



**Massachusetts Mathematics and Science Partnership Title IIB  
Annual State-level Evaluation Report Appendices**

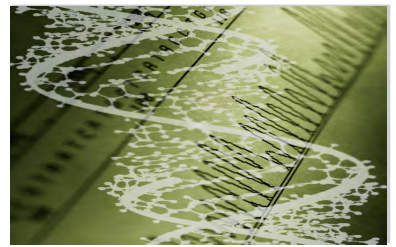
**Cohort 3 Reporting Period: September 1, 2007, through August 31, 2008**

**Cumulative Reporting Period: February 2, 2004, through August 31, 2008**

---

Prepared for the Massachusetts Department of Elementary and  
Secondary Education

April 2010



## Contents

<b>Appendix A: Participant Background Survey – Cohort 3 9/2007-8/2008</b> .....	<b>3</b>
<b>Appendix B: Timeline for State-level Evaluation and TA Activities</b> .....	<b>12</b>
<b>Appendix C: Cohort 3 Results of the Participant Background Survey for 2007-2008</b> .....	<b>14</b>
<b>Appendix D: High Need District Eligibility Criteria</b> .....	<b>20</b>
<b>Appendix E: Cohort 3 Enrollment and Attrition Rates by Course</b> .....	<b>23</b>
<b>Appendix F: Subject Matter Competency Demonstration Options</b> .....	<b>28</b>
<b>Appendix G: Cohort 3 Mean Percentage Scores for Pre- &amp; Post-course Tests</b> .....	<b>29</b>
<b>Appendix H: High Need Districts for All Funding Periods, by Partnership</b> .....	<b>34</b>
<b>Appendix I: Criteria that Account for Gain in Highly Qualified Status</b> .....	<b>38</b>

# Appendix A: Participant Background Survey – Cohort 3 9/2007-8/2008



## MMSP COURSE PARTICIPANT SURVEY

--	--	--	--	--	--	--	--

Please complete all survey items. Return to your instructor when you have finished.

**Teacher Code**

--	--	--

--	--	--	--

For research purposes only      1   2   3      4   5   6

Instructions for creating your Teacher Code

- Box 1 -- Your middle initial
  - Box 2 -- The first initial of your mother's first name
  - Box 3 -- The first initial of your father's first name
  - Boxes 4 and 5 -- Your two digit birth month
  - Box 6 -- The number of older siblings you have
- if any of these are not applicable use an X*

1. In which of the following are you currently employed?

- Public School District
- Public Charter School
- Private School
- Other: \_\_\_\_\_

2. District Code: 

--	--	--	--

Name of District: \_\_\_\_\_

Name of School: \_\_\_\_\_

3. How do you describe yourself? [optional-choose all that apply]

- American Indian or Alaskan Native
- Asian
- Black or African American
- Hispanic or Latino
- Native Hawaiian or other Pacific Islander
- White
- Other: \_\_\_\_\_

4a. Is this your first year employed in education?       Yes    No

4b. If this is not your first year, how many years have you been employed in education? 

--	--

5. Approximately how many students do you teach annually? 

--	--	--	--	--

6. Approximately what number of students from each of the following groups do you teach annually?

Title I	<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td><td> </td></tr></table>			
Advanced Placement or Academically Advanced	<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td><td> </td></tr></table>			
Bilingual or English Language Learners	<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td><td> </td></tr></table>			
Special Education	<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td><td> </td></tr></table>			

7a. Which **BEST** describes your current primary position? (Choose one.)

- Teacher (Regular Education)
- Special Education Teacher (Sole Instructor)
- Special Education Inclusion Teacher
- ELL, ESL, or Sheltered English Immersion Teacher
- Gifted and Talented Teacher
- Title I Teacher
- Paraprofessional
- Support Specialist (counselor, librarian, etc)
- Math Coach (Non-Teaching)
- Math Coach (Teaching)
- Science Coach (Non-Teaching)
- Science Coach (Teaching)
- Instructional Technology Director
- Department Head or Curriculum Coordinator
- Principal / Asst. Principal / Headmaster
- Superintendent or Asst. Superintendent
- Long-Term Substitute
- Other: \_\_\_\_\_

7b. If you have a secondary position, what is your secondary position? (Use the positions listed above in 7a.) If you don't have a secondary position, leave blank.

\_\_\_\_\_

8. Has your district designated you as "highly qualified" in the content area(s) you currently teach?

- No
- Yes
- Not sure
- I don't teach

***If you answered "No," "Not sure," or "I don't teach" to item 8, skip to item 10.***



Grid of seven empty boxes for identification

9. Prior to this course, how many content PDPs have you completed in core academic subject areas that you currently teach?

Grid of four empty boxes for PDP count

10. Why did you participate in this course? [choose all that apply]

- Radio button options for reasons for participation: To obtain graduate credit, To earn PDPs for recertification, To obtain a first license (certification), To obtain an additional license (certification), To prepare for Massachusetts Tests for Educator Licensure (MTEL), To increase knowledge in content, To follow an administrator's suggestion, To pursue a personal interest, Other: \_\_\_\_\_

11. If you are an elementary teacher, skip to Item 12. If you are a middle or secondary level teacher, indicate approximately what percentage of your teaching time is spent teaching the following subjects. For each subject, please enter a number ranging from 0 to 100.

- Subjects with percentage grids: Mathematics, General Science, Biology, Chemistry, Physics, Earth Science, Technology/Engineering (not computer science)

12. Have you taken or will you take the MTEL because of your participation in this course?

- Radio button options: Yes, No, Not Sure

13. If you are not licensed in the subject area(s) and grade level(s) you currently teach, do you have a waiver to teach?

- Radio button options: Yes, No

14. Please select any of the following licenses you currently hold.

- Radio button options for licenses: Vocational Technical, Specialist Teacher, Supervisor/Director, Principal/Asst. Principal, Superintendent/Asst. Superintendent



--	--	--	--	--	--	--	--

15. For each license area listed in Column A (below):  
 In **Column B**, select the appropriate license type for each subject/level license you hold. Do this **whether or not you currently teach the subject/level**. If you do not hold a license in an area, leave the row blank.  
 In **Column C**, for each license checked in **Column B**, identify the date you received it.

A	B				C
License Subjects and Grade Levels	Check which type of license you currently hold				When did you receive each license you checked in Column B?
	Preliminary	Initial	Temporary	Professional	
Academically Advanced PreK-8	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Adult Basic Education	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Biology 5-8	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Biology 8-12	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Chemistry 5-8	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Chemistry 8-12	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Early Childhood PreK-2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Earth Science 5-8	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Earth Science 8-12	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Elementary 1-6	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Elementary Mathematics 1-6	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
ELL PreK-8	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
ELL 5-12	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
General Science 1-6	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
General Science 5-8	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Instructional Technology	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Mathematics 8-12	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Middle School	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Middle School Mathematics 5-8	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Middle School Math/Science 5-8	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Physics 5-8	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Physics 8-12	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Students with Moderate Disability PreK-8	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Students with Moderate Disability 5-12	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Students with Severe Disability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Technology/Engineering 5-12	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	



--	--	--	--	--	--	--	--

16. Please select the major(s) for the degree(s) you **currently** hold.  
**[choose all that apply]**

	Bachelor's	Master's	CAGS	Doctorate
Education	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Math Education	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Science Education	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Math	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
General Science	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Biology	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Chemistry	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Earth Science	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Physics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Technology/Engineering	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other: _____ <i>please write in</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

17. Please select the major(s) for the degree(s) you are currently **pursuing**.  
**[choose all that apply]**

	Bachelor's	Master's	CAGS	Doctorate
Education	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Math Education	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Science Education	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Math	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
General Science	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Biology	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Chemistry	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Earth Science	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Physics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Technology/Engineering	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other: _____ <i>please write in</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



--	--	--	--	--	--	--	--

The following pages address your background and qualifications with regard to the specific subject area(s) that you currently teach. Please refer to the instructions below and complete the appropriate page for each subject area that you teach.

If you currently teach pre-K through elementary level subjects, please complete the bottom of this page.

If you currently teach middle or secondary level mathematics, please complete page 6.

If you currently teach middle school level general science (multiple subject areas per course), please complete page 7.

If you currently teach middle or secondary level biology, chemistry, physics, and/or earth science (one subject area per course), please complete page 8.

If you currently teach technology/engineering, please complete page 9.

If you currently do not teach, the survey is complete. Thank you for participating!

