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NORTH CAROLINA PUBLIC SCHOOL FINANCE

Embracing a Student-Centered Approach To Benefit Every Child

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Embracing a Student-Centered Approach To Benefit Every Child

Introduction

North Carolina's K-12 public school finance system is broken. And efforts to fix it have been at least a decade in the making. This paper highlights the problems with North Carolina's current school finance system and provides recommendations for reform, modernization, and funding strategies that are student-centered.

In 2009, the North Carolina General Assembly commissioned an evaluation of North Carolina's school finance system, which dates back to the Great Depression era's School Machinery Act. The firm selected for the project, Denver-based consulting firm Augenblick, Palaich and Associates (APA), submitted its final report to lawmakers in September 2010.[1] While acknowledging that the system addressed "almost all of the cost factors associated with providing education services," APA experts concluded that North Carolina's school finance system "could benefit from several potential changes." These changes ranged from basic modifications to the existing allotment system, to full-scale adoption of a "foundation" type formula that would set a base cost with adjustments for student and district characteristics. While there was bipartisan support for pursuing school finance reform, lawmakers tabled all considerations of the APA report recommendations until post-recession revenues stabilized.

Five years later, the General Assembly directed its Program Evaluation Division (PED) to conduct a comprehensive report that detailed structural flaws with North Carolina's funding formula.[2] The final report was submitted to state legislators in November 2016 and led to the creation of the Joint Legislative Task Force on Education Finance Reform, which convened between November 2017 and April 2018.[3] Lawmakers created the task force to receive input on the school finance system from district, state, and national school finance experts. After seven meetings of the task force, the consensus was that the PED report accurately described the defects of North Carolina's piecemeal school finance system. In 2020, legislative leaders are expected to introduce legislation to begin the process of restructuring North Carolina's school finance system.

Parents, educators, and policymakers should welcome these efforts. School finance policy is more than just a collection of complex formulas that few understand; it directly affects how classrooms and schools operate. Fundamental reforms are needed to ensure that dollars are delivered to districts in a fair and transparent manner that allows educators to align spending with the needs of North Carolina's 1.5 million public school students.[4] While there's no such thing as a "silver bullet" education reform that guarantees improved outcomes, overhauling the state's funding system would provide the foundation needed to unlock the potential of school leaders to maximize how and where education dollars are deployed.

Part 1: Analysis of the problem

In Fiscal Year 2018, North Carolina spent nearly $15.8 billion on its public education system, which is comprised of 2,461 schools in 115 school systems and 173 charter schools.[5] About 65 percent comes from state revenues, while 24 percent flows from local revenues, and the remainder is drawn from federal sources.[6] The problems with North Carolina's school finance system can be examined through the lens of three distinct silos: (1) staff-based allocations, (2) restricted funding allotments, and (3) other methodological flaws that are entrenched in the formula.

Staff-Based Allocations

North Carolina is one of only a handful of states that allocates resources based on staffing allotments, in which the state acts as a massive central office by doling out staffing positions rather than actual dollars. For example, classroom teacher allotments, which allocates about $4 billion or 40 percent of all state-allocated funds, provides districts with one teacher for every 17 students in grades 2 and 3.[7] The benefits associated with these positions are funded by the state as well. The remainder is disbursed in dollars that mostly come with rigid spending requirements.[8] There are two primary problems with supplying districts with inputs instead of dollars.

In a survey of district business officers, 77 percent responded that it takes at least two years to fully understand the allotment system.

First, this approach inevitably results in an unfair and arbitrary distribution of resources. For example, classroom teacher allotments pay the actual salaries of teachers based on a centralized pay schedule that accounts for years of experience, credentials, and certification. As a result, districts do not need to consider a teacher's salary when making hiring decisions. Whether they hire a teacher who earns $50,000 or $70,000 is inconsequential because the additional expense (or savings) has no impact on the funds available for other expenditures.

