

# Human Capital in Boston Public Schools

Rethinking How to Attract, Develop and Retain Effective Teachers

### **About this study**

This study was undertaken on behalf of the 56,340 children who attend Boston Public Schools.

### **About NCTQ**

The National Council on Teacher Quality (NCTQ) is a non-partisan research and advocacy organization committed to restructuring the teaching profession, led by our vision that every child deserves effective teachers.

### **Partner and Funders**

This project was commissioned by the Massachusetts Business Alliance for Education as part of its commitment to a high quality public education system that will prepare all students to engage successfully in a global economy and society. It was made possible by grants from the Barr Foundation and the Boston Foundation. Additional funding was provided by the Bill & Melinda Gates Foundation.

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# Human Capital in Boston Public Schools: Rethinking How to Attract, Develop and Retain Effective Teachers

## About this study

This analysis reviews the Boston Public Schools' (BPS) teacher policies linked most directly to teacher effectiveness. Framing our analysis are 10 policy goals, developed by NCTQ and supported by research and best practices in the field.

NCTQ wishes to thank its local partner in this endeavor, the Massachusetts Business Alliance for Education (MBAE), which made it possible for us to meet with teachers, principals, school officials and community leaders to gain their critical local perspective. The MBAE is a statewide advocacy organization that brings together business and education leaders to promote education policies and practices based on measurable standards of achievement, accountability for performance and equitable educational opportunities for all students.

Both the Boston Public Schools and the Boston Teachers Union (BTU) were given the opportunity to comment on the draft of this analysis. The BTU chose not to participate. The Boston Public Schools provided factual corrections. The substance of our analysis and any remaining errors in this final report are our own.

To produce this analysis, we took the following steps:

- First, a team of analysts reviewed the district's current teachers' collective bargaining agreement, school board policies and district circulars. We also looked at state laws that influence local policy.
- We compared the laws and policies in Boston and the state of Massachusetts with the 99 other school districts and 49 other states found in our TR<sup>3</sup> database ([www.nctq.org/tr3](http://www.nctq.org/tr3)). This exercise allowed us to determine where the school district falls along the spectrum of teacher quality policies and to identify practices that Boston might emulate. We also collected data from school districts that surround Boston, the district's primary competitors for teacher talent.
- We spoke with local teachers, principals, parents and community leaders to understand how policies play out in practice.
- We looked at a range of teacher personnel data to give us a better understanding of the outcomes of teacher hiring, transfer, evaluation, attendance and compensation policies.

We hope that this document can serve as a resource for Boston parents, teachers, administrators and community leaders as the district seeks to align its human capital policies with the goal of ensuring that every classroom is staffed with an effective teacher.

## Executive Summary

Staffing each classroom with an effective teacher is the most important function of a school district. Doing so requires strategic personnel policies and smart practices.

The National Council on Teacher Quality, working with its local partner, the Massachusetts Business Alliance for Education, undertook an analysis of the Boston Public Schools' existing teacher policies, which included reviewing the teachers' contract and other relevant documents; collecting personnel data and talking with local stakeholders to learn how the rules play out in practice; and comparing Boston to other nearby districts, as well as districts throughout the country. We worked to identify areas in which better policies—adopted by both the district and the state—would lead to improved teacher quality, even absent other factors such as increased funding or better school leadership.

NCTQ must emphasize that Boston has made great strides over the past decade in improving its human capital policies; however, much work needs to be done to ensure that every child has an effective teacher.

### Summary of Findings and Recommendations

#### I. HIRING, TRANSFER AND ASSIGNMENT

**Site-based hiring.** Although in some respects Boston principals have more autonomy to hire teachers than in many other districts, this autonomy is hampered by rules that put the interests of teachers before the interests of schools. “Excessed” teachers—those whose positions have been cut at one school—are entitled to a position elsewhere in the district, even if at schools where the principal does not wish to hire the teacher.

#### Recommendations:

- Give principals full authority to interview and hire all teachers, regardless of whether the teacher is new to the district, transferring voluntarily or transferring as a result of an excess. Teachers should never be guaranteed a position.
- Place unassigned teachers in temporary assignments while they continue to look for permanent positions. Teachers who are unable to find a new position after one year should be dismissed.

**Hiring timelines.** Boston hires too many teachers too close to the start of school, limiting its ability to pick the best possible teachers. In 2009, nearly one quarter (23 percent) of teachers were hired in the two weeks prior to the start of school, and another 13 percent were hired after the first day of school.

What causes these delays? A number of reasons, the first being rules in the teacher contract designed to protect teachers who have lost their teaching assignments. The rules require the district to guarantee the displaced teacher a new position. Consequently principals often hide their vacancies to avoid being forced to hire an excessed teacher. Second, the online application process is not updated regularly, and prospective applicants have difficulty finding accurate information about

vacancies. Third, the district does little to recruit top candidates early. Lastly, teachers about to resign or retire often do not notify the district of their departure plans until late in the summer, giving the district too little time to hire suitable replacements.

**Recommendations:** To ensure that the majority of teacher vacancies are filled by the end of the school year—rather than at the start of the next one—Boston should:

- Change hiring rules for excessed teachers so that principals do not hide their vacancies.
- Update online vacancy information on a daily basis.
- Increase the number of early letters of commitment extended to promising candidates for hard-to-staff positions.
- Require resigning and retiring teachers to notify the district of their departure by June 1.

**District-wide layoffs.** With the high number of layoffs taking place in schools across the country this year, many districts are questioning their long-standing policies of using a teacher's seniority as the determining factor in layoffs. Similar to many districts, Boston currently lays off teachers in order of reverse seniority. While this approach—first hired, last fired—may appear to be the fairest way to make difficult decisions about who should go when cuts must be made, it necessitates eliminating the highest number of jobs: junior teachers cost less money so more young teachers need to be cut. Because seniority-based decisions are “performance neutral,” they also mean that schools often cut higher-performing teachers while less effective teachers remain.

**Recommendation:**

- Allow performance to be a consideration when teachers are laid off. Boston should strive to change its layoff policies in the next teachers' contract.

**Equitable distribution of teachers.** Boston enjoys clear advantages in the quality of teachers it attracts. Although nationally the academic ability of teachers tends to be below the average academic ability of all college graduates, two-thirds of new teachers hired last year in Boston attended “more selective” or “most selective” colleges, as ranked by *U.S. News & World Report*.

To Boston's credit, less experienced teachers are not concentrated in a few schools. Despite this good news, turnover rates are surprisingly high: approximately 50 percent of teachers transferred schools or left the district between 2006 and 2009. While it is commendable that schools with the highest poverty do not experience this disproportionately, such high turnover is problematic from a systemic perspective.

Lastly, Boston's teacher workforce does not yet reflect the diversity of its student body. Nearly one-third of its teachers are persons of color, while more than 80 percent of its students are of color.

**Recommendations:**

- Improve systems to collect and monitor school-level data on teachers' years of experience, retention and academic credentials and make the data available to the public.
- Increase the number of financial and professional incentives available for highly effective teachers to work at high-needs schools. Strategies include placing clusters of effective teachers, such as alumni of the Boston Teacher Residency, in low-performing schools.

## II. DEVELOPING EFFECTIVE TEACHERS AND EXITING INEFFECTIVE TEACHERS

**Support for new teachers.** Although all new teachers are assigned a mentor, some new teachers are assigned mentors after the school year has begun. However, teachers do find the support helpful and give the program high ratings.

