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EXECUTIVE SUMMARY

TEACHER SUPPLY AND CAREER DEVELOPMENT: POSITIVE PATHWAYS FOR MASSACHUSETTS

**A Study Conducted for the Massachusetts Education
Reform Review Commission (MERRC)**

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BACKGROUND / PURPOSE / METHODS

In Massachusetts and nationally educators are concerned about the dwindling supply of well-prepared teachers qualified to enter classrooms and improve the academic success of students. Currently, the Massachusetts teacher workforce consists of just under 70,000, with 38% teaching at the elementary level, 40% in secondary schools, and 22% in classrooms that span different grades, such as special education, art, and music. Over 95% of Massachusetts teachers work in the 300 public school districts, while 3½% teach in the state's 30 vocational-technical schools, and one percent teach in the 83 charter schools.

A shortage of qualified teachers is feared at a time when many in the current teaching force are nearing retirement, student needs are growing, and the expectations for improving student learning in schools are increasing. Recognizing this as a critical issue for the Commonwealth, the Massachusetts Education Reform Review Commission called for a study to:

- Synthesize current data available concerning teacher supply and demand in Massachusetts;
- Determine any trends in recruitment, turnover, and attrition of teachers related to the Massachusetts teacher test, bonus programs for new and veteran teachers, and recent changes in retirement policies;
- Identify (primarily based on initiatives in other states) promising approaches for recruiting and developing the number and types of qualified teachers required in Massachusetts in order to meet the challenges of successful education reform.

Data collection for this study included interviews with leaders of state and national professional organizations, Massachusetts Department of Education staff members, directors of university programs for preparing pre-service teachers, and staff of selected state departments of education in other states. The researchers also conducted a review of relevant published analyses.

FINDINGS AND REFLECTIONS

Shortage of Qualified Teachers

The findings of this study confirm that there is good reason for concern, attention, and action in order to insure that there are high-quality, well-prepared teachers in all Massachusetts classrooms in the coming years. National studies reviewed indicate that over two million new teachers will be needed over the next ten years. Greatest current and expected shortages are in:

- low-achieving schools, especially in urban settings;
- isolated, rural areas; and
- certain high-need subject areas such as special education, foreign language, mathematics, and the sciences.

In Massachusetts student enrollment projections for the next decade are fairly flat, showing little increase. However, the number of teachers approaching retirement age is daunting. Data from

the 1999-2000 school year indicate that 41% of Massachusetts teachers were 50 or older. Forty-three percent of the teachers that year had 20 or more years of service. Given that very few teachers continue past age 60, this leaves over 35,000 teachers that must be replaced over the coming decade.

The Massachusetts Teacher Retirement Board (which serves all teachers except those in Boston) confirms this number and notes that because of changes in the Massachusetts teachers retirement plan, many of these teachers will be eligible to retire three to four years earlier than before. In recent years, teacher retirements have ranged from 1700 to 2000 per year, but are expected to range from 2700-3000 in 2001-02, and 3500-4000 in the following year.

The Massachusetts Teachers Association (MTA) and the Massachusetts Federation of Teachers (MFT) both expect shortages in qualified teachers, with the MTA projecting that 50% of current teachers will turn over in the next ten years, with the greatest shortage areas being foreign language, science, math, and special education. The MTA's data also indicate geographic changes, with increases in enrollment on Cape Cod, Martha's Vineyard, and Nantucket, and hiring of 600 new teachers in this region of the state in 2000-01.

Unfortunately, although schools and districts are still managing to fill most positions, too often the teachers hired are not adequately prepared in the discipline they are to teach. This situation is of great concern, given the urgent need to support children in Massachusetts in reaching high levels of academic success. For example, in 1999-2000, Massachusetts issued 1185 certification waivers allowing teachers to be hired without appropriate certification. These included 43% in special needs, nine percent in foreign languages, five percent in elementary and early childhood education, five percent in the sciences, and four percent in mathematics.

A recently released study conducted by the Center for Labor Market Studies at Northeastern University (Fogg and Harrington, 2001) presents a number of related findings. This study found:

- Teacher employment growth rates in Massachusetts are higher than overall employment rates in the state and higher than U.S. employment growth rates. The study noted that this rate increased by 19% between 1994 and 1999, yet unfilled positions remained low.
- The overall teacher job vacancy rate is 0.8 percent (with the highest area being in special education with 1.7%).
- However, the total percent of teaching positions that were "either vacant or filled by a non-certified teacher" (p. 24) in 2000-2001, was 5.5%. In certain key areas, the percentages were much higher, e.g., 18.5% in technology, 14.8% in reading, 11.0% in foreign language, 7.4% in mathematics, and roughly between seven and nine percent in the sciences. Percentages were higher at the secondary than at the elementary level. Percentage breakdowns by urban vs. suburban vs. rural schools were not provided.

