Maryland Teacher Shortage Task Force Report

Presented to the Governor's P-20 Leadership Council of Maryland in June 2008

The Honorable Martin O'Malley, Chair

FINAL

2008

MARYLAND TEACHER SHORTAGE TASK FORCE

Dr. Edward L. Root, Co-Chair
Ms. Patricia Alexander
University of Maryland, Baltimore County Dr. Bernard KhouryExecutive Officer Emeritus, American Association of Physics Teacher Ms. Carroll McGillinNational Initiatives Manager, Networking Academy Program, Cisco Systems, Inc. Mr. Javier MiyaresVice President for Planning & Accountability, Univ. of Maryland University Colleg Dr. Elizabeth M. Morgan President, Public Schools Superintendents Association of Maryland and Superintendent, Washington County Public School Ms. Mary Jo Neil
Ms. Mary Jo Neil
Dr. Karen A. VerbekeChair and Director of Teacher Education, University of Maryland Eastern Shor Dr. Richard T. WalkerAssistant Superintendent for Instruction, Worcester County Public School Dr. Donna L. WisemanDean, School of Education, University of Maryland, College Par
<u>Staff:</u>
Ms. Candace CaracoEducation Policy Analyst, Maryland Higher Education Commission Dr. James V. ForanExecutive Director, High School and Postsecondary Initiatives, MSD. Ms. Barbara FrankWebmaster, Specialist, High School and Postsecondary Initiatives, MSD. Dr. Nancy ShapiroAssociate Vice Chancellor for Academic Affairs, University System of Marylan Ms. Danielle SusskindP-20 Program Specialist, University System of Marylan

Table of Contents

Introduction	
Recommendations and rationales	6
Appendix A: Invitation to Offer Testimony	18
Appendix B: Testimony Offered	21
Appendix C: List of Resources	22

Introduction

Background

Maryland faces a crisis in staffing all of its classrooms with qualified and effective teachers. This problem is complex and not unique to Maryland, but it must be solved if we are to see continued progress in student achievement statewide and meet the state's workforce needs. Over the past several years, the Maryland State Department of Education (MSDE) *Teacher Staffing Report* has identified many of the same teacher shortage areas; clear statewide trends in teacher hiring, production, and retention are also evident, yet the critical difficulties remain. Because states across the country share these difficulties, Maryland cannot recruit its way out of the problem. School districts already recruit aggressively for qualified teachers within Maryland, across the country, and even internationally.

At the same time, nationally only 50 to 60% of all teachers remain in the profession longer than five years (AASCU, *Policy Matters*, May 2005, et al.). Although there is clear evidence that teachers prepared in Maryland professional development schools remain in teaching longer than other teachers, retention is also a Maryland problem. Annually, more teaching positions are available in Maryland than the number of students graduated from Maryland teacher preparation programs; some are positions created through school growth, but many are positions open because a teacher decided to leave. Maryland public schools now hire more new teachers prepared at out-of-state institutions of higher education than they hire from Maryland colleges. The 2006-2008 *Teacher Staffing Report* reports that of the beginning teachers newly hired for the 2005-2006 academic year (through October 2005), 1,439 were prepared in Maryland and 2,911 were prepared outside Maryland. Maryland needs to increase its production of teachers in critical shortage areas and increase teacher retention, and both need to happen immediately. The percentage of teachers able to retire today varies by district, but the number is large and by all accounts growing.

The persistence of these problems prompted Dr. Edward Root and the Maryland State Board of Education (MSBE) to request in 2007 that the predecessor to the P-20 Leadership Council, the PreK-16 Leadership Council, make the teacher shortage crisis its top priority. That Council asked the PreK-16 Workgroup to consider the Board's letter articulating its concerns and to come back to the Council with its own review of the issues. That report was offered to the Leadership Council in March 2007. The Council considered this report, as well as comments from other groups, and decided that Maryland needed a high-level task force to conduct a comprehensive review of this matter and report back with its recommendations.

Charge

The Teacher Shortage Task Force was charged with gathering and examining data on what is working and not working within and outside the state to address staffing problems and with developing a comprehensive set of recommendations specific to Maryland and responsive to the Workgroup's summary of issues. The task force was therefore to consider:

- higher education curricular initiatives (interdisciplinary programs, involvement of arts and sciences faculty, differentiated majors),
- certification issues (alternative certification, Praxis scores, career-changers),

- marketing and communications (information for the media, students, career-changers, counselors), and
- incentives (salary, scholarships, tuition waivers, retirement, new teacher assignments, and working conditions).

Task Force Process

The PreK-16 Leadership Council named as task force co-chairs Dr. Edward Root, of MSBE, and Dr. Patricia Florestano of the University System of Maryland Board of Regents. Task force members were nominated through the Council co-chairs, in consultation with constituents. The task force met for the first time in October 2007 and agreed to invite testimony from statewide stakeholders to solicit their input and recommendations (see appendices). Three dates were reserved for hearing testimony, and additional testimony was offered solely in writing. A Web site provided task force members and the general public with easy access to research reports, written testimony, and information about the task force (meeting dates, minutes etc.). Thirty-seven people presented testimony and offered 173 recommendations, though there is significant overlap within the recommendations. Many individuals submitted testimony on behalf of affinity groups. A complete list of those who offered testimony, along with their organizational and institutional affiliation, appears in appendix B. For more information, see the task force site: http://www.marylandpublicschools.org/MSDE/divisions/leadership/programs/tstf/.

After receiving input from stakeholders, the task force split into three subgroups (certification, higher education initiatives, and incentives) to evaluate testimony and research. All subgroups considered marketing issues. The subgroups met in February and March and also used e-mail to discuss and shape recommendations. In April the task force reviewed all draft recommendations and met to discuss and come to consensus on its recommendations. More editing took place after the last meeting based on the discussion and further fact-checking, and task force members had opportunities through e-mail to continue to offer input through the last report revision in order to ensure that consensus was maintained to the end of the process.

Themes

Several key themes informed the shaping of the original charge and emerged forcefully in the recommendations and task force discussions. None of these is unique to Maryland, but all are critical to addressing Maryland's teacher shortage:

- Preparation in critical shortage areas—Maryland school district representatives expressed in testimony a preference for hiring Maryland-prepared teachers: they are well prepared and already familiar with Maryland standards. But Maryland does not produce all the teachers it needs in certain fields. Teacher preparation programs, in conjunction with arts and sciences faculty, must examine how to build academic programs that will put more Maryland graduates into classrooms in those critical areas—and then recruit students into those academic programs. Program development is linked to broader issues of program requirements, approval, accreditation, routes to certification, and capacity.
- <u>Recruitment</u>—Critical shortage areas require teachers *now* and in the future. Attracting undergraduates majoring in high-demand content areas and attracting career-changers, especially in high-demand areas, are part of building a quality teacher corps. But career-

changers need routes to the classroom that cost relatively little in terms of money or time, and graduates in high-demand fields typically have appealing and varied career options, with higher salaries, outside education. Consequently, recruiting well requires skillful marketing but also program flexibility, multiple options, and incentives. To build and sustain its teacher corps over time, Maryland needs students in middle and high school to develop a passion for, and an understanding of, teaching as a professional career option. While recommendations to the task force addressed strategies to "grow our own," there was also discussion that teaching needs a better image both outside and within education. Too many parents, teachers, and college faculty are willing to discourage students from pursuing teaching. Before they ever apply to college or enter the workforce, students who will become the workforce of all fields need preK-12 teachers with a strong content background, cultural competency, and pedagogical skill.

