


Commission on Innovation and Excellence in Education
William E. Kirwan, Chair

Agenda

 **Session 1 and Session 2**

December 11, 2017

9:30 a.m.-5:00 p.m.

120 House Office Building, Annapolis, Maryland

9:30 a.m. Chair's Opening Remarks

9:35 a.m. [Building Blocks 5, 6, and 8](#) – Review Revised Draft Recommendations and Discuss/Finalize

10:15 a.m. [Building Block 3, 4, and 7](#) – Review Revised Draft Recommendations and Discuss/Finalize

11:00 a.m. [Building Block 2](#) – Review Draft Recommendations and Discuss

12:00 p.m. Lunch

Lunch Provided for Commissioners and Staff in Room 180

12:45 p.m. Continued – Building Block 2 – Review Draft Recommendations and Discuss

5:00 p.m. Chair's Closing Remarks and Adjournment

Next Meeting: Wednesday, December 20, 2017, 9:30 a.m.-5 p.m.

Building Block #5- Abundant supply of highly qualified teachers**SUMMARY OF GAP ANALYSIS AND RECOMMENDATIONS**

Ensure ~~That~~ Students Selected By Maryland Universities for Teacher Training Are Comparable in Quality to Those in the Top Performing Countries

The top performing countries recruit from the upper academic ranks of the college-bound graduating cohort: the top 50 percent in Shanghai, 33 percent in Singapore, 30 percent in Ontario, and 25 percent in Finland. In Maryland, as in most other states, there are few policies in place to influence selectivity in the admission of students to teacher preparation programs. For example, while the University of Maryland, College Park Campus (UMCP) and Towson University both require a 3.0 minimum GPA for candidates, the academic record of the high school students going into teacher education at UMCP are among the lowest of those going into any professional preparation program, and, alarmingly, only a handful of students among the thousands ~~attending~~entering these two universities every year elect to prepare themselves to be teachers: fewer than 50 students out of more than 4,000 at UMCP and about 150 students out of about 3,500 at Towson. These policies and the data on students admitted to teacher preparation programs in the ~~state~~State fall far short of the policies typical in the top performing countries.

It is very hard to get into teacher preparation programs in the top performing countries. In Finland, it is harder to get into such programs than it is to get into law school. The proportion of acceptances to applicants for places in university teacher education programs in the top performing jurisdictions range from 1 acceptance for every 10 applicants to a little more than 1 acceptance for every 4 applicants. In addition to presenting a strong academic record, top performers require that successful candidates complete demanding interview and assessment processes assessing zeal for teaching, ability to relate to children as well as collaborative and interpersonal skills.

Close to 100 percent of candidates who apply to teacher preparation programs in Maryland higher education institutions are admitted, which is to say that anyone who can get into the university can get into the teacher preparation program, unlike the law school, medical, engineering school or school of architecture.

Finally, the top performers are moving in the direction of limiting the right to offer teacher education programs to their research universities. This is not the case in Maryland or the benchmark states.

Because the average achievement of high school graduates is much higher in the top performing countries than in Maryland, *and* they are selecting their teachers from a higher segment of high school graduates than Maryland is, those countries are choosing their future teachers from a far better educated pool than Maryland is.

The top performers typically provide strong incentives to attract high school graduates with strong academic records into teaching, including paying the entire cost of attending college and graduate school, and, in some cases, providing, in addition, a salary to the teachers-in-training while in university. The Maryland legislature passed, and the Governor signed into law as Chapter 542, SB 666 in 2014, which sets up an incentive fund for prospective teachers. Maryland residents who have strong academic records (a GPA of at least 3.3, combined math and reading SAT of at least 1100, composite ACT score of at least 25, or 50% on GRE) and pledge to teach in a high-poverty Maryland school for four years, are eligible to receive 100 percent of tuition, room, board and fees at a Maryland public institution of higher education, or 50 percent at a private institution. However, these incentives have not yet been funded by the state.

Recommendations

1. Maryland must work on several fronts to greatly strengthen the pool from which its future teachers come. Specifically, it must:
 - a. Charge universities to greatly expand their recruitment efforts, both broadly and in shortage areas, and improve their programs of teacher education at both the undergraduate and graduate levels
 - b. Direct Maryland's teacher preparation programs to apply for grant funding currently available from multiple major foundations to help schools of education increase the size of the pool of high ability high school students interested in applying to their programs and help their teachers-in-training to succeed in the more rigorous program of teacher education the institutions will be required to offer
2. Maryland must provide strong incentives to students with strong records of academic achievement in high school to choose a career in teaching
 - a. Given that Maryland's overall teacher attrition rate is 7%, which is roughly 4,200 teachers per year, the State should significantly expand the program established under SB 666 of 2014 and ensure it is fully funded in the budget
 - i. The program should also be expanded beyond recent high school graduates who are interested in teaching to include students who change their major and career changers
 - ii. The program should include students who teach at any public school in Maryland, not just a high needs school
 - iii. The eligibility requirements of the program should be broad enough to not preclude talented students who have a passion and an aptitude for teaching
- a-3. Maryland must enhance the current alternative pathway into the teaching profession for career changers. This pathway allows a professional with demonstrated mastery of a certain subject matter and years of experience in the workforce to become school

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teachers by “testing out” of the subject matter requirement and taking only a masters level one-year program in the craft of teaching to get a license as a teacher. Each person entering this alternative route should be paired with a teacher in a classroom as their practical experience.

4. Require MHEC, MSDE, and MLDS to report periodically to the legislature on the academic ability of high school graduates going into teacher education in Maryland as compared to the quality of high school graduates selected for teacher training in the top performing countries

Ensure That Candidates in Preparation Master the Content They Will Teach and How to Teach It

Maryland’s regulations for teacher preparation largely resemble those of the benchmark states. Teacher preparation programs in Maryland offer either a bachelor’s or a master’s degree route into teaching. In the three programs studied – UMCP, Towson University, and Notre Dame of Maryland University – candidates take methods of teaching courses in the subjects they will teach, but candidates teaching in elementary school do not have to specialize in one or two academic disciplines as they often do in the top performing countries. Prospective secondary school teachers are required to major in the subject they will teach. Programs varied in the extent to which they imparted research skills to prospective teachers: no courses were offered in this arena at Towson, one course in research was required at Notre Dame of Maryland, and three courses in research were offered at UMCP, but only at the master’s degree level. These courses were not required.

These programs of study, consistent across most of the top U.S. education programs, differ from the top international jurisdictions in several ways. They do not emphasize, or even address, research skills and diagnosis and prescription, which teachers in the top performing countries use to assess the quality of the research on education, formulate strategies for improving student outcomes appropriate for the students in their classes and evaluate the impact of those strategies as they implement them in their schools. They do not require elementary school teachers to specialize in either humanities or math and science, which would by itself be a powerful lever for improving mathematics and science instruction in elementary school and mastery of the STEM subjects in the upper grades. And most importantly, they do not enable teachers to develop the kind of deep conceptual understanding of the subjects they teach that will be required of all students when digital devices take over most of the routine cognitive work that many people now do in their jobs. It is this kind of conceptual understanding that makes it possible for good teachers to grasp the misunderstandings that students typically have when they cannot grasp the material being taught and correct those misunderstandings. It is also the kind of understanding that is required to prepare students for more advanced work at the upper grades.

One way in which Maryland distinguishes itself from the benchmark U.S. states, and resembles the highest-performing international jurisdictions like Finland, is in its requirement that all teacher candidates must have an internship experience in a designated Professional

Development School. In these schools, candidates receive coaching and feedback from staff that have been specially selected and trained. The schools partner with local universities to stay up-to-date on what teacher candidates are learning. The Professional Development Schools also serve as sites where teachers have career-long access to ongoing professional development and training. All full-time students must have a minimum of 100 days in the Professional Development School, which is approximately the same length, or slightly longer, as the practical experiences in the top-performing international jurisdictions. In the programs we reviewed in Maryland, teachers began their practical experience in their junior year, with observations and small group work, and progressed to full-time student teaching in the senior year.

Recommendations

5. Maryland must use its authority to approve teacher education programs to ensure that the content of those programs meets global standards of subject matter as well as mastery of the craft of teaching and, further, that the approved programs are aligned with the goals and structure of the public education system in the state. The institutions should be required to offer programs that incorporate the following features of global best practice:

- a. Provide instruction designed to enable their graduates to teach the specific elementary and secondary school standards adopted by the State to students from many different backgrounds, in such a way as to enable all students to reach the standards established by the State with respect to College and Career Readiness
- b. Teacher preparation programs must include courses that enable the teachers they produce to quickly identify students who are beginning to fall behind and just as quickly diagnose the problem and implement solutions to assist the student to catch up (see Building Blocks 2, 3 and 4)
- c. Teacher candidates must be trained on how to routinely use research methods and data analysis tools that help teachers improve student performance
- d. A student wishing to enter a teacher preparation program should have an opportunity to be in a classroom to confirm their interest in and aptitude for teaching. This would be helpful so that a student can make a decision early in their college career on whether to continue in the field of teaching as well provide faculty with the opportunity to counsel a student into a more suitable major
- e. As the student moves through college, the student should be embedded in a high quality professional development school. Building on the impressive work currently underway in the state's Professional Development Schools, provide to students well-developed clinical programs based in carefully selected schools, which include extended opportunities to apprentice to teachers with the rank of Master Teachers in the new Career Ladder system (See Building Block #6); these teachers to have a reduced teaching load to enable to perform this mentoring

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function well and the opportunity to gain full clinical faculty rank at the sponsoring university

f. The State must make a strong commitment of support to teacher preparation programs

6. Each teacher preparation program's performance should be based on assessments of their graduates and the graduates' performance in a clinical experience. There is significant room for improvement over the currently used Praxis exams. The reapproval of each teacher preparation program should be based on the success of the graduates they produce

7. MSDE should have a stronger role in evaluating teacher preparation programs to ensure their graduates are highly performing once they enter the profession. This should include providing technical support and a feed back loop to ensure the preparation programs are aligned with expectations in the classroom

8. Maryland teacher preparation programs and local school systems must collaborate regularly and develop closer working relationships between the schools and the universities to inform both teacher preparation and ongoing teacher training/professional development

Ensure That All Candidates Being Licensed and Hired Meet the Same High Standards

Policy can be used to regulate teacher quality at the point of entry into teacher education or at the point of exit, or both. As we noted above, the top performers put their emphasis on the first of these options, at the front end of the process, by restricting the right to offer teacher education programs to their best universities. Only Shanghai implements a standardized exam measuring whether teachers have mastered the content and skills they learned in teacher preparation when they exit preparation programs. Maryland, like the benchmark states, attempts to compensate for the relatively loose regulation at the front end by controlling teacher quality at the end of the process, with licensure. All states require all teachers to pass an exam of baseline knowledge of content. The exams used in Maryland for this purpose are less rigorous than those employed in Massachusetts and New Jersey. In Maryland, candidates must earn passing scores on one of several approved assessments of mastery of core academic content. The cut scores are generally set to a low college admissions standard. Candidates must also pass the relevant Praxis content area tests. In 2015, the average passing rate statewide for all Praxis Core and Praxis content area tests for which data are available was 98.5 percent. This suggests that the licensure standard in Maryland represents a standard of academic excellence far below that typically met by prospective teachers in the top performing countries.

Not only do the top performers set very high standards for the students going into teacher education and for the completion of a program of preparation for teaching, but they do not compromise on those standards by allowing alternative routes that bypass those standards. In

contrast, like all the benchmark states, Maryland has created alternative routes that enable candidates in high-need fields to circumvent the usual statutory requirements to be a teacher. Thirteen percent of Maryland program completers came from alternative routes in 2014, higher than eight percent in both Massachusetts and New Hampshire, but lower than 38 percent in New Jersey. While Maryland compares favorably to New Jersey on this indicator of teacher quality and is not far behind Massachusetts, it still has a long way to to match the top performers.

