



Center for Education Policy

**An Evaluation and Analysis of the
12-to-62 Plan for
Recruiting and Retaining
Teachers in Massachusetts**

Sponsored by

The Massachusetts Department of Education

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About the Center for Education Policy

The Center for Education Policy in the School of Education of the University of Massachusetts Amherst was developed to connect the resources of the University to the major education policy issues of the day, with the dual goals of improving public decision-making and enriching scholarly activity. The Center works in an independent and non-partisan way to fulfill the University's land-grant mission of public service and outreach, with a particular focus on state-level issues of importance in Massachusetts and nationally.

Through conferences and seminars, policy studies and research projects, and the dissemination of information throughout the policy community, the Center focuses attention on the important education policy questions facing decision-makers and helps to achieve greater impact and cohesion in the search for effective policies. Policymakers interested in expert assistance, and faculty and graduate students interested in conducting education policy studies, are encouraged to contact the Center for Education Policy.

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EXECUTIVE SUMMARY

Over the past three years, the Department of Education (DOE) has developed and implemented a variety of state-funded initiatives designed to address teacher supply and quality needs through recruitment and retention of high-quality teachers, under the umbrella of the 12-to-62 Plan. To date there has been no comprehensive, external evaluation of the 12-to-62 Plan as a whole. DOE contracted with the Center for Education Policy at the University of Massachusetts Amherst to both evaluate the individual programs within the Plan and analyze the overall Plan as a public policy initiative.

The research on this project has been a complex and intensive undertaking. Research has included: interviews with DOE and program staff; interviews with key education stakeholders in the state; focus groups of MINT participants and program staff; written, telephone, and Internet surveys of 12-to-62 program participants and supervisors; a review of Plan and program documents; and an analysis of the relevant policy, practitioner, and theoretical literature.

THE 12-TO-62 PLAN PROGRAMS

The Office of Educator Recruitment, Retention, and Career Development at the Department of Education has implemented a series of initiatives under the 12-to-62 Plan, using approximately \$4 million in interest from the Superintendent, Principal, and Teacher Quality Endowment Fund and approximately \$1 million in other DOE funds to support the following programs during the 1999-2001 time period:

- **Tomorrow's Teachers Clubs.** Purpose: to develop middle and high-school student interest in teaching. During 1999, 2000, and 2001, DOE made available \$100,000 per year to support grants of up to \$2,000 each to local schools for an advisor stipend and a start-up treasury. Among other activities, all participants are involved in tutoring and teacher shadowing. During this period, DOE awarded grants to 115 schools to establish clubs, serving 1,400 students annually. DOE did not fund Clubs in 2002.
- **Massachusetts Signing Bonus Program for New Teachers.** Purpose: to recruit high-quality recent college graduates and mid-career professionals to become teachers. Beginning in 1999 DOE gives a \$20,000 bonus and a scholarship to the MINT program (see below) for successful applicants who agree to teach full-time in a Massachusetts public school for at least four years. In 2001, the program accepted 115 participants, for a cost of \$2.3 million in bonuses, plus associated MINT scholarship costs.
- **Massachusetts Institute for New Teachers (MINT).** Purpose: to recruit recent college graduates and mid-career professionals with content expertise via an accelerated route to certification. The Institute is an accelerated teacher training program, including summer training and school-year follow-up, designed to allow qualified applicants to progress from Provisional Certification to Provisional Certification with Advanced Standing. All applicants must pass the Massachusetts teacher test in communication/literacy and in their chosen subject area to be considered for MINT. All Signing Bonus recipients are required to participate in MINT; other qualified individuals may earn a scholarship or have a district pay tuition of \$2,250 for them to attend. In 2001, the program trained 220 teachers—the 115

Signing Bonus recipients plus 105 others. The program costs approximately \$600,000 per year.

- **Attracting Excellence to Teaching.** Purpose: to recruit high-achieving college graduates to teach in areas of need. The program provides student loan reimbursement of up to \$1,800 per year for four years for teachers who graduated in the top 15 percent of their class and/or earned an honors designation with either their graduate or undergraduate degree. The program cost \$1.08 million in reimbursements for 700 teachers in 2000 and \$1.11 million in 2001.
- **Master Teachers/National Board Certification.** Purposes: to retain high-quality, experienced teachers in the teaching ranks and to develop a corps of highly qualified mentors. The Chapter 260 legislation created one route to Master Teacher status, the National Board for Professional Teaching Standards (NBPTS) certification, and DOE is working to develop other routes. DOE has set a goal of 1000 Master Teachers by 2003 and provides subsidies for NBPTS application fees. NBPTS-certified teachers who mentor in their schools/districts may be selected as Master Teachers and will be awarded \$5,000 per year for up to ten years. Districts are encouraged to utilize master teachers in leadership positions that offer increased compensation while allowing the teachers to continue to teach. Costs for FY 2002 included \$548,000 in NBPTS application fee subsidies and \$1,050,000 in annual stipends for 185 qualifying teachers, but that amount will grow as the corps of master/mentor teachers grows.
- **Summer Mentor Training Institutes.** Purpose: developed by DOE and provided by various approved vendors to train groups of experienced teachers and administrators in the skills necessary to fulfill this requirement. District teams also collaborated to design a beginning teacher support implementation plan. Over 70 districts participated in the training, with 800 educators becoming trained mentors in the summer of 2000, and 666 in the summer of 2001. The SMTI Program cost in 2001 was \$262,000. In 2002, DOE discontinued the Summer Mentor Training Institutes in favor of “Train the Trainer” institutes that focus on training mentor trainers who can go back to their districts and train mentors in the context of the local induction program.
- **Case Study Seminars for Beginning Teachers.** Purpose: to support and retain new teachers and to improve classroom practice. New teachers take a series of five support seminars in locations throughout the state, discussing issues that relate to their classroom practices with peers and experienced teacher facilitators. In 2001, the seminars served over 1,200 beginning teachers, nearly one-half of all beginning teachers across the Commonwealth, at a cost of \$189,000.
- **Teacher Career Advancement Program (T-CAP).** Purpose: to retain top-quality teachers by developing models of career paths that enable them to advance professionally and in terms of salary without leaving teaching. Based on a model championed by the Milken Foundation, this program has distributed planning grants to 10 districts and implementation grants to six districts to support work on multiple career paths and expanding roles for teachers. Annual program cost for FY 2002 was \$100,000.

The 12-to-62 Plan also includes one other program, the **Tomorrow’s Teachers Scholarship Program**. This program offers tuition remission at Massachusetts public colleges and

universities to students who graduate in the top 25% of their high school class and who agree to teach for a minimum of four years after college graduation. This program began in 1999 with 300 recipients; 700 scholarships were offered in FY2001. Unlike the rest of the programs, which are administered by DOE, the Tomorrow's Teachers Scholarship program is administered by the Massachusetts Board of Higher Education. It was therefore not evaluated in this analysis.

MINT/SIGNING BONUS - FINDINGS

The MINT/Signing Bonus program is recruiting and selecting high-quality people into the teaching profession.

- The selection process is very good, and has been improved over time.
- Principals are generally satisfied (89% would hire a MINT graduate again without reservations, and only 1% would not consider hiring one; 81% say MINT graduates have had a somewhat or very positive impact on students overall)
- Principals primarily attribute success to individual traits, such as personality, background, and/or career experience.
- Participants rate themselves highly as teachers, relative to their peers.
- 87% would do it again.
- Recruiting efforts are not yielding many candidates from beyond New England and New York (84% of applicants are from Massachusetts, 93% are from New England or New York).
- Two-thirds of MINT participants are mid-career applicants.

The accelerated nature of the program is a more important inducement factor than the Signing Bonuses.

- However, the Bonuses may have yielded publicity that caused participants to notice the program in the first place.
- The Signing Bonus appears to be a stronger incentive for recent college graduates than for mid-career participants.

The Summer Training component is insufficient.

- Significant numbers of participants say the Cooperating Teacher relationship is inadequate (40% say either poor or very poor). Problems experienced include Cooperating Teachers who are (1) not at the same grade level as their trainees, (2) not at the same subject area as their trainees, (3) disinterested/resentful, (4) unaware/unprepared for their role, and/or (5) inadequately compensated for their roles.
- The summer school experience is not comparable to regular school. Small classes and a general focus on MCAS remediation offer little practice for the realities of the school-year environment.
- Because most summer schools focus on English and math only, most trainees for other licensing areas receive few opportunities to practice their chosen content areas.
- Participants rate the theoretical workshops more highly than the practice teaching component.
- Less than 50% report that they received an adequate amount of training in classroom management, content knowledge, observing experienced teachers, and learning to work with

special needs students. On the other hand, principals noted classroom management training as a weakness in only a very small number of participants. Moreover, both participants and principals said that participants have good content knowledge. It is possible that some/many participants may need more focus on translating content knowledge into teaching strategies, as several participants noted, but a portion of respondents may have misunderstood the survey question. More research on this issue seems warranted.

- The Shrewsbury NTP site uses a different model for its cooperating teachers, in which a team of content-expert teachers observe and MINT trainees have lead teaching responsibilities. Shrewsbury participants tended to rate their cooperating teachers and practice teaching more highly than those in other programs. UMass Lowell participants, on the other hand, rated their workshop components more highly than those in other programs.
- There is some skepticism among stakeholders about whether MINT training is appropriate for urban districts. In this view, the shock of immersion in the fall is too great; some urban districts are reluctant to hire MINT graduates because they assume they'll leave. (It should be noted that some of the stakeholders expressing this opinion also indicated that they had a relatively limited understanding of how the MINT program actually worked.)

The MINT/Signing Bonus program is producing teachers in high-demand content areas.

- Almost half of MINT graduates are teaching science or math (32% and 17% respectively, of those known). An additional 10% are teaching foreign languages or special education.
- Over 50% have been hired into “hard-to-fill” positions

MINT/Signing Bonus graduates are not primarily teaching in high-need schools.

- Only one-third of MINT teachers as a whole, and of Bonus recipients as a subset, are teaching in high-need schools. Part of this may be due to the fact that urban districts often hire long after suburban districts, which poses problems for mid-career professionals anxious about employment.
- Recent college graduates are more likely (42%) to be teaching in high-need districts than mid-career participants (34%), but two-thirds of MINT participants are mid-career.
- There has been negligible success recruiting minority candidates, to date. This is, however, a common challenge for all teacher recruitment efforts.

The mentoring component is welcomed, but variable.

- Mentoring support seems particularly important for MINT teachers, given the accelerated nature of their training.
- 79% of the 2001 MINT participants say they are receiving mentoring. Of those indicating they are receiving mentoring, 26% find it poor or very poor. This means that about 42% are receiving poor mentoring or none at all.
- Mentoring is more scarce in high-need districts: 55% of 2001 MINT participants in high-poverty districts (40% or more F/RL) say they are receiving poor or nonexistent mentoring.
- Case study seminars are seen as generally useful, especially for sharing/support.
- Focus group participants indicated that they wanted case study seminars to begin as soon as school started in the fall, for immediate feedback and support.

Retention questions remain to be answered.

- Lack of records on 20% of MINT participants makes it difficult to establish a true retention rate.
- 86% of respondents say they will be teaching next year; 4% say they will not.
- 70% say they will teach at the same school next year; 12% say they will not.
- 66% say they will be teaching in five years; 7% say they will not.
- Recent college graduates are significantly more likely to say they will not be teaching in five years than mid-career participants (18% vs. 3%).

Communication with participants and districts needs improvement.

- DOE communication and support problems appear to be deeply felt by participants and site staff. 38% of MINT participants rate DOE's communication and support as poor or very poor, and focus groups with site staff and participants showed this to be a strongly held issue by a number of people.
- Program providers were rated more highly in this area (78% satisfactory or above), but the number of complaints about Cooperating Teachers being unaware of their roles when MINT trainees entered their classrooms indicates that this is also an area for improvement.

MINT has a fairly low profile.

- Principals and stakeholders don't have a clear idea of the program's goals or how it works.
- 59% of principals say they know "a little" or "nothing" about MINT.

MINT/SIGNING BONUS - RECOMMENDATIONS

Develop a marketing campaign to boost the teaching profession as a career, and MINT as a way into it.

Focus recruiting efforts in New England and New York. This is MINT's most productive pool of candidates, historically. Minority recruitment efforts should be focused in this region as well. Minority recruitment might also be improved through programs such as the "Troops to Teachers" program referenced earlier in this report.

Don't give up on recent college graduates. Recent college graduates appear to be more likely to teach in high-need schools, and are less likely to have established lifestyle needs that preclude teaching as a career. Explore existing models around the country that successfully target college math and science majors to get them interested in teaching. Consider broadening targeted majors to include other math-related areas, such as economics, engineering, business, and computer science.

Strengthen DOE's capacity to communicate with MINT participants—before, during, and after the summer program. Participants and program staff sent a clear message that more consistency was desired in this area.

Focus on the cooperating teacher relationship. This is a clear area of dissatisfaction, and solving the problems in this area would significantly improve the summer-school training model. The Shrewsbury model, in which a team of content-expert teachers observe and MINT trainees have lead teaching responsibilities, may hold promise if it can be implemented in urban schools.

Focus on the “nuts and bolts”—both process and content-based pedagogical aspects of teaching. Classroom management, grading strategies, communicating with parents, and working with special-needs students are common needs of all new teachers, regardless of their degree of content knowledge. In addition, MINT participants appear to be asking for more content-specific pedagogy—how to translate their content knowledge into lesson plans for students (although more inquiry is needed to establish the extent of this desire). More interaction with experienced teachers is also desired.

Look carefully at the needs of science teachers and how they can be met through the MINT process. One-third of MINT participants are training for science teaching, but most summer schools do not offer many, if any, science courses.

Designate Bonuses only for high-need areas: high-poverty schools, high-demand specialties, and minority candidates. Scarce state funds should be targeted at the areas where the teaching shortage is most severe. In addition, the state should consider targeting high-need schools, rather than high-need districts, since some schools in high-need districts have less need of subsidized resources (e.g., Boston Latin, which is home to several MINT graduates).

Work to make MINT more of a “grow-your-own,” district-based hiring strategy. Without district buy-in, MINT will risk being an afterthought, perpetuating the poor cooperating teacher relationships and other challenges mentioned above.

Consider whether MINT needs to be changed fundamentally if it is to meet its current goal of serving high-need districts. The demands of urban teaching are such that a Bonus and a seven-week summer session simply may not be sufficient to adequately prepare a significant number of high-quality teachers who will stay. There are a variety of one-year, district-based alternative teacher training programs involving apprenticeships with master teachers (e.g., 180 Days in Springfield, Teach Next Year, Project Open) that could be supported with MINT funding. Other district-based models could be developed, based upon the state’s alternative routes 3 and 4. Alternatively, DOE could arrange for MINT graduates in urban settings to enter district apprenticeships after their MINT training, as the following respondent was apparently able to do:

“I was the luckiest of new teachers to be allowed to share a class with my department head (1/2 of a “double-blocked” class). We worked closely together for a whole year and daily discussed ALL (and I mean all) aspects of teaching including my MINT, college, and other graduate training I have had. Were it not for that year and the generosity of a master teacher I would not be the teacher I am now. I had a true apprenticeship such as I had in my first career. If you want to turn out the best teachers quickly, have them spend one year sitting and watching a master for half of a class and then continuing the lesson for the other half. Have your seminars in the evening or whenever but put the teachers in a real classroom during the real school year.”

At a minimum, MINT should look for ways to extend its current training by several weeks in the summer and insist on rigorous induction programs and ongoing professional development for its urban-based graduates.

TOMORROW'S TEACHERS CLUBS - FINDINGS

Schools – Over half of responding advisors are from suburban schools; almost one-third are from urban districts. Fourteen percent of schools have had future teachers' clubs for longer than DOE has provided TTC funding (4 years). Clubs are most likely to include 10th-12th graders, although students as young as 5th grade are represented.

Advisors are predominantly experienced teachers, with 70% having taught for 9 or more years and almost half having taught for 20 or more. Advisors' certification areas vary, with history/social science, guidance, English language arts, and middle school generalist being most frequent. 86% are white, 80% are female.

Students do not face great selectivity barriers to club participation—the primary criterion for participation is student interest (although 20% of advisors mentioned GPA as a criterion). This is understandable for a school activity, but can be problematic if the purpose of the program is to generate high-quality future teachers. Advisors rated 42% of participating students as high academic achievers, and 8% as low achievers. TTC students are predominantly female (78%) and white/non-Hispanic (70%); 11% of participants are Hispanic, and 5% are black/non-Hispanic.

Activities conducted by at least 40% of responding TTCs include: teacher shadowing, education discussion groups, tutoring other children, reading to elementary school children, and field trips to schools of education. Other activities range from substitute-teaching in elementary schools and team-planning and teaching of lessons to activities that do little or nothing to promote an interest in or skill development for teaching, such as delivering daily announcements and mail and taking a field trip to the IMAX theater in Boston.

Impact of the TTC program, in terms of recruiting more teachers, is difficult to assess due to the relatively short duration of the program to date. Approximately 44% of advisors reported that some of their former TTC members are currently enrolled in teacher preparation programs (36% said they had not been active long enough to track this, and 18% did not know). Nearly 88% of TTC advisors agreed that TTCs “are an effective way to recruit quality students into the teaching profession,” with about 40% strongly agreeing. Almost all respondents (97%) believe that TTCs have a positive effect on student attitudes toward the teaching profession, and several mentioned positive impacts for participating teachers, as well.

Asked to predict what percentage of Club members would **pursue a career in teaching**, advisors' responses varied widely, but about 70% felt that two-fifths or more of their TTC students would become teachers. 55% of TTC students show a primary interest in early childhood or elementary education; whether this focus is likely to persist or is simply due to wanting to teach children younger than themselves at this time is unclear.

Continuation and Support – If TTC grant funding is not available, 28% of respondents say they will continue to sponsor their TTCs; 19% will not, and the rest (54%) were unsure. Respondents suggested the following other types of DOE support: (1) sponsoring statewide networking meetings for TTC advisors and students, (2) marketing and supporting teaching as an

attractive profession, (3) scholarships and awards for TTC members, (4) informational materials/videos on topics such as how to become a teacher, careers in education, and how to teach effectively, and (5) guest speakers, such as the teacher of the year.

TOMORROW’S TEACHERS CLUBS - RECOMMENDATIONS

On balance, the Tomorrow’s Teachers Clubs program offers apparent benefits—increasing interest in teaching among young people at an impressionable age—at a modest cost (approximately \$160,000 in grant funds for 132 schools in 2001-2002). The following are some recommendations for improvement.

- **Stimulate TTCs in high-need districts.** This can be another strategy for recruiting a diverse teaching population.
- **Encourage TTCs to recruit high-achieving and male students.** Currently, advisors rate only 42% of their TTC students as being “high achievers.” Only 22% are males.
- **Convene and share best practices among TTC advisors.** Advisors appear interested in learning from each other and in having materials on teaching to share with interested students. Efforts to have students shadow and interact with practicing teachers should be emphasized over more traditional “social club” activities.

ATTRACTING EXCELLENCE TO TEACHING - FINDINGS

Who are the AET participants?

- Respondents are 80% female, 90% white/non-Hispanic, 75% age 35 or younger. One-third have taught for six years or more.
- About 30% of respondents report that their primary undergraduate major was education. (Of these, half are elementary teachers and another 23% are special education teachers.) About 29% of respondents were social science or English majors. Less than 10% majored in either science or mathematics.
- Three-quarters are certified in elementary school, English, history/social sciences, or middle school, none of which are particular shortage areas. Shortage areas represented include special education (22%), sciences (8%), and mathematics (5%).
- About 70% have \$20,000 or less in outstanding student loans; 13% have more than \$30,000.
- Respondents received an average of \$1,625 in 2001.

To what extent was AET an incentive for their entry into teaching?

- AET does not appear to play a significant role in the recruitment of new teachers. 97.7% of respondents would have entered the teaching profession without the AET incentive.
- Districts and teacher preparation institutions do not appear to be using AET to recruit teachers. Only 2 of 445 respondents said that they learned about AET because a district used it as a recruiting tool. 87% of respondents did not learn about AET until after they began teaching.

- AET may have some impact as a retention tool. 45% said that AET payments had increased their satisfaction with teaching as a career, and 16% said that they are likely to teach more years as a result of AET. Participants made numerous comments about AET boosting morale and making them feel valued.

Is AET attracting teachers to high-need districts? How could this targeting be improved?

- Approximately two-thirds of respondents are currently teaching in “high-need” schools (29% or more free/reduced lunch). However, since 87% of respondents did not learn about AET before they began teaching, AET does not currently appear to have much impact on where teachers initially begin teaching. Five respondents in high-need districts commented that AET had helped retain them, after they began teaching there for other reasons.
- 10% of participants, and 8% of those not already teaching in a high-need district, indicated that limiting reimbursement to teachers in high need systems would have affected their decision about where to teach. 78% said it would not have affected their decisions (12% were unsure).
- It is interesting to note that the definitions of “high-need district” are different in AET (29% free/reduced lunch) and the MINT program (a selected list of districts with much higher free/reduced lunch populations).
- When asked what was the minimum yearly payment that would serve as an effective incentive to teach in high-need districts, nearly 90% said the incentive needed to be increased. An annual payment of \$3,000 would be seen as an effective incentive by 52% of respondents.

How satisfied are participants with the process, and how could it be improved?

- Three-quarters said they were satisfied or very satisfied with the overall administration of the AET program by DOE. 66 respondents volunteered comments about their gratitude for the program.
- 11% were somewhat or very unsatisfied, and 65 respondents (15%) volunteered comments about difficulties with communication and organization.
- Most frequent suggestions for improvement were: (1) increase the annual funding limit and/or number of years paid, (2) increase publicity for the AET program, (3) expand eligibility to more teachers, (4) don’t reduce the reimbursement by taxing it, (5) vary reimbursement according to loan amount, district poverty, or some other factor, and (6) a variety of organizational and communication improvements.

ATTRACTING EXCELLENCE TO TEACHING - RECOMMENDATIONS

Greatly enhance program publicity and market the teaching profession. Currently, it is difficult to know whether the AET payments provide adequate incentive to recruit new teachers, because most recipients didn’t learn about the program until after they began teaching. Publicity efforts should target potential teachers early enough in their careers (at the college/university level) so that the reimbursement program has the opportunity to play an “attracting” role. As part of publicity efforts, information regarding AET should be disseminated to school districts, specifically to personnel and/or administrative leaders responsible for hiring teachers.

Consider targeting reimbursements toward shortage areas. Depending on AET program goals and how the Department wants to define or redefine these goals, it may be appropriate to target scarce public resources toward the following areas:

- teachers in high-need systems,
- teachers in high-need subject areas such as math and science, and/or
- minority teachers.

Consider raising the reimbursement limits for a more targeted population of recipients.

About 45% of respondents are carrying between \$10,000 and \$20,000 in loans. It may be worth examining the reimbursement structure to see if more subsidies (either through increased payments or lengthening of the program) can be provided for these teachers. DOE could more narrowly target the types of teachers they want to recruit (e.g., high-need districts, math, science, special education, languages), and then offer higher reimbursement amounts (e.g., \$3,000 per year) to attract those types.

Examine AET’s definition of “high need” district. While 29% free/reduced lunch districts certainly face significant challenges, most definitions of the neediest districts—those worthy of special, targeted teacher incentives—would be higher, perhaps at a 40% threshold.

Continue to refine the application procedures and consider a system that makes the reapplication process easier. It is important to consider participants’ suggestions for improving the current system so that it is more efficient for everyone involved. The issue of access to internet-ready computers also deserves some consideration because some teachers do not have this access at home. It should also be noted that some Internet-savvy people had difficulty with the online application.

CASE STUDY SEMINARS - FINDINGS

What are the incentives that encourage new teachers to participate in the Case Study seminars?

- 85% of respondents received compensation for participating in Case Study seminars. This included graduate credit (66% of those reporting compensation reporting), PDPs (36% reporting), tuition reimbursement for the seminars (28% reporting), and potential for a step raise on the pay scale (4% reporting).
- 64% of respondents would continue to participate without compensation, because of the intrinsic rewards of the seminars.

How satisfied are the participants with the program and how can it be improved?

- 97% of respondents rated the Case Study seminars as “excellent” or “good.”
- 90% would recommend the Case Study seminars to other teachers.
- 98% rated their Case Study facilitator as “very competent” or “competent.”
- 95% said that meeting locations were convenient for them.
- Suggested improvements included more time on classroom management, shorter and more frequent meetings, and fewer topics discussed in more depth.

- Suggested additional topics included additional information on classroom management, dealing with the administration, and communicating with parents.

Does the program increase the confidence and satisfaction level of new teachers in the profession?

- 94% of respondents indicated that the Case Study seminars have improved their confidence and satisfaction in teaching.
- 88% said that the Case Study seminars had improved their pedagogical skills.
- 82% said that the Case Study seminars had improved their classroom management skills.

Does the program help to reinforce mentoring initiatives in the state?

- 77% of respondents see no connection between the Case Study seminars and mentoring/induction programs in their districts.
- Of those who noted connections, the most frequent responses were that topics similar to the Case Study seminars were discussed by mentors, that the two programs support each other, and their mentors recommended that they take the Case Study seminars.

MENTOR TRAINING - FINDINGS

Overview

- 80% of the respondents stated that they had significant induction programs in place in their school districts, with a strong articulation between mentoring and a more comprehensive induction program. 16% stated that they had minimal induction programs in place (usually mentoring only), and 4% have programs that are under development.
- The mentor coordinators believed that their district induction programs mutually benefited new teachers and veteran teachers (88% and 79% respectively).

Components of Induction Programs

- The majority of the induction programs have an orientation (97%) as well as a mentoring (93%) component to their programs.
- 73% of the programs have mentor workshops, and 73% have beginning teacher workshops. These programs range from the DOE-sponsored Case Study Seminars to formal workshops outside school to formal in-district or school programs.
- 65% of induction programs include support teams. Most support teams were described as informal.
- 58% of the schools have a release time component, which varies among schools.
- Other components, mentioned by 36% of respondents, include social gatherings, peer observations, and a survey/evaluation process.

Mentor Training

- 73% of the mentor coordinators stated that their districts require mentor training.
- 62% of the districts trained their own mentors. 46% used outside consultants, 39% participated in DOE-Sponsored Summer Mentor Training, and 9% used other types of training (many districts reported using more than one type of training).

- Of those who participated in the DOE Summer Mentor Training, 43% rated it as excellent, 41% rated it as good, and 15% rated it as fair. None rated it as poor or very poor.
- 71% of those who participated in the DOE Summer Mentor Training believe that it was beneficial to their district's induction program. 12% believed it was not beneficial, and 17% were not sure.
- 76% of those who responded to the survey offered ratings regarding the support and communication of the DOE-Sponsored Summer Mentor Training. Of those who responded, 11% rated communication and support as excellent and 35% rated it as good. 34% rated communication and support as satisfactory. 14% rated communication and support as poor, and 6% as very poor.
- 14% of districts responding said that there are DOE-trained mentors who are not selected to participate in the district's mentoring program. 19% of districts responding were not aware that teachers would be participating in the DOE training program before they attended.

MENTOR TRAINING - RECOMMENDATIONS

The mentor coordinators offered several recommendations for DOE's consideration:

- DOE should **support districts in developing their own induction programs** through grant funding (for stipends and release time).
- DOE should **sponsor a train-the-trainer type program** every other summer to ensure that district-based programs have the personnel they need to make them work.
- **Resources and materials for in-district mentor-training efforts** will continue to be useful and appreciated.
- DOE could, in general, help to foster **more sharing of knowledge among and between districts**.

MASTER TEACHERS/NBPTS CERTIFICATION PROGRAM - FINDINGS

What are the incentives, fiscal and otherwise, that encourage experienced teachers to participate in the Master Teacher/NBPTS program?

- The most significant reasons teachers apply for National Board Certification are the opportunity for **professional development** and the **Bonus** offered to Master Teachers.
- Payment of the **application fee** up front seems to be the strongest incentive to teachers. If most of the \$2300 application fee had not been paid up front by the DOE, 63% of Master Teachers indicate they would not have applied—regardless of whether it was reimbursable for those who succeeded in achieving Certification. This is not surprising given that about 50% of applicants fail the NBPTS program on their first attempt.
- If the Bonus was not offered at all, 58% of Master Teachers say they would not have applied for Certification. Reducing the bonus offered to Master Teachers would have reduced applications by smaller, though still significant amounts (31% to 47%), depending on the way in which the Bonus was reduced.

How satisfied are participants with the program, and how could it be improved?

- Master Teachers rated the Certification process highly, with over three-quarters stating they **would go through the process again**. They considered it to be a worthwhile professional development exercise. However, a number expressed frustration with the **lack of feedback from NBPTS** concerning their applications.
- Teachers find the opportunity for **self-reflection** the most valuable part of the Certification process. The least valuable components were the procedural issues and the assessment center exercises.
- Some changes recommended by the Master Teachers include **more feedback** from the NBPTS about the scoring of their tests, retaining the **promised Bonuses** for Master Teachers, providing **additional paths to Master Teacher** status besides mentoring, and more efficient **communication** from DOE.
- The mentoring program could be improved by creating ways for Master Teachers to **meet together** and share experiences, and through additional **mentor training**.
- The majority of Master Teachers think that the Department of Education should both support **district-based induction programs** and offer **mentor training institutes**. Among those who favored one role over the other, **three times as many were in favor of supporting districts** in building their own programs.

Does the program increase retention of experienced teachers in the profession?

- The majority (52%) of Master Teachers report an **increase in satisfaction** with teaching as a result of their Board Certification.
- 40% of Master Teachers report that their **involvement in governance and decision-making** has somewhat or significantly increased as a result of Board certification. This is fairly substantial, given that most respondents have only completed their certification fairly recently.
- 33% report that their involvement in **curriculum design and development** has somewhat or significantly increased as a result of Board certification.
- Board Certification appears to have **no net impact on the likelihood of Master Teachers to leave the classroom**. Three-quarters project they will stay the same number of years, while about the same number say they will spend more years (12%) as say they will spend less years (12%).
- Board Certification appears to have **no net impact on the likelihood of Master Teachers to leave teaching for administration**. Three-fifths project they will stay the same number of years, while about the same number say they are more likely (22%) as say they are less likely (19%) to do so.
- However, Board Certification does appear to **increase the likelihood of Master Teachers moving into curriculum director or curriculum development positions** (39% more likely vs. 8% less likely). Whether this means Master Teachers plan to do so concurrently with classroom teaching or ultimately move from one to the other is a matter for further research.

Does the program enhance the mentoring capacity of the state?

- Of the 46% of Master Teachers reporting that their roles had changed “somewhat” or “very much,” **most reported mentoring** as an additional responsibility.
- Most Master Teachers consider themselves to be good or excellent mentors, and believe that **mentoring is an appropriate role** for them to play.

- Master Teachers believe they can best be utilized as **education policy consultants** and **model teachers** as well as mentors.

MASTER TEACHER/NBPTS CERTIFICATION PROGRAM - RECOMMENDATIONS

Continue paying most of the application fee up front for teachers who apply for Board certification. The cost of application is a significant barrier to application, and even a hypothetical reimbursement of successful candidates' fees presents enough risk, given teachers' salaries, to show a large deterrent effect. Given DOE's estimate of a 50% failure rate of applicants on their first attempt, DOE may wish to consider (1) requiring certain application prerequisites or (2) asking districts to vouch for applicants by fronting application fees and being reimbursed by DOE for successful applicants. However, each of these approaches raises control issues that would have to be dealt with, in addition to the local costs incurred by the second of these. Furthermore, several candidates spoke of the benefits of the application process even for those not attaining certification. Compared to Bonus payments, which appear to have a smaller impact on decision-making, the application fees may be a relatively small cost to pay for this self-reflective process benefit.

Consider other roles for master teachers, including serving as members of education program and policy development teams. While most master teachers see mentoring as an appropriate role, it is likely that some may be better utilized in other roles. The state would be well-served by incorporating the seasoned, front-line perspective of master teachers into policy decision-making bodies and program development teams. The state could also consider developing a competitive "Master Teacher research sabbatical," for those interested and qualified, to work with research centers on documenting and analyzing the results of various education initiatives.

Convene the master teachers to discuss best practices, and disseminate products based on their work. Susan Moore Johnson and her team, among others, have documented the strong desire of younger teachers to benefit from the experience of good teachers. The MINT participants also registered this desire. This "inter-generational transfer" does not need to happen only in one-on-one settings. The Master Teachers collectively offer a wealth of good information that should be collected and disseminated.

TEACHER CAREER ADVANCEMENT PROGRAM (T- CAP) - FINDINGS

Lessons Learned

It is clear that the majority of the districts have not envisioned a paradigm shift in the way that teacher roles are structured, as a true T-CAP model demands. This is not surprising, given that the districts have only received funding for one or two years and they have pulled together a diverse group of players. This kind of group collaboration is complex, and made more so by the larger context of financial constraints and perceived negative attitude toward teachers in the Commonwealth

These districts do not perceive that the career-ladder model in its current state will solve the problems of teacher recruitment and retention – with no increases in funding, and in the current atmosphere of teacher layoffs, it is difficult for districts to “sell” the concept to the majority of teachers.

Given this context, some lessons emerge that can inform future endeavors.

Effective Strategies

DOE’s strategy of using a credible intermediary to extend its capacity appears to have been effective in this case. The five districts that were networked through Mass Insight all found that this collaboration was very positive and helpful. It is key that people who are knowledgeable and credible be involved in this process. These districts reported that having the opportunity to work with Susan Moore Johnson was extremely beneficial, and having access to knowledge about a variety of models was helpful. One district stated that Dr. Johnson “really helped us think through the details of what we wanted to do.” The networked districts had more comprehensive, sophisticated proposals and talked more about broad-based changes than the non-networked districts.

Requiring participation from all stakeholders in a district from the beginning was a valuable strategy. This makes the process more complex, but also often smoothed the road to change. Involving the union representatives generated some important conversations; however, most of the districts did not make or plan to make substantial changes in contracts, workload, or responsibilities. Focus groups of union representatives at the state and local levels could inform this process.

Process Issues

DOE needs to implement a more efficient tracking system for grant money. Some of the districts spent the T-CAP money not on development, but on other pre-existing projects in the district. Others were not able to account for T-CAP funds received.

Program plans need to include a method to track changes and research their impact. No school or district managed to implement a total T-CAP model, but many of them did implement some small-scale changes. These were not accompanied by plans to evaluate the effectiveness of those changes, which means that DOE and districts will not know if these changes are having their desired effects.

Suggestions for Future Grantmaking

If there is only a small amount of money and DOE doesn’t want to put it all in one place, then the funds can best be focused on structure, choice, and decisions that can be influenced by DOE. Narrow the focus and consider influencing change in small increments, building on the strengths and changes a district has already made.

When offering planning grants, consider asking districts to design new initiatives or programs on the basis of their current resources rather than promising money that may or may not be there in the future.

Encourage districts to consider a variety of models, rather than assuming that because a model works in one place, it will work across the board. DOE could provide an array of models accompanied by credible evaluations of the models. All models have components that have failed, and an evaluation would spell out the lessons learned from the failures and specify the conditions under which each model succeeded. Districts can then ask if those same conditions exist in their communities, gain a better understanding of how realistic the model is for them, and discuss what can make the implementation a success. The districts that worked with Mass Insight Education reported that one of the most influential components of their training was finding out about the different models being used. They wished that they had access to more.

Non-Monetary Support from DOE

DOE could find exemplary schools/districts around the nation that have made significant changes work without influx of money: many schools have made such changes by rallying around a common focus. By asking questions such as “What did they do?” “How did they do it?” “What was the context?” “How does it differ from our own?” “How is it the same?” and providing access to this information and resources, the DOE could provide additional models for schools.

DOE can gather and disseminate information on grant and funding possibilities that exist around the nation and work to link districts to these opportunities.

TEACHER WORKFORCE CHALLENGES

As part of our research, we conducted an extensive literature review on teacher recruitment and retention issues. From this literature review, as well as the program evaluations and stakeholder input, we developed a summary of teacher workforce challenges. Challenges include the following:

- **Looming Retirements of Experienced Teachers.** Forty-one percent of Massachusetts teachers are age 50 or older.
- **Failure to Retain New Teachers.** Nationally, approximately 29% of all new teachers leave teaching altogether within 3 years, and 39% leave within 5 years. Ninety percent of new hires are simply replacements for recent departures, of which only 12% are due to retirement (Ingersoll, 2001). Reasons include pay, working conditions, lack of support for new teachers, changing career expectations in terms of longevity, and lack of career progression in teaching.
- **Shortages in Particular Teaching Areas.** Certain types of teachers are in general demand across district types. These include sciences, mathematics, special education, and languages (AAEE, 2001; NASBE, 1998). In these cases, the market faces a supply problem, with not enough of these types of teachers being produced by preparation institutions to meet demand.
- **Shortages in Particular Types of Districts.** Schools serving low-income students and students of color have more difficulty recruiting qualified teachers generally (NASBE, 1999). Teacher turnover is greater in high-poverty public schools than in more affluent ones (Ingersoll, 1999). Out-of-field teaching is most prevalent in poor and urban districts (Archer, 1999).
- **Teacher Supply and Quality Linkages.** Research indicates that the teacher supply challenge is actually a teacher quality challenge. Schools rarely leave positions vacant. Therefore, instead of quantitative changes in supply-demand relationships that occur in most other labor market segments, the teacher labor market adjusts to shortages by reducing teacher quality (Fogg & Harrington, 2001; Ingersoll, 1999).
- **Undergraduate Mathematics and Science Coursework and Teacher Preparation.** The academic content needs of K-12 science and mathematics teachers are somewhat different from those of future scientists, engineers, and mathematicians. Undergraduate courses have not always accommodated these different needs, thus reducing the potential pool of future teachers. Schools of Education and Arts & Sciences departments are working together on these issues in many institutions. Some institutions have developed new courses and programs that satisfy both departmental requirements and future teachers' content needs.
- **Mid-career time and financial limitations.** Family obligations and/or other lifestyle demands, the time and financial costs of teacher preparation programs, and the information costs of locating them, can limit the effective size of this pool of potential teachers.

WHAT CAN BE DONE? AN INTERVENTION FRAMEWORK

Based upon our research and our discussions with education stakeholders, the research team has identified an “intervention framework” of leverage points for addressing teacher supply, quality, and distribution challenges. We have found this intervention framework to be useful in categorizing the different types of policy actions available to DOE and other decision-makers in this area. Teacher recruitment and retention initiatives can target some or all of the following areas:

- **Recruit more potential teachers;**
- **Reduce barriers to entry** (without reducing quality);
- **Prepare candidates** (pre-service and in-service) for the demands of schools and standards-based reform;
- **Retain more new teachers**/improve induction and mentoring;
- **Retain experienced teachers**/improve working conditions and career development; and
- **Target the distribution problem** of shortages in particular regions or specialties.

As the following table shows, the 12-to-62 Plan has elements that address each of these potential leverage points.¹ (Other, non-12-to-62 Plan policy initiatives are indicated in italics.)

<p>Recruit More Potential Teachers</p> <ul style="list-style-type: none"> • Tomorrow’s Teachers Clubs • Tomorrow’s Teachers Scholarships • Signing Bonuses • AET loan reimbursement 	<p>Reduce Barriers to Entry</p> <ul style="list-style-type: none"> • MINT accelerated program • <i>Other accelerated routes</i> • <i>Regional credential efforts</i>
<p>Prepare Candidates</p> <ul style="list-style-type: none"> • MINT • <i>State teacher standards</i> • <i>Program approval regulations</i> • <i>District-based collaboration efforts</i> • <i>Arts & Sciences collaboration efforts</i> 	<p>Retain New Teachers</p> <ul style="list-style-type: none"> • Summer Mentor Training • Master Teachers as mentors • Case Study Seminars • AET loan reimbursement • <i>Required induction programs</i>
<p>Retain Experienced Teachers</p> <ul style="list-style-type: none"> • Master Teacher certification • Summer Mentor Training • T-CAP 	<p>Target the Distribution Problem</p> <ul style="list-style-type: none"> • Targeting of Signing Bonuses to high-need areas • Targeting of AET loan reimbursement to high-need areas

¹ *Teacher Supply and Career Development: Positive Pathways for Massachusetts* (MA Education Reform Review Commission, 2002), by Ann Abeille et al., was a significant help in developing this table.

RECOMMENDATIONS

The nature of recommendations is that they tend to focus on areas to be improved. Thus they can contribute to a perception that progress is not being made. But this is not our perception as we conclude this evaluation project. As seen above, the legislature and DOE have been proactive in developing a set of programs that address each of the leverage points in our analytic framework. MINT is attracting high-quality people and has become one of the largest producers of teachers in the state. The mentor training effort has trained approximately 1500 mentors, and DOE is now appropriately focusing on building local induction capacity. The AET program is popular with participants and shows potential as a recruitment and retention incentive. Teacher career path discussions have been initiated through T-CAP. These are all laudable achievements, and DOE deserves much credit for its work in these areas.

Finally, DOE also deserves praise for its willingness to open itself and its programs to external scrutiny. We thank the members of the Office of Educator Quality for their supportive cooperation with our inquiries, and we hope that the results of our analysis will be useful in their challenging and important work.

In that spirit, and in addition to the program-specific recommendations outlined earlier in this report, the research team offers the following systemic recommendations for improving the recruitment and retention of high-quality teachers in areas of need.

1. Retention of new teachers should be DOE's highest recruitment/retention priority.

These are people who are already interested in teaching; retaining them would reduce the pressure to convince currently uninterested candidates to enter the field. DOE should continue to support district and school-based induction programs, as opposed to “pull-out” mentor training workshops, with both financial resources and technical assistance. This support should help districts surmount current barriers to mentorship/induction, especially the lack of time for interaction between mentors and new teachers, the logistical difficulties of one-to-one mentoring relationships, and the different challenges of mentoring in elementary and secondary schools.

2. Especially ensure induction/mentoring support for graduates of MINT and other accelerated programs. Our research indicates that once MINT participants enter their schools, 42% say that they receive either poor mentoring or none at all. Our research also indicates that accelerated entry is a more important inducement to potential teachers than the signing bonus. This offers a potential opportunity for freeing up resources to support the mentoring of signing bonus recipients. DOE may wish to consider restructuring the signing bonus program, so that half of the bonus would go to the recipient and the other half to the hiring school. The school could then use these funds to buy the time that is currently in such short supply, for reduced courseloads and collegial interaction between new and experienced teachers. This might have the added benefit of reducing resentment among experienced teachers regarding the signing bonus program and their inability to participate in it.

3. Reach out to the field on recruitment and retention strategies. Some aspects of Education Reform have created divisions between local educators, their associations, teacher preparation institutions, and DOE. Recruiting and retaining an adequate supply of qualified teachers is an issue on which these various groups could perhaps find common purpose. DOE should reach out to the field on this issue, convening stakeholder conferences, soliciting stakeholder input, including local educators in decision-making groups, and developing joint initiatives on identified areas of mutual interest. One particular area for joint work is the task of marketing the teaching profession (see below). Another promising area is to tap the knowledge of the Master Teachers in policy and program development and research.

4. Develop both broad and targeted strategies to promote teaching to potential teachers. Stakeholders tended to agree that the public hears too much about the difficulties of teaching and not enough about its rewards. Effective promotion of the profession will require both improving the general image of teaching as a career and targeted initiatives in areas likely to yield substantial numbers of new teachers. To improve teaching's general image, DOE should join with the teacher unions and perhaps some corporate partners to develop an ongoing advertising campaign focused on the positive aspects of teaching and the various routes and resources available to help those interested (more on this below). In addition, the promotion of teaching as a career should enlist the support and engagement of DOE, the University of Massachusetts President's Office, the Association of Independent Colleges and Universities in Massachusetts, the Massachusetts Board of Higher Education, postsecondary Arts & Sciences departments, education schools, educator unions, school districts, and others.

In terms of targeted initiatives, DOE should

- work with colleges and universities to develop a "UTeach"-style program, like the one in Texas, that exposes college students to real-life teaching experiences early in their college years and connects those interested to the educator preparation sequence;
- continue recruiting college students and mid-career professionals in the New England/New York region for MINT and other accelerated entry programs;
- consider the "Troops to Teachers" and "Pathways to Teaching" programs, particularly as a means of recruiting minority teacher candidates; and
- encourage district-based, "grow-your-own" programs, in partnership with teacher preparation providers, to upgrade paraprofessionals and encourage elementary teachers to consider secondary-level certifications.

5. Promote existing routes and resources that ease the way into teaching. The Attracting Excellence loan forgiveness program has potential recruiting benefits, but few prospective teachers know about it. Publicity efforts should target potential teachers in their college years, so that the reimbursement program has the opportunity to play an "attracting" role. DOE should collaborate with the postsecondary partners mentioned in Recommendation #4 to maximize the effectiveness of these publicity efforts. Information on the AET program should also be disseminated to all qualifying high-need school districts, especially to personnel responsible for hiring, so they can use AET as part of their recruitment "toolkit." More generally, information on "How to Become a Teacher," including all available routes, incentive programs, and regional contacts, should be visibly available on the DOE website and in secondary and postsecondary schools' career/guidance offices.

6. Complete development of a data system to track teacher supply and demand in Massachusetts. It is difficult to ascertain the current teacher supply and demand picture in the Commonwealth, and implementation of the “data warehouse” that was to have clarified this picture appears to have stalled. However, if state recruitment and retention resources are to be effectively targeted at areas of greatest need, that need must be reliably quantifiable. District reports on hires and difficulty of hiring, teacher preparation program graduation figures, and teacher retirement data should be collected into a single location and maintained regularly. DOE should either staff or contract out this function.

7. Target financial incentives more exclusively on high-need areas, including high-poverty/low-performing schools; high-demand content areas such as math, sciences, special education, and foreign languages; and minority recruitment. By restricting state incentives to high-need areas, DOE may also be able to increase the dollar amounts of the individual awards, thereby increasing the potential impact of these incentives. Current variations between different programs’ definitions of “high need” should be eliminated to increase the clarity and impact of combined incentives. DOE may also want to consider targeting high-need schools, not districts, to the extent feasible, as there can be significant intra-district variation in poverty and achievement.

8. Address the specific needs and barriers of urban, high-need schools in recruiting and retaining teachers. These include:

- *Disadvantages in the timing of the hiring process*—Urban districts are more dependent on state funds than suburban districts; the state budgeting process thus contributes to uncertainty in funding levels that can delay hiring until late summer—long after suburban districts have made their job offers. The state should seek a way to guarantee a portion of the budgets of districts that are heavily state-funded, to enable hiring to occur at the same time as in suburban districts.
- *The “shock of immersion” in the realities of urban education*—Several stakeholders reported a belief that teacher preparation programs, both traditional and accelerated, provide insufficient on-site experience in the day-to-day environment of urban schools, thus exacerbating the urban retention challenge. The state should stimulate more urban pre-service programs tied to the urban teaching experience, including on-site apprenticeship and rigorous induction/mentorship components.
- *The need for more diverse teachers, to serve as role models for the populations they are teaching*—The state should support a variety of urban district-focused, “grow-your-own” initiatives, such as urban Tomorrow’s Teachers Clubs, paraprofessional upgrade programs, and tuition and/or loan forgiveness agreements with local postsecondary educator preparation programs.

9. Encourage apprenticeship, co-teaching, and job-sharing models. A variety of non-traditional models are being used in some schools to retain teachers who otherwise might leave for personal or professional reasons. These types of staffing arrangements provide different benefits for teachers at different stages of their careers, but all focus on creating a less isolated, more collegial relationship between teachers and making teaching more compatible with changing life circumstances. For new teachers, they offer support and induction into the educator community. For more experienced teachers, they offer flexibility that may enable them to stay in the profession and not leave for family reasons. For soon-to-retire teachers, participation may offer a rewarding capstone to a career. DOE should consider developing a working group with local educators and teachers' union representatives to discuss and promote promising examples in this area. This work could, in an incremental way, help move forward the work attempted by the T-CAP program.

10. Foster more sharing of knowledge among schools/districts. In a number of instances, interviewees expressed interest in learning more from their colleagues in other schools and districts. From Tomorrow's Teachers Clubs to mentoring approaches to teacher leadership roles, there are a number of areas in which information sharing could benefit new and experienced teachers. Knowledge-sharing can take place in several ways, including convening groups of individuals, developing web-based forums for sharing curriculum and other information, and pulling together best-practice products from the field. The Master Teachers collectively offer a wealth of good information that should be collected and disseminated.

11. Continue to evaluate existing programs. Although resources are scarce, it is vital to continue conducting focused evaluation research to ensure effective and efficient program implementation. Areas for continued research include monitoring the retention rates of MINT participants and more conventionally trained teachers, monitoring and evaluating induction and professional development approaches, evaluating the Board of Higher Education's Tomorrow's Teachers scholarship program, and assessing the achievement gains of students whose teachers were prepared through different routes. With all DOE programs, it will be vital to continue to improve data collection on program participants and to keep contact information current, to enable rigorous evaluation to occur.

12. Continue to strive to improve the competitiveness of teacher salaries, both overall and in high-need areas. This is difficult to discuss in a resource-constrained environment, but the recruitment and retention challenges are made more difficult by both the perceptions and the realities of teacher pay. To the extent that perceptions are inaccurate, they should be addressed through the marketing efforts mentioned above. Any cost-saving benefits, such as loan reimbursement, housing subsidies, and retirement benefits should be promoted as well. But if Massachusetts is serious about recruiting and retaining more highly-qualified individuals, it cannot afford to ignore the huge impact of a significant salary differential on those individuals' decision-making. This is a legislative issue beyond DOE's control, but it is ignored at all of our peril.

Other, more program-specific recommendations are included in the program evaluation sections of this report. These include:

- Reconsidering the adequacy of summer school as a training ground for MINT participants, due to the great differences between the summer-school and school-year environments and demands (Connecticut's ARC program and other apprenticeship-style programs offer potential models);
- Improving the cooperating teacher relationship for MINT participants;
- Considering offering higher and more-targeted Attracting Excellence loan reimbursements;
- Continuing to support the application fees of teachers applying for National Board Certification; and
- Working with teachers' unions to gain areas of agreement on teacher career path issues addressed in T-CAP.

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INTRODUCTION

PURPOSE OF THE RESEARCH

The Department of Education (DOE) is interested in maximizing the effectiveness of its 12-to-62 Program, a collection of state-funded initiatives designed to address teacher supply and quality needs through recruitment and retention of high-quality teachers. Between 1999 and 2001, DOE has developed and implemented a variety of programs (see below for descriptions) under the umbrella of the 12-to-62 Plan, but there has been no comprehensive, external evaluation of the 12-to-62 Plan as a whole. DOE contracted with the Center for Education Policy at the University of Massachusetts Amherst to both evaluate the individual programs within the Plan and analyze the overall Plan as a public policy initiative designed to meet teacher supply and quality needs. Therefore, the purpose of our research is to analyze the impact of the 12 to 62 Plan on the recruitment and retention of high-quality teachers in areas of need.

ORGANIZATION OF THE REPORT

The report consists of an introduction and two major parts. This introductory section summarizes the origin and components of the 12-to-62 Plan. Part I of the report is then devoted to evaluations of the 12-to-62 Plan components—how they function and how participants and other stakeholders think they could be improved. Part II of the report analyzes the 12-to-62 Plan as a system. We begin this section by examining the current state of teacher supply and quality in the Commonwealth, summarizing the challenges faced in recruiting and retaining high-quality teachers in areas of need, and presenting a conceptual framework for addressing these challenges. We continue by placing the 12-to-62 Plan programs in this conceptual framework, along with some promising approaches from other jurisdictions. Next, we provide a summary of stakeholder views on the challenges of teacher supply, quality, and distribution. We conclude with our policy-level recommendations for systematic improvement of teacher recruitment and retention in Massachusetts.

A BRIEF OVERVIEW OF THE 12-TO-62 PLAN

In August 1998, then-Governor Paul Cellucci signed into law comprehensive legislation, prepared by Commissioner David Driscoll and supported by the legislative leadership, to improve the educator workforce in the Commonwealth. Chapter 260 of the Acts of 1998 established a Teacher Quality Endowment Fund of \$60 million (increased to \$70 million in July 2000), to be administered by the Department of Education. Chapter 260 required DOE to use the income from this endowment to implement: (1) an incoming teacher signing bonus program to encourage high-achieving candidates to enter the teaching profession; (2) a master teacher corps program incorporating national certification to retain experienced teachers and encourage mentorship; and (3) a college scholarship program to encourage outstanding high-school students to become teachers (administered by the state Board of Higher Education). Chapter 260 also directed DOE to develop the “12 to 62 Plan for Strengthening Massachusetts’ Future Teaching Force,” including “such legislative, regulatory, financial, and other policy initiatives necessary to attract, train, retain, mentor, and develop our top teachers into masters of their profession.”

The legislation had two major goals for the 12 to 62 Plan:

1. **To attract the best and brightest individuals in the nation to teach in the Commonwealth's public schools.** Initiatives mentioned in the Act included: “Future Teachers of America” clubs in all middle and high schools; the signing bonuses program mentioned above; enhancing the “Attracting Excellence to Teaching” program to increase loan forgiveness for high-quality college graduates; the scholarship program mentioned above; and the removal of barriers and development of alternate routes to teaching and certification.
2. **To establish a professional life cycle for teachers.** Initiatives identified in the Act included: the master teacher corps program mentioned above; establishment of a low-cost, district-based certification path for apprentice teachers who are mentored by master teachers; amending recertification regulations to ensure mastery of subject matter and professional performance; and enabling of part-time and job-sharing arrangements for teachers.

The Educator Quality Office of the Department of Education has implemented a series of initiatives under the 12-to-62 Plan, using approximately \$4 million in interest from the Superintendent, Principal, and Teacher Quality Endowment Fund and approximately \$1 million in other DOE funds to support the following programs between 1999 and 2001:

- **Tomorrow's Teachers Clubs.** Purpose: to develop middle and high-school student interest in teaching. During 1999, 2000, and 2001, DOE made available \$100,000 per year to support grants of up to \$2,000 each to local schools for an advisor stipend and a start-up treasury. Among other activities, all participants are involved in tutoring and teacher shadowing. During this period, DOE awarded grants to 115 schools to establish clubs, serving 1,400 students annually. DOE did not fund Clubs in 2002.
- **Massachusetts Signing Bonus Program for New Teachers.** Purpose: to recruit high-quality recent college graduates and mid-career professionals to become teachers. Beginning in 1999 DOE gives a \$20,000 bonus and a scholarship to the MINT program (see below) for successful applicants who agree to teach full-time in a Massachusetts public school for at least four years. In 2001, the program accepted 115 participants, for a cost of \$2.3 million in bonuses, plus associated MINT scholarship costs.
- **Massachusetts Institute for New Teachers (MINT).** Purpose: to recruit recent college graduates and mid-career professionals with content expertise via an accelerated route to certification. The Institute is an accelerated teacher training program, including summer training and school-year follow-up, designed to allow qualified applicants to progress from Provisional Certification to Provisional Certification with Advanced Standing. All applicants must pass the Massachusetts teacher test in communication/literacy and in their chosen subject area to be considered for MINT. All Signing Bonus recipients are required to participate in MINT; other qualified individuals may earn a scholarship or have a district pay tuition of \$2,250 for them to attend. In 2001, the program trained 220 teachers—the 115 Signing Bonus recipients plus 105 others. The program costs approximately \$600,000 per year.
- **Attracting Excellence to Teaching.** Purpose: to recruit high-achieving college graduates to teach in areas of need. The program provides student loan reimbursement of up to \$1,800 per year for four years for teachers who graduated in the top 15 percent of their class and/or

earned an honors designation with either their graduate or undergraduate degree. The program cost \$1.08 million in reimbursements for 700 teachers in 2000 and \$1.11 million in 2001.

- **Master Teachers/National Board Certification.** Purposes: to retain high-quality, experienced teachers in the teaching ranks and to develop a corps of highly qualified mentors. The Chapter 260 legislation created one route to Master Teacher status, the National Board for Professional Teaching Standards (NBPTS) certification, and DOE is working to develop other routes. DOE has set a goal of 1000 Master Teachers by 2003 and provides subsidies for NBPTS application fees. NBPTS-certified teachers who mentor in their schools/districts may be selected as Master Teachers and will be awarded \$5,000 per year for up to ten years. Districts are encouraged to utilize master teachers in leadership positions that offer increased compensation while allowing the teachers to continue to teach. Costs for FY 2002 included \$548,000 in NBPTS application fee subsidies and \$1,050,000 in annual stipends for 185 qualifying teachers, but that amount will grow as the corps of master/mentor teachers grows.
- **Summer Mentor Training Institutes.** Purpose: developed by DOE and provided by various approved vendors to train groups of experienced teachers and administrators in the skills necessary to fulfill this requirement. District teams also collaborated to design a beginning teacher support implementation plan. Over 70 districts participated in the training, with 800 educators becoming trained mentors in the summer of 2000, and 666 in the summer of 2001. The SMTI Program cost in 2001 was \$262,000. In 2002, DOE discontinued the Summer Mentor Training Institutes in favor of “Train the Trainer” institutes that focus on training mentor trainers who can go back to their districts and train mentors in the context of the local induction program.
- **Case Study Seminars for Beginning Teachers.** Purpose: to support and retain new teachers and to improve classroom practice. New teachers take a series of five support seminars in locations throughout the state, discussing issues that relate to their classroom practices with peers and experienced teacher facilitators. In 2001, the seminars served over 1,200 beginning teachers, nearly one-half of all beginning teachers across the Commonwealth, at a cost of \$189,000.
- **Teacher Career Advancement Program (T-CAP).** Purpose: to retain top-quality teachers by developing models of career paths that enable them to advance professionally and in terms of salary without leaving teaching. Based on a model championed by the Milken Foundation, this program has distributed planning grants to 10 districts and implementation grants to six districts to support work on multiple career paths and expanding roles for teachers. Annual program cost for FY 2002 was \$100,000.

The 12-to-62 Plan also includes one other program, the **Tomorrow’s Teachers Scholarship Program**. This program offers tuition remission at Massachusetts public colleges and universities to students who graduate in the top 25% of their high school class and who agree to teach for a minimum of four years after college graduation. This program began in 1999 with 300 recipients; 700 scholarships were offered in FY2001. Unlike the rest of the programs, which are administered by DOE, the Tomorrow’s Teachers Scholarship program is administered by the Massachusetts Board of Higher Education. It was therefore not evaluated in this analysis.

The research on this project has been a complex and intensive undertaking. Research has included: interviews with DOE and program staff; interviews with key education stakeholders in the state; focus groups of MINT participants and program staff; written, telephone, and Internet surveys of 12-to-62 program participants and supervisors; a review of Plan and program documents; and an analysis of the relevant policy, practitioner, and theoretical literature. We have been gratified by the helpfulness of the DOE and program staff with whom we have worked on this project. They have been uniformly gracious and willing to give us access to their thoughts, plans, and information. However, as DOE staff warned us from the outset, quality record-keeping has only recently become a priority of some of the 12-to-62 Plan programs. Information on significant numbers of MINT participants, in particular, including, to a greater or lesser degree, identities, addresses, ethnicity, placement, and program dropouts, was incomplete or unavailable. We compensated for this as much as possible by using information from program staff, principals, and Internet searches to supplement our contact information.

PART I – PROGRAM EVALUATIONS

THE MINT/SIGNING BONUS PROGRAM

As the title of this section indicates, because the MINT and Signing Bonus programs are interrelated and all Signing Bonus recipients are MINT participants, this analysis considers them jointly, as two aspects of a single MINT/Signing Bonus initiative.

BACKGROUND

As indicated above, the Signing Bonus program originated in legislative language to encourage “the best and brightest candidates to teach in the public schools.” Chapter 260 directed DOE to promulgate regulations for the effective implementation of the program, including a selection process based on objective measures and college recommendations, targeting of awards to most-needed core subject areas, awarding of bonuses on the basis of merit, not quotas, \$8,000 of the \$20,000 bonus to be given in the recipient’s first year, marketing focused on candidates who would otherwise not consider a teaching career, and a plan to attract underrepresented populations.