- Retention—Keeping teachers in the profession and in high-need schools longer can have a significant impact on the teacher (and principal) shortage. Prominent educators, researchers, non-governmental agencies, and the media have come to recognize that retention depends upon more than salary or other financial benefits, although those are also factors. The Alliance for Excellent Education February 2008 *Issue Brief* noted the findings of Ingersoll (2003), NCES (2007), the MetLife Survey of the American Teacher, and the Center for Teaching Quality (2007), all of which quantify the role played by working conditions in a teacher's decision to transfer to another school or to leave the profession altogether. The brief also addressed the connection between teacher retention and student achievement. Many submissions to the task force addressed mentoring as a means of improving retention.
- <u>Data</u>—Good data is necessary for making good decisions. The task force found that it could not answer some questions without further study and that further study requires, in some cases, data and data networks not currently available. For example, we cannot say how many people in the state are now preparing to be teachers of mathematics.

The Education Industry Initiative of the Governor's Workforce Investment Board (GWIB) is also examining these issues at this time, although through a broader lens. When the GWIB report is complete, its conclusions should be reviewed alongside the recommendations offered here as part of a State effort to design a robust education policy agenda.

Financial Implications of the Recommendations

Although determining the costs of the various recommendations was not a part of the task force charge, the task force understands the recommendations will be considered at least in part in terms of their financial implications. These costs fall loosely into three categories: attracting candidates into teaching, preparation programs for teaching, and retention of existing teachers.

Attracting teaching candidates (and teachers) involves activities that span a wide range of possibilities. Outreach is more than a matter of additional funding. For example, a statewide marketing campaign could be phased in with relatively modest expenditures. A comprehensive Web site to recruit teachers that costs approximately \$200,000 seems less expensive when placed alongside the estimate that it costs a district and a school a total of \$78,750 to replace one teacher

into an urban school district (NCTAF 2007, "Policy Brief: The High Cost of Teacher Turnover," Appendix). A second strategy, creating a statewide coordinator for Future Educators of America clubs, is a modest cost compared with incentives such as full tuition support and expanded loan forgiveness. These costs are not without a degree of flexibility, depending on which teaching fields are targeted. Such costs should also be considered within a competitive context in which many states compete for the same teachers. Recent federal legislation (TEACH Grants) has opened the possibility for students choosing to teach in "high-need" fields to receive non-need-based federal financial aid. As of July 2008, institutions of higher education have a chance to participate in the TEACH grant program to support teacher candidates in high-need areas in the state where the college is located. The goal is to identify a variety of strategies to attract as many teacher candidates as possible to increase our teacher supply.

A review of the nearly two-decades-old teacher education *Redesign*, which most educators feel has improved the preparation of Maryland's teachers, should be undertaken in view of the historical perspective now available, new research on teacher preparation, current societal needs, and a determination of the best uses of financial resources available and necessary. The accreditation of teacher education programs should be considered as part of this review process with the purpose of reducing accreditation costs and unnecessary bureaucratic and reporting requirements. To the extent that traditional teacher education programs can be utilized, the need for alternative preparation programs is lessened. For the foreseeable future, however, alternatives will be necessary. It should also be noted that collaborative preparation programs such as the Associate of Arts in Teaching and the Maryland Approved Alternative Preparation Programs make good use of the collective resources of public school systems and two- and four-year colleges.

The problem of teacher turnover falls disproportionately on the local school systems, which have varying ability to respond to this problem. Improving teacher retention starts with the need for higher salaries and items such as mentoring, induction, and professional development. An improvement in retention, however, represents a return on investment given the high cost of teacher turnover. A recent study estimates that each year Maryland spends more than \$42 million on teacher turnover (NCTAF 2007, "The High Cost of Teacher Turnover"). Beginning teachers are more concerned about benefits such as health insurance and retirement than earlier generations of teachers, and it was often acknowledged in the task force hearings that teachers moved from one district to another to secure better compensation packages. Some teacher concerns linked to retention are less costly to address, such as paperwork reduction (specifically in special education), student behavior, and safety. In addition, potential cost-savings and efficiencies are possible through judicious and creative use of part-time, retired, and near-retirement teachers.

The issue of the teacher shortage is more than an education problem; it is a societal crisis. Virtually all of our societal endeavors, including the practice of all other occupations, depend upon an adequate supply of well-prepared, competent teachers. At this point in time, Maryland is dependent upon other states to prepare and produce the majority of its newly employed teachers each year, a circumstance that precipitated this task force. It is very dangerous to assume that this source of supply will continue unchanged in the future. Shortages in certain areas are national. Maryland is staking the future of its schools, the education of its students, and

the overall welfare of its workforce on the preparation of its teachers by other states. It is critical that Maryland become increasingly self-sufficient in producing teachers because the outside supply may dwindle while Maryland's needs persist.

RECOMMENDATIONS AND RATIONALES OF THE TEACHER SHORTAGE TASK FORCE

The following recommendations made by the Maryland Teacher Shortage Task Force are numbered consecutively throughout the document for ease of use, but the numbers should not be interpreted as priority ordering.

The recommendations are grouped by the four themes described in the introduction. The task force recognizes that many of the recommendations do not fall cleanly into one of the four identified themes. For example, financial incentives can have a positive impact on both recruitment and retention. The recommendations are placed within the category where they seem likely to have impact first, but in many cases, impact across categories is anticipated.

Preparation in Critical Shortage Areas

1. The Maryland State Department of Education (MSDE) should defer the elimination of the transcript analysis route to initial certification, an outcome required by a recommendation of the Quality Teacher Work Group (i.e., to require that all newly hired teachers come to the profession having completed an approved preparation program) adopted in 2003 by the Maryland State Board of Education, until 2012. In the interim, MSDE should review this certification pathway with supporting data to make recommendations regarding its continuation.

Rationale

The need for conditionally certified teachers is anticipated to continue for the near future. Transcript analysis currently represents a viable initial certification pathway for some individuals. Under the current requirements of *No Child Left Behind*, principals of Title I schools have to notify parents if their child is to be taught by a teacher who is not "highly qualified" (which included conditionally certified teachers), which is one potentially negative impact of this pathway that warrants its further review at a later date.