### Recommendations:

- Hire mentors before school starts to ensure that new teachers have help preparing their classrooms and navigating the first few days of school. The early weeks of school are crucial for a teacher to establish classroom procedures, assess students' abilities, set goals and juggle both daily and long-term planning.
- Assign new teachers to classrooms that are close to teachers who are known to be highly effective. This is perhaps one of the simplest and most affordable means of support to new teachers.

**Teacher evaluations.** Too many teachers are not evaluated. All teachers are supposed to be evaluated every two years, with nontenured teachers evaluated every year. However, BPS records show that between the 2007-2008 and 2008-2009 school years, only half of all teachers had been evaluated. Even more striking, one quarter of schools did not turn in a single evaluation.

Furthermore, with only two possible ratings that a teacher can earn ("Meets Expectations" or "Does Not Meet Standards"), the current evaluation system is merely perfunctory and does little to distinguish excellence. Evaluations are important for all teachers, not just struggling teachers. Done right, feedback on evaluations can be an important part of teacher professional development and can help good teachers become great teachers.

Few teachers in Boston are being held accountable for their job performance. Only 41 teachers out of a teacher corps of 4,873 were rated as unsatisfactory in the 2008-2009 school year—less than one percent of all teachers. Teachers are not required to demonstrate effectiveness to maintain their jobs. Furthermore, the evaluation instrument does not contain a provision for evaluating a teacher's impact on student achievement.

### Recommendations:

- Hold principals responsible for completing teacher evaluations and submitting them to the district.
- Implement an automated evaluation system to allow principals to submit teacher evaluation ratings online. The system should have the capacity to generate the reports needed for the superintendent to review patterns, trends and compliance in each school.
- Allow senior leaders in schools to evaluate their peers and expand the team of central office observers available to conduct random evaluations.
- Use the value-added data already provided to Boston teachers, in addition to other measures of student growth, to assess teacher effectiveness.
- Establish an evaluation system with multiple categories to distinguish performance levels among teachers. This way teachers have more meaningful feedback about their strengths and weaknesses, and the most effective teachers can be recognized.

**Making tenure meaningful.** In effect, the district's decision to award tenure to a teacher is a \$2 million investment that includes an individual's salary earnings, benefits and pensions. In exchange, the teacher enjoys high job security. Too often, however, the tenure decision is not made deliberately. Although BPS officials assert that principals routinely decide not to renew provisional teachers' contracts, and therefore deny tenure, in reality, only about 10 percent of such contracts are not renewed each year. Furthermore, NCTQ could not find evidence that the district reviews a teacher's performance in the classroom before awarding tenure.

### Recommendation:

- Hold a "district tenure review" to decide whether to award tenure to teachers. Tenure should be a significant milestone in a teacher's career and should only be awarded after deliberate and thoughtful consideration of a teacher's performance.
- Increase the probationary period for new teachers to at least four years. This policy would need to be reflected in state law.

**Support for struggling teachers.** Struggling teachers in Boston are offered a number of supports, including peer assistance. If performance continues to be a problem, teachers are placed on an improvement plan and given two opportunities to show improvement. As stipulated by the teacher contract, principals are required to be heavily involved in teacher improvement plans, a process which appears cumbersome and prone to procedural errors. For example, teachers can disrupt the timeline by being absent from school. Notably, teachers on an improvement plan have twice the number of absences as the district average.

**Recommendation:**

- Scale up the district's "Peer Assistance Program" to play a greater role supporting underperforming teachers.

**Exiting ineffective teachers.** Boston's current interpretation of a teacher's right to due process is unfairly and unnecessarily disruptive to student learning. Currently, teachers are entitled to a remediation plan that can last nearly two-thirds of the school year. If evaluations are not timed properly, the process can extend into the next school year, suggesting that not one but two classes of children will be assigned a teacher with a record of weak performance. Moreover, teachers can appeal a district's dismissal decision multiple times, prolonging the dismissal process, which is already cumbersome and prone to procedural errors, for months.

**Recommendation:**

Streamline the evaluation, remediation and due process timeline to make it easier to dismiss an underperforming teacher within one school year.

- Require that administrators evaluate all teachers by the end of the first semester. Any teacher not meeting expectations would have 90 days to improve and be eligible for support from Peer Assistants. At the end of the 90-day period, the principal would decide whether or not to dismiss that teacher.
- Restrict the appeals process for dismissal decisions. Teachers should have only one opportunity to appeal the district's dismissal decision. This appeal should be made before a panel of educators.

### III. WORKING CONDITIONS AND COMPENSATION

**Work day and work year.** Boston teachers are required to be on site six and a half hours a day—only 30 minutes beyond the student school day and less than what is required of teachers in comparable districts. Additionally, at 182 days, Boston's teachers have one of the shortest work years among the 100 TR<sup>3</sup> districts—only two days beyond the student school year. Although Boston's policies in this area are comparable to other Massachusetts school districts, its work year is shorter than other urban districts (and AFT affiliates), including Philadelphia, Baltimore and Chicago.

**Recommendation:**

- Extend the work day after students leave by one hour to facilitate teacher collaboration.

**Leave.** Although Boston teachers are given 15 days of sick leave a year—five days more than the national average—Boston teachers report commendable attendance rates, using less than half of their allotted sick and personal leave. Comparable rates are reported across both high- and low-performing schools. Boston closely monitors teacher attendance by prohibiting absences on days before and after holidays, giving principals regular reports on teacher attendance and holding teachers accountable for any questionable absences.

**Recommendations:**

- Reduce the number of sick leave days from 15 to 10 to mirror the national average.
- Make personal leave inclusive of bereavement, religious and other kinds of leave.

**Compensation.** Boston's compensation system has several strengths. Its teacher salaries are competitive with surrounding districts, with Boston having the highest starting salary of all surrounding districts and the highest lifetime earning potential. Most notably, teachers receive the highest pay increase early in their careers. This timing is important to the retention of younger teachers and runs contrary to the trend found in many districts, which reserve the largest pay increases for teachers later in their careers. Also, teachers reach their maximum salary after only nine years, much as doctors and lawyers do, increasing teachers' lifetime earnings potential.

There are, however, some problems that the district needs to address. Like all American school districts, Boston's pay structure is built on a popular but erroneous premise that the more coursework a teacher takes, the more effective he or she is likely to become. Boston spends a considerable portion of its annual teacher payroll—\$33 million (or nine percent)—on additional compensation for teachers who have taken post-graduate coursework. To qualify for the highest salary teachers must take coursework that is equivalent to two masters' degrees. Furthermore, the district pays an exorbitant amount—\$5.3 million annually—in bonuses that reward teachers for their longevity.

**Recommendations:**

- Eliminate intermediate lanes on the salary schedule that enable teachers to qualify for higher salaries based on coursework alone. Teachers currently in these lanes can be exempted from this policy.
- Redistribute masters' incentives and career increments (longevity bonuses) to recognize teacher contributions to student achievement. For example, Boston should consider awarding higher pay to teachers working in shortage subject areas or more challenging schools.

## Hiring, Transfer and Assignment

**Goal 1. Teacher assignment is based on the mutual consent of principals and teachers; policies minimize the deleterious impact of teacher excessing and layoffs.**

### INDICATORS

- i. Teachers who lose their current teaching assignment actively apply for a new assignment, regardless of whether they are transferring voluntarily; have lost an assignment through a program change, enrollment shift or school closing (i.e., are “excessed”); or are returning from a long-term leave or layoff.
- ii. Principals and/or school committees are entitled to select those applicants they wish to interview and have the final say over which teachers they hire.
- iii. Teachers who have lost their current assignment and prove unsuccessful in a year’s time in obtaining a new assignment should be terminated.
- iv. When teachers need to be laid off and are therefore ineligible for reassignment, teacher performance should be a key factor in deciding who stays or goes.

