

Building Block #2: Provide more resources for at-risk students so that Maryland students can achieve the world-class college and career readiness standards

Gap Analysis.

Spending

The following table compares the cost of educating the average elementary and secondary school student in the top performing nine countries, the United States as a whole and the states of Maryland and Massachusetts. Massachusetts is shown because it is the only state in the United States that would rank, if it ~~was~~were a country, among the top performers.

Top performing countries	\$9,623
United States	12,152
Massachusetts	15,544
Maryland	14,291

While the cost to Maryland of educating the average student is 50 percent more than it is in the top performing countries, this does not take into consideration numerous important differences. One is that national and state accounts are not kept in the same way in the United States as they are in most other countries. For example, in most OECD countries, the competitive sports program is paid for by the municipality, not the schools, whereas that is not the case in the United States. In many highly-urbanized countries, most students take public transportation to school that is not paid for by the school district. It is also the case that benefits for school staff are accounted for differently in some countries than in others. And many of the top performing countries spend much more on general support and social, medical, dental, and other services for families with young children than the United States does, none of which is accounted for in their school budgets. In the United States, the schools bear the burden of trying to address the problems that the lack of such support in the United States causes for the schools as they try to educate students who are increasingly entering school far less ready for school than their counterparts in the countries with more generous provisions for families with young children (discussed further in Building Block #1). It is entirely possible that, once these differences in the provision of non-educational services are taken into account, the difference in expenditure could disappear. That conjecture is made more plausible by comparing per pupil expenditures in Massachusetts and Maryland, which are very similar. In this case, the accounting conventions are similar, as are ~~and~~ the provision of services to families with young children, ~~are similar~~, so one can assume that these are apples-to-apples comparisons.

Maryland ~~is ranked~~ the 11th in per pupil spending ~~biggest spender~~ in the United States, but drops to 19th when adjusted for regional cost differences, even though Maryland's median income is the highest in the nation. The average of spending in the benchmark states of Massachusetts, New Jersey and New Hampshire is \$2,200 all-~~spend~~ per student more than Maryland, which includes state, local and federal funds. Maryland does not do well on measures of funding

equity. Although Maryland has the highest weight in the country for low-income students in its funding formula, the State spends 4.9 percent *less* money (state and local) on poor school districts than on wealthy ones, making it the state with the 15th most regressive funding system in the nation. By contrast, Massachusetts spends 7.3 percent *more* money on students in low-income districts.

Student Performance

In summary, Maryland is spending roughly the same as top performing systems, somewhat less than the benchmark US states, and more on wealthy schools than poor schools. How does that translate to student academic performance?

When looking at student performance, the performance of Massachusetts' school children is comparable to the performance of students in the top performing countries, which is far superior to the performance of Maryland's students. In the latest Programme of International Student Assessment (PISA) results, if Massachusetts were a country it would have ranked among the very top performing systems in the world in science (6th highest) and in reading (2nd only to Singapore) and 18th in math. This compares to the U.S. rankings of 23rd in reading, 39th in math, and 25th in science. Maryland does not participate in PISA as a country, so there are no comparable data. However, the most recent results from the National Assessment of Educational Progress (NAEP) show that in 2015, Massachusetts led the nation on NAEP in 4th grade reading and math and 8th grade math; on 8th grade reading, it tied for 2nd place with Vermont (both a single point below New Hampshire). Maryland ranked roughly in the middle of states on NAEP (29th in 4th grade math, 26th in 4th grade reading, 25th in 8th grade math) with the exception of 8th grade reading, where Maryland ranked 18th.

While Massachusetts' performance on NAEP is among the best in the country, still only about 50% of Massachusetts' students are performing at or above proficiency. Looking at overall performance is important, but the gaps in performance between different subgroups of students -are what to truly measure the equity of a school system. Here Maryland and Massachusetts' performance is similar, though not positive. To compare one state to another NAEP provides an apples to apples comparison. The 2015 NAEP 8th grade mathematics assessment shows a gap of 32 points between Maryland -students who are eligible for the national school lunch program (a measure of poverty) compared to those who aren't. When looking at the race of students there is a gap of 34 points between white and African-American black students and 23 points for Hispanic students in Maryland. For all of these subgroups, the gap in Massachusetts is equal to or larger than in Maryland. In all cases- Maryland's gap is larger than the national gap. The gaps in 8th grade reading and 4th grade reading and math are slightly less, but still significant.

