEd, [School Level Financial Transparency Act](#) (2017).

<sup>24</sup> See ExcelinEd, [Open Districts](#) (2020).

<sup>25</sup> Interview with Eric Hanushek (Mar. 8, 2023).