### Open-market hiring vs. job protections for teachers

**Boston principals do not have full authority to interview and hire teachers.**

Giving principals the authority to select which teachers work in their schools is critical to ensuring cohesive and effective school faculties. To its credit, Boston’s teachers’ contract gives principals and schools some authority to select which teachers they want to interview and hire. However, this authority exists during only part of the hiring season and only for certain types of vacancies. Furthermore, when it comes to district-wide layoffs, an unfortunate prospect currently facing Boston, principals have little say in who goes. An explanation of the procedures that Boston uses for filling anticipated vacancies reveals some of its inherent problems.

### TYPES OF VACANCIES

The first phase of Boston hiring begins as early as February. At this time, principals may choose to advertise a vacancy as either a “transfer” or an “open” posting. The distinction, while technical in nature, has serious consequences.

**“Transfer” posting.** Vacancies advertised as transfer postings give teachers already employed by the school district the opportunity to find a new assignment before vacancies open up to new hires. Principals must interview all candidates who apply and must hire a teacher from among that applicant pool. Only when there is a single applicant for a transfer posting can a principal defer hiring.



Teachers who wish to transfer to a new position voluntarily, or those who must transfer because of staffing, budgetary or enrollment changes (i.e., “excessed”), clearly find it advantageous to apply to a transfer posting. Not only are they guaranteed a new position, they do not have to pursue interviews actively.

After the transfer period has ended, a subset of teachers who have not secured a new position usually remains. These teachers may have applied to transfer postings but were not selected or they may not have been excessed until after the transfer postings were complete. Boston is contractually obligated to find positions for these teachers, and it is in this stage that principals have the least say in which teachers are selected to work in their schools.

To find positions for these remaining teachers, the district holds a reassignment meeting in the spring, termed the “excess pool.” Human Resources (HR) officials, principals and the excessed teachers all attend this meeting. Teachers bid on leftover vacancies in order of seniority, with the most senior teacher choosing a preferred position first. In turn, principals submit their rankings of candidates. HR then attempts to match candidates with the most appropriate assignments. While in some cases principals and teachers mutually select one another, the excess pools ultimately appear to favor teachers, whose preferences often trump those of the principals. In interviews with NCTQ, principals stated that they assume the quality of the teachers in the excess pool to be generally poor.<sup>1</sup> Consequently, principals try to make vacancies sound as unappealing as possible, so that no unassigned teachers will bid on a position at their school.

“I did everything possible to discourage people from selecting my school. I told them that we had a shooting the previous year near the school yard, that we don’t have parking—anything to make the school seem as unappealing as possible.”

- Boston principal

The concerns of Boston principals about the quality of teachers in the excess pool are consistent with those of principals in other urban districts. Undesired teachers are routinely excessed and passed onto other schools rather than fired, a practice known as the “dance of the lemons.”

**“Open” posting.** In contrast to transfer postings, schools can advertise vacancies as open postings to both internal candidates as well as new hires. For open postings, principals have full authority to select teachers that they wish to interview and hire, but there is a catch. To advertise a vacancy as an open posting, principals must attach a minimum \$1,250 stipend, payable to the teacher hired. Open postings were negotiated as a means of giving principals another option for hiring teachers early in the season, without the limitations imposed by the transfer process. The stipend essentially buys a school the right to expect more of a candidate and to be choosier about whom they hire. However, principals must find money in their budget to post this type of vacancy.

If the requirement that principals must choose from the pool of available “excessed” candidates limits their autonomy, why would a principal opt for a transfer posting over an open posting? Some do so out of inexperience, failing to realize the extent to which this limits the applicant pool and allows teacher preferences to outweigh a principal’s preference. Others do not have the money in their budgets required for an open posting. Or, a principal may have a specific teacher already in mind for a position and not want to pay extra for a teacher that has already been identified for hire. During the 2009 budget crunch, Boston limited open postings because there were fewer resources and vacancies and therefore a greater need to fill positions with teachers already employed by BPS.

Open postings were negotiated as a means of giving principals another option for hiring teachers early in the season, without the limitations imposed by the transfer process. The stipend essentially buys a school the right to expect more of a candidate and to be choosier about whom they hire. However, principals must find money in their budget to post this type of vacancy.

If funds are available, most principals prefer to classify their vacancies as open postings because they allow schools to advertise their vacancies early in the school year and to choose from a broader pool of applicants. In 2009, due

1 In the case of Boston, 68 percent of teachers in the excess pool did not have an evaluation record on file, either because the evaluations were not completed or were not submitted.

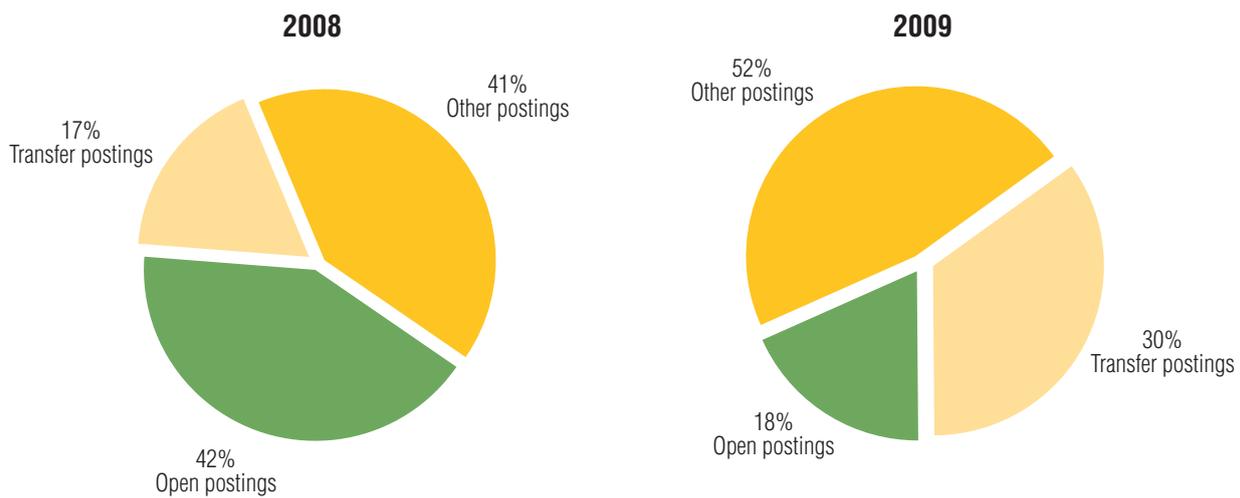


to budget cuts, Boston limited open postings to a select few categories (e.g., science, ESL, special education) partly as a cost-saving measure, but also to ensure that internal candidates secured new positions through the transfer process before new teachers were hired.

**“Other” posting.** Transfer postings benefit teachers already employed by the school district while open postings benefit both principals and teachers. Nevertheless, about one-half of all vacancies are classified as “other” postings, which are publicized last in the hiring season, once the district has placed all of the teachers remaining in the excess pool.