---

18. If you DO NOT teach one of the subject areas listed above, what subject / level do you currently teach?

Subject: \_\_\_\_\_

Grade Level: \_\_\_\_\_

**PRE-K THROUGH ELEMENTARY TEACHERS**

19. Do you teach multiple core subjects?

- Yes       No

19a. Do you teach **mainly mathematics** in an elementary school?

- Yes       No

19b. What grades do you currently teach? (choose all that apply)

- Pre-K       5
- K             6
- 1             7
- 2             8
- 3             ELL
- 4             SPED

19c. Have you taken any of the following MTEL tests?

- General Curriculum (formerly Elementary)  Yes  No
- Elementary Math  Yes  No
- Early Childhood  Yes  No

**If YES**, have you passed? If you have not yet received your scores, mark "Don't know yet"

- General Curriculum  Yes  No  Don't know yet
- Elementary Math  Yes  No  Don't know yet
- Early Childhood  Yes  No  Don't know yet



--	--	--	--	--	--	--	--

**MIDDLE OR SECONDARY LEVEL**  
**MATHEMATICS TEACHERS ONLY**

20. Do you currently teach middle or secondary level **mathematics?**

- Yes       No

**If YES,** please complete the remaining questions on this page.

20a. For what grades do you currently teach mathematics? (Choose all that apply.)

- 5               10  
 6               11  
 7               12  
 8               ELL  
 9               SPED

20b. Have you taken any of the following MTEL tests?

Mathematics	<input type="radio"/> Yes <input type="radio"/> No
Middle School Mathematics	<input type="radio"/> Yes <input type="radio"/> No
Middle School Math/Science	<input type="radio"/> Yes <input type="radio"/> No

**If YES,** have you passed? If you have not yet received your scores, mark "Don't know yet."

Mathematics	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Don't know yet
Middle School Mathematics	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Don't know yet
Middle School Math/Science	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Don't know yet

20c. If you do not hold a mathematics degree, have you successfully completed coursework equivalent to an academic major in mathematics?

- Yes       No

**If YES,** date coursework completed: \_\_\_\_\_

20d. Do you hold mathematics certification through either the National Board for Professional Teaching Standards or the American Board?

- Yes       No

**If YES,** date certificate earned: \_\_\_\_\_



Empty grid box for data entry

MIDDLE SCHOOL LEVEL
GENERAL SCIENCE TEACHERS ONLY

21. Do you currently teach middle school level general science (multiple subject areas in the same course)?

- Yes No

If YES, please complete the remaining questions on this page.

21a. For what grades do you currently teach general science? (Choose all that apply.)

- 5 8
6 ELL
7 SPED

21b. Have you taken either of the following MTEL tests?

General Science Yes No
Middle School Math/Science Yes No

If YES, have you passed? If you have not yet received your scores, mark "Don't know yet."

General Science Yes No Don't know yet
Middle School Math/Science Yes No Don't know yet

21c. If you do not hold a science degree, have you successfully completed coursework equivalent to an academic major in science? If yes, in what subject area?

- Yes subject area:
No

If YES, date coursework completed:

21d. Do you hold a general science certification through either the National Board for Professional Teaching Standards or the American Board?

- Yes No

If YES, date certificate earned:



--	--	--	--	--	--	--	--

**MIDDLE OR SECONDARY LEVEL**  
**BIOLOGY, CHEMISTRY, PHYSICS, AND EARTH SCIENCE**  
**TEACHERS ONLY**

22. Do you currently teach **subject-specific science** (one subject area per course) at the middle or high school level?

- Yes     No

**If YES, please complete the remaining questions on this page.**

22a. For what grades do you currently teach biology, chemistry, physics, and/or earth science?

	Biology	Chemistry	Physics	Earth Science
Gr 5	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Gr 6	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Gr 7	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Gr 8	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Gr 9	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Gr 10	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Gr 11	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Gr 12	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ELL	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SPED	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

22c. If you do not hold a biology, chemistry, physics, or earth science degree, have you successfully completed coursework equivalent to an academic major in one of these subjects?

**If YES, date completed:**

Biology	<input type="radio"/> Yes	<input type="radio"/> No	_____
Chemistry	<input type="radio"/> Yes	<input type="radio"/> No	_____
Physics	<input type="radio"/> Yes	<input type="radio"/> No	_____
Earth Science	<input type="radio"/> Yes	<input type="radio"/> No	_____

22b. Have you taken any of the following MTEL tests?

Biology	<input type="radio"/> Yes	<input type="radio"/> No
Chemistry	<input type="radio"/> Yes	<input type="radio"/> No
Physics	<input type="radio"/> Yes	<input type="radio"/> No
Earth Science	<input type="radio"/> Yes	<input type="radio"/> No

**If YES, have you passed? If you have not yet received your scores, mark "Don't know yet."**

Biology	<input type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> Don't know yet
Chemistry	<input type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> Don't know yet
Physics	<input type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> Don't know yet
Earth Science	<input type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> Don't know yet



60506

--	--	--	--	--	--	--	--

**MIDDLE OR SECONDARY LEVEL**  
**TECHNOLOGY/ENGINEERING TEACHERS ONLY**

23. Do you currently teach middle or secondary level **Technology/Engineering** (not computer science)?

Yes       No

**If YES**, please complete the remaining questions on this half of the page.

- 23a. For what grades do you currently teach technology/engineering? (Choose all that apply.)

5             10  
 6             11  
 7             12  
 8             ELL  
 9             SPED

- 23b. Have you taken the **Technology/Engineering** MTEL?

Yes       No

**If YES**, have you passed? If you have not yet received your scores, mark "Don't know yet."

Yes     No     Don't know yet

- 23c. If you do not hold a technology/engineering degree, have you successfully completed coursework equivalent to an academic major in technology/engineering?

Yes       No

**If YES**, date  
coursework  
completed: \_\_\_\_\_

Thank you for your participation in this survey!

## Appendix B: Timeline for State-level Evaluation and TA Activities

The following is a summary timeline of state-level evaluation and technical assistance activities carried out between February, 2004, and end of Year 5 of the MMSP.

- February 2004 Held Kick-off Meeting for all partnerships and their evaluators at the Department of Education
- Spring 2004 Conducted individual partnership meetings with local evaluators and partnership leaders to:
- Review the Minimum Expectations document along with the local evaluation and data collection plan
  - And
  - Explore potential modifications to implementation plans to create opportunities for experimental or quasi experimental design
- Spring 2004 Developed common measures for state-level data collection
- June 2004 Attended federal meeting held for MSP projects across the country
- Summer 2004 Disseminated and collected end-of-course documents designed to collect course-level data for the statewide evaluation
- Fall 2004 Conducted individual partnership meetings with local evaluators and partnership leaders to:
- Review the Minimum Expectations document along with the local evaluation and data collection plan
  - And
  - Review the Federal Reporting document to ensure the partnerships were collecting the data needed to complete that report
- Winter 2005 Conducted partnership meetings with the two new partnerships funded in the second round that constitutes Cohort 2 to:
- Introduce the Minimum Expectations document along with the local evaluation and data collection plan
  - And
  - Introduce the Federal Reporting document to ensure the partnerships were collecting the data needed to complete that report
- June 2005 Held Technical Assistance Meeting for all partnerships regarding the requirements of the USED Annual report

- June 2006 Participated in USED Annual Conference of MSP State Coordinators
- August 2006 Held Technical Assistance Meeting for all partnerships regarding evaluation requirements for MMSP
- Fall 2006 to Winter 2007 Conducted partnership meetings with the new Cohort 3 partnerships to:  
Introduce the Minimum Expectations document along with the local evaluation and data collection plan  
And  
Discuss the federal reporting requirements to ensure the partnerships were collecting the data needed to complete federal report
- December 2006 Participated in USED MSP Regional Conference
- June 2007 Participated in USED Annual Conference of MSP State Coordinators
- September 2007 Held Technical Assistance Meeting for all partnerships regarding the requirements of the USED Annual report
- January 2008 Participated in USED MSP Regional Conference
- April 2008 Participated in technical assistance workshop for bidders pursuing MSP funding for 2008-2009
- April 2008 Participated in USED the Massachusetts MSP Statewide Conference
- June 2008 Participated in USED MSP State Coordinators' Meeting

The following activities were on going throughout the life of the project:

Disseminated and collected end-of-course documents designed to collect course-level data for the statewide evaluation