At first glance, this might seem beneficial because districts are essentially permitted to hire the "best candidate possible," regardless of salary. However, there are unintended consequences to this arrangement. In practice, teacher salaries aren't distributed evenly throughout districts and schools. Some inevitably have more veteran teachers who earn higher salaries, while others have fewer veterans. Research has consistently found this yields predictable spending patterns that shortchange low-income communities, which often have higher teacher turnover rates and less experienced teachers.[9] This 'teacher sorting' phenomenon is observed in North Carolina where several studies have found inequities between lower-income and more affluent communities.[10] According to the Program Evaluation Division, "LEAs with the most experienced, best educated, most credentialed teachers receive a greater share of state resources through the Classroom Teacher Allotment because those teachers cost more."[11] PED reported a $649 per-pupil funding gap between the highest-funded and lowest-funded districts. This amounts to a funding discrepancy of about $13,000 for each class of 20 students.[12]

Figure 1 shows the average per-pupil dollar amount distributed to North Carolina school districts by the percentage of nonwhite students. Clearly, there is substantial variation across districts, with an inverse relationship between funding and a district's population of nonwhite students, as the trend line shows.

PED's analysis of the Classroom Teacher Allotment concluded:[13]

> *As this measure of local wealth increases, the amount an LEA receives per student through the Classroom Teacher allotment increases as well. The analysis also shows a relationship between the amount LEAs receive through the allotment and their proportion of minority students. As the number of minority students increases, the amount LEAs receive through the Classroom Teacher Allotment decreases.*

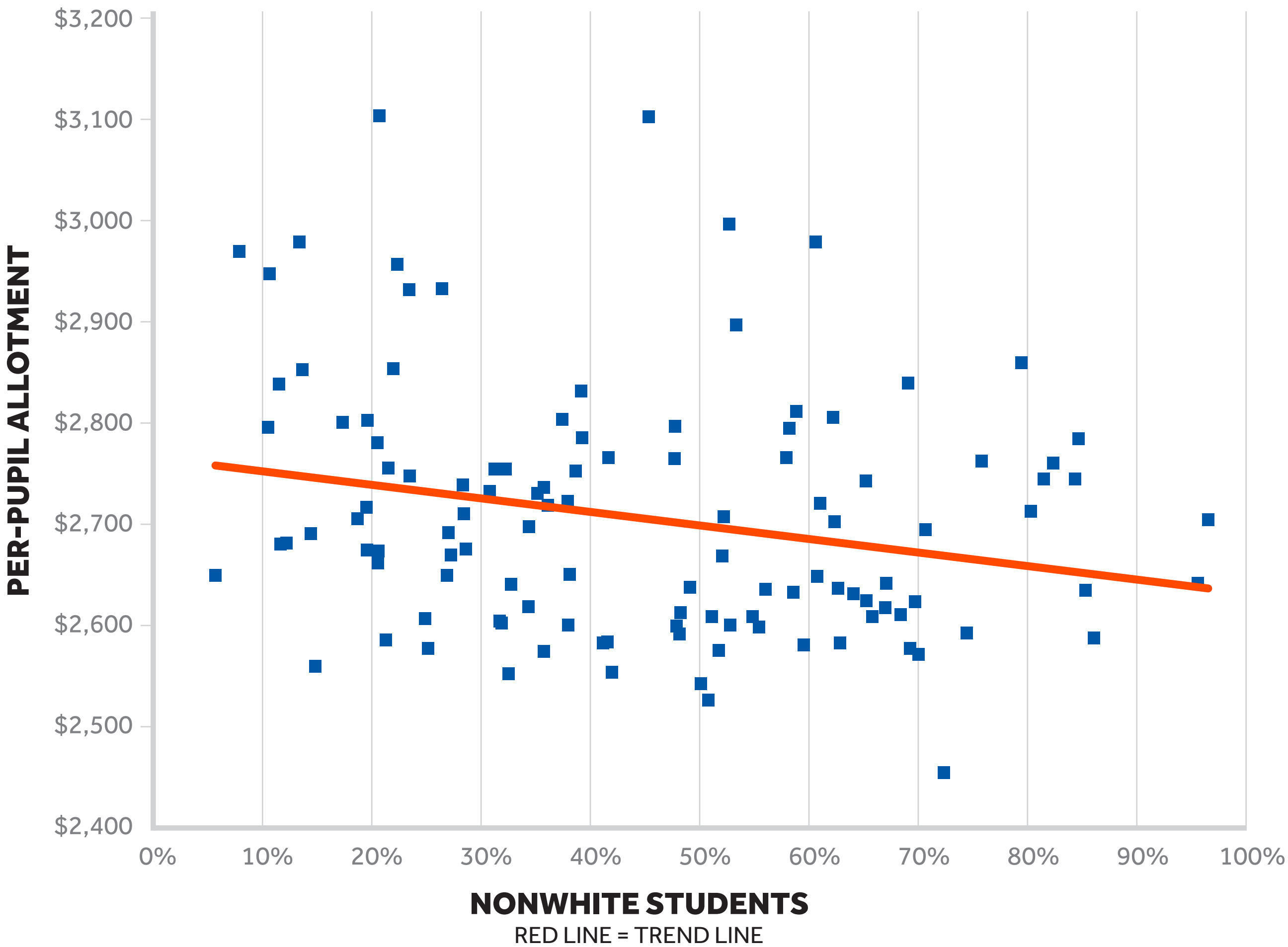
Additionally, staff-based allocations diminish portability, which is the idea that money should "attach" to a child and follow them to whatever district or school they attend. Because resources are tied to rigid ratios that distribute large sums of resources, money doesn't follow the child from one district to another. Using the Classroom Teacher Allotment as an example, a district with 170 second-grade students would receive 10 teachers, while a district with 169 students would receive only nine. In this case, just one student is the difference in an entire staffing position for the former district, which also wouldn't receive another staffing position under this allotment until it enrolled an additional 17 students. This means small fluctuations in student populations can have significant effects on budgets.