2. MSDE should review and recommend adjustment to the Maryland Praxis qualifying scores so they are competitive with neighboring states.

Rationale

In 2003 the Quality Teacher Work Group recommended periodic review of qualifying scores by an expert panel; this process remains a viable strategy for determining appropriate scores, and there has not been such a review for a few years. Some nearby states have lower qualifying scores, and engaging in the review process now would address whether Maryland should have a different qualifying score from those states.

3. MSDE should explore a mechanism for providing flexibility in teacher certification tests on the basis of acceptable evidence demonstrating skills and knowledge.

Rationale

Stakeholder groups have indicated that some successful teachers exhibit difficulty in meeting qualifying scores on required assessments. This difficulty excludes potentially effective teachers from Maryland classrooms.

4. MSDE in collaboration with local school systems and deans and directors of teacher education should explore what flexibility may be developed for the required teacher candidacy internship.

Rationale

Testimony to the task force revealed beliefs that the State requirements for the teacher candidacy internship were seen as limiting the teacher pipeline and that alternatives might be offered that did not adversely impact the quality of teacher preparation. The task force did not wish to make specific changes to the requirement without more considered study and asks that a work group by convened to assess the length of the internship, delivery models, and other ways to add flexibility.

This group may also explore the question of how community colleges may be involved in partnerships that supervise teacher candidates.

5. The committee of school system human resource directors and deans and directors of teacher education should be continued with support from MSDE to engage in ongoing efforts to review and to facilitate common understandings of policies concerning certification, program approval, and national accreditation, including what options and flexibility are available within existing law, regulation, and policy.

Rationale

This committee held regional meetings in fall 2007 that generated questions among stakeholders about laws, regulations, policies, and practices governing entry into the field of teaching. Stakeholders sought clarification about such rules and learned that at the very least, they sometimes interpret policy differently. The Maryland Association of Colleges for Teacher Education (MACTE), the Maryland Association of School Personnel Administrators (MASPA), and MSDE will convene this same committee to determine if there are refinements or changes that could increase the teacher pipeline.

6. The 1995 Maryland Redesign of Teacher Education should be reviewed for potential revision with consideration of changes in the preparation and induction of professional educators across the multiple pathways that have been developed since the Redesign was completed. MSDE and MHEC should oversee this review, with input from stakeholders, and should periodically continue to review and update the Redesign.

Rationale

Since the original *Redesign* policy was established in 1995, significant changes have occurred in state and national teacher preparation programs. The need for review is also suggested by changing state and national demographics, as well as new public policies and research findings related to public education, teacher preparation, and national needs. The issue of an adequate supply of teachers as it affects the quality of education and the nation's place in the global marketplace is vastly different than in 1995 and demands attention.

Therefore, the review of the *Redesign* should be comprehensive and address specific issues such as:

- teacher preparation in high-demand areas and meeting the full range of student needs, including academic program development to ensure high quality and academically rigorous college programs that enable students to qualify to teach in more than one field (e.g., interdisciplinary majors), thereby helping to meet the need for teachers in subject areas where few students prepare to teach, enable principals to have more flexibility in staff utilization, better meet the requirements of NCLB, and still meet certification requirements;
- consideration of differentiated majors;
- the cost and productivity of different pathways to certification and their relative effectiveness, especially how they impact the quality and supply of teachers;
- teaching in challenging schools with at-risk student populations;
- the expanded role of IHE and preK-12 partnerships during the teachers' induction years;
- national accreditation requirements and their impact on the costs of teacher preparation, quality of programs, time to degree, and supply of teachers, among other issues; and
- an enhanced research and evaluation component to support further review and updating the *Redesign* in future years.

7. The State of Maryland should provide dedicated funding for professional development schools (PDS) in the MHEC budget in order to maintain the quality and availability of PDS across the state.

Rationale

Through a higher education-school system partnership, PDS provide mentoring to teacher candidates who serve an internship in the PDS and also professional development for school and university faculty. Maryland PDS have proven to be a vital element of teacher preparation programs, and evidence supports the claim that PDS contribute to the retention of teachers (cf. Towson study, Jacob France Institute study). National and state data demonstrate that better retention is critical to solving the teacher shortage crisis. Annually in Maryland, fewer teacher candidates graduate than the number of pre-retirement-age Maryland teachers who leave teaching. PDS are a vehicle of workforce development because teacher candidates can often be successfully recruited by the district where they intern. However, local support for PDS, which operate under shared governance, can vary significantly by the size and resources of the school system partner and on the system's teacher turnover rate.

At the same time, the Maryland State policy requires institutions of higher education to prepare teachers in PDS; Maryland is the only state with such a mandate, although PDS are nationally recognized for their efficacy in teacher preparation. Maryland colleges and universities will require some additional funding if they are to increase production to address the teacher shortage, particularly if more students are to be trained through PDS. Institutions of higher education have already tried to make reallocations internally to replace federal grant funding that essentially built Maryland PDS, but they are not fully able to close the significant gap. Some PDS benefit from short-term grant funding; and still others rely, in part, on volunteer teachers who serve as site coordinators and on coordinating councils. A stable and predictable source of base PDS funding will ensure that this important part of teacher preparation in Maryland is maintained across the state.

Recruitment

8. The State of Maryland through a multi-agency effort, and to include institutions of higher education, should develop a public relations and marketing campaign that publicizes incentives for Maryland teachers and promotes teaching as a profession. Part of the campaign should be a Web-based clearinghouse developed with MSDE as the lead agency that provides national and international outreach to recruit and inform teachers and prospective teachers.

Rationale

For Maryland to recruit and retain an adequate supply of qualified teachers for its public schools, an effective and informative public relations campaign is needed to help develop a teacher pipeline, attract college graduates to teaching in Maryland, and express to the general public the critical importance of the teaching profession. Maryland recruits thousands of teachers from outside the state and hundreds from outside the country, so efforts should not be limited to a Maryland audience. The campaign should include elements addressing compensation, working conditions, professional and personal development, the learning environment, job satisfaction, Maryland as a destination, and additional advantages of being a teacher in Maryland. A tag line such as "Transfer Knowledge, Transform Lives" could be developed and used to help deliver a consistent message. Some part of the campaign should be directed toward addressing perennial designated staffing shortage areas, including underrepresented demographic groups.

A few other states, for example Florida (www.teachinflorida.com) and Virginia, have developed attractive, easy-to-navigate Web sites that provide a one-stop information center to recruit and inform teachers and prospective teachers for the state. Maryland should develop a comprehensive teacher marketing site of this type that:

- a) provides information or links to information on:
 - certification requirements;
 - school system applicant processes;
 - available positions in school systems;
 - undergraduate and post-baccalaureate teacher preparation programs;
 - available career-changer programs and requirements;
 - State financial assistance programs and other State incentives for teachers;
 - related Maryland employment, recreational, residential, and cultural opportunities;
 - other campaign elements noted above (professional development etc.); and
- b) offers interested candidates opportunities to post résumés and express interest in employment.

