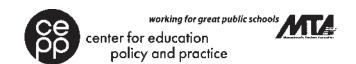


Tomorrow's Teachers

Preparing the Education Workforce for 21st Century Schools

A Policy Brief

October 2008



Tomorrow's Teacher: Preparing the Education Workforce for 21st Century Schools

Executive Summary

The research is clear that well-prepared teachers are the single most important element of a high-quality education under the control of school districts. Current Massachusetts statute and regulations create barriers to ensuring that all classrooms are led by teachers with both content and pedagogical knowledge and skills.

The proposals outlined in this policy brief are designed to ensure that all teacher preparation – university-based, district-based, and alternative programs – prepare tomorrow's teachers for classrooms with diverse student populations.

These proposals will ensure that teachers not only understand their subject matter, but also the theory and practice behind a range of teaching strategies. They will know how to incorporate appropriate reading and writing skill development into their instruction; they will know how to differentiate instruction to accommodate special learning needs; they will know strategies to assist English language learners in acquiring English language skills; and they will understand the effect of home culture on student learning.

Recommendations

A. Tests for teacher licensure.

Replace the Massachusetts Test for Educator Licensure (MTEL) Communications and Literacy Test with *Praxis I*, a test of reading, writing, and mathematics. Pre-service teacher candidates should be allowed to substitute SAT scores for *Praxis I*, as Vermont allows. A passing score on *Praxis I* would be required for entry into any teacher preparation program.

Praxis II Subject Assessments replace the MTEL content area tests. Candidates seeking a grades 5-12 license, should pass the appropriate 7-12 test. Elementary candidates should pass the Praxis II Elementary Curriculum Subject Assessment. Candidates should take subject assessment tests prior to beginning their internship experience.

All pre-service teacher candidates would take the *Praxis II Principles of Learning and Teaching*. Candidates should take this test upon completion of their internship.

For all *Praxis I* and *Praxis II* tests, the Board of Elementary and Secondary Education would set a pass score equal to the highest score required by a state comparable to Massachusetts. All three tests are required for licensure.

B. License subject matter areas and grade spans.

Split the current "Early Childhood: Teacher of Students With and Without Disabilities" into two licenses: Early Childhood for regular education classes; and Young Children with Special Needs for classes where a majority of students are on Individual Educational Plans.

- Extend the current "Grade 1-6" license to include kindergarten which mirrors the elementary school organizations, thus becoming a K-6 license.
- Replace current grade 5-8, 8-12, and 9-12 licenses with 5-12 subject specific licenses to be used by those teaching in middle, high and/or middle-high schools.

C. Preparation program coursework and field experiences

- Subject matter for early childhood and elementary classroom teachers should encompass coursework in literature, mathematics, history, geography, civics, and physical and life sciences to enable teachers to master the knowledge and skill defined in the four Curriculum Frameworks: English Language Arts, History and Social Sciences, Mathematics, and Science and Technology/Engineering.
- Pedagogy courses for all pre-service teachers must include:
 - Educational psychology to include child, adolescent and human growth and development and abnormal psychology.
 - Theory and practice of English language development in native English speakers and language acquisition strategies for English language learners.
 - Theory and practice of instructional methods, strategies, and practices and curriculum development.
 - The appropriate use of instructional and informational technology to enhance the learning environment.
 - Elements of standards-based curriculum design from planning through assessment, making specific connections to the learning standards of the Curriculum Frameworks.
 - Theory and practice of reading and writing strategies that all teachers should incorporate into their instructional practice.
 - Understanding of learning styles and needs and differentiating instruction based on learning styles, readiness, independence, and accommodations.
 - Understanding the elements of cultural competence and the impact of socioeconomic, ethnic/racial, linguistic, and disability status on teaching and learning.
 - Pre-service teachers must participate in three field experiences:
 - Weekly classroom observations followed by on-site seminars that connect theory to practice. This experience totals 150 hours: two-thirds of the time in observation and one-third in seminar.
 - Observing classroom practice week and teaching classes followed by on-site seminars. This should total 150 hours: one-third observing, one-third teaching, and one-third seminar.
 - 16-week internship that consists of 300 hours of teaching and 100 hours of on-site seminars.

D. Preparation program and school district partnerships.

As a means of providing meaningful field experiences to preservice teachers, preparation programs must enter into residency partnership agreements with specific school districts. As a means of offering pre-service teachers an array of learning experiences, each preparation program must have partnerships with at least two types of districts: urban, suburban and/or rural. Each school district must educate students at all grades covered by the license earned. For example, PreK-6 for early childhood and elementary licenses, grades 5-12 for secondary licenses and PreK-12 for all-grade licenses.

E. Career path positions for K-12 veteran educators.

The New Teacher Developer is a career path position for teachers with a Professional License who have earned Professional Teacher Status in a school district. The New Teacher Developer works with pre-service and novice teachers while remaining within the teaching ranks. New Teacher Developers would earn an endorsement based on the successful completion of graduate study in adult learning theory, facilitation and coaching skills, and formative teacher evaluation protocols. The New Teacher Developer would be an adjunct faculty member with the district's preparation program partner and contributes to the assessment of pre-service teachers as they progress through their field experiences and seminars.

Tomorrow's Teachers

Preparing the Education Workforce for 21st Century Schools

I. Introduction

The promise of education reform is that every child has a basic right to attend a great public school staffed by effective teachers in every classroom, instructional leaders guiding teaching and learning, and school managers operating safe and efficient school plants. Educator quality is the single most important component of schooling within the control of school districts and policymakers.

Education inequality, the disparity between the instruction and leadership provided in high-poverty, urban and rural schools and their more affluent and suburban counterparts, is in large measure due to an inadequate supply of qualified educators (Ingersoll, 2007).

While Massachusetts confronts a shortage of qualified teachers in a number of areas, we also have a retention problem; that is, once qualified teachers are hired, about 30 percent leave within their first five years. The loss of effective practitioners is especially pronounced in high-poverty and hard-to-staff schools where up to 50 percent leave (Carroll, 2007; Barnes et. al., 2007; Ingersoll, 2003). Many leavers cite under-preparation and lack of support in their first years of practice as the primary causes for their abandoning the profession.

This policy brief outlines five elements of teacher preparation and licensure that will simplify the current system, expand the pool of potential teaching candidates, and require greater collaboration between PreK-12 systems and preparation programs. While current regulations define five routes to the Initial License¹, the elements identified here should apply to all programs preparing PreK-12 classroom teachers.

- A. Tests for teacher licensure.
- B. License subject matter areas and grade spans.
- C. Preparation program subject matter content, pedagogical theory and practice, and field experiences.
- D. Preparation program and school district partnerships.
- E. Career path positions for veteran educators.

This brief is based on a review of the literature addressing elements of preparation programs and reports from new teachers and those exiting the field with regard to the shortcomings of their preparation experiences.

II. Review of Research

Quality Counts (2008) bestowed a "C" for Massachusetts' teacher quality. Some of the report findings resulting in this low grade

The problems of teacher preparation, recruitment and retention jeopardize the promise of education reform.

 $^{^1}$ See 603 CMR 7.05 for a complete description of each route: www.doe.mass.edu/lawsregs/603cmr7.html?section=05

addressed the requirements for initial licensure:

- No requirement for substantial coursework in the subject area(s) taught.
- No test of pedagogical knowledge.
- No other field experience required beyond student teaching.

