

Building Block #5: Abundant supply of highly qualified teachers**GAP ANALYSIS**

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 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 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, 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.

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.

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.

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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—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
 - c. 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
 - 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

2. 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. 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
3. 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 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
 4. 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).

5. In order to elevate teacher preparation programs and help them build the capacity to make the changes the Commission envisions in their programs of teacher education, Maryland should create a competitive grant program for collaboratives, each composed of a university and associated school districts, formed to 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 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 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
6. The districts in this competitive grant program should be expected to serve as 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.
7. 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, schools that will implement the emerging career ladder system design and use it to manage the new forms of school organization recommended by the Commission.

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