Managed data collected from partnerships at the end of each course

Provided technical assistance to partnerships in support of local partnership evaluation efforts

Monitored local evaluation plans to see they include both formative and summative research questions and corresponding activities

Monitored data collection and analysis around the basic logic model of professional development

Served as liaison to the U.S. Department of Education for evaluation and research issues including participation in national meetings and periodic conference calls

Met with ESE MSP Team as needed to support integration of evaluation efforts with program goals

Until Steering Committee was disbanded, attended MMSP Steering Committee meetings in role of state level evaluator and technical assistance

## Appendix C: Cohort 3 Results of the Participant Background Survey for 2007-2008

Item	Cohort 3 2007-2008	
	<i>n</i>	%
How do you describe yourself?		
American Indian or Alaskan native	0	<1%
Asian	10	2%
Black or African American	8	2%
Hispanic or Latino	11	2%
Native Hawaiian or other Pacific Islander	0	<1%
White	415	87%
Mixed Race	2	<1%
Other	9	2%
No Response	22	5%
What best describes your current primary position?		
Teacher (Regular Education)	328	69%
Special Education Teacher (Sole Instructor)	35	7%
Special Education Inclusion Teacher	18	4%
Other	11	2%
Department Head or Curriculum Coordinator	7	2%
Principal/Asst. Principal/Headmaster	8	2%
Support Specialist (counselor, librarian, etc.)	1	<1%
Long-term Substitute	3	1%
Paraprofessional	3	1%
Superintendent or Asst. Superintendent	1	<1%
No Response	4	1%
ELL, ESL, or Sheltered English Immersion Teacher	13	3%
Gifted or Talented Teacher	5	1%
Title I Teacher	6	1%
Math Coach (Non-Teaching)	15	3%
Math Coach (Teaching)	16	3%
Science Coach (Non-Teaching)	0	0%
Science Coach (Teaching)	3	1%
Instructional Technology Director	0	0%

Item	Cohort 3 2007-2008	
	<i>n</i>	%
What grades do you currently teach?		
Pre-K	0	0%
Elementary and K-8	135	28%
Middle School (Grades 6-8)	221	46%
High School (Grades 9-12)	66	14%
Middle and High School grades	4	1%
Adult Education	0	0%
All levels	0	0%
No Response	51	11%
How many years have you been employed in education?		
1 <sup>st</sup> year	12	3%
2-3 years	66	14%
4-5 years	66	14%
6-10 years	133	28%
11-20 years	112	24%
Over 20 years	68	15%
0 or No Response	20	4%

Note: Percentages may not total 100% due to rounding error or items in which respondents may respond to all that apply.

Item	Cohort 3 2007-2008	
	<i>n</i>	%
Which of the following content areas are you currently teaching?		
Mathematics	192	40%
Elementary (all subjects)	117	25%
Elementary Mathematics	36	8%
General Science	103	22%
Biology	24	5%
Physics	25	5%
Earth Science	15	3%
Chemistry	26	6%
Any science area*	193	41%
Technology/Engineering	14	3%
Other	14	3%
Do not teach currently	13	3%
In which of the following are you currently employed?		
Public School	460	96%
Public Charter School	2	<1%
Private School	7	2%
Other	6	1%
No Response	2	<1%
Currently hold certification through the National Board for Professional Teaching Standards.		
In Mathematics	8	2%
In General Science	10	2%

\*Number of unique participants teaching in any science area.

Item	Cohort 3 2007-2008
------	-----------------------

	<i>n</i>	%
Approximately how many students do you teach annually?		
0 students	11	2%
1-10 students	10	2%
11-40 students	106	22%
41-150 students	289	61%
151+ students	42	9%
No Response	19	4%
Approximately how many students do you teach annually who are Title I students?		
0 students	125	26%
1-10 students	75	16%
11-40 students	60	13%
41-150 students	65	14%
151+ students	10	2%
No Response	142	30%
Approximately how many students do you teach annually who are academically advanced students?		
0 students	153	32%
1-10 students	81	17%
11-40 students	78	16%
41-150 students	20	4%
151+ students	0	0%
No Response	145	30%
Approximately how many students do you teach annually who are Special Education students?		
0 students	32	7%
1-10 students	146	31%
11-40 students	210	44%
41-150 students	31	7%
151+ students	1	<1%
No Response	57	12%
Approximately how many students do you teach annually who are English Language Learners?		
0 students	65	14%
1-10 students	170	36%
11-40 students	86	18%
41-150 students	51	11%
151+ students	5	1%
No Response	100	21%

Item	Cohort 3 2007-2008	
	<i>n</i>	%
Why did you participate in this course? *		
To obtain graduate credit	525	75%
To increase knowledge in content	436	62%
To pursue a personal interest	174	25%
To earn PDPs for recertification	192	27%
To get an additional license (certification)	124	18%
To prepare for the Massachusetts Test for Educator Licensure (MTEL)	105	15%
To follow an administrator's suggestion	30	4%
To obtain a first license (certification)	25	4%
Other	46	7%
No Response	8	1%
High Need District		
Yes	335	70%
No	129	27%
Unknown	13	3%
Highly Qualified		
Yes	235	49%
No	144	30%
In some, but not all areas taught	20	4%
Not enough information to determine	35	7%
Private School (not included)	4	1%
Not applicable (not currently teaching)	39	8%

\*Data for this item represents the number of seats filled from all courses, rather than the number of unique participants.

Item	Cohort 3 2007-2008	
	<i>n</i>	%
How many PDP hours do you have in your content area(s)?		
Less than 48 PDP hours	60	13%
48 to 100 PDP hours	38	8%
101 to 250 PDP hours	101	21%
251+ PDP hours	88	18%
No Response	190	40%
Please select any of the following licenses you currently hold.		
Vocational Technical	4	1%
Specialist Teacher	93	20%
Supervisor/Director	8	2%
Principal/Asst. Principal	19	4%
Superintendent/Assistant Superintendent	2	<1%

Item	Cohort 3 2007-2008							
	Bachelors		Masters		CAGS		Doctorate	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
A degree currently held for each major.								
Education	147	31%	191	40%	4	1%	1	<1%
Math Education	11	2%	15	3%	0	0%	1	<1%
Science Education	12	3%	22	5%	0	0%	0	0%
Math	30	6%	3	1%	0	0%	0	0%
General Science	9	2%	4	1%	0	0%	0	0%
Biology	40	8%	4	1%	0	0%	0	0%
Chemistry	12	3%	7	2%	0	0%	0	0%
Earth Science	14	3%	2	<1%	0	0%	0	0%
Physics	8	2%	2	<1%	0	0%	1	<1%
Technology/Engineering	16	3%	8	2%	1	<1%	1	<1%
<i>All science/technology combined</i>	99	21%	27	6%	1	<1%	2	<1%
Other	122	26%	54	11%	5	0%	1	<1%
A degree currently being pursued for each major.								
Education	6	1%	48	10%	10	2%	3	1%
Math Education	2	<1%	89	19%	16	3%	3	1%
Science Education	3	1%	35	7%	2	<1%	0	0%
Math	1	<1%	9	2%	4	1%	0	0%
General Science	1	<1%	10	2%	0	0%	0	0%
Biology	0	0%	2	<1%	0	0%	0	0%
Chemistry	0	0%	0	0%	0	0%	0	0%
Earth Science	0	0%	1	<1%	0	0%	0	0%
Physics	0	0%	1	<1%	0	0%	0	0%
Technology/Engineering	0	0%	0	0%	0	0%	0	0%
<i>All science/technology combined</i>	1	<1%	14	3%	0	0%	0	0%
Other	1	<1%	12	3%	5	1%	0	0%

Item	Cohort 3 2007-2008					
	MTEL Taken		MTEL Passed		Scores Unknown	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
MTEL tests taken						
General Curriculum (formerly Elementary)	66	14%	64	97%	1	2%
Elementary Math	22	5%	17	81%	1	5%
Early Childhood	7	2%	6	86%	0	0%
Mathematics	37	8%	28	88%	1	3%
Middle School Mathematics	70	15%	62	90%	1	1%
Middle School Mathematics/ Science	18	4%	11	61%	1	1%
General Science	52	11%	48	98%	1	0%
Biology	20	4%	19	95%	0	0%
Chemistry	15	3%	14	93%	0	0%
Physics	9	2%	7	78%	2	22%
Earth Science	2	<1%	1	50%	0	0%
Technology/Engineering	3	1%	3	100%	0	0%