"Although uncertified teachers help fill the existing demand for classroom teachers, they do not fill the demand for teachers who possess the qualifications deemed necessary to perform effectively as an educator. An uncertified teacher does meet some of the basic educational, safety and security needs of schools. By definition, uncertified teachers [do] not possess the specific skills needed for effective performance in their positions resulting [in] a skill gap between the proficiencies of the teacher in the classroom and the skills considered to be necessary to perform effectively in the classroom." (Fogg and Harrington, 2001, pp. 23-24)

- Twenty-eight percent of beginning teachers do not have certification, and 46% of teachers overall who are not certified in the area they are teaching are teachers who are continuing prior teaching assignments, thus, *remaining* uncertified.

Several interviewees from Massachusetts teacher preparation programs similarly indicated shortages of teachers in the state, especially in urban and rural areas and in the subjects of science, mathematics, bilingual education, and special education. Several also noted increased enrollment in their teacher preparation programs, but not in the numbers to address even the current demand.

Reasons for Shortage of Qualified Teachers and Emerging Strategies to Address Shortages

This study identified numerous potential reasons for teacher shortages nationally and in Massachusetts. Besides the retirement situation, these include:

- ***economic and procedural deterrents***, e.g., a national study that cites the median salary range expected by recent college graduates, \$35,000-\$45,000, compared to the average beginning teacher salary of under \$27,000;
- ***inadequate teacher recruitment practices***;
- ***inadequate preparation of teachers*** to handle the pressures of classrooms, especially in urban settings;
- ***job dissatisfaction of teachers***, e.g., a national study that shows that 26% of teachers who leave teaching do so because of job dissatisfaction linked to salary, lack of support from school administrators, student discipline problems, and lack of teacher influence over school decision-making; and
- ***inadequate teacher support and professional growth opportunities***, e.g., a national study that shows that 25% of teachers who leave teaching do so to pursue a job that offers better career advancement opportunities; and
- ***inadequate assessment of teacher performance*** at the pre-service, new teacher, and veteran teacher level.

Obviously, this is not a simple situation with simple answers. Across the country and in Massachusetts many strategies are being developed to try to increase the supply and retention of qualified teachers who are able and committed to improving student achievement. These are designed to:

- ***remove economic and procedural deterrents***, e.g., pay increases, pay for performance systems, signing bonuses, reimbursement of student loans, housing subsidies;
- ***develop innovative recruitment practices***, e.g., recruiting high-quality mid-career professionals outside of education, recruiting in companies with large employee layoffs;
- ***improve the preparation of teachers in traditional and alternative programs***, e.g., more intensive and lengthier periods of student teaching or internships, greater integration of instructional technology, deeper linkage of programs to teacher performance standards;
- ***address greatest sources of job satisfaction of practicing teachers***, e.g., improved administrator development programs, increased opportunities for teacher involvement in school decision-making;
- ***improve supervisory support, professional development, and professional growth opportunities for new and veteran teachers***, e.g., induction programs that include mentoring of new teachers for up to three years; opportunities for relevant, job-imbedded professional learning; and development of instructional and other leadership opportunities;

- ***improve tools and processes for assessment of performance of new and veteran teachers***, e.g., linking performance assessment to state standards for teaching or others, e.g., those of the Interstate New Teacher Assessment and Support Consortium (INTASC).

Table 1 in the appendix provides an outline summary of many of the findings of this research, including reasons for the shortage of qualified teachers and strategies being used nationally and in Massachusetts to address this concern.

RECOMMENDATIONS

At this moment, educators in Massachusetts face a critical juncture in the road, as a new generation begins to take the reins and the responsibilities for educating our state's children. This moment and the challenges set forth in this study offer an important opportunity. Educators at all levels must seize this opportunity to pause, talk, listen, rethink, and establish a common, shared agenda focused on children and the adults who commit themselves to educating children. It is often said that most important thing to do is to focus on helping children learn. Yes, and, in order to do so, educators must work together to create school and district environments that feed, inspire, respect and nurture the adults who work with our children.