Furthermore, Maryland, unlike the other benchmarked states, has a challenge to ensure the quality of the 61 percent of newly-certified teachers coming from out of state (2015). Teachers from out of state with a valid out-of-state teaching license and at least three years of teaching experience in good standing are eligible for immediate licensure in Maryland. Those without three years of teaching experience can apply for reciprocity by submitting their transcript and proof of passing scores on Praxis Core and Praxis II subject test to the Maryland Department of Education, a very low standard.

Building Block #5: Abundant supply of highly qualified teachers
RECOMMENDATIONS

- 2. ~~Maryland must work on several fronts to greatly strengthen the pool from which its future teachers come; specifically, it must:~~
 - a. ~~Charge universities—especially its public universities—to greatly expand their recruitment efforts and improve their programs of teacher education at both the undergraduate and graduate levels~~
 - b. ~~Direct Maryland’s university based teacher preparation programs to apply for grant funding currently available from multiple major foundations to help schools of education increase the size of the pool of high ability high school students interested in applying to their programs and help their teachers in training to succeed in the more rigorous program of teacher education the institutions will be required to offer~~

~~Provide strong incentives to students with strong records of academic achievement in high school to choose a career in teaching. To that end, the state should significantly expand the program established under SB 666 of 2014 and ensure it is fully funded in the budget. The legislation provides free room, board and tuition to students with strong academic records in high school, provided that those students commit to work as a teacher in Maryland schools serving high proportions of disadvantaged students for four years after they are first employed as teachers.~~
Recommendations

- ~~d. Require~~ the appropriate agencies of Maryland state government to report periodically to the legislature on the academic ability of high school graduates going into teacher education in Maryland as compared to the quality of high school graduates selected for teacher training in the top performing countries

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~~3.1. Maryland must use its authority to approve teacher education programs to ensure that the content of those programs meets global standards of subject matter as well as mastery of the craft of teaching and, further, that the approved programs are aligned with the goals and structure of the public education system in the state. The institutions should be required to offer programs that incorporate the following features of global best practice:~~

- ~~a. Provide instruction designed to enable their graduates to teach the specific elementary and secondary school courses adopted by the state to students from many different backgrounds, in such a way as to enable them to reach the standards established by the state with respect to College and Career Readiness~~
- ~~b. Provide instruction to enable the teachers they produce to routinely use research methods to improve student performance~~
- ~~c. Provide instruction to enable the teachers they produce to quickly identify students who are beginning to fall behind and just as quickly diagnose the problem and bring to bear the resources that student needs to catch up,~~
- ~~d.a. Building on the impressive work currently underway in the state's Professional Development Schools, provide to students well-developed clinical programs based in carefully selected schools, which include extended opportunities to apprentice to teachers with the rank of Master Teachers in the new Career Ladder system (See Building Block #6); these teachers to have a reduced teaching load to enable to perform this mentoring function well and the opportunity to gain full clinical faculty rank at the sponsoring university~~
- ~~e. Provide opportunities for a professional with demonstrated mastery of the requisite subject matter and years of experience in the workforce to become school teachers by "testing out" of the subject matter requirement and taking only a masters level one-year program in the craft of teaching to get a license as a teacher~~

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4.9. Maryland must ensure that all teachers licensed to teach in Maryland, whether they have attended a teacher education program in Maryland or in another state or country, meet standards comparable to the standards met by teachers licensed to teach in the top performing countries; it. Specifically, Maryland must:

- a. Consider adopting for use in Maryland the teacher licensure examinations used in the state of Massachusetts, or edTPA, a performance assessment of teaching ability developed at Stanford University
- b. Take steps to ensure that teachers who are hired from other states to teach in Maryland schools meet the same high standards when licensed to teach in Maryland that teachers produced by teacher education institutions in Maryland will be required to meet
- c. Phase in these requirements so that the institutions responsible for preparing teachers in Maryland have time to make sure their students can meet these standards and to make sure that the new incentives intended to attract high performing high school graduates have time to affect the career decisions of high school students

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d. Teachers from another state should be required to pass the same certification exam as teachers prepared in a Maryland teacher preparation program

5.10. Because raising standards for licensing new teachers (~~see Recommendation #3 above~~) in Maryland might greatly reduce the number of applicants to those programs if teaching does not become a much more attractive career option for high school students with strong academic records, Maryland school districts must raise teacher compensation and improve the conditions under which teachers work (see recommendations for Building Block #6).

~~In order to elevate teacher preparation programs and help them build increasing the capacity to make the changes the Diversity of Maryland's Teachers~~

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Currently, only 25% of Maryland's teachers are of a diverse racial background. Maryland needs to attract a more diverse population of students to become teachers. The Commission envisions in their programs of teacher education believes that some school children respond better and are inspired by a teacher who "looks like me" and that if a diverse workforce is desired then diverse incentives must be provided. The national Teach for America (TFA) program attracted a high proportion of African American teachers. The program was considered prestigious and it had an outreach and advertising campaign at Historically Black Colleges and Universities. Although teachers in the TFA program did not stay for many years, it could serve as a model for Maryland. If such a model were to be adopted, Maryland should establish incentives to reduce not only the attrition rate of TFA teachers, but the attrition rate of all teachers.

11. Maryland should establish creative methods of attracting a diverse pool of teachers.

Some options include:

- a. Providing child care incentives to teachers, which in combination with a higher salary (BB6), could prevent teachers from stopping out of the profession when they have children of their own
- b. Providing incentives such as statewide property tax abatement or home mortgage assistance
- c. Maryland higher education institutions frequently have programs whereby the children of faculty get some level of tuition remission when they attend college. This program should be expanded to children of any employee at a higher education institution
- d. Recruiting future teachers who attended primary and secondary school in that school system should be encouraged as a way to lower teacher attrition rates

Seed Grants to Form Collaboratives between Teacher Preparation Programs and School Districts to Begin Implementing These Strategies

12. In order to accomplish the strategies and achieve results, Maryland should create a competitiveness grant program for school districts to partner with teacher preparation programs at Maryland universities. These collaboratives, will each be composed of a

~~university~~ one or more preparation programs and ~~associated~~ one or more school districts, ~~formed to.~~ These entities will work together to create the conditions under which the universities will raise their standards for teacher admission and reform their education and training programs, at the same time that the districts are making teaching a more attractive occupation for the high school students the university is trying to attract. ~~In order to win a grant, applicants would have~~ including implementing a career ladder and improving working conditions (see Building Block 6)

13. The structure of the seed grants would be short term, but multiyear, grants to help the collaboratives build their programs and “show the way” to other school districts and teacher preparation programs in the State as they implement the Commission’s recommendations in Building Blocks 5, 6 and 8. Technical assistance must be provided to applicants so that each applicant has an equal chance to put their best proposal forward.

~~6-14.~~ An objective awards process should be established with very specific criteria. Grant applicants would be required to present a detailed plan for addressing all of the Commission’s recommendations related to teacher quality, including training all future teachers in basic research and data analysis methods; using formative evaluation, diagnostics, and prescription to identify student difficulties quickly and use appropriate research-based responses; and teaching future teachers how to teach the specific courses in the state curriculum to students from many different backgrounds. Part of the grant application should include how the applicant proposes to achieve greater diversity in workforce pool

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15. A critical aspect of managing the seed grants is to ensure that each proposal includes a plan to monitor the success of the innovations to be implemented. If the innovation is producing the desired results, then there would be greater comfort that scaling that program up would lead to success and ensure a high return on investment of funds. It would be optimal that a few ways to implement the Commission’s recommendations are explored as one size may not fit all LEAs when it comes to scaling up. This will also ensure that each LEA has control over how best to implement the recommendations for their school. One of the data points would be the impact on teacher attrition rates.

~~7-16.~~ The districts in this competitive grant program should be expected to serve as ~~state~~ State pilots for implementing the new leadership development systems, teaching career ladder systems and advanced forms of school organization and management described in Building Blocks #6 and #8. Both the universities and the school districts would be expected to work very closely with each other to develop the clinical training schools for new teachers.

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~~8-17.~~ The university and district partners must take joint responsibility for building on the current Professional Development Schools to create a network of high quality Professional Development Schools serving very different kinds of students and communities in the ~~state~~ State, schools that will implement the emerging career ladder

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system design and use it to manage the new forms of school organization recommended by the Commission.

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ISSUES TO BE RESOLVED WITH RESPECT TO TEACHER PREPARATION:

1. Should the state establish a minimum time that prospective teachers should be in professional development schools? If so, how long should that be? Should the state establish other criteria for the clinical training of teachers? If so, what should they be?
2. What should state policy be with respect to the criteria and instruments used to award licenses to teach in Maryland? Should Maryland consider the use of the Massachusetts licensure examinations for this purpose? Or edTPA? Or both? Are there other measures that should be considered? What characteristics should be measured? Should Maryland be seeking a licensure standard at the level of teacher quality seen in the top performing countries?
3. How can Maryland attract a diverse population of teachers? Several national foundations are now awarding large grants to institutions of higher education working on this issue. Should Maryland institutions training teachers be instructed to seek these grants? What other strategies should Maryland be using?
4. Should Maryland have a policy with respect to counseling people in teacher education programs out of teaching? If so, what should that policy be?

Should any of the eligibility criteria of the teaching scholarship in current law (currently unfunded) be altered?

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Building Block #6: Redesign schools as places in which teachers will be treated as professionals, with incentives and support to continuously improve their practice and the performance of their students

SUMMARY OF GAP ANALYSIS AND RECOMMENDATIONS

Teacher Compensation

Because the top performing jurisdictions are trying to attract teachers from the same cohort of high school students who go into the high-status professions, their typical stated policy is to compensate them at levels comparable to compensation for the high-status professions. Starting pay for teachers in these countries is often higher than in the high-status professions. When lower, the difference is almost always less than 25 percent. Neither Maryland nor the top performing states in the United States do that. The average statewide *starting* salary for teachers in Maryland was \$34,234 in 2015, which lagged behind other professions, by up to 56 percent in 2015. This compares to up to 52% in Massachusetts, 46% in New Hampshire, and 42% in New Jersey. The average of all teachers' salaries in Maryland is \$66,482. This also lagged behind other professions by up to 40% in 2015. This compares to up to 16% in Massachusetts, 31% in New Hampshire, and 26% in New Jersey.

Current salary levels combined with working conditions are having a negative impact on recruitment and retention of teachers in Maryland public schools. In particular, perilously few Maryland students are opting to pursue teaching careers. Enrollment in Maryland teacher preparation programs has declined by approximately 20 percent since 2010, and the number of graduates decreased by nearly the same amount in 2014 and 2015. Of particular concern, it appears from the available data that a sizable portion of Maryland teacher graduates do not pursue a teaching career in Maryland. Between 2005 and 2015, roughly 60% of all the newly teachers hired in Maryland hired teachers are from out of state, and less than one-quarter of newly-prepared teachers hired each year are prepared at a Maryland university (that figure has been declining in recent years). Moreover, during the same time frame, roughly one-third of the teachers that Maryland public and private universities do produce are not hired by Maryland public schools. This either means they do not stay in the State as they launch their careers or they begin their careers teaching in a private school. Further, roughly half of the teachers produced by a Maryland public four-year institution do not teach in a Maryland public school. In fact, roughly 30% of these graduates either aren't employed as a teacher, aren't working at all, or work out of state. The remaining 20% are employed by a Maryland private school.

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Career Ladder Systems

The top performing jurisdictions are increasingly using highly structured career ladders, similar to those found in most high-status professions, to structure the careers of teachers. In Shanghai and Singapore, the world's leaders in this development, as teachers progress up a

well-defined sequence of steps, they acquire more responsibility, authority, status and compensation, much as one would in a large law firm in the United States, progression from associate, to junior partner, to senior partner, to managing partner. Or one could compare the careers of school teachers, who typically have the same job on their last day of work as they did on their first day, to those of university faculty, who might progress from lecturer to assistant professor to associate professor to full professor to full professors who hold endowed chairs. The career ladders for teachers in the top performing countries can be visualized as a “Y” in which the teacher proceeds from novice up the ladder to an exemplar teacher and then choose either to proceed on one branch up to master teacher and up the other to principal and beyond. In these systems, master teachers typically make as much as school principals. The criteria for moving up the ladder start with a focus on excellent teaching, but then, as they move up, focus on the teachers’ ability to mentor other teachers, lead other teachers in the work of teacher teams and, finally, lead other teachers in doing research leading to steady improvement in student performance in the school. In Ontario and Finland, the professional status of teachers and opportunities for differentiated roles creates comparable incentives for retention and professional development. All well-developed career ladders in the leading jurisdictions provide strong incentives to all teachers to get better and better at the work.