The statute did not actually specify any training for the Bonus recipients, but in 1999, DOE worked with the University of Massachusetts President’s Office to develop a delivery system for an accelerated training program for Bonus recipients: the Massachusetts Institute for New Teachers, or MINT. They created a model that included seven weeks of classroom experience in the mornings and seminars in the afternoons, followed by support seminars during the first year of teaching, and a performance assessment at the end of the first year. Participants would move from provisional certification when they passed the teacher test to provisional with advanced standing by the end of the first year of teaching.

GOALS OF THIS STUDY

Based upon analysis of program documents and conversations with DOE staff, we have identified the following three major goals for the MINT/Signing Bonus program:

- Recruit high-quality people into the teaching profession,
- Address teacher shortages in high-demand content areas—math, science, bilingual education, and special education, and
- Address teacher shortages in high-need schools.²

The baseline assumption for the program is that participants bring content expertise with them. “While MINT is not intended to take the place of...more rigorous programs of study, it does offer a fast-tracked alternative route into the classroom for those who have already proven their leadership skills and content expertise in other arenas.” (DOE 2002 Request for Response)

² This goal was not explicitly mentioned in Chapter 260 but has become more of a DOE priority over time.

The MINT approach, therefore, consists of several inter-related components that, combined, are intended to yield a greater supply of high-quality teachers in areas of need. This analysis looks at the following elements of the MINT/Signing Bonus program:

1. **Recruitment and selection** of high-quality MINT candidates;
2. **Summer training** that prepares high-quality recruits to begin teaching in the fall;
3. **Placement** in high-need districts and high-demand content areas;
4. **Further training/mentoring** during the first year of teaching; and
5. **Retention** in high-need districts and content areas

METHODOLOGY

Initial Interviews. We began the research by interviewing DOE Educator Quality staff regarding MINT and the Signing Bonus programs. We interviewed program directors from the two MINT providers: the New Teacher Project and the University of Massachusetts Lowell School of Education. We participated in five focus groups of 2001 MINT participants, conducted by the program providers, and one focus group of MINT program staff, conducted by the New Teacher Project. We also conducted interviews with eight representatives of state stakeholder groups (more details to follow) to gain their perspectives on the MINT program.

Review of Previous Data Collection. We began our survey research on the MINT/Signing Bonus program by examining results from previous surveys of the 1999 MINT participants that had been conducted during the summer of 2000 by the Department of Education. We reviewed the data from a similar survey of recent program completers conducted by DOE for the 2001 training cohort. In addition, we were able to analyze New Teacher Project surveys of MINT participants and faculty from the 2001 NTP programs.

New Surveys. Based upon the information collected in Phases One and Two, the Center for Education Policy created and administered two new MINT survey instruments, one for MINT-trained teachers from the 1999, 2000, and 2001 cohorts (*Appendix I: MINT Teacher Survey*) and one for the principals for whom they have worked (*Appendix II: MINT Principal Survey*). The teacher survey was a written survey, conducted via both mail and internet formats. The principal survey was initially a telephone survey, with a written version mailed out to principals as a follow-up.

We received teacher-survey responses from 215 teachers, for a 57% response rate³, and principal-survey responses from 162 principals (supervising a total of 222 MINT graduates), for a principals' response rate of 67%⁴. We received detailed survey responses assessing the performance of 210 of these teachers. Two of the teachers had left their schools before the current principal had the chance to assess their teaching, and six principals had not observed the teacher in question. Four teachers were located at a school that had hired six MINT participants,

³ This response rate is based on the 379 MINT participants for whom contact information was obtainable from the DOE or other sources, and not to the overall total of 444 who enrolled in MINT; lack of contact information prevented our soliciting responses from the remaining 65 participants. The figure of 215 respondents represents 48% of all MINT-trained teachers.

⁴ 67% of known MINT participants' principals.

and so the principal agreed to assess two of his teachers in detail and provide only overview assessments in certain areas for the remaining four. Two teachers were rated by both their current and former principals.

The table below shows that the survey sample corresponds closely with the overall distribution of MINT graduates whose year of training is known.

MINT Cohort	Participants	Percent of MINT Participants	Survey Respondents	Percent of Survey Respondents
1999	59	13.3%	29	13.5%
2000	165	37.2%	83	38.6%
2001	220	49.5%	103	47.9%
Total	444		215	

The survey also generally reflects the overall distribution of MINT participants with respect to receipt of Signing Bonuses.

Bonus Recipients	Percent of Total MINT Participants	Bonus-Recipient Respondents	Percent of Total Respondents
275	62%	138	65%

Data Analysis. The Center combined the available data from DOE with additional information gathered from our surveys to complete demographic and placement profiles and to enable cross-tabulation of demographic and survey response information. Quantitative survey results were analyzed in SPSS for frequency distributions, and cross-tabulations were calculated where results warranted. Qualitative responses were coded and analyzed using standard qualitative analysis techniques.

ISSUES RAISED IN STAKEHOLDER INTERVIEWS AND PROGRAM FOCUS GROUPS

Prior to surveying MINT participants and their principals, the research team conducted interviews with stakeholder representatives and participated in focus groups conducted by the New Teacher Project for its MINT Participant Advisors and recent MINT graduates and by UMass Lowell for its recent MINT graduates. A number of issues emerged in these discussions.

Stakeholder Perceptions of MINT/Signing Bonus

Ten representatives of the major education stakeholder groups⁵ were interviewed with respect to their perceptions of the state's needs and programs concerning the recruitment, preparation and retention of teachers in general, and MINT in particular (*Appendix III: Stakeholder Interview Protocol* and *Appendix XXII: List of Stakeholder Interviewees*). The following summarizes stakeholder responses regarding MINT in particular; comments regarding broader policies and roles of the Department of Education in teacher recruitment and retention are summarized separately, in Part II of this report. In order to protect the anonymity of views of our respondents in this relatively small population, we do not report on whether everyone was in agreement with a particular perception, but the responses noted were strong general trends within this set of respondents.

Stakeholders identified MINT/Signing Bonus as by far the most visible and best known of the 12-to-62 Plan programs, yet a number of the stakeholders did not know very much about the specifics of the program. Overall impressions of MINT tended to be somewhat negative; in particular, stakeholders felt the preparation program was too short for candidates to be sufficiently and realistically prepared for teaching (for dealing with students' varied performance levels, parents' demands, workload, student behavior). It was also felt that MINT was not effective in placing people in high-need districts. Several respondents suggested that MINT was too focused on providing a short-term, stopgap solution to a major, complex set of problems. On the positive side, stakeholders noted that MINT had attracted some good, motivated people and that it was better than no preparation at all.

With respect to specific aspects of MINT, several respondents did not feel that they had sufficient knowledge to comment on its curriculum, providers, job placements or on-going support. Others had the following perceptions:

- The selection process was seen as positive. Respondents generally did not have direct knowledge of candidates but had heard assorted comments – candidates were good, were amply qualified and had good potential, although they didn't necessarily know what they were getting into. One respondent reported that there seemed to be an emphasis on recruiting in math and science and that this was a good idea.

⁵ Massachusetts Teachers Association, Massachusetts Federation of Teachers, Massachusetts Association of School Superintendents, Massachusetts Association of School Committees, Massachusetts Elementary & Secondary Principals' Association, Massachusetts Secondary School Administrators' Association, Massachusetts Board of Higher Education, UMass President's Office, and Legislative Staff.

- Respondents generally did not believe seven weeks in a summer school program could provide sufficient time or a sufficiently realistic experience to prepare candidates in such areas as classroom management, child development, how children learn, and behavioral challenges. It was felt that pedagogy was under-played and not presented as fundamental to good teaching, and that there was not enough linkage between pedagogy and content.
- Impressions were that graduates were often not ready to teach, that they suffered from the “deer in the headlights” syndrome, that they did not develop a repertoire of skills, and that they required substantial mentoring support, which they were not getting.
- Several respondents felt that graduates were finding employment in suburban districts rather than needy urban districts (one reported that about half a dozen were interviewed and were refused employment in an urban district because the HR director did not think they would stay). One reported hearing that most go to urban districts, but that a number wind up working in suburbs as well. A couple of respondents said that they had heard that a number of graduates have already left teaching.
- Most respondents indicated that they believed the accelerated nature of the program was particularly attractive to candidates (although they were critical of it). These respondents were not certain that the Signing Bonus was the best use of money on the grounds that it did not attract sufficient numbers, created resentful and less-than-welcoming colleagues, and did not engender long-term commitment to teaching as a career. Some felt the money might be better spent in supporting mentoring/induction programs or helping to upgrade paraprofessionals. Those supportive of the bonus payment felt it was probably on the low side of what was necessary to attract good candidates and that its main value was in attracting attention to Massachusetts and the MINT program

Stakeholder Suggestions

When asked to indicate how they would propose to improve MINT, responses ranged from simply eliminating it to trusting that it will continue to evolve and be refined. A number proposed lengthening the program, with options that ranged from making MINT a couple of weeks longer to changing the program to a full year of paid, in-school internship.

Additional suggestions for extension focused on the need for substantial post-MINT mentoring or induction, including partnering with good, veteran teachers. Other proposals included eliminating the bonus (based on the belief that it creates resentment of current staff and may not attract the appropriate candidates) and improving identification and selection of candidates.

A number of sources suggested that there should be more partnering of education schools and local school districts, perhaps facilitated by DOE support. Several proposed that the state university system could contribute to addressing the challenge of recruitment.

Program Advisor and Participant Focus Groups

MINT Participant Advisors and program participants raised the following issues regarding the MINT program:

- **Cooperating Teacher relationships have been problematic at most program sites**, due to lack of communication, lack of Cooperating Teacher buy-in, low-skilled summer school teachers, and/or mismatches between subjects taught and subjects being prepared for. Several suggested that Cooperating Teachers should be paid as mentors.
- **Shrewsbury used a different model**, with a team of five mentor teachers, one in each content area, supervising MINT participants who were lead teachers. This model seemed to address many of the concerns raised in the other sites, although there were doubts about whether it would transfer to high-stakes urban summer schools focused on MCAS remediation.
- **Summer school is not a realistic preparation ground** for teaching in regular classrooms, due in particular to small class sizes and general focus on MCAS remediation in math and English only.
- **Teachers want more preparation on “nuts and bolts,”** such as classroom management, grading policies, time management, dealing with parents, plus examples of expert teachers in their subject areas.
- **Several mentioned that they knew content but wanted to know more about how to tailor it** for students.
- **Participants were very interested in talking to experienced teachers**—both master teachers in their subject areas and first/second-year teachers who can give their perspective about what to prepare for.
- **DOE is seen as communicating poorly** with program participants. Areas mentioned included inadequate communication about program requirements, lack of clarity concerning appropriate contact people, and constant shifting of dates and times.

RECRUITMENT AND SELECTION

Where Does the MINT/Signing Bonus Program Draw From?

An analysis of DOE lists of applicants for the 2001 and 2002 MINT programs indicates that, over the past two years, 84% of all applicants have come from Massachusetts, and 93% have come from New England or New York.

State	2001	2002	Total
Massachusetts	724	810	1534
Rhode Island	44	23	67
New Hampshire	18	17	35
Connecticut	13	15	28
Maine	15	5	20
New York	10	10	20
Texas	7	3	10
Florida	5	3	8
Virginia	6	2	8
Puerto Rico	7		7
California	3	3	6
Michigan	4	2	6
North Carolina	4	2	6
Pennsylvania	3	3	6
Illinois	1	4	5
New Jersey	2	3	5
Maryland	2	2	4
Ohio	3	1	4
Indiana	1	2	3
Minnesota	2	1	3
Nevada	3		3
Ontario, Canada	3		3
South Carolina	1	2	3
Utah	1	2	3
Vermont	2	1	3
Washington	2	1	3
Washington, DC		3	3
Wisconsin	1	2	3
Other ⁶	18	10	28
Total	905	932	1837

⁶ Includes two each from Arizona, Colorado, and Tennessee and one each from Delaware, Georgia, Hawaii, Iowa, Kentucky, Louisiana, Mississippi, Missouri, Oklahoma, Oregon, Alajuela Mexico, Alberta, Cambridgeshire UK, Delhi, Dorset UK, Essex UK, Karachi Pakistan, Manitoba, Nova Scotia, Quebec, Ulster UK, and Zurich Switzerland.

Over the past three years, DOE staff have recruited widely, both in New England and across the nation. To date, it appears that these efforts have been most effective in the New England/New York region.

Mid-Career versus Recent College

Program staff described two different types of MINT participants – recent college graduates who show strong academic ability, and mid-career professionals who are able to bring career-based knowledge to the classroom. Two-thirds of the MINT participants who responded to the teacher survey described themselves as mid-career, while a third of them identified themselves as recent college graduates.

Age

DOE records indicate that at the end of 2001, MINT participants fell into the following age ranges in the indicated proportions:

25 or Younger	26 to 30	31 to 40	41 to 56
23%	17%	30%	29%

Ethnicity

Because one of MINT’s goals is to serve high-need schools, many of which have high proportions of ethnic minority students, recruiting a significant number of minority MINT participants is a priority. DOE staff have attempted a variety of ways of doing this, including recruiting at historically black colleges and universities, advertising in minority community media, and holding community sessions in Massachusetts neighborhoods and community colleges. Unfortunately, data have not been available that would allow a quantitative assessment of success in this area. Our observations of Case Study Seminars and conversations with program staff indicate that the percentage of minority participants is in the low single digits.

DOE staff are analyzing previous recruiting efforts in order to learn from them. Staff say that the community college information sessions in minority neighborhoods appear to show a great deal of promise. Collection of data in this area is key to assessing progress over time.

Bonus Recipients versus Others

DOE records indicate the following breakdown of Bonus recipients versus other participants:

Bonus Recipients	Scholarship Recipients	Other MINT Attendees	MINT Status Unknown⁷	Total
275	103	27	39	444

⁷ DOE reported that 444 people participated in MINT during the 1999-2001 period. However, we were only able to obtain identifying information from DOE and school sources on 405. MINT status of the remaining 39 is unknown.

How Did They Learn About the Program?

The table below summarizes the various ways in which respondents to the Teacher Survey became aware of the MINT program. Nearly one-third of respondents identified word of mouth as their source of information about MINT, followed closely by newspapers (25%) and other sources (25%). The Internet (16%) accounted for most of the remaining responses.

Information Source	Frequency	Percent
Word of Mouth	66	32.0
Newspaper	52	25.2
Other	52	25.2
Internet	33	16.0
Career Fair	3	1.5
Total	206	

Only 3 individuals said that they learned about MINT from a career fair. However, as the table indicates, 25.2% of the MINT participants chose “other” as their source of awareness and 43 gave details on their information sources⁸. The most common responses among “other” were university/college sources, such as announcements by a professor, information from campus career offices, or flyers posted on campus (cited by 13 respondents); and subway advertisements (cited by 8 respondents). Other sources were: the DOE certification office (6), referred to MINT by a friend or relative (5); radio advertisements (5); TV news spots (3); connections with public school officials (2); and a magazine article (1).

Did MINT Participants Consider Other Routes to Teaching?

71% of respondents indicated that they had explored other routes to the teaching profession. Of this group (148 respondents), the vast majority had explored certification through traditional routes at state colleges and universities (both undergraduate and graduate-level programs). Several explored private school options, and a few others looked into other alternative routes such as Teach for America. However, the majority of respondents indicated that they would not have entered teaching if they had to go through a longer, more traditional route to certification. (See also “Responses to Lengthening the Program,” below.)

	No	Maybe	Yes
Would Have Entered Teaching Through Longer, More Traditional Route	61%	5%	34%

⁸ This number is higher than the 52 in the table because some participants selected more than one source of awareness.

What Was the Relative Importance of the Signing Bonus versus the Accelerated Route?

The accelerated nature of MINT was a very significant factor for 73% of the respondents and was significant or very significant for 92% of the participants. In contrast, the signing bonus was very significant for 30% of the respondents and significant or very significant for 56 percent. The signing bonus was not significant for 19% of the respondents.

Factor in Decision-Making	Significant or Very Significant	Not or Somewhat Significant
Accelerated Program	91.9%	8.1%
Signing Bonus	55.7%	43.8%

However, the signing bonus does have some importance as a factor in decision-making, as 24% of the respondents indicated that they would not have considered MINT without the signing bonus. (It is worth noting that 65% of the survey respondents were Signing Bonus recipients, as were 62% of the total population).

	Yes	No
Would Have Considered Without Bonus	76.4%	23.6%

There was no statistical difference in the importance of the accelerated nature of the program to recent graduates versus mid-career professionals, nor to MINT graduates teaching in high-need versus non-high need districts. However, as the table below indicates, the signing bonus is much more important for recent graduates than for mid-career professionals as a source of attraction into the program. This difference is statistically significant.

Signing Bonus as Factor for:	Significant or Very Significant	Not or Somewhat Significant
Recent Graduates	73.7%	26.3%
Mid-Career	49.0%	50.3%

The table below indicates that fewer recent graduates than mid-career participants would have considered MINT without the bonus. This difference is significant at the .10 level.

Would have considered applying without potential for Signing Bonus	No	Yes
Recent Graduates	31.6%	68.4%
Mid-Career	20.1%	79.9%
Overall	23.4%	76.6%

Does the Selection Process Further the Goals of the Program?

The DOE and its contractors have developed a sophisticated process for selecting MINT participants. As one of the stakeholder interviewees noted, “I’d say it’s about as good as anyone’s figured out how to do. They have to pass the teacher test, there’s model teaching as part of the application process, and recommendations and past work with kids are emphasized.” Based on our observation of a large number of recent MINT graduates in their Case Study Seminar sessions, the research team shares this sense that the MINT selection process has generally yielded very high quality candidates, in terms of both intellectual strength and personal qualities, for the program. This is also consistent with the principals’ evaluations, as discussed below. (Attainment of high-need placement goals is treated separately below.)

DOE has worked to improve the selection process over time. For the 2002 MINT selection process, DOE contracted out the selection process to the New Teacher Project (NTP), which is also the largest provider of MINT training in the state and has been developing this type of selection process for its various alternative teacher training programs across the country. DOE staff and school practitioners participated in the process. DOE retained the final decision-making authority regarding acceptances and Signing Bonus allocations.

All applicants must pass the Massachusetts teacher test in communication/literacy and in their chosen subject area to be considered for MINT. DOE collects applications via the Internet and invites promising candidates to participate in an Interview Day, staffed by school practitioners who are trained by NTP as selectors. The Interview Day consists of a five-minute teaching sample, a discussion group of up to 12 candidates, a 20-minute writing prompt, and a 30-minute interview. Candidates are evaluated according to their demonstration of seven competencies, which together define the personal qualities that NTP believes are required for excellent teachers.

Candidates are rated as Exemplary, Fully Acceptable, or Not Fully Acceptable on each of these competencies (for some competencies, the “Exemplary” rating is omitted). Ratings are based on performance in at least three of the application components (written application, teaching sample, discussion group, writing sample, and personal interview).

DOE strengthened its emphasis on teaching in under-resourced schools for the 2002 selection process. Selectors were attentive to this expressed desire, and also looked for candidates with a realistic understanding of what this work entails and prior experience working in under-resourced communities. In addition, the DOE is also trying to promote placement in urban districts by involving representatives from these districts in the selection process and giving them a chance to pre-recruit candidates who seem like particularly good matches for their schools.

The New Teacher Project has also developed a model to determine who among accepted candidates will receive the signing bonus. Candidates are prioritized by their assessment in the seven competencies and their selector’s recommendation, by their dedication to teaching in an urban district or challenged school (such as an alternative high school), and by whether or not they plan to teach a high-need subject area.

What Can Principals Tell Us About the Selection Process?

We asked principals of MINT-trained teachers about the strengths and weaknesses of these individuals. Overall, the principals were very positive about the quality of the MINT graduates, as the table below indicates.

How do the MINT graduate's abilities compare with those of teachers you have hired recently who were prepared in regular university-based programs?	Much Better	Somewhat Better	Same	Somewhat Worse	Much Worse	Mean Response (scale of 1-5)
Content knowledge	11.7%	26.9%	54.8%	3.6%	2.0%	3.42
Ability to employ effective instructional strategies	14.6%	28.6%	39.6%	12.0%	3.6%	3.38
Ability to work with students with special needs	11.9%	24.4%	48.1%	10.6%	3.1%	3.32
Classroom management skills	13.1%	27.6%	41.7%	12.6%	4.0%	3.34

Strengths and Their Sources. We asked principals to describe the particular strengths of their MINT teachers and to what they attributed those strengths. Interestingly, principals overwhelmingly credited the strengths of MINT participants to personal qualities and experiences—factors attributable to the selection process—rather than the MINT training itself.

The principals of 86% of the MINT graduates indicated particular areas of strength for their MINT teachers. These strengths are summarized in the table below (more than one strength could be attributed to an individual). The principals were most likely to mention being impressed with the MINT graduates' ability to work with people and children, but also with the content knowledge and intellect these new teachers brought to the job. Work ethic and energy and enthusiasm were also recognized as strengths of many MINT graduates, followed by pedagogy, organizational ability, and knowledge of the world.

Area of Particular Strength	Frequency
Ability to Work with People/Kids	70
Content Knowledge/Intellect	47
Work Ethic/Extra Involvement	35
Energy/Enthusiasm	25
Pedagogy/Classroom Management	14
Organizational Ability	14
Maturity/Knowledge of the World	14
Brings a New Perspective	2

We then asked principals to what they attributed the particular strengths they had described. As the table below indicates, MINT training does not appear to be a particularly strong source of the MINT graduates' strengths in the minds of the supervising principals. Much greater emphasis was placed on individual personality, background and life experience, and past careers. This

further emphasizes the strength of the selection component of MINT in generating high-quality teacher candidates.

Principals' Attributions of Sources of MINT Graduates' Strengths	Frequency
Personality, Individual Traits	45
Background/Life Experience	35
Past Career	32
Commitment to Teaching	12
MINT Training	9
Maturity	8
Education	6

Weaknesses and Their Sources. Principals were also asked to identify any areas of weakness in the MINT graduates. The principals identified some sort of deficiency for 41% of the MINT teachers, as detailed in the table below. Classroom management was most frequently cited as a deficiency, followed by teaching skills and adjusting to the school setting. However, these deficiencies were only identified in relatively small percentages of the total sample; even classroom management as the most frequently observed deficiency occurred in only 19% of the MINT graduates rated by their principals.

Principals' Assessment of MINT Graduates' Deficiencies	Frequency
Classroom Management	40
Teaching Skills	18
Adjusting to the School Setting	15
Rapport with Students	7
Too Involved, Risk of Burnout	6
Content Knowledge	6
Curriculum Development, Planning	5
Personality/Collegiality	5

The principals mostly attributed these perceived deficiencies to lack of experience, and it should be noted that classroom management in particular is a common concern for all new teachers. While lack of preparation through the MINT program was the second most commonly cited reason for perceived deficiency, the principals only attributed this deficiency to 17 out of the 210 MINT graduates. The table below provides a summary of these responses.

Principals' Attributions of Sources of MINT Graduates' Deficiencies	Frequency
Inexperience	32
MINT/Lack of Preparation	17
Past Career	8
Personality	3
Background	1

Principals rated 96% of the MINT-trained teachers as open to feedback, and 95% as enthusiastic about teaching.

SUMMER TRAINING PROGRAM

Distribution Across Training Sites

One-third of the survey respondents trained in Boston, either at the NTP training site in 2000 and 2001 (54) or at the University of Massachusetts Boston in 1999 (16). Just over one-fifth of survey respondents trained at University of Massachusetts Lowell. These were followed by Shrewsbury (12.9%), Fall River (10.5%) and Springfield (9.6%) with the remaining few distributed among the remaining sites.

Summer Training Location	Frequency	Percent
Boston (NTP)	54	25.8
UMass Lowell	44	21.1
Shrewsbury	27	12.9
Fall River	22	10.5
Springfield	20	9.6
UMass Boston	16	7.7
Worcester	10	4.8
Haverhill	5	2.4
Revere	7	3.3
UMass Dartmouth	2	1.0
UMass Amherst	2	1.0
Total	209	

How Much Time Did MINT Participants Spend Actually Teaching?

MINT participants were asked approximately how many hours per week they spent teaching groups of students during their summer training period. As the table below indicates, responses were fairly evenly distributed across the range of possibilities.

Hours Per Week Spent Teaching	Frequency	Percent
1 to 5	33	15.5%
6 to 10	76	35.7%
11 to 15	59	27.7%
16 to 20	43	20.2%
Total	211	

Amount of Supervision from Cooperating Teachers

We asked MINT participants to estimate the amount of their summer teaching time that was directly observed by a Cooperating Teacher. As the table below indicates, responses showed a wide range of variation. About half of the respondents had their teaching directly observed by a Cooperating Teacher 90 to 100% of the time. On the other hand, over one-quarter of

respondents were observed 30% of the time or less, with 7% reporting that they were never observed by a Cooperating Teacher.

Teaching Time Observed by Cooperating Teacher	Frequency	Percent
0%	14	6.6%
10%	24	11.3%
20%	8	3.8%
30%	12	5.6%
40%	4	1.9%
50%	12	5.6%
60%	4	1.9%
70%	10	4.7%
80%	18	8.5%
90%	36	16.9%
100%	71	33.4%

How Do Participants Rate Their Summer Training?

We asked MINT participants to rate the degree of preparation offered by their summer training, using a “Goldilocks scale” of “too much,” “not enough,” or “about right.” Over four-fifths said that the amount of feedback from their MINT Participant Advisor⁹ was about right. Lowest levels of satisfaction (areas identified as being adequate by less than half of the respondents) were: learning to work with special-needs students, observing an experienced teacher modeling lessons, gaining content knowledge, and gaining classroom management skills. Few participants felt that there was too much preparation in any particular area.

Teacher Preparation Element	Too Much	Not Enough	About Right
Receiving feedback from my MINT Participant Advisor.	0.5%	17.3%	82.2%
Learning to work with diverse populations.	3.8%	28.0%	68.2%
Gaining pedagogical ability	3.9%	30.4%	65.7%
Teaching on my own with supervision.	1.4%	39.0%	59.5%
Receiving feedback from Cooperating Teacher	1.4%	40.5%	58.1%
Teaching on my own without supervision	9.0%	33.3%	57.5%
Co-teaching with my cooperating teacher.	2.0%	43.3%	54.7%
Gaining classroom management skills	0.0%	53.1%	46.9%
Gaining content knowledge	0.5%	62.5%	37.0%
Observing an experienced teacher modeling effective teaching strategies.	1.0%	67.7%	31.4%
Learning to work with students with special needs.	1.0%	73.7%	25.4%

⁹ MINT Participant Advisors are program staff who provide direct instruction and observe participants teaching on-site. In smaller sites, they may also play an administrative role as site director.

Assessment of Practice Teaching and Workshops. The tables below summarize participants' ratings of the practice teaching and workshop components as preparation for various aspects of teaching.

How would you rate the Practice Teaching in terms of developing your ability to:	Very Poor	Poor	Satisfactory	Good	Very Good	Mean Response (scale of 1-5)
Design lessons that are aligned with the state curriculum frameworks	7.0%	16.4%	27.2%	29.1%	20.2%	3.62
Use a variety of effective instructional strategies that respond to the needs of diverse students	4.2%	13.6%	29.6%	32.0%	20.7%	3.51
Use a variety of effective classroom management techniques	5.2%	21.2%	34.0%	26.4%	13.2%	3.21
Assess student learning, using a variety of assessment tools in the classroom	6.6%	26.4%	28.8%	26.4%	11.8%	3.10
Develop the content knowledge needed to teach your subject*	24.8%	23.3%	28.7%	15.8%	7.4%	2.58
Teach students with disabilities or other special needs	19.7%	35.2%	31.9%	8.0%	5.2%	2.43

How would you rate the MINT Summer Training Workshops in terms of developing your ability to:	Very Poor	Poor	Satisfactory	Good	Very Good	Mean Response (scale of 1-5)
Use a variety of effective instructional strategies that respond to the needs of diverse students	1.4%	10.4%	28.4%	33.6%	26.1%	3.73
Design lessons that are aligned with the state curriculum frameworks	4.7%	13.7%	23.2%	31.3%	27.0%	3.62
Use a variety of effective classroom management techniques	4.2%	12.3%	13.6%	31.6%	20.3%	3.51
Assess student learning, using a variety of assessment tools in the classroom	3.3%	16.1%	29.4%	35.5%	15.6%	3.44
Teach students with disabilities or other special needs	13.3%	26.1%	40.3%	12.8%	7.6%	2.75
Develop the content knowledge needed to teach your subject*	20.8%	26.7%	30.7%	13.4%	8.4%	2.62

* The relatively low ratings in this area may reflect some confusion about the question. MINT participants are required to demonstrate content knowledge by passing the subject-area teacher test prior to acceptance. On the other hand, it may reflect interest in more content-based pedagogy, as several participants mentioned in focus groups and case study seminars. More research is needed to clarify this issue.

Participants’ Ratings of Themselves versus Other New Teachers. We asked respondents to rate themselves as teachers compared with other new teachers in their schools. The table below summarizes their responses.

Teaching Element	Much Better	Somewhat Better	About the Same	Somewhat Worse	Much Worse	Mean Response (scale of 1-5)
Content knowledge	33.5%	25.0%	25.6%	10.2%	5.7%	3.70
Classroom management	13.9%	23.9%	40.0%	17.8%	4.4%	3.47
Using effective instructional strategies	6.6%	31.3%	47.2%	12.6%	2.2%	3.27
Designing lessons	7.7%	29.3%	47.0%	12.7%	3.3%	3.25
Assessing student learning	6.1%	19.0%	57.0%	16.8%	1.1%	3.12
Teaching special-needs students	5.4%	8.4%	49.7%	29.3%	6.6%	2.75

Ratings of Cooperating Teachers and MINT Participant Advisors. We asked MINT participants to rate the contributions of their Cooperating Teachers and their MINT Participant Advisors in terms of how they prepared the participants to teach. Responses were somewhat bipolar, with 42% rating their Cooperating Teachers good or very good and 39% rating theirs poor or very poor.

	Very Good	Good	Satisfactory	Poor	Very Poor	Mean Response (scale of 1-5)
Cooperating Teachers	22.9%	19.4%	18.4%	24.0%	15.3%	3.10
MINT Participant Advisors	46.1%	26.5%	18.6%	6.9%	2.0%	4.08

142 respondents also provided some type of comment regarding Cooperating Teachers. From these comments, we were able to identify several issues that may help explain the relatively low level of satisfaction with the Cooperating Teacher relationship.

- Thirty-one MINT participants labeled their Cooperating Teacher as a poor model due to the MINT participant’s perceptions of bad rapport with children, a negative attitude, or a general lack of enthusiasm for teaching.
- Twenty respondents blamed poor program preparation, saying that their Cooperating Teacher was not told in advance to be expecting a student teacher. As one participant described it, “she appeared unsure about her role and that of the MINT student teachers. She was unprepared for us. Cooperating Teachers deserve prior information and training if they are to fully assist student teachers.”
- Nineteen respondents indicated that they did not have a Cooperating Teacher for the student teaching portion of their training.

- Eighteen respondents indicated that their Cooperating Teacher was not teaching the content area or level in which the MINT participant was seeking certification. For example, the MINT student teacher may have been seeking certification in English, but was paired with a math teacher in summer school. Those seeking foreign language and special education certification also cited this as an issue.
- Other issues included inexperienced Cooperating Teachers, disagreements over teaching styles, and lack of contact with and feedback from Cooperating Teachers.

Respondents also provided comments on the contributions of the Participant Advisors. As the table above indicates, the Participant Advisors generally received positive ratings. In the instances in which ratings were less than satisfactory, the participants’ comments provide some insight as to why. Some participants from the earlier MINT years did not have an Advisor. Others noted that their Advisors did as much as possible to help them, but the Advisors were “stretched too thin” with the many responsibilities of their jobs. Finally, a few respondents described their MINT Participant Advisor as having little or poorly matched experience, such as an Advisor with elementary-school background trying to prepare participants for high school teaching.

Ratings of Communication and Support of Program Providers and the Department of Education. We asked MINT participants to rate the communication and support of DOE and their respective program providers (e.g., New Teacher Project or UMass Lowell).

Rating of:	Very Good	Good	Satisfactory	Poor	Very Poor	Mean Response (scale of 1-5)
Program Providers	20.2%	23.7%	34.3%	17.2%	4.5%	3.37
Department of Education	4.7%	16.6%	40.8%	21.8%	16.1%	2.71

Differences in Satisfaction Among Program Providers

DOE was interested in any differences in satisfaction among the different current program providers, UMass Lowell and the New Teacher Project (NTP). Because some of the NTP sites had relatively low numbers of participants/respondents, and because the NTP Shrewsbury site used a significantly different cooperating teacher model than the other sites, we analyzed satisfaction in three groupings: UMass Lowell, NTP Shrewsbury, and all other NTP sites. Because of small numbers in 1999 and the likelihood of significant program changes since that time, we analyzed only 2000 and 2001 responses.

Overall, participants at UMass-Lowell tended to be more satisfied with more aspects of their preparation than participants at any of the NTP sites; relative satisfaction was particularly strong in the workshop components of the training. On the other hand, participants at the Shrewsbury NTP site tended to have higher satisfaction in the practice teaching areas, with relative satisfaction being especially high in instructional strategies and assessment of student learning. Participants in the other NTP sites gave high ratings to their providers’ communication and

support, but gave lower satisfaction ratings for cooperating teachers and generally lower practice teaching and workshop ratings than the other two programs.

Survey Item (1=Very Poor, 2=Poor, 3=Satisfactory, 4=Good, 5=Very Good)	Mean – UMass- Lowell (N=43)	Mean – Shrews- bury NTP (N=27)	Mean – Other NTP (N=118)	Statistically Significant ($p \leq .05$) Mean Differences
Practice Teaching - Use a variety of effective classroom management techniques	3.16	3.52	3.13	
Practice Teaching - Design lessons that are aligned with the state curriculum frameworks	3.43	3.00	3.20	UL-S S-O
Practice Teaching - Use a variety of effective instructional strategies that respond to the needs of diverse students	3.47	4.11	3.42	UL-S S-O
Practice Teaching - Assess student learning, using a variety of assessment tools in the classroom	3.17	3.78	2.92	UL-S S-O
Practice Teaching - Teach students with disabilities or other special needs	2.56	2.59	2.37	
MINT Workshops - Develop the content knowledge needed to teach your subject	2.56	2.88	2.52	
MINT Workshops - Use a variety of effective classroom management techniques	3.91	3.35	3.36	UL-S UL-O
MINT Workshops - Design lessons that are aligned with the state curriculum frameworks	4.05	3.65	3.39	UL-O
MINT Workshops - Use a variety of effective instructional strategies that respond to the needs of diverse students	4.20	3.81	3.49	UL-S UL-O
MINT Workshops - Assess student learning, using a variety of assessment tools in the classroom	3.91	3.54	3.23	UL-O
MINT Workshops - Teach students with disabilities or other special needs	3.03	2.73	2.62	UL-O
MINT Workshops - Develop the content knowledge needed to teach your subject	3.07	2.75	2.42	UL-O
Rating of Cooperating Teacher in terms of how s/he prepared you to teach.	3.35	3.88	2.87	UL-O S-O
Rating of MINT Participant Advisor in terms of how s/he prepared you to teach.	4.15	4.00	4.09	
Rate the communication/support of the program provider.	4.26	3.00	4.26	UL-S S-O
<p><i>UL-S = statistically significant difference between UMass-Lowell & Shrewsbury NTP</i> <i>UL-O = statistically significant difference between UMass-Lowell & Other NTP</i> <i>S-O = statistically significant difference between Shrewsbury NTP & Other NTP</i></p>				

Participants at the UMass-Lowell were more satisfied than their counterparts at the NTP sites with regard to the extent to which the MINT workshops taught them to use a wide variety of classroom techniques and a variety of instructional strategies for responding to the needs of diverse students. UMass-Lowell participants were more satisfied than their peers at the Shrewsbury NTP site with regard to the extent to which practice teaching helped them with lesson design. UMass-Lowell participants were also more satisfied than the Shrewsbury NTP participants in terms of the communication and support they received from the program provider.

On the other hand, Shrewsbury NTP participants were more likely than were UMass-Lowell or other NTP participants to report that their practice teaching experiences were helpful in teaching them to use a variety of instructional techniques and to develop skills in the assessment of student learning. Shrewsbury NTP participants were also more likely than other NTP participants to be satisfied with how well cooperating teachers prepared them to teach. However, Shrewsbury NTP participants were less likely to be satisfied with the communication and support of the program provider than participants at other sites.

Participants in the non-Shrewsbury NTP sites consistently (in nine of the twelve items focusing on satisfaction) were less satisfied with the level of preparation provided by their practice teaching and MINT workshop experiences than participants in the UMass-Lowell and/or Shrewsbury NTP sites. Participants in other NTP sites were also less satisfied than their peers at other sites with how well the cooperating teachers prepared them to teach. Yet the other NTP participants were just as satisfied as UMass-Lowell participants with the communication and support of the program provider and more satisfied in this area than were the Shrewsbury NTP participants.

Appropriateness of the Length of Training

Participants were asked whether the duration of the MINT program was appropriate. Over half (55%) of the respondents indicated that the length of the MINT training program should remain the same while 40% indicated that it needed to be longer. Only 4% (9 respondents) believed the training should be shorter.

Eighty-five respondents added comments supporting a longer MINT training period. Twenty-six respondents provided specific comments about how much they would increase the length of the program; in general, these suggestions are consistent with the results in the table below, in that they recommend an increase of 1-3 weeks on average. With a longer program, the following items might be addressed more fully. The first area of focus is classroom management. Twenty-three respondents specifically cited classroom management as an area that needs additional attention during the training period. This correlates with the 53.1% of respondents who, in the Adequacy of Preparation table above, indicated that they did not receive enough preparation for effective classroom management. Fifteen respondents wanted more time to observe experienced, effective, veteran teachers in the classroom. They suggested that veteran teachers might serve as better models for them. Ten respondents indicated a need to utilize the regular school year for observation time and possibly for practice teaching time, although a few noted the logistical difficulties of doing so.

Other recommendations include content area workshops, more time teaching with a teacher in the appropriate subject area, more realistic class sizes (several cited the small summer school class sizes as being too unrealistic), and increased attention to special needs and inclusion classrooms.

Of the 55% of the MINT participants who indicated that the program should be the same length, many included comments detailing how they might reallocate time among any of the components. Similar to the above findings, the respondents indicated that they would benefit

from more time devoted to classroom management, special needs issues, and observations of veteran teachers. Few respondents, however, indicated what might receive less attention as part of the reallocation. Of those that did indicate what areas might receive less attention, the areas cited were: less theory/theoretical readings (9 respondents); less diversity training (3 respondents); and less afternoon lecture/workshop time, including less time listening to “motivational speakers” (3 respondents).

Responses to Lengthening the Program. We asked MINT participants how many additional weeks could have been added to the summer training without negatively affecting their decision to enroll. The table below shows that most participants believe that the program could be made longer, but not by much. Almost 30% said only one week could be added without negative impact, and about eighty percent indicated that no more than three weeks could be added before the duration of the program became less attractive.

Additional Weeks Without Negative Impact on Enrollment	Frequency	Percent
1 week	56	28.1%
2 weeks	61	30.6%
3 weeks	44	22.1%
4 weeks	15	7.0%
5-7 weeks	5	2.0%
8 weeks	17	8.5%
Total	198	

Responses to Changing the Time of Year of the Program. A suggestion that was made by both principals and teachers was to move the MINT program to the spring, so that participants can do their practice teaching in a regular classroom rather than in summer school. However, some participants may be unable to participate in a spring program. This includes recent college graduates, who are still in school in the spring, and mid-career professionals who are unable to quit their jobs early in the year and not receive a paycheck again until September. Forty-three percent of MINT participants indicated that moving MINT to the spring would have a negative impact on their decision to enroll in the program.

PLACEMENT

Where are MINT Participants Teaching?

We were able to identify 246 schools at which MINT-trained teachers are teaching or have taught (*Appendix IV: Schools where MINT-Trained Teachers Are Teaching or Have Taught*)

Hiring Channels

The principals reported that 80% of the MINT graduates they supervise gained employment through traditional hiring channels. Another 12% were recruited during MINT and about 4% were recruited prior to receiving MINT training. Often teachers in the latter category were encouraged by their principals to go through MINT as an accelerated route to certification.

School Levels

Of the teachers whose school-level placement is known, 51% are teaching in high schools. An additional 30% are teaching in middle schools, and 9% are teaching in combined middle/high schools. Seven percent are teaching in combined elementary-middle schools, two percent in elementary schools, and one percent in K-12 schools.

Are MINT Participants Filling Hard-to-Fill Positions?

We asked each principal if, for each of their MINT teachers, the position into which they were hired has been historically difficult to fill. For over half of the MINT graduates (53%), the answer was yes.

Are MINT Participants Replacing Uncertified Teachers?

Some program staff indicated their belief that MINT was filling positions currently occupied by long-term substitute teachers. Our research with principals suggests that this is not currently the case. Most MINT-trained teachers (78%) were hired to fill vacancies created when traditionally-certified teachers left their schools. An additional 15% were hired to fill newly created positions. Only 5% were hired to replace long-term substitutes, and 2% to replace other alternatively-trained teachers.

Are MINT Participants Teaching in High-Demand Content Areas?

As indicated at the beginning, one of the major goals of the MINT/Signing Bonus program is to target training to high-need content areas—science, math, foreign languages, and special education. This appears to be an area of success for the program: of those for whom teaching area is known, half (49%) are in science or math, and an additional 10% are in foreign languages or special education.

Content/Teaching Area¹⁰ (High-need areas in bold.)	Number	Percent	Percent of those whose teaching area is known
Science	125	27%	32%
Mathematics	66	14%	17%
English	51	11%	13%
History and Social Science	35	7%	9%
Foreign Languages	21	4%	5%
Special Education	18	4%	5%
Middle School	10	2%	3%
Other	8	2%	2%
Elementary	4	1%	1%
Transitional Bilingual Education	3	1%	1%
No Longer Teaching	44	9%	11%
Unknown	84	18%	

How Many MINT Participants are Teaching in High-Need Schools? Bonus Recipients Versus Non-Bonus Recipients? Mid-Career Candidates Versus Recent College Graduates?

The Department of Education has identified nineteen districts¹¹ as being high-need, based on overall number of students, percent of students qualifying for free- or reduced-price lunch, and MCAS scores. Of those teachers whose district-level placement is known, 34% are teaching in one of these districts. This figure includes those who are teaching at charter schools located in those districts. All high-need districts except for Pittsfield currently have at least one MINT teacher employed in their schools.

Because level of need can vary among schools in a district, we also analyzed high-need placements at the school level. We used two different sets of criteria in this analysis. In scenario one, we counted MINT teachers who were teaching in schools with either a 50% MCAS failure rate (math or English Language Arts) or a 40% free or reduced lunch rate. In scenario two, we lowered the threshold to either a 33% MCAS failure rate or a 40% free or reduced lunch rate.

The following tables summarize the degree to which all respondents are teaching in high-need districts, according to the various criteria mentioned above, as well as providing breakdowns of Bonus recipients vs. others and mid-career vs. recent college graduates.

It appears that under these various scenarios, at most about one-third of MINT participants are teaching in schools or districts identified as high-need. Subsequent analyses that examine other criteria for determining high-need status, such as combining MCAS failure rates with the proportion in the lower half of the “needs improvement” category, may present a different picture.

¹⁰ Some teachers reported teaching in more than one area.

¹¹ Boston, Brockton, Cambridge, Chelsea, Chicopee, Fall River, Haverhill, Holyoke, Lawrence, Lowell, Lynn, New Bedford, Pittsfield, Revere, Salem, Somerville, Springfield, Taunton, and Worcester.

	Total	Bonus Recipients	Scholarship Recipients	Other¹²	Status Unknown¹³
Number of Known Current District Placements	321	234	70	14	3
Percent* Teaching in High-Need Districts – DOE Definition	34%	34%	37%	24%	33%
Number of Known School Placements	315	228	70	14	3
Percent* Teaching in High-Need Schools – 50% Failing MCAS¹⁴	27%	25%	34%	29%	0%
Percent* Teaching in High-Need Schools – 33% Failing MCAS¹⁵	39%	36%	53%	35%	0%
Total MINT Participants	444	275	103	27	39
Percent ⁺ No Longer Teaching	10%				
Percent ⁺ District Placement Unknown	18%				
Percent ⁺ School Placement Unknown	19%				

	Total	Mid Career Participants	Recent Graduates	Status Unknown¹¹
Number of Known District Placements	321	224	95	2
Percent* Teaching in High-Need Districts – DOE Definition	34%	34%	42%	4%
Number of Known School Placements	315	219	94	2
Percent* Teaching in High-Need Schools – 33% Failing MCAS	27%	42%	42%	0%
Percent* Teaching in High-Need Schools – 50% Failing MCAS	39%	27%	31%	0%
Total MINT Participants	444	262	117	65
Percent ⁺ No Longer Teaching	10%			
Percent ⁺ District Placement Unknown	18%			
Percent ⁺ School Placement Unknown	19%			

¹² Either district-sponsored or paid for own training.

¹³ Participants counted as having participated, but whose records regarding type of participant are incomplete.

* This percent figure refers to the percent of known district placements.

¹⁴ The 50% Failing MCAS category of high need refers to a school where at least 40% of students qualify for free or reduced-price lunch, or at least 50% fail one or more of the English or mathematics MCAS exams.

¹⁵ The 33% Failing MCAS category of high need refers to a school where at least 40% of students qualify for free or reduced-price lunch, or at least 33% fail one or more of the English or mathematics MCAS exams.

⁺ This percent figure refers to all 444 MINT participants.

FURTHER TRAINING/MENTORING

Are MINT Participants Receiving Mentoring in their First Teaching Year?

We asked respondents if they were currently participating in a school mentoring program.

Receiving mentoring (2001 cohort)	Number	Percent
Yes	81	79%
No	22	21%
Total	103	100%

Of those participating in a mentoring program, we asked them to rate its adequacy. Twenty-six percent rated their mentoring as poor or very poor. This means that about 42% of respondents report that they are either receiving poor mentoring or none at all.

Adequacy of mentoring for those receiving it (2001 cohort)	Number	Percent
Very Good	20	25%
Good	19	23%
Satisfactory	21	26%
Poor	14	17%
Very Poor	7	9%
Total	81	100%

At DOE's request, we also performed a separate analysis of the adequacy of mentoring for 2001 participants teaching in districts with 40% or more students receiving free or reduced lunch. Of the 20 survey respondents in these districts, 11 (55%) said that they were receiving either no mentoring or mentoring that was poor or very poor. By comparison, 39% of their colleagues in districts with lower poverty levels reported poor or nonexistent mentoring.

Receiving mentoring (2001 cohort)	40%+ Free/Reduced Lunch		<40% Free/Reduced Lunch	
	Number	Percent	Number	Percent
Yes	14	70%	67	81%
No	6	30%	16	19%
Total	20	100%	83	100%

Adequacy of mentoring for those receiving it (2001 cohort)	40%+ Free/Reduced Lunch		<40% Free/Reduced Lunch	
	Number	Percent	Number	Percent
Very Good	4	29%	16	24%
Good	3	21%	16	24%
Satisfactory	2	14%	19	28%
Poor	2	14%	12	18%
Very Poor	3	21%	4	6%
Total	14	100%	67	100%

Principals' Comments About Mentoring and Orientation of New Teachers

The principals surveyed indicated that 98% of the schools in which MINT teachers were placed have orientation programs and 89% have mentoring programs. (This is significantly higher than the 79% of 2001 MINT graduates who reported receiving mentoring.) Additionally, just over 90% of the principals indicated that they do nothing differently in terms of orientation and mentoring for MINT participants than they do for more traditionally trained new teachers.

Have MINT Participants Participated in Support Seminars?

We asked respondents if they have participated in support seminars for new MINT teachers, such as Case Study Seminars.

	1999	2000	2001	Total
Yes	9	43	95	147
No	19	36	8	63
Total	28	79	103	210

Likes and Dislikes Regarding Support Seminars. Of those who attended the Case Study Seminars, 116 respondents provided comments on what they found to be most useful. More than two-thirds of this group indicated that the sharing, discussion, and atmosphere of collegiality were the most beneficial aspects of the Case Study Seminars. The remaining one-third of the responses varied, with topics such as Special Education, classroom management, and lesson planning as being useful.

Respondents were provided the opportunity to share what was not useful to them, and 69 respondents provided comments. About one-quarter indicated that the Case Study Seminars were not the best use of their time. This group consistently stated that 3 hours one night per week was too much time for beginning teachers – they indicated that this time could have been put to better use planning for their daily lessons. Other comments indicated that the Case Study Seminars were often too theoretical, used inappropriate materials (for example, handouts were often geared toward elementary classrooms when most MINT participants were being certified as middle school and/or high school teachers), and did not always utilize the 3-hour time period efficiently.

Interactions with Other Teachers—Teachers' Views

The visibility and reputation of the MINT program provides another set of indicators that can be used in the assessment of MINT outcomes. Two-thirds of the MINT participants indicated that it is public knowledge in their school that they are MINT-trained teachers. The table below shows that, of those who believed their MINT participation to be public knowledge, most respondents felt that impressions of others at their school were neutral or favorable. When those who reported negative impressions were asked how attitudes had changed over time at the school, no respondents indicated that they had become worse. Half indicated that attitudes had been unchanged, while the remaining half felt that attitudes had improved.

Impression by Others in School of MINT Program	Frequency	Percent
Very Positive	20	13.1%
Positive	43	28.1%
Neutral	62	40.6%
Negative	27	17.6%
Very Negative	1	0.7%
Total	153	

59 respondents offered comments regarding the attitude of other teachers toward them. It should be noted that while only 27 rated the attitude toward them as negative, 35 respondents chose to comment about teachers’ negative opinions of the MINT program, the Signing Bonus, or accelerated certification in general. Two main reasons were given for the negative attitudes: (1) the perception that the MINT training was inadequate, and (2) unhappiness that MINT participants received signing bonuses as unproven and unqualified beginners in the field. Comments such as MINT is an “affront to my four years” of training and that MINT participants never “paid their dues” were made to two MINT participants. Additional comments by the respondents also indicate that some teachers are unclear about the Signing Bonus, believing it to be a single, up-front payment.

Interactions with Other Teachers—Principals’ Views

Similarly, principals were asked to assess how well their MINT-trained teachers interact with colleagues. As the table below shows, most were very positive about the MINT teachers’ interactions. Three principals noted that some of the traditionally-prepared teachers in the school were negative about the MINT teachers, but that the MINT teachers handled the situation well.

Principals’ Ratings of How MINT Teachers Interact with Colleagues	Frequency	Percent
Very Well	118	59.9
Well	67	34.0
Neutral	5	2.5
Poorly	6	3.0
Very Poorly	0	0

RETENTION

Teachers' Plans for the Future

The following table summarizes respondents' sense of whether they will be teaching in the future.

	Will be Teaching Next Year	Will be in Same School Next Year	Will be Teaching in Five Years
Yes	86%	70%	66%
No	4%	12%	7%
Maybe	10%	19%	27%

As the following table shows, recent college graduates are significantly more likely to say they will not be teaching in five years than mid-career participants. No other subgroups showed significant differences in responses.

Will Teach in Five Years	Recent Graduate	Mid-Career
Yes	57.9%	69.3%
No	17.5%	2.7%
Maybe	24.6%	27.3%

Dropout/Migration Rates

We have school-level placement information for 305 MINT-trained teachers, and district-level placement for an additional nine. We have received confirmation from either the Department of Education, the teacher surveys, or the principal surveys that 44 MINT-trained teachers appear to have left teaching altogether. There are 79 teachers who we know to have participated in MINT, but whose current status is not known. This makes an accurate calculation of retention/dropout rates difficult.

Of those teachers known to have left teaching, the majority were teaching in high-need districts (DOE definition of high need), as the table below indicates. Due to the high number of uncategorizable teachers mentioned above, this statistic should be viewed with some caution.

Type of District	Frequency	Percent
High-Need	25	57%
Non-High Need	16	36%
Unknown	3	7%

Principals' Views on Likelihood of Retention

Seventy-one percent of the principals indicated that they did not believe that it would be any harder to retain MINT teachers than it would be to retain other teachers. Of the principals who said that it may be harder to retain MINT-trained teachers, the most common reason given was the teachers' lack of preparation and/or the difficulties of teaching. Principals also noted the relatively low salaries that teachers earn and the MINT teachers' awareness of options outside of teaching as deterrents to retention. Some principals, however, commented that MINT teachers

are making an informed, mature choice to teach, and may thus be easier to retain than traditionally trained teachers.

WOULD THEY DO IT AGAIN?

MINT Participants

We asked MINT participants if, knowing what they know now, they would participate in MINT again. 87% said that they would.

Principals

We asked principals, if they had a teaching vacancy, would they consider hiring another MINT graduate. Almost 90% said they would consider a MINT graduate without reservations.

	Frequency	Percent
Would Consider with Preference	17	10.6
Would Consider the Same as Anyone Else	126	78.8
Would Consider with Reservations	15	9.4
Would Not Consider	2	1.3
Total	160	

SUGGESTIONS FOR IMPROVEMENT

Participants' Suggestions for Future Recruitment Strategies

The MINT participants offered a number of suggestions for recruitment of future MINT participants. While many respondents indicated that MINT should continue with current strategies, several original ideas may be worth exploration. One of these is the “Troops to Teachers” program. One respondent wrote:

“Before the events of September 11, 2001, the U.S. government planned to restructure the Troops to Teachers program. Massachusetts should team up with Troops to Teachers to recruit retiring military officers to teach. I retired from the U.S. Navy at age 39. In the Navy, I visited 37 different countries, learned French and Italian, and worked with mathematics on a daily basis. Quality candidates, including minorities, would jump at the opportunity to teach because the military often kept them separated from their families. Salary is not an issue because my retirement pay (\$24,000/year) makes the lower salaries teachers make less of an issue than for others. The service academies run job fairs for former graduates. The Retired Officer’s Association would be another place to “get the word out.”

Other suggestions include using testimonials from former MINT participants in television ads or news programs; advertisements in “help wanted” sections across the nation; and making the MINT program section on the DOE website more prominent.

Participants' Suggestions for Improving the MINT Summer Training Program

At the end of our survey, we invited MINT participants to provide suggestions for improving the MINT program in future years. 131 respondents took the opportunity to provide comment and/or suggestions. The table below summarizes the distribution of MINT Participants’ comments.

Area for Improvement	Frequency
Communication/Organization of the DOE	38
Concerns with Cooperating Teachers	25
Summer School as Training Venue (small class size, lack of “reality”)	21
More Focus on Content/Workshops for Content Strategies	11
More Focus on Classroom Management	11
More Time to Observe Effective Veteran Teachers	11
Increase in Teaching Time	10
More Focus on Special Education Issues	9
More Assistance with Job Placement/Job Searches	8
More Attention to Instructional Strategies/Lesson Planning	8
Concerns with the Signing Bonus	8
Logistics/Travel Issues During the Training Period	5
Support/Appropriate Placement for Foreign Language Teachers	2
Limit the Amount of Diversity Training	2

Communication/Organization of the DOE. The most frequently cited area of need was organization and communication, especially communication by the Department of Education. Respondents specifically cited late notification about meetings, faulty information regarding certification regulations, and inadequate lead -time to prepare for observations in schools.

Concerns with Cooperating Teachers. The second most frequent suggestion addressed the need to have effective, experienced cooperating teachers for each MINT participant. Twenty respondents indicated the need to improve how cooperating teachers are chosen, notified, trained, and compensated. The respondents also indicated their desire to be able to observe experienced and effective teachers during their training period.

More Realistic School Setting. Approximately 15 respondents cited the need to experience a more “realistic” school setting (as opposed to summer school) during their training period. These respondents cited summer school class sizes as being too small (some classes as small as 3 and 5) and inadequate for learning how to deal with 25 or 30 students per class during the year.

Principals’ Awareness of MINT

The principals also provided some feedback about suggestions for improving the MINT program. However, their knowledge of MINT is understandably far more limited than that of the participants. As the table below indicates, nearly 60% of the principals feel as if they know little or nothing about MINT.

Principals’ Knowledge About MINT	Frequency	Percent
A Lot	24	15.9%
Some	38	25.2%
A Little	85	56.3%
Nothing	4	2.6%
Total	151	

Principals’ Reservations About MINT

Thirty-two percent of the principals have reservations about MINT and almost two-thirds (63%) had recommendations as to how to change the program. The most commonly expressed reservation was the lack of practical training and exposure to students that MINT trainees receive. This was followed by the general concerns that summer school is not an adequate substitute for practice teaching during the regular school year, that more training in classroom management and pedagogy are needed, and that the MINT program does not sufficiently substitute for a traditional teacher training program.

Principals’ Reservations About MINT	Frequency
More practical training, exposure to students needed	16
Summer school not a good training session	7
More training in classroom management needed	6
Program is not a sufficient substitute for traditional teacher education	5
More training in pedagogy needed	5
Signing bonus is inappropriate	4

Will MINT-trained teachers adjust to/stay in schools?	4
More outreach, education about MINT needed	3

Principals' Areas for Improvement

Principals also suggested specific changes to MINT which, not surprisingly, parallel their reservations.

Principals' Suggestions for Changes in MINT	Frequency
More training in classroom management	17
More practical training, classroom time	17
Student teaching in "real" classroom (not summer school)	12
More training in pedagogy	11
Supervised student teaching	9
Program needs to be longer	9
Need to screen participants more carefully	8
More follow-up needed	6
More training in classroom planning	6
Better communication about the program needed	6

FINDINGS

The MINT/Signing Bonus program is recruiting and selecting high-quality people into the teaching profession.

- The selection process is very good, and has been improved over time.
- Principals are generally satisfied (89% would hire a MINT graduate again without reservations, and only 1% would not consider hiring one; 81% say MINT graduates have had a somewhat or very positive impact on students overall)
- Principals primarily attribute success to individual traits, such as personality, background, and/or career experience.
- Participants rate themselves highly as teachers, relative to their peers.
- 87% would do it again.
- Recruiting efforts are not yielding many candidates from beyond New England and New York (84% of applicants are from Massachusetts, 93% are from New England or New York).
- Two-thirds of MINT participants are mid-career applicants.

The accelerated nature of the program is a more important inducement factor than the Signing Bonuses.

- However, the Bonuses may have yielded publicity that caused participants to notice the program in the first place.
- The Signing Bonus appears to be a stronger incentive for recent college graduates than for mid-career participants.

The Summer Training component is insufficient.

- Significant numbers of participants say the Cooperating Teacher relationship is inadequate (40% say either poor or very poor). Problems experienced include Cooperating Teachers who are (1) not at the same grade level as their trainees, (2) not at the same subject area as their trainees, (3) disinterested/resentful, (4) unaware/unprepared for their role, and/or (5) inadequately compensated for their roles.
- The summer school experience is not comparable to regular school. Small classes and a general focus on MCAS remediation offer little practice for the realities of the school-year environment.
- Because most summer schools focus on English and math only, most trainees for other licensing areas receive few opportunities to practice their chosen content areas.
- Participants rate the theoretical workshops more highly than the practice teaching component.
- Less than 50% report that they received an adequate amount of training in classroom management, content knowledge, observing experienced teachers, and learning to work with special needs students. On the other hand, principals noted classroom management training as a weakness in only a very small number of participants. Moreover, both participants and principals said that participants have good content knowledge. It is possible that some/many participants may need more focus on translating content knowledge into teaching strategies, as several participants noted, but a portion of respondents may have misunderstood the survey question. More research on this issue seems warranted.

- The Shrewsbury NTP site uses a different model for its cooperating teachers, in which a team of content-expert teachers observe and MINT trainees have lead teaching responsibilities. Shrewsbury participants tended to rate their cooperating teachers and practice teaching more highly than those in other programs. UMass Lowell participants, on the other hand, rated their workshop components more highly than those in other programs.
- There is some skepticism among stakeholders about whether MINT training is appropriate for urban districts. In this view, the shock of immersion in the fall is too great; some urban districts are reluctant to hire MINT graduates because they assume they'll leave. (It should be noted that some of the stakeholders expressing this opinion also indicated that they had a relatively limited understanding of how the MINT program actually worked.)