The reality is that North Carolina's staff-based allocation creates winners and losers, while diminishing portability. A better approach would be to allow districts with less expensive staffs to allocate saved dollars toward things that benefit their students rather than subsidizing districts with more expensive payrolls. Importantly, this could help counter some of the adverse effects of high teacher turnover rates, since funds could be deployed in a manner that encourages effective teachers to stay.

Restrictive Funding Allotments

Additional resources delivered to districts arrive in actual dollars through various allotments that are

Figure 1: Distribution Of The Classroom Teacher Allotment Across Districts



Sources: 2014-15 spending figures obtained from "Allotment-Specific and System-Level Issues Adversely Affect North Carolina's Distribution of K-12 Resources." 2014-15 demographic data obtained from National Center for Education Statistics "ELSi Table Generator" https://nces.ed.gov/ccd/elsi/tableGenerator.aspx

restricted for specific resources or programs such as Limited English Proficiency, summer reading camps, textbooks, and driver training.[14] This method of deploying resources is supposed to ensure that funds are used effectively and reach the students they're intended for, but policymakers should be skeptical of this approach. As the Organization for Economic Co-operation and Development (OECD) explains:[15]

> *Experience in some of the OECD review countries indicates that an absence of resource autonomy at the school level risks constraining schools' room for manoeuvre in developing and shaping their own profiles and may create inefficiencies in resource management. School autonomy over budgetary matters can provide schools with needed flexibility to use allocated resources in line with local needs and priorities.*

North Carolina essentially provides districts with something akin to a stack of gift cards, each of which holds limited or no value outside of a narrow purpose that is determined by state officials. Although districts have some ability to shift funds to other uses, this isn't always the case as some allotments are completely restricted while others have minimal flexibility.[16] As a result of this web of rules and mandates, $9.7 million was returned to the state's general fund in 2017 and district officials are left to piece together disparate pieces of a financial puzzle that,

> ***Instead, the North Carolina General Assembly should spearhead the modernization of the state's funding system by adopting student-centered funding***

according to Rowan-Salisbury School System Chief Financial Officer Carol Herndon "is way more complicated than it needs to be."[17] In a survey of district business officers, 77 percent responded that it takes at least two years to fully understand the allotment system. What's more, districts spent $1.5 million over five years on paid consultants just to make sense of it. Public charter schools are an exception because their funding is based on students and generally isn't subject to the same top-down mandates, which allows them to spend funds in a manner that better reflects local priorities.[18]