Maryland has no statewide career ladder system for teachers, although, to its credit, Baltimore City’s pilot system is further along than pilots in the other benchmark states that are all experimenting with career ladders. Massachusetts, the state with by far the best student performance in the United States, is the only top performing state that has a design for a state-level career ladder system, and that system has been implemented in only a few school districts. The National Board for Professional Teaching Standards and the National Center for Education and the Economy are exploring developing a national framework for a career ladder that would be piloted in select states.

RECOMMENDATIONS

1. In order to recognize effective teachers and incentivize them to stay in the classroom, Maryland must build a statewide career ladder system modeled on the most effective such systems in the US and the world
 - a. The development of a viable career ladder will require considerable effort extending over several years and involving all of the stakeholders (LEAs, MSDE, collective bargaining units, school boards, etc.)
 - b. Once established, all new K-12 teachers would be placed on the career ladder. Currently serving teachers would eventually be placed on the career ladder after a reasonable transition period
 - c. Maryland will need to convene a group of experts and stakeholders to develop a statewide framework for a career ladder, which would include the [minimum](#) number of ladder steps, the titles [for these steps](#), and the broad criteria for placement on each [of the](#) ladder steps and [for](#) advancing between

~~those~~ steps. In its final report, the Commission will provide additional detail on how it recommends this process should proceed

- d. Maryland's career ladder should present two paths to school leadership for exemplar teachers: a "Master Teacher" track that allows highly effective teachers to stay in the classroom with appropriate compensation and an administrative track that gives teachers the chance to become assistant principals and principals after they have demonstrated the capacity to be successful teachers.
 - e. The process for evaluation and promotion of teachers on the career ladder should include a combination of master teachers and administrators.
 - f. While the career ladder will have a statewide framework as described above, the districts and local bargaining units would negotiate the compensation and specific responsibilities at each step, as well as any additional ladder steps or requirements added to the statewide framework through local negotiations.
 - f.g. The career ladder should be designed to complement and facilitate the implementation of the high performance work organization in the schools (see #4 below)
- ~~g.~~

2. Once the Commission's recommendations are fully implemented, the gap in compensation between teachers and high-status professions requiring comparable levels of education, such as nurses, certified public accountants and architects should be significantly reduced, if not completely eliminated. A timeline for accomplishing this goal will be included in the Commission's final report.

- a. Once a career ladder is fully developed and implemented, increases in compensation for Maryland teachers must be tied in significant measure to their position and advancement on the career ladder.
- b. Advancement up the ladder should be based on the acquisition of specified knowledge and skills, rigorous evidence of success as a classroom teacher and/or additional responsibilities commensurate with the additional compensation. Teachers should be able to demonstrate success with students from different demographic and economic backgrounds before moving to the top of the ladder.
- ~~h.c.~~ Teachers' compensation should continue to be negotiated at the local level between bargaining units and school boards, but the State should begin conducting regular periodic surveys of compensation in Maryland, both on a county and regional basis, county by county, to determine prevailing rates of beginning and average compensation in the high status professions. This information will provide a benchmark for teachers' salaries as a proportion of high status professions' salaries and enable the State to begin planning for achieving the goal of this recommendation. Recommendation 3a.

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~~2. The career ladder should be designed to complement and facilitate the implementation of the high performance work organization in the schools (see #4 below)~~

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~~3. Once the Commission's recommendations are fully implemented, the gap in compensation between teachers and high status professions requiring comparable levels of education, such as nurses, certified public accountants and architects should be significantly reduced if not completely eliminated, and eliminated in due course~~

~~a.3. The closing of the gap in compensation between teachers and comparable high-status professions should be phased in as part of the implementation of the Commission's recommendations, including changes in teacher preparation programs, raising the standards for teacher certification and re-certification, the development of a career ladder system, and the new approach to school organization and management~~

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~~b.a. In the interim, as the career ladder is being developed and implemented, Maryland needs to systematically phase-in salary increases for teachers (above and beyond cost of living adjustments) over the next 4 or 5 years in order to reduce the gap. Teacher compensation in Maryland is below the average salaries in two of the three states used by the Commission in its benchmarking work. During the phase-in period and while Maryland is phasing in an increase in certification standards, average salaries of Maryland teachers should be brought to the average of the two comparison states, New Jersey and Massachusetts, whose demographics and economy most resemble Maryland. Current salary levels combined with working conditions are having a negative impact on recruitment and retention of teachers. In particular, perilously few Maryland students are opting to pursue teaching careers. Between 2005 and 2015, roughly 60% of the newly hired teachers are from out of state. Moreover, during the same time frame, roughly one-third of the teachers that Maryland public and private universities do produce are not hired by Maryland public schools. This either means they do not stay in the State as they launch their careers or they begin their careers teaching in a private school. Further, roughly half of the teachers produced by a Maryland public four-year institution do not teach in a Maryland public school. In fact, roughly 30% of these graduates either aren't employed as a teacher, aren't working at all, or work out of state. The remaining 20% are employed by a Maryland private school.~~

~~c. Teachers' compensation should continue to be negotiated at the local level between bargaining units and school boards, but the State should begin conducting regular periodic surveys of compensation in Maryland, county by county, to determine prevailing rates of beginning and average compensation in the high status professions to provide benchmark salaries in order to achieve Recommendation 3a.~~

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The Organization of Teachers' Work

The career ladders in the top performing jurisdictions are organized to support a very different form of work organization in the school, much more like that found in professional service practices such as law firms, engineering firms or universities than the form of work organization typically found in the typical American school. American teachers are expected to spend more time facing students in the classroom than teachers in any other industrialized country. By contrast, in many top performing countries, teachers are in front of a class teaching for about 40 percent of their time at work. Most of the rest of their time is spent in teams working to systematically improve their lessons and the way they do formative assessment, work together to come up with effective strategies for individual students who are falling behind, tutoring students who need intensive help, observing and critiquing new teachers, observing other teachers to improve their own practice, doing research related to solving problems in the school and writing articles based on their research. The career ladders in these countries have structured the roles available to teachers as they move up the career ladder to support the form of work organization just described. There is no state in the United States that has thus far implemented policies designed to support the form of work organization just described.

RECOMMENDATIONS

~~4.~~—Maryland needs to change the way its schools are organized and managed to make them more effective and to create a more professional environment for teaching, which the career ladder is designed to facilitate and support

4.

- a. The state should phase—in a reduction of the maximum time, currently 70 to 80%, that teachers are expected to teach in a typical week. This would give teachers more time to work as professionals in collaboration, as is the case for teachers in countries with high performing systems, to improve the curriculum, instructional delivery, and tutor students with special needs. The magnitude of the reduction in teachers' class time and the cost of implementation requires further study by the Commission in the coming months. ~~and will require difficult choices, balancing the magnitude of new funding available to reduce classroom time and increase teacher compensation against class sizes, school facility space issues, and the capacity to repurpose current spending patterns. This study should include a cost analysis of phasing in reduced teaching time first for new teachers, followed by all new teachers, then all teachers, prioritizing schools serving high concentrations of students living in poverty at each phase. A cost analysis of adopting a statewide students to teacher ratio standard—with smaller ratios for schools in areas of concentrated poverty—should also be conducted that would allow for teacher collaboration time without jeopardizing individualized instruction. Such an analysis should show cost~~

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estimates for benchmarking against the ratios in the Commission's three benchmark states: Massachusetts, New Jersey, and New Hampshire.

- b. In order to effectively use this additional collaborative time and the new organization of schools, teachers should receive training on the Commission's recommendations and the best uses of collaborative time to build professional learning communities. As these communities develop and more decision making is moved from the central administration to the schools, more school leadership roles will be created, which will provide more opportunities for greater roles and responsibilities for teachers moving up the career ladder. This training should be a high priority for implementation.

Support for New Teachers

Ontario, Shanghai and Singapore have well-developed systems to induct new teachers into the teaching profession. They are tightly structured and monitored: mentors are recruited, selected through an interview process, trained and evaluated. Maryland has an induction coordinator for each school district and the state provides orientation training for all new mentors, but, as in Massachusetts and New Jersey, mentors are self-selected and receive minimal ongoing training at the discretion of local districts. New Hampshire leaves the decision of whether to implement a program to the districts.

The 2016 Maryland Teacher Induction, Retention and Advancement Act (TIRA) established a stakeholder group to develop recommendations for strengthening teacher induction in the State. The TIRA stakeholder group built on the work of the P-20 Council's Task Force on Teacher Education, which made numerous recommendations to improve teacher preparation and induction programs in 2015. The TIRA recommendations include: integrating mentoring during the teacher training practicum with mentorship during induction and establishing formal qualifications for mentor teachers such as tenure, five years of teaching experience, and highly effective ratings on teacher evaluation and principal recommendations. These recommendations represent a good starting point for developing a high performance system for making mentoring new teachers an integral part of the new career ladder system.

Another promising model also exists in Maryland. Known as the Peer Assistance and Review Program (PAR), Montgomery County Public Schools has successfully implemented this collaborative partnership between the school system and the teachers' union for over 20 years to use successful teachers, known as consulting teachers, to mentor and develop new teachers in the profession. Under PAR, consulting teachers also observe and provide feedback to existing teachers about their performance and best practices in the field, a practice used in the top professions. Consulting teachers are given release time from their classroom duties to give their full attention to reviewing and assisting both new teachers and teachers-at-risk.

Helping Teachers to Continually Improve Their Practice

In Shanghai, teachers are required to take 120 hours of professional development during their first year and 240 hours every five years after that. Senior-level teachers are required to take 540 hours every five years. In Singapore, all teachers are required to have 100 hours of professional development each year. In Ontario, it is the equivalent of Shanghai at 6 days per year, while Finland allows local municipalities and schools flexibility to allocate time for professional development as they see fit.

Maryland sets professional development requirements for teachers who must earn an “advanced teaching credential” to continue teaching after five years of teaching by taking 36 hours of professional development, including 21 hours of graduate credit, earning a master’s degree in education or earning a certification from the National Board for Professional Teaching Standards along with 12 hours of graduate work. After earning this advanced credential, Maryland teachers must be recertified every five years, which requires taking at least six credit hours. Massachusetts and New Hampshire require 100 hours and 75 hours of professional development every three years for recertification. New Jersey only requires 20 hours of professional development for a one-time recertification of a provisional license, with no additional requirements. Like the benchmark states, Maryland generally leaves provision of professional development to districts. The research shows that requirements for specified amounts of professional development of the usual sort, including requiring Masters degrees, acquiring certificates, taking courses or earning credits by taking workshops, have little or no effect on the performance of the students who are involved in this kind of professional development. Only when these forms of professional development are used to supplement professional development that is embedded in the work that teachers do as they participate in teams that work to systematically improve student performance does professional development make a real difference in student performance.

RECOMMENDATIONS

5. Maryland must strengthen its teacher induction systems. As part of its policies establishing the career ladder system, Maryland should require that the career ladders include as part of the responsibility of senior teachers the responsibility to mentor new teachers and experienced teachers who need help; as part of the policies established to implement new forms of work organization, these mentor teachers should be given enough time with their mentees to provide the guidance and support they will need to succeed in their initial years in teaching. The IHE–LEA collaboratives recommended in BB #5 should include teacher inductions systems for new teachers integrated with their teacher preparation program. An excellent starting point for a new induction system is the Teacher Induction and Retention Program (TIRA), modeled on Peer Assistance and Review Program (PAR), which should be scaled up across the State as quickly as possible, recognizing the challenges of economies of scale in smaller school systems, evaluated on an ongoing basis, and integrated into the new career ladder system. The initial focus of enhanced induction programs should be new teachers in schools serving

high concentrations of students living in poverty and expanding to all new teachers over time.