Stanford's Linda Darling-Hammond (2007), a national expert on teacher preparation, argues that "teachers continue to be the most inequitably distributed resource." (p. 7) High-poverty schools are more likely to have teachers who lack either content knowledge or pedagogical skills or both. She has found that "teacher shortages are too often met by lowering standards, in part through alternative certification routes that reduce training and call teachers *highly qualified* before they've begun, much less finished, preparation." (p. 7)

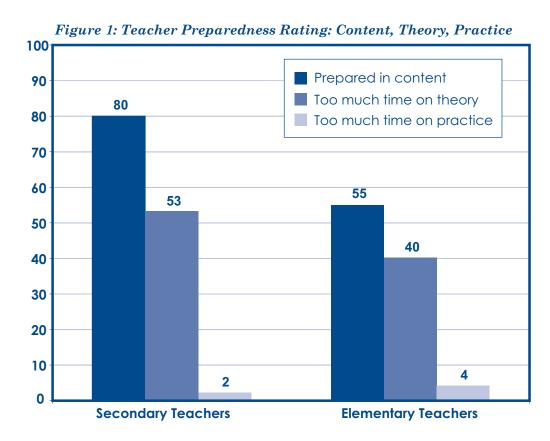
This is certainly the case in Massachusetts with the issuance of the *Preliminary License*. A candidate may receive a license by having a bachelor's degree in the arts and sciences and passing the Massachusetts Test for Educator Licensure (MTEL) *Communications and Literacy Test* and a subject specific content test; having completed a major in that subject area is unnecessary. Such "teachers" are determined to be *highly qualified* despite their having no pedagogical training. We would argue that these are *emergency licenses* at best. By categorizing those with a *Preliminary* license as qualified teachers, the Board of Elementary and Secondary Education (BESE) has essentially lowered the standards for entry into the profession. At the November 2004 BESE meeting, proposed technical changes to the regulations were discussed.²

University of Pennsylvania's Richard Ingersoll (2007), a leading expert on teacher retention, argues that "the failure to ensure that the nation's classrooms – especially those in disadvantaged schools – are all staffed with qualified teachers is one of the most important problems in contemporary American education." (p. 5) Ingersoll also cites alternative preparation programs that attempt to solve the staffing problem as "providing the wrong prescription for the wrong diagnosis." (p. 5) Again, Massachusetts has focused on alternative routes to licensure with mixed results.³

According to the National Comprehensive Center for Teacher Quality (NCCTQ, 2007), 81 percent of teachers report being well-prepared to teach their subject matter content. However, 20 percent feel unprepared to teach their subject, which is significant. Overall, elementary classroom teachers feel less prepared than their secondary colleagues. Their reported preparedness depends on the subject taught: 64 percent felt prepared to teach reading and writing, 62 percent to teach mathematics, and 38 percent to teach science. Such gaps in the preparedness of classroom teachers must contribute to achievement gaps; we know that the least prepared teachers tend to be found in the neediest schools (see Figure 1).

² Effective March 2008, the Board of Education (BOE) became the Board of Elementary and Secondary Education. The acronym BESE is used throughout this paper. In addition, the Department of Education (DOE) became the Department of Elementary and Secondary Education (DESE) which is also used here.

³ This same point was made of education deans and department heads during a focus group with the Massachusetts Association of Colleges for Teacher Education (MACTE) Board of Directors in March 2008.



The NCCTQ study went on to report that 53 percent of secondary teachers felt their preparation programs spent too much time emphasizing theory, while only two percent reported too much emphasis on the practical challenges of teaching. Forty percent of elementary teachers thought that their preparation program spent too much time on theory, while only four percent reported that enough emphasis was placed on handing the practical challenges of teaching. [See Figure 1]

While 34 percent of new teachers report that longer, more intense field experiences would be beneficial (MetLife, 2005), their supervisors would not agree. Principals, even more than education deans (67 percent of principals, 35 percent of deans), believe that longer field experiences are an essential component of new teacher preparation. [See Figure 2]

When asked what would be a better way to prepare teachers to work in today's classrooms, 63 percent of new teachers indicated "preparing teachers to adapt or vary their instruction to meet the needs of diverse classrooms." (NCCTQ, 2006) MetLife (2006) also reports that 58 percent of new teachers feel unprepared for the amount of work they are required to do each week; 42 percent are unprepared to work with a large number of special education students. In contrast, 74 percent of education deans/chairpersons reported that their graduates were well prepared to meet the needs of students with varying abilities. Principals, however, would not necessarily agree; they report that new teachers need more specific training in addressing students' learning styles and abilities (81 percent) and working with students from diverse cultural and linguistic backgrounds (71 percent). Secondary principals are more likely to

100 Percentage Rating Experiences as Adequate 90 80 70 66 65 60 **50** 40 33 30 20 10 0 **Principals New Teachers Deans**

Figure 2: Assessment of Adequacy of Current Field Experiences

report these shortcomings than elementary principals (see Figure 3).

Two significant issues are teacher preparedness to address the diverse student needs that teachers find in today's classrooms and engaging parents as partners with teachers. MetLife (2006) reports that 49 percent of new teachers feel unprepared/underprepared to work with the range of student needs. Yet, only two percent of teacher preparation program deans/chairpersons agree with this assessment. About one-guarter of elementary and secondary principals agree that new teachers are not well-prepared for these instructional challenges. Similarly, almost 40 percent of new teachers do not feel prepared to engage parents in working to address their children's educational needs. Fifty percent of secondary principals and 27 percent of elementary principals agree. Again, deans/chairpersons appear to be out of step by reporting that only nine percent of their candidates are not prepared to engage parents. [See Figure 3]

With regard to university-based preparation programs and retention, the Alliance for Excellent Education (2008) reports that those with an education degree, as opposed to a liberal arts degree, are more likely to stay in the profession. The findings indicate that those who prepared to be teachers in undergraduate school were more committed to the profession, more likely to stay, and, if they left, tended to do so for family reasons rather than seeking a job outside the profession. This report also noted that teachers with "strong academic qualifications are more likely to move to districts with what are typically considered more attractive schools or to leave the profession altogether." (p. 3) Most important for teacher preparation programs is the finding that "new teachers, in particular, are at risk of leaving the professional within their first year of teaching if they are unprepared and unsupported to teach in challenging situations." (p. 5)

The Public Education Network (PEN) (2003) study of teacher quality surveyed new teachers with regard to key components of the preparation programs. Most respondents believed they were well or very well prepared with regard to using assessments, working with

The MetLife report (2006) concludes, "Teacher training that prepares them to meet the realities of the classroom. and teacher support from their schools and school districts can narrow the most important gaps between expectations and experiences to help qualified, experienced teachers stay in the profession."

100 98 91 Percentage Reporting New Teachers Prepared 90 79 80 **73 72** 70 61 60 51 51 **50** 40 30 20 10 0 **Diverse Students Needs Engaging Parents** New Teachers Deans/Chairpersons Elementary Principals Secondary Principals

Figure 3: Ratings of New Teacher Preparedness

colleagues, and teaching students to high standards. In an analysis of three separate research findings, PEN reported that the four areas in which new teachers felt the least prepared were:

- 1. Addressing the learning needs of English language learners (74 percent).
- 2. Working with students' families (61 percent).
- 3. Assuming leadership positions (55 percent).
- 4. Addressing students' special learning needs (51 percent).