It is true that districts don't always optimize education dollars and many employ allocation policies that are especially unfair to schools in low-income communities. Research shows that some are shortchanged by as much as $1 million due largely to budgeting practices that provide staffing positions rather than dollars.[19] Policymakers across the United States must address these problems, but there is little evidence to support the idea that spending mandates are an effective remedy. In fact, a study by William Duncombe and John Yinger found "clear evidence that an increase in categorical aid as a share of state support lowers the efficiency with which a district provides student performance as measured," suggesting that limiting flexibility and placing additional burdens on education officials dilutes the value of education dollars.[20] Similarly, the federal Title I program, which was created in 1965 as part of the Elementary and Secondary Education Act and provides additional funding for children in poverty, has failed to improve student achievement while adding additional layers of complexity around how education dollars are allocated and spent.[21]

There is no optimal mix of resources and programs for legislators to require that will reliably boost student achievement, as schools with similar spending patterns and student demographics often produce dissimilar results. Research on rural school districts indicates that "productivity superstars" — those that outperform their peers — are more effective at leveraging resources in ways that can't be replicated through top-down requirements.[22] In a separate study, Thomas B. Timar and Marguerite Roza explain:[23]

> *Increasingly, research shows that schools "beating the odds" do better not because they have more resources or deploy resources in a particular way–technology, smaller class size, more experienced teachers, and so forth–but because of organizational characteristics. These characteristics include factors such as higher teacher quality (in aspects beyond formal training and experience), effective implementation of curriculum, data-driven decisions regarding instruction, and greater control over hiring. Although higher teacher quality arguably implies more resources, we believe those resources are not necessarily material resources. Resources such as teacher quality are not guaranteed with an increase in material resources from the state but are developed and nurtured at the organizational level.*

Some fear that eliminating funding restrictions would remove safeguards that prevent funding from being spent frivolously or diverted to purposes that don't align with policy goals. California's Local Control Funding Formula (LCFF) illustrates this lack of trust is unwarranted. In 2013, the Golden State eliminated more than 50 categorical grant programs — along with the red tape attached to them — and installed a weighted-student formula that bases funding on students. As a result of these changes, districts now have considerable financial autonomy, and early research on LCFF gives it high marks. For example, surveys of superintendents and principals found the overwhelming majority agree that LCFF is "leading to greater alignment among goals, strategies, and resource allocation decisions." In addition, a study by Edunomics Lab at Georgetown University found that, "Despite having fewer spending restrictions, districts on the whole have not made radically different decisions around spending" but there is "evidence of districts customizing spending to better meet their local needs."[24,25,26]

As reforms in California and other states demonstrate, pushing decisions down to the local level does not result in the dire consequences some predict, but instead provides flexibility needed to make nuanced tradeoffs. Restricting funding means those furthest from kids are making sweeping decisions rather than tapping into local knowledge and expertise necessary to leverage organizational factors associated with student success. A study by OECD that examined practices in numerous countries indicates that unlocking dollars could provide the foundation needed for improved outcomes, finding a positive relationship between the level of principal autonomy and science achievement.[27]

Other Flaws that Diminish Fairness, Transparency, and Portability

North Carolina's school finance system is fundamentally flawed, but even if this approach to funding were desirable, it still contains numerous provisions that diminish fairness and transparency, including:

Disadvantaged Student Supplemental Funding: This was implemented as a pilot program in 2004 to help districts meet the needs of disadvantaged students. In 2015, this allotment funded the original 16 participating districts an average of $779 per pupil more than what other districts received due to a hold-harmless clause that guarantees them a minimum level of funding.[28]

Limited English Proficiency: To be eligible for this allotment, a district or charter must have a minimum Limited-English Proficiency (LEP) population of 20 students, or at least 2.5 percent of average daily membership.[29] Those that have LEP students but fail to meet these arbitrary thresholds (as was the case for six districts and 71 charters in 2015) do not receive any state LEP funding.[30]

Children With Disabilities: The cost of delivering services to children with disabilities varies substantially, but rather than providing funding based on different categories of disabilities or instructional settings, North Carolina provides a single allotment per student.[31] This allotment also has a funding cap such that districts with special-needs populations greater than 12.5 percent do not receive additional revenue for students above this threshold. This was the case for 62 districts in 2015.[32]

Low Wealth Supplemental Funding: This supplement is intended to provide additional funding to property-poor districts, but a component of this allotment is based on adjusted property tax base per-square-mile.[33] Because this calculation doesn't account for student enrollment, it overstates property wealth for some districts while understating it for others, thus eroding its effectiveness in equalizing education dollars.[34]

Central Office Administration: This supplement provides funding for central office personnel, such as superintendents and financial managers, but allocations do not reflect districts' enrollment and are not adjusted based on enrollment fluctuations.[35] As a result, some districts receive more funding than they otherwise would, while others receive less.