6. Maryland also needs to strengthen substantially its professional development policies and practices. At present, professional development in Maryland places too much emphasis on general and generic topical presentations and too little emphasis on advancing teachers' content knowledge and instructional effectiveness. Seed funds should be committed for collaborative partnerships between universities and LEAs to create rigorous professional development programs focused on teacher's pedagogical capacity and content knowledge. Once developed these model programs should be scaled up across the State.

Building Block: #8: Create a leadership development system that enables school leaders to create and manage high performance schools effectively

GAP ANALYSIS

Attracting and grooming a high-quality pool of candidates for the principalship

Although some superintendents of schools in the United States try to identify teachers who might be good school leaders in the future and give them opportunities to develop their leadership capacity, the Commission knows of no state that does this as a matter of statewide policy. As a result, the pool from which the vast majority of future school leaders comes is typically made up of people who volunteer for the role and who then enroll in state-required postsecondary preparation programs that rarely, if ever, assess applicants' potential as good school leaders. In contrast, top performing countries have developed policies to attract teachers who have been carefully identified as people with high leadership potential. These teachers are then given a carefully chosen set of opportunities to develop those skills while still teaching, thus creating a large, very high quality pool of candidates for school leader positions. No American state has developed policy structures of this kind on the scale required to meet all their school leadership needs.

In order to become certificated as a principal, Maryland principals are required to receive a relatively high score on the School Leaders Licensure Assessment (SLLA), however this test is not performance-based like those used in many top-performing countries. A recent study by researchers at Vanderbilt University found that the SLLA is not effective in predicting principal job performance. While individual districts in Maryland may do so, the state, like other U.S. states, generally does not actively identify and groom prospective school principals. Instead, it relies on individuals to self-identify and enroll in a preparation program. However, the Promising Principals Academy, started in 2014, provides leadership development for up to 48 candidates per year (in comparison to the projected 388 principal preparation program completers for 2016-17 who self-select). In another program of note, Prince George's County partnered with the National Institute for School Leadership (NISL) to develop an aspiring principal program that has a rigorous selection process in an effort to develop a talent pipeline for that district. To date, roughly 175 aspiring principals have been trained in Prince George's County.

Tying the development of school leaders to the system's goals and strategies

The top performers provide future leaders with the modern management skills derived from the best research on leadership from the world's best business schools and military academies. That knowledge is matched with the excellent knowledge of curriculum and instruction that comes from the fact that the leaders they develop have come exclusively from the ranks of their best teachers and teacher leaders. But their systems are also designed to do something else that is very important to them. They are designed to give their future leaders the knowledge and skills they need to fully implement the specific structures, strategies, policies

and practices that underlie that country's overall design for their high performance system. They are seen as implementers of the specific kind of high performance management system their own country has developed as a matter of policy. They do not leave the curriculum for school leadership development up to the schools of education. They expect the curriculum of the schools of education to embrace these imperatives, because the education and development of their future leaders is the linchpin of their strategy for implementing the strategies they have chosen to drive their education system forward. No American state has yet developed this kind of policy framework for the development of their school leaders.

Developing leaders who have the knowledge and skills to manage modern professionals in the modern professional workplace

The work organization of the typical American school has more in common with the organization of blue collar work in early 20th century factories than with the kinds of modern work organization typically found in modern professional practices and workplaces. In industrial age workplaces, most of the skill required to make the important decisions is found in the managers, who are expected to direct the work. In the latter, most of the expertise is found in the front-line doctors and engineers and other professionals, and the leadership is expected to create and sustain organizations that enable and support those professionals as they make the important day to day decisions, usually working in groups, that need to be made. The top performers, are, as matter of *policy*, moving toward professional forms of work organization in their school. Because managing professionals is so different from managing people in industrial work organizations, the top performers put a lot of effort into giving their school leaders the skills they will need to manage and support highly skilled professionals working in modern forms of organizations explicitly designed to support professional work. In the United States, matters of school organization in this sense are not normally addressed as matters of policy if they are addressed at all.

Creating an environment in which school leaders have the incentives and support to get better and better at the work

In a growing number of top performing countries, there is a well-developed career ladder for school leaders that is an extension of the career ladder for teachers. Just as for teachers, as one ascends this career ladder, one acquires more responsibility, more authority, more status, and more compensation. As in the case for teachers, this creates an environment in which there is a never-ending incentive for school leaders to get better and better at the work. Again, as in the case with teachers, it is frequently difficult if not impossible to ascend the career ladder without taking multiple assignments to serve as a school leader in a variety of schools serving large proportions of disadvantaged students. This policy provides many schools serving large populations of disadvantaged students with exceptionally qualified leaders and, at the same time, assures the state of a large supply of school leaders at the upper levels of the system who have served in schools populated by many different kinds of students.

Maryland does not have a statewide career ladder system for principals. There is, however, a pilot principal career ladder in place in Baltimore City, upon which the state could build as it creates a world class system and Prince George's County has been developing a nationally recognized system for training school leaders.

Building Block #8: Create a leadership development system that enables school leaders to create and manage high performance schools effectively

RECOMMENDATIONS

1. Maryland should establish a set of aligned policies to bring the initial education and training of new school leaders, including principals, ~~and~~ district administrators ~~and other leadership roles~~, in the ~~S~~state up to global standards, and to help Maryland school leaders develop the leadership and management skills they will need to make their schools successful and, in particular, to fully implement the recommendations made in this report in every school and district in the state. ~~These policies include:~~ ~~Among these policies should be the following:~~
 - a. ~~Require the state to include~~ ~~A~~ career ladder system for school leaders ~~should be developed~~ in the career ladder system ~~it~~ ~~Maryland~~ creates for teachers, described in Building Block #6. A series of steps for school and district leaders, which should be built ~~as a branch of~~ ~~on top of the career ladder structure after mastery of~~ the fully-proficient step for teachers ~~in the career ladder structure~~, thus assuring that all school leaders in Maryland have demonstrated the skills and knowledge needed to be highly competent instructional leaders before they are groomed and trained for school leadership positions. The ~~S~~state should ~~also~~ require that individuals who wish to ascend the career ladder for school leaders ~~spend~~ ~~have~~ significant ~~experience and success at schools that represent the demographic and economic diversity of the school districts in which they have worked.~~ ~~time serving and demonstrating success in leadership positions at schools with large proportions of low-performing schools or at schools with large achievement gaps between subgroups of students.~~ Further, in the upper reaches of the school leadership career ladder, school leaders should be expected to serve as mentors to new leaders of schools serving large proportions of low-performing students
 - a.b. ~~While most of the school leaders would rise through the ranks of first being an exemplary teacher, Maryland should also allow flexibility in how one becomes a school leader so as not to preclude truly talented and passionate leaders who did not start their career as a teacher and, in fact, perhaps started their career in a noneducation-related field~~
 - b.c. ~~Require~~ the ~~S~~state ~~should~~ ~~to~~ use its program approval powers to require higher education institutions that offer programs leading to school leadership certifications

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to carefully evaluate the potential of candidates to be effective school leaders. The evaluation should include evidence that the school district in which that individual has been working as a teacher has identified that individual as someone with a high potential for leadership and can present a record showing that the individual has been offered various teacher leadership roles and has performed well in those roles.

~~e.d.~~ Require the universities wishing to offer graduate level courses in school administration for certification ~~should~~ present evidence that 1) their curriculum will enable the graduates of those programs to successfully organize and manage schools and school systems in a way that closely tracks the practices of the countries with the highest and most equitable student performance and equity in the world; 2) their curriculum will enable their graduates to manage highly skilled professionals working in a modern professional work environment; ~~and~~ 3) their curriculum will give the students in these program the knowledge and skills needed to successfully implement the recommendations made in this report; and 4) their curriculum will enable school leaders to effectively conduct peer observation review and evaluation of other school personnel

~~e.e.~~ The university-school district collaboratives described in Building Block #5 should be tasked with developing a pilot leadership career ladder and demonstrating effective ways to implement the State system for creating an abundant supply of high quality ~~teachers~~ school leaders for Maryland schools. The recommendations made immediately above should be phased in over time

2. Maryland should train every currently serving superintendent, senior central office official, and principal in the State to give them the vision, motivation, ~~skill~~, and knowledge they will need to implement the recommendations made in this report. That training should be carried out as a high priority initiative as early in the implementation of this report as possible. The training should be designed to get all of Maryland's school leaders, at every level, thoroughly conversant with the recommendations in this report and to help them develop the capacity to implement those recommendations well.

~~2-3.~~ School leaders should reflect the diversity of the student population and through their training as both teachers and leaders provide culturally relevant instructional techniques and leadership in their schools ~~Diversity of leaders from BB5 and BB6~~

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ISSUES TO BE RESOLVED WITH RESPECT TO LEADERSHIP CAREER LADDERS:

1. ~~Should the career ladder for school leaders be a branch of the ladder for school teachers? This would mean that the only way to become a school principal would to first be certified as a highly proficient teacher, which is what the top performing countries do.~~

2. ~~Assuming there is a statewide framework for a leadership ladder system, which of the following should be decided at the state level and which at the district level: Number and names of steps on the ladder? Criteria for advancing up the ladder? The roles in the schools and system that a person at each step of the ladder will have (assuming that teacher's compensation will be negotiated locally)?~~
3. ~~Assuming the career ladder for teachers encompasses teacher leaders (defined as teachers who lead teacher instructional teams, mentor newer teachers, lead teacher research efforts, or chair subject matter or grade level teams), should "school leaders" include anyone that plays other leadership roles in the schools such as assistant principals, principals and principals responsible for other principals?~~
4. ~~Should Maryland expand the Promising Principal Academy beyond 48 candidates per year or should Maryland, before making this decision, compare that strategy with other strategies for developing school leaders capable of implementing the Commission's program on both cost and quality?~~

Building Blocks #3, #4 and #7: Building a curriculum and instructional system that will get all but the most severely disabled Maryland students to world-class standards for college and career readiness.

GAP ANALYSIS

A System that Prepares Students for College and Careers

The top-performing countries typically use state-wide or nation-wide tests no more than three times in a student's career in high school. These tests are given at the entrance to high school, if entrance to high school is competitive, at the end of what in the United States would be the sophomore year in high school, and at the end of high school. The reason a test is given at the end of 10th grade is that this marks the end of the common curriculum, the curriculum that all students are expected to master in order to enter rigorous pathways matched to their academic and career interests. For their final two years in high school, students go either into a program intended to prepare them for university or for a career, with work beginning right after high school or after more career and technical education at the postsecondary level. Increasingly, in many countries, students who are in a career and technical program in secondary school go on to postsecondary education after high school, and students who are in the academic stream in high school are getting vocational qualifications as well as academic credentials after high school.

More generally, average academic achievement of students in the top performing countries overall enables them to leave high school with the equivalent of two to three years more education than the typical American high school graduate. This means, for example, that what the American student is studying in the first two years of all but highly selective colleges and universities is being studied by his or her counterpart in a top performing country in high school.

High performing countries focus on "qualifications" not diplomas. - Literally, a qualification is a certification that says that the student has taken specific courses and has gotten specified grades in them. In these countries, it is very clear what courses a student has to take, the content of these courses and the grades he or she has to have achieved to pursue further study or begin a career.

Such a system only works because the top systems not only say what subjects a student must study, but also describe the trajectory of topics that must be studied in that subject as a student goes through school, create course syllabi set to that trajectory or framework and create and score examinations set to the course designs. Thus all employers and universities know just what it means to have gotten a particular grade in a particular course. They know the content of the course and they know that, because the exams are centrally scored by one exam authority, they can trust the grade. Ultimately, this is exactly what a high school diploma

should signal to employers and colleges and universities in Maryland and across the [USUnited States](#).

With such a system in place, parents can hold the schools accountable for student success on state end-of-course exams. Students work hard in school because they can easily see that doing well in school is very important to their future whether they want to fabricate the blades for high speed, high temperature turbines or argue cases in court. No state in the [US-United States](#) has built a real system that encompasses all of these attributes.

Career and Technical Education

Unfortunately, career and technical education in the United States is widely regarded as what a student does if he or she cannot do academics. In the top performing countries, however, a student is expected to have achieved high competence in academics whether that student is headed to university or vocational training. There are examples of high schools in the [US United States](#) that follow an academically rigorous career and technical education model, including Western Tech and Sollers Point high schools in Baltimore County. But no state has, as yet, provided such opportunities on a statewide basis, although efforts are underway in California, Massachusetts, and Delaware, to do so.