PEN also reported that new teachers believe that their student teaching experiences should expose them to different types of schools and districts because they felt better prepared to deal with a variety of teaching situations. In addition, new teachers report that having a number of student teachers assigned to a school allows for them to develop a network of colleagues providing advice and support during this learning experience. New teachers also reported that while they learned a variety of instructional practices in their undergraduate courses, the schools to which they were assigned often prevented them from using the array of skills they had learned.⁴ PEN further reported that the new teachers who described themselves as least prepared for their assignments were those who lacked education preparation courses and experiences.⁵ PEN advanced three recommendations for teacher preparation programs to consider. Pre-service teachers should:

⁴ In Massachusetts, this is the category of teacher who receives a Preliminary license.

⁵ Alternative routes are discussed fully in Section IV below.

- 1. Learn how to teach English language learners, special needs students, and low-achieving students. Incorporating knowledge and skill development in these three areas should be infused into the coursework and field experiences of preparation programs.
- 2. Be prepared to successfully teach in a heterogeneous classroom.
- 3. Have field experiences that include urban schools as a means of learning how to teach in a diverse environment.

III. Current Licensure Issues

It is generally accepted within the profession that the Massachusetts licensure process is overly complicated and bureaucratic. Even those charged with writing and approving regulations concur.

Former-Commissioner of Education David Driscoll described the current regulations as a "jungle." He indicated that the current licensure system is an "embarrassment" and argued that fundamental changes were needed instead of "trimming the branches in the jungle." He went on to argue against the unintended consequences of such current requirements as "the rule of more," the "wrong course sequences," and the "masters and a half." Some of these problems were corrected in the 2005 regulatory changes, however, others remain.

Former BESE Chairman James Peyser indicated that candidates waste hours of their time figuring out what they are supposed to do; as a result, potential teachers are discouraged from entering the profession and driving them to leave. Former BESE member Abigail Thernstrom indicated the licensing regulations should be aligned with the requirements of good teaching. Driscoll indicated that this was not the time to review the entire system but to "think outside the box." (MTA, 2004)

More recently, the Department of Elementary and Secondary Education (DESE) identified the following concerns about the existing system: 1) complex licensure process; 2) preparation and support not always tailored or sufficient for the demands of the job; and 3) need for more resources at state and local levels to implement reforms.⁷

We concur with the assessments of policymakers that the system is not working.

IV. Massachusetts Licensure Story

Massachusetts began licensing teachers in 1951. For the most part, prospective teachers attended a teacher education program in a state or private college in Massachusetts. Their studies resulted in an education degree in a specific teaching area. Upon successful completion of the preparation program, the candidate earned a lifetime certificate in a specific content area and/or a specific grade

⁶ These are terms of art used by those within and without the DESE regarding elements of the licensure requirements.

⁷ Presentation to the BESE by DESE staff; February 26, 2008.

span, e.g. elementary generalist K-8 or mathematics teacher 7-12. All those in the field prior to 1951 were grandfathered with a K-12 generalist license.

Over the past 15 years, the BESE has adopted a series of regulations that have increased the bureaucratic requirements for becoming a teacher; many are unsupported by research findings. Together, these additional requirements have reduced the emphasis on pedagogical theory and practice and field experiences; the result is that we now are moving toward having a generation of teachers who know "what" to teach but have very little idea of "how" to do it.

The current licensure requirements have their roots in the 1987 report *Making Teaching a Major Profession* issued by the Joint Task Force on Teacher Preparation (JTTP). Some of the recommendations in this report included:

■ Adopting a two-tiered license – a provisional license for those coming out of undergraduate preparation programs and full license for those completing a masters degree.

Figure 4: History of Content and Pedagogy Course Work and Field Experiences Requirements for Initial License

	CONTENT	PEDAGOGY	FIELD EXPERIENCE
1982-1994	36 semester hours in the field(s) of knowledge for the license (with the exception of foreign language, ESL and special education which required either fewer or more than 36 hours).	21 semester hours of course work and other experiences.	Full-time student teaching for one semester or half-time for two semesters. Total of at least 300 hours.
1994-2001	Bachelor's degree in the liberal arts or sciences or interdisciplinary major. 24 semester hours of course work or other experience addressing the field(s) of knowledge.	18 semester hours of course work, including pre-practicum experience.	Successful completion of a practicum demonstrating ability to teach in the area of the license. Minimum of 150 hours of field-based training, 135 of which are in direct instructional or other appropriate responsibilities.
2001-present	 For elementary and special needs licenses: at least 36 semester hours in upper and lower level arts and sciences coursework. For middle school licenses: 36 semester hours in a mathematics-science or English-history program of studies; or 24 semester hours in each of two subjects. For the general science license: at least 36 semester hours addressing the topics for the general science license. All other licenses, an unspecified number of semester hours. Instead, a list of topics to be covered during teacher preparation. 	 Cites the professional standards for teachers. No specific courses, topics or number of semester hours is required. 	 150 hours for licenses of grades 5-8, 8-12, PreK-8, 5-12, 9-12 and specialists. 200 hours for Library. 225 hours for Severe Disabilities PreK-12: 75 hours each in a general education setting and a setting with students with severe special needs. 300 hours for Early Childhood, 1-6, all PreK-12 licenses. 300 hours for Moderate Disabilities PreK-8 and 5-12: 150 hours each in a general education setting and a setting with students with moderate special needs.

- Replacing the education major with a liberal arts or science or interdisciplinary major.
- Requiring pedagogy courses in child development and classroom management.
- Mandating 150 hours of field experience.

Over the past two decades, the BESE has adopted a series of changes to the regulations (see Figure 4). The most significant changes include:

- \blacksquare Replacing the $education \ major$ with a major in the liberal arts and sciences.
- Increasing subject matter coursework required for a license.
- Decreasing pedagogy coursework.
- Decreasing the pre-practicum field experiences.
- Decreasing the number of hours required for the practicum.

The Massachusetts Education Reform Act of 1993 (MERA) established three stages of certification: Provisional, Provisional with Advanced Standing, and Standard Certificates replaced the "lifetime" certificate. To move from one stage to the next, teachers had to satisfy certain requirements. The Standard Certificate had to be renewed through the completion of 120 hours of professional development; this has since been raised to 150 hours. The focus of this professional development is almost exclusively on additional subject matter content rather than expanding pedagogical repertoires and skills.

In 1993 the requirement was established that teachers must earn a masters degree or equivalent to acquire a Standard Certificate. In 2001, the masters degree requirement was changed through regulation to one that must be "in the discipline relevant to the license sought" or an "appropriate" education masters. In 2003, the BESE further narrowed the masters requirement to degrees from "approved" programs. This requirement came to be known in the field as the *rule* of more⁸; teachers had to continue to take additional subject matter courses – either upper division undergraduate and/or graduate level courses – regardless of how much study had already been completed. For example, a high school English teacher who successfully completed 45 semester hours (15 courses) in American, British, European and World literatures as an undergraduate, would have to continue to take literature courses for a masters degree in order to be fully licensed, and then would continue to take such courses and workshops in order to be relicensed.

Research tells us there is little value in simply requiring that teachers earn a masters degree in their content area; there is no connection between this requirement and the results of student achievement data (Goldhaber, 2005).9 More important, the traditional

⁸ This is a term of art used by those within and without the DESE.