Item	Cohort 3 2007-2008	
	<i>n</i>	%
License Areas		
Academically Advanced PreK-8	10	2%
Adult Basic Education	0	0%
Biology 5-8	18	4%
Biology 8-12	26	6%
Chemistry 5-8	8	2%
Chemistry 8-12	20	4%
Early Childhood PreK-2	21	4%
Earth Science 5-8	8	2%
Earth Science 8-12	6	1%
Elementary 1-6	191	40%
Elementary Mathematics 1-6	40	8%
ELL PreK-6	12	3%
ELL 5-12	11	2%
General Science 1-6	3	1%
General Science 5-8	76	16%
Instructional Technology	5	1%
Mathematics 8-12	51	11%
Middle School	32	7%
Middle School Mathematics 5-8	92	19%
Middle School Math/Science 5-8	21	4%
Physics 5-8	3	1%
Physics 8-12	11	2%
Students w/ Moderate Disability PreK-8	46	10%
Students w/ Moderate Disability 5-12	24	5%
Students w/ Severe Disability	10	2%
Technology/Engineering 5-12	9	2%

## Appendix D: High Need District Eligibility Criteria

**High Need Districts** For High Need District Lists prior to FY07 (Year 4 of the program) refer to Appendix G of the Annual State-level Evaluation Report for 2004-2007.

### MA FY2007 High Need Districts

DISTRICT	Science/	Math
ATTLEBORO		✓
BARNSTABLE	✓	
BOSTON	✓	✓
BROCKTON	✓	✓
BROOKFIELD		✓
CAMBRIDGE	✓	✓
CHELSEA	✓	✓
CHICOPEE		✓
CLINTON		✓
DOUGLAS		✓
EASTHAMPTON		✓
ERVING		✓
EVERETT		✓
FAIRHAVEN		✓
FALL RIVER		✓
FITCHBURG	✓	✓
FRAMINGHAM		✓
FREETOWN		✓
GARDNER		✓
GLOUCESTER		✓
GRANVILLE		✓
GREENFIELD		✓
HAVERTHILL		✓
HOLBROOK		✓
HOLYOKE	✓	✓
HUDSON		✓
LAWRENCE	✓	✓
LEE		✓
LEICESTER		✓
LEOMINSTER		✓
LOWELL	✓	✓
LUDLOW		✓
LYNN	✓	✓
MALDEN		✓
MASHPEE		✓
METHUEN		✓
MIDDLEBOROUGH		✓
MONSON		✓
NAHANT		✓
NEW BEDFORD	✓	✓
NORTH ADAMS	✓	✓
NORTHAMPTON		✓
NORTH BROOKFIELD		✓
NORTON		✓

DISTRICT	Science/	Math
OXFORD		✓
PALMER		✓
PITTSFIELD		✓
QUINCY		✓
RANDOLPH		✓
REVERE		✓
ROCKLAND		✓
SALEM		✓
SAUGUS		✓
SEEKONK		✓
SOMERVILLE	✓	✓
SOUTHAMPTON		✓
SOUTHBRIDGE	✓	✓
SOUTH HADLEY		✓
SPRINGFIELD	✓	✓
STOUGHTON		✓
TAUNTON		✓
WALTHAM		✓
WARE		✓
WAREHAM		✓
WEBSTER	✓	✓
WESTFIELD		✓
WESTPORT		✓
WEST SPRINGFIELD		✓
WINCHENDON		✓
WINTHROP		✓
WORCESTER	✓	✓
EXCEL ACADEMY CS		✓
FOUR RIVERS CS		✓
BERKSHIRE ARTS CS		✓
ACADEMY OF STRATEGIC CS	✓	✓
SMITH LEADERSHIP ACAD CS		✓
BENJAMIN BANNEKER CS	✓	✓
MURDOCH MIDDLE CS		✓
CONSERVATORY LAB CS		✓
SABIS INTERNATIONAL CS		✓
ROBERT M. HUGHES ACAD CS	✓	
LAWRENCE FAMILY DEV CS	✓	✓
LOWELL COMMUNITY CS	✓	✓
NEW LEADERSHIP HMCS	✓	✓
NEW BEDFORD GLOBAL CS		✓
NORTH CENTRAL CS		✓
PIONEER VALLEY PERFORMING		✓
BOSTON RENAISSANCE CS		✓

DISTRICT	Science/	Math
SALEM ACADEMY CS		✓
SEVEN HILLS CS		✓
PROSPECT HILL ACAD CS	✓	✓
SOUTH SHORE CS		✓
UPHAMS CORNER CS	✓	✓
ATLANTIS CS		✓
ADAMS-CHESHIRE REG.		✓
ATHOL-ROYALSTON		✓
BERKSHIRE HILLS		✓
FREETOWN-LAKEVILLE		✓
GATEWAY		✓
GILL-MONTAGUE		✓
HAMPSHIRE		✓
MOHAWK TRAIL		✓
NARRAGANSETT		✓
PIONEER VALLEY		✓
RALPH C MAHAR		✓
SILVER LAKE		✓

## MA FY2008 High Need Districts

**Criteria:** A high-need district in **science and technology/engineering** is a district that has a grade 8 *and* a high school science CPI of less than 60. A high-need district in **mathematics** is a district that has been identified for corrective action in mathematics, *or* districts with one or more Commonwealth Priority Schools identified for mathematics.

DISTRICT	Science	Math
BOSTON	✓	✓
BRIDGEWATER-RAYNHAM		✓
BROCKTON	✓	✓
CAMBRIDGE	✓	✓
CHICOPEE	✓	✓
EASTHAMPTON	✓	
EVERETT	✓	✓
FALL RIVER	✓	✓
FALMOUTH		✓
FITCHBURG		✓
GARDNER	✓	✓
GATEWAY	✓	
GLOUCESTER		✓
GREENFIELD		✓
HAVERHILL		✓
HOLBROOK	✓	✓
HOLYOKE	✓	✓
HULL	✓	
LAWRENCE	✓	✓
LOWELL	✓	✓
LUDLOW		✓
LYNN	✓	✓
MARLBOROUGH		✓
MEDFORD		✓
METHUEN		✓

DISTRICT	Science	Math
NEW BEDFORD	✓	✓
NORTH ADAMS		✓
NORTH BROOKFIELD	✓	
PEABODY		✓
PITTSFIELD	✓	✓
PLYMOUTH		✓
RANDOLPH	✓	✓
REVERE	✓	✓
SALEM		✓
SOMERVILLE	✓	✓
SOUTHBRIDGE	✓	✓
SPENCER-EAST BROOKFIELD	✓	
SPRINGFIELD	✓	✓
WAREHAM		✓
WESTFIELD		✓
WOBURN		✓
WORCESTER	✓	✓
BERKSHIRE ARTS CS	✓	
BENJAMIN BANNEKER CS		✓
COMMUNITY CS OF CAMBRIDGE	✓	
NEW LEADERSHIP HMCS	✓	✓
NEW BEDFORD GLOBAL CS	✓	

## Appendix E: Cohort 3 Enrollment and Attrition Rates by Course

Enrollment and Attrition Information as Reported for Each Cohort 3 Course						
Partnership	Year Offered	Course Title	Number of Participants Enrolled First Day	Number of Participants Completed Course	Attrition Rate	
EduTron Lowell	06/07	Building a Rock Solid Math Foundation	30	30	0%	
	06/07	Perspectives on Elementary School Mathematics	46	46	0%	
	07/08	Conceptions & Misconceptions in MS Math	24	24	0%	
	07/08	Unlocking Physical Science	16	16	0%	
	07/08	Conceptions and Misconceptions in Elementary School Mathematics	29	29	0%	
	07/08	Unlocking Biological Diversity	16	12	25%	
	<b>Subtotal</b>			<b>161</b>	<b>157</b>	<b>2%</b>
EduTron Fitchburg	06/07	The Math Experience	36	36	0%	
	07/08	Conceptions and Misconceptions in Elementary School Mathematics I	30	30	0%	
	07/08	Conceptions and Misconceptions in Elementary School Mathematics II	32	32	0%	
	07/08	Conceptions and Misconceptions in Elementary School Mathematics III	23	23	0%	
	<b>Subtotal</b>			<b>121</b>	<b>121</b>	<b>0%</b>
Lesley	06/07	Math as a Second Language, Holyoke	32	29	9%	
	06/07	Math as a Second Language, Haverhill	35	35	0%	
	06/07	Math as a Second Language, Fall River	31	31	0%	
	<i>Subtotal – Math as a Second Language</i>			98	95	3%
	06/07	Number Theory, Haverhill	34	30	12%	
	06/07	Number Theory, Holyoke	25	22	12%	
	06/07	Number Theory, Fall River	24	24	0%	
	<i>Subtotal – Number Theory</i>			83	76	8%
	06/07	Functions and Algebra, Haverhill	31	30	3%	
	06/07	Functions and Algebra, Holyoke	15	14	7%	