Two initiatives offer opportunities for Maryland to evaluate and build on its existing CTE program. Pathways to Prosperity is an initiative by Jobs for the Future (JFF), in collaboration with the Harvard Graduate School of Education (HGSE) and state partners, to increase the number of students who complete high school and earn a postsecondary credential with labor market value. Created in 2012, states and regions in the Pathways network design academic and career pathways in grades 9-14 focused on high-growth, high-demand sectors of the economy such as information technology, health care, and advanced manufacturing. The network allows states to build their capacity to design, implement, and scale state and regional pathways. This network can provide Maryland with the tools needed to develop and deliver high-quality CTE programming. There are currently [9-nine](#) state members: AZ, CA, DE, GA, IL, MA, MO, NY, and TN.

ConnectEd began in 2006 in nine districts in California with high numbers of disadvantaged students and below-average student achievement. It has since expanded its services beyond California and is working with more than 30 districts in CA, IL, MI, NY, OH, TX, and WI. ConnectEd helps leaders and educators envision and chart a course of action for building a system of college and career pathways, drawing on lessons and insights from its work in creating Linked Learning. Linked Learning is a high school model that combines college-focused academics, rigorous technical education, work-based learning, and personalized student supports. ConnectEd provides assistance with capacity assessment and planning, pathway design and implementation, leadership development and coaching, pathway quality review and continuous improvement, instructional support, and work-based learning system development.

Leaving No Student Behind

While a system of this general design has proven—all over the world—to be a very powerful tool for raising student performance to the highest levels in the world at scale, it is particularly important for students from low-income and minority families. Although many Americans think the [US-United States](#) is nearly unique in having a lot of poor and minority students, the [US-United States](#) is actually about in the middle of the distribution of all the PISA countries. About 17% of the [U.S.](#) population lives below the national poverty line, which is roughly the same as Shanghai, Japan, and Germany. [Hong Kong](#) (20%) and [Singapore](#) (26%) have more poverty than the [US-United States](#); all of these countries [score](#) much higher than the [US-United States](#) on PISA. [In terms of the percent of students who are immigrants, the US-United States is roughly in the middle at 23% and Singapore is similar at 21%; Hong Kong \(35%\), Canada \(30%\), and New Zealand \(27%\) all have higher rates of first and second generation immigrant students, and again, score higher than the US-United States on PISA.](#)

Most of these systems do not rely on multiple-choice, machine scored examinations. Most questions on their examinations are essay-based. They are therefore able to assess higher level skills and more kinds of skills than can be assessed with most of the assessments used in the United States, which gives their students a very important advantage in the global marketplace. But these top systems also publish both their exam questions and answers that earn high marks, along with an explanation, from the examiners, as to why the answer deserved high marks. In this way, the top performing countries strike a very important blow for equity, because this system has the effect of setting the same expectations for the homeless child in the center city as for the rich student in the suburbs. The standards are high and they are uniform. With examples of real student work that meets standards in front of them, students know exactly what they have to do to succeed. All of the top performing countries benchmark their academic and work ready standards to those of other top performing countries and in that way make sure that their standards are high enough to assure all students that, if they meet those standards, they will be globally competitive.

Precisely because these standards are high, the top performers pay a lot of attention to developing strategies for catching students who start to fall behind as early as possible and getting them back on track for success.

Ontario assesses school readiness at age five. Using a tool called the Early Development Instrument, they measure physical health and well-being, social competence, emotional maturity, language and cognitive development, communication skills and general knowledge. A little over 70 percent are judged ready; those that are not are given double-period math and/or literacy classes with specialized teachers through primary school. In addition, the Ontario authorities put a lot of effort into providing teachers with formative and diagnostic assessment tools that teachers can use to keep track of student progress and provide extra help when needed.

In Finland, all students get Individual Education Plans, based at the outset on the results of diagnostic tests given when students enter primary school. All Finnish school faculties include a special education teacher who is there to make sure that any student who needs special help gets it. During their careers in school, close to 70 percent of Finnish school children get special help at some time or other, which takes the sting out of being labelled a special education student. The vast majority of students are considered “special education” students in Finland at one time or another.

In Singapore, too, students are screened when they enter primary school. Children who need extra help are given a half-hour a day of extra reading time and four to eight additional periods of mathematics each week for the first year of primary school. At the end of the year, teachers make a determination as to whether to keep students in the program for a second year. This program has recently been expanded to the secondary schools as well.

In all of these systems, there is a massive effort to make sure there is a surplus of high quality teachers available for every school. In almost all of these systems, extra teachers are assigned to schools serving high proportions of disadvantaged students. In many of them, there are strong incentives for the best teachers to serve in schools serving high proportions of disadvantaged students.

But the commitment to enabling all students to get to high standards is most apparent in the way the top performers use their teachers’ time. Much less time is spent in front of students teaching. Much more is spent in other ways. For example, one of those ways in Singapore and Shanghai is an hour a week spent by all the teachers in a regularly scheduled meeting. One of the topics at those meetings is students whose daily formative evaluations indicates are in danger of falling behind. All the teachers of that student will talk with one another to exchange ideas as to what the problem is and what might be done about it. The result might be a commitment from one teacher to talk with the student’s parents or from another to conduct a diagnostic test or for another to make a change in teaching method. That team will keep checking on that student until he or she is back on track. Or the team might decide that the student needs regular tutoring to catch up and the teachers use some of the time they are not teaching during the regular school day to do that tutoring. Tutoring is not a special program with its own administration. It is a regular activity in the school, available to any student who needs it from the regular teachers, who are trained as, among other things, skilled tutors. In this way, all students, from the most gifted to those who need a lot of extra help to master the regular—but demanding—curriculum are able to do so with a minimum of labelling and a minimum of separation from the other students.

Building on Maryland’s Assets

While Maryland, like other US-states, does not have a system of the kind just described, it does have assets that can be built on to create a system of the kind just described.

Maryland was among the first states to develop the Maryland College and Career Ready standards built on the Common Core State Standards and measured by the PARCC tests that are aligned with the Common Core. At present, students are expected to reach that standard by the end of their junior year. It is also the case that Maryland has a different standard that all students are required to reach, and a defined set of state courses in subjects that are required, in order to graduate from high school. These elements can be built on to create a real qualification system set to global standards. To do that, one standard must be identified that ~~nearly all~~ students are expected to meet, and the age at which the standard is supposed to be met would have to be moved back to the end of the 10th grade; a defined set of pathways for the junior and senior years, benchmarked to global standards, would have to be created; and the 10th grade standard would also have to be set to a global standard, as well as aligned with Maryland's actual requirements for success in the first year of community college.

Maryland was one of the first states to implement a school readiness model for entering kindergarteners in the early 2000s. Every entering kindergartener was assessed using the model. The model was recently replaced with the Kindergarten Readiness Assessment (KRA), which is aligned with Maryland's College and Career Ready standards. Presently, the KRA is given only to a sample of entering kindergarteners unless the school and teachers agree that all kindergarteners will be assessed. This will be discussed further under Building Block #1.

The existing Maryland lesson plans and lesson seeds could be a good starting point for developing the kind of K-10 curriculum with full supports that typifies the instructional systems in the top performing countries. The level of literacy expected by the end of 10th grade would have to be benchmarked to the top performers expectations for their students at that grade level. Once that is done, a full trajectory of expectations—grade by grade or grade span by grade span—would have to be set for each subject required for graduation, through the 12th grade. Then course syllabi would have to be written or, where they exist, revised and refined and high quality exams created where needed. Examples of student work that meets the standards at the 10th grade level would have to be collected and explanations of why they meet the standards written.

If Maryland chooses to emulate the emerging global best practice with its career and technical education program as well as in its academic program, it would have to focus that program on the junior and senior year of high school, set it to a high academic standard, collaborate closely with the employer community in setting the technical standards for the curriculum, closely integrate the program with the postsecondary career and technical education program at its community colleges, so that the transition is seamless, and provide instructors who are deeply conversant with the state of the art in the occupations the students are training in. Maryland would also have to create opportunities for students to acquire a wide range of technical skills at employer work sites, which may require new ~~state-State~~ regulations on apprenticeship for minors, below market wages for apprentices and other adjustments to the current environment available to high school age students for acquiring the kinds of skills they will need in an age of rapidly advancing automation, neural networks and artificial intelligence.

Perhaps the greatest challenge for Maryland and other ~~US~~-states, if they want to have a globally competitive education system, is the steps it will have to take to bring its students up to the level of academic performance found in the top performing countries. That is true for students at all levels but it is especially true for those who are most disadvantaged.

At present, far too many Maryland students leave high school reading at the 8th grade level or below based on community college remediation rates. In 2017, 49% of Maryland students taking PARCC English 10 received a score of 750 or higher (4 or 5), which is considered on track for college and career readiness (even fewer, 36%, received a score of at least 750 on PARCC Algebra I). For students reading below the 10th grade level, the kinds of measures that the top performers use to assess where students are when they enter the first grade (kindergarten in the U.S.-United States) and frequently thereafter will be essential. Those diagnostics will have to be used to develop plans for each student to address his or her challenges straight on until that student is on track. Use of these strategies will spell the difference between success and failure for a very large fraction of Maryland students.

RECOMMENDATIONS

A SYSTEM THAT PREPARES STUDENTS FOR COLLEGE AND CAREERS

1. Maryland needs to modify its current policy on College and Career Readiness to create a system that has all the advantages of globally-emerging qualifications systems. Such systems enable their students to emerge from high school two to three years ahead of where Maryland's typical student is at present and ready for both demanding college-level work and no-less-demanding technologically-demanding careers. Such a system will require:
 - a. Moving the grade year ~~by~~at which ~~nearly all~~ students are expected to acquire levels of mathematics and English literacy needed for success (a score of 4 or 5 on the PARCC assessment) in the first year of community college to the end of 10th grade, on the understanding that some students may take as long as the end of their senior year to reach this standard.
 - b. Setting a goal that by a date certain ~~what date?? - date certain (e.g., ten years after the enabling legislation is passed)~~ by which ~~all but the most severely disabled students~~¹ will be expected to meet this standard and schools will be held fully accountable for their success in helping students reach this standard.

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¹ It is understood by the Comission that college and career readiness may be different for students with the most severe disabilities, but the curriculum and instructional system, including standards and expectations, needs to be world-class for all students.

c. Requiring all Maryland high schools, by a ~~date certain~~ **date certain** ~~what date??~~, to offer rigorous pathways toward college and careers for students who are on track for college and career readiness by the end of 10th grade, including a high school upper division program consisting of the IB Diploma Program, the AP Diploma program, University of Cambridge Diploma Program or a program of similar academic rigor; a program consisting of all the courses required to get an Associate's Degree by the end of the senior year in high school (in collaboration with higher education institutions); and a high quality career and technical education program resulting in either an industry recognized credential or a credential entitling the holder to begin a demanding post-secondary program of technical education and training.

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d. Create an early warning system as soon as possible based on formative evaluations that enable teachers to identify students who are beginning to fall behind and have teachers work together to get the student back on track. This process should be done in all grades. (see BB # 5 on educating teacher candidates to use data analysis to identify and assist struggling students).

~~e.e.~~ For students who are not college and career ready by the end of the 10th grade, Maryland should build on its current transition course model. Interventions should include providing a common curriculum that is designed to help students catch up and targeting more teachers and resource personnel to struggling students. Students who are close to meeting the college and career ready standard at the end of 10th grade, or who meet the standard before the end of 12th grade, should have opportunities to participate in the college and career pathways, for example by taking a co-requisite higher education course that includes remedial and credit-bearing coursework in a subject that they are not yet college and career ready.

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~~e.f.~~ Conducting a study of the actual requirements in mathematics literacy for success in the first year of a typical Maryland community college program to determine the appropriate mathematics assessment for college and career readiness at the end of 10th grade (e.g. Algebra I, Statistics, Algebra II).