Part 2: Recommendations for reform

In its report on North Carolina's school finance system, North Carolina's Program Evaluation Division provided two options for policymakers to pursue: either attempt to fix the myriad problems with the current allotments or overhaul the system by implementing a weighted-student funding model.[36] Policymakers should be wary of fixing the status quo since any system that provides funding based on inputs will inherently lack fairness, transparency, and autonomy. This is why few states employ this approach to school finance. Instead, the North Carolina General Assembly should spearhead the modernization of the state's funding system by adopting student-centered funding, which allocates dollars based on a weighted-student formula and empowers those closest to kids to make locally responsive decisions. Student-centered funding is based on four key principles:[37]

- **Fairness:** Per-pupil funding should be based on student needs.
- **Transparency:** Funding systems should be simple and easy to understand.
- **Portability:** Funding should follow the child to his/her school of choice.
- **Autonomy:** Funding should arrive at districts and schools as real dollars that can be spent flexibly, in exchange for accountability for outcomes.

Both the state's legislature and school districts have a role to play in making this transition. Policymakers can think of education funding as two distinct, but related steps as shown in Figure 2 – state formulas that allocate funding to districts and district formulas that then allocate funding to schools. In the near-term, reformers should focus on the most critical component of this modernization: fixing the state's formulas to provide greater autonomy for districts while enhancing transparency. Once this is done, districts can revamp local allocation practices to ensure principals receive fair and flexible funding based on their student populations. The goal should be to create a vertically integrated school finance system where dollars are based on student needs and pushed down to the school level.

The following three recommendations provide a road map for policymakers and districts to accomplish this together.

#1 Develop Weighted-Student Formula To Distribute Funding To Districts

North Carolina should overhaul its funding formula so that it provides a foundational dollar amount that is the same for all students, with per-pupil weights that adjust funding based on student needs. Ideally, this formula would streamline most, if not all, operating revenue streams into one coherent formula. Two states provide guidance.

HAWAII

In 2004, legislators in the state of Hawaii established weighted-student funding that currently provides additional dollars for the student characteristics below:[38]

- K-2 Students
- English Language Learner
- Economically Disadvantaged
- Transiency
- Gifted and Talented
- Grade Levels

Hawaii's transition to weighted-student funding had three primary goals: empower principals and communities with greater decision-making authority, streamline how resources are allocated to schools, and make allocation more transparent and equitable.[39] A comprehensive review by the American Institute for Research found that while improvements are still needed, the formula has been successful in addressing each of these components. Researchers concluded the formula has "resulted in expanded autonomy for school leadership that allows greater flexibility to implement instructional programs that best suit the needs of their unique student populations," including greater collaboration among principals, teachers, and community members around resource allocation.

Figure 2: Allocating Education Dollars

Table 1: Example Funding Weights In The Texas School Finance Formula

STUDENT CHARACTERISTIC	FUNDING WEIGHT
Regular Program	1.00
Special Education	Weighted by instructional setting
Career and Technology (CTE)	1.35
Gifted & Talented	0.12 (capped at 5% of district ADA)
Compensatory Education	0.2
Bilingual Education	0.1
Public Education Grant	0.1
High School Allotment	$275 per high school student in ADA
Advanced CTE	$50 per eligible CTE course
Pregnancy-Related Services	2.41 (part of compensatory education)

Source: Texas Public School Finance Overview Presentation 2017-2018 (Dec 2017)

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North Carolina's policymakers can also study Texas' weighted-student formula, which provides districts with extra dollars for various student characteristics including special education, bilingual education, and compensatory education, as summarized in Table 1. The vast majority of dollars within this funding stream – about 70 percent – flow through the foundational allotment (i.e., Regular Program).[40] The state has accountability mechanisms for overseeing how districts allocate funding to ensure a certain amount is spent on direct services, but these requirements are minimal. As with virtually all school finance formulas, the funding system employed by Texas has problematic components such as hold harmless provisions and other inefficiencies, but dollars allocated through its funding weights are delivered fairly and transparently.