Due to the cumbersome and expensive nature of the transfer and open postings, principals essentially hide many of their vacancies until all excessed teachers have been placed; they do this so that they can hire the teachers they want, without being forced to choose an internal candidate or spend additional money to hire a teacher. Although the teachers’ contract addresses the alleged practice of hiding vacancies, stating that the union can challenge the omission of a vacancy from the excess pool, this does not appear to be much of a deterrent.

**Figure 1. How are vacancies advertised?**



Source: Boston Public Schools, 2008, 2009.

In both 2008 and 2009, nearly half of all teaching positions were advertised after the transfer and open posting periods were completed, largely because principals want full autonomy to interview and hire teachers.



**Figure 2. Types of vacancies**

<b>Description</b>	<b>Who can apply?</b>	<b>Principal say?</b>
<b>Transfer</b> Gives teachers already employed by BPS opportunity to change positions. Teachers who lost their jobs due to a position cut (excessed teachers) are guaranteed a new position at another school.	<b>Transfer</b> Only teachers already employed by BPS. Teachers apply for up to five positions.	<b>Transfer</b> Schools must interview all applicants who apply and select their top pick. Only when there is a single applicant for a transfer posting can a principal defer hiring. During excess pool, principals may be forced to hire a teacher.
<b>Open</b> Occurs at the same time as the transfer posting, but principals attach a stipend to the position.	<b>Open</b> Both teachers employed by BPS and teachers from outside the system, including new hires.	<b>Open</b> Principals only interview those teachers they find most promising. They have full authority to hire whom they want.
<b>Other</b> Occurs after all excessed teachers are placed. This constitutes about one-half of all postings (see Figure 1).	<b>Other</b> Both teachers employed by BPS and teachers from outside the system.	<b>Other</b> Principals only interview those teachers they find most promising. They have full authority to hire whom they want.

**Policies that support (or undermine) good hiring and placement practices**

<b>Policies that support mutual consent:</b>	<b>Policies that undermine mutual consent:</b>
Staffing decisions are made at the school level.	District HR office assumes full authority for reassigning teachers who are involuntarily transferred out of a school.
Teachers apply to vacancies and are selected for interviews by principals and/or hiring teams.	Teachers secure new assignments based on their seniority.
Hiring decisions cannot be the subject of a labor grievance.	Hiring decisions can be the subject of a labor grievance.
Teachers can apply for as many positions as they wish.	Teachers are restricted in the number of vacancies for which they can apply.
Principals are never required to choose from the pool of internal candidates.	
The district has an “exit strategy” for moving teachers unable to find a placement out of the system.	



## Recommendations for Boston Public Schools

- 1. Eliminate the transfer and open postings.** Boston should simplify its hiring process by eliminating the various types of vacancies. The same hiring rules should apply for all applicants, regardless of whether teachers are new to the district, transferring voluntarily or as a result of excessing.

Boston may want to continue the practice of giving internal candidates the first chance to apply for openings, but schools should only have to interview those internal candidates that they want to interview, and teachers should not be guaranteed a new position. Removing these limitations on principals would encourage them to post vacancies early in the hiring season.

- 2. Eliminate job protections for excessed teachers.** Boston's practice of convening school officials at a single meeting for the purpose of finding assignments for excessed teachers is the right idea but poorly implemented. The HR department should still convene such a meeting but not with teachers present. This closed-door meeting process should also occur later in the hiring season after principals have had the opportunity to hire outside candidates. (This would encourage teachers to actively pursue a new assignment, rather than wait to be assigned.) The excess pool meeting should only be used as a last resort to find assignments for excessed teachers. This model also would remove the seniority preferences afforded to excessed teachers, and would deter principals from passing off their poor performers onto other schools and would prevent the concentration of excessed teachers in poor schools. *Boston can look to Montgomery County, Maryland, for a model of how to conduct such an assignment meeting.*

- 3. Develop an “exit strategy” for teachers who are unsuccessful in securing a permanent assignment.** All teachers should compete for jobs on the same basis as other internal candidates. Those teachers who are unable to secure a new permanent position should be placed on temporary assignments while they continue to look for one. Teachers who remain without a permanent position after one year should be terminated. *Boston can look to Chicago Public Schools, which has a strategy for exiting unassigned teachers.*

- 4. Base teacher layoffs on a combination of factors, rather than on seniority alone.** Seniority-based layoffs are not an effective means of recruiting or retaining top talent nor are they a cost-effective way of reducing staff. As a first step, Boston should develop reliable teacher evaluation systems that do a good job of capturing teacher effectiveness. This new system should factor teacher performance into layoff decisions. Some promising models consider performance within an experience range, such as poor performers with one to three years of experience. *Boston can look to Charlotte-Mecklenburg, North Carolina and Dallas, Texas, for examples of how performance can factor into teacher layoffs.*



## **Goal 2. The transfer and hiring timeline occurs early enough in the school year to minimize disruption to schools and to ensure access to top talent.**

### **INDICATORS**

- i.** Budgets are developed and distributed to principals in the late winter or early spring so that vacancies can be determined by April 1.
- ii.** Policies require retiring and non-returning teachers to provide notice to schools before the transfer season begins, so that vacancies can be determined by April 1.
- iii.** Transfers are prohibited during the school year, except in unusual circumstances.
- iv.** Teachers who apply to transfer for the following school year secure assignments by the end of the current school year or early in the summer.
- v.** The process through which teachers learn about vacancies and apply to them is electronic, centralized and user-friendly.

### **Hiring and transfer timeline**

**Hiring in Boston is delayed for two reasons: 1) principals hide vacancies in order to wait out cumbersome and counterproductive hiring protocols; and 2) teachers give late notice of their resignation or retirement.**

Schools inevitably face turnover each year as teachers retire, change positions or transfer to new schools. Some change is invigorating, but high turnover that repeats year after year harms schools. Ideally, all transfers of teachers already employed by the district are decided early in the spring, so that teachers are aware of their assignments before the current school year ends and can begin planning for the new school year during the summer months. Even more important, the process of transferring teachers from one school to another should not hold up the district's need to hire additional teachers from outside the district.

One factor that delays hiring in many districts is that principals have to wait until late in the spring to receive their budgets, causing staffing fluctuations at an inopportune time. Fortunately, this is not a problem in Boston, largely because the school district is an agency of the Boston city government and must submit its projected budget for the following school year no later than February. However, other local factors still prevent Boston principals from hiring teachers earlier, namely timing problems associated with teachers' retirements and resignations and the nature of teacher transfers.

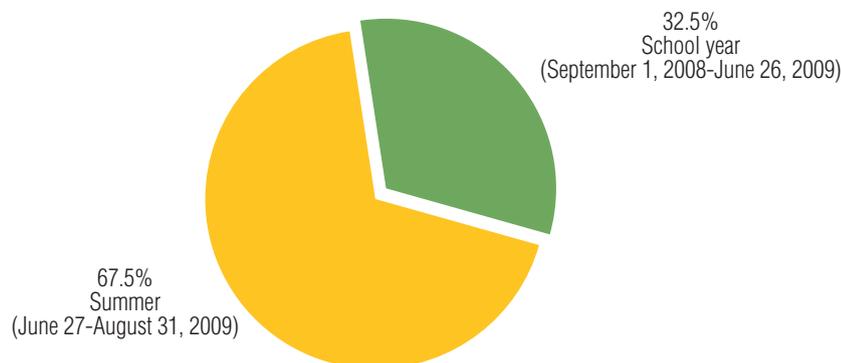
**Timing for resignations and retirements.** Boston's teachers' contract does not provide a deadline for when resigning or retiring teachers must notify the district of their plans but does provide an incentive to encourage early notice. It offers retiring teachers a \$1,500 bonus if they notify the district in mid-December of their intended departure at the end of the school year.<sup>2</sup> While many teachers take advantage of this offer (approximately one-third of all retiring teachers last year), many teachers also retire during the school year.