~~e.g.~~ Using PARCC as the State's measure of the literacy and mathematics requirements to be on track for college and career readiness, and for high school graduation, but beginning to plan for the use of high quality ~~end-of-course exams~~ assessments in the event that PARCC is no longer available.

~~f.h.~~ Incorporating a science assessment into the requirements for college and career readiness by the end of 10th grade (science is already a high school graduation requirement) — and considering whether other subjects should be added.

~~g.i.~~ Benchmarking graduation standards for all subject requirements to their equivalents in the top performing countries and states and regularly reporting the data, with a goal of raising graduation standards to the equivalent of top performing countries and states over time.

- h.i. Requiring all community colleges to enroll students that achieve the 10th grade standard in credit-bearing coursework without remediation.
- h.k. Setting a standard that students enrolling in four-year universities must achieve in order to enroll in credit-bearing coursework without remediation, and requiring public universities to enroll students meeting the standard in such courses.
- h.l. Constructing curriculum frameworks in all grades K–10 for all required subjects for which a framework does not already exist/completed, and using the curriculum frameworks to write sample course syllabi for each required subject in each required content area.
- h.m. Writing sample essay-based examinations for each grade, as appropriate, matched to each syllabus, to the extent required.
- h.n. Collecting examples of student work in each grade that meet the standards for each required subject and writing commentaries explaining why the work meets the standards so that teachers and students know exactly what is required to meet the standards.

CAREER AND TECHNICAL EDUCATION SYSTEM

2. While building on the progress that Maryland has made in this arena, the Sstate must work hard to match the achievements of those countries that are in the lead in this arena by:

- a. Creating two groups to improve the current CTE program.

- i. The first group would be formed as soon as possible to analyze the current CTE program and make recommendations to improve the program including the interrelatedness of CTE programs with workplace apprenticeships. The group would be composed of a select few individuals that have expertise in CTE programs and would act independently from Maryland's education agencies. The group would (1) benchmark Maryland against the best CTE systems in the world, including Singapore and Switzerland, and, on the basis of that benchmarking; (2) evaluate Maryland's existing CTE program based on what is learned from the best systems and the needs of Maryland's economy and employers; (3) analyze the requirements of a Maryland economy that could provide broadly shared prosperity to the state and deriving from that economic vision the kinds of skills the Maryland workforce would need to fulfill that vision; incorporate youth apprenticeships and other offsite training opportunities into the CTE system; and (4) report back to the legislature and the governor on the steps that the State needs to take to develop a fully world-class career and technical education system. This group would then be dissolved.

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ii. Then a second, permanent group would be formed to ensure the recommendations are implemented and to ensure that those CTE programs are successful. This advisory group would ~~an advisory group of leading Maryland employers, state economic development officials, relevant experts and Maryland educators at both the elementary and secondary and higher education levels to~~ 1) advise the MSDE ~~and school districts~~ on its career and technical education programs and would be a larger group with representatives from MSDE, leading Maryland employers, State economic development officials, relevant experts, and Maryland educators at both the elementary and secondary and higher education levels.

~~, 2) benchmark the best such systems in the world, including Singapore and Switzerland, and, on the basis of that benchmarking, 3) analyze the requirements of a Maryland economy that could provide broadly shared prosperity to the state and deriving from that economic vision the kinds of skills the Maryland workforce would need to fulfill that vision, 4) evaluate Maryland's existing CTE program based on what is learned from the best systems and the needs of Maryland employers, and 5) report back to the legislature and the governor on the steps that the state needs to take to develop a fully world-class career and technical education system~~

b. Developing the incorporating into the curriculum skill standards—including those for 'soft' skills—students will need to meet in the future that should be driving today's career and technical education programs.

c. Fully engaging employers in the design and provision of the workplace-based programs needed to equip students with both the theoretical and practical skills needed to pursue rewarding careers in the future.

d. Launching a statewide initiative to rebrand CTE as providing valuable and value-added skills for all students and partnering with industry to develop a media campaign

Collaborating with the State's community colleges to design a system in which very high quality career and technical education programs are offered to high school students with the assistance of community colleges and these high school programs are aligned with equally high quality community college technical programs, forming a continuous course sequence leading in some programs to advanced study in university.

a.e. Joining with a national network of states interested in benchmarking the best career and technical education programs in the world and in collaborating in the

development of advanced systems for career and technical education, such as the Pathways to Prosperity and ConnectED.

LEAVING NO STUDENT BEHIND

3. Maryland must, like the top performers, measure the school readiness of all incoming kindergarteners and enable teachers to use the knowledge thus gained to create education plans for each child and for the school that reflect the professional judgment of the faculty of the school as to the measures that need to be taken to help each child get on track and stay on track to college and career readiness (see Building Block #1 for more details).
4. Maryland schools must, like Singapore, Finland, and Ontario, make whatever adjustments are needed in the normal program of the school to focus on the core needs of each child as revealed in the initial screening, ~~including double periods of basic math and English literacy, before and after school tutoring, etc.~~
5. Maryland must provide every elementary teacher in the ~~state~~ State and appropriate university faculty members responsible for the preparation of elementary school teachers training in tutoring techniques shown by research to be effective in teaching reading to students who enter first grade not yet ready to profit from on-grade instruction in reading and to students who remain behind in the primary grades. ~~This should include, but not be limited to, instruction in Reading Recovery and Response to Intervention.~~ The ability to identify the differing needs of struggling learners and the skill to design appropriate intervention strategies should be built into the teacher preparation programs in all schools of education across the State.
6. Until such time as Maryland teachers routinely have the knowledge and time to do so during the regular school day, Maryland must invest in a program to train tutors for school-age students who are significantly behind in reading in the primary grades. Minnesota has created such a program for reading and math tutors, and a similar program is operating on a limited basis in Maryland.
7. Maryland must make the same kind of investment in the tools needed for high quality formative evaluation of students that the top performers have been making, so that regular classroom teachers develop high levels of expertise in the techniques needed to recognize in real time, almost immediately, during a class, which students do not understand or

misunderstand the material, and also, the tools and knowledge needed to accurately diagnose the problem and identify and solution with a high probability of working

8. Maryland must develop policies to give regular classroom teachers the kind of time during the day away from their teaching responsibilities to work with other teachers that teachers in the top performing countries have to pool their observations of students who are experiencing trouble, to come up with solutions to those problems and together monitor student progress to make sure that the solutions are working; Maryland must also develop policies to give its regular classroom teachers much more time to tutor students who need that special attention to get on track and stay on track (see Building Block #6 for details)

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.

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 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 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. 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 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 the 11th 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 benchmark states of Massachusetts, New Jersey and New Hampshire all spend 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.

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.

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 most recent data from 2017 shows that 49.3% of students taking the English 10 exam received a proficient score (4 or 5) indicating college and career readiness. The results broken down by race are: 29.0% for African American, 34.3% for Hispanic, 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. 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 students 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. 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. Of total test takers in 2017, 36.5% 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.

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 relates to Building Blocks 3 and 4 and 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 pulled out of class to work with specialists once or twice a week, and most often using an "intervention" program that is not necessarily aligned with the classroom curriculum. Afterschool 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.

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 judgement" 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. *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.

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 — should be preserved and updated.
2. Funding must be distributed equitably both among school districts – and within school districts – so that students who need additional services and supports are receiving them.

3. The 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.
4. A new weight for schools with high concentrations of students living in poverty should be added.
5. 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 through, for example, community schools.
6. Substantially more money must be provided to Maryland schools to enable the transition to the 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.
7. 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, such as greatly reducing system administration costs and increasing academic expenditures at the school level
8. Maryland must ensure that high quality teachers are teaching in high needs schools and provide additional learning opportunities for struggling students
9. 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 Maryland to greatly reduce the number of students who are assigned to special education. 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.
10. 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.
11. Because the funding that school systems receive is based on the 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, these targeted funds should be allocated to each school based on the number of at-risk students enrolled at the school. This will allow for the allocation of additional teachers and

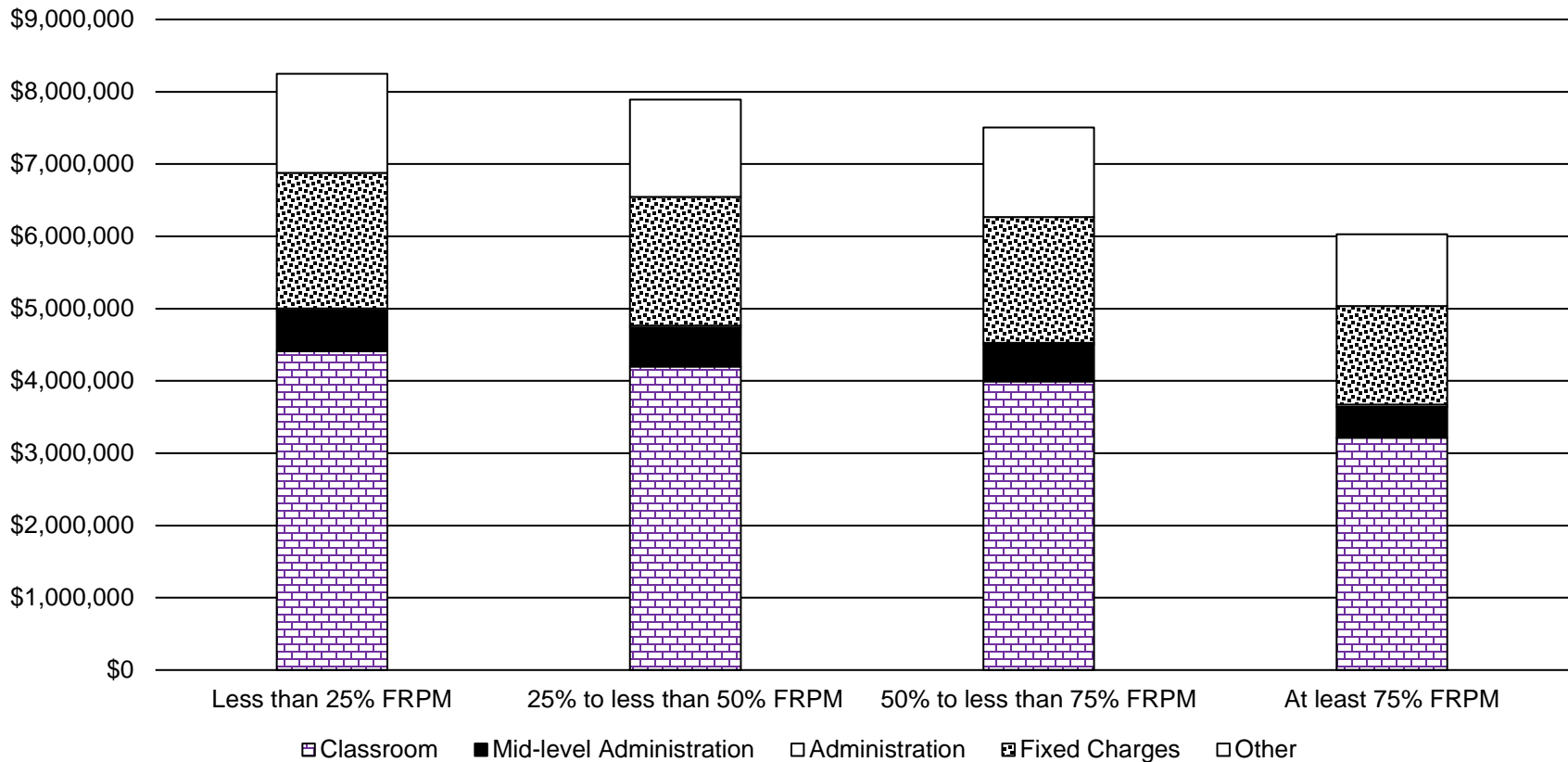
other resources to schools and students using the results from an early warning system (BB3 and 4) that identifies students who are not on track.