Enrollment and Attrition Information as Reported for Each Cohort 3 Course						
Partnership	Year Offered	Course Title	Number of Participants Enrolled First Day	Number of Participants Completed Course	Attrition Rate	
Lesley	06/07	Functions and Algebra, Fall River	18	18	0%	
	07/08	Functions and Algebra, Randolph	13	13	0%	
	<i>Subtotal – Functions and Algebra</i>			77	75	3%
	07/08	Geometry and Measurement - Holyoke	22	20	9%	
	07/08	Geometry and Measurement - Haverhill	27	27	0%	
	07/08	Geometry and Measurement – Fall River	19	19	0%	
	07/08	Geometry and Measurement - Randolph	15	15	0%	
	<i>Subtotal – Geometry and Measurement</i>			83	81	2%
	07/08	Probability and Statistics - Holyoke	22	19	14%	
	07/08	Probability and Statistics – Fall River	21	21	0%	
	07/08	Probability and Statistics – Haverhill	28	28	0%	
	07/08	Probability and Statistics – Randolph	14	14	0%	
	<i>Subtotal – Probability and Statistics</i>			85	82	4%
	07/08	Trigonometry and Algebra II – Holyoke	16	15	6%	
	07/08	Trigonometry and Algebra II - Haverhill	23	22	4%	
	07/08	Trigonometry and Algebra II – Fall River	17	17	0%	
	07/08	Trigonometry and Algebra II - Somerville	13	13	0%	
	<i>Subtotal – Trigonometry and Algebra II</i>			0	0	0%
	06/07	Exploring Numbers, Randolph	28	27	4%	
	<b>Subtotal</b>			<b>523</b>	<b>503</b>	<b>4%</b>
North Shore	06/07	Physics I: Forces, Energy & Motion	29	25	14%	
	07/08	Physics I: Forces, Energy & Motion	7	7	0%	
	<i>Subtotal – Physics I</i>			36	32	11%
	06/07	Biology I: Cell Biology and Genetics-A Human Approach	9	9	0%	
	07/08	Biology I: Cell Biology and Genetics-A Human Approach	11	11	0%	
	<i>Subtotal – Biology I</i>			20	20	0%
North Shore (continued)	06/07	Earth Science II: The Solid Earth	0	0	N/A	
	07/08	Earth Science II: The Solid Earth	17	17	0%	

Enrollment and Attrition Information as Reported for Each Cohort 3 Course					
Partnership	Year Offered	Course Title	Number of Participants Enrolled First Day	Number of Participants Completed Course	Attrition Rate
	<i>Subtotal – Earth Science II</i>		17	17	0%
	06/07	Engineering I: From Science to Engineering: Pre-Engineering Design Experience	3	3	0%
	07/08	Engineering I: From Science to Engineering: Pre-Engineering Design Experience	13	13	0%
	<i>Subtotal – Engineering I</i>		16	16	0%
	06/07	Physics II: Electricity and Magnetism	8	7	13%
	07/08	Physics II: Electricity and Magnetism	8	7	13%
	<i>Subtotal – Physics II</i>		16	14	13%
	06/07	Biology II: Ecology, Evolution, and the Diversity of Life	7	7	0%
	07/08	Biology II: Ecology, Evolution, and the Diversity of Life	9	9	0%
	<i>Subtotal – Biology II</i>		16	16	0%
	06/07	Chemistry I: Particulate Nature of Matter	4	4	0%
	07/08	Chemistry I: Particulate Nature of Matter	23	22	4%
	<i>Subtotal – Chemistry I</i>		27	26	4%
	06/07	Chemistry II: Equilibrium and Thermodynamics	6	6	0%
	06/07	Chemistry III: Bio-Organic Chemistry	6	6	0%
	06/07	Biology III: Regulation and Homeostasis in Biological Model Systems	2	2	0%
	07/08	Energy I	10	10	0%
	07/08	Earth Science I: Weather and Water	3	3	0%
	<b>Subtotal</b>		<b>175</b>	<b>168</b>	<b>4%</b>
UMass Amherst	06/07	Life Sciences	13	12	8%
	06/07	Math, Mind and Matter	14	14	0%
UMass Amherst	06/07	Algebra/Geometry I	17	15	12%
	06/07	Engineering: Making it Better	13	13	0%
	07/08	Chemistry for Middle School Teachers	17	14	18%
	07/08	Electricity and Magnetism	10	9	10%
	07/08	Physical Science for Middle School Teachers	13	13	0%

Enrollment and Attrition Information as Reported for Each Cohort 3 Course					
Partnership	Year Offered	Course Title	Number of Participants Enrolled First Day	Number of Participants Completed Course	Attrition Rate
	07/08	Integrating Calculus and Trigonometry into Middle School Mathematics	13	13	0%
	07/08	Integrating Technology and Engineering into Middle School	15	10	33%
	<b>Subtotal</b>		<b>125</b>	<b>113</b>	<b>10%</b>
Salem State	06/07	Patterns, Relations, & Algebra for MST	32	27	16%
	07/08	Patterns, Relations, & Algebra for MST	14	13	7%
	<i>Subtotal – Patterns, Relations, &amp; Algebra for MST</i>		46	40	13%
	06/07	Data, Probability & Statistics for MST	19	19	0%
	07/08	Data, Probability & Statistics for MST	Data Not Submitted	Data Not Submitted	Data Not Submitted
	06/07	Number Systems for MST	12	11	8%
	07/08	Number Systems for MST	20	18	10%
	<i>Subtotal – Number Systems for MST</i>		32	29	9%
	06/07	Geometry & Measurement for MST	10	10	0%
	07/08	Geometry & Measurement for MST	20	16	20%
	<i>Subtotal – Geometry &amp; Measurement for MST</i>		30	26	13%
	<b>Subtotal (excluding data for 07/08 Data, Probability &amp; Statistics course)</b>		<b>127</b>	<b>114</b>	<b>10%</b>
	SE/Cape	06/07	Energy and the Environment, BSC	24	24
06/07		Energy and the Environment, BCC	9	8	11%
07/08		Energy and the Environment	20	18	10%
07/08		Energy and the Environment	23	22	4%
SE/Cape	<i>Subtotal – Energy and the Environment</i>		76	72	5%
	07/08	Topics in Earth/Space Science for Middle School Teachers	25	22	12%
	07/08	Topics in Earth/Space Science for Middle School Teachers	19	19	0%
	<i>Subtotal – Topics in Earth/Space Science</i>		44	41	7%
	07/08	Special Topics in Chemistry: Chemistry of Matter and Atoms	13	13	0%
	07/08	Special Topics in Chemistry: Chemistry of Matter and Atoms	17	17	0%
	<i>Subtotal – Special Topics in Chemistry</i>		30	30	0%
	06/07	Chemistry	24	22	8%

<b>Enrollment and Attrition Information as Reported for Each Cohort 3 Course</b>					
<b>Partnership</b>	<b>Year Offered</b>	<b>Course Title</b>	<b>Number of Participants Enrolled First Day</b>	<b>Number of Participants Completed Course</b>	<b>Attrition Rate</b>
	<b>Subtotal</b>		<b>174</b>	<b>165</b>	<b>5%</b>
WPI - Science	06/07	The Physics and Engineering of Forces	20	19	5%
	07/08	The Physics of Work and Energy	13	13	0%
	<b>Subtotal</b>		<b>33</b>	<b>32</b>	<b>3%</b>
Worcester Public Schools	06/07	Number Sense I (Gr 3-6)	26	23	12%
	06/07	Number Sense & Algebra (Gr 3-6)	16	15	6%
	06/07	Number Sense (K-2)	12	11	8%
	<b>Subtotal</b>		<b>54</b>	<b>49</b>	<b>9%</b>

## Appendix F: Subject Matter Competency Demonstration Options

### How do teachers demonstrate subject matter competency in Massachusetts?

<p><b>Elementary teachers</b> may demonstrate competence in reading, writing, mathematics, and other areas of the basic elementary school curriculum through one of the following:</p>	<p><b>Middle and secondary school teachers</b> may demonstrate subject matter competence in each of the areas they are teaching through one of the following:</p>
<p>Passing the Massachusetts Test for Educator Licensure (MTEL) Elementary Subject Matter Test: General Curriculum and the Foundations of Reading</p>	<p>Passing the Massachusetts Test for Educator Licensure (MTEL) appropriate Subject Matter Test:            Middle School Humanities            Middle School Mathematics            Middle School Mathematics/Science            Subject Title (e.g., History, English, Physics)</p>
<p>Making sufficient progress* on Massachusetts High Objective Uniform State Standard of Evaluation (HOUSSE)</p>	<p>Making sufficient progress* on Massachusetts High Objective Uniform State Standard of Evaluation (HOUSSE); prior to 2007</p>
	<p>Completion of an appropriate academic major</p>
	<p>Completion of an appropriate graduate degree</p>
	<p>Completion of comparable coursework equivalent to an undergraduate academic major</p> <p>Advanced certification or credentialing</p>

\*It is the Department's expectation that a teacher will have completed at least half [48] of the content PDPs [96 total] needed to meet HOUSSE requirements before being considered highly qualified.