In the 2008-2009 school year, more than a quarter of teacher retirements occurred during the school year, including 14 teachers who retired during the first two months of school. The City of Boston's pension system allows teachers to retire at any time, even during the school year. Since retirement is based on a combination of service and age, if a teacher's birthday falls during the school year, the resignation is allowed in that month instead of at the end of the school year.

<sup>2</sup> To be eligible for the bonus, teachers must have at least 10 years of experience in the district and be at least 55 years of age. The agreement is irrevocable and binding on both parties.

When teachers retire after December 1, their positions are filled by a substitute rather than a permanent teacher, doing little to engender stability within schools. Such departures pose real hardships on schools and the students in their charge.<sup>3</sup>

**Figure 3. When do teachers retire?**



Source: Boston Public Schools, 2008, 2009.

**Transfer process.** The transfer process is another hindrance to earlier hiring. Although on paper principals can advertise vacancies and hire teachers early in the spring, in reality, principals hide many of their vacancies so that they will not be forced to hire transfer or “excessed” teachers who have lost their assignments in other schools. If principals were not limited to selecting candidates from either the transfer or excess pools, they might be more inclined to post their vacancies in February or March. School leaders cherish the freedom to hire the teachers they want. It’s no surprise that Boston’s Pilot Schools—created by the Boston Teachers Union and the district as a district-run alternative to popular charter schools—enjoy exactly that freedom.

“The best time to hire teachers is after all internal people have been hired, so that I can hire new candidates.”  
 -Boston principal

### Recruiting and hiring new talent

**Among the teachers Boston hired in 2009, nearly one in four were hired in the two weeks prior to the first day of school, and 13 percent of new teachers were hired after the first day of school.**

**Principals are not fully utilizing the online application system to hire teachers. The online hiring database is not updated regularly.**

**Early recruitment.** The Boston Public Schools are a desirable place to work, as evidenced by the number of applicants the district receives each year. For the 2009-2010 school year, nearly 4,000 applicants vied for 775 vacancies, averaging five applicants per opening. Unfortunately, Boston does not have the pick of all this talent because it hires too late, often choosing from a more limited pool.

In 2006 and 2007, Boston hired over 500 teachers, offering approximately 50 early letters of commitment. However, those early offers dropped to only six in 2008, increasing slightly to 18 in 2009. Although a 50 percent decrease in the number of openings available to external candidates surely played a role, HR also appears to have stepped back from its more active role in

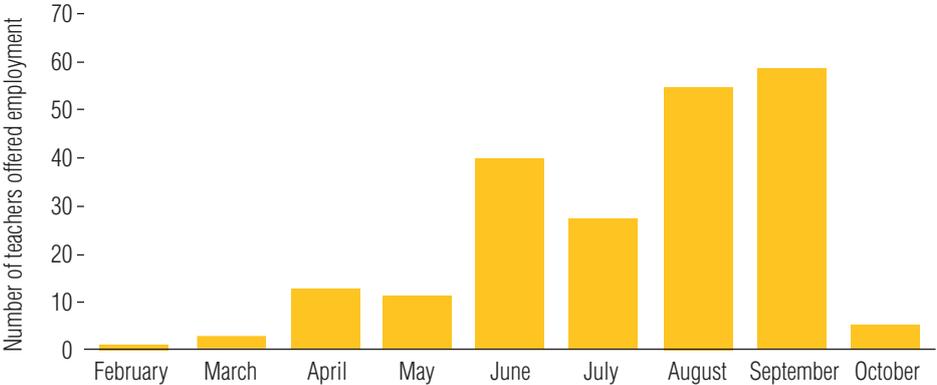
<sup>3</sup> Boston Public Schools reports that in the past it has filled positions for teachers who it knew would be retiring in September, October or November by hiring a replacement teacher at the beginning of the year. It then had to pay the full salary for two teachers until the original teacher retired. This is a costly solution to a problem that may be better addressed in city or district policy.



teacher hiring, as schools assumed more authority over staffing. HR officials interviewed by NCTQ suggested that the policy may have gone too far and that they intend to increase district involvement in hiring this year to ensure that the candidates sent to principals are promising and sent into the district's low-performing schools.

**Hiring dates.** In 2009, despite the district's attempts to jump start hiring in February, more than half of new teachers received formal offers for positions in August and September, and 13 percent of positions were hired after the start of the school year.

**Figure 4. When are new teachers offered positions?**



Source: Boston Public Schools, 2009.

Thirty-six percent of teachers were offered their positions in the two-week period before and after the first day of school on September 10: 23 percent of positions were offered between August 27 and September 10; and 13 percent were offered after the first day of school, September 10, 2009.

**Streamlining hiring.** Boston posts vacancies and accepts teacher applications online. However, it appears that this system is not updated regularly, which makes the system unreliable. According to teachers surveyed by the Boston Plan for Excellence, job postings often were inaccurate, and applications often went unanswered. Teachers found it most effective to show up at a school and inquire about a vacancy directly. While the district should be commended for centralizing its vacancies and application system, it can do more to ensure that it operates efficiently and reliably.

“The online system was not updated. . . most of the jobs that were posted as vacant were filled.”  
-Boston teacher



## Recommendations for Boston Public Schools

- 1. Require resigning and retiring teachers to notify the district of their plans by June 1.** Boston should consider instituting penalties, such as a loss of pay or leave, if a teacher fails to notify the district by the deadline. Regardless of whether a teacher takes advantage of Boston's early deadline in December or meets a new June deadline, the terminations should not go into effect until a later date, as is currently the case, so that teachers maintain health benefits over the summer. *Boston can look to Granite and Jordan, Utah, for examples of sanctions on teachers.*
- 2. Incentivize early notification of resignation and retirements by offering a bonus to teachers who notify the district by April 1.** A spring deadline with an incentive attached would likely result in more benefits to the district. *To implement a spring deadline with incentives attached, Boston can look to Billings, Montana, as an example.*
- 3. Increase the number of early letters of commitment extended to promising candidates for hard-to-staff positions.** While respecting local schools' autonomy over staffing, HR should play a larger role in recruiting outside talent for openings, especially in hard-to-staff subject fields or schools. A better online system should facilitate speedier communications between HR and schools.
- 4. Train principals to use the online application tool to facilitate hiring.** Boston should ensure that its centralized system is maintained with real-time data so that once a position is filled, its posting is removed.

## Recommendation for City of Boston

- 1. Prohibit retirements during the school year.** Allowing teachers to retire during the school year is extremely disruptive to student learning and leaves schools with few staffing options, other than to fill a vacancy with a long-term substitute.

**Figure 5. A more efficient timeline for the spring transfer and hiring season might look like the following:**

<b>January 1</b>	Early notification deadline for resigning teachers, with bonus attached.
<b>January – April</b>	District HR recruits teachers for critical subject areas, offers general contracts.
<b>March 15</b>	Teachers notified if they are losing their assignments.
<b>March 15 – June 30</b>	All internal candidates, including voluntary transfers and excessed teachers, apply for vacancies. Schools interview and can hire, but are under no obligation to choose an internal candidate.
<b>April 1 – June 15</b>	Schools interview any candidates they wish and offer positions. Ninety percent of openings are filled by the end of this period.
<b>June 1</b>	Final deadline for giving notification of resignation or retirement.