#2 Create Robust System Of Financial Transparency

Some fear that providing districts with greater financial autonomy may lead to frivolous spending and continued inequities. These concerns aren't entirely without merit, but top-down mandates that limit innovation and accountability are a poor solution. North Carolina needs to increase financial transparency by implementing a data infrastructure that provides robust school-level reporting. Parents, policymakers, and communities need to see exactly how funds are allocated to schools, not just among districts. Importantly, school board officials, superintendents, and principals could also use these data to raise awareness around spending patterns and better inform decisions.

Ideally, North Carolina lawmakers should create an interactive public website where users can easily view, compare, and download financial data by school. With just a few clicks, the public could analyze per-pupil operating expenditures and spending on different categories of students across multiple schools within each district. The next best option would be to follow the Texas model: provide this information via traditional reports that are available online.[41] The federal Every Student Succeeds Acts (ESSA) already requires states to collect and report this data, but North Carolina policymakers should go beyond ESSA's basic requirements and harness the insights that financial data can provide. According to Georgetown University's Edunomics Lab, key insights can be gleaned:[42]

1. Are LEA policies shortchanging any schools?
2. Do allocations for high-needs students augment spending at high-needs schools?
3. Are salary patterns driving uneven spending in ways that are concerning?
4. What share of the dollars are accounted for centrally?
5. Relative to meaningful peers, how well are dollars being leveraged at each school to drive outcomes?
6. Are there more purposeful ways for funds to be deployed?

#3 Push Funding Down To The School Level

Once improvements have been made at the state level, districts will have greater autonomy over how dollars are allocated and spent. While this alone would be a substantial improvement over the status quo, district officials will still need to ensure that dollars are pushed down to the school level so that principals are in the driver's seat. The more 'unlocked' dollars a principal controls, the more autonomy he or she has to align resources with goals and strategies. To do this, districts should be encouraged to adopt student-centered funding reforms at the local level. More than 30 districts across the United States have already done so. In Boston, Denver, and Houston, funds are allocated using a weighted-student formula and principals receive actual dollars to spend flexibly rather than dollars tied to staffing positions or other inputs. This system has proved popular; in one poll, 87 percent of officials surveyed wanted to keep it.[43]

Naturally, implementing a new system involves challenges, but best practices have been established over the past two decades and should be followed in order to make the transition as smooth as possible. Principal training can be accomplished in one or two days, and some districts use tiered or earned autonomy where those who need more support are eased into the system. Additionally, districts can take a strategic approach in determining which categories of funding are decentralized. For example, principals might not want autonomy over building maintenance, food services, and transportation; it might make sense to leave these decisions at the district level. Flexibility is key. These decisions can be assessed and adjusted over time to suit changing local needs.

Perhaps the biggest obstacle in adopting student-centered funding is transforming a district's central office culture so that it promotes collaboration and support rather than compliance and oversight. This requires a shift in mindset and a shared understanding of why changes are needed. Importantly, funding reform requires greater collaboration between a central office's financial and academic teams since it is not just a new way to budget but rather an approach to improving student outcomes. According to an official with the Baltimore City Public Schools, "Fair Student Funding is not about budgets. It is about equity, freedom, and accountability … We can confidently say that two schools with the same kids have the same budgets, although programs may look very different."[44]

Conclusion

This paper illustrates that North Carolina's school finance system is unfair, restrictive, and inefficient. It is a system that fails to maximize how education dollars are spent. North Carolina policymakers have an historic opportunity to be transformational agents of change by modernizing this antiquated system and adopting student-centered funding and focus. With this reform strategy, North Carolina would strategically allocate dollars based on student need and provide local leaders with autonomy necessary to meet the unique demands of the state's 1.5 million K-12 public school students. Reforms in other states and in districts throughout the country demonstrate the benefits of implementing a more flexible funding system that puts students first.