The MINT/Signing Bonus program is producing teachers in high-demand content areas.

- Almost half of MINT graduates are teaching science or math (32% and 17% respectively, of those known). An additional 10% are teaching foreign languages or special education.
- Over 50% have been hired into “hard-to-fill” positions

MINT/Signing Bonus graduates are not primarily teaching in high-need schools.

- Only one-third of MINT teachers as a whole, and of Bonus recipients as a subset, are teaching in high-need schools. Part of this may be due to the fact that urban districts often hire long after suburban districts, which poses problems for mid-career professionals anxious about employment.
- Recent college graduates are more likely (42%) to be teaching in high-need districts than mid-career participants (34%), but two-thirds of MINT participants are mid-career.
- There has been negligible success recruiting minority candidates, to date. This is, however, a common challenge for all teacher recruitment efforts.

The mentoring component is welcomed, but variable.

- Mentoring support seems particularly important for MINT teachers, given the accelerated nature of their training.
- 79% of the 2001 MINT participants say they are receiving mentoring. Of those indicating they are receiving mentoring, 26% find it poor or very poor. This means that about 42% are receiving poor mentoring or none at all.
- Mentoring is more scarce in high-need districts: 55% of 2001 MINT participants in high-poverty districts (40% or more F/RL) say they are receiving poor or nonexistent mentoring.
- Case study seminars are seen as generally useful, especially for sharing/support.
- Focus group participants indicated that they wanted case study seminars to begin as soon as school started in the fall, for immediate feedback and support.

Retention questions remain to be answered.

- Lack of records on 20% of MINT participants makes it difficult to establish a true retention rate.
- 86% of respondents say they will be teaching next year; 4% say they will not.
- 70% say they will teach at the same school next year; 12% say they will not.
- 66% say they will be teaching in five years; 7% say they will not.

- Recent college graduates are significantly more likely to say they will not be teaching in five years than mid-career participants (18% vs. 3%).

Communication with participants and districts needs improvement.

- DOE communication and support problems appear to be deeply felt by participants and site staff. 38% of MINT participants rate DOE’s communication and support as poor or very poor, and focus groups with site staff and participants showed this to be a strongly held issue by a number of people.
- Program providers were rated more highly in this area (78% satisfactory or above), but the number of complaints about Cooperating Teachers being unaware of their roles when MINT trainees entered their classrooms indicates that this is also an area for improvement.

MINT has a fairly low profile.

- Principals and stakeholders don’t have a clear idea of the program’s goals or how it works.
- 59% of principals say they know “a little” or “nothing” about MINT.

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RECOMMENDATIONS

Develop a marketing campaign to boost the teaching profession as a career, and MINT as a way into it.

Focus recruiting efforts in New England and New York. This is MINT’s most productive pool of candidates, historically. Minority recruitment efforts should be focused in this region as well. Minority recruitment might also be improved through programs such as the “Troops to Teachers” program referenced earlier in this report.

Don’t give up on recent college graduates. Recent college graduates appear to be more likely to teach in high-need schools, and are less likely to have established lifestyle needs that preclude teaching as a career. Explore existing models around the country that successfully target college math and science majors to get them interested in teaching. Consider broadening targeted majors to include other math-related areas, such as economics, engineering, business, and computer science.

Strengthen DOE’s capacity to communicate with MINT participants—before, during, and after the summer program. Participants and program staff sent a clear message that more consistency was desired in this area.

Focus on the cooperating teacher relationship. This is a clear area of dissatisfaction, and solving the problems in this area would significantly improve the summer-school training model. The Shrewsbury model, in which a team of content-expert teachers observe and MINT trainees have lead teaching responsibilities, may hold promise if it can be implemented in urban schools.

Focus on the “nuts and bolts”—both process and content-based pedagogical aspects of teaching. Classroom management, grading strategies, communicating with parents, and working with special-needs students are common needs of all new teachers, regardless of their degree of content knowledge. In addition, MINT participants appear to be asking for more content-specific pedagogy—how to translate their content knowledge into lesson plans for students (although more inquiry is needed to establish the extent of this desire). More interaction with experienced teachers is also desired.

Look carefully at the needs of science teachers and how they can be met through the MINT process. One-third of MINT participants are training for science teaching, but most summer schools do not offer many, if any, science courses.

Designate Bonuses only for high-need areas: high-poverty schools, high-demand specialties, and minority candidates. Scarce state funds should be targeted at the areas where the teaching shortage is most severe. In addition, the state should consider targeting high-need schools, rather than high-need districts, since some schools in high-need districts have less need of subsidized resources (e.g., Boston Latin, which is home to several MINT graduates).

Work to make MINT more of a “grow-your-own,” district-based hiring strategy. Without district buy-in, MINT will risk being an afterthought, perpetuating the poor cooperating teacher relationships and other challenges mentioned above.

Consider whether MINT needs to be changed fundamentally if it is to meet its current goal of serving high-need districts. The demands of urban teaching are such that a Bonus and a seven-week summer session simply may not be sufficient to adequately prepare a significant

number of high-quality teachers who will stay. There are a variety of one-year, district-based alternative teacher training programs involving apprenticeships with master teachers (e.g., 180 Days in Springfield, Teach Next Year, Project Open) that could be supported with MINT funding. Other district-based models could be developed, based upon the state's alternative routes 3 and 4. Alternatively, DOE could arrange for MINT graduates in urban settings to enter district apprenticeships after their MINT training, as the following respondent was apparently able to do:

“I was the luckiest of new teachers to be allowed to share a class with my department head (1/2 of a “double-blocked” class). We worked closely together for a whole year and daily discussed ALL (and I mean all) aspects of teaching including my MINT, college, and other graduate training I have had. Were it not for that year and the generosity of a master teacher I would not be the teacher I am now. I had a true apprenticeship such as I had in my first career. If you want to turn out the best teachers quickly, have them spend one year sitting and watching a master for half of a class and then continuing the lesson for the other half. Have your seminars in the evening or whenever but put the teachers in a real classroom during the real school year.”

At a minimum, MINT should look for ways to extend its current training by several weeks in the summer and insist on rigorous induction programs and ongoing professional development for its urban-based graduates.

TOMORROW'S TEACHERS CLUBS

BACKGROUND

Tomorrow's Teachers Clubs (TTCs) are middle- and high-school-level clubs designed to generate student interest in and an understanding of the teaching profession. Beginning in 1998, Massachusetts public schools have been able to apply to DOE for \$1,200 grants to fund the activities of their TTCs. (Note: as the data below indicate, a number of schools had future teachers clubs in existence prior to 1998.) Typical TTC budgets include a \$900 stipend for the club advisor and a \$300 operating budget for club activities. In the 2001-2002 school year, DOE awarded grants for TTCs to 132 schools (*Appendix V: Schools receiving TTC Funding*).

GOALS OF THIS STUDY

The Tomorrow's Teachers Clubs program is a modest program within the 12-to-62 Plan that has not been previously studied by DOE. The major goals of this study included answering the following questions:

- **What kinds of schools and advisors are participating in the program?**
- **What kinds of students are participating in TTCs?**
- **What kinds of activities are conducted by TTCs?**
- **Is there any evidence that former TTC members continue on the path to teaching?**
- **Would schools continue to sponsor their TTCs if grant funding were unavailable?**

METHODOLOGY

A contact list from DOE indicated that 132 schools had applied for and received grant funding for TTCs for the 2001-2002 school year. Telephone calls to confirm contact information turned up seven schools that were not actually sponsoring a TTC, although they had been listed as grant recipients. Several had been unable to find a faculty advisor; others did not get the club functioning this year for various reasons. The Center for Education Policy mailed out 125 surveys to schools that sponsored a TTC during the 2001-2002 school year (*Appendix VI: Tomorrow's Teachers Club Survey*). After several weeks, a follow-up mailing was done. A total of 67 surveys were returned, from 65 schools (two TTCs had more than one advisor respond) (*Appendix VII: Schools Responding to the Tomorrow's Teachers Club Survey*). Based on 65 schools, this represents a response rate of 52%.

WHAT KINDS OF SCHOOLS AND ADVISORS ARE PARTICIPATING?

School Characteristics

Although there is a mix of school-types represented, nearly 55% of the schools are characterized as suburban, and nearly one-third are urban.

School Type	Frequency	Percent
Suburban	35	54.7
Urban	20	31.3
Rural	7	10.9
Other	2	3.1
Total	64	100.0

Years with a TTC Club

Slightly more than one-quarter of the TTCs have just completed their first year, but nine future teacher clubs (nearly 14%) began before the TTC program was implemented four years ago.

Response	Frequency	Percent
This is our first year.	18	27.7
2 years	7	10.8
3 years	19	29.2
4 years	12	18.5
5-8 years	7	10.8
9 or more years	2	3.1
Total	65	100.0

Changes in Student Enrollment

Nearly 90% of the schools who have had TTCs for two or more years have had stable or increasing enrollment in their TTCs, with almost half increasing in membership.

Response	Frequency	Percent
Increased	22	47.8
Stayed the same	19	41.3
Decreased	5	10.9
Total	46	100.0

Grade Levels Represented

TTCs are most likely to be found at the high school level, but clubs enlist students as young as 5th grade.

Grade Level	Number of Schools Reporting Students at this Grade Level
5 th	3
6 th	11
7 th	15
8 th	13
9 th	28
10 th	44
11 th	44
12 th	43

Advisors' Tenure in the Classroom

Approximately 70% of TTC advisors have 9 or more years of classroom experience, and nearly 50% have 20 or more years in the classroom.

Response	Frequency	Percent
This is my first year.	1	1.6
2-4 years	7	10.9
5-8 years	11	17.2
9-12 years	4	6.3
13-19 years	11	17.2
20 or more years	30	46.9
Total	64	100.0

Advisors' Tenure as an Advisor

Nearly 40% of the advisors recently completed their first year with a TTC. Relatively few (10.9%) began advising TTCs last year.

Response	Frequency	Percent
This is my first year.	25	39.1
2 years	7	10.9
3-5 years	29	45.3
5 or more years	3	4.7
Total	64	100.0

Advisors' Highest Degree Received

75% of TTC advisors hold a Master's degree or higher.

Response	Frequency	Percent
Bachelors	16	25.0
Masters	40	62.5
C.A.G.S.	6	9.4
Doctorate	2	3.1
Total	64	100.0

Advisors' Certification

Approximately one-fifth of advisors are from the high-demand areas of math, science, special education, or foreign languages.

Area of Certification	Frequency	Percent
History/Social Sciences	13	20.3
Other	13	20.3
English	10	15.6
Middle School Generalist	9	14.1
Elementary	6	9.4
Math	6	9.4
Foreign Languages	5	7.8
Sciences	1	1.6
Special Education	1	1.6
Total	64	100.0

Of those who responded “other” for area of teaching certification, 11 are guidance counselors, three are business educators, and two are home economics educators. Nineteen advisors reported being certified in more than one area.

Advisors' Age

Approximately 75% of the advisors are age 41 or older – this is consistent with the fact that about 70% of the teachers responding have 9 or more years of classroom experience.

Response	Frequency	Percent
25 or younger	1	1.6
26-30	9	14.3
31-35	4	6.3
36-40	2	3.2
41-45	8	12.7
46-50	12	19.0
51-55	20	31.7
56 or older	7	11.1
Total	63	100.0

Advisors' Gender and Ethnicity

The tables below indicate that 80% of the advisors are female, and nearly 86% are white.

Response	Frequency	Percent
Female	52	80.0
Male	13	20.0
Total	65	100.0

Response	Frequency	Percent
White/non-Hispanic	54	85.7
Hispanic	5	7.9
Black/non-Hispanic	2	3.2
Native American/Alaska Native	1	1.6
Other	1	1.6
Total	63	100.0

WHO PARTICIPATES IN TTCs?

We asked the responding advisors about the types of students involved in TTCs.

Academic Achievement of Participating Students

We asked advisors what percentages of their participating students were high achievers, average achievers, and low achievers. It should be noted that definitions for high, average, and low achievement were left to the discretion of the TTC advisors. Advisors provided academic achievement data on approximately 1,000 participating students. By their estimation, 46% of the students are high achievers, 46% are average achievers, and 8% are low achievers.

Achievement Levels	Percentage of Total	Numbers of Students
High Academic Achievers	46%	459
Average Academic Achievers	46%	458
Low Academic Achievers	8%	83

Selection Criteria

We asked advisors what criteria they use for deciding which students are eligible for membership in their TTC:

Criterion	Number
Student Interest	63
Teacher Recommendation	27
G.P.A.	13
“Other”	6

Various other criteria were also noted. One club limits participation to juniors and seniors. Another club examines the “character of students in relation to good conduct, sound morals, and an understanding and sensitivity for working with children.” Another TTC accepts only “model students – we follow the criteria for Honor Society.”

How are Students Recruited to Join TTCs?

Most TTCs use relatively informal recruitment methods, such as word of mouth, announcements, posters and flyers. A significant number use school career exploration programs to identify students interested in teaching and encourage them to explore it through the TTC.

Recruiting Method	Frequency
Word of Mouth	58
School Announcements	54
Posters and Advertisements	43
Interest, as shown on Career Interest Inventories	30
Invitation Flyers to All Classrooms	24
Other (see below)	8

Ten advisors provided additional information regarding recruitment methods. Three advisors noted that they recruit students in child study/child development classes. Other responses by two or fewer respondents include: new freshman orientation sessions, teacher recommendations, personal invitations to join (through the students' advisors), and recommendations from guidance counselors.

Race/Ethnicity and Gender

Most (70%) of the students in the responding TTCs are non-Hispanic whites. Girls represent 78% of the participating students.

Race/Ethnicity	Girls	Boys	Total Number of Students	Percent of Total Enrollment
White/non-Hispanic	570	162	732	70%
Hispanic	90	30	120	11%
Not Identified	53	23	76	7%
Black/non-Hispanic	40	9	49	5%
Asian/Pacific Islander	30	5	35	3%
“Other” Background	32	2	34	3%
Native American/Alaska Native	3	2	5	<1%
Subtotals (girls/boys)	818	233		
Percent (girls/boys)	78%	22%		
Total	1,051			

WHAT KINDS OF ACTIVITIES ARE CONDUCTED BY TTCs?

TTC Meetings

Nearly 90% of the respondents reported that their clubs meet at least once per month (29% reported weekly meetings, 23% reported bi-weekly meetings). 75% of the clubs meet after school hours. Most club meetings (75%) lasted for one hour or less – and several schools reported that the length of their meetings varies depending on the topic of discussion. Nearly one-half of the advisors reported that 80% or more of their students regularly attend the functions of the TTC.

How often does the TTC meet?	Frequency	Percent
Weekly	19	29.2
Biweekly	15	23.1
Monthly	23	35.4
Once each semester	2	3.1
Other	6	9.2
Total	65	100.0

When does the TTC meet?	Frequency	Percent
After school	49	75.4
During the school day	12	18.5
Before school	4	6.2
Total	65	100.0

For How Long Does the TTC Generally Meet?	Frequency	Percent
30 minutes	25	39.1
1 hour	23	35.9
1.5 hours	8	12.5
2 hours	1	1.6
Other	7	10.9
Total	64	100.0

What Proportion of the TTC Members Regularly Attend the Functions of the TTC?	Frequency	Percent
80% or more	32	49.2
50-79%	24	36.9
25-49%	5	7.7
24% or less	4	6.2
Total	65	100.0

Activities of TTCs

We asked TTC advisors to tell us what kinds of activities their TTC conduct. Respondents provided the following information :

Type of Activity	Number of Schools Conducting this Activity	Percent
Shadowing a teacher	47	70%
Education discussion groups	44	66%
Tutoring children after school hours	34	51%
Reading aloud to children in elementary classrooms	31	46%
Tutoring children during school hours	28	42%
Field trips to schools of education	28	42%
Creating bulletin boards for classrooms	26	34%
Publicizing the TTC at school	25	37%
Hearing guest lectures	24	36%
Assisting in lesson planning	21	31%
Researching websites on careers/education	19	28%
Fundraising to supplement the TTC budget	15	22%
Other Activities (specified below)	14	21%
Fundraising to sponsor a scholarship	5	8%

In addition to those mentioned above, a number of advisors described other activities:

- Seven respondents reported that their clubs assist with “Teacher Appreciation Week” (raising money for teacher gifts and/or lunches).
- Five respondents reported that their clubs perform some type of community service/volunteer work, such as raising money for the homeless or working with elders.
- Two clubs attend educational conferences (see specifics under the fundraising section below).

Individual respondents mentioned the following other club activities: substitute-teaching in elementary schools as needed, forming two-person teams to plan and teach a lesson to an elementary class, “adopting” a Special Needs class (hearing impaired), teaching classes in French and Spanish to 3rd-grade students over the course of the year, serving as teaching assistants in regular classes and in the school’s day care center, participating in the “school to career” program (leaving early to work at elementary schools), serving as library aides, participating in internships for credit, participating in “Teach for a Day” in grades K-6, conducting a summer program with the Future Teachers of America club, completing internships at day care centers, conducting kindergarten screening, conducting special projects with local elementary schools, using grant monies to thank teachers for mentoring future teachers (\$100 worth of classroom supplies to 3 teachers), creating books for kindergarten students, organizing an elementary school bookmark contest to raise the club’s visibility, conducting a book drive for children’s books, assisting with yearbook assembly, delivering daily announcements and mail, and taking a field trip to the IMAX theater in Boston.

The tables below show that 18 TTCs conducted fundraisers. Four of those schools raised \$500 or more. Of these four, two respondents specified that they provide scholarship money/savings bonds to graduating seniors. The other two have used the money to attend conferences. One club attended the NEAEYC (New England Association for the Education of Young Children) conference, and the other attended the FEA (Future Educators of America) conference in Denver.

Does the TTC Conduct Fundraising Activities?	Frequency	Percent
No	47	72.3
Yes	18	27.7
Total	65	

If So, How Much Money Does the TTC Raise Over the Course of One Year?	Frequency	Percent (of all TTCs)	Percent (of those that raise funds)
\$500 or more	4	6.0	22.2
\$100-\$499	9	13.4	50.0
Less than \$100	5	7.5	27.8
Total	18	26.9	100.0

The groups that raised between \$100 and \$499 spent their money in a variety of ways. One club provides monetary gifts to two graduating seniors (one TTC club member, one not) who intend to study education in college. Other clubs sponsored field trips to places such as the New England Aquarium, an IMAX theater, and the Discovery Museum. Finally, the remaining groups (those raising less than \$100) spent the funds they raised on local field trips (including trips to colleges), providing small gifts for graduating seniors, purchasing materials for general TTC activities, purchasing textbooks for TTC purposes, and sponsoring TTC club parties.

Tomorrow’s Teachers Scholarship. We asked respondents if any of their TTC members had ever received the Tomorrow’s Teachers Scholarship (tuition remission at Massachusetts public colleges and universities for students who graduate in the top 25% of their high school class and who agree to teach for a minimum of four years after college graduation). Slightly over one-third said yes. Three advisors provided comments about the importance of the scholarship incentive to their students (one noted the disappointment of seniors in his/her TTC who did not receive the scholarships).

Response	Frequency	Percent
No	28	45.9
Yes	23	37.7
Unsure	10	16.4
Total	61	100.0

IS THERE ANY EVIDENCE THAT FORMER TTC MEMBERS CONTINUE ON THE PATH TO TEACHING?

Since DOE has only been funding TTC programs since 1998, it is too early to determine whether TTC participants have become teachers. Instead, we asked TTC advisors several questions about their perceptions of the effectiveness of TTC in recruiting future teachers.

Impact on Student Attitudes

We asked TTC advisors what kind of impact they felt the TTC was having on student attitudes toward the teaching profession. The vast majority (about 97%) of respondents believe that TTCs have a positive or very positive impact on attitudes toward teaching. A small percentage (only 2 respondents) believed that TTCs did not affect student attitudes toward the teaching profession, and no respondents indicated a negative impact on student attitudes.

Type of Impact	Frequency	Percent
Very positive	25	39.1
Positive	37	57.8
Does not affect	2	3.1
Negative	0	0.0
Very negative	0	0.0
Total	64	100.0

Eight respondents provided comments to support their answers. Five noted that TTCs give students needed exposure and an “insider’s perspective” on the work of teachers—the positives and negatives of the profession. One respondent noted that it was “too soon to determine,” one noted a positive impact on teacher attitudes, and one noted that students have the opportunity “see what they can do” as teachers.

Effectiveness as a Recruiting Tool

We also asked TTC advisors whether they agreed with the statement that “Tomorrow’s Teachers Clubs are an effective way to recruit quality students into the teaching profession.” Nearly 88% of the TTC advisors agreed with the statement, and about 40% strongly agreed. Some (~10%) neither agreed nor disagreed, and 2 respondents noted that they disagreed with the statement.

Response	Frequency	Percent
Strongly Agree	25	39.1
Agree	31	48.4
Neutral	6	9.4
Somewhat Disagree	1	1.6
Strongly Disagree	1	1.6
Total	64	100.0

Several advisors stated that the clubs are only effective if students have the opportunity to job-shadow and truly interact with teachers in the field. As noted above, 70% of schools offer job-shadowing as a club activity.

Interest in Teaching

We asked TTC advisors to predict what percentage of Club members would pursue a career in teaching. Responses ranged widely, but about 70% felt that two-fifths or more of their TTC students would become teachers.

Predicted % Pursuing Teaching Career	Frequency	Percent
81-100%	7	11.1
61-80%	17	27.0
41-60%	21	33.3
21-40%	11	17.5
Less than 20%	7	11.1
Total	63	100.0

We also asked advisors to identify the levels of preK-12 education in which their Club members show the most interest. As the table below indicates, nearly 44% of the students primarily show an interest in early childhood or elementary education. Of those respondents who chose “a mix of the above” categories, seven provided comments to specify that the mix was composed of an interest in early childhood and elementary education, which raises the percentage of members interested in early childhood or elementary education to 55%.

Teaching Area of Most Interest	Frequency	Percent
Early Childhood	2	3.1
Elementary	26	40.6
Secondary	2	3.1
A mix of the above	34	53.1
Total	64	100.0

Two advisors cited Childhood Education programs and/or child development courses that might play a role in sparking the interest in younger children.

Outcomes

We asked TTC advisors how many of their former TTC students are currently in teacher preparation programs. Approximately 44% of respondents reported that former TTC members are currently enrolled in teacher preparation programs, while 36% reported not having been active long enough to track this. An additional 18% said they did not know.

Number of Former TTC Members Currently in Teacher Prep Programs	Frequency	Percent
Zero	1	1.6
1-3	11	18.0
4-6	9	14.8
7-10	5	8.2
I don't know.	11	18.0
Other	2	3.3
TTC not active long enough to track.	22	36.1
Total	61	100.0

One advisor noted that her club surveys students each year. She reports finding that “at least 10 out of 12 graduating seniors are even more committed to the profession than they were when they first joined the club.”

We also asked TTC advisors how many of their former TTC members are currently teaching. Approximately 65% of the advisors gave the expected response that they have not been active long enough to track students entering teaching. However, nearly 14% did report that they do have former TTC students currently teaching. Five percent reported that none of their former students were teaching. Sixteen percent said they did not know.

Number of Former TTC Members Currently Teaching	Frequency	Percent
Zero	3	4.8
1-3	4	6.5
4-6	3	4.8
7-10	1	1.6
I don't know.	10	16.1
Other	1	1.6
TTC not active long enough to track.	40	64.5
Total	62	100.0

WOULD SCHOOLS CONTINUE TO SPONSOR THEIR TTCs IF GRANT FUNDING WERE UNAVAILABLE?

We asked advisors “If TTC grant funding was not available, would your school continue to sponsor a TTC?” Slightly over one-quarter said yes, while over half were unsure.

Response	Frequency	Percent
Yes	18	27.7
No	12	18.5
Unsure	35	53.8
Total	65	100.0

Of the 18 respondents who said “yes” to the above question, four provided comments to support their response. Two indicated that the club would continue without providing a stipend for the advisors. Two others stated that their schools are committed to endeavors such as TTCs and mentoring programs, so they would continue even if funding were unavailable. (One respondent stated that her school has had a club like TTC since 1951.)

Ten of the 35 respondents who were “unsure” provided comments to clarify their response. These respondents indicated that the current budget may not permit them to continue without grant funding, but decisions had not been made at the time they submitted their surveys. Of the 12 respondents who indicated that their clubs would not continue, three provided comments. All three stated that there simply are not enough funds to continue with the club.

Other Ways for DOE to Help TTCs

We asked the TTC advisors the following question: “Other than financial support, how else might the DOE support schools in encouraging quality students to become teachers?” The following table summarizes their responses:

Other Ways for DOE to Help TTCs	Number
<i>Meetings/Conferences (at the state level to share ideas with students/advisors)</i>	14
Training/networking for TTCs (8)	
Workshops for Advisors (4)	
Workshops for TTC students (2)	
<i>Market the Profession</i>	8
Market/advertise by accentuating the positives in teaching (6)	
Validate the profession as a legitimate career (1)	
Support current teachers publicly (1)	
<i>Awards for Active TTC Members</i>	7
Continue/Expand the Scholarship Opportunity (6)	
Reward with Recognition (1)	

<i>Provide Materials:</i>	7
Quarterly magazines on education/newsletter (2)	
Information on the process of becoming a teacher (1)	
Information on careers (1)	
Videos on effective teaching (1)	
General supplies/materials for club activities (2)	
<i>Provide Guest Speakers</i>	5
Provide speakers on a variety of educational topics (4)	
Continue to allow Teacher of the Year to tour and meet with TTCs (1)	
<i>Other</i>	
Lobby for higher teacher salaries	3
Grants to continue the TTCs	3
Provide an opportunity for college visits	2
Provide an opportunity for shadowing programs	2
Put an end to the cuts in district budgets	2
Chat Room (for TTC students) on web site	1

Two advisors celebrated the positive aspects of the TTC in their school, for both the students and the teachers involved with the club. One respondent felt that TTCs may not be a “viable program at the high school level as few students know definitely what they want to teach.”

FINDINGS

Schools – Over half of responding advisors are from suburban schools; almost one-third are from urban districts. Fourteen percent of schools have had future teachers’ clubs for longer than DOE has provided TTC funding (4 years). Clubs are most likely to include 10th-12th graders, although students as young as 5th grade are represented.

Advisors are predominantly experienced teachers, with 70% having taught for 9 or more years and almost half having taught for 20 or more. Advisors’ certification areas vary, with history/social science, guidance, English language arts, and middle school generalist being most frequent. 86% are white, 80% are female.

Students do not face great selectivity barriers to club participation—the primary criterion for participation is student interest (although 20% of advisors mentioned GPA as a criterion). This is understandable for a school activity, but can be problematic if the purpose of the program is to generate high-quality future teachers. Advisors rated 42% of participating students as high academic achievers, and 8% as low achievers. TTC students are predominantly female (78%) and white/non-Hispanic (70%); 11% of participants are Hispanic, and 5% are black/non-Hispanic.

Activities conducted by at least 40% of responding TTCs include: teacher shadowing, education discussion groups, tutoring other children, reading to elementary school children, and field trips to schools of education. Other activities range from substitute-teaching in elementary schools and team-planning and teaching of lessons to activities that do little or nothing to promote an interest in or skill development for teaching, such as delivering daily announcements and mail and taking a field trip to the IMAX theater in Boston.

Impact of the TTC program, in terms of recruiting more teachers, is difficult to assess due to the relatively short duration of the program to date. Approximately 44% of advisors reported that some of their former TTC members are currently enrolled in teacher preparation programs (36% said they had not been active long enough to track this, and 18% did not know). Nearly 88% of TTC advisors agreed that TTCs “are an effective way to recruit quality students into the teaching profession,” with about 40% strongly agreeing. Almost all respondents (97%) believe that TTCs have a positive effect on student attitudes toward the teaching profession, and several mentioned positive impacts for participating teachers, as well.

Asked to predict what percentage of Club members would **pursue a career in teaching**, advisors’ responses varied widely, but about 70% felt that two-fifths or more of their TTC students would become teachers. 55% of TTC students show a primary interest in early childhood or elementary education; whether this focus is likely to persist or is simply due to wanting to teach children younger than themselves at this time is unclear.

Continuation and Support – If TTC grant funding is not available, 28% of respondents say they will continue to sponsor their TTCs; 19% will not, and the rest (54%) were unsure. Respondents suggested the following other types of DOE support: (1) sponsoring statewide networking meetings for TTC advisors and students, (2) marketing and supporting teaching as an

attractive profession, (3) scholarships and awards for TTC members, (4) informational materials/videos on topics such as how to become a teacher, careers in education, and how to teach effectively, and (5) guest speakers, such as the teacher of the year.

RECOMMENDATIONS

On balance, the Tomorrow's Teachers Clubs program offers apparent benefits—increasing interest in teaching among young people at an impressionable age—at a modest cost (approximately \$160,000 in grant funds for 132 schools in 2001-2002). The following are some recommendations for improvement.

- **Stimulate TTCs in high-need districts.** This can be another strategy for recruiting a diverse teaching population.
- **Encourage TTCs to recruit high-achieving and male students.** Currently, advisors rate only 42% of their TTC students as being “high achievers.” Only 22% are males.
- **Convene and share best practices among TTC advisors.** Advisors appear interested in learning from each other and in having materials on teaching to share with interested students. Efforts to have students shadow and interact with practicing teachers should be emphasized over more traditional “social club” activities.

ATTRACTING EXCELLENCE TO TEACHING (AET) LOAN REIMBURSEMENT PROGRAM

BACKGROUND

The “Attracting Excellence to Teaching” loan reimbursement program is designed to attract high quality people into the teaching profession by providing payments of up to \$1,800 per year for four years to help teachers to pay off outstanding student loans. “The program was developed as part of the Education Reform Act of 1993 to lure out-of-state teachers to Massachusetts, and to entice others to enter the profession.”¹⁶ To qualify, teachers need to be currently teaching full-time in a public school, to have begun their career after July 1, 1994, to have graduated in the top 15 percent or earned honors in their graduate or undergraduate class, and to be actively repaying student loans.

Recipients need to reapply every year for renewal. If there are more applicants than funds available, first priority will be given to teachers currently teaching in high-need target districts where 29% or more of students are eligible for the free/reduced-price lunch program. For 2002, DOE identified Boston, Chelsea, Fall River, Fitchburg, Holyoke, Lawrence, Lowell, Lynn, New Bedford, Orange, Somerville, Springfield, and Worcester as priority districts. (However, it should be noted that many other districts than these have over 29% of their students qualifying for free/reduced lunch.)

The AET program was envisioned as a teacher recruitment tool. Commissioner Driscoll has said, “The Attracting Excellence to Teaching program is designed to relieve some of the debt burden that teachers carry with them into jobs in our public schools. We are offering relief from some of the undergraduate debts as one key piece of our state plan to attract people to the career of teaching who otherwise are considering higher paying jobs in the private sector.”¹⁷ For the 2000-2001 school year, approximately \$1.2 million were distributed to AET participants.

GOALS OF THIS STUDY

The major goals of this study were to answer the following research questions:

- **Who are the AET participants?**
- **To what extent was AET an incentive for their entry into teaching?**
- **Is AET being used as a recruiting tool by local districts?**
- **Is AET attracting teachers to high-need districts? How could this targeting be improved?**
- **How satisfied are participants with the process, and how could it be improved?**

¹⁶ DOE press release, 9 May 2002

¹⁷ Ibid.

METHODOLOGY

We surveyed 690 Attracting Excellence participants whose contact information was provided by the Department of Education (*Appendix VIII: Attracting Excellence to Teaching Survey*). Participants with active email addresses were sent an email invitation to complete the survey online. To eliminate sampling bias, the remaining participants were mailed a questionnaire and invited to complete it online if they preferred. 445 respondents completed the survey for a response rate of 64% (*Appendix IX: Attracting Excellence Survey Respondents*). We analyzed the data using SPSS and standard qualitative data analysis methods.

WHO ARE THE AET PARTICIPANTS?

Race/Ethnicity

The vast majority of respondents are white/non-Hispanic:

Race/Ethnicity	Frequency	Percent
White/non-Hispanic	377	90.4
Black/non-Hispanic	20	4.8
Hispanic	12	2.9
Asian/Pacific Islander	4	1.0
Other	3	0.7
Native Am./Alaskan	1	0.2
Total	417	100.0

Gender

Four-fifths are female:

Gender	Frequency	Percent
Male	84	19.8
Female	340	80.2
Total	424	100.0

Age

Three-quarters are 35 or younger, with half being 30 or younger:

Age	Frequency	Percent
25 or younger	44	10.3
26-30	174	40.8
31-35	102	23.9
36-40	39	9.2
41-45	29	6.8
46-50	22	5.2
51-55	15	3.5
56 or older	1	0.2
Total	426	100.0

Undergraduate Major

About 30% of respondents report that their primary undergraduate major was education. (Of these, half are elementary teachers and another 23% are special education teachers.) About 29% of respondents were social science or English majors. Less than 10% (total) majored in science or mathematics.

Major	Frequency	Percent
Education	126	29.8
Social Science	70	16.5
English	56	13.2
Science	27	6.4
History	25	5.9
Foreign Language	17	4.0
Art	14	3.3
Mathematics	11	2.6
Music	10	2.4
Other	67	15.8
Total	423	100.0

The most common major reported among teachers who checked “other” was business or a related field (finance, administration), with 19 responses. This was followed by communications or communication disorders (15), physical education (8), human services (5), humanities (4), human development (3), criminal justice (3), American studies (2), liberal studies (2), computer science (1), journalism (1), and nursing (1).

Academic Achievement

As would be expected, given program requirements, over half had GPAs of 3.5 to 4.0 as undergraduates, and over one-third more had GPAs of 3.0 to 3.5. Somewhat more surprising is the 9% who had GPAs under 3.0, though these respondents may have demonstrated their academic qualifications in graduate school.

Grade Point Average	Frequency	Percent
2.0 to 2.49	4	0.9
2.5 to 2.99	35	8.3
3.0 to 3.49	163	38.4
3.5 to 4.0	222	52.4
Total	424	100.0

Participants' Outstanding Loans

AET offers participants up to \$1,800 per year for four years, for a maximum total of \$7,200 in loan reimbursement. To put this in context, we asked each participant to indicate the amount of his/her outstanding student loan balance. We found that about 70% of respondents carry an outstanding balance of \$20,000 or less, while about 13% carry a balance of over \$30,000.

Outstanding Loan Amount	Frequency	Percent
\$1,001 to \$2,500	3	0.7
\$2,501 to \$5,000	25	5.7
\$5,001 to \$10,000	79	18.1
\$10,001 to \$15,000	99	22.7
\$15,001 to \$20,000	97	22.2
\$20,001 to \$30,000	75	17.2
\$30,001 to \$50,000	42	9.6
Over \$50,000	16	3.7
Total	436	100.0

Average Reimbursement Received, by Year

The table below shows the number of respondents receiving payment and the average amount of payment received over each of the past four years.

	Amount received in 2001	Amount received in 2000	Amount received in 1999	Amount received in 1998
N	368	306	180	46
Mean	\$1,625	\$1,605	\$1,532	\$1,427

Teaching Certification Area

Three-quarters of the AET respondents are certified in elementary school, English, history/social sciences, or middle school, none of which are shortage areas in most districts. Shortage areas represented include special education (22%), sciences (8%), and mathematics (5%).

Certification Area	Frequency	Percent
Elementary	206	49
Special Education	95	22
English	48	11
History/Social Science	43	10
Sciences	32	8
Middle School Genl.	27	6
Foreign Language	24	6
Mathematics	22	5
Other Areas	104	25
Total	601	100

Of the teachers who checked “other” for area of certification, the most common area given was early childhood (28). This was followed by bilingual or ESL (26) and fine arts (music, visual arts, dance, or theater) (21). Seventeen teachers were certified in reading and/or writing, and 16 in school psychology, school social work, or guidance. Ten each were certified in physical education or health, and business or technology. Eight were certified in speech/language/hearing, and seven in instructional technology or media. Five were certified in administration. One was certified as a school nurse, and one in educational leadership. Eight respondents reported pending certifications, in reading (3), English (1), special education (1), leadership (1), technology (1), and instructional technology (1).

Teacher Preparation/Certification Program

Almost half of AET respondents have a master’s degree in addition to certification.

Type of Teacher Certification Program	Frequency	Percent
Master's plus certification	201	47.1
4-year undergraduate program	166	38.9
Post BA, solely for certification	26	6.1
MINT	6	1.4
“Other”	28	6.6
Total	427	100.0

Thirteen people received certification as undergraduates at a private college or university. Nine people reported alternative paths to certification. Many of the teachers who became certified as undergraduates continued their education in a Master of Education or content-area master’s degree program.

Years as a Classroom Teacher

Two-thirds of respondents have been teaching for five years or less.

Number of Years	Frequency	Percent
First year	3	0.7
2-3 years	118	27.8
4-5 years	168	39.5
6-8 years	120	28.2
Other	16	3.8
Total	425	100.0

Plans for Teaching Career

We asked participants to indicate how many more years they planned to continue in classroom teaching. Almost one-third are currently planning to teach for over 20 years, while only 17% are planning to leave within the next five years.

0 yrs	1-2 yrs	3-5 yrs	6-9 yrs	10-15 yrs	16-20 yrs	21 or more yrs	Total
17	21	70	36	64	67	131	406

We also asked those not planning to teach after 2005 what they planned to do. Interestingly, 54% said that they would remain in education in another capacity. Administration was the most popular single choice, at 29.2%.

Future Plans	Frequency	Percent
Administrator	46	29.2
Employed outside of education	23	14.6
Caring for family member or raising children	23	14.6
Education specialist	15	9.5
Teacher educator	14	8.9
Guidance counselor	10	6.3
Attending graduate school	10	6.3
Other	16	10.1
Total	157	100.0

TO WHAT EXTENT WAS AET AN INCENTIVE FOR ENTRY INTO TEACHING?

One goal of this study was to determine when participants learned about the AET program and how much of an influence AET had on participants' decisions to enter into a teaching career. We asked each AET participant to rate the significance of several factors that may have influenced their decisions to pursue careers in teaching. Respondents could choose from "Very Significant" to "Not Significant" as indicated in the table below.

How significant were the following factors in your decision to enter the teaching profession?	Very Significant	Significant	Somewhat Significant	Not Significant	Mean Response (scale of 1-4)
Desire to work with children	79.6%	17.8%	1.8%	0.9%	3.76
Interest in subject matter	57.4%	33.1%	8.3%	1.1%	3.47
Value to society	57.6%	30.6%	10.2%	1.6%	3.44
Self-growth & actualization	43.3%	42.2%	11.5%	2.9%	3.26
Job security	14.7%	33.0%	31.2%	21.0%	2.41
School year schedule/Long summer vacation	12.4%	23.0%	36.7%	27.9%	2.20
Family influence	9.5%	26.2%	26.7%	37.6%	2.08
Status/recognition	5.5%	18.6%	26.6%	49.3%	1.80
Salary/benefits	3.9%	14.6%	31.3%	50.2%	1.72
Attracting Excellence to Teaching loan forgiveness program	5.4%*	8.8%*	11.5%	74.3%	1.46

The data above indicate that participants felt that desire to work with children, value to society, interest in subject matter, and self-growth were the most significant factors in their decisions to become teachers. According to these data, the AET program was clearly not an influential factor on participants' career choices, as only 14% rated AET as a "Significant" or "Very Significant" factor. One respondent stated, "I would hate to think that a person would choose to teach to have their loans paid off. It would make for a very long career after the loan was paid."

*It is important to note that other survey data indicate that even this 14.2% is an inflated percentage due to participants' misinterpretation of the question. Forty-eight out of 63 participants who cited AET as significant or very significant indicated on another question that they had not learned about AET until after they had begun their teaching careers; therefore, AET could not have played a role in their decision to enter the teaching profession. This leaves only 15 respondents (3%) for whom AET was a factor in their decision to enter teaching.

Seventy teachers mentioned other factors that influenced their decision to become a teacher. These included: influence of other teachers (18), enjoy teaching/believed to be good at it (14), wanted to have an impact on the future (9), wanted to work with special populations (7),

previous experience, such as private schools, paraprofessional work, or parenting (6), teaching was a calling (3), and a desire to coach (2).

How Participants Learned About AET

Only two respondents indicated that a district used AET as a recruiting tool, and only 28 learned about AET in college (schools of education, career centers, or financial aid offices). These data appear to indicate that AET is not currently serving as a recruitment incentive.

Source of Awareness	Frequency	Percent
Another teacher	162	37
School/District announcement	150	34
DOE website	59	13
Other word of mouth	56	13
Article	40	9
College/University School of Education	23	5
College career center	3	<1
College financial aid office	2	<1
Districts used as a recruiting tool	2	<1
Other source	21	5
TOTAL	517	100

(The total of 517 is larger than the 445 total respondents because many AET participants indicated that they learned about AET in more than one way.)

Would Participants Have Entered Teaching Without Being Able to Participate in AET?

When specifically asked whether they would have entered teaching without AET, respondents confirmed the above-mentioned impression that AET is having minimal recruitment impact.

Response	Frequency	Percent
Yes	431	97.3
Maybe	9	2.0
No	3	<1
Total	443	100.0

Of the people who responded “yes,” eleven offered comments. Three indicated that AET may actually have some effect on their recruitment or retention, with two saying that AET influenced their decision to teach in Massachusetts and one saying that AET may be a factor in his retention. Three stated that they did not know about AET when they entered the profession, and three said that the money is not significant enough to make a difference. One responded that she had always wanted to teach anyway, and one said that she may have to get a third job to afford housing.

Three people originally responded “no,” but offered comments that indicated a misunderstanding of the question. Two said that they began their careers without knowing about AET, and one said that she simply wanted to teach and was not affected by AET. These responses were

changed accordingly. One of the remaining respondents who responded “no” did not offer comments, but indicated elsewhere that she did not learn about AET until after she had started teaching. Seven of the people who responded “maybe” offered comments, all reflecting on the low pay and/or high educational expenses of teachers.

When Did Participants Learn about AET?

We asked respondents to indicate when they first became aware of the AET program. Over 90% indicated they had become aware of AET either after beginning teaching or after beginning a teacher preparation program.

When Participants Learned of AET	Frequency	Percent
During my first year of teaching	205	46.3
After I had been teaching two or more years	178	40.2
While I was in a post-BA teacher prep. program	24	6.1
While I was an undergraduate	14	3.2
During the job search process	13	2.9
Other	16	1.4
Total	442	100.0

From the respondents’ comments, we also learned that more than 30 AET participants did not learn about AET until after three or more years of teaching.

Did Your School System Inform You About AET?

We also asked the participants if their school district informed them of the availability of AET at any point after they were hired. The table below illustrates the results:

Response	Frequency	Percent
No	304	68.6
Yes	118	26.6
Unsure	21	4.7
Total	443	100.0

AET'S ROLE IN TEACHER RETENTION

While there is little evidence that AET serves a teacher recruitment function, our survey did appear to indicate that AET serves a teacher retention function for some respondents.

AET Participants' Satisfaction Levels with Teaching

We asked participants about their satisfaction with teaching as a career. 87% were satisfied or very satisfied.

What is your current level of satisfaction with teaching?	Frequency	Percent
Very satisfied	182	42.6
Satisfied	191	44.7
Neutral	24	5.6
Somewhat unsatisfied	26	6.1
Very unsatisfied	4	<1
Total	427	100.0
Mean rating = 4.22 on a scale of 1 (very unsatisfied) to 5 (very satisfied)		

We then asked respondents if they would again choose teaching as a career. Less than 5% said they would not, although another 17% were unsure.

Would choose teaching again	Frequency	Percent
Yes	333	78.2
Maybe	74	17.4
No	19	4.5
Total	426	100.0

We asked respondents what impact the AET reimbursement payments have had on their satisfaction with teaching. 45% said that they payments had somewhat or greatly increased their satisfaction with teaching.

How have the AET reimbursement payments affected your satisfaction level with teaching, if at all?	Frequency	Percent
Greatly increased satisfaction	33	7.7
Somewhat increased satisfaction	159	37.1
Have not affected satisfaction	234	54.7
Somewhat decreased satisfaction	1	0.2
Greatly decreased satisfaction	1	0.2
Total	428	100.0
Mean Rating = 3.51 on a scale of 1 (greatly decreased satisfaction) to 5 (greatly increased satisfaction)		

We asked AET participants whether they were likely to spend more, the same, or fewer years in classroom teaching as a result of receiving reimbursements for their college education. Most said the payments had not affected their plans, but 16% said that they were likely to spend more years in teaching as a result of the reimbursements.

Years	Frequency	Percent
More years	67	16.0
About the same number of years	350	83.7
Fewer years	1	0.2
Total	418	100.0

These data, along with the increase in satisfaction with teaching mentioned above, support the idea that AET may have some positive affect on teacher retention.

IS AET ATTRACTING TEACHERS TO HIGH-NEED DISTRICTS? HOW COULD THIS TARGETING BE IMPROVED?

Two sub-goals of this study were (1) to explore whether or not tightening requirements for AET payments (either decreasing the number of schools classified as “high need” or restricting reimbursement to those in schools already so classified) would affect where participants seek teaching jobs, and (2) to explore participants’ perceptions of appropriate incentives for high need schools (what amounts of loan subsidies would be a sufficient incentive to attract teachers to high need districts).

Where are AET Participants Teaching?

Approximately two-thirds of the survey respondents are teaching in “high-need” schools, by DOE’s criteria for this program. In order for a school district to qualify as “high-need,” a minimum of 29% of the district’s students must qualify for free or reduced lunch¹⁸.

High-Need District	Frequency	Percent
Yes	276	66.3
No	140	33.7
Total	416	100.0

Impact of Limiting AET Exclusively to “High-Need” Districts

We asked participants whether restricting AET to teachers teaching in “high-need or high-poverty districts” would have affected where they applied for teaching positions. One in ten loan reimbursement recipients would allow such a limitation to influence where they teach school. An additional 12% indicated that they might consider such AET parameters in making a decision. Over three-quarters of respondents said such a limitation would not affect where they teach.

If AET were only available to teachers teaching in high need districts, would this have affected where you applied for teaching positions?	Frequency	Percent
No	340	77.6
Maybe	54	12.3
Yes	44	10.0
Total	438	100.0

¹⁸ High need schools, as defined for this survey, include those in the following districts: Boston, Brockton, Cambridge, Chelsea, Chicopee, Essex Agricultural, Everett, Fall River, Fitchburg, Gateway Regional, Gill-Montague, Greater Lawrence, Greater Lowell, Greater New Bedford, Greenfield, Holyoke, Lawrence, Lowell, Lynn, Malden, New Bedford, New Salem, North Adams, Orange, Pittsfield, Ralph Mahar, Revere, Salem, Somerville, South Middleboro, Southbridge, Springfield, Ware, Wareham, Whittier Vocational, and Worcester.

Further analysis of respondents and their comments provides interesting context. As the table below indicates, 214 of the 340 respondents who answered “no” in the previous table are already teaching in high need school districts, by the AET definition. Of those teaching in non-high-need districts, three-quarters say that requiring AET recipients to teach in high-need districts would not change their choices.

District type	If AET were only available to high need districts, would this have affected where you applied?	Frequency	Percent
High-Need	No	214	77.8
	Maybe	31	11.3
	Yes	30	10.9
Not High-Need	No	107	76.4
	Maybe	22	15.7
	Yes	11	7.9

Of those who indicated that high-need criteria would not affect their choice of district and chose to offer comments, the most commonly stated reason was that they made the decision to teach in an urban school for reasons other than AET. Thirty-nine people made this statement, although five of them commented that the AET has helped retain them in their urban schools.

The second-most common comment was that the teacher did not know about AET when choosing a school. Of the fifteen people making this statement, one said that AET has helped retain her in the urban school where she teaches.

Other comments offered by people who said that high-need criteria would not affect their district choice included: a desire to stay in their current schools (4), the money is too small to make a difference (4), limited opportunities in their area meant that they had little choice about where to teach (3), AET should be available to all teachers, regardless of location (3), and the respondent would not want to teach in a high-poverty school regardless of salary and benefits (2).

Of the people who responded “maybe” to this question, eight said that they chose to teach in a high need district independently of AET, although one noted that AET reinforces this decision. Two said that they took AET into consideration when deciding to leave a high-poverty school system, but that other factors outweighed the AET incentive and they chose to leave. One said that she didn’t know about AET at the time of application, but that the program may affect retention.

Of those who responded “yes” to this question, six gave examples of the AET affecting their decision to take jobs in or remain in high need areas. One said that she already teaches in a high-need area. She rated AET as “not significant” in her decision to become a teacher, and did not find out about the program until her first year of teaching.

Participants' Suggestions on Incentives for High Need Districts

We asked participants to indicate what they believed might be an effective financial incentive for attracting/recruiting teachers to high-need school districts. Nearly 90% of the respondents indicated that the amount of reimbursement needed to be increased for the incentive to work. A reimbursement of \$3,000 per year would be seen as an effective incentive by over half (52%) of the respondents.

Minimum reimbursement necessary for effective incentive	Frequency	Percent
Current amount is sufficient	53	12.5
\$2000/year	60	14.2
\$3000/year	108	25.5
\$4000/year	49	11.6
\$5000/year	106	25.0
Other Amount	48	11.3
Total	424	100.0

Many teachers offered comments supplementing their answers to this question. They often spoke of the grant's effects on their personal decision to stay in teaching and the relationship of the size of the grant to the size of the loan. While one teacher said that she would hate to see teaching become a money-driven profession, most respondents spoke of the need to pay in order to attract and retain talented teachers. Of those who responded that \$5,000 per year would be needed to serve as an incentive, three qualified this statement by saying that even more may be needed, and one said the reimbursement should be tax-free.

HOW SATISFIED ARE PARTICIPANTS WITH THE PROCESS, AND HOW COULD IT BE IMPROVED?

Overall Satisfaction with DOE’s Administration of AET

We asked AET participants to rate their satisfaction with DOE's administration of the AET loan forgiveness program. The following table illustrates the results.

Rating	Frequency	Percent
Very satisfied	142	32.6
Satisfied	187	43.0
Neutral	59	13.6
Somewhat unsatisfied	42	9.7
Very unsatisfied	5	1.1
Total	435	100.0

Overall satisfaction levels are fairly high, with 75.6% of the participants saying that they were satisfied or very satisfied. The mean rating (on a scale of 1-5, with 1 being “very unsatisfied” and 5 being “very satisfied”) is 3.96. However, one-quarter of respondents were either neutral or unsatisfied, indicating that there is room for improvement.

Of the people who were very satisfied with DOE’s administration of the program, 44 offered comments indicating that they were grateful for the funds received and found them a welcome bonus from the state. Thirteen said that DOE has been very helpful in answering their questions, and eleven said that the application was easy and well-organized. One wished for a longer eligibility period, and one believed that more money would serve as a better attractor for excellent teachers.

Of the people who were satisfied with DOE’s administration of the program, twenty offered comments indicating that they were grateful for the funds received. Twelve said that DOE was helpful and efficient in processing their applications. Eleven people reported difficulties with DOE’s processing of their applications, and eleven said that more money should be offered through the program. Eight said that the application process was easy, and two said it was not. Two said that the program needed to be publicized more, and two reiterated the comments they had made in the previous question about the difficulty of getting through to DOE staff. One person said that the award should not be taxable, one said that reapplication should not be necessary, and one said that she didn’t require help with the application process.

Of those who rated the DOE’s administration of the program as “neutral,” seven reported difficulties with the DOE in getting their applications processed or getting answers to their questions. Three reported difficulties with completing the application, and three said that the reimbursements should not be taxable income. Three said that the program should offer more money, and three said that eligibility should be expanded. One said that the application process was easy, and one said that she was happy to get the money. One said that the program should be publicized more, and one said that reapplication should not be necessary.

Of those who were somewhat dissatisfied with DOE’s administration of the program, nineteen cited problems with communication and/or the processing of their applications. Seven said that more money should be offered through the program, and six said that eligibility should be expanded. Five said that the reimbursements should be tax free, and two said that reapplication should not be necessary. One said that more publicity is needed, and one said that the award was worth the inconveniences of application.

Four of the teachers who were very unsatisfied with DOE’s administration of the program offered comments. Two cited difficulties with getting reliable information about the program from DOE, one said that communication was terrible and her check was delayed for months, and one said that the low sum of money offered is an insult. The following table summarizes the comments regarding the DOE’s administration of the AET program.

Comment:	RATING:					Total
	Very Satisfied	Satisfied	Neutral	Somewhat Unsatisfied	Very Unsatisfied	
Grateful for money	44	20	1	1		66
Problems with DOE efficiency or communication		13	7	19	3	42
More money/expanded eligibility	2	11	6	13	1	33
DOE is helpful	13	12				25
Easy application	11	8	1			20
Award shouldn’t be taxed		1	3	5		9
Difficulty with application		2	3			5
Need more publicity		2	1	1		4
Reapplication should not be necessary		1	1	2		4

The AET Application Process

In the past year, DOE moved from a paper application to an on-line process. We asked each participant to indicate his/her preferred method for applying to the AET program. The following table illustrates a mix of responses, but the fact that about three-quarters of respondents reported that they either prefer the internet or that either system is fine supports the current move toward streamlining the process and keeping the online system in place.

Application Method	Frequency	Percent
Prefer Internet	153	35.2
Prefer Paper	115	26.4
Either system is fine	167	38.4
Total	435	100.0

Summary of Comments Regarding the Application Process. The following table summarizes respondents' comments regarding internet versus paper applications.

Comment	Prefer Internet	Prefer Paper	Either is fine	Total
Appreciate speed, ease, convenience	92			92
Difficult to have to use both paper and Internet	15	15	14	44
Technical difficulties with online applications		33	8	41
Internet not secure/can't be sure information reaches DOE		16		16
Paper applications easier to complete		15		15
Lack access to Internet at home		11		11
Prefer hard copies		7		7
Dislike/have trouble using Internet		7		7
Not all teachers have access to the Internet		3	4	7
Either is fine, but prefer paper			3	3
Either is fine, but prefer Internet			2	2
Didn't know Internet was required this year	1			1
Paper applications have gotten lost			1	1
Application process needs more work			1	1
Difficulties with both methods			1	1
Would be helpful to get responses through regular mail			1	1
Would be helpful if application did not require resubmission of paperwork.			1	1

It is important to consider participants' suggestions for improving the current system so that it is more efficient for everyone involved. The issue of access to internet-ready computers also deserves some consideration because some teachers do not have this access at home.

Participants’ Ratings of DOE Assistance During the Application Process. We asked each participant to rate their satisfaction with DOE's assistance to them during the application process.

Rating	Frequency	Percent
Very good	143	32.8
Good	144	33.0
Satisfactory	104	23.9
Poor	36	8.3
Very poor	9	2.1
Total	436	100.0

Of the people who rated the DOE’s assistance “very good,” 42 offered comments praising the helpfulness and responsiveness of the staff, with three respondents offering examples of proactive assistance such as electronic reminders or advice about mistakes in their applications. Seven people offered qualifying comments to their “very good” rating – two said that phone contact has been difficult but that staff were helpful by e-mail, two said that this year’s assistance was much better than last year’s, and one said that last year’s was better than this year’s. One said that the process should be made more user-friendly for repeat applicants, and one said that a confirmation that all items have been received by the deadline would be helpful.

Of the people who rated the DOE’s assistance as “good,” 11 offered qualifications for their comment, with seven of them remarking on the difficulty of getting someone over the phone. Ten offered comments praising the helpfulness and responsiveness of the staff. Two said that they found the electronic applications difficult, and two offered suggestions for improving the process: one said that returning applicants should be provided with computer-generated sheets with their information already filled out, to be changed only when necessary, and one said that an e-mail reminder about re-application would be helpful.

Of the people who rated the DOE’s assistance as “satisfactory,” 16 commented that it was difficult to get through to the right person to have questions answered. Nine spoke of disorganization at DOE that resulted in lost materials, incorrect records, or incorrect information. Five reported difficulties that they have had with the application form, and four said that some people at the DOE have been helpful but that they have had problems as well. One person said that the assistance was good, one reported not needing any assistance, and one suggested that the DOE keep in touch with participants’ schools so as to facilitate reapplication for funds.

The following table summarizes the comments.

Comments Regarding Assistance from DOE	RATINGS					Total
	Very Good	Good	Satisfactory	Poor	Very Poor	
Helpful and responsive staff	42	10	1			53
Phone contact difficult	2	7	18	13	3	43
Disorganization/Poor communication			10	8	4	22
Difficulty with application		2	5	2		9
Last year better	1			5		6
This year better	2			1		3
Make it easier to reapply	1	1		1		3

Waiting Periods (Confirmation of AET Eligibility and Loan Payment). We asked respondents about the time period between when they applied for AET and when they received confirmation regarding their eligibility to receive payments. The following table shows that approximately 72% of the respondents received confirmation in approximately two months or less.

Waited for confirmation	Frequency	Percent
About two months	245	57.1
About one month	66	15.4
Less than one month	9	2.1
Other	109	25.4
Total	429	100.0

Of those who responded “other,” the most common length of time reported was three months (22 respondents), closely followed by four months (21 respondents). Nine respondents reported waiting five months, three waited six months, and one person waited eight months.

Twenty-seven respondents could not remember how long they waited between applying and receiving confirmation. Twelve said that they waited more than two months, without giving a specific length of time. Twelve said that the wait period varied from year to year.

The wait between confirmation of eligibility and receipt of payments was longer for many participants, as the following table indicates.

Waited for payment:	Number
Less than one month	5
One month	19
Two months	147
Three months	67
Four months	57
Five months	33
Six months	13
Eight months	2
Nine months	3
One year	2
<i>Other:</i>	
Can't remember	20
More than two months	12
Varied each year	10
Never received confirmation	1

The following table illustrates when payments were received, as reported by survey respondents.

Month received payment	Frequency	Percent
January	1	0.2
February	3	0.7
March	2	0.5
April	1	0.2
May	1	0.2
June	16	3.8
July	48	11.5
August	316	75.8
September	17	4.1
October	7	1.7
November	4	1.0
December	1	0.2
Total	417	100.0

While the majority of the respondents received prompt payment (by July or August), the number of applicants who had longer waiting periods warrants some attention.

Ineligibility for AET

If participants were ever turned down for AET reimbursements, we asked them to share reasons that they were ineligible (it should be noted that all of our respondents received funding at least one year; our survey universe only encompassed AET recipients).

The most common reason that applicants gave for being turned down for AET funding was that they did not teach in a high need district (11). Second-most common was that there was an

excess of applicants in the year that they applied (9). One man stated that the year that he was turned down, his wife received funds even though she had lower grades than he did. He was told that awards were made at random from among all of the applicants who met the minimum standards set by the DOE. He believed that awards should be made on the basis of undergraduate grade rankings. The following table summarizes all of the comments from the respondents.

Reason for Ineligibility	Number
Not teaching in high-need district	11
Excess of applicants	9
Missed application deadline/difficulty submitting materials	6
Change in professional status	5
Change in loan status	3
Mistakes by DOE	3
Can't remember/not told	3
Unaware that reapplication was necessary	2
Already received maximum four years	1
College does not recognize honors students	1

Respondent Suggestions Regarding DOE's Administration of AET

Respondents had the following suggestions regarding DOE's administration of the AET program. Details follow the summary table below.

Comment	Number
More publicity needed	97
Changes to organization	14
More timely notification	9
Better communication	9
Changes to applications	6
Streamlined reapplication	5

Publicity. By far the most common suggestion for DOE concerning their role in the administration of the program was to increase publicity, cited by 97 people. Many said that they found out about the program by chance, and that many others who qualify are unaware of the opportunity.

Organization/Implementation. Fourteen had comments or suggestions on the organization of the program or its implementation process. These included paying the money directly to the lender (3), taking out taxes before sending the money (2), increasing contact with participants (1), better organization (1), a more timely distribution of funds (1), more people to assist with the program (1), sending out the 1099 income statement in time for people to complete their taxes (1), using schools as a means for informing people about the program (1), requiring a recommendation from an applicant's principal (1), using more realistic evaluation methods (1), and having fewer people involved in the execution of loan reimbursements (1).