### **Goal 3. The district works to improve both the “academic capital” and diversity of new hires as well as equitably distribute its teacher talent.**

#### **INDICATORS**

- i.** School districts recruit teachers with high “academic capital,” recognizing the importance of a teacher’s academic strengths, as measured by the selectivity of teachers’ undergraduate institutions, high SAT and ACT scores and teachers’ success on licensure exams.
- ii.** The percentage of minority teachers employed by a district is proportional to the make-up of its student population.
- iii.** Schools generally have comparably low proportions of new teachers on their staff.
- iv.** School districts take steps to monitor and ensure that high-poverty schools do not suffer disproportionately high turnover rates.

#### **Attracting and recruiting quality teachers**

**Nearly two-thirds of teachers that Boston hired for the current school year graduated from top colleges and universities.**

Districts should ensure that a well-educated and effective teacher staffs every classroom. Although districts compile data on the percentage of “Highly Qualified Teachers” (HQT) at each school to comply with federal law, these figures tell very little about other, perhaps more meaningful, indicators of quality.<sup>4</sup>

By looking at the academic background of all teachers in Illinois, the Illinois Education Research Council learned that the following measures—indicators of “academic capital”—were linked to a teacher’s ability to produce academic gains among students: the selectivity of a teacher’s undergraduate institution; a teacher’s SAT or ACT scores; and a teacher’s pass rate on state licensure exams.<sup>5</sup> This study confirms previous research demonstrating these important correlations. It may come as no surprise to some that those teachers who were themselves good students tend to be good teachers.

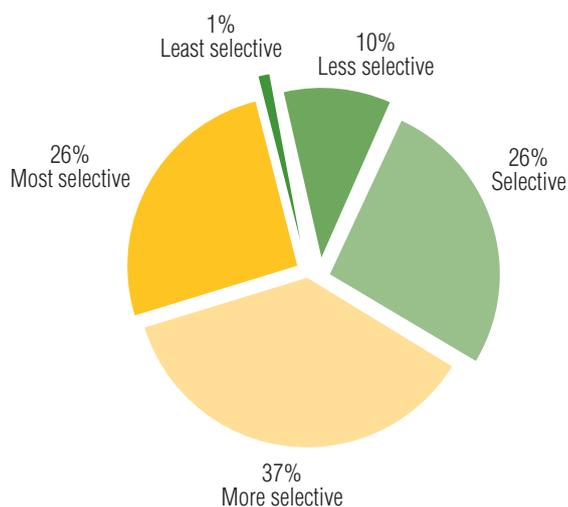
NCTQ reviewed the undergraduate institutions of the teachers hired by Boston Public Schools for the 2009–2010 school year as one measure of a teacher’s academic capital.<sup>6</sup> Nearly two out of three new teachers hired for the 2009–2010 school year graduated from “more selective” or “most selective” institutions, based on admissions data compiled by *U.S. News & World Report* for its annual ranking of colleges and universities. One third of the district’s approximately 190 new hires last year graduated from the following well-regarded schools: Boston College, Boston University, Northeastern University, Simmons College and University of Massachusetts–Amherst.

<sup>4</sup> Teachers meet HQT requirements mostly by being certified in the subject or subjects they teach. Some middle and high school teachers are also required to have a college major or its equivalent in the subjects they teach..

<sup>5</sup> White, B.R., Presley, J.B., & DeAngelis, K.J. (2008). *Leveling up: Narrowing the teacher academic capital gap in Illinois* (IERC 2008-1). Edwardsville, IL: Illinois Education Research Council.

<sup>6</sup> While test scores on teachers’ SAT/ACT or state licensing exams would round out the measurement, NCTQ was not able to obtain these data.

**Figure 6. What percentage of teachers hired for the current school year graduated from top colleges and universities?**



Source: Boston Public Schools, 2009.

Boston does a good job of maximizing the pool of teaching candidates offered by the city's and region's top colleges and universities: 63 percent of new hires graduate from an institution rated "more selective" or "most selective" by *U.S. News & World Report*.

## Attracting a diverse workforce

**Despite its best efforts, attracting minority teachers continues to be a challenge for Boston.**

Having a teacher of a student's own race appears to benefit student academic achievement, especially for black students.<sup>7</sup> While the United States has witnessed a rapid increase in the number of non-White students enrolled in its public schools over the past 20 years, the number of minority teachers has declined.<sup>8</sup>

Boston in particular has had to pay attention to the racial balance of its workforce because of a 1976 court order requiring the district to increase the percentage of black teachers to 25 percent and the percentage of other minority teachers to 10 percent.<sup>9</sup> According to data published on the district's website, BPS currently meets the court order. However, even with this progress, the racial make-up of the teaching corps is still not proportional to the student body.

7 Dee, T. (2004, Spring). The race connection. *Education Next*, (4)2, 53-59. Goldhaber, D., & Hansen, M. (2009, December). Race, gender, and teacher testing: How informative a tool is teacher licensure testing? *American Education Research Journal*, (XX)X, 1-34.

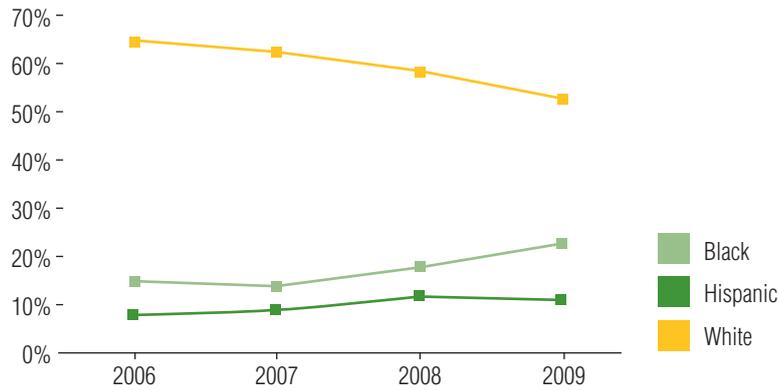
8 Walsh, K., & Tracy, C.O. (2004). *Increasing the odds: How good policies can yield better teachers*. Washington, D.C.: National Council on Teacher Quality.

9 14 Fair Empl.Prac.Cas. 312, 11 Empl. Prac. Dec. P 10,636

Tallulah MORGAN et al., Plaintiffs-Appellees, v. John J. KERRIGAN et al., Defendants-Appellees, and John P. Doherty et al., Intervenor-Appellants.



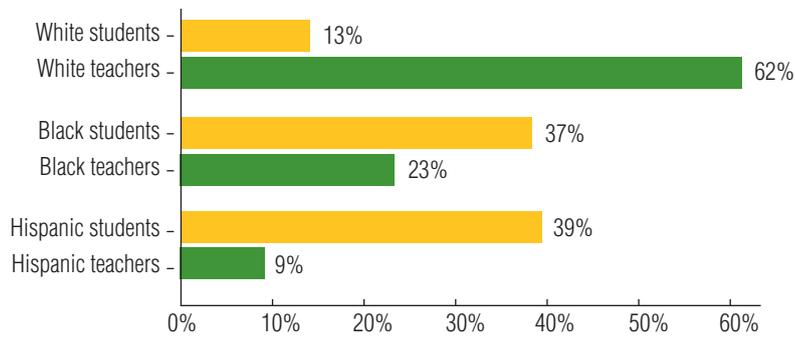
**Figure 7. Is Boston hiring more minority teachers?**



Source: Boston Public Schools, 2006–2009.