After receiving the Program Evaluation Division (PED) report and recommendations from experts who testified before the Joint Legislative Task Force on Education Finance Reform, North Carolina is ready to take the next step. Lawmakers should set aside funding that would allow state education officials to contract with a team of school finance experts tasked with redesigning the funding system based on parameters established by the legislature. First, the process should allow ample input from district and charter school stakeholders. Second, the new system should focus on the core principles of funding fairness, transparency, portability, and autonomy. Finally, any redesign effort must ensure that the transition to the new system is as seamless as possible. The complexities involved in such an undertaking will require extraordinary patience, but have the potential to produce lasting benefits for North Carolina's public schools.

"The more 'unlocked' dollars a principal controls, the more autonomy he or she has to align resources with goals and strategies."

ENDNOTES

1. Augenblick, Palaich and Associates, "Recommendations to Strengthen North Carolina's School Funding System," September 2010, url: https://www.ncleg.gov/documentsites/committees/JLSCPSFF/APA%20Final%20Report/APA_PSFFFinalReport.pdf.
2. North Carolina General Assembly Program Evaluation Division, "Allotment-Specific and System-Level Issues Adversely Affect North Carolina's Distribution of K-12 Resources," November 2016, url: https://www.ncleg.net/PED/Reports/documents/K12/K12_Report.pdf.
3. See North Carolina General Assembly Joint Legislative Task Force on Education Finance Reform, url: https://www.ncleg.gov/Committees/CommitteeInfo/NonStanding/6685#Committee%20Meetings
4. National Center for Education Statistics, "Digest of Education Statistics: Current Tables and Figures," url: https://nces.ed.gov/programs/digest/d18/tables/dt18_203.40.asp?current=yes
5. North Carolina Department of Public Instruction Information Analysis Division of School Business, "Highlights of the North Carolina Public School Budget 2018," February 2018, url: http://www.dpi.state.nc.us/docs/fbs/resources/data/highlights/2018highlights.pdf North Carolina Department of Public Instruction, "North Carolina School Finances," April 2019, url: https://gdacreporting.ondemand.sas.com/srcfinance/
6. "North Carolina School Finances," April 2019
7. "Allotment-Specific and System-Level Issues Adversely Affect North Carolina's Distribution of K-12 Resources." North Carolina Department of Public Instruction Information Analysis Division of School Business, "Highlights of the North Carolina Public School Budget 2019," February 2019, url: http://www.ncpublicschools.org/docs/fbs/resources/data/highlights/2019highlights.pdf
8. Ibid.
9. Note: A wide body of research demonstrates this relationship. As an example, see Marguerite Roza and Paul T. Hill, "How Within-District Inequities Help Some Schools to Fail." The Brookings Institution, 2004, url: https://www.crpe.org/sites/default/files/roza_hill.withindistrictinequities.pdf.
10. "Allotment-Specific and System-Level Issues Adversely Affect North Carolina's Distribution of K-12 Resources."
11. Ibid.
12. Calculations based on data provided in "Allotment-Specific and System-Level Issues Adversely Affect North Carolina's Distribution of K-12 Resources."
13. "Allotment-Specific and System-Level Issues Adversely Affect North Carolina's Distribution of K-12 Resources."
14. "Highlights of the North Carolina Public School Budget 2019"
15. Organization for Economic Co-operation and Development (OECD), "The Funding of School Education: Connecting Resources and Learning," June 2017, url: https://doi.org/10.1787/9789264276147-en.
16. "Highlights of the North Carolina Public School Budget 2019."
17. Liz Schlemmer and Jason Debruyn, "What Public School Finance Officers Want You To Know About School Funding," North Carolina Public Radio, August 29, 2018, url: http://www.wunc.org/post/what-public-school-finance-officers-want-you-know-about-school-funding.
18. "Allotment-Specific and System-Level Issues Adversely Affect North Carolina's Distribution of K-12 Resources."