As practitioners at all levels and policy- and law-makers consider next steps, we emphasize that in order to put high-quality teachers in all Massachusetts classrooms, it will be critical to find a balance between actions focused on: 1) short-term vs. long-term needs, and 2) recruitment of teachers vs. all-important strategies to motivate and retain them. Likewise, policies, plans, and actions must always pass the test of not only filling classroom positions, but of filling them with teachers of the highest quality—prepared and able in their content areas, their pedagogical approaches, and their commitment to improving student achievement.

Therefore, given the findings of this study, we make the following recommendations:

MASSACHUSETTS EDUCATORS AND STAKEHOLDERS: Establishing a Common Agenda for Improving Student Achievement through Improving Teacher Quality

Under the leadership of the Massachusetts Department of Education, statewide professional organizations, and higher education institutions that prepare teachers, convene a broad array of stakeholders to work collaboratively on the critical issues raised in this study as well as some of the similar issues addressed in another study sponsored by the Massachusetts Education Reform Review Commission (MERRC) entitled, "Leadership Challenges: Supply and Demand in Massachusetts Schools."

- **Convening appropriate stakeholders is essential.** These should include:
 - Educators from all levels,
 - Representatives from professional organizations,
 - State, district, and higher education program designers and participants, and
 - Policy- and law-makers.

- **Significant time needs to be devoted to this work**, e.g., several multi-day summits, in order to accomplish the following **purposes**:
 - To **ensure** that a much **broader range of voices and perspectives** can be heard as initiatives are undertaken or reviewed for effectiveness;
 - To **allow wide response to data that are available** concerning these issues and program initiatives;
 - To **encourage cross-program, cross-level sharing of the work in the field**, sharing of successes, troubleshooting challenges, and sharing of ideas for the future;
 - To **build a common agenda for the state** in assuring a qualified teaching force for our students—complete with clear-cut strategies and well-explained rationales; and
 - To **identify the data that are most needed** at given times in order to make well-informed policy and program decisions.

- **Critical topics** to be discussed by these groups include:
 - **Traditional and alternative teacher preparation programs and strategies;**
 - **Maximizing effectiveness of teacher induction programs and strategies;**
 - **Creation of a wider variety of professional roles and professional opportunities** for educators in schools and districts;
 - **Ways to bring educator salaries generally to a more competitive level** and to be reflective of individual choices of educator roles, responsibilities, and length of work year;
 - **Ways to connect educator salaries to performance in positive and motivating ways;** and
 - **Clearer identification and understanding of working conditions** that eat away at the retention of educators in school and district settings.

MASSACHUSETTS DEPARTMENT OF EDUCATION:

- **Take the lead in convening educational stakeholders to establish A Common Agenda for Improving Student Achievement through Improving Teacher Quality.**
- Based on broad discussions described above, **propose a more deeply developed set of coherent policies and corresponding funding in order to address the serious challenges related to providing well-qualified teachers for all schools and classrooms in Massachusetts.**
- **Continue scaffolding and awareness building** in the field of current initiatives and recent developments, e.g.:
 - Teacher recruitment practices, including incentives,
 - Teacher preparation program approval standards,
 - Teacher performance assessment tools and processes,
 - Teacher induction programs,
 - Master Teacher program, and
 - The Teacher Career Advancement Program.
- **Set aside significant funding each year for ongoing formative and summative evaluation of state initiatives related to teacher quality**, e.g., recruitment initiatives, alternative certification programs, financial and other incentives, and induction programs. Evaluation should include frequent gathering of feedback from practitioners and program participants and designers/administrators, in order to constantly inform policy and program decisions and to inform statewide discussion of key issues and strategies.
- **Address and focus immediately on the technology needs of the Commonwealth** in:
 - Tracking educator preparation, support levels, placement, and retention in ways that clearly inform state policies and programs;
 - Facilitating on-line posting of teacher vacancies, applications, and document management; and
 - Consolidating Department information requests and survey requests in ways that take into account the growing overload in paperwork required for district and school people to meet the information requirements of the Department.

TEACHER PREPARATION PROGRAMS:

- ***Continue to link coursework, practicum experiences, and assessment of pre-service teachers to Massachusetts Professional Standards for Teachers.***
- ***Continue to develop positive partnerships with K-12 public schools and districts*** to provide learning experiences for teacher candidates that better prepare them for the realities of teaching, as well as more extensive time in schools for student teaching and internships.
- ***Expand collaborations between teacher preparation and Arts and Sciences***, building the sense of broadened responsibility for preparing teachers.
- ***Continue and expand efforts to prepare teachers in ways to effectively integrate technology into their work with students.***
- ***Collaborate with administrator preparation programs*** to find ways to support educators to restructure professional opportunities in their schools and districts in ways that create challenging and growth producing job opportunities for a broader group of educators.