Communication. Nine people said that notification to applicants of what is needed and reminders to re-applicants that it is time to re-apply should be more timely. Nine people said that DOE’s communication with applicants needs to be improved in general.

Application Methods. Six people commented on application methods, with four saying the process should be easier, one saying that people should be able to apply by either paper or the Internet, and one saying that all paperwork should be done on line. Five said that the re-application process should be streamlined.

Respondent Suggestions for Improving the Program’s Effectiveness at Retention

Respondents had the following suggestions regarding using AET to retain teachers. Details follow in the summary table below.

Comment:	Number
<i>Money issues:</i>	
Increase level of funding/number of years offered	115
Expand eligibility	28
Don’t tax reimbursement	18
Vary reimbursement rates	16
Narrow eligibility	6
Award money in a lump sum	1
<i>Recruitment and Retention:</i>	
Other incentives more important	70
Reimbursement not part of decision to become a teacher	12
Concern that people shouldn’t enter teaching for money	4
AET not used for recruitment	2
AET not effective for retention	1
<i>Other comments:</i>	
Praise for program/feel appreciated	24
Problems with DOE hinder recruitment/retention	9
Opposition to MINT	8

Money Issues. Many of the comments that AET participants offered involved changes to the funding. The most common response, offered by 115 participants, was to increase the amount of funding offered per year and/or the length of time that a person can receive funding. Twenty-eight believed that eligibility should be expanded, to teachers outside of low-income districts (13), to more teachers generally (9), to those who move to private schools or administration, or teach less than full-time (4), and to those who are not actively paying off their loans (2).

Eighteen people thought that the reimbursements should not be taxable income. Sixteen people thought that reimbursement rates should be varied, by the amount owed on the loan (8), by the level of need in the district (3), by length of time teaching (2), by educational attainment (2), or by area of certification (1).

Six thought that program eligibility should be narrowed, to high need schools (2), to more closely screened teachers (2) to first-year teachers (1), and to teachers with at least three years of service (1). One person thought that the money should be awarded in a lump sum, to forestall additional interest charges.

AET as an Incentive. Seventy people said that other incentives besides AET were more important in recruiting and retaining teachers. Twenty-two people said that higher salaries or bonuses were needed. Twenty believed that other forms of support, such as professional development, smaller classes, and more materials, were more important. Fourteen offered general comments about recruitment and retention, and nine thought that the state should pay for the required master's degree. Five thought that the state should do more to promote teaching.

Nineteen people commented on the Attracting Excellence program as an incentive to enter or remain in teaching. Twelve said that the reimbursement was not part of their motivation to become a teacher. Four expressed concern regarding people entering the teaching profession for additional money rather than for the love of teaching. Two said that the AET was not used as a recruitment tool when they were hired, and one questioned AET's effectiveness at retaining teachers.

Other Comments. Twenty-four respondents offered general praise for the AET program, with three of them saying that the program helps to convince them that the state values them as teachers. Nine people said that certification rules and other regulations combined with the difficulty of contacting DOE make becoming and staying a teacher needlessly difficult. Eight people offered comments critical of the MINT/signing bonus program.

FINDINGS

Who are the AET participants?

- Respondents are 80% female, 90% white/non-Hispanic, 75% age 35 or younger. One-third have taught for six years or more.
- About 30% of respondents report that their primary undergraduate major was education. (Of these, half are elementary teachers and another 23% are special education teachers.) About 29% of respondents were social science or English majors. Less than 10% majored in either science or mathematics.
- Three-quarters are certified in elementary school, English, history/social sciences, or middle school, none of which are particular shortage areas. Shortage areas represented include special education (22%), sciences (8%), and mathematics (5%).
- About 70% have \$20,000 or less in outstanding student loans; 13% have more than \$30,000.
- Respondents received an average of \$1,625 in 2001.

To what extent was AET an incentive for their entry into teaching?

- AET does not appear to play a significant role in the recruitment of new teachers. 97.7% of respondents would have entered the teaching profession without the AET incentive.
- Districts and teacher preparation institutions do not appear to be using AET to recruit teachers. Only 2 of 445 respondents said that they learned about AET because a district used it as a recruiting tool. 87% of respondents did not learn about AET until after they began teaching.
- AET may have some impact as a retention tool. 45% said that AET payments had increased their satisfaction with teaching as a career, and 16% said that they are likely to teach more years as a result of AET. Participants made numerous comments about AET boosting morale and making them feel valued.

Is AET attracting teachers to high-need districts? How could this targeting be improved?

- Approximately two-thirds of respondents are currently teaching in “high-need” schools (29% or more free/reduced lunch). However, since 87% of respondents did not learn about AET before they began teaching, AET does not currently appear to have much impact on where teachers initially begin teaching. Five respondents in high-need districts commented that AET had helped retain them, after they began teaching there for other reasons.
- 10% of participants, and 8% of those not already teaching in a high-need district, indicated that limiting reimbursement to teachers in high need systems would have affected their decision about where to teach. 78% said it would not have affected their decisions (12% were unsure).
- It is interesting to note that the definitions of “high-need district” are different in AET (29% free/reduced lunch) and the MINT program (a selected list of districts with much higher free/reduced lunch populations).
- When asked what was the minimum yearly payment that would serve as an effective incentive to teach in high-need districts, nearly 90% said the incentive needed to be increased. An annual payment of \$3,000 would be seen as an effective incentive by 52% of respondents.

How satisfied are participants with the process, and how could it be improved?

- Three-quarters said they were satisfied or very satisfied with the overall administration of the AET program by DOE. 66 respondents volunteered comments about their gratitude for the program.
- 11% were somewhat or very unsatisfied, and 65 respondents (15%) volunteered comments about difficulties with communication and organization.
- Most frequent suggestions for improvement were: (1) increase the annual funding limit and/or number of years paid, (2) increase publicity for the AET program, (3) expand eligibility to more teachers, (4) don't reduce the reimbursement by taxing it, (5) vary reimbursement according to loan amount, district poverty, or some other factor, and (6) a variety of organizational and communication improvements.

RECOMMENDATIONS

Greatly enhance program publicity and market the teaching profession. Currently, it is difficult to know whether the AET payments provide adequate incentive to recruit new teachers, because most recipients didn't learn about the program until after they began teaching. Publicity efforts should target potential teachers early enough in their careers (at the college/university level) so that the reimbursement program has the opportunity to play an “attracting” role. As part of publicity efforts, information regarding AET should be disseminated to school districts, specifically to personnel and/or administrative leaders responsible for hiring teachers.

Consider targeting reimbursements toward shortage areas. Depending on AET program goals and how the Department wants to define or redefine these goals, it may be appropriate to target scarce public resources toward the following areas:

- teachers in high-need systems,
- teachers in high-need subject areas such as math and science, and/or
- minority teachers.

Consider raising the reimbursement limits for a more targeted population of recipients.

About 45% of respondents are carrying between \$10,000 and \$20,000 in loans. It may be worth examining the reimbursement structure to see if more subsidies (either through increased payments or lengthening of the program) can be provided for these teachers. DOE could more narrowly target the types of teachers they want to recruit (e.g., high-need districts, math, science, special education, languages), and then offer higher reimbursement amounts (e.g., \$3,000 per year) to attract those types.

Examine AET's definition of “high need” district. While 29% free/reduced lunch districts certainly face significant challenges, most definitions of the neediest districts—those worthy of special, targeted teacher incentives—would be higher, perhaps at a 40% threshold.

Continue to refine the application procedures and consider a system that makes the reapplication process easier. It is important to consider participants' suggestions for improving the current system so that it is more efficient for everyone involved. The issue of access to internet-ready computers also deserves some consideration because some teachers do not have this access at home. It should also be noted that some Internet-savvy people had difficulty with the online application.

CASE STUDY SEMINARS

HISTORY

Case Study Seminars for new teachers were developed to offer support, guidance, instructional techniques, and feedback in an informal setting to beginning teachers throughout the commonwealth. Each session addresses a different focus area designed to meet the needs of new teachers in Massachusetts.

Vendors for the Case Study Seminars are selected by the Department of Education through a competitive process. For the 2001-2002 school year, seven vendors of the nine who applied were selected to conduct Case Study Seminars, and five vendors enrolled enough teachers to complete at least one Case Study session. The completing vendors included the Auburn Public Schools (1 session), Danvers Public Schools (2 sessions), Endicott College (Beverly) (1 session), Massachusetts Teachers Association (12 sessions at various sites¹⁹), and the University of Massachusetts Amherst (1 session).

Seminars are held monthly, for approximately three hours in the afternoon or evening, and are conducted by experienced teacher-facilitators chosen by each regional site. The Department of Education funding pays for the facilitators and provides stipends for refreshments.

METHODOLOGY

We distributed surveys (*Appendix X: Case Study Seminars Survey*) at four of the Case Study seminar sites (Auburn Public Schools, Endicott College, Danvers Public Schools, and MTA-Springfield), and invited participants to fill them out immediately or mail them to us later. We received 61 responses (*Appendix XI: Case Study Seminars Survey Respondents*):

	Endicott College	Auburn	Danvers	Springfield
Surveys returned	34	15	8	4

GOALS OF THIS STUDY

The Department of Education sponsored Case Study Seminars as a retention strategy to help combat and reduce increasing attrition rates among beginning teachers. The major goals of this study are to answer the following questions:

- **What are the incentives that encourage new teachers to participate in the Case Study Seminars?**
- **How satisfied are the participants with the program and how can it be improved?**
- **Does the program increase the confidence and satisfaction level of new teachers in the profession?**
- **Does the program help to reinforce mentoring initiatives in the state?**

¹⁹ MTA Case Study seminars were held in Brockton, Cambridge, Hingham, Marlborough, Martha's Vineyard, New Bedford, Norwood, Quincy, Pittsfield, Springfield, Westfield, and Winchester.

WHAT ARE THE INCENTIVES THAT ENCOURAGE NEW TEACHERS TO PARTICIPATE IN THE CASE STUDY SEMINARS?

Who participates in the Case Study Seminars?

Years of Experience. A plurality of respondents (38%) are in their first year of teaching. Another 26% are in their second year, and 30% have been teaching for longer than two years (the responses ranged from 3 to 25 years). Six percent of respondents did not respond to the question.

Education levels. Although the Case Study Seminars target new teachers, many participants have already attained a master's degree. Of those responding, 49% percent have a master's or CAGS degree, and 48% have a bachelor's degree. Three percent did not respond.

Certification Area. The most common certification area was in elementary school, followed by science and special education. Eleven respondents reported two or three areas of certification, two did not indicate their area, and one reported teaching on a waiver.

Area of Certification	Number	Percent	Valid Percent
Elementary	27	36%	36%
Science	7	9%	9%
Special Education	7	9%	9%
Foreign Language	5	7%	7%
Middle School	4	5%	5%
History/Social Science	4	5%	5%
English	2	3%	3%
Mathematics	2	3%	3%
Waiver	1	1%	1%
Other	15	15%	16%
No Response	2	3%	

Those who reported other areas of certification noted English as a Second Language (3), music (3), vocational education (2), guidance (2), communications (1), media specialist (1), speech (1), technology (1), and theater (1).

Why do new teachers participate in the Case Study Seminars?

Compensation. Eight-five percent of respondents indicated that they receive compensation for participating in the Case Study Seminars. The most common form was graduate credit for completing the course (often offered at a price, although sometimes discounted). Sixty-six percent²⁰ of those reporting that they received some form of compensation mentioned graduate credit. Thirty-six percent of those who received compensation reported earning PDPs, and 28% were offered tuition reimbursement for the course, sometimes with the condition that they attain a certain grade. Four percent mentioned the opportunity for increased salary through step increases. One commented that the food was compensation.

²⁰ Some respondents reported more than one incentive; hence, percentages do not add to 100%.

Intangible Incentives. We asked the participants who received incentives whether they would have chosen to attend the sessions had incentives not been provided. Sixteen did not respond, either because they did not receive compensation or chose not to answer the question. Of those who did respond, nearly two-thirds of respondents (64%) would continue to participate in the Case Study Seminars even without compensation. Twenty-nine percent of participants said they would not participate without incentives, sometimes commenting that they need that time to pursue PDPs and/or graduate credits in other ways. Seven percent gave mixed responses or said they were unsure.

HOW SATISFIED ARE THE PARTICIPANTS WITH THE PROGRAM AND HOW CAN IT BE IMPROVED?

Overall rating of Case Study Seminars

Sixty percent of respondents rated the Case Study Seminars as “excellent.” An additional 37% rated them as “good” or between “good” and “excellent,” and three percent rated them as “fair.” No respondents gave the Case Study Seminars a “poor” rating.

Most of the comments offered were positive. Five respondents said that the seminars were generally helpful, and a sixth cited the specific assistance with behavioral issues and stress management. Four said that the sessions were enjoyable. Three each praised the facilitators and the topics, and two said that they appreciated the time it gave them for reflection. One respondent each mentioned the knowledge gained, the feeling of not being alone, the interactions with other teachers, and the comfortable setting as reasons for enjoying the seminars. One person commented that the state needs to invest in programs such as these to support new teachers. One respondent, while generally pleased, said that some sessions could have been more practical.

Would you recommend the Case Study Seminars to other teachers?

The overwhelming majority of respondents (90%) would recommend the Case Study Seminars to other teachers, with only 7% saying “maybe” and 3% saying they would not recommend the seminars (one person left the question blank).

Many respondents offered comments on this question. Eighteen respondents each (some making both statements) said that the Case Study Seminars are a useful source of information and a valuable support to new teachers. One offered general praise for the seminars. Of the two people who would not recommend the Case Study Seminars to other teachers, one said that the sessions were too long, and one did not comment.

What about the Case Study Seminars was most valuable?

Many respondents listed elements of the seminars that were valuable to them. Most frequently mentioned were the discussions, noted by 20 respondents. This was followed by the reduced feeling of isolation (15), feelings of support (13), resources gained from instructors and

classmates (7), gaining new ideas (6), and the variety of speakers/topics (3). Session topics of particular value, each mentioned by one respondent, included the MCAS session, the special needs session, classroom management, curriculum frameworks, and time management.

What about the Case Study Seminars was least valuable?

Forty respondents (66%) had no comment to make in this area, either saying that all of the elements of the seminars were valuable or simply leaving the question blank. Among those who listed a least valuable aspect, the most common was the technology session, mentioned by nine respondents. Most of them said that the session was irrelevant to them as the technology discussed did not exist in their schools. Other least valuable aspects noted included the tendency for discussions to degenerate into gripe sessions (2), the length of time in between classes (2), and (one each) that the topics were too general, particular sessions or facilitators (MCAS, special education, professional standards, first grade literacy), too much structure, too many handouts, and difference in needs among teachers in different grade levels.

Which sessions were most valuable?

Respondents ranked sessions on classroom management and grade-level breakout sessions as the most useful seminars, with use of technology seen as the least useful. However, at most 7% of respondents ranked a session—technology—as not useful to them, and 5% or fewer of respondents ranked any of the other sessions as not useful. (One-fifth of respondents reported that their seminars did not cover accelerated students or subject-area breakouts; it may be that the survey was conducted before these sessions were offered.)

Case Study Session	Very Useful	Useful	Somewhat Useful	Not Useful	Average ²¹	Not Covered	Did Not Attend/ No response
Classroom Management	61%	28%	10%	0%	3.52	0%	2%
Grade Level Breakout Sessions	38%	28%	5%	2%	3.41	13%	15%
Special Education Issues – LD Students	48%	38%	12%	0%	3.37	3%	0%
Special Education Issues – Accelerated Students	36%	30%	12%	2%	3.27	20%	2%
Subject Breakout Sessions	30%	39%	7%	2%	3.24	20%	12%
MCAS	30%	48%	16%	0%	3.14	5%	2%
Curriculum Frameworks	25%	51%	18%	5%	2.97	0%	2%
Use of Technology	26%	28%	20%	7%	2.92	10%	9%

²¹ Average rating on a scale of 1-4, with 1=not useful and 4=very useful. Blank responses omitted.

Which types of participant activity were most valuable?

Thirty-six percent of respondents believed that participant-initiated discussion was the most valuable type of activity, while most of the remainder were nearly evenly split between directed discussion (26%) and informal social interaction (25%). Seven percent believed that both informal social interaction and participant-initiated discussion were equally important, and two percent believed that directed discussion and participant-initiated discussion were equally important.

Was the program location convenient?

The Case Study Seminars are held regionally, with meetings often held in school or college buildings in centrally located areas. Ninety-five percent of respondents said that the meeting sites were convenient for them. Only one noted that the long commute (30 miles) made the site inconvenient; the other two who noted that the sites were inconvenient did not give reasons. It is likely, however, that those who live far from the sites simply do not participate in the Case Study Seminars.

Timing/Length/Attendance

Sessions begin in either September or October, at the discretion of the provider. Of the respondents whose sessions began later in the school year, about one-quarter (9 of 35) would have preferred to meet earlier in the school year, with the remainder preferring to start later in the school year.

In an open-response question, 29 respondents stated that they believed the length and/or timing of the sessions was appropriate (most agreed with both statements). Four respondents would have preferred more sessions early in the school year, with two specifying that scheduling the classroom management session earlier in the year would have been helpful. Four thought that the sessions were too long, particularly after a full day of teaching. Two thought that the sessions were too widely spaced, and two appreciated the dinner break.

Respondents attended most of the sessions, with only four indicating that they missed more than one or two seminars.

Were the facilitators competent?

Nearly all respondents rated their facilitators as either “very competent” (78%) or “competent” (20%). Only one participant noted that a facilitator was not competent and this facilitator only directed one particular session. One person did not answer the question.

Nineteen respondents offered positive comments about their facilitators, saying that they presented information well (5), shared useful information (4), represented a good variety of styles and expertise (2), and were well-rounded (1). Four praised specific subject facilitators: MCAS (2), technology (1), and special education (1). Seven made generally positive comments.

Three respondents offered mixed assessments of their facilitators, in each case noting that they had several different ones and some were better than others. Three respondents made negative comments about their facilitators (although they did not find the facilitators incompetent), with one saying that the facilitator was not warm and friendly, one saying that it would have been helpful to have a facilitator with more experience in inner city schools, and one saying that more presentation of best practices would have been useful.

What aspects of the sessions should be preserved?

Participants most commonly mentioned (9 each) the group discussions and the variety of facilitators and topics as the aspects of the Case Study Seminars they would most like to see preserved. Other elements noted included the dinner break (7), the informal atmosphere (6), the facilitator(s) (6), the timeline (4), the makeup of the classes (3), and the free texts and resources (2). One respondent each mentioned breaking out groups by level, the length and timing of sessions, the graduate credit granted, and the MCAS session. Three respondents said that all aspects of the seminars should be preserved.

Suggestions for changes

The most common suggested change was more time on classroom management (4 respondents). Other suggestions included making sessions shorter and more frequent (3), having fewer topics discussed in more depth (3), having fewer, longer sessions (2), staying on topic (2), more small group discussion (2), discussions based around case studies (2), sharing activities (2), and more interaction (2). One respondent each mentioned doing more hands-on work, doing the special education session earlier, keeping teachers together by grade level, more attention to DOE certification, more on child psychology and learning styles, organizing the handouts into a book, allowing teachers more time to vent, less time spent overall, more relevance to state and national standards, more sharing of ideas, more reporting back after sessions, and better facilitation by some topic leaders.

Would you prefer regional or district-based Case Study Seminars?

A plurality of respondents (46%) would prefer to retain the regional Case Study Seminars, with 30% preferring that the seminars be offered at the district level, and 25% indicating no preference or leaving the question blank.

Suggested topics for future sessions

When asked to suggest other seminar topics that might be useful to first- and second-year teachers, the most common response (14 respondents) was additional information about handling classroom management and discipline issues. Dealing with the administration was the second-most common response, suggested by six respondents. Parent-teacher communication was suggested by four respondents, and sessions concerning curriculum frameworks, report cards, and school culture were suggested by three respondents each.

Suggested re-ordering of sessions

We asked respondents whether they had suggestions for re-ordering the sessions. Eight stated that they wished classroom management had come earlier in the sessions, and four said that they wished parent communication came earlier. Two each would have liked to see special education and differentiated instruction earlier in the sessions, and one said that the technology session should have been earlier. One respondent thought that seminars should begin in the summer, so that teachers have a head start in preparing themselves for their classrooms.

Additional Comments

Five teachers expressed a hope that the program would not be cut. Two thanked the Department of Education for offering it, and two said that all new teachers should be required to attend. One said that all current teachers should be required to attend, and three additional teachers offered generally positive comments.

DOES THE PROGRAM INCREASE THE CONFIDENCE AND SATISFACTION LEVEL OF NEW TEACHERS IN THE PROFESSION?

How do you rate yourself as a new teacher?

Nearly all of the participants in the Case Study Seminars rated themselves as excellent or good teachers.

Excellent	Good	Fair	Poor	No Response
26%	48%	8%	5%	2%

In addition, five respondents (8%) rated themselves as between fair and good, and two respondents (3%) rated themselves between good and excellent.

Have Case Study seminars affected your confidence and satisfaction level with teaching?

Virtually all respondents said that the Case Study Seminars improved their confidence and satisfaction level with teaching, with 28% saying that the seminars made their confidence and satisfaction level much better, and 66% saying that their confidence and satisfaction level were better. Only four respondents were unaffected.

Participants who commented on this section most often stated that they felt less isolated as a result of the seminars (8 respondents). Three respondents cited the reinforcement and support they believe came from the seminars, and two each mentioned the ideas they gained and their better understanding of new innovations/current teaching practice.

How have the seminars affected your pedagogical (instruction) skills? Your classroom management skills?

Respondents were slightly more likely to believe they had improved their pedagogical skills than their classroom management skills through the Case Study Seminars. However, the majority of respondents believed that they improved both.

	Much Better	Better	Unaffected	Somewhat Worse	Much Worse	No Response
Pedagogical Skills	13%	75%	10%	0%	0%	2%
Classroom Management Skills	8%	74%	15%	0%	0%	3%

Seven teachers mentioned that they have learned useful tools for either pedagogy or classroom management, and three teachers cited the new ideas they have gained from the seminars as helping their teaching practice.

DOES THE PROGRAM HELP TO REINFORCE MENTORING INITIATIVES IN THE STATE?

What type of mentoring program exists at your district and school?

Eighty-seven percent of respondents reported that their district has an induction program, while 10% reported it does not and 3% did not respond. Sixty-nine percent of respondents indicated that their school has a significant induction program. Fifteen percent have a minimal induction program, and 13% have no induction program at their school.

How would you rate the quality of mentor/induction support?

Teachers had varied reactions to the quality of the mentoring/induction support at their school, with a majority rating it as excellent or good, but over 40% rating their program as fair or poor. While 13% of respondents reported not having an induction program, five of these respondents rated the program their school has as fair or poor, leaving a smaller percent reporting no induction program in response to this question.

	Excellent	Good	Fair	Poor	No Response/No Induction Program
Quality of mentor support	22%	32%	21%	21%	5%

How are the Case Study Seminars linked with the mentoring and induction programs in your district?

Seventy-seven percent of respondents either left this question blank or noted that there was no link between the Case Study seminars and district-based induction programs. Some respondents noted that topics similar to the Case Study Seminars were discussed by mentors (6), that the two programs support each other (3), or that their mentors recommended that they take the Case Study seminars (2). One respondent each noted that the Case Study seminars were taught by a teacher from their school, that they discussed induction-related issues with their Case Study facilitator, and that the programs were linked via the district's certification program.

How could your district do a better job of mentoring teachers?

While many participants had suggestions to offer their districts, the most frequent comment (8 respondents) said that their district is already doing a good job of mentoring. Of the suggestions for change, the two most frequent (5 respondents each) were that districts need to pair mentors and new teachers up by subject area, and that districts need to provide more meeting time for mentors and new teachers.

Four respondents said that districts need to better organize and structure their mentoring programs, and three each said that districts need to make sure that mentoring programs are implemented as designed, and follow up with new teachers to offer support. Two respondents

suggested mentor training, and two wanted to see all new teachers have mentors. One respondent each suggested beginning a mentoring program, not using new teachers as dumping grounds for problem students, improved orientation, using better facilitators, offering incentives to new teachers, allowing teachers with 1-3 years of experience to participate in mentoring programs, and allowing teachers to discuss the problems they are having with mentors.

How could the Department of Education do a better job of mentoring and supporting new teachers?

Four respondents believe that the Department of Education can mentor and support new teachers through programs such as the Case Study seminars, perhaps expanded to serve more teachers. Two respondents said that DOE should provide more funding for district induction programs, and two said that DOE needs to communicate better with the districts. Respondents also mentioned ways in which the Department of Education could supervise/support district training programs: requiring mentors to have more accountability (2), make mentoring programs mandatory/holding districts accountable for providing them (2), making the administration accountable for supporting teachers (1), evaluate mentoring programs and give feedback (1), allow mentees to evaluate mentors (1), change school politics around hiring mentors (1). Other suggestions, mentioned by one respondent each, included offering direct support to new teachers, providing a single contact person for new teachers in each district, visiting districts and schools, an e-mail forum with experienced teachers, offering stipends to retired master teachers in exchange for mentoring, paying mentors, offering mentor training, and making it easier for mid-career professionals to enter the classroom. One said that the DOE already does a good job at supporting new teachers.

FINDINGS:

What are the incentives that encourage new teachers to participate in the Case Study seminars?

- 85% of respondents received compensation for participating in Case Study seminars. This included graduate credit (66% of those reporting compensation reporting), PDPs (36% reporting), tuition reimbursement for the seminars (28% reporting), and potential for a step raise on the pay scale (4% reporting).
- 64% of respondents would continue to participate without compensation, because of the intrinsic rewards of the seminars.

How satisfied are the participants with the program and how can it be improved?

- 97% of respondents rated the Case Study seminars as “excellent” or “good.”
- 90% would recommend the Case Study seminars to other teachers.
- 98% rated their Case Study facilitator as “very competent” or “competent.”
- 95% said that meeting locations were convenient for them.
- Suggested improvements included more time on classroom management, shorter and more frequent meetings, and fewer topics discussed in more depth.
- Suggested additional topics included additional information on classroom management, dealing with the administration, and communicating with parents.

Does the program increase the confidence and satisfaction level of new teachers in the profession?

- 94% of respondents indicated that the Case Study seminars have improved their confidence and satisfaction in teaching.
- 88% said that the Case Study seminars had improved their pedagogical skills.
- 82% said that the Case Study seminars had improved their classroom management skills.

Does the program help to reinforce mentoring initiatives in the state?

- 77% of respondents see no connection between the Case Study seminars and mentoring/induction programs in their districts.
- Of those who noted connections, the most frequent responses were that topics similar to the Case Study seminars were discussed by mentors, that the two programs support each other, and their mentors recommended that they take the Case Study seminars.

MENTOR TRAINING

BACKGROUND

Summer Mentor Training Institutes (SMTI) have been part of a broader effort by the Massachusetts Department of Education to develop district mentorship programs to support and retain new teachers and to improve classroom practices. All school districts are required by DOE to have induction programs for incoming teachers, and the SMTI were developed by DOE and provided by various approved vendors to train groups of experienced teachers and administrators in the skills necessary to fulfill this requirement. District teams also collaborated to design a beginning teacher support implementation plan. Over 70 districts participated in the training, with 800 educators becoming trained mentors in the summer of 2000, and 666 in the summer of 2001. The SMTI Program cost in 2001 was \$262,000.

In 2002, DOE discontinued the Summer Mentor Training Institutes in favor of “Train the Trainer” institutes that focus on training mentor trainers who can go back to their districts and train mentors in the context of the local induction program. DOE also conducted its own study of teacher induction programs in May of 2002. Therefore, rather than an evaluation of the SMTI program, DOE asked CEP to survey Massachusetts mentor coordinators on a specific set of questions to add to the research they had already assembled.

GOALS OF THIS STUDY

The goals of this study were to survey mentor coordinators in Massachusetts school districts about their district mentorship programs and their perceptions of how their programs had interfaced with the DOE’s Summer Mentor Training Institutes. Specifically, the goals of the study were to answer the following questions:

- **What is the degree of implementation of district teacher induction programs?**
- **What components are included in these programs?**
- **Are mentors required to be trained? How are mentors trained?**
- **To what degree did DOE’s Summer Mentor Training Institutes support local district induction programs?**
- **Are district induction programs and mentoring activities beneficial to new and/or experienced teachers, and if so, how?**

METHODOLOGY

In conducting this research, we surveyed the mentor coordinators in 284 school districts, by electronic or U.S. mail (*Appendix XII: Mentor Coordinator Survey*). The survey included open-ended and multiple choice questions. We began by sending out surveys electronically and conducted follow-up surveys of those who had not yet responded. We received 116 responses, for a return rate of 41% (*Appendix XIII: Districts Responding to the Mentor Coordinator Survey*).

WHAT IS THE DEGREE OF IMPLEMENTATION OF DISTRICT TEACHER INDUCTION PROGRAMS?

Eighty percent of survey respondents reported that they had significant induction programs in place in their school districts, with strong articulation between mentoring and more comprehensive induction programs. These programs also appear to be standardized throughout the district.

What Type of Induction Program Exists at the School?	Significant Induction Program	Minimal Induction Program	Induction Program Under Development	No Induction Program	Total
Frequency	93	18	4	1	116
Percent	80%	16%	3%	1%	100%

Districts that reported significant induction programs described different program elements. One noted that theirs is a partnership between their teachers' association and the school department, with annual evaluations based on teacher feedback. Another described the in-house graduate course programs for new teachers and stipends for mentor coordinators, as well as an ongoing mentor training course, all supported by grants. One district described working with Teachers 21 to develop a mentoring and peer assistance program that has been in place for three years. One district described the three-day orientation period that all teachers who are new to the district attend, and the connection of each new teacher with a mentor as well as their exemption from homeroom and administrative duties.

Sixteen percent of the respondents stated that their district programs were minimal induction programs: mentoring programs only, at the school level and not linked to more comprehensive induction programs. Districts' descriptions of their minimal mentoring programs included comments that they are beginning and developing the process, that it happens at the building level but not across the district, and that funding limitations have prevented them from developing the program as fully as they would like.

Three percent of the respondents stated that their induction programs were under development, and only one respondent stated that the district had no induction program. Reasons for this ranged from lack of release time (requiring the district to rely more heavily on volunteers), lack of funding, lack of leadership/coordination, and union contract issues.

How Do Respondents Rate the Quality of Their District's Induction Program?

Most respondents were pleased with their district's induction program, with 80% rating the program as excellent or good and none rating it as poor.

Quality	Excellent	Good	Satisfactory	Poor	No answer
Number	29	64	23	0	0
Percent	25%	55%	20%	0%	0%

Average: 3.06 on a 1-4 scale

WHAT COMPONENTS ARE INCLUDED IN THESE PROGRAMS?

Component	Yes	No/No answer	Percent Yes
Orientation	113	3	97%
Mentoring	108	8	93%
Mentor Workshops	86	30	74%
Beginning Teacher Workshops	85	31	73%
Support Team	75	41	65%
Release Time	67	49	48%
Other Components	43	73	37%

Nearly all induction programs described by respondents have an orientation component. The orientation programs vary by (a) when they are offered (b) how they are offered, (c) who is involved and (d) what is actually covered. Orientation programs are either offered during the summer or at the beginning of the year. These programs range from a half-day orientation programs to those that are 2-3 days in length. Some programs are district wide programs while others are school level programs. Most programs include meetings with administrators, directors and personnel officials. Common content covered includes contractual requirements, evaluation cycle, tour of facilities, district policies, parent communication and relationships, payroll information, and explanation of benefits. Programs that are longer than a day build in time for mentor-protégé meetings, more school orientation and a “moving-in” day.

Most districts also reported mentoring as part of their induction program, with mentors assigned to first-year teachers and teachers new to the district. Mentors are usually assigned by school, grade level and subject area, but in some cases there is a voluntary match. Some mentors receive a stipend, while others receive in-service credit which can be counted towards salary advancement. Generally there is 1:1 mentor-protégé ratio, and the ratio is usually no higher than 4:1. Mentor activities that districts described include:

- Mentor training, either in a year-long program or during the summer;
- Mentors must submit an activity log or journals;
- Observations of each other’s classrooms;
- Specific dates assigned for meetings;
- Both formal and informal meetings;
- Required meetings once every two weeks; and
- Regular meetings with principals

Seventy-four percent of the responding districts offer mentor teacher workshops. These programs range from the DOE-sponsored Summer Mentor Training Institutes to workshops outside school to in-school programs. Some of the types of workshops offered include:

- Mentor workshops offered through Teachers 21;
- Various in-district or school workshop models (summer workshops, support meetings for mentors throughout the academic year, annual refresher workshop);
- For-credit mentor training;
- Professional development workshops offered at the University of Massachusetts (Dartmouth and Lowell), Bridgewater State College, and DOE;

- A graduate level course, “Teaching in a Standards-Based Classroom;” and
- An in-district workshop using the “Teacher to Teacher” book

Seventy-three percent of the districts responding to the survey offer beginning teacher workshops. These programs range from the DOE-sponsored Case Study Seminars to workshops outside school to in-district or in-school programs. Types of workshops include:

- The DOE/Massachusetts Teachers’ Association Case Study Seminars,
- The Success for All program,
- Three-day in-school workshops offered during the summer focused on classroom management, parent conferences/report cards, etc.,
- The Writing Across the Curriculum program,
- A 10-month Beginning Teacher Institute, focused on instructional strategies, review of curriculum framework, lesson plan development, assessment, and behavior management;
- Monthly after-school workshops;
- A 3-credit graduate course from Lesley University, taught by two mentor coordinators;
- The Understanding Learning course;
- The Exploring Multicultural Initiatives program;
- A Beginning Teacher Workshop offered by Teachers 21; and
- The New Teacher Induction program sponsored by the Massachusetts Teachers’ Association.

Sixty-five percent of the responding districts use support teams for new teachers, most of which were described as informal. Principals and department heads were the primary members of those teams, with some schools having ad hoc committees.

Forty-eight percent of the districts reported a release time component. This varies among the districts, with some building in release time for the mentoring program while others allowing release time for peer observations only. Other schools do not officially offer release time, but arrangements are made as needed with the principal. In many districts, the mentor-protégé meetings were held during common planning times during school or after school. Other induction program components reported included social gatherings (district ice cream socials, PTO sponsored receptions, final banquets), peer observations, and a survey/evaluation process.

ARE MENTORS REQUIRED TO BE TRAINED? HOW ARE MENTORS TRAINED?

Seventy-two percent of the mentor coordinators reported that their districts require mentor training.

District requires training	Yes	No	No answer
Frequency	84	27	5
Percent	72%	23%	4%

We asked school districts to indicate whether they trained mentors through district staff, outside consultants, the DOE, other sources, or a combination of the above. Many districts reported more than one type of training.

Type of Training	Yes	No/ No response	% Yes
Training by Outside Consultants	52	64	45%
Training by District Staff	51	65	44%
DOE-Sponsored Summer Mentor Training	48	68	41%
Other Training	12	104	10%

The distribution among the three major sources of training was fairly even, with 44% of the districts training their own mentors, 45% using outside consultants, and 41% training mentors through the DOE-sponsored Summer Mentor Training. Twelve districts reported other forms of training.

TO WHAT DEGREE DID DOE’S SUMMER MENTOR TRAINING INSTITUTES SUPPORT LOCAL DISTRICT INDUCTION PROGRAMS?

Were There Any Summer Institute-Trained Teachers Who Were Not Selected to Participate in the District’s Mentoring Program?

Fourteen percent of districts responding reported that some of the Summer Institute-trained teachers in their districts were not selected to participate in the district’s mentoring programs. There were no clear patterns or themes to the comments from the mentor coordinators regarding this issue.

Institute-trained mentors not selected to mentor	Yes	No	Don’t Know/No response
Frequency	16	61	39
Percent	14%	53%	34%

Were Respondents or their Districts Aware that the DOE-Trained Teachers Were Going to Participate in the Training Before They Attended the Training?

Thirty-nine percent of the mentor coordinators stated that they were aware prior to the DOE-sponsored summer training that teachers in their district were going to participate, while 20% stated that they were not aware that teachers in their districts would participated in the DOE-sponsored training. Forty-one percent either did not respond or were not sure of district awareness of DOE-trained teachers.

District knew in advance about participation	Yes	No	Don’t Know/No response
Frequency	45	23	48
Percent	39%	20%	41%

How Do Respondents Rate the DOE-Sponsored Summer Mentor Training?

Of those 48 districts whose teachers participated in the DOE Summer Mentoring Training, 44% rated the training as excellent, 40% rated it as good, and 16% rated the training as fair (average rating = 4.28 on a 1-5 scale). None reported the training as poor or very poor.

	Excellent	Good	Fair	Poor	Very Poor	Did not participate/ no answer
Number	22	20	8	0	0	66
Percent	19%	17%	7%	0%	0%	57%
Percent responding	44%	40%	16%	0%	0%	

Average with did not participate/no answer removed: 4.28 on a 1-5 scale

“We like the consistency provided by the DOE training,” wrote one respondent. “It is best if groups of teachers from our district are trained together, which is what happened for the first three years of the program; however, the DOE training is more economical and since there are several sites, more convenient for many teachers.” One participant who was less satisfied with the training wrote, “They are not consistent. All programs should be equal. If the DOE sponsors these programs, then all teachers should be given the same information so when they come from the training we know what info they have been given. There should be some type of agenda that covers specific topics, e.g., adult learners, observation techniques, etc.”

Do Respondents Think the DOE-Sponsored Summer Mentor Training was Beneficial to the District’s Induction Program?

Seventy-three percent of the mentor coordinators who participated in the SMTI believed that it was beneficial to their district’s induction program. Eleven percent believed it was not beneficial and 16% were unsure.

Beneficial to District Program	Yes	No	Unsure	N/A or no response
Number	46	7	10	53
Percent	40%	6%	9%	46%
Percent Responding	73%	11%	16%	

How Do Respondents Rate the Communication and Support of the Department of Education Regarding the Summer Mentor Training?

Seventy-seven percent of those who responded to the survey offered ratings regarding the support and communication of the DOE-Sponsored Summer Mentor Training. Of these who responded, 10% rated communication and support as excellent and 34% rated it as good. Thirty-five percent rated communication and support as satisfactory while the remaining 22% rated communication and support as poor or very poor.

DOE Communication and Support	Excellent	Good	Satisfactory	Poor	Very Poor	No answer
Number	9	20	31	14	5	26
Percent	8%	26%	27%	12%	4%	23%
Percent Responding	10%	34%	35%	16%	6%	

Average with did not participate/no answer removed: 3.28 on a 1-5 scale

ARE DISTRICT INDUCTION PROGRAMS AND MENTORING ACTIVITIES BENEFICIAL TO NEW AND/OR EXPERIENCED TEACHERS, AND IF SO, HOW?

Do Respondents Believe that their District’s Induction Program and Mentor Activities Benefit New Teachers? Veteran teachers?

Most of the mentor coordinators who responded to our survey believe that their district induction programs mutually benefit both new and veteran teachers. “New teachers who have mentors adapt to their schools much more smoothly and are able to find support beyond “which way to the lav?” types of concerns,” wrote one respondent. Other comments included noting that teachers with mentors show improved confidence and benefit from the positive support. Some districts noted that offering mentoring programs makes them more attractive to job applicants. These comments were sometimes based on feedback received through surveys of new teachers participating in the district’s mentoring program.

Benefit new teachers	Yes	No	Unsure	N/A or no response
Number	102	0	4	10
Percent	88%	0%	3%	9%
Percent Responding	94%	0%	4%	

Mentor coordinators also described ways in which veteran teachers benefit from mentoring. “It serves as a tool to re-energize them, focus their attention on current practice, learn from new colleagues and develop professionally,” was one representative comment.

Benefit veteran teachers	Yes	No	Unsure	N/A or no response
Number	92	3	9	12
Percent	79%	3%	8%	10%
Percent Responding	88%	3%	9%	

FINDINGS

Overview

- 80% of the respondents stated that they had significant induction programs in place in their school districts, with a strong articulation between mentoring and a more comprehensive induction program. 16% stated that they had minimal induction programs in place (usually mentoring only), and 4% have programs that are under development.
- The mentor coordinators believed that their district induction programs mutually benefited new teachers and veteran teachers (88% and 79% respectively).

Components of Induction Programs

- The majority of the induction programs have an orientation (97%) as well as a mentoring (93%) component to their programs.
- 73% of the programs have mentor workshops, and 73% have beginning teacher workshops. These programs range from the DOE-sponsored Case Study Seminars to formal workshops outside school to formal in-district or school programs.
- 65% of induction programs include support teams. Most support teams were described as informal.
- 58% of the schools have a release time component, which varies among schools.
- Other components, mentioned by 36% of respondents, include social gatherings, peer observations, and a survey/evaluation process.

Mentor Training

- 73% of the mentor coordinators stated that their districts require mentor training.
- 62% of the districts trained their own mentors. 46% used outside consultants, 39% participated in DOE-Sponsored Summer Mentor Training, and 9% used other types of training (many districts reported using more than one type of training).
- Of those who participated in the DOE Summer Mentor Training, 43% rated it as excellent. 41% rated it as good, and 15% rated it as fair. None rated it as poor or very poor.
- 71% of those who participated in the DOE Summer Mentor Training believe that it was beneficial to their district's induction program. 12% believed it was not beneficial, and 17% were not sure.
- 76% of those who responded to the survey offered ratings regarding the support and communication of the DOE-Sponsored Summer Mentor Training. Of those who responded, 11% rated communication and support as excellent and 35% rated it as good. 34% rated communication and support as satisfactory. 14% rated communication and support as poor, and 6% as very poor.
- 14% of districts responding said that there are DOE-trained mentors who are not selected to participate in the district's mentoring program. 19% of districts responding were not aware that teachers would be participating in the DOE training program before they attended.

RECOMMENDATIONS

The mentor coordinators offered several recommendations for DOE's consideration:

- DOE should **support districts in developing their own induction programs** through grant funding (for stipends and release time).
- DOE should **sponsor a train-the-trainer type program** every other summer to ensure that district-based programs have the personnel they need to make them work.
- **Resources and materials for in-district mentor-training efforts** will continue to be useful and appreciated.
- DOE could, in general, help to foster **more sharing of knowledge among and between districts.**

THE MASTER TEACHER/NBPTS CERTIFICATION PROGRAM

BACKGROUND

The National Board of Professional Teaching Standards (NBPTS) offers teachers nationwide the opportunity to meet their rigorous standards for certification. Teachers prepare portfolios that include videotaped lessons, samples of student work, and detailed analyses of their practice. They also complete assessment center exercises, which are written questions relating to the content in their fields. Each component is assessed for quality, and teachers who perform at appropriately high levels receive National Board certification. Certifications expire after ten years, after which teachers can maintain their certification by completing renewal requirements. The first cohort of certifications will expire in 2006.

As of November 2001, there were 16,030 board-certified teachers across the country. Of those, 269, or just under 2%, teach in Massachusetts. Seventy-two percent of these teachers were certified in 2000 or 2001. The table below shows the number of Massachusetts Board-Certified Teachers, by year of certification:

Year of Certification	Number of Teachers	Percent of Total
1996	3	1%
1997	4	1%
1998	16	6%
1999	52	19%
2000	111	41%
2001	83	31%
Total	269	

The Massachusetts Department of Education has developed a Master Teacher program as part of its package of incentives to recruit and retain excellent teachers. The state pays \$2000 of the \$2300 application fee for up to 300 applicants per year (some districts pay the remaining \$300). Candidates for application fee payment are selected by a lottery by certificate area and geographic location. It should be noted that applicants for National Board certification are entirely self-selected—they do not have to meet any criteria before applying. According to DOE staff, approximately 50% of those applying do not achieve Board certification on their first attempt.

Teachers who are awarded Board certification and who serve as mentors to new teachers are given salary bonuses of \$5,000 per year for the duration of the certificate, for a maximum of \$50,000. Master teachers also have parity in compensation and certification with teachers with Master's degrees, and can use their Master Teacher status to fulfill recertification requirements.

A list of districts where Master Teachers are teaching is attached (*Appendix XIV: Districts in Massachusetts where Master Teachers are Teaching*).

GOALS OF THIS STUDY

The Department of Education is sponsoring National Board Certification as a teacher retention strategy, both by rewarding experienced teachers with stipends and by linking the stipends to support for new teachers. The Department is also facing fiscal constraints that may affect its ability to offer stipends in the future. Therefore, the major goals of this study were to answer the following research questions:

- **What are the incentives, fiscal and otherwise, that encourage experienced teachers to participate in the Master Teacher/NBPTS program?**
- **How satisfied are participants with the program, and how could it be improved?**
- **Does the program increase retention of experienced teachers in the profession?**
- **Does the program enhance the mentoring capacity of the state?**

METHODOLOGY

The research team distributed written surveys, via email/Internet and regular mail, to 265 Massachusetts teachers who had applied for National Board Certification through the Master Teacher/National Board of Professional Teaching Standards (NBPTS) program (*Appendix XV: Master Teachers Survey*). This report includes 153 responses, which represents a 58% response rate. One hundred and fifty-one of the respondents had received Certification; the other two did not indicate whether or not they had received it.

WHO ARE THE BOARD-CERTIFIED TEACHERS?

Experience Levels

Respondents to our survey represented a wide range of teachers. As expected, they are mostly experienced; the newest teacher to answer our survey had been teaching for four years, and 14 teachers had been teaching for over 30 years. Many were in the middle range of experience, with 43% teaching for between 6 and 15 years.

Years in the Teaching Profession	Number	Percent
0-5	1	1%
6-10	35	23%
11-15	31	20%
16-20	23	15%
21-25	23	15%
26-30	25	16%
Over 30	14	9%
Total	152	100%

Education Levels

The education levels of our respondents reflect their years of teaching. Only eight had no more than a bachelor's degree, while 143 had a master's degree or more (two did not respond).

Teaching Certification Area

Respondents were fairly evenly distributed among certification levels, with 76 holding elementary certification, 76 holding middle school certification, and 89 holding high school certification (many teachers reported more than one level of certification). Among subject areas, elementary certification was the most frequently reported, followed by English, science, and math. Six percent of our respondents are in administrative or guidance positions.

One hundred and thirty-eight of the 153 respondents (90%) are teaching in the area in which they are holding certification.

Teaching Certification Area	Number	Percent
Elementary	60	27%
English/Reading	40	18%
Science	27	12%
Math	24	11%
History	16	7%
Administration/Guidance	13	6%
Middle	12	5%
SPED	10	4%
ESL	3	1%
FL	1	0%
Other	17	8%
Total	223	100%

WHY DO TEACHERS APPLY FOR BOARD CERTIFICATION?

Introduction to the Process

We asked respondents how they were introduced to the Board certification process, and why they decided to apply. Respondents most frequently heard about certification through word of mouth, although many noted other sources as well. Some teachers noted more than one source of information about the process:

Introduction Source	Number	Percent
Word of Mouth	56	29%
DOE Website	38	20%
School District Posting	33	17%
Newspaper/Magazine article	32	17%
Other	32	17%
Total	191	100%

The newspapers and magazines cited by respondents included NEA Today (5), the Boston Globe (4), local newspapers (4), MTA Today (3), Educational Leadership (1), Mathematics Teacher (1), Teacher Magazine (1), National Council of Teachers of Mathematics (1), National Teachers Association publications (1), Teacher Magazine (1), Council of Exceptional Children (1), English Journal (1), Social Education (1), and the New York Times (1).

Those who cited other sources of information mentioned e-mail or other communications from the Department of Education (9), information from school administrators (9), information from the union (3), information from a conference (2), an invitation to participate in a pilot program (1), and a televised panel discussion (1).

Incentives to Apply

Respondents were motivated to apply by a variety of factors. The survey asked them to rate the significance of nine different factors, and included space for them to include additional categories. The highest mean response was for the increased opportunities for professional development in teaching methods, with a mean of 3.31²² on a scale of 1 to 4. Fifty-six percent of teachers rated this as a very significant incentive, with an additional 26% rating it as significant. Second-highest was the state-issued bonus of \$5,000 per year for ten years, with a median significance of 3.20. Fifty-eight percent of respondents rated this as very significant, with 18% rating it as significant. The least important incentives were the increases on the salary scale (1.55), and the district encouraging teachers to apply (1.60).

²² The mean was calculated by assigning a value of 1 to “not significant,” 2 to “somewhat significant,” 3 to “significant,” and 4 to “very significant.” Blank responses were omitted.

Ratings of Factors in Decision-Making	Very Significant	Significant	Somewhat Significant	Not Significant	Mean (1-4 scale)
Professional development in teaching methods	56% ²³	26%	11%	7%	3.31
Master Teacher bonus	58%	18%	11%	13%	3.20
Opportunity to become a mentor	31%	36%	17%	15%	2.83
Increased status/recognition	32%	33%	23%	13%	2.83
Certification portability	22%	22%	28%	30%	2.35
Potential for promotion while staying in classroom teaching	15%	26%	15%	43%	2.13
Potential for promotion by moving into curriculum development or administration	10%	27%	18%	46%	2.00
Encouragement from school or district	10%	8%	14%	68%	1.60
Salary scale increase	11%	8%	6%	75%	1.55

Some teachers also cited other incentives to participate in board certification. Nineteen teachers cited the opportunity to assess their performance and validate their beliefs about teaching, and 17 cited the challenge of certification as an attraction. Other incentives cited by fewer people included recommendations from others (4), curiosity about the nature and assessment value of the process (2), desire for greater professional opportunities after retirement (2), not being accepted into a doctoral program (1), previous experience with scoring the assessment (1), and because a friend was applying (1).

²³ Unless otherwise noted, each table displaying responses by percent omits from the total those responses that were left blank.

THE CERTIFICATION PROCESS

What Kind of Support Did Board-Certified Candidates Receive?

We asked respondents how supportive their school and district administrations and colleagues were of their seeking Board certification. We also asked them to rate the assistance of the Department of Education.

Support from School, District, and Colleagues. Respondents found their school and district to be somewhat more supportive than their colleagues. Sixty-seven percent of respondents rated their school and district to be supportive or very supportive, and only 5% said it was unsupportive or very unsupportive. With regard to their colleagues, 56% of respondents said that they were supportive or very supportive, and 10% reported colleagues who were unsupportive or very unsupportive.

Degree of Support from:	Very Supportive	Supportive	Neutral	Unsupportive	Very Unsupportive
School/District Administration	31%	36%	27%	3%	2%
Colleagues	26%	30%	35%	7%	3%

Thirty-two respondents mentioned that they were given additional time off to spend on the application process. Twenty-two respondents commented that their school or district helped defray the costs of the application, usually by covering the \$300 that the Department of Education does not subsidize. Six teachers mentioned local support groups for teachers pursuing certification. One teacher was given in-service credits for pursuing the process, which led to a higher salary.

While some respondents described the support they had from their colleagues, many went through this process in isolation from their peers. Twenty-one respondents did not tell most or any of their colleagues about pursuing certification, either from a fear of failure or because they thought their colleagues would not understand and might resent them for pursuing extra recognition. Four respondents mentioned negative attitudes from co-workers, and two cited active interference by colleagues; one said that colleagues complained to the union and the principal about parent seminars that were part of the portfolio requirement, and one said that a new superior refused to acknowledge the teacher's role in a project as part of the portfolio, perhaps fearing competition for a future position.

Support from the Department of Education. Most respondents (88%) found the Department of Education's assistance with the certification process to be at least satisfactory. Fifty percent rated the DOE as good or very good during this process, while 12% rated the DOE assistance as poor or very poor.

Twenty-two respondents mentioned the support groups provided through the DOE, although one found them unhelpful, one said they were too far away to attend, and one said that the criticism received during the workshops was discouraging and unhelpful. The remaining 19 found the groups to be helpful.

Fourteen respondents commented on the monetary support that the DOE provided, focusing more often on the fee coverage (all) rather than the bonus money (two mentioned it, with one saying it is not likely to remain available). Five respondents commented that they would not have applied for certification if the DOE had not paid most of the application fee.

Eighteen respondents commented on communication with the DOE and their ability to have their questions answered, with eight reporting that communication was positive and ten reporting that it was problematic.

Was Feedback on the Application from the NBPTS Useful? Forty-three percent of respondents reported that the NBPTS feedback on their application was not useful. Forty-one percent found it somewhat useful, and 16% found it very useful.

Three teachers commented that the scores themselves were useful feedback, and one commented that the NBPTS was helpful in explaining the application process. But 62 teachers – 41% of all respondents – made comments indicating that the NBPTS feedback was not useful to them. Most of the complaints centered around the NBPTS practice of providing scores only, with no explanation of how they were determined. Teachers were frustrated by seeing low scores in areas where they thought they did well, and high scores in areas that were more problematic for them. “This definitely needs serious revision,” wrote one teacher. “It is educationally unsound.”

Satisfaction with the Certification Process

What Were the Most Valuable Parts of the Certification Process? Ninety-four respondents (61%) cited self-reflection as one of or the most valuable part of the certification process. One respondent, echoing the comments of many, wrote “(The most valuable part was) the opportunity to reflect on my philosophy, methodology, and the impact my teaching has on my students. It was a "soul-searching" process that validated and affirmed my professional competency. It afforded me the opportunity to "dig deeper" into the hows and whys of what I do and how I do it. It was a huge personal accomplishment that has me continually reviewing and refining my practices so that EACH and EVERY child in my care has the BEST learning experiences that are geared toward their strengths for successful academic, social and emotional growth.”

The second most common response was the videotaping, far behind self-reflection with only 23 (15%) of respondents citing it. Eighteen respondents spoke of the professional development value of the process, and ten said it was an opportunity to meet other committed teachers. Ten respondents cited the portfolio preparation, and nine noted the validation they received of their teaching practices.

What Were the Least Valuable Parts of the Process? When asked what parts of the certification process were least valuable, respondents most often (29) mentioned procedural issues, such as the very detailed instructions and time required for assembling information, the duplication among different parts of the test, and the extensive documentation. An additional 23 respondents saw as least valuable the assessment activities that took place at the NBPTS testing

centers. Three people said that the exercises were too broad, and two said that the equipment was difficult to use or malfunctioning; most simply stated that the assessments were not useful.

Twenty-two respondents could identify no “least valuable” part of the process; they believed each component was worthwhile.

Would They Do It Again? We asked teachers if they would complete the certification process again. As the table below indicates, at least three-quarters would.

	Yes	No	Unsure	No Response
Would Do It Again	75%	8%	1%	16%

Many teachers wrote in comments on this question. Among positive comments, the most common response (48) was that the process helped them to become a better teacher. An additional 14 teachers commented that the process validated their skills and knowledge, and 11 talked about the additional salary and/or bonus money. Eight found that the Master Teacher designation has provided new professional opportunities for them.

Twenty-six teachers made comments that indicated negativity or ambivalence about the certification process. Seven of them indicated that they doubt the promised bonus money will be delivered by the Department of Education, and are very concerned. An additional ten thought that the process was too time consuming and took too much away from other aspects of teaching and of life. Five commented that they do not see tangible benefits from certification.

What Overall Rating Do Teachers Give the Board Certification Process? As the table below indicates, overall satisfaction with the Board Certification process is high. 89% rated the process good or excellent, while only 1% gave it a poor rating.

	Excellent	Good	Fair	Poor
Overall Rating	40%	49%	9%	1%

Of the four teachers who rated the process as poor, two did not provide comments. One was concerned that board certification is used primarily as a stepping stone for teachers who want to move into administration, and one said that the standards for certification keep changing. Teachers who rated the process as fair usually commented on the inadequate feedback (5) or what they saw as lack of correlation between certification processes and good teaching (4).

Teachers who rated the process as good often provided comments praising the overall process, often commenting on its value as a professional development exercise or praising its rigor and validity. Some, however, offered suggestions for ways that the certification process could be improved. These comments will be discussed in more detail at the end of the report. In summary, nineteen people thought that the lack of feedback from NBPTS was problematic. Six people commented that the process seemed redundant or overly focused on formatting and other non-content specifics.

All of the comments from teachers rating the process as “excellent” were positive, although one qualified the comment by saying that the paperwork was cumbersome.

TO WHAT EXTENT HAVE TEACHERS' ROLES CHANGED AS A RESULT OF THE BOARD CERTIFICATION PROCESS?

We asked teachers how much their professional roles and duties have changed as a result of the Board certification process. For those answering that their roles and duties had changed somewhat or very much, we asked them to describe the changes.

	Very Much	Somewhat	A Little	Not at All
Extent of Changes	11%	36%	20%	33%

Of the 53% of teachers who reported little or no change, a few offered comments. Two said that their certification has been too recent for them to see any change in their role, and two changed positions for reasons not related to national certification. One said that nothing has changed in the district as a result of certification, and one reported having a child and choosing to spend less time on professional activities as a result. Six of the teachers reporting a little change made comments: two reporting mentoring and the chance to do consulting work with the DOE, two reporting committee work, one reporting mentoring as well as being part of the school's induction steering committee, and one reporting mentoring.

Of the teachers who reported that their professional roles and duties have changed somewhat or very much, most reported mentoring as an additional responsibility. Ten teachers reported that they coordinate mentor training or otherwise play a supervisory role in addition to mentoring new teachers. Seven teachers reported that they have taken new positions since being certified; five as administrators, one in business, and one has begun a doctoral program. Other changes listed included public speaking (5), working with pre-service teachers or offering professional development (5), working in curriculum development (3), and assisting with NBPTS support groups (3).

Involvement in School Governance and Decision-Making

We asked teachers whether, and how, their involvement in school governance and decision-making has changed as a result of certification.

	Significantly Increased	Somewhat Increased	Stayed the Same	Somewhat Decreased	Significantly Decreased
Governance & Decision-Making Involvement	10%	30%	58%	1%	0%

Of those who reported no change, many said that they were already actively involved in school governance and decision-making. Three reported that they have not yet had a chance to become involved, and two report a backlash against Board-certified teachers that hampers their involvement.

Of those who reported increased responsibilities, the more commonly mentioned avenues included leadership positions within the school (10), consultation with administration on changes to the school (10), and committee memberships or direction (9).

Involvement in Curriculum Design and Development

We asked teachers whether, and how, their involvement in curriculum design and development has changed as a result of certification. Teachers were more likely to report no change to their involvement with curriculum design and development than with school governance and decision-making.

	Significantly Increased	Somewhat Increased	Stayed the Same	Somewhat Decreased	Significantly Decreased
Involvement in Curriculum Design and Development	9%	24%	64%	2%	0%

Twenty teachers reported in comments that they were already involved in curriculum issues before certification. “You have to realize that NBPTS teachers aren’t people who’ve suddenly found themselves,” one wrote. “They’ve always been involved. That’s why they cared to apply.”

Among those who reported changes, the most common response was advocating for and/or writing curriculum for new courses at the school (5). Other responses included serving on committees (4), introducing new programs to the school (3), leading workshops (3), and aligning the school’s curriculum to the state standards (3).

IS NATIONAL BOARD CERTIFICATION AN EFFECTIVE RETENTION TOOL?

Satisfaction with Teaching

We asked teachers to rate their current satisfaction with teaching as a career, and to assess the impact of the NBPTS certification process on that satisfaction level.

	Very Satisfied	Satisfied	Somewhat Unsatisfied	Very Unsatisfied
Satisfaction with Teaching as a Career	51%	38%	9%	2%

	Greatly Increased Satisfaction	Somewhat Increased Satisfaction	Has not Affected Satisfaction	Somewhat Decreased Satisfaction	Greatly Decreased Satisfaction
Effect of Board Certification Process	20%	32%	43%	3%	1%

Teachers who offered comments on how the certification process affected their satisfaction with teaching most often commented on how the certification gave them validation or additional confidence in their abilities (34). Twelve teachers believe that they are able to have more of an impact on teaching and learning in their schools, and ten believe they are better teachers as a result of the certification process. Eight teachers believe that their views are more respected as a result of the certification, and eight enjoyed the challenge of certification and the feeling of accomplishment they got as a result.