⁹ Goldhaber in citing a previous study (Goldhaber and Brewer, 1997) states: Many studies find a weak relationship between teachers holding an advanced (masters) degree and student achievement, a result we replicated when we treated the masters as a generic degree. However, when we took advantage of disaggregated data to investigate whether degree level might matter in some contexts, we discovered that subject-specific teacher background in mathematics and science is systematically related to student achievement in these subjects, even though teachers' advanced degrees in general are not. (p. 1)

path to a masters had teachers adding licenses to their repertoire. So, for example, an elementary teacher might add a license by earning a masters in special education. A mathematics teacher might add a guidance license. By adding more licenses, teachers were able to fill a variety of different roles. Educators with multiple licenses are more "valuable" to the district. The current regulations make the acquisition of additional teaching licenses overly burdensome, thus narrowing the teachers' knowledge and skills to a single content area.¹⁰

At the same time, regulatory changes made it more difficult to acquire or add licenses, the BESE was adopting regulations that allowed for fast-track entry into the profession. The two most publicized programs were the Massachusetts Bonus Program (MBP) and the Massachusetts Institute for New Teachers (MINT), both of which were designed to attract well-educated, non-traditional candidates to teaching. MINT was a seven-week alternative preparation program that occurred in the summer months. MBP was designed to award \$20,000 bonuses to new teachers willing to work in high-poverty districts.¹¹

Salem State College's Clarke Fowler (2003; 2008), an expert of teacher testing and alternative licensure programs, examined both MBP and MINT and found the DESE abandoned the seven-week New Teacher Project programs for MBP teachers and replaced them with year-long models having a greater connection to higher education institutions. In addition, he reports that MINT bonus recipients were not recruited into high-poverty districts, as was the intent of the program, and that higher percentages of MINT teachers in high-poverty districts left at "substantially higher than comparable national rates." Finally, he concludes that these programs failed to attract minority teachers and urban teachers and that the overall retention rate was low. Churchill (2003) reports that MINT participants indicated that the seven-week preparation was insufficient to prepare them for the realities of the classroom.

There is wide agreement that teachers must have an understanding of the subject(s) taught and that content knowledge is essential. However, equally important is a deep understanding of pedagogical theory and practice. Research and survey data indicate that new teachers are lacking an understanding of and practice with students with diverse learning needs, English language learners, and students from different cultures.

The recommended teacher preparation program that follows addresses the shortcomings in current regulations and practice with the goal of preparing new teachers to take over tomorrow's classrooms with a clearer understanding of the skills necessary to meet the needs of more and more diverse student populations. We know that well-prepared teachers are more likely to come to and stay in our classrooms.¹²

¹⁰ It must be noted that concurrent with the narrowing of the options for the masters degree is a drastic increase in the number of waivers issued by the DESE to school districts unable to fill teaching positions with qualified special education teachers; at least one-third of the waivers issued in the past five years have been in special education.

 $^{^{11}}$ To read more about the MINT program see Johnson et al (2005), Churchill et al. (2003) and Liu et al (2004).

¹² The licenses affected by the following proposals are those defined in 603 CMR 7.06 only; education support professional support personnel, specialist teacher, administrator and vocational licenses are not discussed.

V. Creating Preparation Programs for 21st Century Teacher

A. Pre-Service Teacher Tests

The No Child Left Behind Act (NCLB) and Title II of the Higher Education Act require that all prospective teachers take and pass subject area tests. Currently, all applicants for teaching licenses in Massachusetts must pass the Massachusetts Tests for Educator Licensure (MTEL). Having a state-specific test eliminates potential candidates from the teaching pool. Praxis I and Praxis II are administered by the Educational Testing Service (ETS), also known as the College Board. These tests are currently used by 46 states and territories, including four other New England states. Praxis tests are administered across the country on multiple occasions; some tests, such as Praxis I, have a computerized version that allows candidates almost immediate score results.

Additional arguments for using *Praxis* include that:

- In New England states using Praxis, approximately 30 percent of the test takers are from out of state; only 10 percent of MTEL test takers are from outside Massachusetts. Praxis would significantly increase the pool of teacher candidates.
- The argument that *MTEL* uses questions specific to Massachusetts is inaccurate; like all test makers National Evaluation Systems use an item bank for all state tests administered.

By replacing the MTEL with Praxis I and II, we would significantly increase the number of qualified, licensed teacher candidates.

Praxis™ Tests Defined

Praxis 1: Pre-professional skills tests are designed to measure basic skills in reading, writing and mathematics.

Praxis II:

- Subject Assessments measure general and subject-specific teaching skills and knowledge. They include both multiple-choice and constructed-response test items.
- Principles of Learning and Teaching Tests measure general pedagogical knowledge at four grade levels: Early Childhood, K-6, 5-9 and 7-12. These tests use a case study approach and feature constructed-response and multiple-choice items.
- Teaching Foundations Tests measure pedagogy in five areas: multisubject (elementary), English Language Arts, Mathematics, Science and Social Science. These tests feature constructed-response and multiple-choice items.

¹³ For more information on the pass rates required by Title II of the Higher Education Act, go to *https://title2.ed.gov/FAQ.asp.*

¹⁴ Five states do not currently use any tests in the Praxis series: Arizona, Florida, Massachusetts, Michigan, and New York. All other states, the District of Columbia, Department of Defense, Guam and Virgin Islands use Praxis.

Figure 5: Praxis I Cut Scores for Comparable States and New England States¹⁵

STATE	READING TEST SCORES	WRITING TEST SCORES	MATHEMATICS TEST SCORES	COMPOSITE SCORE
Connecticut	172	171	171	514
Maine	176	175	175	526
New Jersey*	175	173	174	None
New Hampshire	172	170	170	518
Ohio	173	172	172	None
Pennsylvania	172	173	173	521
Vermont	177	174	1 <i>7</i> 5	526
Wisconsin	175	174	173	None

^{*} Only candidates for Vocational Education licenses must take and pass Praxis 1.

Figure 6: Recommended Praxis and SAT Minimum Scores

	READING TEST SCORES	WRITING TEST SCORES	MATHEMATICS TEST SCORES	COMPOSITE SCORE
Praxis 1	175	174	174	527
SAT	500	500	500	1600

The testing requirements in nine states were reviewed: the five other New England states and four states with comparable student demographics to Massachusetts (New Jersey, New York, Pennsylvania, Wisconsin); Connecticut falls into both categories.

PRE-SERVICE TEST: ENTRY TEST

 $Praxis\ I$ is used as one licensure measure in four other New England states and three of four comparable states as Figure 5 illustrates. Rhode Island does not use $Praxis\ I$; New Jersey uses the test only for vocational education teachers.

Vermont allows pre-service teachers to use their SAT scores $in\ lieu$ of $Praxis\ I$, provided the candidate achieves a minimum score of 500 on both the Verbal and Mathematics tests and a minimum combined score of 1100.

RECOMMENDED ACTION ON PRAXIS I

We recommend that $Praxis\ I$ replace the $MTEL\ Communications$ and $Literacy\ Test$, which has the added benefit of testing pre-service teachers in mathematics in addition to reading and writing. The minimum reading, writing, and mathematics score should equal the highest score required of a state comparable to Massachusetts. We also recommend that pre-service candidates be allowed to substitute SAT scores for $Praxis\ I$, as Vermont allows. The minimum score for each test is defined in Figure 6.

¹⁵ To see all state *Praxis* requirements, go to *www.ets.org/praxis*.