STATE POLICY- AND LAW-MAKERS:

- ***Provide funding for design, development, and evaluation of teacher induction programs*** that include training of mentors and time for mentors and new teachers to work together.
- ***Provide funding for substantive formative and summative evaluation of significant state initiatives***, including pilot programs.
- ***Provide funding for regular convening of a broad range of education stakeholders*** as described above, and:
 - ***Actively participate in these discussions***
 - ***Develop appropriate legislative responses*** in support of recommendations that emerge from these groups.

STATE PROFESSIONAL ORGANIZATIONS:

- **Take the lead** in supporting, participating in, and encouraging practitioners to participate in opportunities to dialogue about the issues raised in this study concerning development of a teacher workforce that is large enough in numbers and well-qualified to address the challenges of improving student achievement in Massachusetts schools.
- **Convene informal groups from organizational memberships** to discuss possibilities for explicit new educator roles in schools and districts and how to build capacity for change in the field as well as how to address compensation for new job configurations.
- **Actively share the vision of these new roles in the field.**
- **Build awareness** of potential opportunities and rationale among local association representatives.
- **Lead and support action initiatives**, including innovative compensation approaches and contract language, stemming from all of the above discussions.

SCHOOLS AND DISTRICTS:

- **Create opportunities in schools for practitioners and parents to generate ideas for new approaches to educator roles and ways to improve working conditions in schools and districts**—working conditions for new and veteran teachers, administrators, and other professionals.
- In collaboration with professional associations and school boards, **begin creating alternative teacher leadership and professional roles**, with corresponding alternative compensation plans.
- **Increase district collaboration with Master Teachers** to design appealing and helpful ways they can contribute to school and district leadership/professional tasks.
- **Create environments in schools and districts in which all personnel take responsibility for supporting and guiding new teachers.**

APPENDIX

Table 1: Reasons for Teacher Shortage and Strategies to Address Shortages

REASONS FOR SHORTAGE OF TEACHERS QUALIFIED TO IMPROVE STUDENT ACHIEVEMENT	STRATEGIES TO ADDRESS SHORTAGE (Identified through research at the state and national level)	STRATEGIES TO ADDRESS SHORTAGE (Used or planned in Massachusetts)
<p>Retirement</p> <ul style="list-style-type: none"> • Large numbers of teachers reaching retirement age • Growing numbers of Massachusetts teachers expected to take advantage of early retirement 	<ul style="list-style-type: none"> • Reduction of salary limits for retired teachers who return to work, especially in high-shortage areas 	

<p>Economic / Procedural Deterrents</p> <ul style="list-style-type: none"> • Teacher salaries that do not compare to those in other employment arenas • More career choices available for women • School district hiring procedures and timelines • Shortages of affordable housing in areas with increased student enrollments • State certification requirements that discourage migration across states • State certification requirements that discourage career changes into education 	<ul style="list-style-type: none"> • Significant statewide increases in teacher pay • Pay for performance plans • State-sponsored, performance-based awards to schools and teachers • More timely hiring of teachers in large, urban districts especially • Acceptance of certifications across state lines • Alternative certification programs • Housing loans, subsidies 	<ul style="list-style-type: none"> • Northeast Regional Credential project that facilitates transference of teacher certification across state lines in New England • MI NT alternative route to certification • Attracting Excellence to Teaching program that provides loan reimbursement to teachers in urban districts
<p>Reaching Potential Candidates</p> <ul style="list-style-type: none"> • Inadequate recruiting within college settings • Inadequate recruiting of other potential candidates without education background 	<ul style="list-style-type: none"> • Recruitment of high-achieving arts and science students in college settings • Signing bonuses • Recruitment of mid-career professionals • Alternative routes to teacher certification • Development of state and national clearinghouses for teaching positions, on-line applications, common application form • Support for future teacher programs at the middle and high school levels • Retraining opportunities for teachers certified in elementary education to prepare them in high-shortage areas 	<ul style="list-style-type: none"> • An extensive teacher recruitment program including signing bonuses • Alternative route to certification through the MI NT program • State support for Tomorrow's Teachers Clubs on middle and high school levels