Five teachers made negative comments about their satisfaction with teaching, but the NBPTS certification was not directly related to their complaints. Four reported that the lack of district support for their certification has been disheartening, and one reported that the increased emphasis on MCAS testing has made teaching less rewarding.

Plans for Future Teaching

We asked teachers how much longer they plan to stay in classroom teaching. Over half of the teachers who responded to the question plan to stay in teaching for at least nine more years, and over 75% plan to stay in teaching at least five more years.

Classroom Teaching Plans	Frequency	Percent
Will leave this year	7	6%
1-2 more years	9	8%
3-4 more years	10	9%
5-8 more years	28	25%
9-12 more years	25	22%
13-19 more years	20	18%
20 or more years	15	13%
Total	114	

We asked about the impact of Board Certification on the decision to continue to teach. On average, as the table below indicates, respondents are likely to spend about the same number of years in classroom teaching.

	More Years	Same Number of Years	Fewer Years
Impact of Board Certification on Years in Classroom Teaching	12%	75%	12%

We asked teachers whether they were more, less, or equally likely to move into a curriculum director or curriculum development position as a result of the Board Certification process. We also asked whether they were more, less, or equally likely to leave teaching for an administrative position.

Likelihood of Becoming a:	More Likely	Equally Likely	Less Likely
Curriculum Director	34%	59%	8%
Administrator	22%	59%	19%

Changes in Career and Professional Development Opportunities

We asked teachers to indicate ways in which applying for NBPTS certification has increased career and professional development opportunities.

NBPTS Certification Process Has Resulted in:	Percent
Increased earning potential	58%
Increased consulting opportunities	48%
Increased leadership/ administrative opportunities	46%
Increased opportunities for where I can teach	41%
Increased release time for professional purposes	21%
Increased flexibility in what I can teach	11%

Two teachers did not see any increased opportunities as a result of certification. Several others noted opportunities in addition to the ones we had listed. Four found certification to have improved their credibility and/or impact on education reform. Two noted increased respect, and one said that she has had more contact with other teachers. One has found opportunities to be involved with the National Board, and one is serving on committees. One has found increased summer and retirement professional opportunities, and one noted being chosen as a selector for the Massachusetts Institute for New Teachers program. One person mentioned mentoring, and another referred to the certification portability.

HOW DOES THE MENTORING ROLE WORK?

Types of Mentoring/Induction Programs

We asked teachers what types of mentoring/ induction programs are offered in their schools.

	Significant Induction Program²⁴	Minimal Induction Program²⁵	No Induction Program
Type of Program	71%	20%	9%

Types of Mentoring Roles

Eighty-eight percent of respondents say they serve as mentors in their schools or for NBPTS candidates. We asked those teachers in what ways they serve as mentors (respondents could check more than one category).

I Serve as a Mentor in the Following Ways:	Percent
In my school/district as a formally assigned mentor to new teacher(s)	52%
In my school/district as an informal resource for new teacher(s)	38%
In my school/district as a leader in our mentoring/induction program for new teachers	34%
As a seminar leader for new NBPTS candidates	18%
As a mentor for another NBPTS candidate	16%

Mentor Training

We asked teachers what type of mentor training they received.

Type of Mentor Training	Percent
DOE Summer Mentor Training	51%
District Training	32%
Other Mentor Training	12%
No Mentor Training	5%

Of the teachers who reported other types of training, eight were trained at colleges or universities, and seven responded being trained by their district as well as by others. Six reported being trained by the DOE outside of the summer institute, and six were trained through NBPTS.

²⁴ Such as an orientation session plus assigned mentors for all new teachers.

²⁵ Such as an orientation session for new teachers.

We also asked teachers to rate their mentor training.

	Excellent	Good	Fair	Poor
Rating of Mentor Training	37%	46%	15%	2%

Self-Rating as Mentor

The table below shows how respondents rate their own mentoring skills.

	Excellent	Good	Fair	Poor
Rating of Mentoring Skills	51%	45%	3%	0%

Should NBPTS Teachers Have Their Own Mentor Training Sessions?

We asked teachers whether the Department of Education should offer separate mentor training sessions for NBPTS teachers, or if combined sessions would be appropriate.

Mentor training preference	Percent
A mix of Board-Certified and regular teachers is appropriate	72%
Separate mentor training for Board-Certified teachers	21%
No response	7%

Five of the teachers who supported combining the mentor training commented that teachers who are not Board-Certified can still add a lot of value as mentors, and that they are needed because the need for mentors outstrips the supply of Board-Certified teachers. Four commented that this mingling allows Board-Certified teachers to promote the certification process to other teachers, and one commented that the interaction between Board-Certified and other teachers is “a good thing.” One teacher stated that non-Certified teachers feel very threatened by the Board-Certified teachers, and that separating the trainings would only exacerbate these feelings.

Four of the teachers who believed that the trainings should be separate referred to the common vocabulary that Board-Certified teachers share, and one noted that Board Certification represents a self-selection process.

State Support for Board-Certified Teachers as Mentors

We asked teachers how the state could do a better job of helping board-certified teachers to be excellent mentors. The most common responses were to provide ways for mentors to meet with each other (26), to provide additional training, either through the districts or through the state (21), and to provide more release time for them to act as mentors (19).

Thirteen of the teachers expressed concern that the bonuses they were promised when they became certified and took on mentoring duties will not be delivered, or that they will be encumbered even further with paperwork and additional responsibilities. Eight believed that DOE should encourage districts to recognize and use board-certified teachers, and two thought

that districts should be required to use NBPTS teachers as mentors first before assigning mentorships to other teachers.

Is It More Important for the State to Offer Mentor Training Institutes or to Support Districts in Building Their Own Induction Programs?

We asked teachers about the most appropriate role for state-level activity in this area. The majority though both roles were important, but those preferring district-based support outweighed those preferring separate mentor training institutes by a three-to-one margin.

Which State Role is Most Important?	Percent
Offer mentor training institutes	9%
Support districts in building their induction programs	30%
Both are equally important	60%
Neither is important	1%

Five respondents offered comments emphasizing the need for the state to provide some level of standardization for district programs, for quality control and also efficiency.

WHAT WOULD BE THE IMPACT OF CHANGING STATE INCENTIVES?

Ceasing to Offer the Bonus

Forty-two percent of the teachers who responded would still have applied for Certification if the Master Teacher Bonus were not offered. Fifty-eight percent would not have applied without the Bonus (see table below).

Reducing the Bonus

We asked teachers if they would have applied for Certification if the Bonus were \$2,500 per year for ten years, and if it were \$5,000 per year for five years. There was substantial difference between the results of each of these questions. Fifty-three percent of teachers who responded would have applied if the Bonus were \$2,500 over ten years, while 69% would have applied if the Bonus were \$5,000 per year for five years (see table below).

Changing the Application Fee Reimbursement

We asked teachers if they would still have applied for Certification if they had been required to pay the application fee themselves, with the state reimbursing them only if they obtained certification. Only 37% of teachers responded that they still would have applied.

Change in Incentive	Would Still Apply	Would Not Apply
Bonus Eliminated Entirely	42%	58%
Bonus of \$2,500 Per Year for Ten Years	53%	47%
Bonus of \$5,000 Per Year for Five Years	69%	31%
Reimbursement of Application Fee Only to Successful Candidates	37%	63%

Many teachers reacted strongly to the above questions; ninety-nine of the respondents offered comments. Thirty-five of them stated that the certification process represents a great deal of work as well as professional excellence, and that it is appropriate for the state to offer a financial incentive for achieving it. Twenty-one respondents said that they could not have afforded to pay the certification fee without assistance; some thought that the fee assistance was more important than the bonus.

Twelve respondents expressed concern that the DOE is now changing the terms of the bonus; most of them believe that they will not receive the full \$50,000 that was promised to them. This concern also came through in other areas in the questionnaire. Nine stated that their motivations for achieving certification were not financial: for six, it was for personal and professional development, two cited prestige, and one noted the 10-year recertification. Three said that it is inappropriate to require extra effort beyond certification to receive the bonus. Three said that the bonus money should be contingent on completing the certification process, not on actual certification, and two said that the money is not a bonus but rather pay for the extra work of mentoring.

SUGGESTIONS FROM THE FIELD

How Could the State Best Use the Master Teacher Corps to Improve Teacher Quality?

Respondents had many ideas about how to use the Master Teacher corps. Some of the more commonly expressed ideas were to continue to use Master Teachers as mentors (25) (three teachers believe that principals should be pressured or even required by DOE to use Master Teachers as mentors), to use them as education policy consultants (12), to publicize the teachers and their skills to districts (11), to visit other schools or have their classrooms be models (7), and to lead workshops for other teachers (5).

Other Comments/Change Recommendations

Teachers were given the opportunity at the end of the survey to make additional comments concerning Board Certification. Many of them offered suggestions for changes, as they also did when asked what overall rating they would give to the NBPTS process. These suggestions are combined here.

The most common recommendation for change addressed the bonus funds from DOE. Twenty-eight teachers expressed concern about the Department of Education withdrawing the promised bonuses or otherwise changing the terms of the Master Teacher program. Sixteen teachers noted that more detailed feedback on their applications would have been helpful to them, regardless of their final score.

Other changes recommended:

- Alternative ways for Board-certified teachers to become Master Teachers, in addition to mentoring (6);
- Allowing more time to complete the portfolios (5);
- More efficiency from DOE in answering questions and providing information (4);
- Better publicity for the Master Teachers, originating from DOE and targeting districts and the media (4);
- Less time-consuming, minutia-oriented proposal process (3);
- Make greater use of NBPTS teachers in leadership positions (3);
- Provide paid time off to work on certification (2);
- Expand the process to more teachers, with similar certification at the local level (1) or requiring certification for all teachers and principals (1).

FINDINGS

The data suggest the following findings, grouped according to our initial research questions.

What are the incentives, fiscal and otherwise, that encourage experienced teachers to participate in the Master Teacher/NBPTS program?

- The most significant reasons teachers apply for National Board Certification are the opportunity for **professional development** and the **Bonus** offered to Master Teachers.
- Payment of the **application fee** up front seems to be the strongest incentive to teachers. If most of the \$2300 application fee had not been paid up front by the DOE, 63% of Master Teachers indicate they would not have applied—regardless of whether it was reimbursable for those who succeeded in achieving Certification. This is not surprising given that about 50% of applicants fail the NBPTS program on their first attempt.
- If the Bonus was not offered at all, 58% of Master Teachers say they would not have applied for Certification. Reducing the bonus offered to Master Teachers would have reduced applications by smaller, though still significant amounts (31% to 47%), depending on the way in which the Bonus was reduced.

How satisfied are participants with the program, and how could it be improved?

- Master Teachers rated the Certification process highly, with over three-quarters stating they **would go through the process again**. They considered it to be a worthwhile professional development exercise. However, a number expressed frustration with the **lack of feedback from NBPTS** concerning their applications.
- Teachers find the opportunity for **self-reflection** the most valuable part of the Certification process. The least valuable components were the procedural issues and the assessment center exercises.
- Some changes recommended by the Master Teachers include **more feedback** from the NBPTS about the scoring of their tests, retaining the **promised Bonuses** for Master Teachers, providing **additional paths to Master Teacher** status besides mentoring, and more efficient **communication** from DOE.
- The mentoring program could be improved by creating ways for Master Teachers to **meet together** and share experiences, and through additional **mentor training**.
- The majority of Master Teachers think that the Department of Education should both support **district-based induction programs** and offer **mentor training institutes**. Among those who favored one role over the other, **three times as many were in favor of supporting districts** in building their own programs.

Does the program increase retention of experienced teachers in the profession?

- The majority (52%) of Master Teachers report an **increase in satisfaction** with teaching as a result of their Board Certification.
- 40% of Master Teachers report that their **involvement in governance and decision-making** has somewhat or significantly increased as a result of Board certification. This is fairly substantial, given that most respondents have only completed their certification fairly recently.
- 33% report that their involvement in **curriculum design and development** has somewhat or significantly increased as a result of Board certification.

- Board Certification appears to have **no net impact on the likelihood of Master Teachers to leave the classroom**. Three-quarters project they will stay the same number of years, while about the same number say they will spend more years (12%) as say they will spend less years (12%).
- Board Certification appears to have **no net impact on the likelihood of Master Teachers to leave teaching for administration**. Three-fifths project they will stay the same number of years, while about the same number say they are more likely (22%) as say they are less likely (19%) to do so.
- However, Board Certification does appear to **increase the likelihood of Master Teachers moving into curriculum director or curriculum development positions** (39% more likely vs. 8% less likely). Whether this means Master Teachers plan to do so concurrently with classroom teaching or ultimately move from one to the other is a matter for further research.

Does the program enhance the mentoring capacity of the state?

- Of the 46% of Master Teachers reporting that their roles had changed “somewhat” or “very much,” **most reported mentoring** as an additional responsibility.
- Most Master Teachers consider themselves to be good or excellent mentors, and believe that **mentoring is an appropriate role** for them to play.
- Master Teachers believe they can best be utilized as **education policy consultants** and **model teachers** as well as mentors.

RECOMMENDATIONS

Continue paying most of the application fee up front for teachers who apply for Board certification. The cost of application is a significant barrier to application, and even a hypothetical reimbursement of successful candidates' fees presents enough risk, given teachers' salaries, to show a large deterrent effect. Given DOE's estimate of a 50% failure rate of applicants on their first attempt, DOE may wish to consider (1) requiring certain application prerequisites or (2) asking districts to vouch for applicants by fronting application fees and being reimbursed by DOE for successful applicants. However, each of these approaches raises control issues that would have to be dealt with, in addition to the local costs incurred by the second of these. Furthermore, several candidates spoke of the benefits of the application process even for those not attaining certification. Compared to Bonus payments, which appear to have a smaller impact on decision-making, the application fees may be a relatively small cost to pay for this self-reflective process benefit.

Consider other roles for master teachers, including serving as members of education program and policy development teams. While most master teachers see mentoring as an appropriate role, it is likely that some may be better utilized in other roles. The state would be well-served by incorporating the seasoned, front-line perspective of master teachers into policy decision-making bodies and program development teams. The state could also consider developing a competitive "Master Teacher research sabbatical," for those interested and qualified, to work with research centers on documenting and analyzing the results of various education initiatives.

Convene the master teachers to discuss best practices, and disseminate products based on their work. Susan Moore Johnson and her team, among others, have documented the strong desire of younger teachers to benefit from the experience of good teachers. The MINT participants also registered this desire. This "inter-generational transfer" does not need to happen only in one-on-one settings. The Master Teachers collectively offer a wealth of good information that should be collected and disseminated.

TEACHER CAREER ADVANCEMENT PROGRAM (T- CAP)

BACKGROUND

The Teacher Career Advancement Program (T-CAP) offers school districts the opportunity to design and implement innovative staffing solutions in order to attract and retain highly qualified educators, by offering multiple career paths and expanded teacher roles that are linked to a non-traditional model of compensation. The Department of Education encourages, but does not require, that districts use the Milken Family Foundation's Teacher Advancement Program Model²⁶ in their program design.

Districts which have received grant money to participate in T-CAP include Beverly, Cambridge, Carlisle, City on a Hill Charter School (Boston), Danvers, Lawrence, Lee, Leominster, Lowell, Martha's Vineyard, Montachusett, Needham, New Bedford, South Hadley, Watertown, Westfield, Westport, and Whitman (*Appendix XVI: Grant Money Received by T-CAP Districts*).

GOALS OF THIS STUDY

The Department of Education has offered three rounds of T-CAP funding as a teacher recruitment and retention strategy. The Department is currently faced with important fiscal decisions to make and requesting information and data regarding the T-CAP developments to date. Therefore, the major goals of this study were to answer the broad questions of:

- **What is the status quo in each district regarding planning and implementation of T-CAP?**
- **Which district goals have been implemented to date?**
- **Which teacher advancement programs are serving as models?**
- **What has facilitated the T-CAP planning and/or implementation?**
- **What challenges have affected planning and/or implementation?**

²⁶ The Milken Family Foundation's Teacher Advancement Program (TAP) is a comprehensive reform plan to attract and retain qualified teachers and is based on the assumption that the teaching profession is losing talented young adults to the private business sector due to increased career opportunities and competitive compensation. TAP is an attempt to make teaching more rewarding by providing a system that offers market-driven compensation; multiple career paths; performance-based accountability; ongoing, applied, professional development; and an expanded supply of high quality teachers. The Foundation has written a detailed plan for other districts and states to draw from in planning TAP systems and they report that the model is now being implemented or being planned at schools in Arizona, Arkansas, Colorado, Indiana, and South Carolina.

In October 2001, the Commissioner of Education scheduled two meetings for district superintendents to meet with him and representatives of the Milken Family Foundation. The invited districts were those who received the T-CAP grant, or those which have innovative programs that fit the T-CAP model. In addition, some of the districts which received T-CAP funding sent representatives to Arizona for further training in the model.

METHODOLOGY

We conducted semi-structured, open-ended, qualitative interviews with representatives from eleven of the eighteen school districts that have received T-CAP funding. Interviews were also held with representatives from the Department of Education and Mass Insight Education. Interviews were conducted by telephone and lasted from 45 to 90 minutes. All interviewees were assured anonymity. The interview protocol (*Appendix XVII: T-CAP Interview Protocol*) was devised from a review of the priorities outlined in the RFP, from interviews with Elizabeth Pauley of the Department of Education, and from a review of the literature on teacher career advancement programs. We also reviewed documents developed by the Mass Insight Corporation²⁷ and the ten district grant proposals that the Department of Education was able to provide to us.

Seven districts have not been included in this report for the following reasons:

- Two did not respond to our requests for interviews.
- One district representative stated that the district was awarded funding, but they declined the funds because they were informed of the award too late in the year to be able to make use of the money.
- One district representative said that their district never applied for this grant and must have been mistakenly added to the list of grantees.
- One district is not included because no one in the district knew of a contact person for the grant. Funding was given to this district in the first round, with the district superintendent as the lead grant writer. This superintendent is no longer with the district. A school principal was listed as the contact person for the grant, but the person was not ever involved with T-CAP.
- Several representatives from another district that received funding in the first round did not know who might know about the grant.
- The City on a Hill Charter School, which has been receiving T-CAP funds since the program's inception in 1999, is a professional development school that incorporates T-CAP principles into its core contract with its teachers. It is discussed in an appendix (*Appendix XVIII: City on a Hill Charter School*), because the school's structure and its ability to integrate T-CAP into its overall operation are considerably different from that of traditional public schools.

²⁷ Five of the T-CAP districts (Beverly, Needham, South Hadley, Watertown, and Whitman) participate in Mass Insight Education and Research Institute (Mass Insight Education)'s "Coalition for Higher Standards" and were brought into this project as a network. Mass Insight Education is a not-for-profit corporation established in 1997 to assume the education initiatives of the Mass Insight Corporation, a public policy and communications organization that deals with issues affecting the competitiveness of Massachusetts (www.massinsight.com). Mass Insight Education targets academic achievement for all students, through a focus on public outreach initiatives, school leadership training programs, and public opinion and policy reports.

The Coalition for Higher Standards is an initiative of Mass Insight Education and is made up of a group of 28 urban and suburban school districts and two regional alliances led by school superintendents. The Coalition represents 359 schools and over 180,000 students. Coalition members work to create model school programs that use state standards and tests to improve student achievement; participate in performance-based school training; share best practices for raising academic achievement; and develop and share parent and public outreach materials.

FINDINGS

In 1999, after the first round of T-CAP grants, the plans developed by the five Mass Insight districts were reviewed by Dr. Susan Moore Johnson from the Graduate School of Education at Harvard University. A report was prepared for Mass Insight and used to structure further planning.

In order to provide consistency, the findings in this current report are organized in accordance with Dr. Johnson's "Preliminary Report on T-CAP Districts from the Coalition for Higher Standards" which was provided by the Mass Insight Corporation. Four additional sections were added in order to provide additional information that was not addressed in the preliminary report. The sections are:

- Integrating the plan with current realities;
- Components of the plan that were implemented;
- Ensuring broad participation;
- Emphasizing larger instructional purposes;
- Establishing collegial cultures;
- Planning for funding;
- Structure of teacher roles;
- District or school level focus;
- Timeline and evaluation;
- Models;
- Department of Education support; and
- Lessons learned.

INTEGRATING THE PLAN WITH CURRENT REALITIES

According to Dr. Johnson, "if a differentiated career structure is to be well-integrated with the district's academic program, the components of the plan have to map onto the reality of current activities". She adds that districts will also "need to develop a distinct set of roles and responsibilities, selection procedures, incentives and rewards" and go beyond the mere listing of current roles. Her preliminary report concluded that the five Coalition districts had not yet begun to develop these larger structures.

None of the district representatives that we interviewed indicated that they have moved beyond the planning phase. All, however, had developed plans built on existing programs in their districts, and the districts have implemented small pieces of their plans. All of the districts spent some planning time discussing the status quo regarding salary structure, teacher roles, and leadership roles and talked about potential changes. They all identified the need to empower and involve teachers in the planning process, and all stated the importance of building on what they already have in place.

Only one of the 11 districts planned to implement distinctly different roles and career tracks for teachers, accompanied by changes in the salary structure. The other districts held discussions

concerning roles and career tracks, but made no plans for changes. These districts intended to put effort into strengthening existing mentoring and induction programs, developing expanded roles for teachers, and/or focusing on changes in professional development. One district reported developing plans to recruit mid-career professionals and another planned to involve teachers who wanted to work part-time.

Discussions related to collective bargaining arose in each district, and half of the districts addressed their ongoing connections and/or partnerships with higher education institutions. One reported inviting the local business council to participate in some of their planning sessions.

While some of the districts may now better understand the larger structural changes that are needed in order to implement a T-CAP model, none of the districts have attempted to make such major changes. This is largely because they are aware of funding cutbacks and they have been informed that the initially-promised T-CAP implementation money will not be forthcoming. Most of the districts have stopped planning for T-CAP and are putting efforts into various related programs such as mentoring and induction.

COMPONENTS OF PLANS THAT WERE IMPLEMENTED

All of the districts reported that they have implemented changes related to T-CAP, but have significantly scaled down or changed their plans after learning that there would be no follow-up implementation funding. The changes that were implemented varied across districts.

Five districts were discussing district-wide changes:

- Two of the districts were engaged in the examination of the status quo and brainstorming possibilities for change.
- Two of the districts focused on mentoring and induction, with one strengthening an existing mentoring and induction program and raising starting salaries, and the other spending time on developing a mentoring and induction program in response to the new regulations. The contact person for the latter district stated that “we only have so much time, money and energy, so the time we could have spent on planning for T-CAP was eaten up by responding to these new regulations.” The other district is using the T-CAP funding to implement Saphier’s “Research for Better Teachers” training.
- The most advanced of the five districts has developed a solid plan that includes structural changes, has plans for leadership training, and has piloted mini-projects such as course leader roles. Due to the funding cuts, this district reported having to stop their efforts for change in these areas.

Three districts focused on change at the middle school level only:

- One district explored the status quo in all T-CAP related areas, conducted site visits and trainings and ended up planning to implement flexible scheduling for the 2002-03 school year to allow different teaming structures.
- Another district established a district-wide Professional Development Center, but reported investing most of their efforts at the middle school level to establish a professional

development school demonstration site based on the Holmes Group Model. This district worked with a local college to develop four courses and to implement other components related to this model.

- The third district developed a plan that incorporated a condensed salary schedule with greater expectations for teachers, and was able to transform a leadership position staffed by one person into a council of teachers in decision-making roles. When the funding cuts were announced, the planning committee disbanded. The rest of the money will be utilized to strengthen the existing mentor and induction program.

Of the remaining districts:

- One focused at the middle and high school levels, and used their time and money to implement a pre-existing plan for lead teachers to perform mentoring and induction of uncertified teachers.
- One implemented grade-level leadership positions at the high school level.
- One is implementing the Learning Network's model of mentoring and professional development which, according to the district's contact person, "includes all the elements of T-CAP." The model incorporates a teacher-leader model with a focus on reading, writing, and spelling.

ENSURING BROAD PARTICIPATION

In the preliminary report, Dr. Johnson pointed out the necessity of involving from the beginning all of the major parties in planning complex, structural changes such as T-CAP. While "having so many people involved will inevitably make the planning process somewhat unwieldy and may mean that the plans are less bold and coherent," it prevents surprises and opposition later.

For these 11 districts, committee make-up was defined by whether or not T-CAP was attempted as a district-wide initiative or confined to one or two particular schools. The five districts planning for district level change had the most professionally diverse committees. All but one included the superintendent. All five included principals, assistant principals, a good representation of teachers, and teachers' association representatives. One had school committee representation, one had a representative from the parent organization, and one included the curriculum director. The district that made the most headway in planning had the highest number of top level administrators on the committee, including the president of the teachers' union, all of the principals, the superintendent, the assistant superintendent, and a wide representation of teachers from each school in the district. One district used an already-established professional development committee. Another stated that since the funds have dwindled, the committee has now changed to being made up of classroom teachers at all grade levels and subject matters working on mentoring/induction programs.

The one district that focused on high school and some middle school change included teachers and union representatives and a faculty person from a nearby university.

The three districts that focused on middle school change had committees made up primarily of middle school teachers, principals, and assistant principals. Two of these districts included the teachers' union representative on their committees. One district included faculty, the Dean, and the Assistant Dean from their partnership college and also invited a parent and students to two of their meetings. Similarly, the district geared toward high school change had high school teachers making up the committee while the elementary-focused district involved only the elementary principal and teachers.

EMPHASIZING LARGER INSTRUCTIONAL PURPOSES

Dr. Johnson's earlier report pointed out the importance of explicitly linking T-CAP plans to increased student learning. In our research, we found that although some of the language in the grant proposals stated an explicit link between professional development for teachers and student learning, in the interviews, only one contact person talked about increased student learning as an outcome or benefit of adopting T-CAP changes. Most of the contact people focused the discussion around the benefits to the district of not having to spend so much time recruiting, hiring, and inducting new teachers, and three discussed the benefits to the building principals who currently do not have enough time to work as intensely on teacher growth as they would like.

ESTABLISHING COLLEGIAL CULTURES

These interviews were consistent with the preliminary report on the five Coalition districts that assumed the "importance of establishing a collegial, collaborative set of relationships among teachers" (Johnson). All of the districts emphasized the need to structure their districts to allow time, space, and resources for teachers to work together in reflective communities on their own growth and development in instructional practice and subject content areas. These points most frequently arose around the discussions of the mentoring and induction programs that are being strengthened or developed in most of the districts.

The development of collegial cultures appears to be a priority for most of the districts, as is evidenced by the implementation of components related to this goal even without access to T-CAP implementation money. Two districts have developed networks of teachers who are learning similar concepts (Research for Better Teachers and Learning Network Literacy), one has collaborative teacher-learning study groups, several districts are implementing teachers-as-leaders models, one district reorganized teaching schedules so teachers will have more time to plan and work together, and one district transformed an administrative position held by one person into a cluster of responsibilities shared by a committee of teachers.

PLANNING FOR FUNDING

The funding situation for T-CAP districts has not changed since Dr. Johnson wrote that "all of the planners are trying to finance their plans on a shoestring." All of the districts cited funding as their major challenge and barrier to change. Over half of the eleven said they are laying teachers off for next year due to budget cuts, and were not comfortable with promoting career advancement for those teachers who stay at the same time that many positions are being

eliminated. One superintendent said that the districts are having to retrench and go into “survival mode.” In this atmosphere, discussions of major restructuring are set aside to deal with more immediate concerns.

Representatives at eight of the eleven districts reported that people became discouraged when they spent considerable time and effort learning, researching, and going through the complexities of collaborative planning only to find out that they either didn’t get a follow-up planning grant to continue, or found out that implementation money that had been previously promised was not going to be forthcoming. In all eleven districts, direct T-CAP planning has stopped. In one district, the committee members have quit and no one else will take the stipended T-CAP committee positions. In other districts, the T-CAP planning committees have been transformed into mentoring and induction planning and implementation committees. No district sees the kind of change envisioned by T-CAP planners happening without substantial start-up and continuation funding.

None of the districts talked about redistribution of current funds; although four people noted that the Milken Model proposes this, they also stated that they don’t believe the Milken Model can work in their school districts. Three of the districts that have developed plans have tried to find alternative funding sources, and have so far been unsuccessful. They will continue to try, and some are applying for the current round of Teacher Education Quality Enhancement Grants. When asked about the possibilities of restructuring the current contract, almost all of the districts said that people in the district are very happy with the current contract and that the planning teams had decided to leave the contract alone.

The changes that have been implemented in the districts so far have clearly been minor changes, and support Dr. Johnson’s prediction that “a make-do approach is likely to produce only minor tinkering rather than major renovation of the career structures.”

STRUCTURE OF TEACHER ROLES

“The more that a district can explicitly promote a staged multi-path career (as opposed to a series of short-term opportunities), the more likely they will be to attract skilled teachers and end up with a distinctive career structure” (Johnson). As was the case in the preliminary report, most of the districts designed temporary positions that will rotate among teachers. Dr. Johnson describes this as a slight variant of the status quo, which is a flat career path with stipends.

Only one of the districts actually planned a distinctive career structure that was made up of different roles, responsibilities, and compensation for teachers. According to the district’s contact person, this plan will not be implemented because of the lack of implementation funds.

When asked specifically about a career structure or career pathways concepts, representatives from other districts agreed that this is a worthwhile goal, but cited a number of barriers and challenges to making this change:

Money. The primary barrier to restructuring career pathways for all eleven districts is a lack of funding. All of the districts reported that they couldn't implement such broad changes without money for release time, substitutes, increased salaries, and people to lead the change process. All said that the districts could not incorporate the costs involved in their current budgets. Some district representatives noted that these changes are hard to make when the district is losing teachers, and one contact person asked "how can we plan changes like this when districts don't know who will be here and who won't be here in the future?"

Unions. All of the districts discussed the role of the unions and the existing collective bargaining agreements in developing career pathways. In most cases, the general feeling was that although the unions were cautious, they were willing to listen and engage in conversation around changes. Three different types of union relationships were found:

Union Collaboration. Most of the districts collaborated with union representatives from the beginning and are attempting to work out creative solutions. Seven of the districts said that the unions have either not been an issue because there are no changes to salary scale or workload proposed, or that they have been supportive and willing to sit at the table and plan changes. Two people said that involving the union representative was key, because the representatives' perspectives changed as they learned what the initiative was about. One person said that the unions have been involved at the state level through such activities as attending the Milken Conference and initial planning at the state level. He believed that this helped the local unions accept the proposed changes. One respondent believed that the union representatives had valid concerns and it was important to try to find ways to address those concerns. Another district reported that the union was willing to extend the definition of "teaching" to include teaching adults as well as children.

Avoiding the Issue. Some of the districts are treading carefully, as is evidenced by comments like "we don't have problems because everything we are doing is in line with school and district improvement plans and fits within the regular structure," or "we avoid problems by offering these things on a voluntary basis".

Union Resistance. Four of the districts reported hesitancy or specific conflicts with the union. All of these said that there is resistance to change in general when it comes to teachers' and administrators' roles. One district applied for a T-CAP grant initially because they were having contract disagreements about implementation of a mentoring program in the district.

One person reported the negotiations climate as a barrier. Another said the district did not include the union in decisions about implementing the teachers-as-leaders program and ended up in a breach-of-contract conflict. Another district reported that they didn't reapply for a follow-up planning grant because the union in their district was not willing to work with them on such an initiative.

One of the districts that proposed short-term teacher-leader roles said if the plan were to go forward there would be a problem, because the union would want the short-term stipend to be retained after the teacher returned to the classroom. The district never reached this point in implementation.

Public Perceptions. Public perceptions were cited as barriers to structuring career paths by two districts. One representative believed that the community would not approve of a reduced courseload for teachers, as people already think that teachers receive high salaries as well as lengthy summer and holiday vacations. This issue never arose because the T-CAP planning stopped. Another district said that parents are concerned about the district using part-time teachers as part of their lead teacher program, as this means that their children have two different teachers for the same subject.

Effects on Students. One contact person said that people in his district were concerned that T-CAP will take the best teachers out of the classroom and replace them with less experienced or even under-qualified teachers, with the potential of a negative impact on students.

Time and People Resources. Time constraints were cited by all districts. The districts can't afford release time, substitutes, or stipends for after-school time. Two districts also had difficulty finding enough substitute teachers.

None of the representatives of the eleven districts believe that this initiative is possible given their current financial, time, and resource constraints. Three, however, said that their plans are solidified enough to begin implementation of the model as soon as funds become available.

DISTRICT OR SCHOOL LEVEL FOCUS

As was noted in Dr. Johnson's earlier report, districts are focusing their efforts at different levels of schooling. Five of the eleven districts planned their efforts as district-wide initiatives; three planned for implementation at the middle school levels only; one planned to begin at the high school level and draw in the middle school next; one planned efforts at the high school level only; and one was focused on an elementary school. Two of the districts that were focused on one level only stated that it was their intention to eventually spread these changes out across the district, but that they wanted to set up pilot demonstration sites so that other schools in the district would have an in-district model.

TIMELINE AND EVALUATION

Most districts were aware of the need to incorporate a planned evaluation strategy, but they stopped planning when they learned that implementation funds would not be available, and so did not develop detailed evaluation plans.

All of the districts changed their goals, plans, and timelines when it became apparent that no more funding would be available. All believed that they had done a good job of planning, but now have no way to implement the plans. Most of the T-CAP committees have disbanded or have been transformed into mentoring and induction committees. All of the districts used

volunteers on the committees and most provided small stipends for members. All reported a high level of interest and excitement in the beginning, followed by frustration and withdrawal of effort when it became apparent that the promises of implementation money fell through.

One respondent summarized the situation by stating, “Unfortunately, the state keeps sending up trial balloons for initiatives with promises of more money, and even though everyone understands that there is not enough money, when the promises don’t pan out, everyone loses interest. This is one of these same ol’ same ol’ initiatives.”

Some of the districts are seeking other grant money to continue their work, and some have received Educator Quality Grants which they believe will help them make slight changes, but all believe that they need substantially more funding in order to create the systemic changes necessary to implement a full T-CAP system.

MODELS

Districts used a number of models to develop their plans. The RFP specifically stated that the districts consider the Milken Model, and all did consider it. One district said they were basing their plans on the Milken Model, but the changes they have implemented do not reflect a heavy reliance on the model. None of the other districts believe that the Milken Model will work in their communities, although four districts reported that some of their ideas were stimulated by exposure to Milken and the other national models.

DEPARTMENT OF EDUCATION SUPPORT

The interview protocol attempted to guide districts toward describing potential non-monetary sources of support from the Department of Education (DOE), but all eleven districts once again stated that lack of money was the biggest issue. All believed that their ideas were good, but that they won’t happen without funding.

Districts were split on the question of whether DOE should set up one or two demonstration sites. One-third said they didn’t know or didn’t have an opinion. One-third said that the state should fund two model demonstration districts, so that there would be places in Massachusetts to visit and emulate. The final third said that while model demonstration districts are a noble idea, unless there is a mechanism in place to ensure ample and continuing funding for other districts, there is no way DOE can expect other districts to be able follow in the demonstration sites’ leads. All of the districts believed that the initiative cannot be funded statewide, and several stated that demonstration sites might end up creating even more frustration and dissatisfaction when people would not be able to do this in their own communities.

Beyond money issues, one respondent noted that DOE could work to identify and disseminate many new models that help teachers grow. Exposure to a variety of models rather than to just one might help districts glean new ideas that they could synthesize to develop their own local model.

The majority of the respondents were angry at DOE for promising money that didn't pan out. They noted that this is a repetitive pattern with DOE, and two reported feeling reluctant to try for more planning grants in the future, saying that they will try for funding from places that are more reliable. One person stated that her district has decided to stop applying for small grants because of the time and effort it takes to write and manage grants – they felt the time and effort should be spent for bigger grant proposals.

At the same time, most people said that they understood the budget cuts and the position that DOE is in, and noted that they realize that some difficult decisions must be made. Two respondents noted that the DOE was very helpful when they had concerns or questions and appreciated the informational role that DOE played.

LESSONS LEARNED

It is clear that the majority of the districts have not envisioned a paradigm shift in the way that teacher roles are structured, as a true T-CAP model demands. This is not surprising, given that the districts have only received funding for one or two years and they have pulled together a diverse group of players. This kind of group collaboration is complex, and made more so by the larger context of financial constraints and perceived negative attitude toward teachers in the Commonwealth

These districts do not perceive that the career-ladder model in its current state will solve the problems of teacher recruitment and retention – with no increases in funding, and in the current atmosphere of teacher layoffs, it is difficult for districts to “sell” the concept to the majority of teachers.

Given this context, some lessons emerge that can inform future endeavors.

Effective Strategies

DOE’s strategy of using a credible intermediary to extend its capacity appears to have been effective in this case. The five districts that were networked through Mass Insight all found that this collaboration was very positive and helpful. It is key that people who are knowledgeable and credible be involved in this process. These districts reported that having the opportunity to work with Susan Moore Johnson was extremely beneficial, and having access to knowledge about a variety of models was helpful. One district stated that Dr. Johnson “really helped us think through the details of what we wanted to do.” The networked districts had more comprehensive, sophisticated proposals and talked more about broad-based changes than the non-networked districts.

Requiring participation from all stakeholders in a district from the beginning was a valuable strategy. This makes the process more complex, but also often smoothed the road to change. Involving the union representatives generated some important conversations; however, most of the districts did not make or plan to make substantial changes in contracts, workload, or responsibilities. Focus groups of union representatives at the state and local levels could inform this process.

Process Issues

DOE needs to implement a more efficient tracking system for grant money. Some of the districts spent the T-CAP money not on development, but on other pre-existing projects in the district. Others were not able to account for T-CAP funds received.

Program plans need to include a method to track changes and research their impact. No school or district managed to implement a total T-CAP model, but many of them did implement some small-scale changes. These were not accompanied by plans to evaluate the effectiveness of those changes, which means that DOE and districts will not know if these changes are having their desired effects.

Suggestions for Future Grantmaking

If there is only a small amount of money and DOE doesn't want to put it all in one place, then the funds can best be focused on structure, choice, and decisions that can be influenced by DOE. Narrow the focus and consider influencing change in small increments, building on the strengths and changes a district has already made.

When offering planning grants, consider asking districts to design new initiatives or programs on the basis of their current resources rather than promising money that may or may not be there in the future.

Encourage districts to consider a variety of models, rather than assuming that because a model works in one place, it will work across the board. DOE could provide an array of models accompanied by credible evaluations of the models. All models have components that have failed, and an evaluation would spell out the lessons learned from the failures and specify the conditions under which each model succeeded. Districts can then ask if those same conditions exist in their communities, gain a better understanding of how realistic the model is for them, and discuss what can make the implementation a success. The districts that worked with Mass Insight Education reported that one of the most influential components of their training was finding out about the different models being used. They wished that they had access to more.

Non-Monetary Support from DOE

DOE could find exemplary schools/districts around the nation that have made significant changes work without influx of money: many schools have made such changes by rallying around a common focus. By asking questions such as "What did they do?" "How did they do it?" "What was the context?" "How does it differ from our own?" "How is it the same?" and providing access to this information and resources, the DOE could provide additional models for schools.

DOE can gather and disseminate information on grant and funding possibilities that exist around the nation and work to link districts to these opportunities.

PART II – POLICY ANALYSIS

In this section, we analyze the 12-to-62 Plan as a system. We begin with a summary of data on teacher supply and quality in the Commonwealth. We then outline the challenges faced in recruiting and retaining high-quality teachers in areas of need, and present a conceptual framework for addressing these challenges. We continue by placing the 12-to-62 Plan programs in this conceptual framework, along with some promising approaches from other jurisdictions. Next, we provide a summary of stakeholder views on the challenges of teacher supply, quality, and distribution. We conclude with policy-level recommendations for furthering the goals of the 12-62 Plan in Massachusetts.

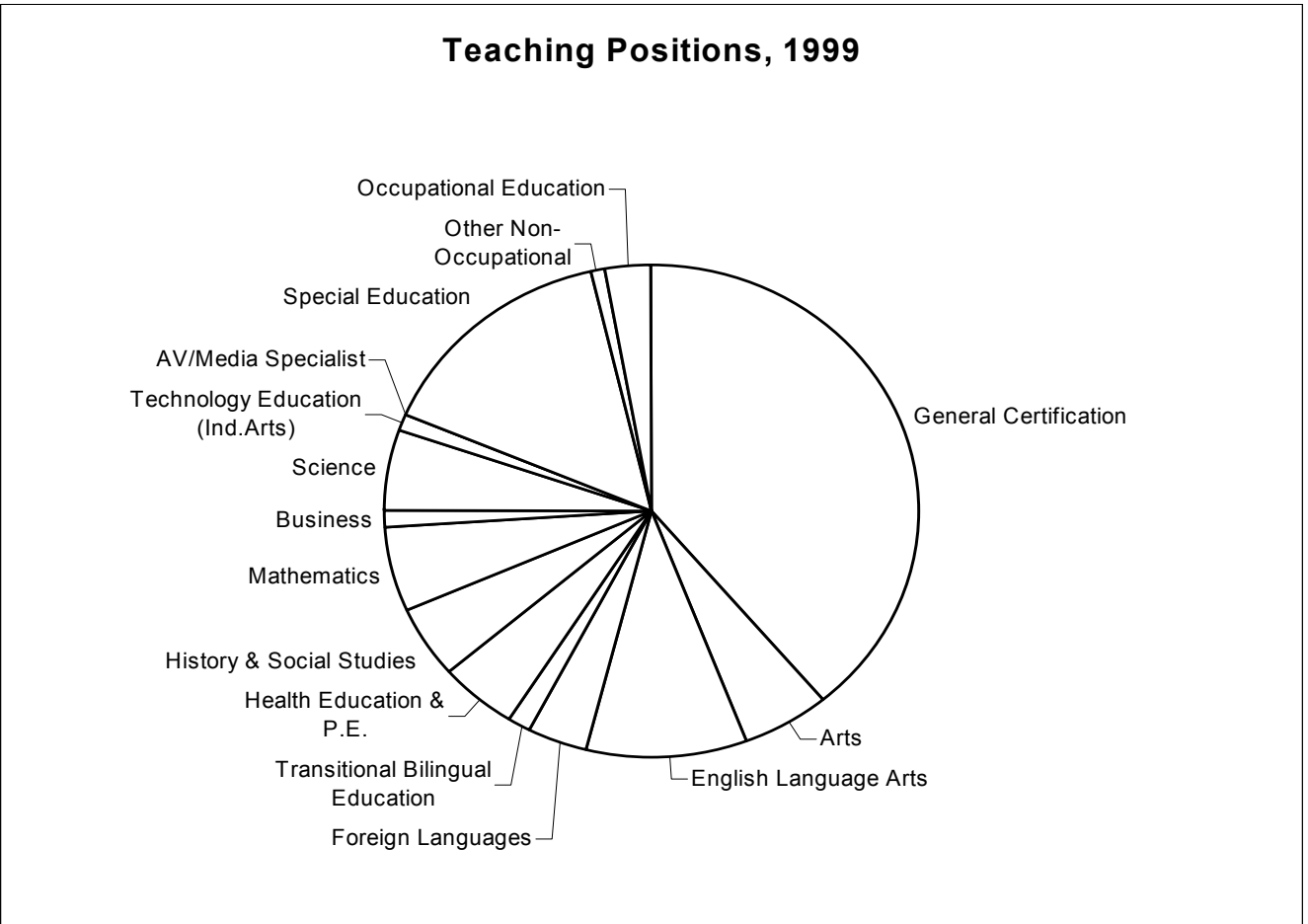
DATA ON MASSACHUSETTS TEACHERS

According to the Department of Education’s 1999 “October 1 Report” (the most recent we were able to obtain), there were 71,412.6 full-time equivalent (FTE) teachers working in Massachusetts.²⁸ The number of individuals working as teachers is larger than the FTE figure, because some teachers work part time.

The largest single group of teachers (28,625.1 FTE, or 40.1%) were in generalist positions, including elementary education, middle school, and early childhood education. The second largest group was special education (10,882.4 FTE, or 15.2%).

By comparison, in 1999, there were 5199.6 FTE administrators and 10054.1 FTE support staff working in Massachusetts schools and districts. Administrators include principals, assistant principals, supervisors, directors, and superintendents. Support staff include aides, tutors, counselors, librarians, media specialists, psychologists, social workers, and substitute teachers.

²⁸ Some of these data were collected as part of the Center for Education Policy’s development of an Annual Report on Education Reform for the Massachusetts Education Reform Review Commission.



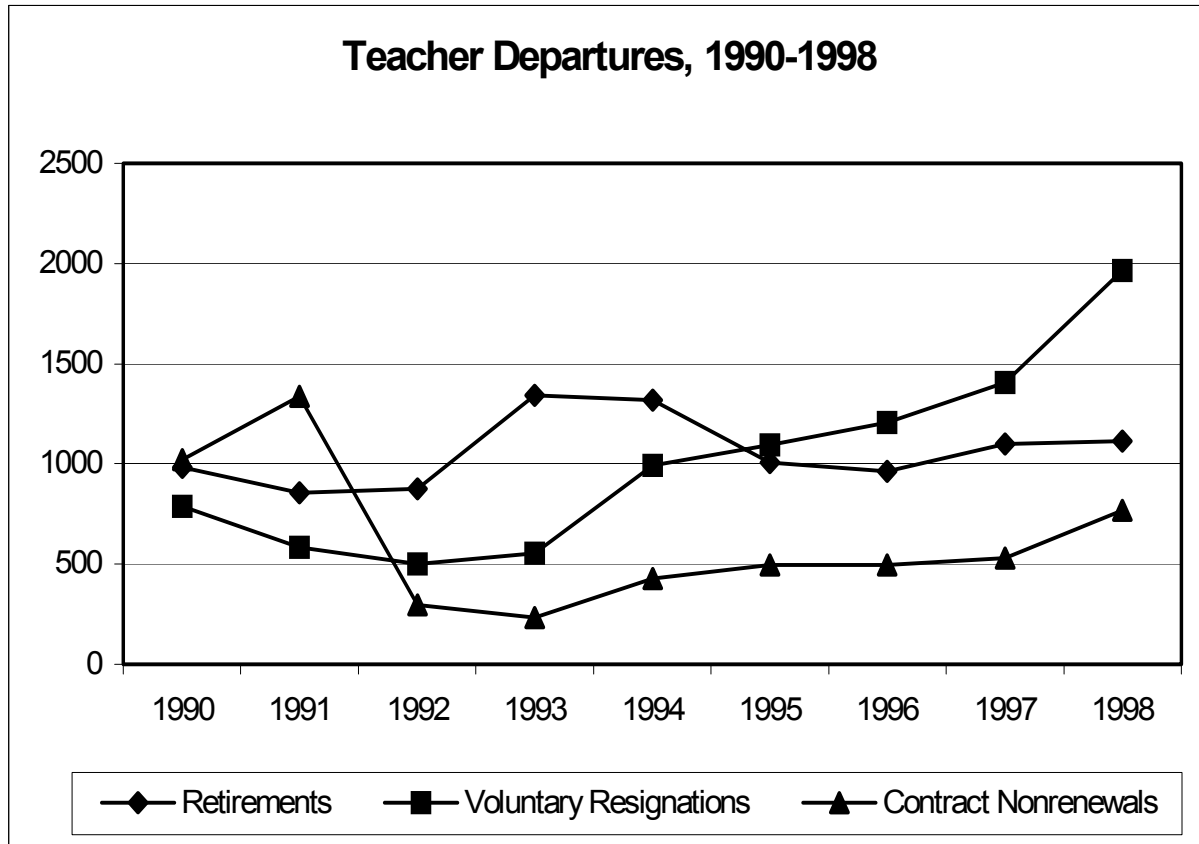
Trends in teacher supply and demand

According to data reported in a February, 2002 report issued by the Massachusetts Education Reform Review Commission, 41% of current Massachusetts teachers are age 50 or over, and 43% have 20 or more years of service. About 35,000 teachers (or approximately half of the 1999 FTE total) will probably be retiring over the course of the next decade.²⁹

Data on teacher supply and demand have not traditionally been collected, either for the Commonwealth of Massachusetts or for the U.S. as a whole. Our data for this report come from the Massachusetts Department of Education's "October 1 Reports." The format for these reports changed between 1998 and 1999, and the most recent report we have available is 1999.

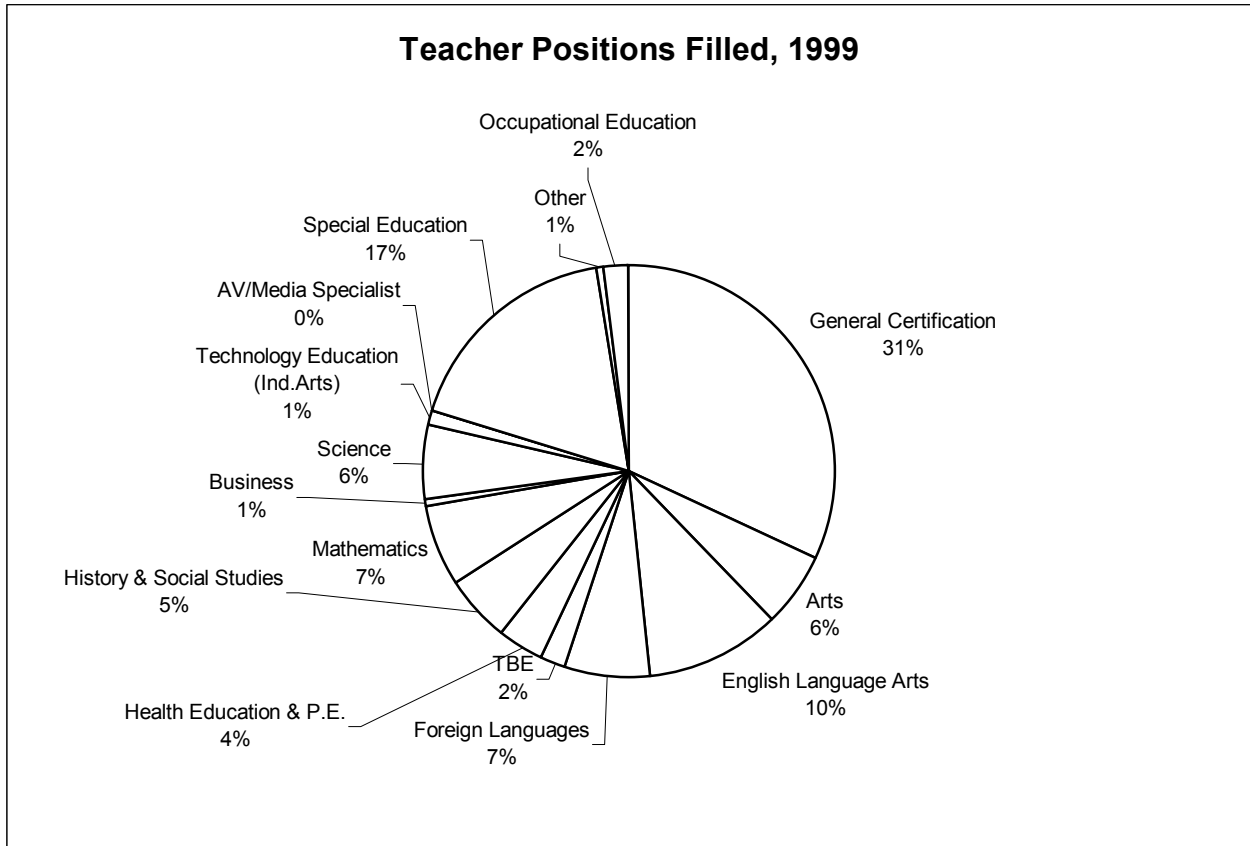
²⁹ Abeille, A., Hurley, N., & Nesbitt, J. (2002) *Teacher Supply and Career Development: Positive Pathways for Massachusetts*. Report prepared for the Massachusetts Education Reform Review Commission. Online: <http://www.massedreformreview.org/research/pdf/TS&D.pdf>

Teachers Leaving Positions. Between 1990 and 1998, the data on teachers' departures from their jobs presents a mixed picture. Retirements increased slightly over the entire time period, but peaked in 1993 and 1994. Voluntary departures, not including retirements, have increased steadily since 1992. There were more contract non-renewals in 1990 and 1991 than in any post-Education Reform year.

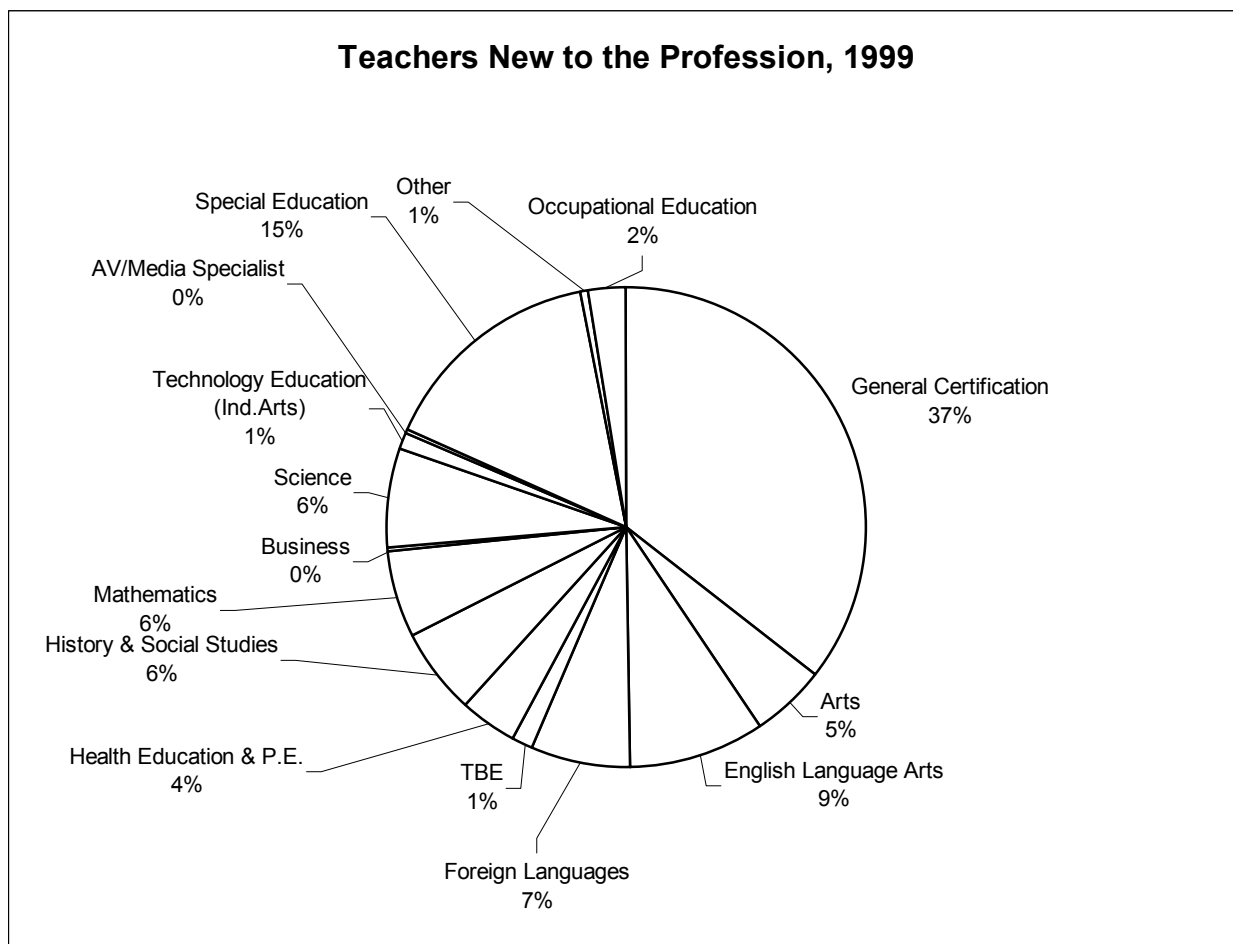


Beginning in 1999, DOE used a different format for the October 1 Reports. This format did not have separate categories for retirements and contract non-renewals. In 1999, the overall rate of voluntary departure for teachers was 4.7%, and the rate of involuntary departure was 0.6%. These figures appear generally consistent with the earlier trends. In 1998, the combined rate of retirements and voluntary departures was 3.8% and the rate of contract non-renewal was 0.9%.

Teachers Entering Positions. In 1999, the most recent year for which we have data, the largest category of teachers hired was “general certification”(including early childhood and elementary teachers and middle school generalists). There were 2,245 FTE positions filled with generalists in 1999. The next two largest categories were special education (1,241 FTE) and English Language Arts (753 FTE).



Of the teachers hired in 1999, 32.1% were new to the teaching profession. The newcomers were distributed among the subject categories in much the same pattern as the other new hires.



Uncertified/out-of-field teachers

Because schools rarely leave teaching positions vacant, they sometimes must hire teachers who are less highly qualified than would be ideal. In the 1999-2000 school year, the state issued 1,185 certification waivers.³⁰ According to the Northeastern University Center for Labor Market Studies, 4.8% of teachers in 2000 were uncertified in the fields in which they were primarily teaching. Of these teachers, 46% were continuing teachers, rather than new hires. In Fall, 2000, 28% of all newly hired middle and high-school teachers were hired to teach in fields for which they were not certified. 6.6% of secondary-school and 6.5% of special-education teachers were working in fields for which they lacked certification. The largest proportions of uncertified teachers were in technology, reading, foreign languages, industrial arts, chemistry, and physics.³¹

³⁰ Abeille, A., Hurley, N., & Nesbitt, J. *Teacher Supply and Career Development: Positive Pathways for Massachusetts*. Report prepared for the Massachusetts Education Reform Review Commission, 2002.

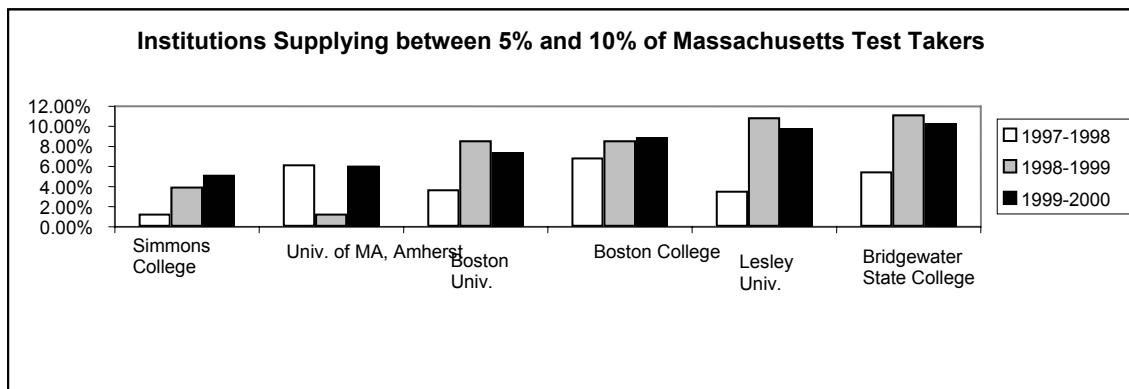
³¹ Fogg, N.P. & Harrington, P.E., *Teacher Labor Market Imbalances in Massachusetts: A Review of the Evidence*.

Sources of Massachusetts teachers

Ideally, it would be possible to obtain data on where each teacher currently working in Massachusetts was trained. Such data do not currently exist. The closest approximation is the institutional affiliation that teachers report when they take the Massachusetts Test for Educator Licensure (formerly the Massachusetts Educator Certification Test), which was first administered in 1998. This information does not tell us where all the current teachers were trained, but it does tell us which colleges and universities the most recent groups of aspiring teachers attended.

When the test was first given, about a third of test takers listed themselves as unaffiliated with a college or university, but the number of unaffiliated test takers has since fallen dramatically to 2% in 1999-2000 (the most recent year for which we could obtain data for this report). In 1999-2000, 59% of test takers were affiliated with private colleges and universities, and 39% with public colleges and universities.

The largest single source of 1999-2000 test-takers was a public institution, Bridgewater State College. Four of the five other largest sources of test-takers were private institutions.