The expertise of offices outside of education could be valuable to shaping a campaign of this type, for example, the Office of Tourism. It is likely the State legislature would have to identify funding for this effort.

9. As part of the comprehensive marketing campaign to promote and support the teaching profession and to increase the number of teachers, initiatives should be collaboratively pursued by members of the education community to focus attention on the value of teaching as a career.

Rationale

This collaboration to promote and support teaching should include both institutions of higher education and preK-12 schools and districts. Such initiatives might include, for example, the creation of a statewide position for a Future Educators of America (FEA) coordinator at MSDE; establishing or publicizing institution of higher education policies that recognize and reward faculty who engage in P16-related activities and work with the public schools; and focused days or weeks promoting teacher education and the teaching profession within all schools and institutions of higher education.

This collaborative effort is necessary because the teaching profession needs an improved image and better public relations, both outside and inside education. Parents, teachers, college faculty members, and others inside education are urged to encourage students to enter a teaching career. Teachers and faculty members need to increase the public's and students' awareness and understanding of teaching as a career option and of the multiple career paths to becoming a teacher. Strategies such as providing district-level support for middle school Future Educators of America (FEA) clubs and club sponsors and for dissemination of model programs such as the Teacher Academies of Maryland (TAM) would support this recommendation. FEA clubs provide early opportunities to reach out to middle school students to encourage them to consider continuing their education through college and become (http://www.nea.org/teacherquality/futuretchrs.html). FEA clubs have a demonstrated track record in Maryland of introducing students to the profession and marketing teaching as a profession (Unpublished findings from E=mc², USM, 2007), and these clubs expand the teacher pipeline by encouraging young students from diverse backgrounds to consider teaching as a career. Creating a statewide position for an FEA coordinator would help ensure that all districts will be able to create and sustain FEA clubs.

IHE leaders should promote teaching across their campuses and among their teaching faculty. According to national studies, the reward system is a powerful motivator of faculty behavior. Faculty members are involved in a variety of types of activities including teacher professional development, teacher preparation, teacher recruitment, curriculum alignment and revision, mentoring, and research. If this work is deemed important, faculty should be recognized and rewarded for this work.

10. The State of Maryland should consider legislation similar to the former full tuition waiver program, which existed until about 1972. The full tuition benefit should be available to students in all pathways to teaching in critical shortage fields at the tuition level of the flagship institution and funded insofar as possible by the State so as not to be a financial burden on the institutions of higher education. The service commitment to be eligible for the benefit should be one-for-one-plus-one (e.g., five years of service for four years of full tuition).

Rationale

Making full tuition assistance available to those pursuing a teaching career helps remove one of the primary barriers to entry of the teaching profession. Given that teachers cannot expect to earn incomes as high as those of many of their fellow graduates, either when they start or as their careers progress, it is important to ensure that students do not need to take on substantial student loans to pay to become a teacher. Students with great financial need may be eligible for

additional financial assistance to cover living expenses. Students with financial need may, in some cases, be able to study while they live at home, but they will face high costs for tuition, fees, and books for the foreseeable future. Providing full tuition—at least at the cost level of the flagship—is a substantial incentive to offer prospective teachers with or without financial need. At the same time, it is important to ensure that teachers who receive this assistance do serve Maryland's youth by teaching in the State. The task force would like to see robust and predictable financial support for teacher candidates and in return recommends this increase in service. There is evidence to suggest that teachers who stay at least five years in teaching are likely to remain for an even longer period.

- 11. The State of Maryland should work to ensure that annual loan forgiveness, as well as tuition waivers and/or scholarships, are available at the tuition level of the state's flagship institution for teachers in critical shortage areas. Eligibility for tuition and loan incentives tied to teaching in a critical shortage area in Maryland schools should include:
 - teachers and prospective teachers from underrepresented demographic groups;
 - career-changers and those returning to teaching who require additional course work to become certified in a critical shortage area;
 - Maryland students who attend an out-of-state institution who commit to teaching in Maryland, and
 - non-Maryland students who choose to attend a Maryland institution of higher education and commit to teaching in Maryland.

Rationale

All critical shortage areas identified in the *Teacher Staffing Report* should be eligible, as legally possible, for State incentives related to paying educational costs. Because part of meeting school needs for teachers includes attracting career changers, career changers should be eligible for benefits as they often incur significant costs for coursework and training needed to become a teacher. Extending tuition benefits to non-resident students will help Maryland attract more teachers to the State. The last staffing report shows that over 1,400 teacher candidates graduated from Maryland programs but were not hired by Maryland schools; by all estimates, a significant number of them left the state, with many returning to their homes states to teach. Maryland should try harder to retain them to teach in Maryland public schools. Some Maryland students go to college in nearby states, and of that group, some may actually be closer to home while studying in an adjacent state than they would be if they attended a Maryland college. Through a substantial tuition benefit program, Maryland might attract them back to the state to teach once their studies are complete.

12. Institutions of higher education (IHEs) should work with local school systems to design programs geared to teachers returning to the profession and those who have recently retired but wish to continue on a part-time basis.

Rationale

Many teachers leave the profession for a variety of reasons, but not all teachers intend to leave the profession forever and some would like to remain involved on a part-time basis if possible. For those who would like to someday return or who are not sure whether they will return, it is important that the door be kept open. IHEs should work with local school systems to

design programs that would be attractive for those who have left the profession so they can remain engaged with their content area and kept abreast of the latest developments in pedagogy.

Retention

13. Teacher salaries should be competitive with other states in our region and with other professions that require similar professional training, skills, and responsibility.

Rationale

Raising teacher salaries must be a priority. Attracting and retaining highly qualified, well-prepared teachers to a career in teaching will always be a challenge as long as teacher pay lags significantly behind professions of similar requirements, education, and responsibilities. When negotiating, local school districts and employee representatives must work collaboratively to raise salaries and eliminate pay inequities between teachers and other professions. In the recently released book *The Teaching Penalty*, Lawrence Mishel, Sylvia Allegretto, and Sean Corcoran report that in the U.S., teachers on average make 14.3% less than other professionals with similar levels of training, such as accountants, nurses, clergy members, computer programmers, and personnel officers (see also *Education Week*, online edition, April 29, 2008).

14. The State Legislature should provide enhanced tax incentives linked to individual income taxes for teachers in Maryland schools.