The percentage of minority teachers hired by Boston Public Schools has steadily increased over the past four years: 34 percent of teachers hired for the current school year were people of color.

**Figure 8. How closely does Boston’s current teaching force reflect its student population?**



Source: Boston Public Schools, 2009–2010.

The percentage of black and Hispanic teachers is not yet proportional to the percentage of black and Hispanic students.

The Boston Teacher Residency (BTR) program serves to attract high-quality and diverse talent to teach in the Boston Public Schools. Since 2004, the program has prepared more than 200 teachers to work in the city’s public schools. The program is a partnership between the Boston Plan for Excellence and the public schools. Participants work alongside experienced mentors for one year and earn an initial state license. The program graduated its first group of teachers in 2004, and 87 percent of those graduates remain in Boston schools.

Data provided by BPS suggest that the BTR also helps the district to recruit teachers of color. The most recent group of BTR graduates consists of teachers who are 31 percent black, 13 percent Hispanic and 50 percent white.

## Teacher retention and distribution of experience

**Boston schools report comparable proportions of inexperienced and experienced teachers on their staffs, regardless of school poverty rates.**

**Approximately half of Boston's teachers changed schools within the district over the past three years.**

To Boston's credit, inexperienced teachers are not concentrated in a few schools. A large body of research shows that, not surprisingly, teachers in their first year are considerably less effective than teachers with more experience, and that second-year teachers, while improving markedly from their first year, are still not as effective as they will be.<sup>10</sup> Ensuring that inexperienced teachers are not clustered in high-poverty or low-performing schools is one way to combat turnover and the negative effects of inexperience.

Although Boston distributes its new teachers equitably among schools, turnover rates are surprisingly high. Approximately 50 percent of teachers transferred out of a school or left the district between 2006 and 2009. While it is good that schools with the highest poverty do not experience teacher turnover disproportionately, the rate is problematic from a systemic perspective, even if it is partly the result of significant restructuring led by the central office

**Figure 9. Are poorer schools more likely to have less experienced teachers and higher turnover?**

School poverty quartile (percent)	Percent of inexperienced teachers	Average three-year turnover rate (2006-2009)
0-25th	n/a	n/a
26th-50th	15	52
51st-75th	15	52
76th-100th	15	55
<b>District average</b>	<b>15%</b>	<b>53%</b>

Source: Boston Public Schools, 2006–2009.

NCTQ calculated the percentage of staff with less than two years of experience at each elementary school. Although all schools in Boston have significant numbers of low-income students, there is little difference in the number of inexperienced teachers at these schools.

## Recommendations for Boston Public Schools

- 1. Improve systems to collect and monitor school-level data on teacher years of experience, retention and academic capital and make the data available to the public.** Although Boston laudably collects data on teacher characteristics, it should put systems in place to annually monitor the proportion of new teachers on each school's staff and the three-year retention rates of all schools.
- 2. Incentivize effective and experienced teachers to work at high-poverty, high-needs schools.** The district should increase the number of financial and professional incentives available for highly effective teachers to work at high-needs schools. Strategies include placing clusters of effective teachers, such as alumni of the Boston Teacher Residency, in low-performing schools.

<sup>10</sup> Hanushek, E., Kain, J., & Rivkin, S. (1998). *Teachers, schools, and academic achievement*. Cambridge, MA: National Bureau of Economic Research.

## Developing an Effective Teaching Corps

### **Goal 4. The district provides all new teachers with an induction program. Particular consideration is given to teachers in schools serving low-income students.**

#### **INDICATORS**

- i.** New teachers receive regular and consistent support from mentors. The district has a minimum time requirement for mentors and mentees to meet, and this time is well documented.
- ii.** Mentors are selected on the basis of their own effectiveness, subject-matter and school expertise and interpersonal skills.
- iii.** Mentors receive specialized training and feedback from mentees on their own performance.
- iv.** Mentors are compensated for their time.

#### **New teacher induction**

**Over 70 percent of Boston's new teachers attribute at least part of their success to their mentor.<sup>11</sup>**

**Boston assigns a mentor to all new teachers, although some are not assigned a mentor until after the first few weeks of school.**

As most new teachers find themselves overwhelmed and under-supported at the outset of their teaching careers, a strong induction program is critical. Over the past decade, Boston has paid increasing attention to supporting and retaining new teachers. The district faced high turnover among new teachers: approximately 30 percent of the district's first-year teachers in 2003 did not return for a second year.

The school system first partnered with the Boston Plan for Excellence in 2003 to improve induction and later in 2006 with the New Teacher Center to implement a mentoring program for all first-year teachers. Although the program has been in place only since 2006, retention rates of first-year teachers have improved. For example, more than 85 percent of first-year teachers in 2006 returned for a second year.<sup>12</sup>

According to data provided by Boston Public Schools, 100 percent of all first-year teachers were assigned a mentor in 2008-2009 and 98 percent of first-year teachers have been assigned a mentor in the current school year. Full-time mentors are assigned to teachers a month before school starts, but school-based mentors are often not assigned to new teachers until a few weeks into the school year.

<sup>11</sup> Boston Plan for Excellence 2008-2009 survey.

<sup>12</sup> Towery, I.D., Salim, K., & Hom, V. (2009, June). *Hiring (and keeping) urban teachers: A coordinated approach to new teacher support*. Boston, MA: Boston Plan for Excellence and the Boston Public Schools.

In addition to support provided through the mentoring program, new teachers attend a summer orientation and have the option of attending courses after school. Less than 30 percent of new teachers surveyed by the BPE took advantage of these courses. Of the teachers who did attend, however, approximately 80 percent said the courses advanced their skills.

### Mentor selection

**The selection process for full-time mentors is quite competitive; only 10 percent of applicants are hired.**

The selection process for full-time mentors working in the New Teacher Development program is quite competitive. A team of BPS administrators and BTU members selects the full time mentors through an interview process. Applicants must also submit recommendations. In its first year, over 100 teachers applied to be a mentor and less than 10 percent were accepted.<sup>13</sup> Part-time, site-based mentors are hired and evaluated by their school administrator. Once selected, mentors must participate in training provided by the New Teacher Center at the University of California-Santa Cruz.<sup>14</sup>

Part-time mentors are full-time teachers who assume this additional responsibility. Forty-three school-based mentors served 47 new teachers. Full-time mentors each work with up to 14 new teachers, generally clustered in nearby schools to increase the opportunities for contact. Fourteen full-time mentors served the remaining 183 new teachers.

Boston mentors are among the highest paid of the 100 districts in NCTQ's TR<sup>3</sup> database. Full-time mentors receive their regular teacher pay, plus a five percent supplement. Part-time receive a five percent salary adjustment for each assigned teacher, working with no more than two teachers at a time.

### Recommendations for Boston Public Schools

- 1. Hire school-based mentors before school starts to give new teachers support from the start.** The early weeks of school are crucial for a teacher to establish classroom procedures, assess students' abilities, set goals and juggle both daily and long-term planning.
- 2. Provide reduced but ongoing supports for teachers in their second year.**
  - a. Seminars with peer teachers who teach the same grade or subject.** Such sessions should be held frequently and led by an experienced teacher, giving teachers the opportunity to share resources, strategies, etc.
  - b. Release time to observe accomplished teachers.** Make sure opportunities to observe accomplished teachers are plentiful in *every* school.
  - c. Build a video library of high-performing Boston teachers.** As other school districts and Teach For America have done, the district may want to film its own high-performing teachers. Those videos could augment the video library already linked to the district's website.
- 3. Place new teachers in classrooms that are near the classrooms of teachers who are known to be highly effective.** This is perhaps the best and most affordable induction model. Newer teachers are highly sensitive to teacher quality, and the more effective a teacher's peers, the more likely a teacher will produce higher student learning gains.<sup>15</sup>

<sup>13</sup> All 10 of the mentors have at least nine years of experience and half have at least 20 years of experience.