**Charter School Teachers** who teach core academic subjects do not need a Massachusetts license but must hold a Bachelor's degree and demonstrate competence in the subject area in which they teach. Charter school teachers may demonstrate subject matter competence through any one of the options available to elementary and middle/secondary teachers.

**Teachers in Vocational Schools who** teach core academic courses are required to meet the definition of a highly qualified teacher. A vocational school teacher who teaches a core academic subject must hold a Bachelor's degree, be licensed or certified by the state, and demonstrate subject matter competence in order to be considered highly qualified.

(information obtained from ESE, 2004)

## Appendix G: Cohort 3 Mean Percentage Scores for Pre- & Post-course Tests

Cohort 3 Mean Percentage Scores for Pre- & Post-course Tests						
Year Offered	Institute Name – Course	<i>N</i>	Mean Pre-test	Mean Post-test	Change in Mean	<i>p</i> < .05
06/07	EduTron Lowell – Building a Rock Solid Math Foundation	28	58	73	14	Yes
06/07	EduTron Lowell – Perspectives on Elementary School Mathematics	42	53	71	19	Yes
07/08	EduTron Lowell – Conceptions and Misconceptions in MS Mathematics	23	58	80	22	Yes
07/08	EduTron Lowell – Unlocking Physical Science	15	63	82	19	Yes
07/08	EduTron Lowell – Conceptions and Misconceptions in Elementary School Mathematics	28	50	77	26	Yes
07/08	EduTron Lowell – Unlocking Biological Diversity	12	33	76	43	Yes
06/07	EduTron Fitchburg – The Math Experience	33	63	76	12	Yes
07/08	EduTron Fitchburg – Conceptions and Misconceptions in Elementary School Mathematics I	29	70	83	12	Yes
07/08	EduTron Fitchburg – Conceptions and Misconceptions in Elementary School Mathematics II	31	57	81	24	Yes
07/08	EduTron Fitchburg – Conceptions and Misconceptions in Elementary School Mathematics III	22	74	91	17	Yes
06/07	Lesley C3 – Math as a Second Language, Holyoke	26	72	79	7	Yes
06/07	Lesley C3 – Math as a Second Language, Haverhill	32	51	65	14	Yes
06/07	Lesley C3 – Math as a Second Language, Fall River	28	67	77	10	Yes
06/07	Lesley C3 – Number Theory, Haverhill	26	17	52	35	Yes
06/07	Lesley C3 – Functions and Algebra, Haverhill	26	32	66	34	Yes
06/07	Lesley C3 – Number Theory, Holyoke	22	21	58	36	Yes
06/07	Lesley C3 – Number Theory, Fall River	22	17	51	34	Yes

Cohort 3 Mean Percentage Scores for Pre- & Post-course Tests						
Year Offered	Institute Name – Course	<i>N</i>	Mean Pre-test	Mean Post-test	Change in Mean	<i>p</i> <.05
06/07	Lesley C3 – Functions and Algebra, Holyoke	14	48	69	21	Yes
06/07	Lesley C3 – Functions and Algebra, Fall River	18	39	76	37	Yes
06/07	Lesley C3 – Exploring Numbers, Randolph	27	39	72	33	Yes
07/08	Lesley C3 – Geometry and Measurement, Holyoke	17	32	62	30	Yes
07/08	Lesley C3 – Geometry and Measurement, Haverhill	26	29	53	24	Yes
07/08	Lesley C3 – Geometry and Measurement, Fall River	19	32	66	33	Yes
07/08	Lesley C3 – Functions and Algebra, Randolph	14	32	63	31	Yes
07/08	Lesley C3 – Probability & Statistics, Holyoke	14	52	61	9	Yes
07/08	Lesley C3 – Probability & Statistics, Fall River	19	23	62	39	Yes
07/08	Lesley C3 – Probability & Statistics, Haverhill	23	27	54	27	Yes
07/08	Lesley C3 – Trigonometry and Algebra II, Holyoke	12	35	66	30	Yes
07/08	Lesley C3 – Geometry and Measurement, Randolph	13	24	46	22	Yes
07/08	Lesley C3 – Trigonometry and Algebra II, Haverhill	21	28	69	40	Yes
07/08	Lesley C3 – Trigonometry and Algebra II, Fall River	18	25	69	44	Yes
07/08	Lesley C3 – Trigonometry and Algebra II, Somerville	12	13	46	33	Yes
07/08	Lesley C3 – Probability & Statistics, Randolph	14	21	72	51	Yes
06/07	North Shore – Physics I: Forces, Energy & Motion	19	49	67	19	Yes
06/07	North Shore – Biology I: Cell Biology and Genetics-A Human Approach	9	44	69	25	Yes
06/07	North Shore – Biology III: Regulation and Homeostasis in Biological Model Systems	2	62	84	22	No
06/07	North Shore – Chemistry III: Bio-Organic Chemistry	6	43	74	31	Yes

Cohort 3 Mean Percentage Scores for Pre- & Post-course Tests						
Year Offered	Institute Name – Course	<i>N</i>	Mean Pre-test	Mean Post-test	Change in Mean	<i>p</i> <.05
06/07	North Shore – Earth Science II: The Solid Earth	0	N/A	N/A	N/A	N/A
06/07	North Shore – Engineering I: From Science to Engineering: Pre-Engineering Design Experience	3	43	77	34	No
06/07	North Shore – Physics II: Electricity and Magnetism	7	58	67	9	No
06/07	North Shore – Biology II: Ecology, Evolution, and the Diversity of Life	7	57	72	16	Yes
06/07	North Shore – Chemistry I: Particulate Nature of Matter	4	48	73	25	No
06/07	North Shore – Chemistry II: Equilibrium and Thermodynamics	6	49	70	22	Yes
07/08	North Shore – Energy I	9	31	60	29	Yes
07/08	North Shore – Physics II: Electricity and Magnetism	6	54	69	15	Yes
07/08	North Shore – Earth Science II: The Solid Earth	17	31	76	45	Yes
07/08	North Shore – Biology I: Cell Biology and Genetics-A Human Approach	11	76	84	7	No
07/08	North Shore – Earth Science I: Weather & Water	3	51	69	18	No
07/08	North Shore – Engineering I: From Science to Engineering: Pre-Engineering Design Experience	12	54	78	24	Yes
07/08	North Shore – Physics I: Forces, Energy & Motion	7	64	80	16	Yes
07/08	North Shore – Biology II: Ecology, Evolution, and the Diversity of Life	9	52	64	12	Yes
07/08	North Shore – Chemistry I: Particulate Nature of Matter	23	62	82	20	Yes
06/07	UMass Amherst C3 – Life Sciences	12	67	83	16	Yes
06/07	UMass Amherst C3 – Math, Mind and Matter	14	85	92	8	No
06/07	UMass Amherst C3 – Algebra/Geometry I	15	35	79	45	Yes
06/07	UMass Amherst C3 – Engineering: Making it Better	13	60	92	33	Yes
07/08	UMass Amherst C3 – Chemistry for Middle School Teachers	14	42	80	39	Yes
07/08	UMass Amherst C3 – Electricity and Magnetism	8	73	83	10	No
07/08	UMass Amherst C3 – Physical Science for Middle School Teachers	13	49	63	14	Yes