Rationale

Maryland school districts now regularly compete with districts across the country for qualified teachers in the U.S. and abroad. This highly competitive environment calls for more aggressive recruitment and incentives. The State Legislature should entertain enhanced tax incentives on individual income taxes for classroom teachers and teachers retired from Maryland schools. A tax break would in effect put money back in the pockets of teachers so they can stretch their monthly income to meet housing costs, which are among the most expensive in the country (rent or purchase), outstanding student loan obligations, or other financial commitments that are difficult to meet on a teacher's salary. Eligibility could be based on the same guidelines that provide educators deductions, credits, or adjustments on their federal tax returns.

15. The State of Maryland should examine local school systems (LSS) participation in existing State homebuyer incentive matching programs, with an eye to determining if additional marketing through LSS will interest teachers in these incentive options or if there are program adjustments that could make the homebuyer incentives more attractive to teachers. Incentives should include reduced interest rates and assistance with closing costs.

Rationale

Policy leaders have recognized that it is very difficult for first-time homebuyers to afford the purchase of a home anywhere in Maryland. That difficulty is exacerbated for teachers due to current salary structures, particularly at entry levels. The State could provide a powerful incentive for teachers to want to teach in Maryland, and to remain in teaching, by working with lending institutions to provide a subsidized, reduced interest rate program benefiting teachers

across the state, especially for those who are first-time homebuyers. That incentive could be enhanced by waiving certain line items in closing documents or providing assistance with closing costs. This incentive could be tied to a certain length of stay in a school system, which should not discourage most individuals prepared to make the commitment of home-buying. A reduced interest rate would be attractive not only to young teachers, but also to those with more experience. In addition, reduced homebuyer costs might be an incentive to some teachers to remain in teaching rather than seek higher-paying positions.

Existing homebuyer incentive programs might be marketed more directly to teachers (by school systems, by a comprehensive website etc.) and, as necessary and appropriate, adapted to serve teachers better. Data from the Maryland House Keys 4 Employees (HK4E) program and other first-time homebuyer programs could be used to determine what program elements are most effective for teachers. School systems might assist in determining why some of them participate in HK4E and some do not, as well as what might attract more teachers to use such programs. A cost-benefit analysis might be done for those districts that participate with matching funds in the House Keys 4 Employees program.

16. The State of Maryland should continue to be responsible for the Maryland State Retirement System for Teachers and should work to make retirement benefits comparable to those offered by other states in the region.

Rationale

The strength of the Retirement System is in no small part a result of its organization as a State benefit and program. The System has been well managed for decades, to the benefit of both the State and System members. The secure and stable retirement this System represents is the State's recognition to each individual educator of that person's years of public service. Maintaining a defined benefit retirement system is one strategy for retaining teachers.

While 2005 Retirement System improvements made Maryland more competitive, surrounding states have pension and tax benefits that continue to outpace Maryland's. Maryland political and educational leaders will use the legislative review requirement included in the 2005 legislation to identify ways to improve the teachers' pension system. The State of Maryland needs to continue to ensure that educators' salaries and benefits are enhanced so as to remain competitive with other states, rather than pass the responsibility for future payments and improvements to local school systems, which have uneven capacity to provide such support.

17. MSDE, in conjunction with institutions of higher education, should create guidelines for an induction program for teachers, principals, and instructional assistants that includes highly qualified, trained mentors and focuses on support, classroom management, cultural competencies, and curriculum, instruction, and assessment. This program should include the first two years of teaching for all teachers and the first three years for teachers in schools in any phase of school improvement.

Rationale

Teacher attrition is both a financial and an instructional problem, and approximately half of all teachers leave the profession within the first five years of teaching. School systems need to address the problems associated with teacher attrition by implementing a comprehensive induction program for new teachers. Replacements are expensive due to the costs of recruitment

and the subsequent training and support of that new teacher. The cost of replacing teachers has been estimated by the National Commission on Teaching and America's Future at \$39,250 and \$78,750 depending upon whether it is a suburban or urban district ("The High Cost of Teacher Turnover," June 2007).

Research shows that high-quality induction and mentoring programs decrease teacher turnover, provide new teachers with the instructional skills they need to increase student achievement, and improve the satisfaction and skills of veteran teachers. An induction program is important for all new teachers in all schools, but it is exponentially important in high priority (i.e., challenged) schools as part of the basic support system for educators, including the administrative staff. In addition, the current generation of new teachers will see induction as an incentive because it represents a commitment to their professional development, particularly when done in collaboration with institutions of higher education.

18. Local school systems and principals should design teaching assignments and schedule opportunities for job-embedded professional development, with particular emphasis on teachers in their first five years of experience and those in schools in any phase of school improvement.

Rationale

Too often new teachers find themselves in situations where the level of challenge in either the school or their teaching assignment does not match their talent and skills. In cases where the system makes the placement decision, it is critical that system leaders consider each individual's background of study in the specific context of the challenge level at the school, the leadership structure at the school, and the supports for new teachers in place in the school. To motivate, challenge, and keep new teachers, school personnel who craft teacher assignments and then match teachers to those assignments, both to schools and within schools, must give special attention to assignments both to schools and within schools ensure that assignments are attractive in scope, commensurate with their skills, and manageable with other supports in place, such as mentoring, in place. Success is a critical retention factor, and therefore placement and assignments for teachers must be handled with the goal of success as the driving force.

19. Local school systems and institutions of higher education should collaboratively design high-quality professional development aligned with the Maryland Teaching Standards for Professional Development and accessible to teachers without significant financial outlay on their part and without shifting the cost to colleges and universities.

Rationale

Local school districts and institutions of higher education should collaborate with each other and also with MSDE and the Maryland State Teachers Association to ensure that professional development for teachers is research-based, job-embedded, reflective, ongoing, and supported through robust follow-up activities. Teachers need to be directly involved in the planning of their professional development, and principals must also be involved to ensure that the professional development is integrated with other school activities, as appropriate. Best practices should be shared with one another.

The 2004 Report of the Maryland Professional Development Teacher Advisory Council surveyed all public school teachers in Maryland to determine the qualities of the most effective

professional development programs. Among other things, the data in the report support the idea that graduate courses and graduate programs were among the most highly effective and highly valued professional development opportunities available to teachers. In order to expand opportunities for more teachers to have access to this high quality professional development, local school districts are encouraged to work closely with colleges and universities to minimize the initial out-of-pocket expenses to teachers while not shifting the financial burden to institutions of higher education. New teachers are likely to experience financial strain that can make paying for graduate study and professional development courses difficult. Colleges and universities can work with local school districts to expand their direct billing practices to offer payment plans that will allow teachers to participate in graduate study or other professional development with minimal initial out-of-pocket expenses.

20. The Governor and the Maryland Congressional delegation should work with local school systems and MSDE to examine paperwork flow, reporting requirements, and other work requirements to reduce, streamline, and align the related expectations of teachers, principals, and other personnel so they can focus on the core mission of increasing student achievement. This work should result in recommendations for federal and state legislation or policy changes to address policy issues.