Figure 7: Selected Praxis II Subject Assessment and Principles of Learning and Teaching Cut Scores for Comparable and New England States

PRAXIS II TEST	CT	ME	NH	NJ	ОН	PA	RI	VT	WS
Biology	152	150	153	152	148	147		151	154
Chemistry	151		153	152	152	154		150	154
Earth Science	157		148	153	151	157		158	154
Elementary	163	145	145	141	143	168		148	147
English, 7-12	172	160	164	162	167	160		172	160
Englishh, 5-8	164	155	155	156	156	163	162	154	160
General Science	157		147		149	146		157	154
Mathematics, 7-12	137	148	127	137	139	136		141	135
Mathematics, 5-8	158	126	151	152	143	151	158	162	
Physical Science		147	148	152					154
Physics	141		146	141	132	140		133	154
Science, 5-8	162	142		145	144	144	154	157	154
Social Studies, 7-12	162	157	155	157	157	157		162	153
Social Studies, 5-8	160	153	153	158	151	152	160	165	153

Principles of Learning and Teaching

	CT	ME	NH	NJ	ОН	PA	RI	VT	WS
Early Childhood					166				
K-6		166			168		167		
Grades, 5-7					168		167		
Grades, 7-12		NMSb			165		167		

^a Wisconsin requires the same test for all licensure candidates in the content area – regardless of grade level – to take the same test and achieve the same pass score.

PRE-SERVICE TESTS: SUBJECT MATTER AND PEDAGOGY

Praxis II measures knowledge of specific subjects that K-12 educators will teach, as well as general and subject-specific teaching skills and knowledge. There are three separate tests: Subject Assessment, Principles of Learning and Teaching (PLT), and Teaching Foundations [see PraxisTM Tests Defined box]. These are designed to be taken as part of the teacher licensing process after completion of certain course work and/or field experiences.

All other comparable states and New England states use either the Subject Assessments or the PLT or a combination of both tests at the end of the teacher preparation cycle. [See Figure 7] The Teaching Foundations test battery is not used in any of these states. Ideally, preservice candidates would take the Subject Assessment upon completion of their content area study and the PLT upon completion of their pedagogical courses and internship field experience.

There are a number of advantages to using Praxis instead of MTEL for candidates and teacher preparation programs. First, the Education Testing Service administers Praxis. As a result, for every test there are both free and commercial test preparation materials available to candidates, similar to those available for all other professional exams such as the $Graduate\ Management\ Admission$

^b No minimum score defined.

Test (GMAT), Graduate Record Examination (GRE), or Law School Admission Test (LSAT). On the other hand, MTEL provides only five downloadable practice tests: Communications & Literacy, Early Childhood, General Curriculum, Mathematics, and Foundations of Reading. For candidates in most subject areas, there are no preparation materials.

Second, *Praxis* offers tests measuring the candidates' knowledge and skills directly related to the act of teaching; *MTEL* does not. The *Praxis II Principles of Learning and Teaching* test, which is offered at four levels (Early Childhood, K-6, 5-9, and 7-12) measures pedagogical knowledge through multiple-choice, short constructed response, and case histories in three areas:

- Students as learners covers student development and the learning process, students as diverse learners, student motivation and the learning environment.
- *Instruction and assessment* addresses instructional strategies, planning instruction and assessment strategies.
- *Teacher professionalism* measures communications techniques, cultural competence, reflective practice and school-community relations.

Third, by using Praxis, the Commonwealth of Massachusetts expands the pool of potential teaching candidates to include all those taking the test in the other New England states and beyond. Many pre-service teachers educated in Massachusetts currently take Praxis because it is the test for their home state. By allowing them to use the test for licensure here, more teachers may decide to stay in-state to teach.

Fourth, using the Praxis series would allow for reciprocity with over 40 other states. Currently, teachers from other states, even those who are fully-licensed, may only attain a Massachusetts license by taking and passing MTEL. Teachers who have achieved the minimum score set by Massachusetts on the $Praxis\ I$ and II tests would acquire a license upon submission of their application and test scores. This significantly broadens the potential pool of applicants and eliminates a current barrier to entry.

Fifth, the Praxis test is administered on eight different dates in every state, including Massachusetts and many foreign countries. This allows students who live out of state to take the teacher test at a time and place convenient for them. In addition, Massachusetts residents have more options as they can attend administration in a neighboring state if that site is closer. Finally, students actually have the option of choosing the site in which they want to take the test; currently, they are assigned to an MTEL test site and not always the one closest to their home or school.

RECOMMENDED ACTION ON PRAXIS II

 \blacksquare We recommend that Praxis~II~Subject~Assessments replace the MTEL content area tests.

- \blacksquare We recommend that candidates seeking a grades 5-12 license, take and pass the appropriate 7-12 $Praxis\ II$ test.
- We recommend that the pass scores for each test equal the highest score required by comparison states (see Figure 5). For example,
 - Elementary candidates would take the Elementary
 Curriculum Subject Assessment and earn a score between 163 (CT) and 168 (WS).
 - English candidates would take the Grade 7-12 English Language, Literature, and Composition Subject Assessment and earn a minimum score between 167 (OH) and 172 (CT, VT).
 - Mathematics candidates would take the Grade 7-12
 Mathematics Subject Assessment and earn a minimum score between 139 (OH) and 148 (ME).
- All candidates would take the Praxis II Principles of Learning and Teaching and earn a minimum score between 165 and 167.

B. Licenses and Grade Spans

Current licenses span the following grades depending upon the subject area: PreK-2, PreK-6, PreK-8, 1-6, 5-8, 5-12, 8-12, and PreK-12. These arbitrary distinctions among grade spans create critical barriers and lead to confusion on the part of teachers and difficult decision-making on the part of school districts.

As an illustration, a teacher can earn a Biology license at either the 5-8 or 8-12 grade level. The current regulations are silent on the pedagogical courses/seminars needed for each license. The required MTEL content test is $exactly\ the\ same$. The practicum requirement is $exactly\ the\ same$ – 150 hours. The content knowledge for both of these Biology licenses is $exactly\ the\ same$, which is:

- (a) Biology of organisms, especially that of humans, including characteristics and classifications of organisms.
- (b) Cells and cell theory.
- (c) Ecology and evolutionary biology.
- (d) Matter and energy in ecosystems.
- (e) Genetics, including chromosome structure and function and inheritance.
- (f) Molecular biology.
- (g) Related aspects of chemistry, physics, earth science, and mathematics, such as statistics.
- (h) Engineering and technical applications of biology.
- (i) History and philosophy of science.
- (j) Methods of research in the sciences, including laboratory techniques and the use of computers.¹⁶

¹⁶ See 603 CMR 7.06, Massachusetts Licensure Regulations for content, pedagogy, and field experience requirements for all licenses.

We propose that the names and grade spans of licenses be simplified to reflect the needs of schools, districts, and educators.

- PreK-2 Early Childhood licenses: for teachers in regular education programs for grades PreK-2. This recommendation eliminates the "with and without disabilities" from the current name.
- PreK-2 Young Children with/without Special Needs license: this license should be required for those teaching three-to-five-year olds with Individualized Education Plans (IEP) and for grades K-2 classes where a majority of students are on an IEP or coteaching in inclusion classrooms. This license allows for the inclusion of students "with and without disabilities."
- *K-6 Elementary* license: this license should be required for those teaching grades in regular education beginning in kindergarten, primary and intermediate grade classrooms; this extends the current "1-6" grade span to include kindergarten thus mirroring the elementary school organization and acknowledging that kindergarten has become the new first grade.
- Grade 5-12 licenses are subject specific and would be used by those teaching in middle, high and middle-high schools; this merges the current 5-8, 8-12 and 9-12 into one grade span.
- PreK-12 licenses are for those who teach at all grade levels; this replaces "All" in the current regulations.

In the pre-service preparation programs section below, it is made clear that the field experiences must cover the grade range of the license. Figure 8 indicates the current license name and grade span in the first two columns; any proposed change to a license name is in column 3 and any proposed change to a license grade span is in column 4.