Twenty-four other colleges and universities each accounted for between 1% and 4% of test takers in at least one year. Among this group, some of the larger proportions of test takers came from Fitchburg State College, Framingham State College, the Harvard Graduate School of Education, Salem State College, the University of Massachusetts at Boston, Westfield State College, and Wheelock College. Thirty-two other colleges and universities had small numbers of students taking the test.³²

If we look only at the numbers of students passing the test, as opposed to all test takers, the same institutions appear on the list of main sources of teachers. Bridgewater State College had the largest number of students passing, followed by Lesley University, Boston College, Boston University, the University of Massachusetts at Amherst, and Simmons College.

³² Sources: www.doe.mass.edu/mtel/results/9798/978sumcum.html (1997-98), www.doe.mass.edu/mtel/results/9899/summary.html (1998-99), www.title2.org/cgi-bin/broker.exe (1999-2000).

An increasing number of teachers are being prepared through the Massachusetts Institute for New Teachers (MINT) program. In 2000, 165 new teachers graduated from the program. This is more than graduated from most of the state's higher-education-based teacher preparation programs in that year.³³

Teacher salary trends

At first glance, teacher salaries in Massachusetts appear to have grown considerably in all district types and for the state as a whole since 1993. In fiscal year 1993, the state's average teacher salary was \$38,681. In fiscal year 2000, it was \$46,580. However, if we adjust these figures to take the overall level of inflation in the economy into account, the growth has been less dramatic. Converted into 2001 dollars,³⁴ the 1993 average salary was \$47,112 and the 2000 average salary was \$47,878. This represents an increase of less than 2%.

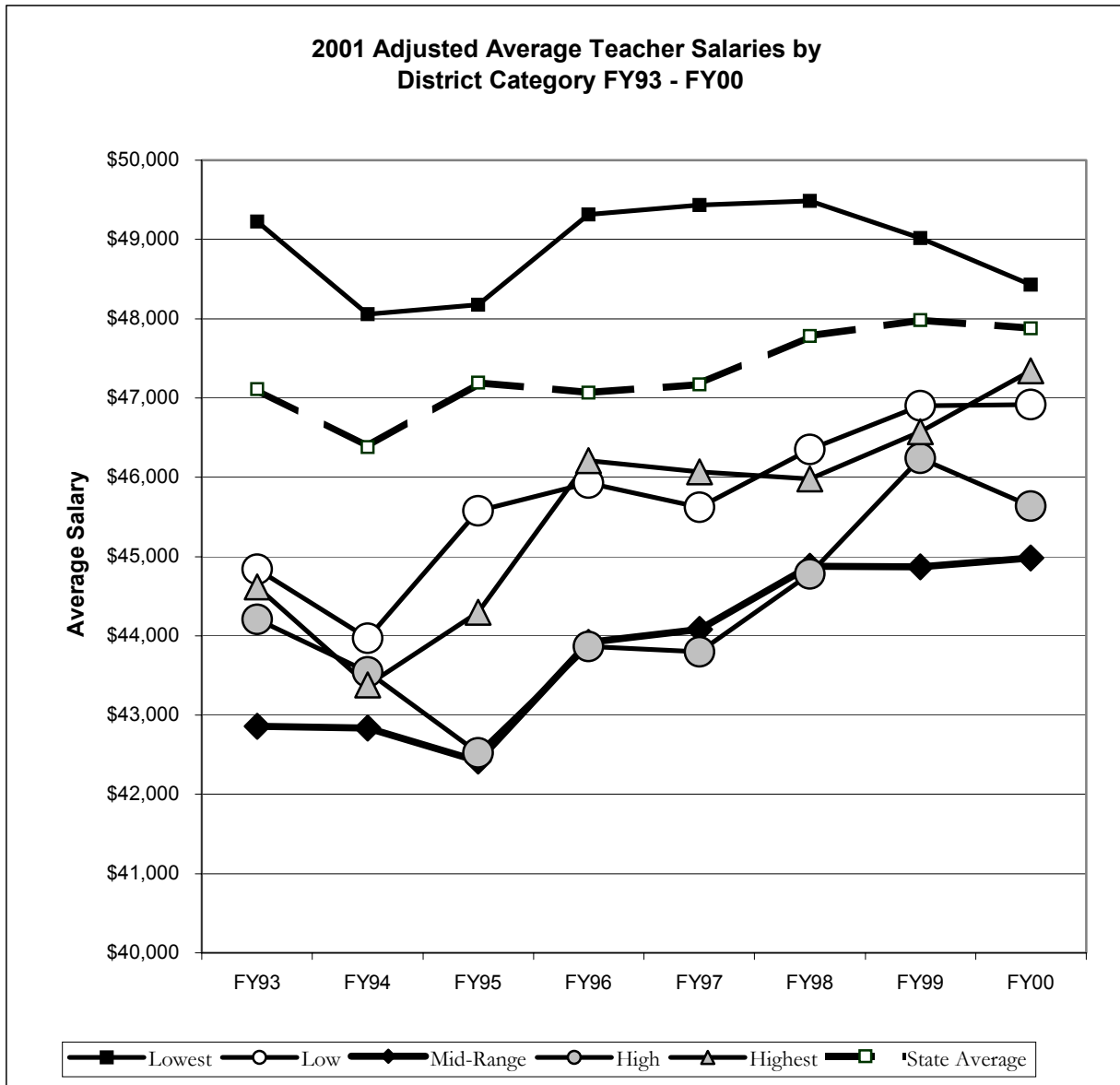
The chart below shows how teacher salaries in districts at different income levels have converged in the years since passage of the Education Reform Act. This narrowing can be seen by comparing the distance between the top line and the bottom line on the left side of the chart to the distance between the top and bottom lines on the right side of the chart. Note that the middle-income districts, not the lowest-income districts, have the lowest teacher salaries on average.

In 1993, the wealthiest districts' average teacher salary (in 2001 dollars) was \$49,226, while the middle category of districts, which had the lowest average teacher salary, paid \$42,857. Thus, the gap was \$6,369. Stated a different way, in 1993 the teachers in the lowest-paying group of districts earned 87 cents for every dollar paid to their peers in the highest-paying group.

By 2000, the gap between the highest-paying category of districts and the lowest had narrowed to \$3,442 (in 2001 dollars). Teachers in the lowest-paying districts were earning 93 cents for every dollar paid to their peers in the highest-paying districts.

³³ In 1999, there were 59 MINT graduates. In 2001, there were 220. In 2002, 210 teacher candidates completed the program.

³⁴ Annual salaries were converted to 2001 dollars using the U.S. Department of Labor's Consumer Price Index for the Northeastern region.



The gaps have narrowed because average teacher salaries have changed in different ways in districts at different income levels. The highest-income districts' average teacher salary actually declined slightly, on an inflation-adjusted basis, between 1993 and 2000, while the other districts' average salaries rose. Average salaries rose the most in the lowest-income districts. The middle and medium-low income districts were paying the lowest average salaries in 1993, and despite increases, continued to pay the lowest average salaries in 2000.

Differences in average salaries across districts and district types do not necessarily mean that there are differences in the districts' pay scales. The salary differentials could also be the result of differences in teachers' levels of education (those with more degrees generally earn more money) or years of service in the district types.

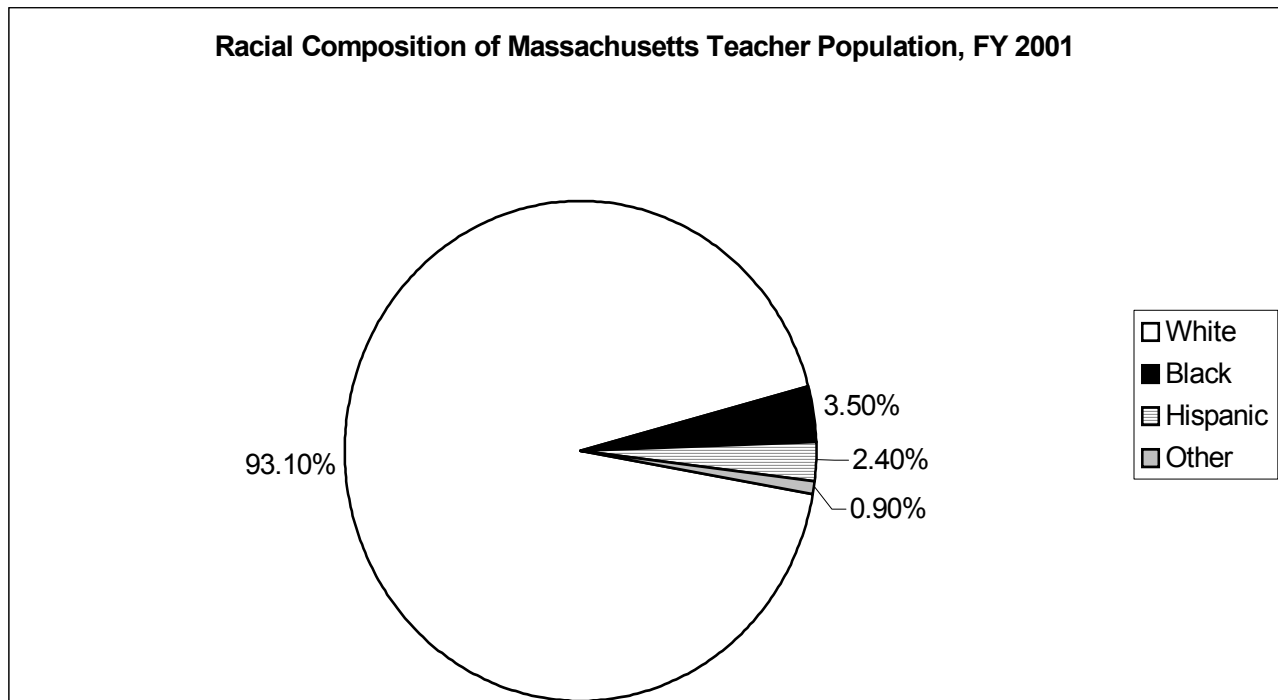
Teacher salaries compared to those in other states

According to a report released by the American Federation of Teachers (American Federation of Teachers, 2002, Table I-1), Massachusetts' average teacher salary ranks eleventh in the U.S.. Looking at neighboring states, average teacher pay in Massachusetts is less than that of Connecticut, New York, and Rhode Island, but more than that of New Hampshire, Vermont, and Maine.

Massachusetts' average starting salary for teachers with a B.A. degree ranks tenth in the U.S., behind New York and Connecticut but ahead of Rhode Island, Vermont, New Hampshire, and Maine (American Federation of Teachers, 2002, Table III-1).³⁵

Racial and ethnic composition of Massachusetts teachers

The "typical" Massachusetts public school teacher is a white woman. As of 2001, the Massachusetts teacher workforce was about 93% white, a proportion which has dropped only slightly since 1995. A large majority of the state's teachers (72%) are women. This proportion has increased slightly since 1995, when 70.0% of teachers were women.



The teacher work force is "whiter" than the student population, which was 77% white in 2000. There have been slight increases since 1995 in the proportion of the state's teachers who are black, Latino, Asian-American, or Native American.

³⁵ American Federation of Teachers (2002). AFT Survey and Analysis of Teacher Salary Trends 2001. Online: http://www.aft.org/convention/download/01survey_tables.pdf.

TEACHER WORKFORCE CHALLENGES

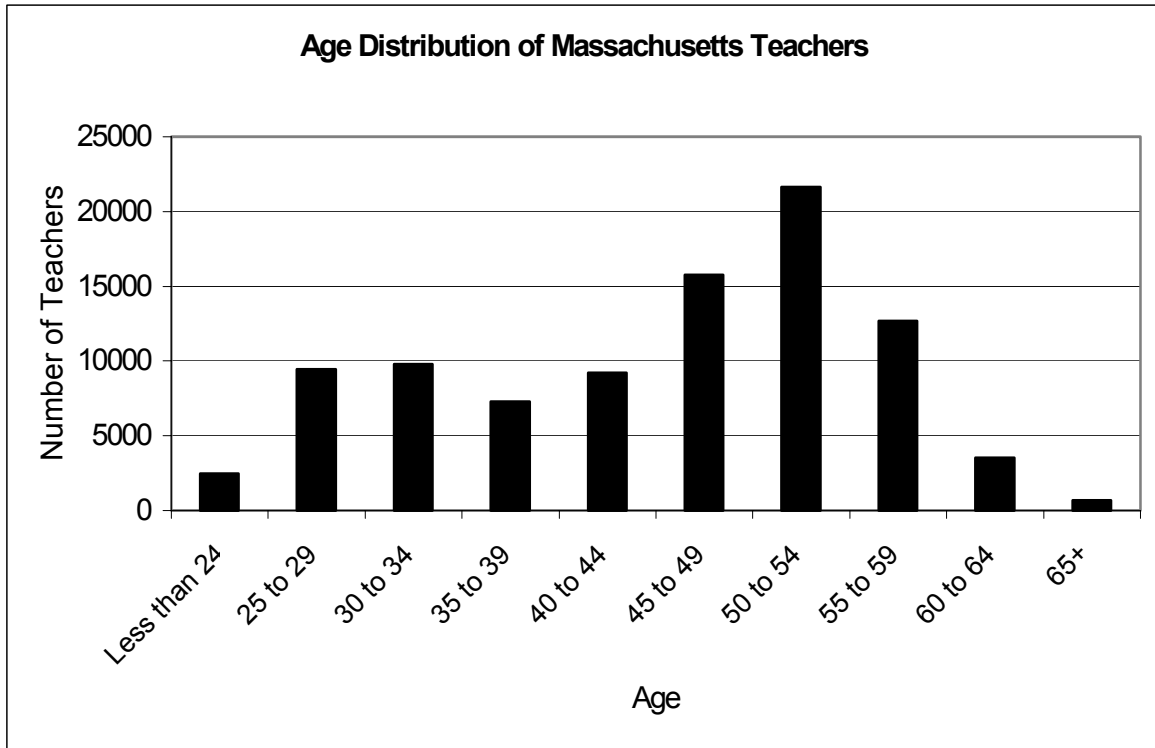
As part of our research, we conducted an extensive literature review on teacher recruitment and retention issues (see Bibliography). From this literature review, as well as the program evaluations and stakeholder input, we developed a summary of teacher workforce challenges.

Looming Retirements of Experienced Teachers

According to a study sponsored by the Massachusetts Commission on High Technology Workforce Development and the New England Council, Massachusetts has recently experienced high levels of growth in hiring of teachers (Fogg & Harrington, 2001). Fogg and Harrington found that, compared with high-technology professionals, teachers have a relatively low rate of attrition. However, this rate may increase in the near future for two reasons. First, the state has recently put incentives in place for teachers to retire early. Second, retirees will generally be replaced by teachers in their first few years of service, who leave the profession at higher rates than their more experienced peers.

Data on the age and years of service of the current Massachusetts teacher population confirm the impending increase in retirements. According to the 2001 *Actuarial Valuation Report* of the Public Employee Retirement Administration Commission, 41% of the Commonwealth's teachers have twenty or more years of service.³⁶ Looking at the age distribution of the teacher workforce shows the coming retirement boom even more dramatically. Forty-one percent of Massachusetts teachers are age 50 or older.

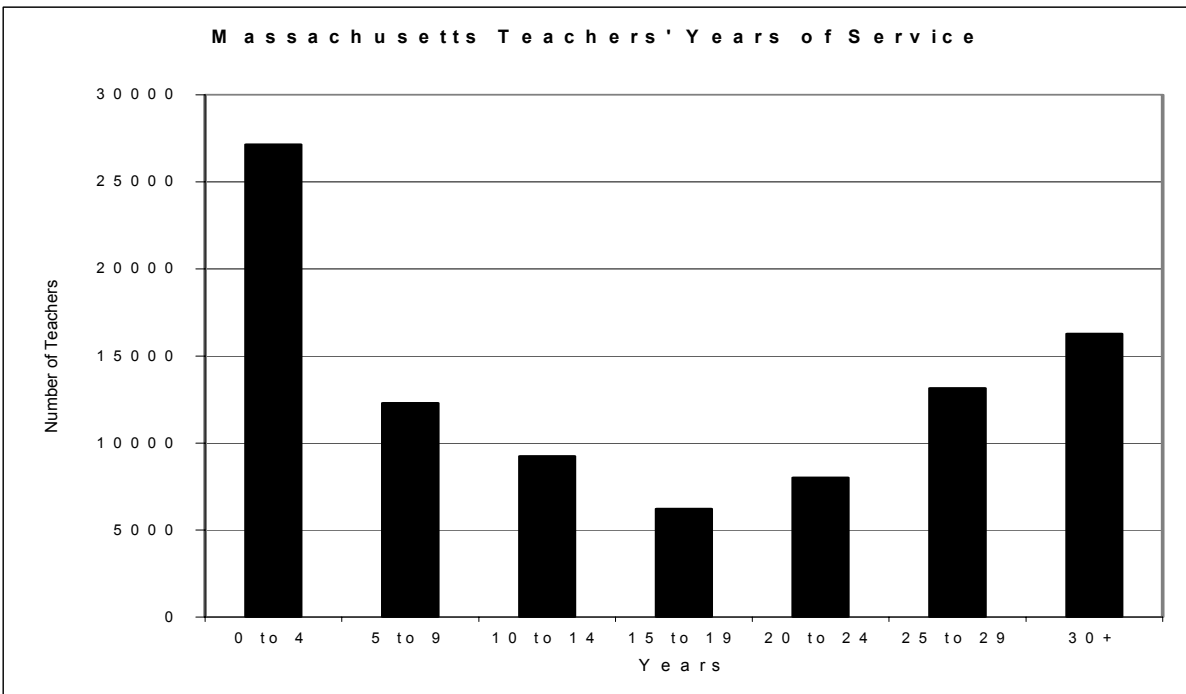
³⁶ The *Actuarial Valuation Report* lists Boston and non-Boston teachers separately. In this report, Boston and non-Boston data were combined to produce statewide figures.



According to the Massachusetts Teachers’ Association, the larger of the state’s two teacher unions, 50% of the state’s teachers will need to be replaced within the next ten years (Learning Innovations at WestEd, 2001). Taking the *Actuarial Valuation Report* data on age and years of service together, 18% of those currently teaching in Massachusetts are 50 or older with 30 or more years of service.

Failure to Retain New Teachers

A number of researchers have noted that school staffing problems are caused not so much by an inadequate supply of qualified individuals but by inadequate retention of teachers once they begin teaching. Nationally, approximately 29% of all new teachers leave teaching altogether within 3 years, and 39% leave within 5 years (Ingersoll, 2001). A look at the distribution of Massachusetts teachers by years in teaching supports this finding, indicating a huge dropoff in teachers with 5-to-9 years of service, relative to the number of newer teachers with 0-to-4 years of service.



Nationally, teacher turnover is particularly strong in the areas of special education, mathematics, and sciences (Ingersoll, 2001). And although all types of districts report difficulty retaining new teachers, this problem is particularly pronounced in schools located in low-income areas. The turnover rate for schools in high-poverty areas, for example, can be as high as 50% (Hare & Heap, 2001; NASBE, 1998; quoted in Voke, 2002).

Some researchers have also found that the most academically successful and effective teachers leave the profession at the highest rates. For example, in a study conducted in the Midwest, the majority of superintendents interviewed reported that 75 to 100% of the teachers leaving classrooms are “highly effective” or “effective” (Hare & Heap, 2001, quoted in Voke, 2002). Another study found that new teachers who scored in the top quartile on their college entrance exams are nearly twice as likely to leave teaching than those with lower scores (Boser, 2000, quoted in Voke, 2002)

Researcher Richard Ingersoll notes that over 90% of new teacher hires are simply replacements for recent departures. He also notes that about half of total teacher turnover is cross-school migration—teachers moving from one school to another—while the other half is teachers leaving the field entirely.

Ingersoll identifies the following distribution of reasons for teacher turnover:

Reason	Percent ³⁷
Retirement	12%
School Staffing Action ³⁸	28%
Family or Personal ³⁹	39%
To Pursue other Job ⁴⁰	25%
Dissatisfaction	26%

Other research and stakeholder conversations yield the following reasons for teacher turnover:

- Pay and working conditions.** Teaching remains a relatively low-paid, low-status profession compared with other jobs requiring similar levels of education (Murnane, Singer, & Willet, 1998; Scherer, 2001; Webb, 1993; Gold, 1998). Teachers, especially those with the strongest educational credentials, incur an “opportunity cost” by forgoing higher wages in better-paid fields (Murnane, 1993; Heyns, 1988; Schlechy & Vance, 1981). Math and science teachers, in particular, face other attractive career options offering significantly higher pay. In many urban areas, rising housing costs make it more difficult for teachers to live near where they work. Teachers’ working conditions—in particular their isolation from other adults, inadequate support from school administration, lack of student motivation and discipline, substandard physical plant and lack of supplies, feeling of pressure from new accountability policies, and increased administrative tasks—are also widely recognized obstacles to retention (Yee, 1990; Bennet & Lecompte, 1990; MacDonald, 1999; Ball & Goodson, 1985; Ingersoll, 2001).
- Lack of support for new teachers.** Susan Moore Johnson and her colleagues at Harvard’s Project on the Next Generation of Teachers have found that new teachers feel that they receive little guidance or encouragement from their new schools. While most have been assigned mentors, schedule and time constraints and differences in subject and grade levels make it difficult for one-to-one mentoring arrangements to be effective (Johnson et al., 2001, and personal interview). New teachers also report wanting significantly more guidance from their colleagues on what curriculum to teach and how to teach it (Kauffman, Johnson, et al., 2001, and personal interview). In addition, new teachers are frequently assigned the most challenging students, asked to teach multiple subjects, required to teach classes for which they are not certified, and assigned responsibility for overseeing extracurricular activities (U.S. Department of Education, 2000, quoted in Voke, 2002).
- Changing career patterns.** Heather Peske, Susan Moore Johnson, and their colleagues have also documented changes in the career expectations of the current generation of teachers. Rather than seeing teaching as a calling and a lifelong career choice, many new teachers enter teaching with the idea of either testing their interest as a possible career choice or as a short-term contribution to society before moving on to the next stage of

³⁷ Adds to more than 100% due to teachers selecting multiple answers.

³⁸ Includes cutbacks due to layoffs, school closings, and reorganizations.

³⁹ Includes departures for pregnancy, child rearing, health problems, and family moves.

⁴⁰ Includes pursuing jobs both in and out of education.

their career (Peske et al., 2001). This increases “churn” in the workforce and thus presents new hiring and administrative challenges. It also increases the retention challenge, as new teachers approaching teaching more tentatively are less likely to tolerate a lack of support on the job.

- **Lack of career progression for long-term teachers.** Teaching traditionally has offered few opportunities for career advancement (Evans, 1989) or influence over decision-making (Ingersoll, 2001) while remaining in the classroom. This “the only way up is out” mentality is a source of mid-career teacher burnout and an obstacle to retention of experienced teachers.
- **Migration of teachers from high-need schools.** As noted above, half of teacher turnover is actually inter-school migration. The direction of this flow is largely away from high-poverty, low-achieving, urban schools, some of which have turnover rates as high as 50%.

Other Obstacles/Barriers to Entry

In addition to those already mentioned, several other obstacles factor into the challenge of recruiting high-quality teachers.

- **Undergraduate Mathematics and Science Coursework and Teacher Preparation.** The academic content needs of K-12 science and mathematics teachers are somewhat different from those of future scientists, engineers, and mathematicians. Undergraduate courses have not always accommodated these different needs, thus reducing the potential pool of future teachers. Schools of Education and Arts & Sciences departments are working together on these issues in many institutions. Some institutions have developed new courses and programs that satisfy both departmental requirements and future teachers' content needs.
- **Mid-career time and financial limitations.** As MINT has demonstrated, a number of mid-career professionals have the interest and the content knowledge to become teachers. However, given family obligations and/or other lifestyle demands, the time and financial costs of teacher preparation programs, and the information costs of locating them, can limit the effective size of this pool of potential teachers. Successful programs targeting this group will streamline access to program information and provide routes to entry into teaching that do not require long periods without income.

Teacher Supply and Quality are Linked

Research indicates that the teacher supply challenge is actually a teacher quality challenge. For a variety of reasons, including the need to maintain a safe environment in school buildings and the need to maintain mandated student-teacher ratios, schools rarely leave positions vacant. Richard Ingersoll notes that, when faced with difficulty locating enough qualified teachers, principals “commonly do three things: hire less-qualified teachers, assign teachers trained in another field or grade level to teach in the understaffed area, and make extensive use of substitute teachers” (Ingersoll, 1997, quoted in Voke, 2002). A recent study by the Center for Labor Market Studies at Northeastern University confirms that teacher shortages in Massachusetts do not generally

manifest themselves as vacant positions.⁴¹ “Instead of quantitative changes in supply-demand relationships that occur in most other labor market segments, the teacher labor market adjusts to shortages by reducing teacher quality” (Fogg & Harrington, 2001).

Disproportionate Shortages in Certain Areas.

Two areas of disproportionate shortage have been identified:

- **Shortages in Particular Teaching Areas.** Certain types of teachers are in general demand across district types. These include sciences, mathematics, special education, and languages (AAEE, 2001; NASBE, 1998). In these cases, the market faces a supply problem, with not enough of these types of teachers being produced by preparation institutions to meet demand.
- **Shortages in Particular Types of Districts.** Schools serving low-income students and students of color have more difficulty than other districts in recruiting qualified teachers (NASBE, 1999). Teacher turnover is greater in high-poverty public schools than in more affluent ones (Ingersoll, 1999). Out-of-field teaching is most prevalent in poor and urban districts (Archer, 1999).

⁴¹ The Northeastern study found that the Fall 2000 vacancy rate for teaching positions in Massachusetts was only 0.8%. Special education positions and secondary-level positions were slightly more likely to be vacant.

WHAT CAN BE DONE? AN INTERVENTION FRAMEWORK

Based upon our research and our discussions with education stakeholders, the research team has identified an “intervention framework” of leverage points for addressing the above-mentioned teacher supply, quality, and distribution challenges. We have found this intervention framework to be useful in categorizing the different types of policy actions available to DOE and other decision-makers in this area. Teacher recruitment and retention initiatives can target some or all of the following areas:

- **Recruit more potential teachers;**
- **Reduce barriers to entry** (without reducing quality);
- **Prepare candidates** (pre-service and in-service) for the demands of schools and standards-based reform;
- **Retain more new teachers**/improve induction and mentoring;
- **Retain experienced teachers**/improve working conditions and career development; and
- **Target the distribution problem** of shortages in particular regions or specialties.

As the following table shows, the 12-to-62 Plan has elements that address each of these potential leverage points.⁴² (Other, non-12-to-62 Plan policy initiatives are indicated in italics.)

<p>Recruit More Potential Teachers</p> <ul style="list-style-type: none"> • Tomorrow’s Teachers Clubs • Tomorrow’s Teachers Scholarships • Signing Bonuses • AET loan reimbursement 	<p>Reduce Barriers to Entry</p> <ul style="list-style-type: none"> • MINT accelerated program • <i>Other accelerated routes</i> • <i>Regional credential efforts</i>
<p>Prepare Candidates</p> <ul style="list-style-type: none"> • MINT • <i>State teacher standards</i> • <i>Program approval regulations</i> • <i>District-based collaboration efforts</i> • <i>Arts & Sciences collaboration efforts</i> 	<p>Retain New Teachers</p> <ul style="list-style-type: none"> • Summer Mentor Training • Master Teachers as mentors • Case Study Seminars • AET loan reimbursement • <i>Required induction programs</i>
<p>Retain Experienced Teachers</p> <ul style="list-style-type: none"> • Master Teacher certification • Summer Mentor Training • T-CAP 	<p>Target the Distribution Problem</p> <ul style="list-style-type: none"> • Targeting of Signing Bonuses to high-need areas • Targeting of AET loan reimbursement to high-need areas

⁴² *Teacher Supply and Career Development: Positive Pathways for Massachusetts* (MA Education Reform Review Commission, 2002), by Ann Abeille et al., was a significant help in developing this table.

INTERVENTIONS IN OTHER STATES

This section summarizes a variety of approaches taken by other states in response to teacher recruitment and retention challenges. They are loosely grouped according to the intervention framework categories.

Recruiting More Potential Teachers

The **UTeach program at the University of Texas at Austin** is a joint effort of the College of Natural Sciences, the College of Education, and the Austin Independent School District that actively recruits and supports undergraduates in the Natural Sciences who are interested in careers in secondary math and science education. A key goal is to let students explore K-12 classroom teaching early; those who have an affinity for teaching will confirm that teaching is right for them, while others will quickly find out otherwise and pursue other college and career options. The University is aggressive in its effort to attract students. All first-year students, upon acceptance into the College of Natural Sciences, are immediately sent a letter to ask them if they have considered teaching as a career. If students choose to explore the UTeach program, their tuition for the first two one-hour classes is covered by the University. The program includes the following elements:

- Support in the form of small cohort groups, opportunities to be guided by master teachers, loan reimbursement, and paid internships;
- Teacher preparation that includes a focus on the knowledge required for the specific discipline;
- Professional education sequence that includes pedagogical training based on current research;
- Assessments based on a teaching portfolio that is reviewed by university faculty and local school district teachers and/or administrators;
- Early and ongoing field experiences (beginning in the first semester of the program); and
- Multiple entry points into the program (either as a first-year student or a post-baccalaureate student)

The first class, in the fall of 1997, had 28 students. By the Fall of 2001, 247 students had enrolled in the program, and 31 of 35 graduates (88%) were teaching. The Education Trust in Washington, D.C., has chosen UTeach as a model to be included in their future work. The National Research Council has also expressed interest in piloting a similar program.

Troops to Teachers, mentioned above in the MINT evaluation, is a program that encourages retiring military officers to enter teaching. Because they have pensions, the salary issue is less pressing. In addition, retiring officers offer a diverse pool of candidates who often have a background in mathematics, science, or technology. The service academies run job fairs for their former graduates.

Virginia's Teaching Scholarship Loan Program helps **paraprofessionals** earn college degrees and teacher certification. Paraprofessionals are a promising pool of new teachers because they already have experience working with children in schools and often come from populations that have historically been under-represented in the teaching profession. A study by Recruiting New Teachers (2001) touted this group as an important untapped resource for schools.

In response to the teacher shortage in urban and rural schools, since 1989 the Dewitt Wallace-Reader's Digest Fund has sponsored its **Pathways to Teaching Careers** program, which was operating in 42 districts around the country by 1999. The Pathways program seeks to recruit from three non-traditional pools: **paraprofessionals, uncertified teachers, and returned Peace Corps volunteers**. While important differences exist among the 42 programs, all share four basic features:

- A partnership between a teacher education program that prepares participants and one or more high-need school districts that employ them;
- A process that combines traditional and nontraditional criteria to select participants;
- A rigorous and innovative teacher education curriculum that is tailored to the needs of nontraditional participants and builds on their strengths; and
- Varied types of support for Pathways candidates while they pursue college degrees (B.A. or master's) as well as teaching certificates.

A six-year evaluation of the paraprofessional and Peace Corps volunteer programs found that Pathways has recruited more than 2,200 individuals, with a substantial proportion being minorities; that the Pathways completion rate is higher than the national rate for students in traditional teacher education programs; that Pathways graduates teach in urban/rural districts at very high rates; that Pathways graduates are perceived by their supervisors, their principals, and a trained, independent assessor to be more effective as teachers than the typical beginning teacher in their schools; and that Pathways graduates are more likely to remain in teaching for at least three years than are typical beginning teachers.

California has established **teacher recruitment centers** in six regions of the state that have a demonstrated need for more teachers. The state also gives **grants to low-performing schools**, for them to use as they see fit to provide recruitment and retention incentives (Hirsch, Koppich, and Knapp, 2001).

South Carolina's Teacher Cadet Program targets high school students who are interested in teaching. Students participate in a year-long course focused on aspects of teaching and incorporating content in specific school subjects. Many of the state's colleges grant credit for participation in this course. Students also engage in hands-on opportunities to observe teaching, construct lesson plans, and tutor younger students. An average of 35% of participants have indicated plans to pursue teaching careers, and over 2,000 program graduates are currently teaching in South Carolina. The program has been replicated in eighteen other states, including Massachusetts (www.scctr.org/teachercadet.asp).

Mississippi's Critical Teacher Shortage Act focuses on recruiting teachers to geographic areas with a high need for teachers. The act provides financial support to pre-service and in-service teachers who agree to teach in teacher shortage areas (see details below). In publicizing the Act, state officials focused heavily on marketing the program in the shortage areas themselves. They hoped that teachers who are from the areas that they are serving will have already put down roots in the community and will be more willing to stay (NASBE, 1999).

A number of states have used **financial incentives** to market the profession. **Connecticut increased and equalized salaries** in districts around the state in 1986. This allowed poorer districts to offer salaries that are competitive with those in the wealthier suburbs. Concurrent legislation also mandated higher licensing standards, elimination of emergency licensing, a tiered teacher certification system involving support for new teachers, and non-monetary incentives to attract high-ability candidates into teaching. Within three years, Connecticut had gone from a teacher shortage to a surplus, with growing evidence of teacher quality. (Wilson, Darling-Hammond, and Berry, 2001)

California has provided the following financial incentives to attract and retain teachers:

- Beginning teacher salaries of \$34,000;
- **Tax credits** to teachers who serve at least four years in public or private schools. The size of the credits varies with length of service;
- \$20,000 **teaching fellowships** through competitive awards to up to 1,000 candidates who agree to teach in a low-performing school for up to four years;
- **Loan forgiveness** for a total of 6,500 teachers in 2000-2001; and
- Two percent of earnings placed in a **supplemental retirement account** for members of the State Teachers' Retirement System, available as a lump sum or as an annuity when the member retires.

(Hirsch, Koppich, and Knapp, 2001)

Other states have also taken action to provide financial support to teachers, usually in the form of salary raises:

- **Alabama** provided an 8.5% cost of living adjustment in 1998, and approved additional pay increases designed to gradually raise teachers' salaries to the national average;
- **Maryland** created a **teacher salary challenge program** that provides an additional one percent increase in pay for teachers if districts raise salaries by four percent;
- **Arizona** raised taxes to increase teachers' base level compensation and **compensation based on performance**;
- **Oklahoma** increased salaries by \$3,000 for certified personnel, raising the minimum starting salary to \$27,060.
- **Maryland** is providing a \$1,000 **signing bonus** for candidates who graduated in the top ten percent of their class and who agree to teach for at least three years.

(Hirsch, Koppich, and Knapp, 2001).

Reducing Barriers to Entry/Preparing Teachers for the Demands of Schools

North Carolina, Pennsylvania, and South Carolina have a **common application form** that can be used in any district in the state (Hirsch, Koppich, and Knapp, 2001). **Arizona, Colorado, and Minnesota** have moved to make it easier for teachers licensed in other states to obtain licenses in those states.

Some states are also experimenting with programs that **help teachers purchase homes**. These programs began at the district level, but **Connecticut, California, and Mississippi** now offer them across the state. In Connecticut, teachers in needy districts and in high priority subject areas qualify for low-interest mortgages and down payment assistance. California offers loans of up to \$7,500 to help with down payments, to educators who work in high-need districts for at

least five years after receiving the loans. In Mississippi, teachers get grants of up to \$6,000 toward down payments and closing costs on houses in regions where the need for teachers is considered critical, if they agree to teach in these districts for at least three years. New hires can also receive up to \$1,000 in moving expenses (Galley, 2001).

The **North Carolina Teaching Fellows** program is a prominent example of a state providing financial and educational support to students who are interested in becoming teachers. The program provides \$6,500 per year for up to four years to 400 qualified students, who in turn maintain a specified grade point average and participate in enrichment opportunities during the school year and the summer. Students also must enter a teacher education program by their junior year, and teach for four years in the North Carolina public schools after graduating. The fourteen participating campuses provide enrichment opportunities that set this program apart from other scholarships. Students travel around the state to learn about the state's economic and cultural diversity and its effect on the schools. They also participate in seminars and conferences with other Teaching Fellows. (<http://www.teachingfellows.org/>)

Forty-one states and the District of Columbia have **alternative paths to teacher certification** (Feistritzer, 2001). Many use waivers or other means that allow people to be placed in classrooms as teachers without fulfilling traditional requirements. Some states have developed summer programs that prepare people with college degrees but no education background to begin teaching in the fall, with additional support and training during the school year.

One such program is **Georgia's Teacher Alternative Preparation Program** (TAPP, formerly called Teach for Georgia). This is a classroom-based teacher education model, for individuals who possess the basic qualifications to teach but have not completed a teacher certification program. Participants take summer courses and then teach in a classroom while completing a two-year induction program, offered by colleges and universities around the state. The induction program consists of seminars, interactions with mentor teachers, classroom observation (of and by others), and the development of a teaching portfolio (<http://www.teachforgeorgia.org/>). Georgia TAPP began during the summer of 2001. A total of 758 people completed the summer program, and many were placed in public schools. The state will watch closely to determine their success and retention rates (Donsky, 2001).

Connecticut's Alternate Route to Certification (ARC) is structured very similarly to TAPP, with eight weeks of summer training or a school year's worth of Friday evening and Saturday daytime classes. ARC participants also take part in the state's BEST teacher induction program (see *Support for New Teachers*, below), receiving two years of closely supervised instruction (<http://www.ctdhe.org/ARC/alt1.htm>).

A summary of a number of other **apprentice-style teacher preparation programs** is attached as an Appendix (*Appendix XIX: Apprenticeship and Immersion Programs*).

California provides **grants to teacher interns** and has expanded the intern and pre-intern programs to 12,700 slots. Interns work in classrooms under mentor supervision while earning their teaching credentials (Hirsch, Koppich, and Knapp, 2001).

Summaries of some other alternative certification programs (Hirsch, Koppich, and Knapp, 2001):

- **California** grants emergency permits to individuals who are enrolled in classes to fulfill education requirements, are employed as full-time teachers, and are eligible for resident status.
- **Georgia** will grant a renewable certificate to applicants who hold a bachelor's degree in an area corresponding to an appropriate subject area certification classification, complete a one-year supervised classroom internship, obtain satisfactory results on tests and assessments, and satisfy any additional requirements established by the state's professional standards commission.
- **Maine** created a new certification allowing people to teach in areas determined to have teacher shortages.
- **Minnesota** issues licenses to applicants who have completed all examinations, and issues temporary licenses for a maximum three-year term to an applicant who has not completed all requirements.
- **Virginia** allows local school boards to issue three-year local licenses to applicants who hold a bachelor's degree, have subject expertise in an area deemed necessary by the district, and complete training specified by the district and the state. These licenses are probationary, nonrenewable, and restricted to the district that issues them.

The **National Center for Education Information** is an organization that promotes alternative certification programs. In 2000, NCEI listed six elements of exemplary alternative certification routes:

1. The program has been specifically designed to recruit, prepare and license talented individuals for teaching who already have at least a bachelor's degree.
2. Candidates for these programs pass a rigorous screening process, such as passing tests, interviews, demonstrated mastery of content.
3. The programs are field-based.
4. The programs include coursework or equivalent experiences in professional education studies before and while teaching.
5. Candidates for teaching work closely with trained mentor teachers.
6. Candidates must meet high performance standards for completion of the programs.

In 2001, only twelve of the states offering alternative certification had at least one program that met these criteria. They were: **Arkansas, California, Colorado, Connecticut, Delaware, Illinois, Kentucky, Maryland, New Jersey, New Mexico, Pennsylvania, and Texas** (National Center for Education Information, 2000).

Retaining More New Teachers

Induction programs are becoming more common in all states. Few existed before 1980, but today 38 states plus the District of Columbia offer them. However, in some states districts are not required to participate and/or the state does not cover the full cost of the program. School districts often have broad latitude in developing these programs, and their quality and penetration vary widely (Hirsch, Koppich, and Knapp, 2001).

Connecticut is considered a leader in providing support to new teachers, thanks to its **BEST (Beginning Educator Support and Training) program**. BEST has attracted attention around the country, and in 2000 it received the Education Commission of the States Award for Outstanding Innovation in Education.

The BEST program is a two-year program designed for teachers who have initial educator certificates, interim initial educator certificates, temporary 90-day certificates, or durational shortage area permits. All teachers with these certificates, whether they teach full or part time or as long-term substitutes, are required to participate in the BEST program. The program lasts two years for most participants, although those who need an additional year to fulfill the program's requirements are permitted the extra time. Teachers who have not completed the program requirements after three years will not have their initial educator certificates renewed.

Most teachers participate in a portfolio induction program, although teachers in certain trade-related areas participate in a one-year support program instead. The portfolio induction program consists of required support (at least bi-weekly meetings) from a mentor or a team of experienced teachers as well as recommended participation in discipline-specific seminars and BEST orientation sessions. At the end of the second year, participants submit a portfolio, including videotapes, lesson logs, student work, and commentaries, for assessment by a state-level board. If the portfolio is determined to be acceptable, the teacher receives provisional certification. If not, the teacher has a third year of support and seminars with an additional opportunity to submit a portfolio at the end of the third year. The support program consists only of support during the first year of teaching by a mentor or a team, and recommended participation in orientation sessions.

Teachers who enter teaching through alternative certification also participate in BEST. They are required to complete 30 hours of professional development and two years of support from mentors (traditionally certified teachers have one year of required support and one year of optional support). (*A Guide to the BEST Program for Beginning Teachers, online at http://www.state.ct.us/sde/der/publications/teacher_assessment/index3.htm*)

California also operates a teacher induction program, the **Beginning Teacher Support and Assessment Program (BTSA)**, which has been successful in lowering attrition rates of new teachers. The state supports BTSA programs in districts around the state, serving all new teachers. The programs vary in organizational design, but all encourage collaboration among districts, colleges, universities, and community organizations. Experienced teachers work with new colleagues and provide them with formative assessments to guide their on-the-job learning. BTSA has resulted in a 93% retention rate among first- and second-year teachers participating in the program (<http://www.btsa.ca.gov/>).

New Jersey's induction program grew out of its alternative certification program, the first in the nation when it began in 1985. Originally, people who did not complete a traditional training program were issued provisional licenses, allowing them to teach while undergoing additional professional development. Today, all first-year teachers in New Jersey are provisionally licensed. Those who have not completed the training program are required to work closely for 20 days under the guidance of an experienced, certified teacher before entering the classroom,

and to undergo 200 hours of study at a district- or state-operated training center during the first year of teaching. All provisionally licensed teachers are under the guidance of a professional support team, with whom they have contact at least once every two weeks for ten weeks, and then at least four times over the next twenty weeks. In addition, provisional teachers are formatively evaluated after 10 weeks and summatively evaluated after 30 weeks (<http://www.state.nj.us/njded/educators/license/1113.htm>).

Retaining Experienced Teachers

Ten states – Florida, Georgia, Indiana, Kentucky, North Carolina, Pennsylvania, South Carolina, Tennessee, Texas, and Utah – provide **rewards for increased student achievement** that can be used all or in part for salary bonuses.

Many states have recently passed legislation **encouraging retired teachers to return** to the classroom. These teachers are allowed to keep their pensions and are paid at least enough in addition to the pension to equal their full salaries at the time of retirement. **Texas** pays full salaries in addition to pensions to teachers who specialize in math, science, or technology. Other states employing similar, although less generous, incentives include California, South Carolina, Maryland, North Carolina, Missouri, Alabama, Kentucky, Louisiana, Maryland, Massachusetts, Oklahoma, and Tennessee (Hirsch, Koppich, and Knapp, 2001).

To date, most efforts to **enhance teacher working conditions** and duties, such as site-based management initiatives, have been the result of local rather than state policies. The effects of such efforts have been indirect and difficult to demonstrate. Some states have permitted greater autonomy at the local level, particularly **Kentucky** and **Texas** (Hirsch, Koppich, and Knapp, 2001). Ingersoll (2001) cites increased administrative support, efforts to reduce student discipline problems, and decision making shared between faculty and administration as examples of organizational changes that can positively affect schools and enhance recruitment and retention.

Like Massachusetts, many other states have participated in the **National Board for Professional Teaching Standards certification** program. The details of implementation vary from state to state. A summary of how various states have implemented and rewarded NBPTS certification is included as an appendix (*Appendix XX: NBPTS Certification*).

Targeting the Distribution Problem

The **New York** legislature passed a \$25 million package entitled “**Teachers of Tomorrow**,” proposed by Governor Pataki in January of 2000. The package provides college scholarships of up to \$34,000 to aspiring teachers who agree to teach in a geographic or subject area with shortages after completing their training, and also help with tuition or other expenses for teachers working toward full certification. Teachers who achieve national board certification and teach in low-performing schools are also eligible for a \$30,000 bonus over three years. Teachers of Tomorrow also provides funding to the five largest city school systems in the state, to hire college interns to help out in classrooms over the summer (Keller, 2000).

The **Mississippi Critical Teacher Shortage Fund** underwrites undergraduate education for student teachers in exchange for a commitment to teaching a certain number of years (one year for each year of assistance received, up to three) in a geographical shortage area. Those who do not complete the program or begin teaching in a shortage area must repay the loan with interest. Mississippi also provides funding for up to 75 educators each year to pursue master's degrees or educational specialist degrees, again in exchange for service in a shortage area. Educators receive their full salary as well as tuition, fees, expenses, and a computer (NASBE, 1999).

Other examples of state scholarships for potential teachers in targeted areas:

- **Virginia's Teaching Scholarship Loan Program** supports students interested in teaching in critical shortage disciplines or in high-poverty areas, and also supports paraprofessional development and the pursuit of teaching by candidates who have been at-risk students or underrepresented in the teaching profession.
- **Connecticut** provides incentive grants of up to \$20,000 to encourage minority students to enter teaching.
- **Virginia** and **West Virginia** provide teacher scholarships to recruit minority teachers and other educators to areas of high need.
- **Florida** provides up to \$4,000 per year to minority students pursuing a career in education.
(Hirsch, Koppich, and Knapp, 2001).

Interventions in Other Countries

England faces recruitment and retention issues that are similar to those of the United States, if not more challenging. The BBC reports that the number of teaching vacancies has risen by 70% over the past year (BBC news on-line, 2001). The country has recently begun a variety of initiatives designed to recruit and retain more teachers. They include:

- Stipends of up to £6,000 for postgraduate teacher trainees (Jewell, 2001).
- A £4,000 bonus to teachers of mathematics, science, technology, foreign language, or English at the beginning of the second year of teaching (Jewell, 2001).
- Expense reimbursements of up to £1,000 for undergraduates who are student-teaching (Smithers, 2001).
- £800 million increase in the budget for school budgets, repairs, and £2,000 - £4,000 bonuses to former teachers returning to the classroom (Judd, 2001).
- Government student loan writeoffs of 10% for each year in teaching up to ten years (Woodward, 2001).
- Three-month summer teacher training programs for undergraduates, with stipends of £2,000. These graduates can go straight into the classroom, concurrent with additional training, rather than go on to postgraduate teaching certification (Woodward, 2001).

New Zealand's government also recently introduced a teacher recruitment package, offering \$10,000 to student teachers in their final year of training, to trainees who are "topping up" their degree to the secondary school level, and to those going directly into secondary school teaching, provided they teach in New Zealand schools. New Zealand teachers who are working overseas are also given a \$5,000 relocation grant if they return (Manson, 2001).

STAKEHOLDER PERCEPTIONS

As part of our analysis of teacher recruitment and retention issues in Massachusetts, the research team solicited input from key education stakeholders in the Commonwealth. We began in the fall of 2001 by conducting initial interviews with representatives of most of the major education organizations in the state, asking them about overall needs and challenges of teacher recruitment and retention and specific impressions about the MINT program. The MINT comments are collected in the MINT evaluation component of this report; the more general comments are summarized below. Then, in the spring of 2002, we convened a group of education leaders and experts to respond to our initial findings and to offer their suggestions for program and policy improvement.

Stakeholder Interviews

Ten representatives of the major stakeholder groups⁴³ were interviewed with respect to their perceptions of the state's needs and programs concerning the recruitment, preparation and retention of teachers. In order to protect the anonymity of views of our respondents in this relatively small population, we do not report on whether everyone was in agreement with a particular perception, but the responses noted were strong general trends within this set of respondents.

Major needs and challenges in teacher recruitment and retention. There was general agreement on the need to:

- find more well-qualified teachers for every classroom;
- do some substantially more effective marketing of the teaching profession;
- offer competitive salaries and less “off-putting” entry requirements, especially in relation to Connecticut;
- prepare teachers more adequately to take on the challenges of working in high-need schools;
- coordinate and systematize the process to make clearer where the job openings are;
- have strong, comprehensive induction and support programs;
- improve teachers' working conditions to a more professional and less discouraging environment;
- develop a more differentiated career ladder;
- develop more math, science, foreign language, and special education teachers (and to improve pay, especially for prospective math and science teachers); and
- recruit more teachers from non-traditional backgrounds;

The state role in teacher recruitment and retention. Stakeholders mentioned a limited number of roles for DOE in teacher recruitment and retention. DOE should make certification and access as reasonable as possible. The agency should set appropriate standards and leave considerable implementation discretion to the local districts. One respondent emphasized that

⁴³ Massachusetts Teachers Association, Massachusetts Federation of Teachers, Massachusetts Association of School Superintendents, Massachusetts Association of School Committees, Massachusetts Elementary & Secondary Principals' Association, Massachusetts Secondary School Administrators' Association, Massachusetts Board of Higher Education, UMass President's Office, and Legislative Staff.

DOE should play more of a role in creating “the big picture” (getting the key stakeholders to plan together) and should be more concerned with getting people qualified than certified. It was also suggested that DOE could do more to facilitate placements by establishing an on-line job and application bank. Assuming that money (especially salaries) is a key factor, it was suggested that the state will have to play an important role in helping to provide more financial support. Stakeholders identified (1) providing strong induction programs and (2) improving working conditions in schools as being areas where local districts had a major role in teacher recruitment and retention.

Stakeholder Conference

On May 31, 2002, the Center for Education Policy convened a gathering of 70 superintendents, district personnel directors, principals, teachers, educator preparation program representatives, mentor trainers, union and retirement program representatives, legislative staff, Department of Education personnel, college faculty, researchers, and other education stakeholders, to discuss the preliminary results from its analysis of the 12-62 Plan programs and to elicit ideas about how the state can promote teacher recruitment and retention (*Appendix XXI: Conference Participants*). A summary of stakeholder suggestions follows.

After a brief overview of preliminary findings from our research, three presenters set the stage for the group’s discussions with preliminary remarks.

Kathleen Kelley, President, Massachusetts Federation of Teachers. Ms. Kelley, whose union represents a number of large, urban districts in the state, began by emphasizing that education reform is a K-16, not a K-12, issue, and requires “cross-pollination” between postsecondary institutions and the public schools. She noted that the teaching profession must be upgraded, and that districts and the state must focus on retention, in particular in urban areas where the attrition rate over five years can top 50%.

Her suggestions for improving retention included more support systems for new teachers, who she said are not getting adequate mentoring and induction currently, but this requires making time and money available if it is to be done well. She also called for directing bonus dollars to teachers who are already in the classroom, and training paraprofessionals to allow them to become certified. Ms. Kelley stating that three things need to happen for education reform to truly occur: increased salaries; improved working conditions; and strong, constant, and embedded professional development for new teachers.

Pendred Noyce, The Noyce Foundation. Dr. Noyce outlined her involvement in the state’s recent proposal to the National Science Foundation that involves 15 districts, 10 postsecondary institutions, and DOE in a joint effort to increase teacher quality and student achievement in math and science. Among other issues, the project is focusing on hiring issues, induction and mentoring, and ongoing professional development. Dr. Noyce noted some of the problems that urban schools face in teacher recruitment, including the need to streamline recruiting and hiring practices so that urban schools are not hiring long after suburban ones, the lack of time available for mentors to work with new teachers, and the high number of math and science teachers that

come into teaching from other professions rather than from schools of education and thus lack pedagogical training.

She said that too much of teacher preparation is traditionally “front-loaded” in education schools, with little offered later in the teaching pathway, in induction support and ongoing content enhancement for teachers. Yet, she said, 40% of urban math and science teachers come from other jobs and lack this front-end training. She also noted a lack of data, and therefore accountability, from traditional teacher preparation institutions on what happens to their trainees—how many of them are still teaching after 5 years? The MINT program, she said, has become the largest producer of math and science teachers in the state. In closing remarks, she recommended limiting signing bonuses to high-need districts and subject areas, and she recommended a new model of mentoring in which every day a new teacher co-teaches for one period with a master teacher.

Steven Rosenberg, Mathematics Professor, Boston University. Dr. Rosenberg described the structural challenges of training both mathematicians and math teachers at the college level. He noted the separation and competition that exists at colleges and universities between traditional mathematics faculty and mathematics-education faculty, as they have different goals, different languages, and different ideas about fund allocations. He reported that traditional math professors often look down on math education, and in general do not expose students to math teaching.

In terms of recruitment, he suggested a new master’s program in math education which could be quicker to complete than existing programs and could thus entice students who may be “math majors by default.” In terms of retention, Dr. Rosenberg mentioned his belief that, too often, good teachers leave and bad teachers stay in teaching. To retain more good teachers, he said, we need to give them the time and the opportunity for lifelong intellectual growth. He described a summer program at Boston University which offers teachers research experience that can “help teachers remember why they love math.” In his concluding remarks, he emphasized the need to re-examine the current academic barriers separating math majors from math education majors, and math faculty from their math education counterparts. A greater exchange of ideas between the two communities is necessary for teacher recruitment and retention.

Sandra Stotsky, Senior Associate Commissioner for Academic Affairs and Planning. Dr. Stotsky posed as a central question, “How can we enhance the dignity of the teaching profession?” She described a new department at the Department of Education, called The Center for Teaching and Learning. This center will unify and integrate subject matter content with formal preparation. In terms of teacher preparation, she noted that new regulations for educator licensure and program approval, which address the demands of the Massachusetts Education Reform Act, have been developed. She also highlighted the existence of several alternative routes to certification in the regulations, which may be used for innovative preparation programs.

Dr. Stotsky noted that middle schools are at the crux of the problem in student achievement, and that there is a need for middle school teachers who possess more training in content areas than do elementary school teachers. The Department of Education is developing three new license areas and tests for middle school teachers, with a greater focus on content knowledge in reading,

mathematics, and science. She also noted that a large number of MINT applicants fail the teacher tests. In an examination of a small sample of MINT applicants who had failed the mathematics or science teacher test, she found that about two-thirds were over the age of 30 and suggested that test preparation may be needed for mid-career changers. Many of the mid-career changers who seek to teach math or science may not have taken a formal test in many years or have become highly specialized in their work in math or science. In her final comment, she stated that retention efforts need to be improved and district-based. She also proposed that mentoring programs should extend into the third year of a teacher's career.

The opening remarks were followed by small-group discussions, each framed around one of the six leverage points in the intervention framework: marketing the profession, reducing barriers to entry, preparing candidates, recruiting new teachers, retaining experienced teachers, and targeting the distribution problem. Highlights of each discussion and the report-out session are listed below, by topic:

Recruiting More Potential Teachers

- We need to be better ambassadors for schools, to make sure the “good stuff” about teaching and learning doesn't get drowned out in our efforts to highlight problems that need attention. This is vital if we are to change public perceptions about teaching and teachers. We should demystify the public about the quality of education that is going on in our schools.
- We need better data about teacher supply and demand, salaries, etc., so we can better target marketing efforts and incentives.
- We must promote greater awareness about teaching careers among diverse populations.
- We wouldn't need to aggressively market the profession if the salaries were better. Salary schedules need to be elevated, to make teaching a competitive career.
- The Massachusetts Teacher Retirement Board is developing new incentives for teachers to stay in teaching longer.

Reducing Barriers to Entry

- We need to market Attracting Excellence to Teaching and other financial support programs.
- Teacher preparation programs should be marketed as specific types of packages, depending on the needs and interests of the potential teacher—college student, mid-career, para-professional, etc.
- High-need districts need to change their hiring practices, to be able to pre-hire qualified candidates in the spring, when they are looking for positions.
- More money needs to be available to prospective teachers. Scholarships based on need should be funded to help people gain entry to the profession
- There should be college-level test-preparation programs for the teacher tests.
- However, we should not reduce quality in reducing barriers. Colleges and schools need to develop competency-based, not credit-based, programs. Some candidates can be prepared in a few weeks; others will not succeed without vast expenditures and costs to children.
- Mid-career entrants into the Massachusetts Teacher Retirement System must pay 11% of their salary into retirement. This is the highest rate in the nation and is a huge disincentive. The Massachusetts Teacher Retirement Board is looking into ways of reducing this barrier.

Preparing Candidates

- Teacher preparation institutions have to have good connections to districts, to ensure that the preparation is relevant. We should publicize course and program evaluations to make sure programs are providing adequate preparation. We could also use technology to better advantage—to offer support groups and models of teaching and supervision.
- Most pre-service teaching experiences do not match the urban experience. Candidates need more clinical training, to reduce surprises when they begin teaching. Urban teacher preparation should feature more of an apprenticeship model. Urban districts should increase the number of professional development schools.
- We should develop regional teacher quality centers featuring ongoing, cooperative relationships between districts and postsecondary institutions. These should identify the numbers and types of teachers needed, then work together to prepare, hire, and mentor the new teachers. Superintendents were reported to like this idea, which was seen as helping with professional development, too. Connecticut and Pennsylvania have this model.
- There needs to be a greater focus on teaching “pedagogical content”—not just how to teach but how to teach math, science, English, etc. The ability to teach content to a variety of constituents (e.g., English language learners, different learning styles) is also a key skill.
- It was suggested that school of education faculty in math and science may be currently under-challenged, due to low enrollments in these areas. This offers potential new roles for them, bridging K-12 and postsecondary environments by teaching in secondary schools part-time and serving as lead teachers.
- Remember that special education is a critical need area.
- There was disagreement about the role of community colleges. Some saw them as especially helpful in training paraprofessionals with an eye toward their ultimately becoming teachers. Others expressed concern about maintaining quality while increasing access to teaching via community colleges.
- Lowell Community College and Fitchburg State College have programs that encourage paraprofessionals to enter teacher preparation programs
- The UMass/Dartmouth career pathways program, for prospective teachers to learn the tricks of the trade before they begin teaching, was mentioned as a best practice. The Fenway Project, in which graduate-level education students spend a whole year in a school, was also seen as a good program.
- We need more data on where teachers are coming from, and we need to be able to connect this to student data to show how well they’re teaching. We also need to be able to monitor retention rates of teachers with different preparation routes/programs.

Retaining New Teachers

- Good, strong mentoring and induction programs are vital for retention. DOE could be helpful in providing models of successful programs. Brookline has a good model—a district-wide mentor coordinator, and each school has a designated induction coordinator freed up one-fifth time; they do, however, have an endowment to pay for it. Springfield was able to do an interesting induction program fairly inexpensively, with grant funds, that utilizes a similar combination of district-wide and school-based staff, along with Saturday workshops and internet and hotline resources for new teachers.
- The state guidelines on induction programs have been very helpful; they have driven buy-in from school staff.

- One-to-one mentoring is problematic, logistically and financially, due to the challenges of matchmaking, finding enough expert teachers, and arranging for common release time. Also, secondary teachers are easier to free up for mentoring than elementary teachers—these may require different strategies.
- There are multiple components to induction: “buddy support,” help with paperwork and nuts-and-bolts procedural questions, instructional support, and observation/feedback. These components could be divided up and provided by different people, or delivered through a team approach.
- We need to involve departments or grade levels in collegial staff development learning communities. Good induction is really good staff development, with a role for everyone, including new teachers. Induction, further training should be a condition of hiring.
- Good induction ideally begins with a school-based team approach to the hiring process, with the principal and teachers involved, to produce a good fit between new teachers and the school culture. Larger districts may have trouble decentralizing hiring to this extent, however. We need to get personnel offices to connect with teacher preparation programs.
- We should allow teachers to carry lighter teaching loads for their first two years, with time to observe, co-teach, and be observed by master teachers.
- Teachers approaching retirement could be enlisted as mentors and supervisors. This would provide support to new teachers, enrichment for the older teachers, and an improvement in the supervision/evaluation capacity of administrators. Principals are incapable of adequately supervising the number of novice teachers they must hire. Collective bargaining must encourage differentiated staffing models for skilled supervision.