Rationale

With each new mandated education program and initiative—whether federal or state—school systems are required to complete a myriad of paperwork that may duplicate existing reports. Working with the assistance of advocacy groups, a thorough examination of currently mandated federal and state reports should uncover areas of duplication and offer opportunities to streamline processes—saving time and resources for both the individual schools and the federal or state agencies receiving the reports.

21. To reduce paperwork and improve teacher working conditions, MSDE should not require short-term objectives in individualized education programs (IEPs) for all students with disabilities in all areas that are not specifically diagnosed through the evaluation process.

Rationale

The Individuals with Disabilities Education Act (IDEA) does not require short-term objectives for other than the most severely disabled students. There are sound reasons for retaining short-term objectives in areas specifically identified by the evaluation process, but there is no requirement to include short-term objectives for areas not specifically identified, yet these are often included in the IEP at the local school level. Making this change improves working conditions for teachers by reducing an unnecessary burden of paperwork that is exacerbated by having to include short-term objectives for all areas for all students with an IEP. Less unnecessary paperwork, along with other improvements to working conditions, can help improve teacher retention.

22. To help improve working conditions and learning environments, MSDE should revise the definition of in-school suspension for students with IEPs. MSDE should ensure that services and instruction continue for these students.

Rationale

Under current regulation, if a student is removed from the classroom for behavioral reasons for more than 30 minutes but remains in the school, the student is considered to be in "in-school suspension." That half-hour is recorded as a full day of in-school suspension and counts toward the cumulative limit of 10 days of suspension allowed by regulation. Increasing the amount of time required to count as an in-school suspension would reduce the number of students in the category of in-school suspension. Making this change with respect to special education would provide teachers and administrators with the flexibility available in federal law: IDEA appears to permit in-school suspension so long as instruction and services continue. This change would be an incentive that could help retain teachers by giving the schools a better tool to deal judiciously with minor infractions and classroom distractions, while meeting all requirements for students with disabilities.

It is critical that action be taken to stem the flow of teachers away from special education. Their working conditions must be addressed, while ensuring that students receive the services they need.

<u>Data</u>

23. MSDE, the Maryland Higher Education Commission (MHEC), the University System of Maryland (USM), the Maryland Association of Community Colleges (MACC), St. Mary's College of Maryland, Morgan State University, and the Maryland Independent College and University Association (MICUA) should work together to select or develop a unique teacher identifier for all teacher candidates that stays with them when they are hired by a school system, link that identifier to the MSDE longitudinal database that uses unique student identifiers, and develop a systemic approach to capturing and analyzing data using these identifiers.

Rationale

At this time, Maryland cannot say how many prospective teachers from all avenues of preparation complete their programs and go on to become teachers in Maryland. Stakeholders seek information about high school Teacher Academy participants, students who enter Associate of Arts in Teaching (AAT) programs, Master of Arts in Teaching (MAT) students, career-changers who participate in either the Resident Teacher Certificate or transcript analysis, as well as full-time undergraduates in teacher preparation programs. Many other key data related to teacher production, appropriate preparation, and effective retention are also unavailable. The current staffing report provides limited detail on the origin of teacher hires and little reliable detail on teacher retention. These knowledge gaps present barriers to making data-driven decisions. A teacher identifier linked to a student identifier would help provide information for evaluating preparation programs and various pathways into teaching.

Maryland has a history of inter-agency, inter-segmental cooperation with regard to teacher preparation, and an initiative of this magnitude should be approached with the key constituencies in dialogue together.

Many states have been developing similar statewide data networks to help guide local and state strategies regarding professional development, teacher preparation, and teacher retention. The American Association of State Colleges and Universities (AASCU) makes several related recommendations for state policy-makers in "Toward a National Framework for Evidence of Effectiveness of Teacher Education Programs" (see Alene Russell and Mona Wineburg writing for AASCU in *Perspectives*, Fall 2007, p. 16). The development of such a systemic approach to capturing these data should be planned to include all teachers hired by Maryland school districts, whether prepared in Maryland or in other states or countries.

MSDE, MHEC, USM, MACC, and MICUA should report to the Governor's P-20 Leadership Council on their collaborative progress no later than September 30, 2009.

24. Local and state education agencies and stakeholder groups should use the Governor's Teaching and Learning Conditions Survey and/or other local school system survey results as data points for potential use in addressing issues related to the recruitment and retention of teachers.

Rationale

The Governor's Teaching and Learning Conditions Survey or school district surveys administered locally can be used to assess the perceptions of teaching and learning conditions by professionally certified personnel. The factors that affect the recruitment and retention of teachers should be identified and studied. The findings could inform action taken at the level of individual schools, districts, regions, and the state as a whole to improve teacher recruitment and retention.

Appendix A: Invitation to Offer Testimony

In mid-October 2007, the following memorandum was disseminated by e-mail to the constituents listed below.

Maryland Teacher Shortage Task Force

TO: Superintendents, Maryland Local Education Agencies (LEA)

Council of Educational Administrative and Supervisory Organizations of

Maryland (Association of School Business Officials of MD and the

District of Columbia; MD Association of Colleges for Teacher Education;

MD Association of Elementary School Principals; MD Association of Secondary School Principals; MD Association of Supervision and

Curriculum Development; MD Association of School Personnel

Administrators; MD Association of Teacher Educators; MD Council of Staff Developers; MD Middle School Association; MD State Department

of Education; Public School Superintendents Association of MD; State of

MD International Reading Association Council; University of MD, Dept.

of Education Leadership, Higher Education & International Education)

Maryland State Teachers Association Board of Directors

AFT Maryland Board of Directors

PreK-12 Principals Advisory Council

LEA Board of Education Presidents

Maryland Association of Boards of Education

Maryland Association of Student Councils

Maryland Parent Teacher Association

Maryland Council of Teachers of Mathematics

Presidents, Two- and Four-Year Institutions of Higher Education

Chief Academic Officers, Two- and Four-Year Institutions of Higher Education

Deans & Directors of Teacher Education, Two- and Four-Year Inst. of Higher Ed.

Deans of Arts and Sciences, Two- and Four-Year Institutions of Higher Education

Maryland Independent College and University Association

Maryland Association of Community Colleges

Eastern Shore of Maryland Educational Consortium

Maryland Business Roundtable for Education

Members, Education Industry Initiative, Governor's Workforce Investment Board

Maryland Federation of the Council for Exceptional Children

FROM: Dr. Patricia S. Florestano and Dr. Edward L. Root, Co-Chairs

Teacher Shortage Task Force

DATE: October 19, 2007

SUBJECT: Recommendations for the Teacher Shortage Task Force

In the spring of 2007, the Leadership Council of the Maryland Partnership for Teaching and Learning, PreK-16, agreed to convene a task force to develop a comprehensive set of

recommendations to address critical shortages of qualified teachers in the state. As documented by the annual *Maryland Teacher Staffing Report*, shortages of qualified teachers are especially keen in certain fields that are also experiencing national shortages: computer science, English for speakers of other languages, mathematics, the sciences, and special education. Maryland school districts are therefore competing with neighboring states in a highly competitive environment. At the same time, many qualified teachers leave the profession after just a few years.