C. Teacher Preparation Program

The preparation of classroom teachers should consist of three elements. Each component is explained in the sections below.

- Subject matter knowledge that teachers should master based on the subject(s) they will teach.
- Pedagogical knowledge for all classroom teachers with additional specific knowledge related to the teaching assignment.
- Field experiences that engage the pre-service teacher in observation, analysis and practice.

PRE-SERVICE SUBJECT MATTER COURSES

Teachers should know the subject matter they are required to teach. Teachers should have the equivalent of a major if teaching one subject, or if teaching multiple subjects, a minor in each. In our review of the subject matter requirements at six Massachusetts' teacher preparation programs, we found a wide disparity: 36 semester hours for English to 55 semester hours in science. While we do not intend to comment on the subject matter courses required by higher education

Figure 8: Current Elementary and Secondary Teaching Licenses and Grade Spans with Proposed Changes

CURRENT LICENSE	CURRENT GRADE SPAN	REOMMENDED NAME CHANGER OR MERGE WITH OTHER LICENSE	RECOMMENDED GRADE SPAN CHANGE
Biology/Life Sciences	5-8; 8-12		5-12
Business	5-12	Merge with Instructional Technology	5-12
Chemistry	5-8; 8-12		5-12
Dance	All		PreK-12
Early Childhood: Teacher of Students With and Without Disabilities	PreK-2	Early Childhood	PreK-2
Earth Science	5-8; 8-12	Rename with Physical Science**	5-12
Elementary	1-6		K-6
English	5-8; 8-12		5-12
English as a Second Language (ESL)	PreK-6; 5-12		PreK-12
Foreign Language	PreK-6; 5-12		PreK-12
General Science	1-6; 5-8		K-8
Health/Family and Consumer Sciences	All		5-12
History	1-6; 5-8; 8-12		5-12
Instructional Technology (Business)	All		PreK-12
Latin and Classical Humanities	5-12		5-12
Library	All		PreK-12
Mathematics	1-6; 5-8; 8-12		5-12
Middle School: Humanities	5-8	Rename Middle School English/ Social Studies	5-8
Middle School: Mathematics/Science	5-8		5-8
Music: Vocal/Instumental/General	All		PreK-12
Physical Education/Health	PreK-8; 5-12		PreK-12
		Physical Science	5-12
Physics	5-8; 8-12		5-12
Political Science/Political Philosophy	5-8; 8-12	Rename Social Studies	5-12
Speech	All		PreK-12
Teacher of Students with Moderate Disabilities	PreK-8; 5-12		PreK-12
Teacher of Students with Severe Disabilities	All		PreK-12
Teacher of the Deaf and Hard-of-Hearing	All		PreK-12
Teacher of the Visually Impared	All		PreK-12
Technology/Engineering	5-12		
Theater	All		PreK-12
Visual Art	PreK-8; 5-12		PreK-12
		Young Children with/without Special Needs*	PreK-2

^{*} The Young Children with Special Needs license is for those teaching children 3-7 years in special education programs that are integrated with regular education children. This is not the license for regular education PreK-2.

^{**} Physical Science license, might include physical science, basic physics, weather and climate, meteorology, oceanography, astronomy, ecology and earth science.

^{***} Instructional Technology license is combined with the Business license and focuses on 21st century communications and business skills.

Teacher preparation consists of the following three elements.

- **Subject Matter Courses:** Coursework in the subject matter taught by holders of a license. *The Praxis II Subject Assessment* would measure pre-service teachers acquisition of content area knowledge.
- **Pedagogy Courses:** Coursework directly related to the knowledge and skill need to be a successful classroom teacher. Pedagogy refers to instructional theory and practice and the correct use of teaching strategies based on subject and student needs. The Praxis II Principles and Learning and Teaching would measure pre-service teachers acquisition of pedagogical knowledge.
- Field Experience: Field-based experiences are a variety of early and ongoing school-based opportunities in which pre-service teachers may observe, assist, tutor, and/or instruct. Field experiences take place in PreK-12 schools, are connected to on-site seminars, and are supervised by PreK-12 personnel in collaboration with higher education partners.

to earn a degree, we would argue that all courses in a given subject should be considered for the purposes of licensure. Courses that may or may not be relevant to the student's major may still be relevant for the purposes of licensure.

For example, if a pre-service teacher attends a university that requires a broad liberal arts curriculum during the first two years, courses in literature, history, mathematics, or science, these should be included in the overall requirement for licensure even though they may not be credited toward the student's major.

Elementary teachers also must have a basic understanding of reading theory, methods and practices. This should include knowing how to use and adapt both literature series and trade books in the regular education classroom.

The guide with regard to all subject matter knowledge should be the content of the Curriculum Framework that governs the teaching assignment.

SUBJECT MATTER CONTENT FOR ELEMENTARY CLASSROOM TEACHERS

All elementary teachers must be well-prepared to teach the four subjects that traditionally are included within the academic curriculum. Therefore, subject matter courses for early childhood and elementary classroom teachers should encompass coursework in literature, mathematics, history, geography, civics, and physical and life sciences to enable teachers to master the knowledge and skill defined in the four Curriculum Frameworks: English Language Arts, History and Social Sciences, Mathematics, and Science and Technology. The advocacy for a mathematics grades 1-6 teacher is misguided and unrealistic. It must be acknowledged that the current preparation of elementary teachers lacks sufficient coursework and rigor in mathematics and science.

SUBJECT MATTER CONTENT FOR MIDDLE SCHOOL TEACHERS

For the renamed Middle School English/Social Studies license, we recommend coursework leading to an understanding of the knowledge and skills defined for grades 5-8 in English Language Arts and History and Social Sciences.

For the Middle School Mathematics/Science license, we recommend coursework leading to an understanding of the knowledge and skills defined for grades 5-8 in Mathematics and Science and Technology Curriculum Frameworks.

SUBJECT MATTER CONTENT FOR SECONDARY TEACHERS

Candidates for 5-12 subject specific licenses should earn a major in that subject. The knowledge and skill that candidates acquire should be related to the Grades 5-12 learning standards in the governing Curriculum Framework(s) for their subject area.

SUBJECT MATTER CONTENT FOR SPECIAL EDUCATION TEACHERS

Subject matter courses for special education teachers should be similar to those for elementary classroom teachers. Because special education teachers often must work in collaboration with subject matter teachers, they should have general knowledge of the overall curriculum. However, it must be acknowledged that more of their academic learning will focus on identifying and accommodating the needs of students with special learning needs.

PRE-SERVICE PEDAGOGY CONTENT

Pre-service teachers must have direct instruction in key pedagogical theory and practice to understand the students with whom they will work and how to address their learning needs.

Pedagogical preparation is designed to provide theoretical understanding of how children and adolescents learn and connect this knowledge to the field experiences and seminars. For example, as pre-service teachers are developing an understanding of child, adolescent and human growth and development in their pedagogical courses, they are observing classrooms at different grade levels specifically to understand the connection between student development and educational practices. While preparation program faculty are responsible for the pedagogical course instruction, Pre-K-12 practitioners would lead on-site seminars that make connections between learning theory and classroom practice.