Taking a deeper dive into Maryland student performance,

Maryland participates in the Partnership for Assessment of Readiness for College and Careers (PARCC) assessments for federally mandated testing in most grade levels and subjects. The goal

is that all, or nearly all, students are proficient. The most recent data from 2017 shows that just under almost half (49.3%) of students taking the English 10 exam received a proficient score (4 or 5) indicating college and career readiness. Further, there are racial and socioeconomic gaps in student performance. For example, while 67.5% of white students and 77.5% of Asian students were proficient, only 29.0% of African American students and 34.3% of Hispanic students were proficient, 45.8% for American Indian and Alaskan native, 51.5% for Hawaii native and Pacific Islander, 60.3% for two or more races, 67.5% for white, and 77.3% for Asian. And only about one-quarter of low-income students. ~~When broken down by the three categories of at-risk students, the PARCC English 10 proficiency rates in 2017 were 27.6% for free and reduced price meals, 25.2% for English language learners, and 25.1% for special education students were proficient with disabilities.~~ (It should be noted that when further breaking down the English language learners and students with disabilities to just those students who did *not exit* these at-risk categories, the performance dropped to 2.7% for ELL and 9.7% for students with disabilities.) These The negative performance gaps have widened since the 2016 administration of PARCC. ~~for African American, Hispanic, American Indian and Alaskan native as well as all three at-risk categories.~~

Similar results are seen in the Algebra I PARCC assessment, with although only 36.5% of total test takers scored proficient. ~~The results broken down by race are: 15.9% for African American, 18.5% for Hispanic, 26.3% for American Indian and Alaskan native, 37.3% for Hawaii native and Pacific Islander, 46.3% for two or more races, 56.4% for white, and 68.0% for Asian. When broken down by the three categories of at-risk students, the PARCC Algebra I proficiency rates in 2017 were 16.6% for free and reduced price meals, 33.5% for English language learners, and 27.9% for students with disabilities. When further breaking down the English language learners and students with disabilities to just those student who did not exit these at-risk categories, the performance dropped to 5.6% for ELL and 8.2% for students with disabilities. The negative gaps in Algebra I have also generally widened for all groups except for students with disabilities. This group narrowed the gap by 1.7 percentage points for all disabled students and 0.2 points for non-exiters.~~

Data from the OECD shows that, in the industrialized countries, there is little correlation between how much is spent on schooling and student achievement. Further, OECD has found that once total spending on a child's education (first through tenth grade) reaches \$50,000, how any additional funding is spent is more important than how much more is spent.

Support for High Need Students

Among the eight states using a single weight in their formula for special education students, as Maryland does, five apply a higher weight than Maryland ~~does~~. At about 12% of students statewide, Maryland's special education enrollment is about average for the United States but more than double the special needs identification rates of the top performers in the world. ~~This~~ This issue also relates to Building Blocks 3 and 4 and to the imperative for building an instructional system with an early warning system that identifies students as soon as they begin to fall behind and provides the necessary supports to get them back on track *before* they fall

too far behind grade level. This is what the top performers do. Investing in this strategy should reduce the number of students who are identified as in need of special education services in the future.

All of the international top performers assign extra teachers to work with high need students. Finland and Singapore assign all schools learning-support teachers who work with small groups of students in classrooms to provide them with extra help to stay on-track in class. Ontario assigns literacy and numeracy support teachers to all schools, and additional teachers to secondary schools where there are high numbers of students at-risk of not graduating. These extra teachers work with students under the direction of the classroom teacher, with the aim of helping these students succeed in the specific work for that class. This is different than what is typically done in the United States where students are ~~often~~ rarely pulled out of class to work with specialists ~~once or twice a week~~, and ~~even when they are the schools~~ most often using an “intervention” program that is not necessarily aligned with the classroom curriculum. After school support is most often provided by paraprofessionals, again with little coordination with classroom work.

In addition to assigning more teachers to at-risk students, many of the top performers have explicit policies to ensure that these students are taught by the most qualified and/or highest quality teachers. For example, both Singapore and Shanghai assign well regarded teachers and school leaders to help low performing schools and teachers. It is an expectation that many educators on higher levels of Shanghai’s career ladder will teach for a time in lower performing or rural schools, either as part of the Empowered Management Schools process that shares school staff collaboratively across high and low performing schools, or as part of a temporary rotation into a low performing school full time. It is very hard, if not impossible, for teachers to move up the career ladder in Singapore and Shanghai unless they have taught disadvantaged students. While Finland does not have a specific policy to assign high-quality teachers to high-need schools, there are financial incentives for teachers to work in rural and high-need schools. In addition, many teachers teach in rural areas initially, as jobs in the cities are more competitive. In effect, this helps to distribute high-quality teachers throughout the country. In addition to these specific policies, all of the top-performing jurisdictions have much higher entry standards for the profession, which ensures a higher quality bar for teachers across the system.