The co-chairs of the PreK-16 Leadership Council—the State Superintendent of Schools, the Secretary of Higher Education, and the Chancellor of the University System of Maryland—requested that we co-chair the Teacher Shortage Task Force. The task force members are a broadly representative group of individuals who will work over the next several months to report their final recommendations to the newly constituted Governor's P20 Leadership Council of Maryland.

To fulfill our charge, it is important that the Teacher Shortage Task Force hear from the many sectors of the education community. To facilitate the involvement of as many informed stakeholders as possible in this endeavor, three afternoons have been set aside to hear the thoughts of people close to these issues: **December 6, January 8, and January 22**. We invite you to present your concerns and, especially, your recommendations for solutions to one or more of the many overlapping facets of the teacher shortage crisis in Maryland. Presentations should not exceed 15 minutes, with some time reserved for questions from task force members. We also ask presenters to submit in advance a brief written summary of the recommendation(s) to be made and a brief rationale for each (one page per recommendation-rationale). These submissions will enable task force members to have your ideas at hand as they shape their final recommendations. If there are more requests for presentations than there is time, these will also be used to select presenters. **If you wish to offer a recommendation without making a presentation, you may simply submit your written recommendation(s) and rationale(s).**

We ask that you offer your recommendations within one or more of these general categories:

- 1. <u>Higher education curricular initiatives</u> (for example, interdisciplinary programs, involvement of arts and sciences faculty, differentiated majors, discipline-specific education tracks);
- 2. <u>Certification issues</u> (for example, alternative certification, Praxis cut scores, career changers); and
- 3. <u>Incentives</u> (for example, scholarships, tuition waivers, salary, retirement benefits, new teacher assignments, and incentives related to working conditions, including leadership issues [and their effect on retention], student discipline, class size and total student teacher load, preparation time, professional development, and mentoring).

We also ask that your recommendations take into consideration <u>how the strategies you offer</u> <u>might be marketed or otherwise communicated</u> (for example, information for the media, for counselors at all educational levels, and for the purpose of engaging students or career changers).

To schedule a presentation or to offer recommendations, please e-mail your written material **by November 19, 2007**, to Dr. Nancy Shapiro at **nshapiro@usmd.edu**. To request a presentation slot, indicate—in order of preference—on which of the three hearings dates you are available during the period 1:00 - 4:00 pm and include a phone number. Every effort will be made to schedule everyone who requests a presentation time. Presentations for December 6 will be scheduled by November 30 and others as soon thereafter as possible.

For more information, please contact one of the task force staff members:

Candace Caraco, Education Policy Analyst, Maryland Higher Education Commission, ccaraco@mhec.state.md.us; 410-260-4570;

Jim Foran, Executive Director, High School & Postsecondary Initiatives, MD State Dept. of Education (MSDE), jforan@msde.state.md.us; 410-767-0589;

Barbara Frank, Webmaster, Specialist, High School & Postsecondary Initiatives, MSDE bfrank@msde.state.md.us; 410-767-0985;

Nancy Shapiro, Associate Vice Chancellor for Academic Affairs, University System of MD, nshapiro@usmd.edu; 301-445-2753; and

Danielle Susskind, Graduate Assistant, University System of MD dsusskind@usmd.edu; 301-445-2733.

Please share this message with your constituents and other important stakeholders.

cc: Members, Teacher Shortage Task Force

* * * * * * *

In early December, the following e-mail message was disseminated to the addressees, extending the deadline to January 21 for recommendations to be submitted to the task force.

Dr. Patricia S. Florestano and Dr. Edward L. Root, co-chairs of the Maryland Teacher Shortage Task Force, have extended the deadline for accepting recommendations to address the teacher shortage in Maryland. The requested format for submissions is 1-2 sentences summarizing each recommendation, followed by a 1-2 paragraph rationale supporting the recommendation.

Recommendations may address any of the following broad categories, as well as marketing strategies to implement changes: (a) higher education curricular issues; (b) certification issues; (c) incentives.

Please e-mail any recommendations you have before January 21, to Dr. Nancy Shapiro, Associate Vice Chancellor for Academic Affairs, University System of Maryland, at nshapiro@usmd.edu. Additionally, if you also wish to make a presentation to the task force, you might still be able to secure a time slot on January 8 or 22; include that request in your e-mail, and Dr. Shapiro's staff will contact you with further information.

For more task force information, see http://www.marylandpublicschools.org/MSDE/divisions/leadership/programs/tstf/

APPENDIX B: Testimony Offered

Those who offered oral testimony as well as written testimony are indicated with an asterisk.

	as wen as written testimony are maical	
Susan Aldridge* President University of MD University College	Joann Ericson* MD State Department of Education	DeWayne Morgan University System of Maryland
Jon Andes Superintendent Worcester County Public Schools	Dorie Flynn Executive Director, MD Assn. of Nonpublic Special Education Facilities	Stephanie R. Moses* President, MD Assn. of School Personnel Administrators (Wicomico Co. Public Schools HR)
Charlotte Baker* Staff Development Washington County Public Schools	Jennifer V. Frank University System of Maryland	Linda Murray* Washington County Public Schools
Kathryn Barbour* President, MD Council of Community College Chief Academic Officers (VP of Academic Services, Chesapeake College)	Barbara Gimperling Family Services Inc. Jacqueline Haas, Superintendent* Harford County Public Schools	Mary Jo Neil Past President MD Parent Teacher Association
Gary Bauer* Carroll County Board of Education	Lynn Harbison University System of Maryland	Dennis Pataniczek* President, MD Assn. of Colleges of Teacher Education (Dean of Education, Salisbury University)
Florie Bozzella Director of Human Resources Anne Arundel County Public Schools	David Helfman* Executive Director MD State Teachers Association (MSTA)	Jeanne Paynter* MD State Department of Education
Robert Caret* Chair, Education Industry Initiative, Governor's Workforce Investment Board (President, Towson University)	Kevin A. Hettel Asst. Superintendent for Human Resources Charles County Public Schools	Virginia Pilato* MD State Department of Education
Mary Cary Asst. State Superintendent MD State Department of Education	Donald Langenberg* National Research Council & Chancellor Emeritus, University System of MD	Ed Root Past President MD State Board of Education
Robert L. Davis* President Elect, MD Assn. of School Personnel Administrators (Cecil Co. Public Schools HR)	Kittybelle Hosford President, MD Assn. of Teacher Educators (faculty of Hood College)	John Smeallie* Asst. State Superintendent MD State Department of Education
Ernesto Diaz* Manager of Teacher Recruitment & Retention Howard County Public School System	Raymond Lorion* Dean of Education, Towson University	Gene Streagle Executive Director MD Assn. of Secondary School Principals
Michelle Dunkle* MD State Department of Education	Susan Marks Assoc. Superintendent for Human Resources Montgomery County Public Schools	Betty Weller* Vice President MD State Teachers Association
Colleen Eisenbeiser* President, MD Assn. of Dirs. of Teacher Education in the Community Colleges (& Dir. of Anne Arundel Comm. College TEACH Inst.)	Stacy Messick* MD Assn. of School Personnel Administrators (Dorchester Co. Public Schools HR)	Robert Wedge MD Assn. of School Personnel Administrators (Carroll Co. Public Schools HR)

APPENDIX C: List of Resources

On the task force website, the materials were electronically linked to the text.