Retaining Experienced Teachers

- We need to increase salaries, to demonstrate that the profession is a competitive career. It takes 12 years to get to a decent level of pay, and there is no potential for growth after a certain point. Teachers also pay more for their benefits than many professions. And teachers often have to spend their own money on supplies and other expenses. Teaching is a rare profession in that you are rewarded for leaving—to make more money, you become an administrator.
- Isolation, work load, non-teaching duties, lack of leadership opportunities, time spent on discipline, and general lack of respect were also mentioned as sources of loss of experienced teachers.
- Random, unstructured release time for mentoring or professional development is a problem—the class loses, parents are concerned, and there are administrative issues. We need to have structured, planned release time, integrated into the structure of the school day. We should facilitate co-teaching with novice and veteran teachers, similar to hospital internships.
- We need to involve teachers’ unions in helping teachers who need development or need to make a different career decision.
- Teachers should have opportunities to participate in education policymaking.

Targeting the Distribution Problem

- We should be focusing our state incentives on high-need districts, subject shortages, and minority recruitment.
- It is critical to diversify the teaching pool. Also, if we expect to recruit more minority candidates, they may be older than the typical prospective teacher, and we need to make sure our marketing and preparation are matched to the appropriate age level.
- Loan forgiveness could be an incentive for diverse populations, but it is not advertised enough. We should target marketing on high-achieving high school students in urban districts, and offer them five-year scholarships and loan forgiveness for pursuing teaching careers.
- Mentoring, induction, and financial support are doubly important in high-need, urban districts.
- Giving incentives to certain types of teachers, e.g., math and science, affects the climate in school buildings—it needs to be perceived as fair. The state should work with the teachers' unions on incentives issues. Stipends for certain high-need areas may be workable if they are negotiated in union contracts. Perhaps private industry could pitch in for matching salaries in critical needs areas.
- The position was expressed that suburban districts get more funding from the state than urban districts, relative to needs, and that this has to change if high-need schools are to be addressed appropriately.
- We should encourage elementary teachers who have a minor in math or science to take the middle school test—give them incentives to move to the middle school level.

RECOMMENDATIONS

The nature of recommendations is that they tend to focus on areas to be improved. Thus they can contribute to a perception that progress is not being made. But this is not our perception as we conclude this evaluation project. As seen above, the legislature and DOE have been proactive in developing a set of programs that address each of the leverage points in our analytic framework. MINT is attracting high-quality people and has become one of the largest producers of teachers in the state. The mentor training effort has trained approximately 1500 mentors, and DOE is now appropriately focusing on building local induction capacity. The AET program is popular with participants and shows potential as a recruitment and retention incentive. Teacher career path discussions have been initiated through T-CAP. These are all laudable achievements, and DOE deserves much credit for its work in these areas.

Finally, DOE also deserves praise for its willingness to open itself and its programs to external scrutiny. We thank the members of the Office of Educator Quality for their supportive cooperation with our inquiries, and we hope that the results of our analysis will be useful in their challenging and important work.

In that spirit, and in addition to the program-specific recommendations outlined earlier in this report, the research team offers the following systemic recommendations for improving the recruitment and retention of high-quality teachers in areas of need.

1. Retention of new teachers should be DOE's highest recruitment/retention priority.

These are people who are already interested in teaching; retaining them would reduce the pressure to convince currently uninterested candidates to enter the field. DOE should continue to support district and school-based induction programs, as opposed to “pull-out” mentor training workshops, with both financial resources and technical assistance. This support should help districts surmount current barriers to mentorship/induction, especially the lack of time for interaction between mentors and new teachers, the logistical difficulties of one-to-one mentoring relationships, and the different challenges of mentoring in elementary and secondary schools.

2. Especially ensure induction/mentoring support for graduates of MINT and other accelerated programs. Our research indicates that once MINT participants enter their schools, 42% say that they receive either poor mentoring or none at all. Our research also indicates that accelerated entry is a more important inducement to potential teachers than the signing bonus. This offers a potential opportunity for freeing up resources to support the mentoring of signing bonus recipients. DOE may wish to consider restructuring the signing bonus program, so that half of the bonus would go to the recipient and the other half to the hiring school. The school could then use these funds to buy the time that is currently in such short supply, for reduced courseloads and collegial interaction between new and experienced teachers. This might have the added benefit of reducing resentment among experienced teachers regarding the signing bonus program and their inability to participate in it.

3. Reach out to the field on recruitment and retention strategies. Some aspects of Education Reform have created divisions between local educators, their associations, teacher preparation institutions, and DOE. Recruiting and retaining an adequate supply of qualified teachers is an issue on which these various groups could perhaps find common purpose. DOE should reach out to the field on this issue, convening stakeholder conferences, soliciting stakeholder input, including local educators in decision-making groups, and developing joint initiatives on identified areas of mutual interest. One particular area for joint work is the task of marketing the teaching profession (see below). Another promising area is to tap the knowledge of the Master Teachers in policy and program development and research.

4. Develop both broad and targeted strategies to promote teaching to potential teachers. Stakeholders tended to agree that the public hears too much about the difficulties of teaching and not enough about its rewards. Effective promotion of the profession will require both improving the general image of teaching as a career and targeted initiatives in areas likely to yield substantial numbers of new teachers. To improve teaching's general image, DOE should join with the teacher unions and perhaps some corporate partners to develop an ongoing advertising campaign focused on the positive aspects of teaching and the various routes and resources available to help those interested (more on this below). In addition, the promotion of teaching as a career should enlist the support and engagement of DOE, the University of Massachusetts President's Office, the Association of Independent Colleges and Universities in Massachusetts, the Massachusetts Board of Higher Education, postsecondary Arts & Sciences departments, education schools, educator unions, school districts, and others.

In terms of targeted initiatives, DOE should

- work with colleges and universities to develop a "UTeach"-style program, like the one in Texas, that exposes college students to real-life teaching experiences early in their college years and connects those interested to the educator preparation sequence;
- continue recruiting college students and mid-career professionals in the New England/New York region for MINT and other accelerated entry programs;
- consider the "Troops to Teachers" and "Pathways to Teaching" programs, particularly as a means of recruiting minority teacher candidates; and
- encourage district-based, "grow-your-own" programs, in partnership with teacher preparation providers, to upgrade paraprofessionals and encourage elementary teachers to consider secondary-level certifications.

5. Promote existing routes and resources that ease the way into teaching. The Attracting Excellence loan forgiveness program has potential recruiting benefits, but few prospective teachers know about it. Publicity efforts should target potential teachers in their college years, so that the reimbursement program has the opportunity to play an "attracting" role. DOE should collaborate with the postsecondary partners mentioned in Recommendation #4 to maximize the effectiveness of these publicity efforts. Information on the AET program should also be disseminated to all qualifying high-need school districts, especially to personnel responsible for hiring, so they can use AET as part of their recruitment "toolkit." More generally, information on "How to Become a Teacher," including all available routes, incentive programs, and regional contacts, should be visibly available on the DOE website and in secondary and postsecondary schools' career/guidance offices.

6. Complete development of a data system to track teacher supply and demand in Massachusetts. It is difficult to ascertain the current teacher supply and demand picture in the Commonwealth, and implementation of the “data warehouse” that was to have clarified this picture appears to have stalled. However, if state recruitment and retention resources are to be effectively targeted at areas of greatest need, that need must be reliably quantifiable. District reports on hires and difficulty of hiring, teacher preparation program graduation figures, and teacher retirement data should be collected into a single location and maintained regularly. DOE should either staff or contract out this function.

7. Target financial incentives more exclusively on high-need areas, including high-poverty/low-performing schools; high-demand content areas such as math, sciences, special education, and foreign languages; and minority recruitment. By restricting state incentives to high-need areas, DOE may also be able to increase the dollar amounts of the individual awards, thereby increasing the potential impact of these incentives. Current variations between different programs’ definitions of “high need” should be eliminated to increase the clarity and impact of combined incentives. DOE may also want to consider targeting high-need schools, not districts, to the extent feasible, as there can be significant intra-district variation in poverty and achievement.

8. Address the specific needs and barriers of urban, high-need schools in recruiting and retaining teachers. These include:

- *Disadvantages in the timing of the hiring process*—Urban districts are more dependent on state funds than suburban districts; the state budgeting process thus contributes to uncertainty in funding levels that can delay hiring until late summer—long after suburban districts have made their job offers. The state should seek a way to guarantee a portion of the budgets of districts that are heavily state-funded, to enable hiring to occur at the same time as in suburban districts.
- *The “shock of immersion” in the realities of urban education*—Several stakeholders reported a belief that teacher preparation programs, both traditional and accelerated, provide insufficient on-site experience in the day-to-day environment of urban schools, thus exacerbating the urban retention challenge. The state should stimulate more urban pre-service programs tied to the urban teaching experience, including on-site apprenticeship and rigorous induction/mentorship components.
- *The need for more diverse teachers, to serve as role models for the populations they are teaching*—The state should support a variety of urban district-focused, “grow-your-own” initiatives, such as urban Tomorrow’s Teachers Clubs, paraprofessional upgrade programs, and tuition and/or loan forgiveness agreements with local postsecondary educator preparation programs.

9. Encourage apprenticeship, co-teaching, and job-sharing models. A variety of non-traditional models are being used in some schools to retain teachers who otherwise might leave for personal or professional reasons. These types of staffing arrangements provide different benefits for teachers at different stages of their careers, but all focus on creating a less isolated, more collegial relationship between teachers and making teaching more compatible with changing life circumstances. For new teachers, they offer support and induction into the educator community. For more experienced teachers, they offer flexibility that may enable them to stay in the profession and not leave for family reasons. For soon-to-retire teachers, participation may offer a rewarding capstone to a career. DOE should consider developing a working group with local educators and teachers' union representatives to discuss and promote promising examples in this area. This work could, in an incremental way, help move forward the work attempted by the T-CAP program.

10. Foster more sharing of knowledge among schools/districts. In a number of instances, interviewees expressed interest in learning more from their colleagues in other schools and districts. From Tomorrow's Teachers Clubs to mentoring approaches to teacher leadership roles, there are a number of areas in which information sharing could benefit new and experienced teachers. Knowledge-sharing can take place in several ways, including convening groups of individuals, developing web-based forums for sharing curriculum and other information, and pulling together best-practice products from the field. The Master Teachers collectively offer a wealth of good information that should be collected and disseminated.

11. Continue to evaluate existing programs. Although resources are scarce, it is vital to continue conducting focused evaluation research to ensure effective and efficient program implementation. Areas for continued research include monitoring the retention rates of MINT participants and more conventionally trained teachers, monitoring and evaluating induction and professional development approaches, evaluating the Board of Higher Education's Tomorrow's Teachers scholarship program, and assessing the achievement gains of students whose teachers were prepared through different routes. With all DOE programs, it will be vital to continue to improve data collection on program participants and to keep contact information current, to enable rigorous evaluation to occur.

12. Continue to strive to improve the competitiveness of teacher salaries, both overall and in high-need areas. This is difficult to discuss in a resource-constrained environment, but the recruitment and retention challenges are made more difficult by both the perceptions and the realities of teacher pay. To the extent that perceptions are inaccurate, they should be addressed through the marketing efforts mentioned above. Any cost-saving benefits, such as loan reimbursement, housing subsidies, and retirement benefits should be promoted as well. But if Massachusetts is serious about recruiting and retaining more highly-qualified individuals, it cannot afford to ignore the huge impact of a significant salary differential on those individuals' decision-making. This is a legislative issue beyond DOE's control, but it is ignored at all of our peril.

Other, more program-specific recommendations are included earlier in this report. These include:

- Reconsidering the adequacy of summer school as a training ground for MINT participants, due to the great differences between the summer-school and school-year environments and demands (Connecticut's ARC program and other apprenticeship-style programs offer potential models);
- Improving the cooperating teacher relationship for MINT participants;
- Considering offering higher and more-targeted Attracting Excellence loan reimbursements;
- Continuing to support the application fees of teachers applying for National Board Certification; and
- Working with teachers' unions to gain areas of agreement on teacher career path issues addressed in T-CAP.

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APPENDICES

APPENDIX I: MINT TEACHER SURVEY

Your Name: _____

Name of District in which Currently Employed: _____

Name of School: _____

If you have taught at another school since MINT, what was it?
 School _____ District _____

MINT (Summer Training) Site: _____

Year of MINT Training: _____

Certification Subject Area: _____

Certification Level: ___Elementary ___Middle School ___High School

Are you mid-career or a recent college graduate? ___Mid-career ___Recent College Graduate

If a recent college graduate, when did you complete your undergraduate degree? _____

Age: _____

If you had another career, from what field did you come? _____

Are you currently teaching the subject area in which you hold certification? ___Yes ___ No

If not, what subject(s) are you teaching? _____

I. MINT PROGRAM EVALUATION

Please rate the MINT **PRACTICE TEACHING** in terms of how it prepared you to teach with respect to the following areas. (Check one answer in each row.)

	How would you rate the Practice Teaching in terms of developing your ability to:	Very Good	Good	Satisfactory	Poor	Very Poor
1.	use a variety of effective classroom management techniques.					
2.	design lessons that are aligned with the state Curriculum Frameworks.					
3.	use a variety of effective instructional strategies that respond to the needs of diverse students.					
4.	assess student learning , using a variety of assessment tools in the classroom.					
5.	teach students with disabilities or other special needs .					
6.	develop the content knowledge needed to teach your subject.					

Please rate the MINT Summer Training **WORKSHOPS** in terms of how they prepared you to teach with respect to the following areas: (Check one answer in each row.)

	How would you rate the MINT Summer Training Workshops in terms of developing your ability to:	Very Good	Good	Satisfactory	Poor	Very Poor
7.	use a variety of effective classroom management techniques.					
8.	design lessons that are aligned with the state Curriculum Frameworks.					
9.	use a variety of effective instructional strategies that respond to the needs of diverse students.					
10.	assess student learning , using a variety of assessment tools in the classroom.					
11.	teach students with disabilities or other special needs .					
12.	develop the content knowledge needed to teach your subject.					

In the next table, please rate yourself **in comparison with other BEGINNING TEACHERS** who have been prepared in more traditional/longer university-based teacher education programs. In each of the following teaching elements, would you say you are much better, somewhat better, about the same, somewhat worse, or much worse?

	Teaching Element	Much Better	Somewhat Better	About the Same	Somewhat Worse	Much Worse	No Basis for Judgment
13.	Classroom management						
14.	Designing lessons						
15.	Using effective instructional strategies.						
16.	Assessing student learning						
17.	Teaching special-needs students						
18.	Content Knowledge						

19. During the MINT training period, approximately how many hours per week did you spend teaching groups of K-12 students in a classroom setting (not individual tutoring)?

___ 1-5 hrs/wk ___ 6-10 hrs/wk ___ 11-15 hrs/wk ___ 16-20 hrs/wk

20. Of the time indicated in Question 19, approximately what percent of the time were you under the direct observation of a Cooperating Teacher? (Circle one:)

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

For each of the following teacher preparation elements, indicate whether the MINT preparation was Too Much, About Right, or Not Enough (please check the appropriate box):

	Teacher Preparation Element	Too Much	About Right	Not Enough
21.	Observing an experienced teacher modeling effective teaching strategies.			
22.	Co-teaching with my cooperating teacher.			
23.	Teaching on my own with supervision.			
24.	Teaching on my own without supervision			
25.	Receiving feedback from Cooperating Teacher			
26.	Receiving feedback from my MINT Participant Advisor.			
27.	Gaining content knowledge			
28.	Gaining classroom management skills			
29.	Gaining pedagogical ability			
30.	Learning to work with students with special needs.			
31.	Learning to work with diverse populations.			

32. How would you rate the contribution of your Cooperating Teacher in terms of how he/she prepared you to teach? (Circle one:)

Very good Good Satisfactory Poor Very poor

Comments:

33. How would you rate the contribution of your MINT Participant Advisor in terms of how he/she prepared you to teach? (Circle one:)

Very good Good Satisfactory Poor Very poor

Comments:

34. Should the MINT program be (circle one:) longer, shorter, or the same length?

34a. If longer, how much longer and what components would you add?

34b. If shorter, how much shorter and what would you cut from the program?

34c. If the same, would you reallocate time among any of the components?

II. OTHER PROGRAM ISSUES

1. How would you rate the communication and support of the Department of Education?

Very good Good Satisfactory Poor Very poor

2. How would you rate the communication and support of your program provider (e.g. NTP or UMass-Lowell)?

Very good Good Satisfactory Poor Very poor

3. How significant a factor was the potential for a signing bonus in terms of what attracted you to the MINT program? (Circle one:)

Very significant Significant Somewhat significant Not significant

4. Would you have considered MINT without the potential for a signing bonus?

_____ Yes _____ No

5. Did you receive a signing bonus?

_____ Yes _____ No

6. How significant a factor was the accelerated nature of the program in deciding to enroll in the MINT program? (Circle one:)

Very Significant Significant Somewhat significant Not significant

7. Would you have gone into a teaching career if you had to go through a longer, more traditional route to certification? _____ Yes _____ No

8. How many additional weeks could have been added to the MINT summer training program without negatively affecting your decision to enroll? (Circle one:)

1 wk 2 wks 3 wks 4 wks 5 wks 6 wks 7 wks 8+ wks

9. If a similar MINT training program had been offered during the springtime, rather than summer, would this have negatively affected your decision to enroll?

_____ Yes _____ No

10. Did you explore other routes to enter the teaching profession? ____ Yes ____ No

10a. If yes, what were they?

11. Are you currently participating in a school mentoring program? ____ Yes ____ No

12. If yes to number 11, please rate the adequacy of your mentoring. (Circle one:)

Very good Good Satisfactory Poor Very poor

13. Is it public knowledge in your school(s) that you were prepared in MINT summer training?
____ Yes ____ No

13a. If yes, how would you describe the initial attitude of the other faculty and staff in your building toward you? (Circle one:)

Very positive Positive Neutral Negative Very negative

13b. If negative or very negative, why do you think this was the case?

13c. If you answered yes to number 13, has the attitude of other faculty and staff improved, stayed the same, or gotten worse over time? (Circle one.)

Improved Stayed the same Gotten worse

14. Have you participated in support seminars for new MINT teachers (e.g., Case Study Seminars)?
____ Yes ____ No

14a. If yes, what has been most useful?

15. Knowing what you know now, would you participate in MINT again?
____ Yes ____ No

15a. If no, why not?

16. Do you expect to be teaching next year? ___ Yes ___ No ___ Maybe
17. Do you expect to be teaching in the same school next year? ___ Yes ___ No ___ Maybe
18. Do you expect to be teaching in five years? ___ Yes ___ No ___ Maybe
19. If the answer to number 16, 17, or 18 is NO or MAYBE, please explain.

20. Do you have any other suggestions for improving the MINT program?

21. How did you become aware of the MINT program?

- Word of mouth _____
- Career fair _____
- Internet _____
- Newspaper _____
- Other (specify) _____

22. How would you suggest MINT should promote the program/recruit new participants?

23. Any other comments?

Thank you very much for taking the time to respond to this survey. Your responses will help us evaluate the MINT program in a way that helps the DOE continue to improve it.

Please return your completed survey in the enclosed postage-paid envelope to:

**Center for Education Policy, 250 Hills South, 813 North Pleasant St.,
University of Massachusetts, Amherst, MA 01003-9308**

APPENDIX II: MINT PRINCIPAL SURVEY

The Center for Education Policy at UMass Amherst is conducting an evaluation of the Department of Education's teacher quality programs. The study is funded by the DOE, but all of the data collection, analysis, and reporting is being conducted by the Center for Education Policy.

All of your responses will be kept confidential and anonymous, and will not be used to evaluate individual teachers or schools. Our goal is to evaluate the MINT program as a whole, so our final report will use only aggregate information from the surveys.

Thank you again for agreeing to participate in our survey. The questions that follow are about the Massachusetts Institute for New Teachers (MINT) and the Signing Bonus Program. Most of the questions ask you to select a response from a list of options.

Your Name: _____
Name of School: _____

1. When did you become principal of this school?
2. (Please check all that apply.) Prior to your current position, were you:
 A principal at another MA school?
 A principal at a school outside of MA? If so, in which state?
 A classroom teacher?
3. When we say "new teachers" in this survey, we're referring to people in their first teaching position. Using that definition, how many new teachers have you hired in the past 5 years? (If you have been a principal for less than 5 years, how many teachers have you hired?) _____
4. How many teachers who were prepared in the Department of Education's MINT summer program, or were signing bonus recipients, are currently teaching at your school? _____

I. EVALUATION OF SPECIFIC MINT GRADUATES/SIGNING BONUS RECIPIENTS

5. Our records from the DOE indicate that one MINT-graduate teacher is at your school. In the space below, please provide the name, subject area, and grade level(s) at which he/she is currently teaching.

Teacher Name: _____
Subject Area: _____
Grade Level(s): _____

6. Is this the subject area and grade level in which the MINT graduate is provisionally certified?
 Yes No
If not, why not? _____
7. Have you previously had difficulty filling this position? Yes No

8. Is this MINT recipient a new college graduate, or did she/he change careers?
 _____ New college graduate
 _____ Changed careers
 If he/she changed careers, from what field did he/she come?

9. In what month and year was this teacher hired? _____

Most of the following questions ask you for your impression of how well each MINT graduate was prepared to teach. Please circle one answer for each item.

10. Approximately how many times have you had the opportunity to observe the MINT graduate's teaching? _____

11. How would you rate the MINT graduate's content knowledge?
 Excellent Good Fair Poor Very Poor

12. How does the MINT graduate's content knowledge compare with that of new teachers you have hired recently who were prepared in regular university-based programs? (By "new teachers" we mean people in their first teaching position, not experienced teachers who are new to your school.)

Much Better	Somewhat Better	About the Same	Somewhat Worse	Much Worse	No Basis for Judgment
-------------	-----------------	----------------	----------------	------------	-----------------------

13. How would you rate the MINT graduate's ability to employ effective **instructional strategies**?
 Well Above Above Average Below Well Below No Basis
 Average Average Average Average Average for Judgment

14. How does the MINT graduate's ability to employ **instructional strategies** compare with that of teachers you have hired recently who were prepared in regular university-based programs?
 Much Better Somewhat Better About the Same Somewhat Worse Much Worse No Basis for Judgment

15. How would you rate the MINT graduate's **classroom management skills**?
 Well Above Above Average Below Well Below No Basis
 Average Average Average Average Average for Judgment

16. How do the MINT graduate's **classroom management skills** compare with those of teachers you have hired recently who were prepared in regular university-based programs?
 Much Better Somewhat Better About the Same Somewhat Worse Much Worse No Basis for Judgment

17. How would you rate the MINT graduate's ability to work with students with **special needs**?
 Well Above Above Average Below Well Below No Basis
 Average Average Average Average for Judgment

18. How does the MINT graduate's ability to work with students with **special needs** compare with that of teachers you have hired recently who were prepared in regular university-based programs?
 Much Somewhat About the Somewhat Much No Basis
 Better Better Same Worse Worse for Judgment

19. All things considered, how would you evaluate the MINT graduate teacher compared to other beginning teachers with whom you have worked?
 Well Above Above Average Below Well Below No Basis
 Average Average Average Average for Judgment

20. How would you evaluate this teacher compared to the overall teaching faculty at this school (not only beginning teachers)?
 Well Above Above Average Below Well Below No Basis
 Average Average Average Average for Judgment

21. How would you evaluate the subject matter knowledge of this teacher compared to other teachers in his or her department?
 Much Somewhat About the Somewhat Much
 Less Less Same More More

22. Please rate the impact of the MINT graduate teacher on the following aspects of your school:

Students' Academic Achievement

Very Positive Somewhat Positive Neutral Somewhat Negative Very Negative

Schoolwide Extracurricular Activities

Very Positive Somewhat Positive Neutral Somewhat Negative Very Negative

School Improvement Activities (School Planning)

Very Positive Somewhat Positive Neutral Somewhat Negative Very Negative

Curriculum Development

Very Positive Somewhat Positive Neutral Somewhat Negative Very Negative

Impact on the Overall School Environment

Very Positive Somewhat Positive Neutral Somewhat Negative Very Negative

Overall Impact on the Students

Very Positive Somewhat Positive Neutral Somewhat Negative Very Negative

23. Did this teacher have particular strengths that allowed him or her to contribute significantly to the school?

_____ Yes _____ No If yes, what were they?

To what do you attribute this strength?

24. Is the MINT graduate teacher deficient in any particular areas?

_____ Yes _____ No If yes, which area(s)?

To what do you attribute this deficiency?

25. Is this teacher open to feedback?

_____ Yes _____ No

26. How does he or she interact with colleagues?

Did her or his nontraditional route into teaching seem to affect her or his interaction with colleagues? ___ Yes ___ No Please explain:

27. Is this teacher enthusiastic about teaching and/or dedicated to the profession?

_____ Yes _____ No Comments:

28. How did you come to hire this teacher (e.g. through a normal hiring process, looking for MINT candidates, arrangement with the MINT program, etc.)?

29. Who held this position prior to this teacher's being hired?

_____ A traditionally-certified teacher

_____ Another teacher with an alternate route to the profession

_____ A long-term substitute

_____ Other (Specify) _____

II. EVALUATION OF THE MINT/BONUS PROGRAM

1. If you had a teaching vacancy at your school, would you consider hiring another MINT graduate? (Please check one response.)

- Would not consider
- Would consider with reservations
- Would consider the same as anyone else
- Would consider with preference

Comments:

2. How much do you know about the MINT training?

3. Do you have any reservations about the MINT program?

4. Do you think it will be harder to retain MINT teachers than to retain traditionally trained teachers? Yes No
If yes, why?

5. Are there any changes in the MINT program you'd like to recommend?

III: GENERAL QUESTIONS

1. Does your school have an orientation for new teachers? Yes No

2. Does your school have a mentoring program? Yes No

APPENDIX III: STAKEHOLDER INTERVIEW PROTOCOL

[Introductions, thanks, etc.]

The purpose of this research project is to analyze the impact of the state's "12 to 62 Plan" on recruitment and retention of high-quality teachers in areas of need.

1. How familiar are you with the 12 to 62 Plan? Could you tell me what you know about its goals and programs?

[Circle all programs mentioned:]

MINT (MA Institute for New Teachers)

Signing Bonuses (\$20k)

Attracting Excellence Loan Forgiveness Program

Master Teachers/National Board Certification

Summer Mentor Training Institutes

Case Study Seminars

T-CAP (Teacher Career Advancement Program)

Tomorrow's Teachers Clubs (high school clubs)

Tomorrow's Teachers Scholarships (college scholarships)

2. Among your colleagues and constituents, is there greater awareness of the 12 to 62 Plan overall, or of individual components like MINT, Master Teacher certification, etc.?

I would like to ask you about teacher recruitment and retention issues in the state in general before talking about the MINT program specifically.

3. What would you say are the state's major needs and challenges in terms of teacher recruitment and retention?

4. What do you think the state should be doing to recruit and retain more high-quality teachers in areas of need? PROBE: What about early/mid-career people?

5. What should be the state role versus the local district role in recruiting and retaining high-quality teachers in areas of need?

6. What roles, if any, should other entities, besides the state and local districts, play to enhance the recruitment and retention of high-quality teachers in areas of need?

7. Now I would like to ask you some questions about the MINT program. What is your overall impression of the MINT program, its pluses and minuses?

8. Selection—what are your impressions about the types and quality of people who apply and are selected to participate in MINT?

9. Curriculum—what are your impressions about the curriculum and organization of the summer MINT program?

10. Providers—what are your impressions about the faculty and staff of the summer MINT program?

11. Where are MINT graduates going after their summer training—what types of schools and districts are hiring MINT graduates?

12. Readiness to teach—what are your impressions about the readiness of MINT graduates to be high-quality teachers, in terms of both content knowledge and teaching ability?

13. On-going support—what are your impressions about the degree of support MINT participants need and receive after the summer MINT program?

14. How could the MINT program be improved?

15. Top MINT applicants also receive a Signing Bonus of \$20,000 paid over their first four years of teaching. How important do you think the Signing Bonus is as a means of attracting high-quality candidates to the teaching profession?

16. How important do you think the accelerated entry under MINT is as a means of attracting high-quality candidates to the teaching profession?

17. How would you rate the relative importance of the Signing Bonus versus the accelerated entry route, in terms of attracting high-quality candidates?

18. This study will be continuing over the next few months.. We would like to contact you later in the winter to discuss a couple of the other 12-62 Plan programs. Would that be alright? Best times to talk?

19. Are there any studies, reports, exemplary programs, or data sets regarding recruitment and retention of high-quality teachers in areas of need that you think I should know about?

20. Is there someone else that you know who would have particular expertise about the 12 to 62 Plan or its programs?

Thank you, etc.

APPENDIX IV: SCHOOLS WHERE MINT-TRAINED TEACHERS ARE TEACHING OR HAVE TAUGHT

District	SCHOOL	Current Placement	Previous Placement	Free/ Reduced Lunch	2001 MCAS Average
Abington	Abington High	1		3%	243
Amherst-Pelham	Amherst Regional High	1		15%	245
Andover	Andover West Middle	1		4%	245
Athol-Royalston	Athol-Royalston Middle School		1	27%	230
Atlantis Charter School	Atlantis Charter School	1		0%	226
Attleboro	Attleboro High	2		7%	239
Attleboro	Robert J Coelho Middle	1		18%	232
Auburn	Auburn Senior High	1		6%	243
Avon	Avon Middle High School	3		11%	234
Ayer	Ayer Middle	1		29%	232
Belchertown	Belchertown High	1		8%	243
Bellingham	Bellingham Memorial Jr/Sr	2		3%	233
Belmont	Belmont High	1	1	4%	253
Belmont	Winthrop L. Chenery Middle	3		10%	244
Beverly	Beverly High	1		4%	240
Beverly	Briscoe Middle	1		15%	237
Beverly	Memorial Middle	1		20%	239
Billerica	Billerica Memorial HS	1		2%	240
Billerica	Locke Middle	1		5%	238
Boston	Another Course to College	2		21%	
Boston	Boston Arts Academy	2		45%	232
Boston	Boston High School	1		62%	219
Boston	Boston Latin	2		29%	253
Boston	Boston Latin Academy	1		39%	246
Boston	Brighton High	2		56%	223
Boston	Charlestown High	6		58%	228
Boston	East Boston High	3		68%	224
Boston	Edison Middle School	1		78%	223
Boston	Edwards Middle School		1	87%	222
Boston	Harbor School		1	79%	221
Boston	Hyde Park High School	1		57%	217
Boston	Jackson Mann	1		70%	230
Boston	James P. Timilty Middle	2		86%	227
Boston	Jeremiah E. Burke High	3		62%	222
Boston	John D. O'Bryant School	2		58%	238
Boston	John F. Kennedy Elementary		1	92%	223
Boston	Lyndon	1		52%	234
Boston	Madison Park High	1		60%	218
Boston	Mary E. Curley Middle	2		75%	220
Boston	New Mission High School	1		64%	227
Boston	Phyllis Wheatley Middle	1		76%	220
Boston	Quincy Upper School	1		80%	235

Boston	R.G. Shaw Elementary		1	78%	224
Boston	Snowden International School		1	50%	224
Boston	South Boston High	2		40%	215
Boston	Wm B Rogers Middle	2		70%	224
Boston	Young Achievers	1		55%	227
Boston Renaissance Charter School	Boston Renaissance Charter School		1	0%	225
Bourne	Bourne High	1		12%	240
Braintree	South Middle School	1		5%	240
Bridgewater-Raynham	Bridgewater-Raynham Regional	1		3%	243
Brockton	Brockton High	4		17%	234
Brockton	North Junior High	1		37%	228
Brookline	Brookline High	2		10%	247
Cambridge	Cambridge Rindge and Latin	1		16%	234
Cambridge	Charles G. Harrington	1		65%	224
Cambridge	Graham and Parks	1		37%	232
Carver	Carver High School	1		6%	241
Chelmsford	Chelmsford High	1		1%	245
Chelmsford	McCarthy Middle School	1		1%	243
Chelsea	Chelsea High	8	2	74%	227
Chelsea	Clark Avenue School		5	86%	228
Chelsea	Williams North Middle	1		0%	223
Chicopee	Bellamy Middle School	1		43%	226
Chicopee	Chicopee High	1		17%	230
Chicopee	Selser	1		78%	224
Concord-Carlisle	Concord-Carlisle High	2		4%	253
Dedham	Dedham High	1		3%	238
Dighton-Rehoboth	Dorothy L. Beckwith	2		3%	239
Douglas	Douglas Middle High School		1	9%	236
Duxbury	Duxbury High	1		1%	251
Fairhaven	Fairhaven High	1		16%	234
Fall River	B M C Durfee High	2		15%	228
Fall River	Matthew J. Kuss Middle	1		55%	222
Fitchburg	Fitchburg High	1		28%	232
Framingham	Cameron	1		0%	232
Framingham	Framingham High	5	1	11%	243
Framingham	Fuller Middle	3		36%	234
Framingham	Walsh Middle	6		22%	236
Francis Parker Charter School	Francis Parker Charter School	1	1	0%	243
Franklin	Remington Middle School	1	1	7%	240
Freetown-Lakeville	Apponequet High	1		3%	239
Freetown-Lakeville	George Austin Middle	1		11%	234
Gardner	Gardner High	2		11%	241
Gateway	Gateway Regional Middle School	1		59%	231
Georgetown	Georgetown Middle/High	1		3%	240
Gloucester	Gloucester High School	1		7%	236

Gloucester	Ralph B. O'Maley Middle	1		20%	232
Grafton	Grafton Memorial Senior	1		4%	243
Granby	Granby Jr Sr High Sch	1		8%	237
Greater Fall River	Diman Reg Voc Tech	1		22%	226
Greenfield	Greenfield Middle	1		61%	230
Harvard	Bromfield	1	1	1%	248
Harwich	Harwich Elementary		1	17%	238
Hatfield	Smith Academy	1		7%	243
Haverhill	Dr Paul Nettle	1		39%	229
Health Careers Acad HMCS	Health Careers Acad HMCS	2	1	58%	230
Hingham	Hingham High School	1		2%	250
Hingham	Hingham Middle School	1		2%	243
Holbrook	Holbrook Jr. Sr. High	1		12%	233
Holyoke	Dr Wm R Peck Middle	1		65%	220
Holyoke	Wm J Dean Voc Tech High	1		54%	216
Hopkinton	Hopkinton High	1		1%	250
Hopkinton	Hopkinton Middle School	2		1%	243
Hull	Hull Memorial MS	1		23%	234
Ipswich	Ipswich High	1		6%	243
King Philip	King Philip Reg High	1		2%	245
Lawrence	Haverhill Street School	1		91%	223
Lawrence	Henry K. Oliver	1		88%	227
Lawrence	James F. Leonard	1		86%	224
Lawrence	Lawrence High	2		51%	222
Lawrence	North Central Elementary	1		84%	223
Lawrence	Robert Frost	1		69%	223
Lenox	Lenox Memorial High	1		13%	243
Leominster	Leominster Senior High	1		19%	240
Lexington	Lexington High	3		3%	253
Lincoln-Sudbury	Lincoln-Sudbury Reg High	2		3%	253
Littleton	Littleton High	1		4%	242
Littleton	Littleton Middle	1		0%	239
Longmeadow	Glenbrook Middle		1	4%	243
Longmeadow	Longmeadow High	2	1	2%	250
Lowell	Butler Middle School		1	54%	225
Lowell	Henry J Robinson Middle	1		64%	225
Lowell	Lowell High	4		22%	233
Lowell	McDonough Arts Magnet Sch	1		75%	227
Lowell Community Charter	Lowell Community Charter School	1		0%	
Lunenburg	Turkey Hill Middle School	1		6%	239
Lynn	Breed Junior High	1		57%	226
Lynn	Classical High School	1		32%	232
Lynn	Fecteau-Leary Middle School	1		80%	222
Lynnfield	Lynnfield Middle School	1		2%	245
Malden	Beebe	1		40%	237
Malden	Malden High	1		20%	235

Marlborough	Marlborough High	2		9%	235
Martha's Vineyard	Martha's Vineyard Reg High	1		5%	244
Mashpee	Mashpee High	2		13%	235
Maynard	Maynard High	1		6%	242
Medford	Andrews Middle School	1		0%	
Medford	Medford High	3		7%	237
Medway	Medway High	1		1%	245
Melrose	Melrose High		1	6%	245
Merrimack Special Education Cooperative	Merrimack Special Education Cooperative	1		0%	
Methuen	Marsh	1	1	24%	238
Methuen	Methuen High	1		12%	235
Methuen	Timony Grammar School		1	28%	232
Middleborough	John T. Nichols Middle	2		15%	234
Middleborough	Middleborough High	1		9%	236
Millbury	Millbury Jr/Sr High	1		12%	235
Millis	Millis High School	1		4%	243
Milton	Milton High	2		2%	241
Minuteman	Minuteman Regional High	1		7%	233
Mount Greylock	Mt Greylock Reg High	1		9%	240
Murdoch Middle Charter School	Murdoch Middle Charter School	1		0%	233
Nashoba	Florence Sawyer		1	3%	244
Needham	Pollard Middle	1		6%	245
New Bedford	New Bedford High	2		22%	231
New Bedford	Roosevelt Junior High	1		77%	226
Newton	Bigelow Middle	2		14%	246
Newton	Charles E Brown Middle	1		7%	247
Newton	Newton North High	1		2%	252
Newton	Newton South High	1		2%	253
North Andover	North Andover High	2		2%	247
North Attleborough	North Attleborough Middle School	1		7%	238
North Middlesex	North Middlesex Regional HS		1	2%	244
Northampton	Northampton High		1	12%	247
Northboro-Southboro	Algonquin Reg High	1		0%	249
Northborough	Northborough Middle	1		3%	243
Northeast Metropolitan Regional Vocational Technical School	Northeast Metropolitan Regional Vocational Technical School	1		25%	224
Norton	Norton High	1		5%	242
Norwell	Norwell High		1	0%	248
Norwood	Norwood Junior High South		1	9%	239
Old Rochester	Old Rochester Reg High	3		5%	241
Pathfinder Voc Tech	Pathfinder Voc Tech	3		21%	229
Peabody	J. Henry Higgins Middle	2		13%	234
Peabody	Veterans Memorial High	3		7%	238
Pentucket	Pentucket Middle	1		6%	239
Pentucket	Pentucket Regional Senior	1		3%	250

	High				
Pioneer Valley	Pioneer Valley	1		19%	234
Plymouth	Hedge	1		47%	240
Plymouth	Plymouth South High	1		8%	242
Quabbin	Quabbin Regional Middle/High	2	1	9%	239
Quaboag	Quaboag Regional Middle/High		1	16%	235
Randolph	Randolph Community Middle	2		25%	230
Randolph	Randolph High	2		15%	239
Reading	Coolidge Middle	1		1%	245
Reading	Walter S Parker Middle	1		3%	244
Revere	Beachmont	4		43%	231
Revere	Garfield Magnet	2	2	60%	230
Revere	Revere High	2		25%	233
Rising Tide Charter School	Rising Tide Charter School	2		0%	235
Rockland	Rockland Senior High	1		9%	233
Salem	Collins Middle	2		43%	230
Salem	Salem High	2		25%	231
Sandwich	Oak Ridge	1		3%	242
Seekonk	Seekonk High	2		2%	237
Sharon	Sharon Middle School	1		4%	243
Shrewsbury	Shrewsbury Middle	2		6%	243
Shrewsbury	Shrewsbury Sr High	2		3%	250
Silver Lake	Silver Lake Regional High	1		5%	238
Somerville	Somerville High	1		59%	234
Somerville Charter School	Somerville Charter School	1		0%	235
South Hadley	South Hadley Middle	1		17%	233
South Shore RVT	So Shore Voc Tech High	1		12%	230
Southborough	P. Brent Trottier		1	2%	244
Spencer-East Brookfield	David Prouty High	1		10%	237
Springfield	Chestnut Street Middle School		1	70%	226
Springfield	Forest Park Middle School	1		100%	226
Springfield	High School Of Commerce	1		83%	221
Springfield	High School/Science-Tech	1		47%	227
Springfield	John J Duggan Middle	1		78%	220
Springfield	Springfield Central High	3		45%	227
Springfield	Washington	1		100%	222
Stoneham	Stoneham High	1		7%	248
Stoughton	Stoughton High	1		6%	243
Sturgis Charter School	Sturgis Charter	1		0%	249
Sutton	Sutton Elementary Preschool	1		0%	242
Sutton	Sutton High School	1		3%	246
Swampscott	Swampscott High School		1	3%	250
Swansea	Case High School	1		5%	230
Tantasqua	Tantasqua Reg Sr High	1		5%	240
Taunton	Friedman Middle School	1		0%	
Taunton	Parker Middle School		1	28%	231

Taunton	Taunton High School	1		11%	234
Triton	Triton High School	2		14%	243
Wachusett	Mountview Middle	1		4%	244
Wachusett	Paxton Center	2		2%	242
Wachusett	Wachusett Regional High	1		1%	249
Wayland	Wayland High School	1		3%	258
Wellesley	Wellesley Middle	1		4%	249
West Springfield	West Springfield Middle	1		28%	231
Westborough	Sarah W Gibbons Middle	1		4%	244
Weston	Weston Middle	1		3%	247
Wilmington	Wilmington High	1		1%	242
Winthrop	Winthrop Middle School	1		21%	237
Winthrop	Winthrop Sr High	2		4%	238
Worcester	Accelerated Learning Lab	2	1	80%	225
Worcester	Burncoat Middle School	2		59%	227
Worcester	South High School		1	40%	228
Worcester	Sullivan Middle	2		55%	224
Worcester	Worcester East Middle	1		69%	225
Worcester	Worcester Voc High	2	1	53%	221
Total		315	44		

APPENDIX V: SCHOOLS RECEIVING TTC FUNDING

District	School
Abington	Abington High School
Acton-Boxborough	Acton-Boxborough High School
Acushnet	Ford Middle School
Adams-Cheshire	Hoosac Valley High School
Agawam	Agawam High School
Amherst-Pelham	Amherst Regional High School
Arlington	Arlington High School
Athol-Royalston	Athol High School
Auburn	Auburn High School
Avon	Avon Middle-High School
Barnstable	Barnstable Middle at Hyannis
Belchertown	Belchertown High School
Bellingham	Memorial Jr./Sr. High School
Boston	Boston Adult Technical Academy
Boston	Boston High School
Boston	Boston Latin Academy
Boston	Boston Latin School
Boston	Brighton High School
Boston	Burke High School
Boston	Dorchester High School
Boston	East Boston High School
Boston	Edwards Middle School
Boston	English High School
Boston	Lewenberg Middle School
Boston	McCormack Middle School
Boston	O'Bryant School of Math & Science
Boston	R.G. Shaw Middle School
Boston	Snowden International School
Boston	Timilty Middle School
Boston	West Roxbury High School
Boston	Woodrow Wilson Middle School
Braintree	Braintree High School
Brockton	Brockton High School
Carlisle	Carlisle School
Chelmsford	Chelmsford High School
Danvers	Danvers High School
Danvers	Dunn Middle School
Dedham	Dedham High School
Dedham	Dedham Middle School
Dracut	Dracut High School
Dudley-Charleton	Shepherd Hill Regional High
East Bridgewater	East Bridgewater High School
East Bridgewater	Mitchell Middle School
East Longmeadow	East Longmeadow High
Easton	Oliver Ames High School

Fairhaven	Fairhaven High School
Fall River	BMC Durfee High School
Falmouth	Falmouth High School
Fitchburg	Fitchburg High School
Georgetown	Georgetown Middle/High School
Gill-Montague	Turners Falls High School
Greater New Bedford VT	Greater New Bedford VTHS
Holyoke	Holyoke High School
Holyoke	Lynch Middle School
Holyoke	Magnet Middle School
Holyoke	Peck Middle School
Lawrence	Arlington School
Lawrence	Bruce School
Lawrence	Frost School
Lawrence	Haverhill Street School
Lawrence	Lawrence High School
Lawrence	Leonard School
Lawrence	North Central School
Lawrence	Oliver School
Lawrence	South Lawrence East
Lawrence	Transitional Learning Academy
Leicester	Leicester High School
Leominster	Leominster High School
Leominster	Samoset Middle School
Leominster	Southeast Middle School
Mashpee	Mashpee High School
Maynard	Maynard High School
Medford	Andrews Middle School
Medford	Medford High School
Melrose	Melrose Middle School
Millbury	Millbury Jr./Sr. High
New Bedford	New Bedford High School
North Attleborough	North Attleborough High School
North Brookfield	North Brookfield High
North Middlesex	North Middlesex Regional High School
North Shore Regional Voc.	North Shore Technical High School
Northborough-Southborough	Algonquin Regional High School
Oxford	Oxford High School
Pittsfield	Pittsfield High School
Pittsfield	Reid Middle School
Pittsfield	Taconic High School
Plymouth	Plymouth North High School
Plymouth	Plymouth South High School
Quaboag	Quaboag Regional High
Quincy	Central Middle School
Randolph	Randolph High School
Revere	Revere High School
Rockland	Rockland High School
SABIS Foxboro	SABIS Charter School

Salem	Collins Middle School
Shirley	Lura A. White School
Southbridge	Southbridge High School
Spencer-East Brookfield	David Prouty High School
Springfield	Brookings Elementary School
Springfield	Duggan Middle School
Springfield	High School of Science and Technology
Springfield	High School of Commerce
Springfield	Kennedy Middle School
Springfield	Kiley Middle School
Stoneham	Stoneham High School
Sutton	Sutton High School
Swansea	Case High School
Tantasqua	Tantasqua Regional High School
Tewksbury	Tewksbury High School
Triton Regional	Triton Regional High School
Tyngsborough	Tyngsborough Jr./Sr. High
Wareham	Wareham High School
Watertown	Watertown Middle School
Webster	Bartlett High School
West Springfield	West Springfield Middle School
Westborough	Westborough High School
Weymouth	Weymouth High School
Whitman-Hanson	Whitman-Hanson Regional High School
Wilmington	Wilmington High School
Worcester	Accelerated Learning Lab (H.S.)
Worcester	Accelerated Learning Lab (M.S.)
Worcester	Burncoat High School
Worcester	Burncoat Middle School
Worcester	Doherty Memorial High
Worcester	Doherty Satellite
Worcester	Forest Grove Middle School
Worcester	North High School
Worcester	South High Community
Worcester	Sullivan Middle School
Worcester	University Park Campus
Worcester	Worcester East Middle
Worcester	Worcester Vocational High

APPENDIX VI: TOMORROW’S TEACHERS CLUB SURVEY

Tomorrow’s Teachers Clubs Program Information

How many years has your school had a Tomorrow’s Teachers Club?

- A. This is our first year with a TTC.
- B. 2 years
- C. 3 years
- D. 4 years
- E. 5-8 years
- F. 9 or more years

What criteria do you use to determine who is eligible to become a member of your TTC? (Circle all that apply.)

- A. Grade point average
- B. Teacher recommendation
- C. Student interest
- D. Other indicators (please specify): _____

Comments on the previous question:

How do you recruit students to participate in your Tomorrow’s Teachers Club? (Circle all that apply.)

- A. “Invitation” flyers to all classrooms
- B. Posters/advertising at school
- C. School Announcements
- D. Contact students who have shown an interest based on “Career Interest” Inventories
- E. Word of Mouth
- F. Other (Please specify): _____

Please complete the following table to provide information regarding student enrollment in your Tomorrow’s Teachers Club. Please enter the total number of boys, girls, the total number of students enrolled, and the breakdowns across each type of racial/ethnic background.

		Asian/Pacific Islander	Native American/ Alaska Native	Hispanic	Black/non-Hispanic	White/non-Hispanic	Other
Total Boys: _____	How many boys come from each background? →						
Total Girls: _____	How many girls come from each background? →						
Total Enrolled in TTC: _____							

What percentage of students in your TTC would you classify as:

- “high” academic achievers? _____%
- “average” academic achievers? _____%
- “low” academic achievers? _____%

Comments, if any:

If you have had a TTC for two or more years, has student enrollment in your TTC increased, decreased, or stayed the same?

- A. Increased
- B. Decreased
- C. Stayed the same

Comments, if any:

What grade levels are represented in your Tomorrow’s Teachers Club? (Circle all that apply.)

- A. 5th grade
- B. 6th grade
- C. 7th grade
- D. 8th grade
- E. 9th grade
- F. 10th grade
- G. 11th grade
- H. 12th grade

How many of the TTC club members regularly attend the functions of your TTC?

- A. 80% or more
- B. 50-79%
- C. 25-49%
- D. 24% or less
- E. Other (please specify):

How often does your TTC meet?

- A. Weekly
- B. Biweekly
- C. Monthly
- D. One time each semester
- E. Other (please specify): _____

What time of day do you generally meet?

- A. During the school day
- B. After school
- C. Before school
- D. Weekends
- E. Other (please specify): _____

For how long do you generally meet?

- A. 30 minutes
- B. 1 hour
- C. 1.5 hours
- D. 2.0 hours
- E. Other (please specify): _____

In what types of activities do TTC student members participate? (Please circle all that apply.)

- A. **Shadowing** a teacher
- B. **Guest lectures** by teachers at different levels
- C. **Field trips** to Schools of Education
- D. Education **“Discussion” groups**
- E. **Research** websites on careers and education

- F. **Reading aloud** to children in elementary classrooms
- G. **Tutoring** children **after school** hours (for instance, at the library)
- H. **Tutoring** children **during school** hours
- I. **Assisting** in lesson planning
- J. **Creating Bulletin Boards** for classrooms

- K. **Publicizing** the TTC at your school
- L. **Fundraising** to **supplement** the TTC budget
- M. **Fundraising** to sponsor a **scholarship**
- N. Other (please specify):

Comments regarding TTC activities:

Does your TTC conduct fundraising activities?

- A. Yes
- B. No

If so, how much money does your TTC raise over the course of one year?

- A. \$500 or more
- B. \$100 - \$499
- C. Less than \$100

How do you spend the funds that you receive through your fundraising efforts?

Have any of your TTC members ever received the DOE's "Tomorrow's Teachers Clubs" Scholarships?

- A. Yes
- B. No
- C. Unsure

Comments:

How many of your former TTC students are currently teaching?

- A. Not applicable – Our TTC has not been active long enough to track students.
- B. 0
- C. 1-3
- D. 4-6
- E. 7-10
- F. I don't know.
- G. Other (Please specify): _____

How many of your former TTC students are currently enrolled in a teacher preparation program?

- A. Not applicable – Our TTC has not been active long enough to track students.
- B. 0
- C. 1-3
- D. 4-6
- E. 7-10
- F. I don't know.
- G. Other (Please specify): _____

What percentage of your TTC students **would you predict** will pursue a career in teaching?

- A. 81-100%
- B. 61-80%
- C. 41-60%
- D. 21-40%
- E. Less than 20%

In which of the following areas do your TTC students show the most interest?

- A. Early childhood
- B. Elementary
- C. Secondary
- D. A mix of the above – please specify:

Comments:

What kind of impact do you feel the Tomorrows Teachers Clubs are having on student attitudes toward the teaching profession?

- A. Very positive impact on student attitudes
- B. Positive impact on student attitudes
- C. Does not affect student attitudes
- D. Negative impact on student attitudes
- E. Very negative impact on student attitudes

Comments:

Select one choice below to indicate your level of agreement with the following statement: **“Tomorrow’s Teachers Clubs are an effective way to recruit quality students into the teaching profession.”**

- A. Strongly Agree
- B. Somewhat Agree
- C. Neutral
- D. Somewhat Disagree
- E. Strongly Disagree

Comments:

How did your school find out about the Tomorrow’s Teachers Clubs grant opportunity?

- A. Explored the DOE website
- B. Mailing to school district from DOE
- C. Read school district postings/opportunities
- D. Discussions with colleagues/word of mouth
- E. Other (please specify): _____

If Tomorrow’s Teachers Clubs grant funding was not available, would your school continue to sponsor a Tomorrow’s Teachers Club?

- A. Yes
- B. No
- C. Unsure

Comments:

Other than financial support, how else might the DOE support schools in encouraging quality students to become teachers?

Please share any other comments or suggestions that you may have regarding TTC’s and/or teacher recruitment:

Background/Demographic Information:

(We ask for the following information to help us in analyzing the data according to different variables. We take our commitment to confidentiality very seriously, and no respondents will be identified in any way. Our final report will only include aggregate data.)

Name: _____

School District: _____

School: _____

Which of the following best characterizes your school?

- A. Urban
- B. Suburban
- C. Rural
- D. College town
- E. Other (please specify):

How many years have you been a classroom teacher?

- A. This is my first year.
- B. 2-4 years
- C. 5-8 years
- D. 9-12 years
- E. 13-19 years
- F. 20+ years

How long have you been the Faculty Advisor of the Tomorrow's Teachers Club (or Future Teachers Club)?

- A. This is my first year
- B. 2 years
- C. 3-5 years
- D. 5 or more years
- E. Other (please specify):

What is the highest degree that you have received?

- A. Bachelors
- B. Masters
- C. C.A.G.S.
- D. Doctorate

In what areas do you hold teaching certification?

- A. Elementary
- B. Middle School Generalist
- C. Math
- D. History/Social Sciences
- E. English

- F. Sciences
- G. Foreign Language
- H. Special Education
- I. Other (specify): _____

Are you currently teaching in the area in which you hold certification?

- A. Yes
- B. No

If not, what are you doing (e.g. teaching outside of certification area; curriculum specialist; administration)?

What is your age?

- A. 25 or younger
- B. 26-30
- C. 31-35
- D. 36-40
- E. 41-45
- F. 46-50
- G. 51-55
- H. 56 or older

Gender:

- A. Male
- B. Female

Ethnicity:

- A. Asian or Pacific Islander
- B. Native American/Alaska Native
- C. Hispanic
- D. White/non-Hispanic
- E. Black/non-Hispanic
- F. Other (specify): _____

Thank you very much for taking the time to complete this survey. If you have any questions about this research, please contact Andrew Churchill, Assistant Director, Center for Education Policy, UMass Amherst, at 413-545-0958 or achurchill@educ.umass.edu

APPENDIX VII: SCHOOLS RESPONDING TO THE TOMORROW’S TEACHERS CLUB SURVEY

School District	School
Abington	Abington High
Adams-Cheshire Reg.	Hoosac Valley High School
Agawam	Agawam High
Athol-Royalston	Athol High
Barnstable	Barnstable Middle at Hyannis
Belchertown	Belchertown High School
Carlisle Public Schools	Not reported
Chelmsford	Chelmsford High
Danvers	Danvers High
Dracut	Dracut High
East Bridgewater	G.W. Mitchell Middle
East Longmeadow	East Longmeadow High
Easton	Oliver Ames High
Fairhaven Public Schools	Fairhaven High
Fall River	BMC Durfee
Georgetown	Georgetown Middle-High School
Gill-Montague	Turners Falls High
Greater New Bedford Vocational	Greater New Bedford Vocational
Holyoke	Holyoke High
Holyoke	Lynch Middle
Holyoke	Peck Middle
Lawrence	Frost School
Leominster	Samoset
Mashpee	Mashpee High
Maynard	Maynard High
Medford	Medford High
North Brookfield	North Brookfield High
North Shore Regional Voc. District	North Shore Technical High School
Northboro/Southboro	Algonquin
Oxford	Oxford High
Pittsfield	Reid Middle
Pittsfield	Taconic High
Plymouth	Plymouth North High
Plymouth	Plymouth South High
Quincy	Central Middle School
Randolph	Randolph High
Revere	Revere High
Rockland	Rockland High
Salem	Collins Middle
Shirley	Lura A. White
Southbridge	Southbridge High
Springfield	Brookings
Springfield	Commerce High
Springfield	Kiley
Stoneham	Stoneham High

Sutton	Sutton High
Swansea	Joseph Case High
Tantasqua R.S.D.	Tantasqua Regional High
Tewksbury	Tewksbury Middle/High
Triton Reg. S.D.	Triton Regional High
Webster	Bartlett High
Westborough	Westborough High
Worcester	Accelerated Learning Lab School
Worcester	Burncoat High
Worcester	Burncoat Middle
Worcester	North High
Worcester	South High School
Worcester	Sullivan Middle
Worcester	Worcester Vocational High
(Six schools responded anonymously.)	

APPENDIX VIII: ATTRACTING EXCELLENCE TO TEACHING SURVEY

Please rate the following factors in terms of how significant each was in your decision to enter the teaching profession. (Check one answer in each row.)

	How significant were the following factors in your decision to enter the teaching profession?	Very Significant	Significant	Somewhat Significant	Not Significant
1.	Desire to work with children				
2.	Value to society				
3.	Interest in subject matter				
4.	Family influence				
5.	School year schedule/Long summer vacation				
6.	Job security				
7.	Self-growth & actualization				
8.	Status/recognition				
9.	Salary/benefits				
10.	Attracting Excellence to Teaching loan forgiveness program				
11.	Other (please specify):				

12. When did you first become aware of the Attracting Excellence to Teaching (AET) loan forgiveness program? (Please circle only one choice.)

- A. While I was in college doing my undergraduate work
- B. While I was in a post-B.A. educator preparation program
- C. During the job search process, before I was hired
- D. During my first year of teaching
- E. After I had been teaching for ____ number of year(s) but still had loan payments (enter # of years)
- F. Other (Please specify): _____

13. How did you learn about the Attracting Excellence to Teaching (AET) loan forgiveness program? (Please circle all that apply.)

- A. College/university school of education
- B. College financial aid office
- C. College career center
- D. School district used AET as a recruiting tool when I inquired about teaching positions
- E. School/district announcement/posting
- F. Another teacher told me
- G. Other word of mouth
- H. Department of Education website

I. Article in newspaper, magazine, or journal (Please specify): _____

J. Other (Please specify): _____

14. Did the school system in which you are currently working inform you about the Attracting Excellence to Teaching loan reimbursement program as one way of paying off college debt?

- A. Yes
- B. No
- C. Unsure

14a. Comments, if any:

15. Would you have entered the teaching profession if you were not able to participate in the Attracting Excellence to Teaching loan forgiveness program?

- A. Yes
- B. No
- C. Maybe

15a. If you answered “no” or “maybe” above, please explain:

16. If the AET loan reimbursement payments were only available to teachers teaching in “high need” or “high poverty” school districts, would this have affected where you applied for a teaching position?

- A. Yes
- B. No
- C. Maybe

16a. Comments, if any:

17. If the DOE wants to use AET as an incentive to attract and retain teachers in high need districts, what would be the minimum reimbursement necessary for it to be an effective incentive (if it were only paid to teachers in high-need districts)?

- A. Current amount (up to \$1800/year) is sufficient
- B. \$2000/year
- C. \$3000/year
- D. \$4000/year
- E. \$5000/year
- F. Other (Please specify): _____

18. In what year(s) did you apply to receive AET loan reimbursement payments, and how much have you received?

Year	Applied and received Reimbursement (check all that apply)	Applied but was turned down (check all that apply)	Amount received (write dollar amount)
1998			
1999			
2000			
2001			

19. If you ever applied and were turned down for the AET loan reimbursement, what reasons were given for your ineligibility?

20. What was your total amount of student loans remaining to be paid when you applied to the AET program?

- A. \$1,000 or less
- B. \$1,001 to \$2,500
- C. \$2,501 to \$5,000
- D. \$5,001 to 10,000
- E. \$10,001 to \$15,000
- F. \$15,001 to \$20,000
- G. \$20,000 to \$30,000
- H. \$30,001 to \$50,000
- I. over \$50,000

Application Process

21. Would you prefer to apply to the AET program using the Internet (on-line application) or paper (mail-in)?

- A. Prefer Internet (on-line)
- B. Prefer paper (mail-in)
- C. Either is fine

Why?

22. How long was the time period between when you applied and when you received confirmation that you were eligible to receive reimbursement payments from the AET program?

- A. Less than one month
- B. About one month
- C. About two months
- D. Other (Please specify): _____

23. Once you received confirmation of your eligibility, how long was the time period before you actually received your payment?