Recommendations

The Commission will cost out the policy recommendations made in this preliminary report over the first few months of 2018. Until that work is completed, the Commission cannot make recommendations on the amount of the base funding in the formula, or the weights to be applied to that base for at risk students. Thus, the Commission is not yet able to recommend the amount of funding needed to provide funding that would be “adequate” for the purpose of

getting Maryland students to the College and Career Ready standards. These recommendations will be made in the Commission's final report.

Additional aspects of the funding formulas for Maryland schools will be addressed in spring/summer 2018 after the costing out of the preliminary policy recommendations is completed. These include determining (1) the base per pupil amount and weights for at-risk student populations; (2) the method for calculating local wealth; (3) the equitable distribution of funds; (4) whether to include a geographic cost adjustment factor; (5) the proxy for estimating the number of low-income students; (6) the funding for prekindergarten; (7) whether to require local school systems to fund their share of the at-risk funding formula; and (8) the impact on the local maintenance of effort requirement.

The Commission is prepared now to make the following recommendations, which will guide the Commission as it develops its final report:

1. The basic structure of the State's funding formulas as created by the Thornton legislation — uniform base funding with additional weights for specified categories of disadvantaged students based on a calculation of adequate funding — should be preserved and updated.
2. Funding must be distributed according to the needs of students equitably (i.e., according to the needs of the students) both among school districts – and within school districts – so that students who need additional services and supports are receiving them.
- ~~2-3.~~ Funding must also be distributed equitably, with greater resources going to the less wealthy jurisdictions that cannot afford to provide their full share of the funding needed to fully fund the base formula and additional weights for at-risk students.
- ~~3-4.~~ For the purpose of costing out the preliminary recommendations, tThe weight for special education students should be increased. and should be differentiated based on the severity of a student's disability to recognize that certain disabilities require more intensive services than others. The results from the costing out should be implemented as a place holder until an in-depth study by experts can be conducted and provided to the Governor and legislature, which -should include differentiated weights based on the severity of a student's disability.
- ~~4-5.~~ A new weight for schools with high concentrations of students living in poverty should be added. An analysis of what this additional weight should be and whether the weight should be differentiated among levels of high poverty will be conducted and included in the Commission's final report.
- ~~5-6.~~ The necessary wraparound social services for at-risk students and their families must be significantly expanded so that all students have the opportunity for academic success. These services should include: through, for example, extending the school day and/or school year, providing summer school, incorporating a service coordinator at each school above a certain poverty level, and expanding use of Judy Center, or community schools. The physical and mental health needs of students and their families must also be addressed. community schools. The concentration of

poverty factor in Recommendation 4. should provide the funding to support these services.

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~~7.~~ Maryland must ensure that high quality teachers are teaching in high needs schools and provide additional learning opportunities for struggling students

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8. Maryland must implement strategies to identify any special needs a student may have as early as possible and address those needs as quickly as possible. As has been demonstrated in high performing systems, this will eventually allow result in Maryland to greatly ~~reduc~~inge the number of students who are identified as needing assigned to special education and enable the State to target special education resources other than to ~~on~~ those with severe cognitive disabilities. By doing what is necessary to improve both the readiness for school of children coming into kindergarten and through targeted support students receive once in school, the scale of the services reserved for special education students in upper grades can be reduced.

9. For students who continue to struggle and are not on track for college and career readiness despite early intervention, more intensive support ~~must~~ be provided, including one-on-one tutoring and additional instructional supports.

10. Currently ~~Because~~ the funding that *school systems* receive for at-risk students is based on their need for additional resources to be successful and necessary resources so that all students have an opportunity to meet State standards, and because the basic structure of the per pupil funding system incorporates additional weights to provide more resources to the three categories of at-risk students, ~~††~~ The Commission strongly endorses the concept that these targeted funds should be allocated follow at-risk students to their each schools based on the number of at-risk students enrolled at the school. This will allow for the allocation of additional teachers and other resources to schools and students using the results from an early warning system (BB3 and 4) that identifies students who are not on track. The Commission recognizes that schools systems need some ~~F~~flexibility in allocating funds to schools should be considered to ensure that funds, while targeted to the school, are used efficiently and effectively to reflect local strategies, initiatives, and school system student needs. Required school-level expenditure reporting by federal law beginning in 2019 will at a minimum provide more transparency in how school systems are allocating funds to schools within their system. This data will allow for analysis of school-level spending patterns between and among school systems. The Commission will continue to explore this issue and make specific recommendations in its final report.

11. The State must ensure that students have access to other professionals in the school building that provide assistance with a student's social and emotional well-being (e.g., school counselors, school psychologists) and that these professionals receive professional development in order to stay abreast of current behavioral and other intervention strategies. This staffing should be phased-in throughout the

implementation period with higher poverty schools receiving these additional resources first.