- 1. Alliance for Excellent Education. (Feb. 2008). Issue Brief: What Keeps Good Teachers in the Classroom? Understanding and Reducing Teacher Turnover.
- Alt, M., & Perry, K. (2007). To Teach or Not to Teach? Teaching Experience and
 Preparation Among 1992-93 Bachelor's Degree Recipients 10 Years After College:
 Statistical Analysis Report. Washington: Institute of Education Sciences of the National
 Center for Education Statistics.
- 3. Bottoms, G. (2008, January 11). Maryland principals must be ready to lead. *Baltimore Sun*.
- 4. Business Higher Education Forum. (2007). *An American Imperative*. Washington: Author.
- 5. The Center for Quality Teaching [Hirsch, E., & Emerick, S. et al.]. (2006). *North Carolina Teacher Working Conditions Survey Interim Report*. Chapel Hill, NC: Author.
- 6. Combs, S. (2006). The Cost of Underpaying Texas Teachers *Updated*. Austin: Texas Comptroller of Public Accounts.
- 7. Coulter, T., & Vandal, B. (2007). *Community colleges and teacher preparation: Roles, Issues and Opportunities*. Boulder: Education Commission of the States.
- Eastern Shore Association of Colleges & Eastern Shore Superintendents Association.
 (2005). Eastern Shore Teacher Recruitment Proposal.
- 9. Educational Testing Service (ETS). (2007). America's Perfect Storm. Princeton: Author.

- Educational Testing Service (ETS). (2003). Preparing Teachers around the World.
 Princeton: Author.
- 11. Freeland, R. (2008, January 10). A better way to choose a college. *The Christian Science Monitor*.
- 12. Gitomer, D. (2007). Teacher Quality in a Changing Policy Landscape: Improvements in the Teacher Pool. Princeton: Educational Testing Service.
- 13. Honawar, V. (2007, December 19). Reports Renew Debate Over Alternative Preparation. *Education Week*.
- 14. Jacob France Institute. (2007). Retention of Maryland PDS Graduates Study in Maryland Public School Districts.
- 15. Keller, B. (2007, December 19). New Teachers Outdo Peers of Last Decade on Academic Scales. *Education Week*.
- 16. Leadership Maryland material (July 2001) [binder of material from 2001 meeting]
- 17. Levin, J., Mulhern J., & Schunck, J. (2005). Unintended Consequences: The Case for Reforming the Staffing Rules in Urban Teachers Union Contracts. New York: New Teacher Project.
- Levine, Arthur. (2006). Educating School Teachers. Washington: Education Schools Project.
- Maryland Higher Education Commission. (March 2006). A Study of the Capacity of Maryland's Teacher Preparation Programs.
- 20. Maryland State Department of Education. (2006). Report of the Task Force on the Education of Maryland's African-American Males.
- 21. Maryland State Department of Education. (2006-2008). Teacher Staffing Report.

- 22. Maryland State Department of Education. (2003). Quality Teacher Workgroup Report.
- 23. Maryland Teacher Professional Development Advisory Council. (December 2004).

 Helping Teachers Help All Students: The Imperative for High-Quality Professional

 Development.
- 24. Mielczarek, N. (2008, January 5). Districts to decide teacher incentives: Pay for performance guidelines are broad. *Tennessean.com*
- 25. National Commission on Teaching and America's Future (NCTAF). (June 2007). Policy Brief: The High Cost of Teacher Turnover.
- 26. National Commission on Teaching and America's Future (NCTAF). (2002). Solving the Dilemmas of Teacher Supply, Demand, and Standards: How we can ensure a competent, caring, and qualified teacher for every child.
- 27. National Commission on Teaching and America's Future (NCTAF). (2002). Unraveling the 'Teacher Shortage' Problem: Teacher Retention is the Key.
- 28. National Comprehensive Center for Teacher Quality (NCCTQ) and Public Agenda.
 (2007). They're Not Little Kids Anymore: The Special Challenges of New Teachers in
 High Schools and Middle Schools. Issue 1. Lessons Learned: New Teachers Talk About
 Their Jobs, Challenges and Long-Range Plans. Washington: Author.
- 29. National Comprehensive Center for Teacher Quality (NCCTQ). (2007). *America's Challenge: Effective Teachers for At-Risk Schools and Students*. Washington: Author.
- 30. National Comprehensive Center for Teacher Quality (NCCTQ) and Public Agenda.
 (2007). Working Without a Net: How New Teachers Describe Their First Year on the
 Job. Issue 2. Lessons Learned: New Teachers Talk About Their Jobs, Challenges and
 Long-Range Plans. Washington: Author.

- 31. National Governor's Association Center for Best Practices. (2007). Improving Teaching through Pay for Contribution. Washington: Author.
- 32. National Governors Association. (2007). Innovation America: A Compact for Postsecondary Education. Washington: Author.
- 33. National Science Foundation. (2007). A National Action Plan for Addressing the Critical Needs of the U.S. Science, Technology, Engineering, and Mathematics Education System. Washington: Author.
- 34. Public Agenda. (2007). Working Without a Net: How New Teachers Describe Their First Year on the Job. Washington: Author.
- 35. Pugach, M., Longwell-Grice, H., Ford, A., & Surma, M.A. (2007). A Programmatic View of Portfolios for Urban Teacher Preparation. *The New Educator*.
- 36. Rubenstein, G. (2007, November 14). Building a Better Teacher: Confronting the Crisis in Teacher Training. [on Teachers for a New Era, Carnegie Foundation] edutopia.org/magazine.
- 37. University System of Maryland. (2006). Update on Transfer Yield and Student Performance Related to AAT Graduates in the USM.
- 38. Viadero, D. (2008, January 19). Working Conditions Trump Pay. Education Week.
- 39. Villar, A. and Strong, M. (2007). Is Mentoring Worth the Money? A Benefit-Cost Analysis and Five Year Rate of Return of a Comprehensive Mentoring Program for Beginning Teachers. *Educational Research Service: ERS Spectrum Journal of Research and Information*, 25.3, 1-17.