Cohort 3 Mean Percentage Scores for Pre- & Post-course Tests						
Year Offered	Institute Name – Course	<i>N</i>	Mean Pre-test	Mean Post-test	Change in Mean	<i>p</i> <.05
07/08	UMass Amherst C3 – Integrating Calculus and Trigonometry into Middle School Mathematics	13	29	79	50	Yes
07/08	UMass Amherst C3 – Integrating Technology & Engineering into Middle School	10	13	89	76	Yes
06/07	Salem C3 – Patterns, Relations, & Algebra for MST	25	-0.1	0.3	0.4	Yes
06/07	Salem C3 – Data, Probability & Statistics for MST	19	29	85	56	Yes
06/07	Salem C3 – Number Systems for MST	11	26	87	61	Yes
06/07	Salem C3 – Geometry & Measurement for MST	10	39	83	44	Yes
07/08	Salem C3 – Patterns, Relations, & Algebra for MST	11	55	75	21	Yes
07/08	Salem C3 – Geometry & Measurement for MST	16	33	79	47	Yes
07/08	Salem C3 – Number Systems for MST	18	26	91	65	Yes
07/08	Salem C3 – Data, Probability & Statistics for MST	6	18	87	69	Yes
06/07	SE/Cape – Energy and The Environment, BSC	23	36	59	23	Yes
06/07	SE/Cape – Energy and The Environment, BCC	8	40	75	34	Yes
06/07	SE/Cape – Chemistry	21	55	65	10	Yes
07/08	SE/Cape – Energy and The Environment	18	44	73	29	Yes
07/08	SE/Cape – Topics in Earth/Space Science for Middle School Teachers	18	55	72	18	Yes
07/08	SE/Cape – Special Topics in Chemistry: Chemistry of Matter and Atoms	13	70	83	14	Yes
07/08	SE/Cape – Energy and The Environment	22	40	74	34	Yes
07/08	SE/Cape – Topics in Earth/Space Science for Middle School Teachers	16	60	76	16	Yes
07/08	SE/Cape – Special Topics in Chemistry: Chemistry of Matter and Atoms	17	63	82	19	Yes
06/07	WPI Science - The Physics and Engineering of Forces	19	47	74	28	Yes

Cohort 3 Mean Percentage Scores for Pre- & Post-course Tests						
Year Offered	Institute Name – Course	<i>N</i>	Mean Pre-test	Mean Post-test	Change in Mean	<i>p</i> < .05
07/08	WPI Science – The Physics of Work and Energy	13	61	82	20	Yes
06/07	Worcester Public Schools – Number Sense I (Gr 3-6)	18	50	72	22	Yes
06/07	Worcester Public Schools – Number Sense & Algebra (Gr 3-6)	15	52	81	29	Yes
06/07	Worcester Public Schools – Number Sense (K-2)	11	59	79	20	Yes

## Appendix H: High Need Districts for All Funding Periods, by Partnership

High Need Districts for All Funding Periods, by Partnership							
Partnership	High Need Districts	Number of Participants from High Need Districts					
		Feb04-Aug04	Sep04-Aug05	Sep05-Aug06	Sep06-Aug07 Cohorts 1 & 2	Sep06-Aug07 Cohort 3	Sep07-Aug08 Cohort 3
EduTron (M)	Fitchburg	37	53	28	N/A	N/A	N/A
	Gardner	14	4	9	N/A	N/A	N/A
	<b>Subtotal</b>	<b>51 (79%)</b>	<b>57 (88%)</b>	<b>37 (84%)</b>	N/A	N/A	N/A
Harvard University (M)	Boston	1	3	10	0	N/A	N/A
	Boston Renaissance CS	3	2	0	2	N/A	N/A
	Cambridge	5	4	9	3	N/A	N/A
	Fall River	0	0	4	4	N/A	N/A
	Lowell	0	1	0	0	N/A	N/A
	Malden	0	0	3	1	N/A	N/A
	New Bedford	0	1	0	0	N/A	N/A
	Somerville	0	2	4	2	N/A	N/A
	Somerville CS/ Prospect Hill Academy	0	5	0	1	N/A	N/A
	Southbridge	0	0	1	0	N/A	N/A
	<b>Subtotal</b>	<b>9(39%)</b>	<b>18 (33%)</b>	<b>31 (39%)</b>	<b>13 (54%)</b>	N/A	N/A
Lesley University (M)	<b>Malden</b>	<b>21 (21%)</b>	<b>16 (19%)</b>	<b>14 (19%)</b>	<b>3 (25%)</b>	<b>N/A</b>	<b>N/A</b>
MCLA – Science (S)	Adams-Cheshire Planning Year		6	5	5	N/A	N/A
	Clarksburg		1	1	1	N/A	N/A
	Florida		2	1	2	N/A	N/A
	Mount Greylock		0	0	2	N/A	N/A
	North Adams		5	3	3	N/A	N/A
	<b>Subtotal</b>			<b>14(100%)</b>	<b>10(100%)</b>	<b>13 (93%)</b>	N/A
Salem State College (M)	Boston	0	0	1	N/A	N/A	N/A
	Chelsea	0	1	1	N/A	N/A	N/A
	Haverhill PS	1	20	16	N/A	N/A	N/A
	Lynn	32	32	41	N/A	N/A	N/A
	Salem	18	16	14	N/A	N/A	N/A
	Somerville	0	0	0	N/A	N/A	N/A
	<b>Subtotal</b>	<b>51 (93%)</b>	<b>69 (86%)</b>	<b>73 (79%)</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
Springfield/Holyoke Public Schools (S)	Holyoke	6	17	19	N/A	N/A	N/A
	Holyoke Community CS	0	0	0	N/A	N/A	N/A
	Springfield	32	31	28	N/A	N/A	N/A
	<b>Subtotal</b>	<b>38(100%)</b>	<b>48(100%)</b>	<b>47 (96%)</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
Wareham PS (M)	Wareham	<b>17 (46%)</b>	<b>11 (61%)</b>	N/A	N/A	N/A	N/A
WPI – Math (M)	Abby Kelley Foster CS	0	2	3	N/A	N/A	N/A
	Athol-Royalston	1	0	0	N/A	N/A	N/A
	Berkshire Hills	0	1	0	N/A	N/A	N/A

## High Need Districts for All Funding Periods, by Partnership

Partnership	High Need Districts	Number of Participants from High Need Districts					
		Feb04-Aug04	Sep04-Aug05	Sep05-Aug06	Sep06-Aug07 Cohorts 1 & 2	Sep06-Aug07 Cohort 3	Sep07-Aug08 Cohort 3
	Boston	0	0	1	N/A	N/A	N/A
	Brockton	0	1	0	N/A	N/A	N/A
	Cambridge	0	0	1	N/A	N/A	N/A
	Chicopee	4	1	2	N/A	N/A	N/A
	Fall River	0	1	0	N/A	N/A	N/A
	Fitchburg	0	0	1	N/A	N/A	N/A
	Lawrence Fam. Devt. CS	0	0	3	N/A	N/A	N/A
	Lowell Community CS	0	0	1	N/A	N/A	N/A
	New Bedford	2	4	0	N/A	N/A	N/A
	North Adams	2	0	0	N/A	N/A	N/A
	Pittsfield	0	0	2	N/A	N/A	N/A
	Ralph C. Mahar	2	0	0	N/A	N/A	N/A
	Seven Hills CS	0	0	2	N/A	N/A	N/A
	Somerville	0	1	0	N/A	N/A	N/A
	Webster	0	1	0	N/A	N/A	N/A
	Winchendon	0	8	6	N/A	N/A	N/A
	Worcester	4	7	10	N/A	N/A	N/A
	<b>Subtotal</b>	<b>15 (63%)</b>	<b>27 (41%)</b>	<b>32 (43%)</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
MCLA – Math (M)	Adams-Cheshire	Started in Year 2	Planning Year	0	3	N/A	N/A
	North Adams	N/A	N/A	1	2	N/A	N/A
	Pittsfield	N/A	N/A	0	1	N/A	N/A
	<b>Subtotal</b>	<b>N/A</b>	<b>N/A</b>	<b>1 (9%)</b>	<b>6 (86%)</b>	<b>N/A</b>	<b>N/A</b>
UMass Amherst (M)	Athol-Royalston	Started in Year 2	0	0	1	N/A	N/A
	Chicopee	N/A	0	2	1	N/A	N/A
	Easthampton	N/A	0	0	1	N/A	N/A
	Gateway	N/A	0	0	1	N/A	N/A
	Gill-Montague	N/A	0	0	2	N/A	N/A
	Greenfield	N/A	2	0	0	N/A	N/A
	Holyoke	N/A	5	5	3	N/A	N/A
	Holyoke Community CS	N/A	0	0	1	N/A	N/A
	Ludlow	N/A	0	0	2	N/A	N/A
	North Adams	N/A	0	0	1	N/A	N/A
	Ralph C. Mahar	N/A	0	0	1	N/A	N/A
	Springfield	N/A	7	4	7	N/A	N/A
	Westfield	N/A	2	2	2	N/A	N/A
	<b>Subtotal</b>	<b>N/A</b>	<b>16 (64%)</b>	<b>13 (37%)</b>	<b>23 (34%)</b>	<b>N/A</b>	<b>N/A</b>
EduTron Lowell (M/S)	<b>Lowell</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>54 (100%)</b>	<b>66 (100%)</b>
EduTron Fitchburg (M)	Fitchburg	N/A	N/A	N/A	N/A	17	20
	Gardner	N/A	N/A	N/A	N/A	7	7
	Leominster	N/A	N/A	N/A	N/A	10	26