Commission on Innovation and Excellence in Education

**Follow-up Information from the
October 25, 2017 Meeting**

**Department of Legislative Services
December 11, 2017**

Average Expenditures at a School by Free and Reduced-price Meals Concentration (Fiscal 2015)



FRPM: Free and Reduced-price Meals

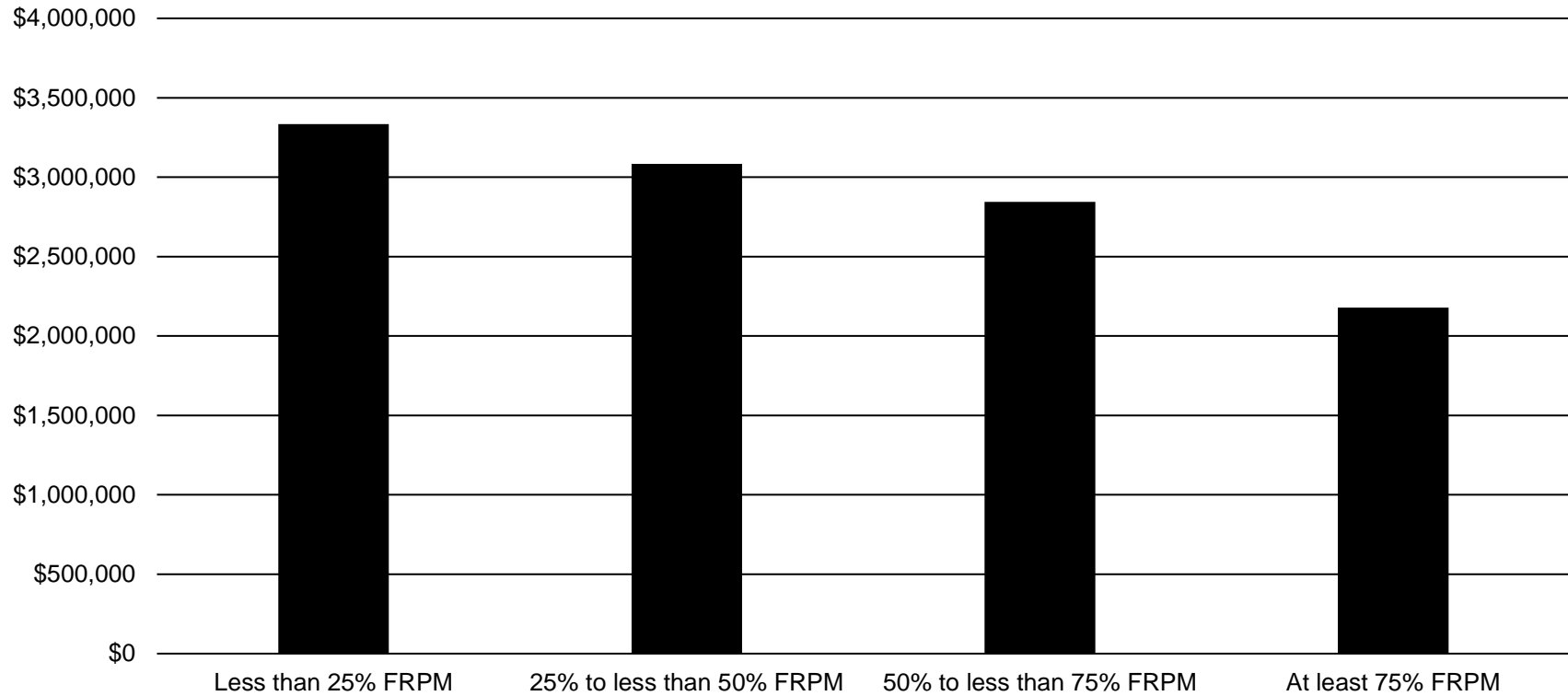
Classroom includes salaries for special education, nonspecial education, supplies, and other instruction related expenditures.

Fixed charges includes all expenditures for fixed charges as the data source does not break them out by program.

Other includes capital outlay, community service, student personnel, student health, transportation, and maintenance and operation of plant.

Source: Department of Legislative Services

Average Instructional Salary Expenditures per School by Free and Reduced-price Meals Concentration (Fiscal 2015)

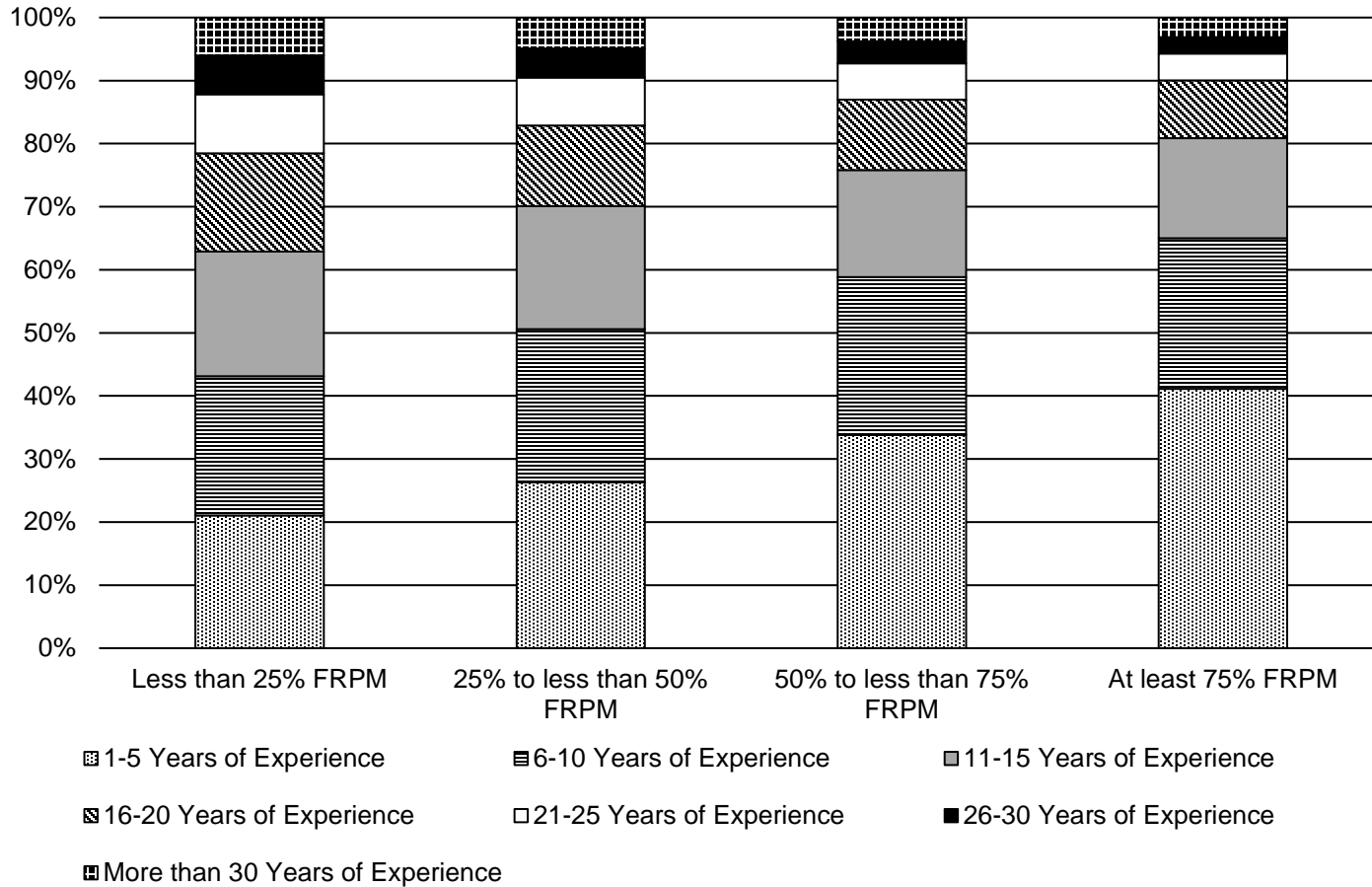


FRPM: Free and Reduced-price Meals

Note: Does not include fixed charges.

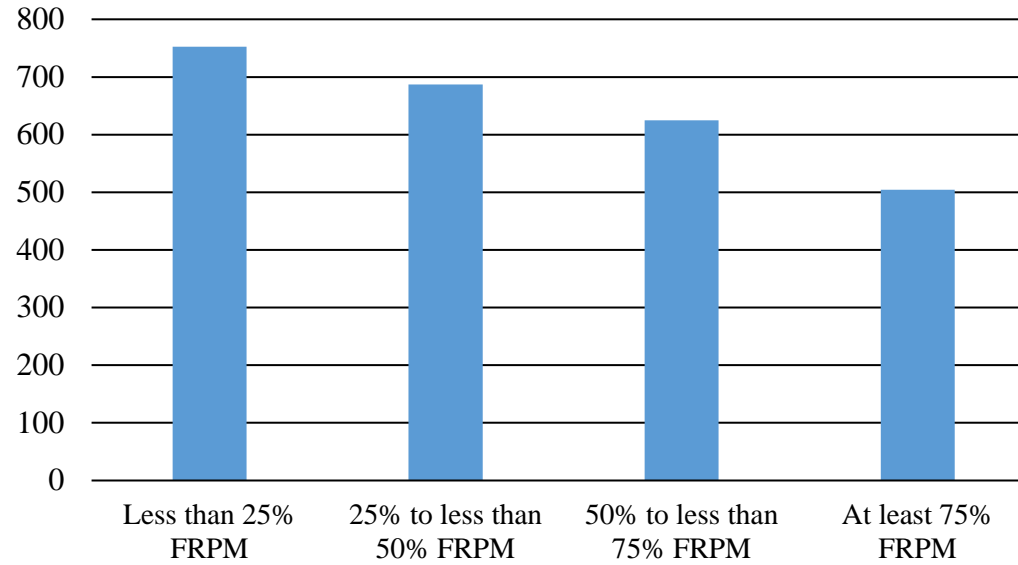
Source: Department of Legislative Services

Teacher Experience Level Distribution at Schools by Free and Reduced-price Meals Concentration (Fiscal 2015)



FRPM: Free and Reduced-price Meals
 Source: Department of Legislative Services

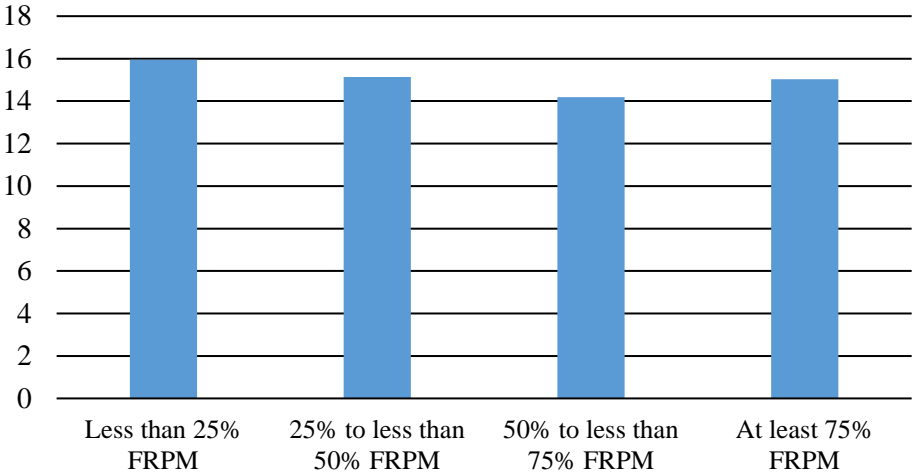
**Average Number of Students per School by FRPM Concentration
(2015)**



FRPM: free and reduced-price meal

Source: American Institutes for Research; Department of Legislative Services

Student/Teacher Ratio by FRPM Concentration (2015)

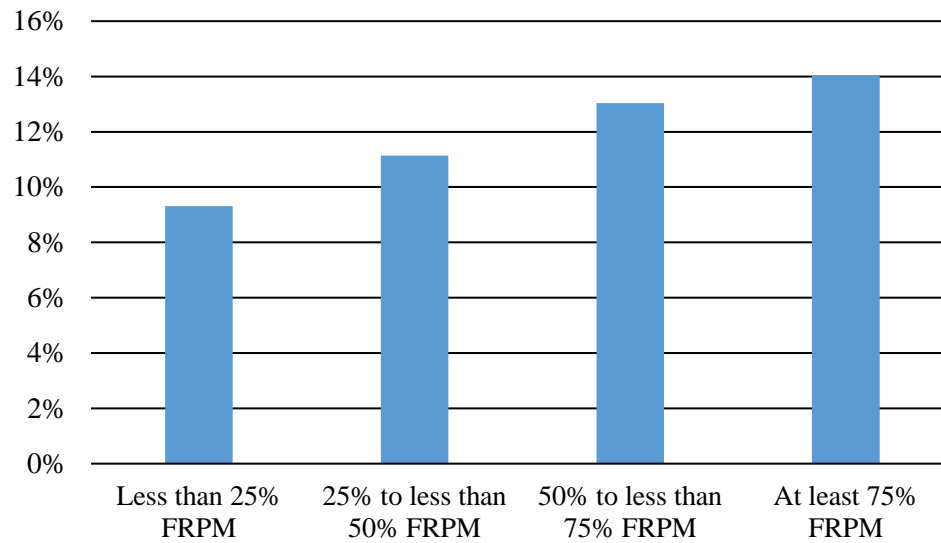


FRPM: free and reduced-price meal

Note: The ratios provided here are calculated by dividing total school enrollment within a FRPM category by the total number of teachers within the same category. Thus, the calculated ratios do not necessarily represent the student/teacher ratio within a typical classroom and should not be interpreted as such. Ratios were calculated using school-level enrollment data provided by AIR and school-level teacher staffing data from MSDE.