10.12. The State should study the possibility of adopting social and emotional learning standards and cultural competency standards to give student the non-academic skills needed to be college and career ready. (See also BB #3)

NOTE TO COMMISSIONERS: It is proposed that the remaining content of this document would be moved to the introduction sections of the preliminary report.

What does it take to provide an “adequate education” to Maryland students?

Maryland’s constitution requires the State to provide a “thorough and efficient system of free public schools” to the State’s students. In 1999, the Thornton Commission was created to recommend changes to the State’s school finance system that would enable the schools to provide an “adequate” education. “Adequate” was defined as an education that would enable students to achieve the new state standards. A consulting firm, Augenblick and Myers (a precursor to Augenblick, Palaich and Associates (APA)), was engaged to advise the Thornton Commission. APA recommended that the State create a formula for funding Maryland schools with a standard (or base) amount for each student in the State, plus additional weights in the formula for students at risk of failing to meet the State’s standards, including, low-income students, English language learners, and special education students. These formulas would be used to calculate the State contribution to the school systems, which would then be free to use the money as they saw fit, with the State holding the school systems accountable for the use of additional funds to improve student performance. The amount of the base and the percentages of that base amount used to calculate the additional amounts for each category of at risk student were calculated using a combination of standard “adequacy” methods, involving expert opinion (the “professional judgment” method was used, “evidence-based” is another method that has since been developed) and calculations of the actual spending by schools that were getting students to standards similar to the ones to be implemented by the state (the “successful schools” method).

The legislation implementing the Thornton recommendations required the State to conduct a follow-up adequacy study using methodologies similar to those used for the Thornton Commission report 10 years later to review the formulas and recommend changes as needed. The required study, which was delayed several years due to the State adopting new standards and assessments and the Great Recession, was begun in 2014 and completed in 2016, once again by APA, in association with Picus, Odden and Associates and the Maryland Equity Project. The Commission on Innovation and Excellence in Education was created in 2016 to review the study’s findings, which included numerous other reports, and also to investigate the strategies used by the countries with the most effective education systems in the world. The Commission was charged with, among other things, making recommendations to the State on what policies the State should implement to make Maryland a world class education system and commensurate funding and changes to the funding formulas. The Commission has engaged

APA to advise it on the school finance issues and the National Center on Education and the Economy (NCEE) to advise it on the issues related to the strategies used by the top performing countries.

There are different methods of calculating adequacy. APA's approach, widely used in the United States, essentially asks the question, "How much will it cost to add the staff to the existing system and build the special programs needed to improve student performance to the target level?" The assumption is that the current system stays in place and new resources are added to provide extra services that will be needed. But data from the OECD shows that, in the industrialized countries, there is little correlation between how much is spent on schooling and student achievement. Further, OECD has found that once total spending on a child's education (first through tenth grade) reaches \$50,000, how any additional funding is spent is more important than how much more is spent. *Money matters, but how it is spent also matters.* More money is needed to get better results but the system must also be changed drawing upon the design of the systems used by the top performers to produce much higher performance with higher equity.

A growing number of State leaders are looking for new ways to structure school funding formulas, not just to distribute funds equitably, but also to make sure that those funds are used productively, efficiently and with accountability for performance. Movement in this direction by the Commission will make it a school finance pioneer in the nation. To this end, the Commission has asked APA and NCEE to work with the Commission staff to help the Commission develop estimates of what it might cost Maryland to implement an education system similar in design to the systems being used by the top performers. The overall design of those systems is captured in an NCEE document titled "The 9 Building Blocks of High Performance Education Systems." These are the 9 Building Blocks that the Commission has been using to structure its overall preliminary policy recommendations. Once the cost estimates for implementing the preliminary policy recommendations are developed, the Commission will be able to take these costs into consideration when the Commission makes its funding and formula-related recommendations in summer 2018.

Substantially more money must be provided to Maryland schools to enable the transition to this new system, based on what it will cost to implement the policy recommendations that the Commission makes, such as to strengthen the early childhood education system, extend wrap-around services to the schools and students that need them, construct a world-class instructional system, attract high-quality high school graduates to a career in teaching, give the current teaching force the skills they need to get their students truly college and career ready, reorganize schools to give teachers much more time to work together to improve instruction and tutor the students who need extra help, build a world class career and technical education system and put the other elements of the 9 Building Blocks in place.

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2. But Maryland must also be prepared to make significant reallocation of existing funds in areas where current costs far exceed those in countries with high-performing systems to practices that have proven to have a high success rate in improving the academic capabilities of students that are used in those systems.