19. Roza and Hill. "How Within-District Inequities Help Some Schools to Fail."
20. William Duncombe and John Yinger, "Understanding the Incentives in California's Education Finance System," Institute for Research on Education Policy and Practice, 2007, url: https://cepa.stanford.edu/sites/default/files/Duncombe.pdf.
21. The last comprehensive evaluation of Title 1 is U.S. Department of Education, Office of Planning and Policy. "Prospects: The Congressionally Mandated Study of Educational Growth and Opportunity. The Interim Report," 1993, url: https://files.eric.ed.gov/fulltext/ED361466.pdf.
22. Marguerite Roza and Georgia Heyward, "Highly Productive Rural Districts: What is the Secret Sauce?" Rural Opportunities Consortium of Idaho, 2015, url: https://edunomicslab.org/wp-content/uploads/2015/09/ROCI_SuperProductiveRuralDistricts_Final.pdf.
23. Thomas B. Timar and Marguerite Roza, "A False Dilemma: Should Decisions About Education Resource Use Be Made at the State or Local Level?" *American Journal of Education* 116, no. 3 (May 2010): 397-422. url: https://www.jstor.org/stable/10.1086/651414?seq=1#page_scan_tab_contents.
24. Julie A. Marsh and Julia E. Koppich, "Superintendents Speak: Implementing the Local Control Funding Formula (LCFF)," Local Control Funding Formula Collaborative, 2018, url: https://www.edpolicyinca.org/sites/default/files/LCFF_Superintendents_Survey.pdf.
25. Julia E. Koppich, "Principals' Perceptions: Implementing The Local Control Funding Formula." Local Control Funding Formula Collaborative, 2019, url: https://www.edpolicyinca.org/sites/default/files/Report_PrincipalsPerceptions_Jan-19.pdf.
26. Roza, Marguerite, Tim Coughlin, and Laura Anderson. "Taking stock of California's weighted student funding overhaul: What have districts done with their spending flexibility?" Edunomics Lab, 2017, url: https://edunomicslab.org/analyzing-early-impacts-californias-local-control-funding-formula/.
27. OECD, "PISA 2015 Results (Volume II): Policies and Practices for Successful Schools." OECD Publishing, 2016, url: https://www.oecd.org/education/pisa-2015-results-volume-ii-9789264267510-en.htm.
28. "Allotment-Specific and System-Level Issues Adversely Affect North Carolina's Distribution of K-12 Resources."
29. Ibid.
30. Ibid.
31. Ibid.
32. Ibid.
33. Ibid.
34. Ibid.
35. Ibid.
36. Ibid.
37. These principles are adapted from: Thomas B. Fordham Institute, "Fund the Child: Tackling Inequity & Antiquity in School Finance.", 2006, url: https://eric.ed.gov/?id=ED495066.
38. Hawaii Department of Education, "Fact Sheet: Weighted Student Formula and the Committee on Weights," url: http://www.hawaiipublicschools.org/DOE%20Forms/WSF/WSFCOW.pdf.
39. Jesse D. Levin, Jay G. Chambers, Diana Epstein, Nick Mills, Mahala Archer, Antonia Wang, and Kevin Lane, "Evaluation of Hawaii's Weighted Student Formula: Highlighted Findings," American Institute of Research, 2013. url: https://www.air.org/sites/default/files/downloads/report/AIR_Evaluation_of_Hawaiis_Weighted_Student_Formula_Full_Report06-19-13_0.pdf.
40. Texas Education Agency, "Texas Public School Finance Overview Presentation 2017-2018," December 2017, url: https://tea.texas.gov/Finance_and_Grants/State_Funding/.
41. Texas has multiple publicly available reports that contain school-level financial data. There's room for improvement to make them more functional and accessible, but they're significantly better than what

ENDNOTES

most states provide. For example, see: Texas Education Agency, "PEIMS Individual Campus Financial Actual Reports," 2016-2017, url: https://rptsvr1.tea.texas.gov/school.finance/forecasting/financial_reports/1617_camp_actual.html.

42. Katie Hagan, "Game Changer: School-Level Spending Reporting under ESSA," (Presentation, Edunomics Lab, John Locke Foundation, Raleigh, N.C., Winter Education Finance Workshop, January 29, 2019).
43. Education Resource Strategies, "Fair Student Funding Summit: Conference Proceedings and Recommendations for Action." 2010, url: https://www.erstrategies.org/cms/files/1022-fair-student-funding-summit.pdf.
44. Ibid.

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