REASONS FOR SHORTAGE OF TEACHERS QUALIFIED TO IMPROVE STUDENT ACHIEVEMENT	STRATEGIES TO ADDRESS SHORTAGE (Identified through research at the state and national level)	STRATEGIES TO ADDRESS SHORTAGE (Used or planned in Massachusetts)
<p>Teacher Preparation</p> <ul style="list-style-type: none"> • Low entrance requirements into teacher preparation programs • Inadequate preparation of beginning teachers in the real challenges of the classroom • Inadequate linkage of teacher preparation programs to teacher performance standards 	<ul style="list-style-type: none"> • Higher entrance requirements for teacher preparation programs • Collaborative programs involving higher education and public school districts • Teacher preparation programs housed in public schools • Collaboration of teacher preparation programs with arts and sciences faculty • Year-long internships for aspiring teachers • Extended periods of student teaching • Greater focus on instructional technology • High quality programs for alternative routes to teacher certification 	<ul style="list-style-type: none"> • Some teacher preparation programs that: <ul style="list-style-type: none"> - collaborate closely with school districts - have raised entrance requirements - provide extended in-school learning experiences • State teacher preparation program approval standards that: <ul style="list-style-type: none"> • Require 80% pass rate of program completers • Increase content requirements • Link to state teacher standards

REASONS FOR SHORTAGE OF TEACHERS QUALIFIED TO IMPROVE STUDENT ACHIEVEMENT	STRATEGIES TO ADDRESS SHORTAGE (Identified through research at the state and national level)	STRATEGIES TO ADDRESS SHORTAGE (Used or planned in Massachusetts)
<p>Job Satisfaction</p> <ul style="list-style-type: none"> • Salaries not commensurate with responsibilities and educational background • Poor working conditions, including: <ul style="list-style-type: none"> - Inadequate support from school administration - Inadequate teacher influence over decision-making - Inadequate teacher recognition - Student discipline and motivation problems • Perceived lack of respect for teachers by the general public • Increased pressure on teachers from standards-based reform • Limited career growth opportunities 	<ul style="list-style-type: none"> • Significant statewide increases in teacher pay • Administrator development programs • Teacher recognition programs • State-sponsored, performance-based awards to schools and teachers • Relevant, job-imbedded professional development opportunities • Support/subsidy of the cost of National Board Certification • Career advancement opportunities to National Board certified teachers and others • Flexible number of months in yearly contracts • Opportunities for job-sharing • Leadership opportunities for teachers that also allow teachers to remain in the classroom 	<ul style="list-style-type: none"> • Leadership development programs for administrators • Teacher Career Advancement Program planning grants • Financial support for teachers pursuing National Board certification • Master Teacher program that pays National Board certified teachers who mentor beginning teachers • Potential role of teachers in school decision-making through school councils
<p>Teacher Support and Professional Growth Opportunities</p> <ul style="list-style-type: none"> • Inadequate ongoing support for beginning teachers • Limited opportunities and incentives for professional growth of teachers 	<ul style="list-style-type: none"> • One- to three-year mentoring for beginning teachers • Reduced teaching load for beginning teachers • State funding of teacher mentoring programs • Relevant, job-imbedded professional development opportunities for teachers • Peer review opportunities linked with career ladders • Leadership development opportunities for teachers • Support/subsidy of the cost of National Board Certification as well as career advancement opportunities 	<ul style="list-style-type: none"> • Required (though unfunded) mentoring programs for all new teachers • Mentor training for mentors and administrators (previously provided by the state) • Teacher Career Advancement Program (TCAP) planning grants • Financial support for teachers pursuing National Board certification • Master Teacher program that pays National Board certified teachers who mentor beginning teachers

REASONS FOR SHORTAGE OF TEACHERS QUALIFIED TO IMPROVE STUDENT ACHIEVEMENT	STRATEGIES TO ADDRESS SHORTAGE (Identified through research)	STRATEGIES TO ADDRESS SHORTAGE (Used or planned in Massachusetts)
<p><i>Teacher Assessment</i></p> <ul style="list-style-type: none"> • Inadequate assessment tools for beginning teachers • Inadequate and demotivating teacher assessment tools and processes 	<ul style="list-style-type: none"> • New teacher tests in content • Performance-based assessment of new teachers • High stakes portfolio-based performance assessment linked to discipline-specific teaching standards • State-sponsored, performance-based awards to schools and teachers • Pay for performance programs 	<ul style="list-style-type: none"> • Statewide new teacher test • State teacher performance assessment guidelines linked to state teacher standards, to be used at pivotal points, e.g., pre-service practicum, first year of teaching