Source: American Institutes for Research; Maryland State Department of Education; Department of Legislative Services

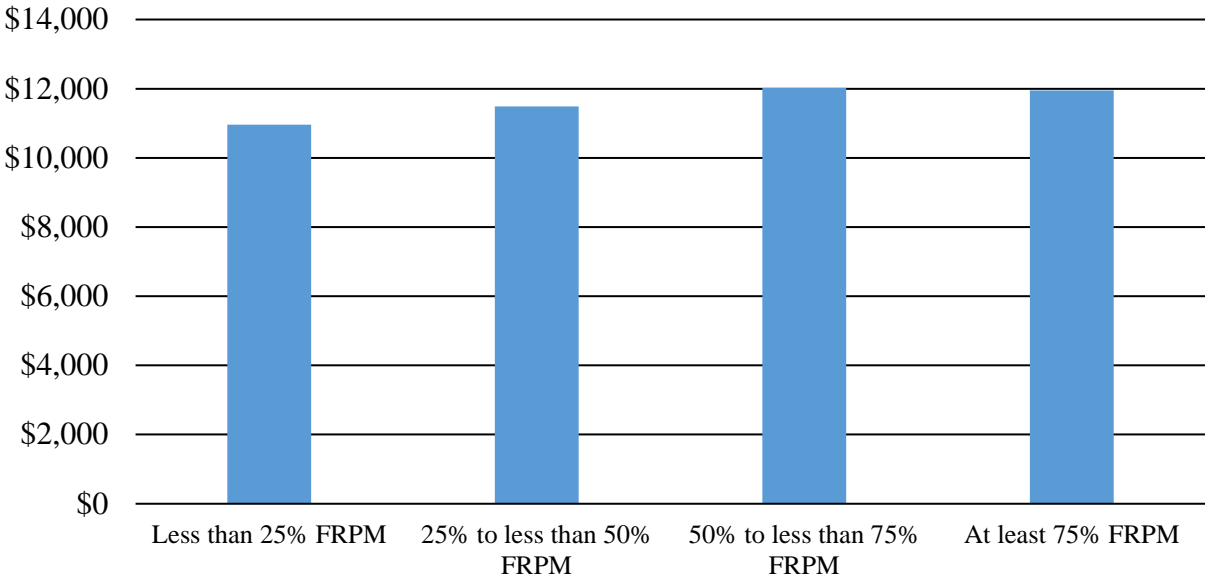
Average Percentage of Special Education Students at Schools by FRPM Concentration (2015)



FRPM: free and reduced-price meal

Source: American Institutes for Research; Department of Legislative Services

Average Per Pupil Spending at Schools by FRPM Concentration (2015)



FRPM: free and reduced-price meal

Source: American Institutes for Research; Department of Legislative Services

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12/11/17

To: Commission members and staff

Re: Draft BB #2

Draft BB #2 covers at-risk students and other key issues. I appreciate how much ground there is to cover in a limited time, and thought it would be helpful to provide my thoughts and suggestions in writing. Two documents are attached. One, a marked-up copy of the Draft with thoughts and suggestions (many of which I have raised in prior Commission meetings). Two of the suggestions are too long to include as a practical matter in the mark-up, so they are separately set out in the second document.

Thanks for considering, Buzzy

Detailed thoughts and suggestions on the special education weight(s) and a framework for interventions for struggling learners

Study of the weight(s) for special education students

While the Draft generally calls for workgroups to cost out recommendations in the first few months of 2018, this does not seem possible for the commendable recommendation to increase the weight(s) for special education. That is basically because, as national special education finance experts attest, state-of-the-art special education adequacy studies across the country reflect special education as it is, not as it should be if funded adequately. This is true of the current Maryland weight and the APA recommendation to this Commission. The state-of-the-art methodology for special education weight(s) lacks key information on current costs and evidence-based best practices across the continuum of disabilities.

Recommendation: An independent expert study is needed and will require employment of consultant(s) and probably take 12-18 months to complete. To begin this process as soon as possible, the Commission intends to recommend to the General Assembly and Governor no later than February 1, 2018 the scope and cost of such a study, and an advisory committee to oversee it. The advisory committee would include representatives of the General Assembly and Governor, general stakeholders similar to those on the Commission, and persons generally representative of disability classifications.

Development of a coherent framework for interventions for struggling learners and preliminary recommendations

The Draft commendably calls for costing out various strategies for providing assistance to at-risk students. But numerous references to this task are scattered and lack a coherent framework. For example, Draft Recommendations 6, 8, 9 and 10 refer in different ways to steps to “tutor students who need extra help,” “teachers [who] provide additional learning opportunities for struggling students,” “strategies to identify any special needs a student may have as early as possible and address those needs as quickly as possible,” and “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.” There are similar variations in the Draft Gap Analysis, including reference to the “early warning system” that is integral to BBs #3 and #4.

As a practical matter, as presented to the Commission and incorporated in the APA recommendations, there is a widely accepted coherent framework for recommending and costing

out strategies to assist at-risk students: the framework is called Multi-Tiered Support Systems (MTSS) or Response to Intervention (RTI) --- they are generally similar except MTSS tends to focus more on behavior and on the whole school than RTI which is more focused on academic interventions for “struggling learners.” Struggling learners are basically defined as all students who are below proficiency on standardized tests in the foundational skills of reading, writing and math. RTI is explicitly incorporated in the APA recommendations and a presentation to the Commission by a national expert on the subject, and seems the best term to work with in the Draft.

Recommendation: The BB #2 Gap Analysis and Recommendations for assistance to at-risk students should be revised to incorporate the framework of RTI. Specific revisions are in the accompanying Draft Mark-up.

Like early childhood programs (and unlike other recommendations – for example, teacher quality and career and technology education – that will require years to fully design and cost out), interventions for struggling learners, especially tutoring, are ready now. Further, there is notable activity already underway, involving members of the General Assembly, to expand interventions for struggling learners within an RTI framework. These activities include further implementation of SB 1, the recommendations of the Maryland Task Force to Study the Implementation of a Dyslexia Education Program, and efforts to directly increase funding for tutoring.

There is also a proposal in the works for the creation of an independent Maryland Children’s Early Literacy Institute, along the lines of a medical institute for diseases. It would provide technical assistance to MSDE and LSS’s in the development and implementation of intervention models, data collection and evaluations of various models. While working in partnership with MSDE and LSS’s, the Institute would remain an independent entity and raise the level of accountability. The Institute would be the first of its kind in the U.S., and with seed money from the state, could attract outside funding.

All of these actions are ripe for consideration by the General Assembly and Governor in the 2018 session.

Recommendation: The Commission workgroup responsible for assistance to at-risk students should consider recommending to the General Assembly and Governor by February 1, 2018 legislation that would further initiatives already underway to expand and improve interventions for struggling learners within an RTI framework, including seed money for an independent Maryland Children’s Early Literacy Institute.

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.

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 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 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. 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 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 the 11th 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 benchmark states of Massachusetts, New Jersey and New Hampshire all spend 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.

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.

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 most recent data from 2017 shows that 49.3% of students taking the English 10 exam received a proficient score (4 or 5) indicating college and career readiness. The results broken down by race are: 29.0% for African American, 34.3% for Hispanic, 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. 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 students 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. 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. Of total test takers in 2017, 36.5% 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.

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 relates to Building Blocks 3 and 4 and 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 who are not in special education are almost never pulled out of class to work with specialists once or twice a week, and even then, most often using an "intervention" program that is not necessarily aligned with the classroom curriculum. Afterschool 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.

Many intervention strategies in high-performing countries are incorporated more or less in the U.S. under the framework of Multi-Tiered Support Systems (MTSS) or Response to Intervention (RTI). The frameworks are generally similar except that MTSS tends to focus more on behavior and on the whole school than RTI which is more directly focused on academic interventions for “struggling learners.” Struggling learners are basically defined as all students who are below proficiency on standardized tests in the foundational skills of reading, writing and math.

Commented [B1]: See discussion of interventions for struggling learners in the accompanying Cover Memo.

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 judgement” 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.

~~In the U.S. adequacy studies have essentially focused too much on just adding money without sufficient attention to how the money is spent. Money matters but how it is spent also matters. More money must be linked to the design of high-performing systems and evidence-based best practices that enable higher performance with higher equity, and there must be much more accountability for how the money is spent. 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. 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.~~

Commented [B2]: I believe the Draft's current language may give an inaccurate impression that traditional adequacy studies cannot – even if carried out right – incorporate far reaching reforms based on benchmarked systems and evidence-based best practices ---- while also including strong accountability features. Also I believe the sentence "But data from the OECD" requires more context and explanation than its placement here.

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.

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 — should be preserved and updated.
2. Funding must be distributed equitably both among school districts – and within school districts – so that students who need additional services and supports are receiving them.
3. The 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.
4. A new weight for schools with high concentrations of students living in poverty should be added.
5. 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 through, for example, community schools.
6. Substantially more money must be provided to Maryland schools to enable the transition to the 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-

Commented [B3]: See Proposal for independent expert study in the accompanying document.

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, the development of an MTSS/RTI framework for interventions for struggling learners ~~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.

Commented [B4]: See discussion of a coherent framework for interventions for struggling learners in the accompanying document.

7. At the same time ~~But~~ Maryland must also scrutinize closely current school expenditures to ensure maximum efficiency and to seek reallocation of existing funds where possible, ~~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, such as greatly reducing system administration costs and increasing academic expenditures at the school level~~

Commented [B5]: The aim of the Draft recommendation is commendable. But I believe that there are statements in it that the Commission has not considered at all, and give misleading impressions that there are proven ways for "greatly reducing system administration costs." True there is surely some dead wood. But slashing central costs has been a mainstay for decades, and a case can be made that some central costs – such as development of curriculum, PD, supervision and monitoring -- are underfunded.

8. The RTI framework must include assurances ~~Maryland must ensure~~ that high quality teachers are teaching in high needs schools and provide additional learning opportunities for struggling students

Commented [B6]: See discussion of coherent framework for interventions for struggling learners in the accompanying document.

9. Adequate funding and effective implementation of interventions under the RTI framework for struggling learners ~~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 Maryland to greatly reduce the number of students who are assigned to special education. 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.

Commented [B7]: See discussion of coherent framework for interventions for struggling learners in the accompanying document.

~~10. 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.~~

Commented [B8]: This Recommendation would be redundant if the proposed revisions in Recommendations 6, 8 and 9 are adopted in one form or another.

~~11.10.~~ Because the funding that school systems receive is based on the 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, these targeted funds should be allocated to each school 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 data from the RTI framework ~~results from an early warning system (BB3 and 4) that identifies students who are not on track.~~

Commented [B9]: This is consistent with Comments above.