- A. Less than one month
- B. About one month
- C. About two months
- D. Other (Please specify): _____

24. In what month did you receive your loan reimbursement payment?

(Please indicate one month): _____

25. How would you rate the Department of Education's assistance to you during the **application process**?

- A. Very good
- B. Good
- C. Satisfactory
- D. Poor
- E. Very poor

25a. Comments:

26. What is your overall satisfaction level with the DOE's administration of the AET loan forgiveness program?

- A. Very Satisfied
- B. Satisfied
- C. Neutral
- D. Somewhat unsatisfied
- E. Very Unsatisfied

26a. Why?

27. The AET program is designed to attract and retain outstanding teachers in Massachusetts public schools, particularly in high-need districts. Do you have suggestions for improving the program's effectiveness?

SATISFACTION AND FUTURE PLANS

28. What is your current level of satisfaction with teaching? (Please circle one choice.)
- A. Very satisfied
 - B. Satisfied
 - C. Neutral
 - D. Somewhat unsatisfied
 - E. Very unsatisfied
29. How have the reimbursement payments affected your satisfaction level with teaching, if at all? (Circle one choice.)
- A. Greatly increased satisfaction
 - B. Somewhat increased satisfaction
 - C. Have not affected satisfaction
 - D. Somewhat decreased satisfaction
 - E. Greatly decreased satisfaction
- 29a. If you indicated that your satisfaction level has changed as a result of AET, please explain:
30. How much longer do you currently plan to continue in classroom teaching?
- A. 0 years
 - B. 1-2 years
 - C. 3-5 years
 - D. 6-9 years
 - E. 10-15 years
 - F. 16-20 years
 - G. 21 or more years
31. If you do not plan to be in a classroom teaching position after 2005, which one of the following do you plan to be?
- A. Administrator
 - B. Guidance Counselor
 - C. Education Specialist
 - D. Employed outside the field of education
 - E. Caring for a family member or raising children
 - F. Attending graduate school
 - G. Teacher Educator
 - H. Retired
 - I. Other (please specify): _____
 - J. Not applicable.
32. Would you say you are likely to spend more, the same, or fewer years in classroom teaching as a result of receiving reimbursements for your college education?
- A. More years
 - B. About the same years
 - C. Fewer years

33. If you could choose again, would you choose teaching as a career?
- A. Yes
 - B. No
 - C. Maybe
34. In what type of teacher preparation/certification program did you participate?
- A. 4-year undergraduate program at a state college/university
 - B. Graduate teacher preparation program that offered a Master's degree plus teacher certification
 - C. Post-B.A. teacher preparation program solely for teacher certification
 - D. Massachusetts Institute for New Teachers (MINT) summer training sponsored by the Dept. of Education
 - E. Other (Please specify): _____
35. Do you have any other comments about AET and/or the DOE's teacher recruitment and retention strategies?

Demographic Information/Personal History

Your Name: (for response rate calculation only)

In what school district are you currently employed?

What is the name of the school?

What is the highest degree that you have received?

- A. Bachelors
- B. Masters
- C. C.A.G.S.
- D. Doctorate

In what areas do you hold teaching certification?

- A. Elementary
- B. Middle School Generalist
- C. Math
- D. History/Social Sciences
- E. English
- F. Sciences
- G. Foreign Language
- H. Special Education
- I. Other (specify): _____

Are you currently teaching in the area in which you hold certification?

- A. Yes
- B. No

If not, what are you doing (e.g. teaching outside of certification area; curriculum specialist; administration)?

How many years have you been a classroom teacher?

- A. This is my first year.
- B. 2-3 years
- C. 4-5 years
- D. 6-8 years
- E. Other: _____

What is your age?

- A. 25 or younger
- B. 26-30
- C. 31-35
- D. 36-40
- E. 41-45
- F. 46-50
- G. 51-55
- H. 56 or older

Gender:

- A. Male
- B. Female

Ethnicity:

- A. Asian or Pacific Islander
- B. Native American/Alaska Native
- C. Hispanic
- D. White/non-Hispanic
- E. Black/non-Hispanic
- F. Other (specify): _____

Please indicate your primary undergraduate major. Please mark only one choice.

- A. Education
- B. English
- C. Math
- D. History
- E. Social Science
- F. Science
- G. Foreign Language
- H. Art
- I. Music
- J. Other (specify): _____

Please mark the grade point average closest to your average for your undergraduate work.

- A. 3.5-4.00
- B. 3.0-3.49
- C. 2.5-2.99
- D. 2.0-2.49
- E. 1.99 or below

Thank you very much for taking the time to complete this survey. If you have any questions about this research, please contact Andrew Churchill, Assistant Director, Center for Education Policy, University of Massachusetts Amherst, at 413-545-0958 or achurchill@educ.umass.edu.

APPENDIX IX: SCHOOL DISTRICTS WHERE RESPONDENTS TO THE ATTRACTING EXCELLENCE SURVEY ARE TEACHING

District	Number of Teachers
Acton	1
Agawam	1
Amesbury	1
Amherst/Pelham Regional	1
Andover	1
Ashland	1
Athol-Royalston	1
Attleboro	1
Bedford	1
Belchertown	1
Berkshire Hills Regional	1
Boston	65
Boston Renaissance CS	3
Bourne	1
Boxborough	1
Braintree	2
Bridgewater-Raynham	1
Brockton	18
Brookline	1
Cambridge	4
Chelmsford	3
Chelsea	13
Chicopee	5
Dartmouth	1
Dedham	1
Dover-Sherborn	1
Dover	1
Dudley-Charlton	1
Everett	4
Fall River	3
Fitchburg	7
Framingham	8
Gardner	1
Gill-Montague	3
Granby	1
Greater Fall River	2
Greenfield	1
Hampshire Regional	1
Hanover	1
Haverhill	4
Holyoke	8
Hudson	1
Ipswich	1

Lawrence	19
Leominster	3
Lexington	1
Lincoln-Sudbury	1
Littleton	1
Lowell	27
Lynn	14
Malden	2
Marshfield	1
Martha's Vineyard	1
Mashpee	1
Medfield	2
Medford	3
Melrose	2
Methuen	1
Middleboro	3
Milford	1
Millbury	1
Mohawk Trail Regional	1
Mount Greylock Regional	2
Natick	1
New Bedford	7
Newton	2
North Adams	1
North Andover	1
North Middlesex Regional	2
Northampton	1
Norton	1
Orange	2
Peabody	1
Pioneer Valley Regional	1
Pittsfield	2
Plymouth	1
Quabbin Regional	1
Quincy	5
Randolph	1
Reading	1
Revere	8
SABIS International CS	3
Seekonk	1
Sharon	2
Somerville	9
South Hadley	1
South Middlesex Regional	1
Springfield	21
Stoughton	1
Sturbridge	1
Sudbury	1

Swampscott	1
Tantasqua Regional	1
Taunton	2
Tewksbury	1
Triton Regional	1
Tyngsborough	1
Wachusett Regional	1
Waltham	7
Watertown	1
Wayland	1
Webster	1
Wellesley	1
West Boylston	1
West Springfield	2
Westborough	5
Westfield	2
Weston	1
Weymouth	3
Winchendon	2
Winthrop	3
Worcester	30
Unknown or no longer teaching in MA	31
Total	445

APPENDIX X: CASE STUDY SEMINARS PARTICIPANT SURVEY

The information gathered from this survey will be used by the UMass Amherst Center for Education Policy to evaluate the Case Study Seminars as part of a larger study of the Massachusetts Department of Education’s teacher recruitment and retention initiatives. All data gathered from this survey will be held anonymous, and information and results obtained from the study will be presented only in the aggregate. No individuals will be identified in any way. Thank you for your input.

I. Case Study Seminar Session Ratings

Please rate the following **Case Study Seminar sessions** in terms of how valuable they were to your teaching (check one per row):

Case Study Seminar Session:	Very Useful	Useful	Somewhat Useful	Not Useful	Not Covered	Did Not Attend
1. Curriculum Frameworks						
2. MCAS/Other Assessment Tools						
3. Classroom Management/Effective Interactions with Students						
4. Special Education Issues-- LD Students						
5. Special Education Issues— Accelerated Students						
6. Use Of Technology						
7. Level Breakout Sessions						
8. Subject Breakout Sessions						
9. Other (specify:)						

Comments on the value of any of the sessions:

10. The activity in the sessions that you value the most is (please check one)

- Directed Discussion
 Participant-Initiated Discussion
 Informal Social Interaction
 Other:

Why?

II. Structure

11. How long were the sessions? (# of hours each session lasted, on average) _____

12. Where did your sessions meet? _____

13. Was this convenient? Yes No

14. When did your sessions begin meeting? September October November

15. Would you have preferred to have the sessions begin at the very beginning of the school year?

Yes No They did

16. Would you have preferred to have more of the sessions held in the early part of the school year?

Yes No

Comments about session length/timing:

17. What was the approximate facilitator-to-student ratio at the seminars? _____

18. On average, about how many participants attended the case study seminars you attended? _____

19. How many of the sessions were you able to attend? _____

20. Were you compensated in any way for attending these seminars (\$, PDPs, etc)?

Yes No

If Yes, how?

21. If you were compensated, would you still attend if you were not? Yes No

N/A

Why or why not?

III. Improvements/Additions/Modifications

22. What other seminar topics would be useful to you as a first/second year teacher?

23. Do you have suggestions for re-ordering the topics—areas that should come sooner or later?

24. The facilitator of my Case Study Seminar sessions was (circle one):

Very Competent

Competent

Somewhat Competent

Not Competent

Comments on facilitation, if any:

25. What is the most valuable aspect of the Case Study Seminars, and why?

26. What is the least valuable aspect, and why?

27. If you could make changes to the Case Study Seminars to make them more effective/useful, what would those changes be, and why?

28. What characteristics about the sessions would you definitely not change, and why?

IV. Connections to District Mentoring/Induction Programs

29. Does your district have a new teacher induction/mentoring program? Yes No

30. What type of mentoring/induction program exists at your school?

No induction program

Minimal induction program (such as orientation session for new teachers)

Significant induction program (such as orientation plus assigned mentors for all new teachers)

31. How would you rate the quality of your mentoring/induction support?

Excellent

Good

Fair

Poor

32. How, if at all, are the Case Study Seminars linked with mentoring/induction programs in your district?

33. Which would you prefer:

Case Study Seminars offered regionally (as they are now)

Case Study Seminars offered by district

No preference

34. How could your district do a better job of mentoring and supporting new teachers?

35. How could the Department of Education help your district do a better job of mentoring and supporting new teachers?

V. Teacher Satisfaction

36. How would you rate yourself as a new teacher ?

Excellent

Good

Fair

Poor

Comments:

37. How, if at all, have the Seminars affected your confidence and satisfaction level with teaching? Have they made it:

Much better

Better

Unaffected

Somewhat worse

Much worse

Comments:

38. How if at all have the Seminars affected your pedagogical (teaching/instructional) skills? Have they made them:

Much better Better Unaffected Somewhat worse Much worse

Comments:

39. How if at all have the Seminars affected your classroom management skills? Have they made them:

Much better Better Unaffected Somewhat worse Much worse

Comments:

40. Would you recommend the case study seminars to other teachers? Yes No
Maybe
Why?

41. What overall rating would you give the case study seminar process?

Excellent Good Fair Poor

Why?

42. Any other comments?

VI. Background Information

43. In what school district are you currently employed? _____

44. What is the highest degree that you have received?

- A. Bachelors
- B. Masters
- C. C.A.G.S.
- D. Doctorate

45. In what area(s) do you hold teaching certification ?

- A. Elementary
- B. Middle School Generalist
- C. Math
- D. History/Social Sciences
- E. English
- F. Sciences
- G. Foreign Language
- H. Special Education
- I. Other (specify): _____

46. How many years have you been a classroom teacher?

- A. This is my first year
- B. This is my second year
- C. Other: _____

47. What is your age?

- A. 25 or younger
- B. 26-30
- C. 31-35
- D. 36-40
- E. 41-45
- F. 46-50
- G. 51-55
- H. 56 or older

48. Gender:

- A. Female
- B. Male

49. Ethnicity:

- A. Asian or Pacific Islander
- B. Native American/Alaska Native
- C. Hispanic
- D. White/non-Hispanic
- E. Black/non-Hispanic
- F. Other (specify): _____

50. Please indicate your primary undergraduate major. Please mark only one choice.

- A. Education
- B. English
- C. Math
- D. History
- E. Social Science
- F. Science
- G. Foreign Language
- H. Art
- I. Music
- J. Other (specify): _____

51. Please mark the grade point average closest to your average for your undergraduate work.

- A. 3.5-4.00
- B. 3.0-3.49
- C. 2.5-2.99
- D. 2.0-2.49
- E. 1.99 or below

Thank you very much for taking the time to complete this survey. If you have any questions about this research, please contact Andrew Churchill, Assistant Director, Center for Education Policy, University of Massachusetts Amherst, at 413-545-0958 or achurchill@educ.umass.edu

APPENDIX XI: CASE STUDIES SEMINARS SURVEY RESPONDENTS

Districts Represented by Participants in this Survey

District	Case Study Location	Number of Respondents
Acton-Boxborough	Auburn	1
Amesbury	Beverly	1
Auburn	Auburn	1
Beverly	Beverly	5
Central MA SPED Collaborative	Beverly	1
Danvers	Danvers	4
Gloucester	Beverly	3
Hamilton-Wenham	Beverly	1
Leicester	Auburn	1
Lynn	Beverly	5
Lynnfield	Beverly	1
Marblehead	Beverly	1
Masconomet	Beverly	1
Middleton	Beverly	1
Millbury	Auburn	2
Nahant	Beverly	1
Needham-Upton	Auburn	1
Northbridge	Auburn	1
Peabody	Beverly/Danvers	3
Salem	Beverly	1
Saugus	Beverly	1
Southern Worcester County Vocational	Auburn	7
Springfield	Springfield	2
Swampscott	Beverly	2
Wilmington	Danvers	3
Winthrop	Beverly	1
Unemployed/No Response	Auburn/Beverly/Springfield	9

APPENDIX XII: MENTOR COORDINATOR SURVEY

Your Name: _____

Name of District in which Currently Employed: _____

PROGRAM INFORMATION

Does your school district have an induction program? Y N
 If yes, describe your program. If no, explain why not.

What type of induction program exists at your school?

- No induction program
- Minimal induction program (such as orientation session for new teachers)
- Significant induction program (such as orientation plus assigned mentors for all new teachers)

How would you rate the quality of your district’s induction support for new teachers?

Excellent
Good
Fair
Poor

Comments:

For each of the following potential components of an induction program, please indicate whether your district’s program includes that component, and if so, give a brief description of it.

Induction Program Components	Yes/No Response
Orientation (explain)	
Mentoring Component (explain)	
Support Team (explain)	
Release Time (explain)	
Beginning Teacher Workshops (explain)	
Mentor Workshops (explain)	
Other Components (explain)	

Does your district require its mentors to be trained? Y N
 If yes, how are your mentors trained?

Mentor Training	Yes/No Response	Number of Mentors Trained
Department of Education-Sponsored Summer Mentor Training		
In-House Training with District Staff		
In-House Training provided by Outside Consultants		
Other (please explain)		

Other comments regarding mentor training:

Were there any teachers in the district that participated in the DOE-sponsored summer mentor training?
 If so, how many?

If yes above, were there any DOE-trained teachers who were **not** selected to participate in the district's mentoring program?
 If so, why?

Were you or the district aware that the teachers who participated in the DOE-sponsored summer mentor training were going to participate in the training before they attended the training?
 Comments:

How would you rate the DOE-sponsored summer mentor training?

Very positive Positive Neutral Negative Very negative

Comment:

Do you think the DOE-sponsored summer mentor training was beneficial to your district's induction program?
 If yes, why? If no, why not?

Do you believe that your district induction program and mentor activities benefit new teachers?
 If yes, how? If no, why not?

Do you believe that your district induction program and mentor activities benefit veteran teachers?
 If yes, how? If no, why not?

How would you rate the communication and support of the Department of Education regarding the Summer Mentor Training?

Very good Good Satisfactory Poor Very poor

Comments:

How could the Department of Education help your district do a better job of mentoring and supporting new teachers?

Any other comments?

Thank you very much for taking the time to respond to this survey. Your responses will help us evaluate the Summer Mentor Training program in a way that helps the DOE continue to improve it.

APPENDIX XIII: DISTRICTS RESPONDING TO THE MENTOR COORDINATOR SURVEY

Abby Kelly Foster Charter School
Abington
Academy of the Pacific Rim Charter School
Amesbury
Amherst-Pelham RSD
Andover
Ashburnham-Westminster RSD
Athol-Royalston RSD
Atlantis Charter School
Attleborough
Auburn
Ayer
Barnstable
Bedford
Boston
Bourne
Boxford-Middleton-Topsfield
Braintree
Brockton
Brookline
Canton
Carver
Chatham
Chicopee
Clinton
Concord/Concord-Carlisle RSD
Danvers
Dedham
Dennis Yarmouth RSD
Douglas
Dracut
Dudley-Charlton
Duxbury
Easton
Falmouth
Foxborough
Framingham
Gardner
Granby
Greenfield
Hampshire RSD
Hanover
Harvard
Haverhill
Hingham

Holbrook
Holliston
Holyoke
Hopedale
Hudson
King Philip RSD
Lawrence
Leicester
Lenox
Leominster
Lincoln
Lincoln-Sudbury
Longmeadow
Lowell
Lowell Community Charter School
Lower Pioneer Valley Education
Ludlow
Lynn
Lynnfield
Mansfield
Marblehead Community Charter School
Marlborough
Martha's Vineyard Charter School
Masconomet RSD
MA Academy of Math and Science
Medfield
Methuen
Middleborough
Milton
Mount Greylock School Union #1
Mt. Greylock RSD
Narragansett RSD
Natick
Newton
North Berkshire
North Middlesex RSD
Northborough-Southborough
Norton
Norwood Public Schools
Old Rochester RSD
Orange Elementary
Petersham
Pittsfield
Plymouth
Randolph
Rockland
Rockport
Salem

Scituate
Shirley
Somerset
Southbridge
Spencer East Brookfield RSD
Stoughton
Sutton
Tantasqua RSD
Taunton
Tewksbury
Triton Regional
Tyngsborough Public Schools
Up-Island RSD
Wakefield
Wareham
West Boylston
Westford
Westwood
Weymouth
Winchester
Winthrop
Worcester

APPENDIX XIV: DISTRICTS IN MASSACHUSETTS WHERE MASTER TEACHERS ARE TEACHING

(as of November 2001)

School District	Number of Teachers
Acton-Boxborough	1
Acushnet	1
Agawam	1
Andover	1
Ashburnham-Westminster Regional	2
Ashland	1
Attleboro	3
Auburn	1
Barnstable	5
Beverly	2
Billerica	1
Blue Hills Vocational	1
Boston	21
Bourne	1
Brockton	1
Burlington	2
Cambridge	11
Canton	5
Cape Cod Lighthouse Charter School	1
Cape Cod Region Voc Tech	1
Carver	3
Central Berkshire Regional	1
Chelsea	1
Chicopee	1
City On A Hill Charter School	1
Clarksburg	1
Danvers	1
Dighton-Rehoboth	1
Dudley-Charlton Regional	1
East Longmeadow	3
Easton	2
Edgarton	1
Foxborough	2
Framingham	5
Francis W Parker Charter School	2
Frontier Regional	1
Gateway Regional	1
Greenfield	2
Hamilton-Wenham	1
Haverhill	1
Hingham	5

Hudson	5
Ipswich	1
Lawrence	1
Lee	1
Leicester	1
Leverett	1
Lexington	3
Lincoln	1
Lincoln-Sudbury Regional	1
Littleton	1
Longmeadow	1
Lowell	1
Ludlow	1
Lynn	2
Lynnfield	1
Manchester-Essex Regional	1
Marblehead	1
Marlborough	3
Martha's Vineyard Regional	1
Medfield	3
Medway	1
Melrose	1
Milton	1
Nashoba	1
Natick	2
Nauset	2
Needham	2
Neighborhood House Charter School	1
Newton	3
Norfolk County Agricultural High School	1
North Andover	1
North Middlesex	1
Northampton	2
Northampton-Smith Vocational	1
Norton	3
Old Rochester Regional	1
Peabody	1
Plymouth	7
Quabbin	1
Quincy	1
Ralph C Mahar Regional	1
Reading	3
Revere	8
Rockland	1
Roxbury Prep Charter School	1
Sharon	2
Shrewsbury	1
Silver Lake	2

Somerville	5
South Hadley	3
South Shore Regional	1
Southborough	1
Southbridge	1
Southwick-Tolland	1
Springfield	8
Stoughton	2
Swampscott	2
Triton Regional	1
Uxbridge	3
Wachusett	1
Walpole	1
Waltham	1
Wareham	1
Watertown	1
Wayland	1
Wellesley	1
West Springfield	1
Westfield	1
Westford	1
Weston	2
Westwood	3
Weymouth	2
Whitman-Hanson Regional	8
Williamsburg	1
Williamstown	1
Winchester	1
Worcester	4
Wrentham	1

APPENDIX XV: MASTER TEACHERS SURVEY

In the multiple-choice questions below, please circle or check your response (one response per question unless otherwise indicated). In the open-response questions, please feel free to continue on back of page.

Background Information

Your Name:	Name of District in which currently employed: Name of School:
Total number of years in the teaching profession:	Teaching Certification Subject Area:
Highest degree held: (Select one.) <input type="checkbox"/> Bachelors <input type="checkbox"/> Masters <input type="checkbox"/> C.A.G.S. <input type="checkbox"/> Doctorate	Are you currently teaching in the area in which you hold Certification? <input type="checkbox"/> Yes <input type="checkbox"/> No
Certification Level: (Select all that apply.) <input type="checkbox"/> Elementary <input type="checkbox"/> Middle School <input type="checkbox"/> High School	If not, what are you doing (e.g. teaching outside of certification area; curriculum specialist; administration)?

Pursuing National Board Certification Please rate the following factors in terms of how significant each was in your decision to apply for National Board Certification. (Check one answer in each row.)

	How significant were the following in your decision to apply for NBPTS certification?	Very Significant	Significant	Somewhat Significant	Not Significant
1.	Master Teacher bonus (\$5,000/year for 10 years)				
2.	Salary scale increase				
3.	Increased status/recognition				
4.	Certification portability				
5.	Potential for promotion in curriculum development or administration				
6.	Potential for promotion while staying in classroom teaching				
7.	Professional development in teaching methods				
8.	Opportunity to become a mentor				
9.	Expanded roles (please specify):				
10	Encouragement from school/district (please specify):				

11	Other (please specify):				

12. How were you introduced to National Board Certification? (Please check all that apply.)

- a) Word of mouth
- b) School/district announcement/posting
- c) DOE website
- d) Article in newspaper, magazine, or journal (Please specify which one: _____)
- e) Other (please specify: _____)

13. How long did the application process take, from start to finish? _____

14. Have you received National Board Certification? Yes No

15. If you have not received National Board Certification, do you plan to re-apply? Yes No

16. How supportive was your school/district administration of your seeking National Board Certification? (Please circle one choice.)

Very supportive Supportive Neutral Unsupportive Very unsupportive

Comments, if any:

17. How supportive were your school colleagues of your seeking National Board Certification?

Very supportive Supportive Neutral Unsupportive Very unsupportive

Comments, if any:

18. How would you rate the Department of Education's assistance for you during this process?

Very good Good Satisfactory Poor Very poor

Comments, if any:

19. How useful was the feedback you received from the National Board on your application?
Very useful Somewhat useful Not useful
Comments, if any:

20. What were the most valuable parts of the certification process for you? (Describe:)

21. What parts did you find to be least useful? (Describe:)

22. If you had the chance to do it again, would you? ___Yes ___No
Why or why not?

PROFESSIONAL ROLES AND DUTIES

23. To what extent have your professional roles and duties changed as a result of your NBPTS certification?
(Please circle one choice.)

Very much Somewhat A little Not at all

If “very much” or “somewhat,” please describe:

24. To what extent has your level of involvement in issues of school governance and decision-making changed as a result of applying for NBPTS certification? (Circle one choice.)

Significantly increased Somewhat increased Stayed the same Somewhat decreased Significantly decreased

25. Given your answer to the previous question, in what ways has your involvement in issues of school governance and decision-making changed as a result of applying for NBPTS certification?

26. To what extent has your level of involvement in curriculum design and development changed as a result of applying for NBPTS certification?

Significantly increased	Somewhat increased	Stayed The same	Somewhat decreased	Significantly decreased
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27. Given your answer to the previous question, in what ways has your involvement in curriculum design and development changed as a result of applying for NBPTS certification?

SATISFACTION AND FUTURE PLANS

28. What is your current level of satisfaction with teaching? (Please circle one choice.)

Very satisfied	Satisfied	Somewhat unsatisfied	Very unsatisfied
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29. How has the NBPTS certification process affected your satisfaction level with teaching, if at all? (Circle one choice.)

Greatly increased satisfaction	Somewhat increased satisfaction	Has not affected satisfaction	Somewhat decreased satisfaction	Greatly decreased satisfaction
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30. If you indicated that your satisfaction level has changed, please explain:

31. Please check any of the following statements that apply. Applying for NBPTS certification has increased my career and professional development opportunities in the following ways:

- a) increased flexibility in what I can teach
- b) increased opportunities for where I can teach
- c) increased leadership/administrative opportunities
- d) increased consulting opportunities
- e) increased release time for professional purposes
- f) increased earning potential
- g) other (please specify:)

32. How long do you currently plan to continue in classroom teaching? _____ (number of years)

33. Would you say you are likely to spend more, the same, or fewer years in classroom teaching as a result of applying for NBPTS certification?

More years About the same years Fewer years

34. Would you say you are more, equally, or less likely to move into a curriculum director or curriculum development position as a result of applying for NBPTS certification? (Please circle one choice.)

More likely Equally likely Less likely

35. Would you say you are more, equally or less likely to leave teaching for an administrative position as a result of applying for NBPTS certification? (Please circle one choice.)

More likely Equally likely Less likely

Mentor Training

36. What type of mentoring/induction program exists at your school?

- a) No induction program
 b) Minimal induction program (such as orientation session for new teachers)
 c) Significant induction program (such as orientation plus assigned mentors for all new teachers)

Comments, if any:

37. Are you currently serving as a mentor, either in your school/district or for NBPTS candidates?

Yes No

38. Please check all that apply. I serve as a mentor in the following ways:

- a) in my school/district as a formally assigned mentor to new teacher(s)
 b) in my school/district as a leader in our mentoring/induction program for new teachers
 c) in my school/district as an informal resource for new teachers(s)
 d) as a seminar leader for other NBPTS candidates
 e) as a mentor for another NBPTS candidate
 f) I don't serve as a mentor
 g) other (please specify: _____)

39. What type of mentor training did you participate in?

- a) Summer Mentor Training Institute sponsored by the Department of Education
 b) Training sponsored by your district
 c) Other training (please specify:)
 d) No mentor training

40. How would you rate the quality of your mentor training?

Excellent Good Fair Poor

41. Do you think Board-certified teachers should have their own separate mentor training, or is a mix of Board-certified and regular teachers appropriate for mentor training? (Please select one.)

- a) separate mentor training for NBPTS-certified teachers
 b) a mix of Board-certified and regular teachers is appropriate

Comments:

42. How would you rate yourself as a mentor?

Excellent

Good

Fair

Poor

43. How could the state do a better job of helping Board-certified teachers to be excellent mentors?

Other Issues:

44. What overall rating would you give to the NBPTS certification process?

Excellent

Good

Fair

Poor

45. Why?

46. Would you have applied for National Board Certification if the Master Teacher bonus were not offered?

Yes No

47. Would you have applied for National Board Certification if the Master Teacher bonus were offered at a level of **\$2,500 per year for 10 years**? Yes No

48. Would you have applied for National Board Certification if the Master Teacher bonus were offered at a level of **\$5,000 per year for 5 years**? Yes No

49. Would you have applied for National Board Certification if the state required you to pay the application fee yourself and reimbursed you only if you successfully obtained certification?

Yes No

50. Comments, if any, on the previous 3 questions:

51. Which role do you see as more important for the Department of Education to do: offer mentor training institutes or support districts in building their induction programs?

- a) Offer mentor training institutes
- b) Support districts in building their induction programs
- c) Both are equally important
- d) Neither is important

Comments, if any:

52. Do you have suggestions for how the Master Teachers corps could best be utilized by the state to improve educator quality?

53. Do you have any other comments about National Board Certification and/or the Department of Education's Master Teacher policies?

Thank you very much for taking the time to complete this survey. If you have any questions about this research, please contact Andrew Churchill, Assistant Director, Center for Education Policy, University of Massachusetts Amherst, at 413-545-0958 or achurchill@educ.umass.edu.

APPENDIX XVI: GRANT MONEY RECEIVED BY T-CAP DISTRICTS

District	Year Grant Money Received	Amount Received
Beverly	2002	\$15,000
Cambridge	1999	\$15,000
Carlisle	1999	\$11,046
	2001	\$10,000
City on a Hill	1999	\$10,000
	2001	\$15,000
	2002	\$15,000
Danvers	2002	\$ 5,000
Lawrence	1999	\$14,600
	2001	\$15,000
Lee	1999	\$15,000
Leominster	2002	\$15,000
Lowell	1999	\$15,000
	2001	\$15,000
Martha's Vineyard	1999	\$10,020
Montachusett	1999	\$15,000
Needham	2001	\$15,000
New Bedford	1999	\$15,000
South Hadley	2001	\$15,000
	2002	\$15,000
Watertown	2001	\$15,000
	2002	\$15,000
Westfield	2002	\$15,000
Westport	2002	\$15,000
Whitman	2001	\$15,000
	2002	\$15,000

APPENDIX XVII: T-CAP INTERVIEW PROTOCOL

School _____
Contact Person _____
Date/Time of Telephone Interview _____
Amount of grant awarded _____ Years grant received _____

SCHOOL CHARACTERISTICS	
Location _____	
Population _____	Average teacher tenure _____
Percent of first-year teachers _____	Percent of experienced teachers _____
Other grants awarded – Other Initiatives in District _____	

1. Would you characterize the development of T-CAP in your district as being in the Planning or Implementation Phase?

T-CAP GOALS

2. What are your T-CAP Goals? Follow-up – Ask about any of the following list that are omitted. Follow-up 2: please describe each goal.

- ___ 2a. multiple career paths for teachers and opportunities to advance in the profession
- ___ 2b. a professional continuum that provides incentives for increased responsibilities, qualifications, learning and performance-based accountability
- ___ 2c. expanded roles for teachers in on-site leadership, decision-making and mentoring, as well as opportunities for community partnerships
- ___ 2d. extended contract (extra work days)
- ___ 2e. extra pay for extra work
- ___ 2f. performance bonus
- ___ 2g. flexibility to reward performance and negotiate salaries
- ___ 2h. innovative staffing structures
- ___ 2i. a performance based accountability system – hiring, advancement, and pay decisions are based on rigorous reviews that assess teacher performance in content knowledge, planning, instruction, assessment, and student learning gains
- ___ 2j. a school-wide commitment to professional growth activities that are connected to state teaching and learning standards, and local school improvement goals.
- ___ 2k. professional growth led by principal and Master Teachers that foster collaboration and focus on expected learning outcomes, best instructional practices and use of data to inform instruction
- ___ 2l. mandatory salaried induction year
- ___ 2m. method for expanding the supply of high quality teachers

____ 2n. other

3. Which of your goals have been implemented or established already?

4. What is your timeline?

5. Have your goals and/or timeline changed since you began planning ?

6. If so, in what ways?. For what reasons?

7. How is your district going about the process of planning -- i.e., Committee? Task force? Designated person?

8. Are there ongoing meetings? How often?

9. Who is involved in the planning process?
 - Teachers (how many and who?)
 - Staff? (how many and who?)
 - Superintendent
 - Principal(s)
 - Union Rep(s)
 - Local Association Rep(s)
 - School Committee Member(s)
 - Other (who?)

10. Describe the involvement of each of those marked above.

11. For those who are not involved, to what extent are they familiar with the planning process?

12. Do you have a designated T-CAP Director?

Yes

No

13. If yes, who is it – i.e., teacher (who? Qualifications? NBPTS Certified?), administrator

Other

14. What is his/her role?

15. Is he/she working with reduced teaching/administrative hours?

16. If no, what are the reasons you decided not to designate a director?

17. In your planning, are you (or did you):

	YES	NO
17a. Using (use) classroom substitutes?		
17b. Using (use) consultants?		
17c. Designing (design) materials?		
17d. Reviewing (review) and purchasing (purchase) materials?		
17e. Developing (develop) and printing (print) materials?		
17f. Traveling (travel)?		
17.g Other		

18. Please describe any of the above which were marked yes.

19. What have the major outcomes been so far?

20. What barriers to change are there or have there been?

21. How do the unions perceive your T-CAP efforts?

22. How do faculty and staff perceive the T-CAP efforts?

23. What models (if any) are you drawing from?

24. What do you know about the Milken Foundation TAP model?

25. To what degree have you incorporated the Milken Foundation model?

1 2 3 4 5
 not at all slight degree moderate substantial very great degree

26 a. If 3-5, which aspect of the model have you incorporated?

27b. If 1-2, why not?

SPECIFIC PLANS ESTABLISHED AND/OR IMPLEMENTATION BEGUN

To what extent have you implemented new staffing structures that address:	1 not at all	2 slight degree	3 moderate degree	4 substantial degree	5 very substantial degree	NA
28. recruitment and entry?						
29. mentoring and induction for new teachers?						
30. professional development?						
31. training and certification?						
32. To what extent are you changing the role and nature of collective bargaining to allow for flexible staffing solutions and compensations?						
33. To what extent are you providing new avenues for attracting mid-career professionals to the field of teaching?						
34. To what extent does your program expand roles for teachers?						

35. To what extent does your program include the following: 34a. private industry? 34b. higher education? 34c. community organizations? 34d. parents?						
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36. For all areas above marked 3-5, describe the changes being made.

37. For all of the areas marked 3-5, what has helped you?

38. What have been barriers to implementation of any of the above?

IMPLEMENTATION (questions for those who say they are in implementation phase)

39. Describe where you are in the implementation process – i.e, beginning, middle, established.

40. What have the major outcomes been so far?

41. Follow up: On a one to five scale, (1 = not at all; 5 – very substantial) to what extent have these outcomes impacted the following:

_____	41a. the instructional climate in your district?	1	2	3	4	5
_____	41b. the instructional skills of teachers in your school?	1	2	3	4	5
_____	41c. teaching performance?	1	2	3	4	5
_____	41d. teachers achieving professional growth?	1	2	3	4	5
_____	41e. district efforts to enhance the educational program?	1	2	3	4	5

42. To what degree does T-CAP tie in to other initiatives within the district?

43. To what degree are faculty and staff familiar with the changes made?

1	2	3	4	5
not at all	slight degree	moderate	substantial	very great degree

44. To what degree are they involved in changes being made?

1	2	3	4	5
not at all	slight degree	moderate	substantial	very great degree

45. In what ways are they involved?

46. How do they perceive the efforts?

47. How is T-CAP interfacing with already established pay scales?

48. What strategies (if any) have been developed to utilize retired teachers?

49. Do you feel the benefits of T-CAP justify the costs of the program?

50. How can the DOE best support you in your efforts? How else?

51. Do you have any specific needs that DOE can help you meet?

52. How can DOE support/promote T-CAP statewide?

53. What else would you like to add?

APPENDIX XVIII: CITY ON A HILL CHARTER SCHOOL

The City on a Hill Charter School in Boston opened its doors during the 1995-96 school year. It is chartered as a professional development school, meaning that in addition to teaching high school students the school also serves as a training ground for prospective teachers who wish to teach in urban schools. City on a Hill, in conjunction with Northeastern University, runs a Teachers' Institute which provides education-related coursework along with the opportunity to serve as a Teaching Fellow at the school for a full year. Fellows become certified after the school year is complete. For more information on the Teachers' Institute, see www.cityonahill.org.

Faculty at City on a Hill have integrated the Teacher Career Advancement Program (T-CAP) principles into their Teachers' Institute. Every Teaching Fellow, along with other new teachers at the school, is assigned a mentoring team which provides support in classroom management, administrative skills, pedagogy, content knowledge, and whatever else is required. Most teams consist of five people and include at least one administrator. Teachers at City on a Hill teach only three classes per day and have two periods to spend in spent in meeting with or working as part of a mentoring team.

Initially, the Teachers' Institute and the mentoring teams were separate from the rest of the school, with only some veteran teachers participating. The T-CAP program has helped the school to expand the mentoring program, to the point where every teacher at City on a Hill is part of this system.

Each teacher at City on a Hill signs a contract specifying that he or she will either be involved with a mentoring team and/or be in training to become a lead mentor, who conducts evaluations of new teachers. It is through the mentoring teams that City on a Hill implements T-CAP, as veteran teachers become more involved in the mentoring teams and eventually, if they wish, become lead mentors. Through the mentoring teams, veteran teachers have the opportunity to work in new roles and take on new responsibilities without actually leaving the classroom. Eventually, veteran teachers will also be involved with assessing each other, providing continued professional growth throughout each teachers' career at the school. The Teachers' Institute will also expand as City on a Hill expands to additional grade levels and grows in size.

APPENDIX XIX: APPRENTICESHIP/IMMERSION PROGRAMS

Albuquerque, New Mexico – University of New Mexico/Santa Fe Public Schools/Los Alamos Public Schools Teacher Education Program

This 14-month program consists of pre-service coursework and field experiences in local schools, leading to provisional licensure in elementary or secondary school in New Mexico. Prospective teachers are paired in teacher-teams and given full responsibility, with supervision, for a classroom teaching position during their preparation period.

The University of New Mexico/Santa Fe Public Schools/Los Alamos Public Schools Teacher Education Program is an intensive 14-month program. UNM/SFPS/LAPS interns are liberal arts graduates who participate in pre-service coursework at the university and field experiences in local schools during the summer before their initial teaching assignment. After successfully completing their pre-service coursework, interns are granted provisional licensure by the New Mexico state department of education.

Interns are assigned in paired teacher-teams to full-time teaching positions with the Santa Fe or Los Alamos public schools, where they are supervised by clinical supervisors as they accept full responsibility for a classroom position. Interns also complete 6 credit hours of coursework during both the fall and spring semesters. In the subsequent summer session, interns complete their remaining coursework for New Mexico licensure.

Source:

Alternative Paths to Teaching: A Directory of Postbaccalaureate Programs. Second Edition, January 1996--AACTE Publications(American Association of Colleges for teacher Education) ED 394 967 Washington D.C.

Boston, Massachusetts – Teach Next Year

Teach Next Year is an intensive and highly selective partnership between the University of Massachusetts Boston and the Boston Public Schools. It offers prospective teachers who are seeking an M.Ed. and provisional advanced standing the opportunity to focus on urban education and earn an M.Ed. in less than one year.

The program features a full-year internship at Dorchester High School, with most courses on site. Participants are paired with veteran teachers; during the first semester they serve as assistant teachers, and during the second semester they begin to teach on their own. The Teach Next Year interns take an intensive one-year course load in addition to teaching the full school year and participating in a service project at the school.

The Trefler Foundation and other sources offer a \$10,000 stipend for participants to defray living costs and other expenses. The program serves 12 participants per year.

Sources:

http://www.umb.edu/academic_programs/graduate/gcoe/teacher_education/
http://www.umb.edu/news_and_events/university_reporter/ureporter1299/teach.html

Fort Collins, Colorado – Project Promise

Project Promise is a ten-month program that cycles participants through different school settings while providing them with related course work, leading to certification. It is run by the School of Education at Colorado State University.

Project Promise begins in August with two weeks of course work, after which participants engage in five short (one to ten weeks) field experiences in the Fort Collins schools, interspersed with additional course work throughout the school year. Participants can end their involvement in May prepared to take the Colorado teacher licensure tests, or continue over the summer to earn a master's degree in educational leadership. Participants receive peer coaching and support from faculty mentors, and must meet expectations in nine different competency areas. They also are assessed three times by an external evaluator.

The program serves 20 participants annually, out of about 200 applicants. Participants are selected on the basis of their undergraduate record and demonstrated leadership. Project Promise has a 92% placement rate for program graduates, and claims an 80% retention rate of graduates in public school teaching over a five-year period.

Sources:

What Matters Most: Teaching for America's Future, National Commission on Teaching and America's Future, 1996.

Sustaining the Supply of Math and Science Teachers: Assessing the Long-Term Effects of Nontraditional and Mid-Career Teacher Preparation Programs, by Meredith Ludwig, Laura Stapleton, and Burton Goodrich, ED 381 487.

<http://promise.cahs.colostate.edu/PP/Info.html>

Greenville, North Carolina – Project ACT

Project ACT is run by the School of Education at East Carolina University. Project participants teach in shortage subject areas in local public schools for one year while taking monthly Saturday classes at the university.

Project ACT begins during the summer with five weeks of full-day coursework at the University, followed by a two-day teaching simulation. Participants then are placed at local public schools for a full year of teaching, along with monthly Saturday seminars at the University. During this time they engage in portfolio preparation, classroom videotaping, content knowledge exercises, and mentoring from certified teachers in their area. They are supervised by a mentor in the school.

Participants must have a BA with at least a 2.5 GPA, and undergo an interview and screening process. About half of all applicants are accepted to the program. The program is limited to teachers of math, science, languages, middle school, vocational subjects, special education, music, art, drama, dance, and male elementary school teachers.

Of the 43 completers between 1994 and 1996, 16 were African-American. Thirty-eight were still teaching in 1997.

Source: An Accelerated Alternative Licensure Program To Recruit Minorities, by Parmalee P. Hawk, ED 407 380.

Houston, Texas – Texas Alternative Certification Program

The Houston Independent School District administers an alternative certification program for teacher candidates who have a bachelor's degree in another field. Participants serve as teachers of record for one year and then have the opportunity to pass the state's certification test.

The program begins with classroom observations and workshops in the spring, and is then followed by eight weeks of evening teacher education classes at the nearby University of St. Thomas, with which the district contracts for services. At the end of the classes but before placement, participants engage in a week-long, full-time "integrated field experiences" program, which offers them the chance to be supervised student teachers in the district's summer school.

The summer training is followed by placement in a public school, with an emphasis on urban classrooms and at-risk students. Participants work with mentors who are full-time teachers at their schools and are compensated for the additional time they spend with participants. The participants are also supervised by district personnel, who conduct monthly classroom observations of each participant. At the end of the year, the candidates must pass the state's certification test and receive recommendations from both the program director and the principal for state certification in order to continue teaching.

Candidates must have a BA and pass the Texas Academic Skills Program test, as well as meeting requirements specific to their area of certification. This year, approximately 600 candidates are pursuing alternate certification through this program. Participants pay \$3,750 plus \$260 per course at the university (the number of required courses varies with the type of certification pursued and the previous coursework completed by the participant), as well as additional costs for certification tests, books, and other fees.

Sources:

Post Baccalaureate Teacher Certification Programs: Strategies for Enhancement, Improvement, and Peaceful Co-Existence with Traditional Teacher Certification Programs, by Gwendolyn Duhon-Haynes, Mary Augustus, Rose Duhon-Sells, and Alice Duhon-Ross, ED 404 334.

Karen Owen, Office of Certification, Houston Independent School District.

<http://dept.houstonisd.org/acp>.

Knoxville, Tennessee – Lyndhurst Program

The Lyndhurst Program is a 12 to 15-month experiential teacher preparation program, offered by the University of Tennessee's education department, for mid-career professionals who want to enter teaching without a degree in education.

Participants begin by attending summer-school courses at the University full time, to gain grounding for their upcoming teaching experience. In the fall, students are placed in a local school and paired with a mentoring teacher from that school as well as a University faculty member. Students gradually take over responsibility for teaching their mentor's classes. They also attend classes at the University one day each week, and develop an action-research project based on their teaching experience. At the end of the year, participants are eligible to take tests toward and apply for full certification. They also receive credit for the past year of teaching on the state's salary scale. Students have the option of taking additional courses over the second summer to complete a master's degree.

There are two paths to certification through the Lyndhurst Program: one for elementary school and middle school teachers and one for secondary school teachers. The secondary school program is designed for professionals with a background in science or mathematics. The program is very selective, and chooses candidates based on their undergraduate GPAs, an interview process, and past work experience.

Students pay for 48 graduate hours of credit at the university (financial aid is available). They are not paid for their teaching internship. The program is self-funding and relies on maintaining a certain number of enrollees each year. If there is a lack of qualified applicants, the program will not be offered for that year.

Source:

http://www.coe.utk.edu/t_and_l/

Las Vegas, Nevada – Urban Teaching Partnership Program

The Urban Teaching Partnership, operated by UNLV's College of Education, is a university/school district collaborative program, in which students with a baccalaureate degree outside of education pursue teacher certification in an intensive, one-year, school-based program. The UTP Program prepares participants to work in high-poverty, diverse, urban contexts while at the same time preparing experienced teachers as mentors and as site-based teacher educators. The Urban Teaching Partnership Program places participants at urban schools in Clark County for a one-year internship, then assigns them to urban schools for their first year as a certified teacher.

The Urban Teaching Partnership Program lasts for one year, including a teaching internship and on-site coursework. Each intern is paired with a primary mentor teacher in the partnership school. Mentor teachers are experienced teachers who are charged with guiding interns in learning to teach and who are expected to participate in ongoing mentor preparation activities. Interns work in the mentors' classrooms under their guidance for a full academic year. Interns' work in the classrooms is coupled with courses at the university that are offered in an integrated block schedule where interns are at the university during some weeks taking courses and in the schools the other weeks working with students in the mentors' classrooms. Mentors co-teach, but also take time out during the school day to attend mentor training, leaving interns to teach on their own while furthering the mentor-teachers' own mentoring abilities. Mentors are also involved in program development, assessment, and research.

Approximately 60 people are trained each year, selected on the basis of their commitment to urban teaching. Funding comes from the teacher education program at the University of Nevada at Las Vegas, and is used to pay honoraria for mentors and a salary for a program facilitator.

Source:

Selecting and Preparing Quality Teachers from the Non-Certified Personnel Pool: A Review of the DeWitt Wallace-Reader's Digest Pathways to Teaching Careers Program, by Evelyn Dandy, Sandra Odell, and Alan Reiman, December 2001 (<http://www.ericsp.org/pages/digests/eprimers.html>).

Milwaukee, Wisconsin – Milwaukee Teacher Education Center

The Milwaukee Teacher Education Center offers a one-year apprenticeship-teaching program for people seeking certification in bilingual education, special education, or school media specialist in the Milwaukee Public Schools.

The Teacher Education Center program begins with an eight-week summer training session, which includes assisting summer school teachers and becoming solo teachers for the final two weeks, followed by attendance at the district's New Teacher Academy in August. In September, participants become salaried teachers of record for one year. They also attend mandatory weekly 3-hour seminars and take other courses specific to their certification paths, and also develop portfolios. They receive full-time mentoring from veteran MPS teachers on leave, who are paid their full salary plus a 5% bonus.

Bilingual education teachers are fully certified at the end of the first year. Teachers seeking certification in special education or school media specialist continue the apprenticeship for another year before becoming fully certified. Completion of this program counts toward an M.Ed. at some area institutions.

The first-year program tuition is \$10,000, and the second year is \$8-12,000, depending on certification. Students are eligible for financial aid, forgivable loans from the state of up to \$1,500, AmeriCorps stipends, and other scholarships. The program is supported by tuition as well as Title 2, in-kind support from the Milwaukee Public Schools, and grants. As the program grows, it becomes more self-supporting; an enrollment of 200 would be completely self-supporting.

The Teacher Education Center enrolls about 100 participants each year. An evaluation has been conducted by the University of Illinois' Center for Instructional Research and Curriculum Evaluation.

Sources:

What We Know and Don't Know from Peer-Reviewed Research about Alternative Teacher Certification Programs, by Kenneth M. Zeichner and Ann K. Schulte, *Journal of Teacher Education*, Vol. 52 no. 4, September-October 2001, pp. 266-282.
<http://www.mteconline.org/>

New York, New York – Intern Fellowship Program

The Intern Fellowship Program is a 15-month program at Fordham University and school districts in the New York metropolitan area that prepares individuals for careers as urban elementary school teachers. It includes a full-time, year-long teaching internship or apprenticeship and leads to both a Master of Science in Education degree and a P-6 provisional elementary certificate.

The program begins in mid-May and continues through the summer. The first segment combines intensive university based coursework with pre-internship practicums, including in-school observations. During the academic year (Sept.-June) students serve as full-time teaching interns or apprentices in schools in New York City or surrounding communities. Intern fellows are supported in their work by school administrative staff, the district supervisory staff, a university mentor, and university faculty.

Intern fellows are assigned a mentor who works with them throughout the school year and acts as a guide, counselor, coach, and professional role model. During the school year, intern fellows also participate in seminars and additional graduate study in the late afternoon and evening and Saturdays. Intern fellows complete their graduate studies during the July of the summer following their teaching experience.

Applicants must have an earned baccalaureate degree with a concentration in the liberal arts or sciences, and a minimum GPA of 3.0 (B or better). They must have had a distribution of courses including English, math, science, social science, and foreign language. Personal interviews are part of the admission process. Graduation requirements include successful internship/apprenticeship and a satisfactory professional portfolio. The program's scholarship earnings provisions cover the full cost of tuition and include a modest stipend. The number of internships and apprenticeships is limited and admission to this program is competitive.

Source:

Alternative Paths to Teaching: A Directory of Postbaccalaureate Programs. Second Edition, January 1996--AACTE Publications(American Association of Colleges for Teacher Education) ED 394 967 Washington D.C.

Springfield, Massachusetts – 180 Days in Springfield

180 Days in Springfield is an intensive, year-long, secondary school-based program, run jointly by the University of Massachusetts Amherst and the Springfield Public Schools. It leads to a Master of Education degree and provisional certification with advanced standing in mathematics, English, the sciences, or history/social studies.

180 Days begins in August with two semesters of concurrent school-teaching and graduate study at Chestnut Middle School or Central High School. Participants work directly with students throughout the school year, and take most of their courses on site. They begin as tutors, micro-teachers, and student teachers, and then by mid-year they become beginning teachers with a three-course load. Participants then take additional courses over the summer to complete the M.Ed. requirements.

Participants enter the program with bachelor's degrees outside the field of education, with coursework that is sufficient to fulfill the state's requirements for subject-area certification. They are chosen on the basis of their undergraduate record, evidence of leadership, and interviews. Admission to 180 Days in Springfield is contingent on admission to the University of Massachusetts' graduate school of education.

Participants pay \$7,200 tuition, but also receive a \$3,000 stipend from the Springfield Public Schools during the second semester as compensation for their increased teaching load. The program is in its sixth year, and at the end of this year will have graduated 79 people.

Sources:

Robert Maloy, Department of Education, University of Massachusetts Amherst.
<http://www.umass.edu/education/180Days/>

APPENDIX XX: NATIONAL BOARD CERTIFICATION, BY STATE

Information taken from National Board for Professional Teaching Standards website – www.nbpts.org

Eleven states, including Massachusetts, together account for nearly 80% of the Board-certified teachers in the United States. A summary of the incentives each of these other states provides follows.

North Carolina (3,658 teachers certified)

- 12 percent salary increase for those who achieve certification
- Certification fees paid and three days of release time to work on portfolios for up to 1,500 teachers
- Highest level of teacher certification to teachers with board certification
- Complete licensure recertification for those who complete certification process
- License portability for relocating teachers who are board certified
- Staff development plans incorporate the work of the NBPTS
- Institutions of higher education will incorporate NBPTS standards

Florida (2,251 teachers certified)

- Ten percent salary increase for life of certificate to those achieving certification
- Ten percent bonus (on top of salary increase) to those who agree in writing to provide the equivalent of 12 work days of mentoring and related services to other teachers
- 90 percent of certification fee paid by the state
- One-time \$500 stipend for those achieving certification and those who agree to mentor
- Incentive pay of \$150 to offset costs of portfolio preparation
- Certification meets requirements for license renewal
- License portability for relocating teachers who are board certified

Ohio (1,333 teachers certified)

- Salary increase of \$2,500 each year for the life of the certificate to those achieving certification
- Fees paid by Department of Education for 800 candidates in 2000-2001, also uses NBPTS funds and legislative appropriations to pay the fees for an additional 94 candidates
- Those who complete certification are awarded sufficient CEUs to achieve license renewal
- Orientation session provided to those who wish to seek certification; those who attend have priority in receiving funds
- \$300,000 appropriated for candidate support programs each year

California (1,306 teachers certified)

- One-time grant of \$10,000 to teachers who achieve board certification
- Additional \$20,000 to certified teachers who agree to teach for four years in a low-performing school
- State pays up to \$1,000 in funds to each board candidate; also \$1,000 in federal funds for an additional 197 teachers.
- License portability for relocating teachers who are board certified

Mississippi (1,154 teachers certified)

- Salary supplement of \$6,000 per year for the life of the certificate
- Full reimbursement of certification fee to those completing process who are employed in a local district
- Highest level of teacher certification to teachers with board certification
- Completion of board certification fulfills requirements for Mississippi recertification

South Carolina (1,290 teachers certified)

- Salary increase of \$7,500 per year for the life of the certificate
- Loans of \$2,300 (cost of certification) to each candidate; half of which is forgiven with no interest when a portfolio is submitted and the remainder upon certification
- Exemption from six semester hours for certification renewal during life of certificate
- License portability for relocating teachers who are board certified
- Highest level of teacher certification to teachers with board certification

Oklahoma (393 teachers certified)

- Salary increase of \$5,000 for those who achieve board certification
- Salary increase will rise to \$7,000 when Oklahoma is within 90% of the per pupil expenditure of the five surrounding states
- Fee support for 200 candidates
- License portability for relocating teachers who are board certified
- Legislation through the Education Leadership Oklahoma Act to provide fee support for 200 candidates and provide a \$5,000 salary increase remains the same as in previous years. When Oklahoma is within 90% of the per pupil expenditure of the five surrounding states, NBCTs will then receive \$7,000
- Teacher licensing categories modified to be compatible with board categories

Illinois (348 teachers certified)

- \$3,000 one-time stipend for those who achieve certification and are employed by an Illinois public school district
- Additional monetary incentives for providing mentoring services
- Master teacher level available only to board-certified teachers
- State will use NBPTS and state funds to pay fees for 99 candidates.
- Highest level of teacher certification to teachers with board certification

Iowa (322 teachers certified)

- Salary increase of \$5,000 for life of certificate, if achieved by May 1, 2000
- Salary increase of \$2,500 for life of certificate, if achieved after May 1, 2000
- Legislation drafted would increase stipend to \$5,000 per year for all teachers
- Fee reimbursement of \$1,150 at time of application, additional \$1,150 upon certification

Idaho (272 teachers certified)

- Salary increase of \$2,000 per year for five years
- Certified teachers designated as master teachers
- Highest level of teacher certification to teachers with board certification

Teachers in all states and territories are eligible for NBPTS Candidate Subsidy funds, to offset the \$2,300 cost of attaining certification. These funds are given to a limited number of teachers in each state who meet certain criteria set by both the state and the NBPTS. In many cases, lotteries are used to determine which teachers will receive the funds. Most other states, and many local districts, offer additional monetary and professional incentives.

Six states do not provide additional incentives for teachers to achieve board certification (although certain districts within each of these states do so). They are:

1. Alaska
2. Connecticut
3. Minnesota
4. Nebraska
5. Texas
6. Vermont

Of these states, Minnesota has the highest number of participants, with 153 teachers certified by the NBPTS. This is higher than all but the top eleven states. Connecticut follows with 51 teachers certified, which ranks Connecticut 26th among the states.

APPENDIX XXI: CONFERENCE REGISTRANTS

Teacher Recruitment and Retention in Massachusetts: Implications of Research for Policy

May 31, 2002
Sheraton-Needham Hotel

Ann Abeille
Director of Research and Evaluation
Learning Innovations at WestEd

Virginia Anderson
Associate Executive Secretary
Massachusetts Secondary School Administrators'
Association

Joseph Arangio
Principal
Milton High School

Frances Cooper Barry
Staff Developer
Cambridge Public Schools

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University of Massachusetts Amherst
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Mary Brabeck
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Lynch School of Education

Catherine Brooks
Research Consultant
University of Massachusetts
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Mark Brophy
Staffing and Mentor Coordinator
Worcester Public Schools

Cassandra Brown
Operations Director, MINT
The New Teacher Project

Roberta Camacho
Teacher
Dr. Robert G. O'Donnell Middle School

Michael Caruso
Associate Dean of Education
Fitchburg State College

Lisa Cella
Vice President
Recruiting New Teachers

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Lecturer
University of Massachusetts Lowell
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Andrew Churchill
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Center for Education Policy

Patricia Correia
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Massachusetts Association of School Committees

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Center for Leadership Development

Christopher Coxon
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Kathleen Devlin
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Massachusetts General Court

Ralph Devlin
Consultant, Professional Development
Massachusetts Teachers Association

Susan Duggan
Assistant Superintendent of Personnel
Lowell Public Schools

Pamela Edington
Dean of Social Science and Human Services
Middlesex Community College

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Director, Center for Education Policy
University of Massachusetts Amherst

Matt Ferron
Director of Client Services
Massachusetts Teachers' Retirement Board

Phillip Flaherty
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Massachusetts Secondary School Administrators'
Association

Jillayne Flanders
President
Massachusetts Elementary School Principals'
Association, Inc.

Susan Freedman
President
Teachers 21

Deborah Gendreau
Assistant Superintendent
Springfield Public Schools

Linda Griffin
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University of Massachusetts Amherst
School of Education

Holly Grzeskowiak
Office of Educator Quality
Massachusetts Department of Education

Orin Gutlerner
Office of Educator Quality
Massachusetts Department of Education

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Teacher
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Lisa Haverty
Office of Educator Quality
Massachusetts Department of Education

Sylvester Ingeme
Youth Program Manager
FleetBoston Foundation

Angela Irving
Director of Partnership Administration
Northeastern University
School of Education

Linda Javorski
Teacher
Leicester Middle School

Susan Moore Johnson
Professor
Harvard University
School of Education

Tom Johnson
National Board of Professional Teaching Standards

Donna Jones
Director, Teacher Recruitment Initiative Bank
Street College

Kathleen Kelley
President
Massachusetts Federation of Teachers

Melva Kelly
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Recruiting New Teachers

Thomas Kennedy
Director of Human Resources
Shrewsbury Public Schools

Margaret J. Kenney
Department of Mathematics
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Massachusetts Association of School
Superintendents

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James Morrissey
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Watertown Public Schools

Sean P. Neilon
Director of Intergovernmental Relations
Massachusetts Teachers' Retirement Board

Pendred Noyce
The Noyce Foundation

Vera Ossen
Director of Education Certification Programs
University of Massachusetts Lowell

Diane Panico
Springfield Professional Development Center

Joseph Patuleia
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Veterans Memorial High School

Elizabeth Pauley
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State Board of Higher Education

Cathy Pride
State Coordinator for Articulation and Transfer
State Board of Higher Education

Joan Rasool
Associate Dean
Westfield State College

S. Paul Reville
MERRC Chairman
Harvard University
Graduate School of Education

Constance Rizoli
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Massachusetts General Court

Donna Rosenberg
Teacher
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APPENDIX XXII: LIST OF STAKEHOLDER INTERVIEWEES

Name	Position	Organization
Stephen Gorrie	President	Massachusetts Teachers Association
Kate Harrington	Senior Associate for Academic Affairs	University of Massachusetts President's Office
Nadya Higgins	President	Massachusetts Elementary School Principals' Association
Kathleen Kelley	President	Massachusetts Federation of Teachers
Glenn Koocher	Executive Director	Massachusetts Association of School Committees
Christopher Martes	Executive Director	Massachusetts Association of School Superintendents
Richard Neal	Executive Secretary/ Treasurer	Massachusetts Secondary School Administrators' Association
Constance Rizoli	Research Director	Joint Committee on Education, Arts & Humanities, Massachusetts Legislature
Sylvia Smith	Chief of Staff	Office of Senator Robert A. Antonioni
Margaret Wood	Policy Analyst	Massachusetts Board of Higher Education