## High Need Districts for All Funding Periods, by Partnership

Partnership	High Need Districts	Number of Participants from High Need Districts					
		Feb04-Aug04	Sep04-Aug05	Sep05-Aug06	Sep06-Aug07 Cohorts 1 & 2	Sep06-Aug07 Cohort 3	Sep07-Aug08 Cohort 3
	<b>Subtotal</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>34 (100%)</b>	<b>53 (98%)</b>
Lesley University (M)	Attleboro	N/A	N/A	N/A	N/A	0	1
	Brockton	N/A	N/A	N/A	N/A	13	3
	Fairhaven	N/A	N/A	N/A	N/A	3	1
	Fall River	N/A	N/A	N/A	N/A	26	18
	Haverhill PS	N/A	N/A	N/A	N/A	29	23
	Holyoke	N/A	N/A	N/A	N/A	29	18
	Malden	N/A	N/A	N/A	N/A	1	0
	New Bedford	N/A	N/A	N/A	N/A	4	0
	Randolph	N/A	N/A	N/A	N/A	13	14
	Revere	N/A	N/A	N/A	N/A	0	2
	Saugus	N/A	N/A	N/A	N/A	2	5
	Somerville	N/A	N/A	N/A	N/A	0	11
	Ware	N/A	N/A	N/A	N/A	0	1
		<b>Subtotal</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>120 (94%)</b>
North Shore (S)	Fitchburg	N/A	N/A	N/A	N/A	1	0
	Lynn	N/A	N/A	N/A	N/A	0	3
	Revere	N/A	N/A	N/A	N/A	0	9
	Somerville	N/A	N/A	N/A	N/A	16	14
	Lowell Comm. CS	N/A	N/A	N/A	N/A	0	1
		<b>Subtotal</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>17 (41%)</b>
UMass Amherst C3 (M/S)	Athol Royalston	N/A	N/A	N/A	N/A	1	0
	Chicopee	N/A	N/A	N/A	N/A	5	3
	Easthampton	N/A	N/A	N/A	N/A	0	1
	Gateway	N/A	N/A	N/A	N/A	1	0
	Greenfield	N/A	N/A	N/A	N/A	1	0
	Gill-Montague	N/A	N/A	N/A	N/A	0	1
	Holyoke	N/A	N/A	N/A	N/A	3	4
	Ludlow	N/A	N/A	N/A	N/A	2	0
	New Leadership CS	N/A	N/A	N/A	N/A	1	0
	North Adams	N/A	N/A	N/A	N/A	0	1
	Pittsfield	N/A	N/A	N/A	N/A	0	1
	South Hadley	N/A	N/A	N/A	N/A	2	0
	Springfield	N/A	N/A	N/A	N/A	3	9
	West Springfield	N/A	N/A	N/A	N/A	3	0
	<b>Subtotal</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>22 (46%)</b>	<b>19 (38%)</b>
Salem State College	Boston	N/A	N/A	N/A	N/A	1	0
	Chelsea	N/A	N/A	N/A	N/A	1	0
	Everett	N/A	N/A	N/A	N/A	3	1
	Gloucester	N/A	N/A	N/A	N/A	6	3
	Haverhill PS	N/A	N/A	N/A	N/A	4	3
	Lynn	N/A	N/A	N/A	N/A	10	10
	Malden	N/A	N/A	N/A	N/A	1	2
	Methuen	N/A	N/A	N/A	N/A	0	1
	Peabody	N/A	N/A	N/A	N/A	0	2

High Need Districts for All Funding Periods, by Partnership							
Partnership	High Need Districts	Number of Participants from High Need Districts					
		Feb04-Aug04	Sep04-Aug05	Sep05-Aug06	Sep06-Aug07 Cohorts 1 & 2	Sep06-Aug07 Cohort 3	Sep07-Aug08 Cohort 3
	Revere	N/A	N/A	N/A	N/A	0	1
	Salem	N/A	N/A	N/A	N/A	3	3
	Winthrop	N/A	N/A	N/A	N/A	1	0
	Worcester	N/A	N/A	N/A	N/A	1	0
	<b>Subtotal</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>41 (82%)</b>	<b>26 (65%)</b>
SE/Cape (S)	Barnstable	N/A	N/A	N/A	N/A	1	5
	Brockton	N/A	N/A	N/A	N/A	20	22
	Fall River	N/A	N/A	N/A	N/A	0	5
	Horace Mann CS	N/A	N/A	N/A	N/A	2	0
	New Bedford	N/A	N/A	N/A	N/A	8	8
	<b>Subtotal</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>31 (66%)</b>	<b>40 (51%)</b>
WPI – Science (S)	Worcester	N/A	N/A	N/A	N/A	<b>3 (16%)</b>	<b>7 (54%)</b>
Worcester PS (M)	Worcester	N/A	N/A	N/A	N/A	<b>34 (83%)</b>	<b>N/A</b>

\*If columns for this table are summed, totals will not correspond to relevant data in Table 32 because 1) Table 32 presents data for unique participants across all partnerships while this table presents data for unique participants only within partnerships (and some participants took courses through multiple partnerships over all four years) and 2) the districts of some of those participants who crossed partnerships were not consistently classified as high need districts (either because of the content of the course or because of the cohort of the partnership offering the course).

## Appendix I: Criteria that Account for Gain in Highly Qualified Status

<b>Criteria that Account for Gain in Highly Qualified Status</b>										
All unique participants to date*										
Criteria Accounting for Gains in Highly Qualified Status	Gained HQ status during Year 1	Gained HQ status during Year 2		Gained HQ status during Year 3		Gained HQ status during Ext/Year 4		Gained HQ status during Year 4	Gained HQ status during Year 5	TOTAL became HQ over course of project
		Cohort 1	Cohort 2	Cohort 1	Cohort 2	Cohort 3	Cohort 2	Cohort 3	Cohort 3	
MTEL	3	3	0	2	0	1	0	5	4	18
National Certification	0	0	0	0	0	0	0	0	0	0
Degree in Content Area	0	0	0	2	0	0	0	0	0	2
Undergrad Equivalent	0	0	1	0	0	1	0	2	0	4
HOUSSE	10	46	0	12	1	1	0	1	0	71
Earned a Teaching License	0	1	0	2	0	0	0	0	1	4
MTEL/Undergrad Equiv combined	0	4	0	1	0	0	0	0	0	5
MTEL/HOUSSE combined	0	2	0	0	0	0	0	0	0	2
MTEL/HOUSSE/Undergrad Equiv combined	0	0	0	0	0	0	0	1	0	1
Changed area taught or position	0	1	0	3	1	0	0	2	5	12
MTEL/changed area or position combined	0	1	0	2	0	0	0	0	2	5
Degree/changed area or position combined	0	0	0	1	1	1	0	0	0	3
Undergrad Equiv /changed area or position combined	0	0	0	2	0	0	0	0	0	2
<b>TOTAL</b>	<b>13</b>	<b>58</b>	<b>1</b>	<b>27</b>	<b>3</b>	<b>4</b>	<b>0</b>	<b>11</b>	<b>12</b>	<b>129</b>

\*Participants who took courses across multiple cohorts were included within the first cohort in which they participated, unless it was determined that they gained their HQ status during Year 4 while taking Cohort 3 courses.