The topics listed below are meant to guide the development of pedagogy courses and seminars. Some may be stand-alone courses, while others may be woven into the texture of seminars and field experiences. We recommend the following pedagogy content for all preservice teachers to be completed prior to their internship:

- Educational psychology to include child, adolescent and human growth and development and abnormal psychology.
- Theory and practice of English language development for native English speakers and language strategies for English language learners.
- Theory and practice of instructional methods, strategies, and practices and curriculum development.
- The appropriate use of instructional and informational technology to enhance the learning environment.
- Elements of standards-based curriculum design from planning through assessment, making specific connections to the learning standards of the Curriculum Frameworks.¹⁷
- Theory and practice of reading and writing strategies that all teachers should incorporate into their instructional practice.
- Understanding of learning styles and needs and differentiating instruction based on learning styles, readiness, independence, and accommodations.
- Understanding the elements of cultural competence and the impact of socioeconomic, ethnic/racial, linguistic, and disability status on teaching and learning.

In addition to the course content listed above, we recommend that pre-service special education teachers complete the following:

- Understanding federal and state laws and regulations governing individuals with disabilities.
- Understanding characteristics of moderate and severe learning disabilities and application through the assessment of disability status.
- Preparation and implementation of Individual Education Plans based on assessment of student strengths and weaknesses.
- Understanding the range of modifications/accommodations to curriculum, instruction and/or assessment and articulating them through the IEP or 504 Plan.

PRE-SERVICE FIELD EXPERIENCES

Field experiences are an integral part of pre-service preparation. Candidates should spend time observing the full range of grade levels covered by the license sought.

- PreK-2 licenses: field experiences should include both public and private settings and classrooms with a wide range of students with and without disabilities.
- K-6 license: field experiences should include equal time in K-2 and 3-6 classrooms.
- K-8 licenses: field experiences should include equal time in K-3 and 4-8 classrooms.

¹⁷ Those prepared at out-of-state teacher preparation programs should not be excluded from licensing because their preparation was not specific to the Massachusetts Curriculum Frameworks. However, evidence should be required that demonstrates preparation in standards-based instruction.

Figure 9: Sample School Day for Internship: 7.5 hour workday/30 minutes for lunch

PROGRAM COMPONENT	WEEK ONE	WEEK TWO	WEEK THREE	WEEK FOUR	LAST TWO WEEKS		
1 hour/course or content area &	One course in MS/HS	Two course in MS/HS	Three course in MS/HS	Four course in MS/HS	Complete teaching		
one preparation period	One content area in ES	Two content area in ES	Three content area in ES	Four content area in ES	schedule		
On-site seminars lead by NTD	Classroom management	Managing instructional time	Lesson study Language	Incorporating instructional	Managing personal time		
Approximately 3 hours/week	Communicating with Parents	Assessing student learning	acquisition practices	technology	and work load issues		
On-site course led by preparation program faculty and/or NTD	Pedagogical theory and instructional strategies specific to the content area.						
Approximately 3 hours/week							

- Grades 5-12 licenses: field experiences should include equal time in 5-8 and 9-12 classrooms.
- PreK-12 licenses: field experiences should include equal time in PreK-5 and 6-12 classrooms.

In addition, during the three recommended field experiences, candidates should spend time observing and/or teaching in both urban and suburban schools. Rural schools should be included if they are proximate to and partnered with the teacher preparation program. We believe all pre-service teachers, however, should have urban field experiences.

- The initial field experience should consist of weekly classroom observations followed by participation in on-site seminars with other pre-service teachers led by a K-12 veteran educator designated as a New Teacher Developer (NTD) (this role is defined below). Connections would be made between the seminar and pedagogical course content. This experience should total 150 hours: two-thirds of the time in observation and one-third in seminar.
- The second field experience consists of the candidate observing classroom practice and teaching each week. Again, this would be followed by an on-site seminar that makes connections between the field experience and the pedagogical courses. This should total 150 hours: one-third in classroom observations, one-third teaching and one-third in seminar.
- The final field experiences consists of a 300-hour internship (formerly called student teaching) and 100 hours of on-site seminars; this is approximately a 16-week program (see Figure 9). In the initial week, pre-service teachers would teach one subject for generalist teachers or one class for subject area teachers. By the fourth week, the candidate should be teaching an 80 percent schedule and should be teaching a full schedule for

Figure 10: Program Elements, Details and Decision Making Points

PROGRAM ELEMENT	DETAILS	DECISION MAKING POINT
Praxis I	Test of Reading, Writing and Mathematics (either paper and pencil or computerized version acceptable).	 Must achieve MA approved cut score to enter teacher preparation program. Preparation Program: accepts candidate into pre-service teacher preparation program. Candidate: decides upon setting of first field experience.
Subject Matter Coursework	Completion of coursework in the subject matter(s) covered by the license. This is generally completed in undergraduate school.	Praxis II: Subject Assessment
Praxis II: Subject Assessment	Specific to the subject matter taught in the appropriate grade ranges.	Must achieve MA approved cut score prior to the final field experience.
Pedagogy Coursework	Completion of coursework in the topics suggested above. This work may be completed in either undergraduate or graduate school. Any alternative or district-based program must meet the same standards as higher education programs.	Praxis II: Principles of Teaching and Learning
Field Experience I	150 hours in combination of classroom observations and on-site seminars.	 New Teacher Developer and Preparation Program staff: recommends that candidate continue in preparation program. Candidate: decides upon second field experience site.
Field Experience II	150 hours in combination of classroom observations, teaching and on-site seminars.	 New Teacher Developer and Preparation Program staff: recommends that candidate continue in preparation program. Candidate: Identifies the grade level(s) and type of school district for internship.
Field Experience III	300 hours of classroom instruction; 100 hours of on-site seminars and/or university –based courses.	 New Teacher Developer recommends that candidate be endorsed for license. Preparation Program: Indicates candidate has successfully completed program and endorsed for licensure.
Praxis II: Principles of Teaching and Learning	Test measuring knowledge of pedagogy and practice as defined in three broad categories: students as learners, instruction and assessment, and teacher professionalism.	Must achieve MA approved cut score after the completion of the final field experience and prior to the licensure endorsement of the teacher preparation program.

at least the final two weeks of the internship. At the same time, candidates would participate in on-site seminars guided by a NTD in topics directly related to classroom practice, curriculum, instruction and assessment.

JOINT PREPARATION PROGRAM-SCHOOL DISTRICT DECISION MAKING

At the end of each field experience, the preparation program and the partnered PreK-12 school/district should work together, sharing information that each has collected, about the candidate's acquisition of the necessary knowledge, skills and disposition to progress to the next stage.

At the same time, the candidate must decide whether to continue pursuing a teaching credential by making a decision as to whether or not teaching is the correct career choice. An effective teacher preparation program should endorse students who are ready and able to meet the needs of all students. Assessing a candidate as he/she progresses through the field experiences is key to ensuring that both the pre-service teacher and the profession are well-served. To do this, an assessment model should be developed collaboratively by the partners and provided to candidates at the beginning of each field experience. A grading protocol should be established and a series of meetings held with the candidate to provide guidance through the field experience in terms of the assessment model and grading protocol.

Figure 10 outlines an example of a preparation program for a candidate attending a college/university requiring five 3-credit course/ semester. The decisions that preparation program, new teacher developer, and the candidate must make are integrated into this figure, as well as the Praxis tests required to progress from entry through the internship and to the license.

D. Preparation Program – School District Collaboration

As a means of providing meaningful field experiences to preservice teachers, preparation programs must enter into teacher residency partnerships with specific school districts. As a means of offering pre-service teachers an array of learning experiences, each preparation program must have such a partnership with at least two types of districts: urban, suburban and/or rural. Each school district must educate students at all grades covered by the license earned. For example, PreK-6 for early childhood and elementary licenses, grades 5-12 for secondary licenses and PreK-12 for all grade licenses.

