

An Introduction

By participating in a city-wide system to improve science education, the Boston Public Schools and partner institutions address one of the nation's top priorities: creating talented graduates who are ready to enter the workforce.

The BSP is changing the culture of science education in Boston. The BSP invests in human capital – its teachers, teacher leaders, higher education faculty – and social capital to build a spirit of achievement, spark peer-led exchanges in schools across the district, and open doors to collaboration. Students are performing better, have access to advanced courses as never before, and are ready to continue their education in science after high school.

Clear and Measurable Student Achievement

- Tripled AP science enrollment while increasing the percentage of passing scores. Increased reach of support to serve 33 AP science classes in four subject areas. 66% are in non-exam schools.
- Showed that schools which actively engage teachers in BSP activities increase the percent of students passing state MCAS science tests, a requirement for graduation in 2010.
- Provided tools so that teachers can increase rigor across the district.
- Created 43 curriculum guides for every unit in the district so that teachers can increase rigor by effectively building on students' prior learning and prepping students for their next steps.
- More than doubled the number of BPS students enrolling in UMB and NEU as science majors.

Increase in Teacher Quality

- Doubled the number of licensed physics teachers.
- Grew teacher leaders: 38 adjunct instructors; engaged 182 middle and high school teachers in focused peer-led professional development; prepared 66 teachers to run AP science courses.
- Contributed to 170 new licenses being earned by 25% of all teachers of science over the past three years. Result: increase of 47% in the number of science courses taught by teachers with the appropriate license.
- Enrolled 240 BPS teachers in content courses specifically created to support the district-wide curriculum. Courses are co-taught with university faculty and middle and high school teachers – effectively linking content and pedagogy.
- Launched the Science Education Fellowship to further develop teacher instructional leadership.

Stronger Relationships Between BPS and Higher Education Faculty

- Increased the readiness of higher education faculty to embrace research in how students learn.
- Forged connections between teachers and University faculty.
- In the summer of 2008, 18 teachers brought 308 AP students to one of three universities for 8 full days of advanced study and lab time.



BSP Dashboard – Quick Facts

<p>Recognition 2004 - The Boston Science Partnership, a 12.5 million NSF Math Science Partnership grant, is launched. 2006 - NSF awarded a supplement (\$712k) to add RCC and BHCC to the partnership and support a research study of the STEM pipeline in Boston 2008 - NSF awarded a Noyce Fellowship supplement (\$600k) to fund Science Education Fellowships (SEF) in Boston</p>	<p>Four Core Strategies</p> <ul style="list-style-type: none"> • Contextualized Content Courses (CCC) • Collaborative Coaching and Learning in Science (CCLS) • Vertical Teaming • Support for faculty, students and families, and the AP Science Support Program
<p>Dollars and Partners \$13.8 million – Total investment to date \$4.2 million – Subcontract to BPS (30.2% of total)</p> <p>Core Partners:</p> <ul style="list-style-type: none"> • UMass Boston • Northeastern University • Boston Public Schools 	<p>Supporting Partners</p> <ul style="list-style-type: none"> • The College Board • Harvard Medical School • Roxbury Community College • Bunker Hill Community College • Education Development Center
<p>Principal Investigators</p> <ul style="list-style-type: none"> • Hannah Sevia (PI, UMass Boston) • Christos Zahopoulos (Co-PI, Northeastern) • Pamela Pelletier (Co-PI, BPS) • Arthur Eisenkraft (Co-PI, UMass Boston) • Bob Chen (Co-PI, UMass Boston) 	<p>Evaluation</p> <ul style="list-style-type: none"> • PERG at Lesley University • Peterfreund Associates <p>Research</p> <ul style="list-style-type: none"> • Education Development Center, Inc. • UMass Boston