The collaboration between the preparation program and the school district should involve two-way communication regarding the needs and progress of pre-service candidates. Communications should focus on the field experiences, the adult learning environment at the school site, and the decision-making regarding the candidate's advancement toward licensure.

- **Field Experience:** Communication should focus on the connections between pedagogy courses, field experiences and seminars. Together, the partners should define the New Teacher Developer's role in connecting seminar discussions to course content.
- Adult Learning Environment: Communication should focus on creating mechanisms to ensure an adult learning environment within the school supports pre-service teachers and acknowledges they are students rather than colleagues. The two partners should clearly define the roles of all adults working with and assisting the pre-service teacher. This includes a facilitator who is able to resolve problems that will inevitably arise.
- © Candidate Progression: Decisions about the advancement of candidates through the teacher preparation program are shared equally by the preparation program and school site staff. The partners define the knowledge and skills the pre-service teacher must demonstrate in order to progress to the next field experience.

As the teacher preparation program and school district partners make decisions about their collaborative program, both are responsible for providing the necessary training to the New Teacher Developers to ensure that all adults are aware of their roles and responsibilities in relation to the program and the pre-service candidates.

E. Role of New Teacher Developer

The New Teacher Developer (NTD) is a career path position for teachers having a Professional License and Professional Teacher Status in a school district. The NTD works with pre-service and novice teachers while remaining within the teaching ranks.

The NTD plays two roles integral to teacher preparation; Seminar Leader and Mentor. As Seminar Leader, the NTD conducts on-site seminars for pre-service teachers throughout their field experiences. This includes:

- creating a collaborative professional culture within which participants may share their observations of practice;
- making connections between theory and practice;
- assisting in the development of lesson plans during the second field experience; and
- observing and conferencing during the internship and providing formative assessment on classroom practice.

The NTD serves as adjunct faculty with the preparation program and attends training and staff meetings as needed.

As Mentor the NTD coaches and instructs novice teachers through a series of planned induction seminars and/or courses during their first two years of practice. This may include:

providing one-on-one or small group guidance through weekly meetings;

- observing, conferencing and providing formative assessment about classroom and professional practice; and
- providing assistance or specific guidance about practice.

NEW TEACHER DEVELOPER RESPONSIBILITIES

Pre-service Teachers: The NTD works with pre-service teachers during their first two field experiences primarily as a seminar guide. The NTD helps make connections between what they are observing in a variety of classrooms to their pedagogy courses content. During the internship, the NTD works with pre-service and cooperating teachers. The NTD observes classes taught and conferences with students. The NTD plans, prepares and conducts on-site seminars in a series of topics relevant to the learning needs of the pre-service teachers.

In-service Teachers: The NTD works with novice teachers in three different capacities. First, conducting weekly meetings with individual and/or small groups of novices to address immediate issues that arise related to teaching and learning. Second, observing the novice and conferencing to provide formative feedback with the goal of improving practice. Third, conducting seminars on a regular basis (once every two or three weeks) for groups of novices related to specific learning needs.

VI. Policy and Practice Recommendations

A. Teacher Testing

The statutory provision requiring teachers to pass a teacher test is found in M.G. L. Chapter 71, Section 38G, which states that "to be eligible for certification as a provisional educator, the candidate shall ...(2) pass a test established by the board which shall consist of two parts: (A) a writing section which shall demonstrate the communication and literacy skills necessary for effective instruction and improved communication between school and parents; and (B) the subject matter knowledge for the certificate."

The legislation must be amended to:

- Change the terminology from "certificate" to "license."
- Change "pass a test established by the board which shall consist of two parts" to "pass a test established by the board which shall consist of three parts: a pre-service test of reading, writing, and mathematics; a subject matter test; and a test of pedagogical knowledge."
- Change "a writing section which shall demonstrate the communication and literacy skills necessary for effective instruction and improved communication between school and parents" to "a pre-service test of reading, writing, and mathematics."

The law grants the BESE the power to identify the test. The current regulations must be amended to add to the "Purposes" section of the regulations, (603 CMR 7.01):

- Strengthen the pedagogical training required for pre-service teachers.
- Define field-based experiences required for pre-service teachers.
- Create residency partnership agreements between preparation programs and school districts serving as field experience sites.
- $\$ Replace the Massachusetts Tests for Educator Licensure with $Praxis\ I$ and II, Massachusetts regulations (603 CMR 7.00) must be amended.
 - Eliminate all reference in the regulations to the topics covered by licensure tests.
 - \blacksquare Establish minimum pass scores for each of the Praxis tests.

B. License Names and Grade Spans

The current regulations (603 CMR 7.00) must be amended to:18

- Replace all 1-6 licenses with K-6 licenses.
- Replace all existing 5-8, 8-12, and 9-12 licenses with 5-12 licenses.
- Rename licenses as defined in Figure 8.

C. Teacher Preparation Programs

The current legislation (M.G. L. Chapter 71, section 38G) must be amended to:

- Revise the statute to reflect the changes in pre-service training.
- Revise the statute to reflect the type and form of reporting to the DESE.

The current regulations (603 CMR 7.00) must be amended to:

- Articulate the pedagogical coursework required for all regular education and special education teachers.
- Define the three field experiences required for all regular and special education teachers.

D. Preparation Program - District Collaboration

A standardized residency partnership agreement format should be developed by a collaborative group representing teacher preparation program and urban, suburban, and rural district staff, approved by the BESE, and disseminated to teacher preparation programs and school districts. To ensure that pre-service teachers have a wide array of field experiences, the Commonwealth of Massachusetts must ensure that all preparation programs partner with at least two types of districts: urban/suburban, urban/rural, suburban/rural. With the exception of district-based programs, DESE approval should be denied to any preparation program that works with only one school system or one type of school system.

¹⁸ All current licenses would be unaffected by the changes proposed here.

Current regulations may need to be amended to ensure that an integral element for program approval includes preparation program-school district partnerships.

E. Role of New Teacher Developer

We recommend that the Board of Elementary and Secondary Education work with the field to create a series of endorsements for teachers with a Professional teaching license who have earned Professional Teacher Status in a school district. In this instance, an endorsement would indicate that the teacher who is a NTD has completed a specific course of study, generally three graduate level courses, and one field experience, in preparation for taking on additional duties. The preparation program for the endorsement for this career path position would include coursework in:

- Adult learning theory
- Coaching and facilitation skills
- Formative assessment of personnel to include pre/postconferencing and classroom observation techniques
- Field experience. The current regulations (603 CMR 7.00) must be amended to include endorsements in general and specifically for New Teacher Developer

VII. Conclusion

The research is clear that well-prepared teachers are the single most important element of a high-quality education under the control of school districts. Current Massachusetts statute and regulations create barriers to ensuring that all classrooms are led by teachers with both content knowledge and pedagogical skills to meet the needs of an increasingly diverse student population.

The proposals outlined in this policy brief are designed to ensure that all teacher preparation programs – university-based, district-based, or alternative – prepare tomorrow's teachers for the diverse classrooms they will enter.

These proposals will ensure that teachers not only understand the subject matter they are teaching, but understand the theory and practice behind a range of teaching strategies. They will understand the importance of stressing reading and writing skills in all classrooms, they will understand the range of special needs and how to implement accommodations, they will understand the needs of second language learners and know strategies to assist them in acquiring English language skills, and they will understand the affect that home culture has on learning.

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