<sup>14</sup> Towery, I.D., Salim, K., & Hom, V. (2009, June). *Hiring (and keeping) urban teachers: A coordinated approach to new teacher support*. Boston, MA: Boston Plan for Excellence and the Boston Public Schools, p. 6.

<sup>15</sup> Jackson, C., & Bruegmann, E. (2009, July). *Teaching students and teaching each other: The importance of peer learning for teachers*. Cambridge, MA: National Bureau of Economic Research.



**Goal 5. The evaluation of teacher performance plays a critical role in advancing teachers' capacity to be effective and serves the teacher quality needs of the district.**

**INDICATORS**

- i. The instrument for formal evaluation considers objective evidence of student learning, including not only standardized test scores when available, but also classroom-based artifacts such as student work, quizzes, tests, and progress in the curriculum and other measurements of student learning.
- ii. The district connects student data to teacher performance.
- iii. All teachers are observed annually. While in the case of seasoned veterans, formal evaluations need not occur every year, all teachers should be regularly observed (without prior notice) throughout the school year.
- iv. Formal evaluations include classroom observations that focus on and document instructional effectiveness. Teachers' observed behaviors are assigned degrees of proficiency based on standards and defined by scoring guidelines.
- v. Teachers are evaluated formally by multiple trained observers. Observers may include the principal, outside observers, department heads or experienced teachers.
- vi. The district conducts random observations by observers external to the school to validate the reliability of principal ratings.

**Frequency of observations and evaluations**

**Boston principals do not appear to be evaluating teachers as required by state law. One in four schools has not turned in a single evaluation for any teacher in the past two years.**

Regular feedback of teacher performance is critical for teacher growth and is important for both novice and veteran teachers alike. Performance evaluations are generally the means for providing this feedback. Massachusetts law requires that nontenured teachers are observed and evaluated annually until they receive tenure, normally occurring after three years on the job. Tenured teachers are required to be observed formally and evaluated at least once every other year. Additionally Boston requires that tenured teachers with less than three years of experience in the district (but teaching experience elsewhere in Massachusetts) be evaluated annually, as are all staff new to a building (e.g., teachers transferring from one school to another within BPS).

Despite these state and local requirements, in practice, all Boston teachers are not evaluated regularly.

**Figure 11. How many teachers have been evaluated in the past two years?**

<b>Year</b>	<b>Nontenured teachers</b>	<b>Tenured teachers</b>
2008	24%	30%
2009	17%	23%
<b>Total</b>	<b>41%</b>	<b>53%</b>

Source: Boston Public Schools, 2008, 2009.

We looked at data to see which schools had turned in evaluations from the previous two school years and found that **38 out of 144 schools had not turned in a single evaluation for any teacher.**

Even among the schools that had submitted some evaluations, the data were incomplete, meaning that the principal had only evaluated some of the staff over a two-year period, even though all teachers must be evaluated in that time.

“I have never received an evaluation ever, not even the mandated one in my first year. Maybe the paperwork was submitted, but I never saw it.”

-Boston elementary teacher

Why are so few teachers being evaluated? We speculate that principals see neither a carrot nor a stick: 1) the district has no protocol in place to hold principals accountable for turning in teacher evaluations; 2) principals submit evaluation results on paper rather than electronically (although the district states that it is currently transitioning to an online system); and 3) principals themselves have little incentive to evaluate high-performing teachers. Principals told NCTQ that they prefer to focus their energy on evaluating the lowest-performing teachers. Without a way to distinguish or reward high-performing instructors, this practice is likely to continue.

### Central office evaluators

**Boston principals receive more central office support on evaluations than they have in the past, but still only a third of schools have received the help of a central office evaluator.**

Evaluations that reflect the sum of multiple observers' reflections and observations reduce concerns over the arbitrary nature of evaluations. Although Boston's teachers' contract prohibits observations from being performed by other teachers, the district employs one full-time and one-part time central office evaluator to help evaluate the lowest-performing teachers. These evaluators are charged with providing second-opinion evaluations and guiding principals through terminating a teacher. As a means to have a greater impact, the full-time evaluator (a former teacher and principal who holds the title Director of Performance Management) is increasingly training principals in how to properly conduct evaluations, rather than evaluating teachers herself. However, the need for this service exceeds the district's current capacity. Only 30 percent of schools have received this assistance.

### Content of evaluations

**The evaluation instrument does not take into account the teacher's impact on student learning.**

The most important measure of a teacher's effectiveness is the ability to produce learning gains. Although the teachers' contract suggests student achievement is a key component of teacher evaluations, the actual evaluation instrument contains no standard objective measure of student performance. Teachers can earn a satisfactory rating without any evidence that they are sufficiently advancing student learning in the classroom. Boston's evaluation instrument looks at eight areas of teachers' work, all weighted equally:

1. Equity and high expectations
2. Professionalism
3. Safe, respectful, culturally sensitive and responsive learning communities
4. Partnership with family and community
5. Instructional planning and implementation
6. Content knowledge
7. Monitoring and assessment of progress
8. Reflection, collaboration and personal growth

Boston's teacher contract requires administrators to work with a teacher whose student progress is “consistently low,” but since the evaluation instrument does not address any student achievement measures, the process for identifying such teachers is unclear. Presumably, principals are allowed to use other documented evidence of a teacher's performance.



Incorporating student achievement data from standardized tests into teacher evaluations may not be as difficult to consider in Boston as in other locations. To begin, Boston already has the capacity to link student test scores to teacher evaluations: each year all teachers in the tested subjects are given student achievement data indicating how their students compare on standardized tests with similar students in similar classrooms throughout the district. When possible, individual student growth and growth relative to other students is provided. In non-tested subjects there has been no comparable effort to introduce student learning gains.

### Evaluation ratings

**Boston’s evaluation ratings do not distinguish high-performing teachers.**

Boston’s evaluation also makes it difficult to call out weaker teachers and reward exemplary teachers. Boston uses a binary system to rate teachers—teachers either pass or fail the evaluation, with no further distinction for outstanding teachers. Teachers are rated either “Meets or Exceeds Standards” or “Does Not Meet Standards” in each of the areas examined and overall. (The vast majority of teachers are rated as Meets or Exceeds Standards—for more on this, see Goal 7.)

The evaluation instrument does not give principals the option of identifying levels of performance beyond the two categories in any of the areas examined. Principals must describe any deficiencies in a narrative and provide extensive documentation of performance deficiencies to make the case for a “Does Not Meet Standards” rating.

Many districts have moved to allowing evaluators to choose among *several* levels of teacher performance. So, for instance, a teacher who was weak in engaging students in learning might earn “below expectations” on that criterion because only some of the time did her classroom match the goals set forth in the evaluation. Such a system spells out what effective teaching looks like and how close a teacher comes to reaching the specified goals.

### Sample rubric from Texas’ Professional Development and Appraisal System

**Domain I: Active, successful student participation in the learning process**

<b>Exceeds expectations</b>	<b>Proficient</b>	<b>Below expectations</b>	<b>Unsatisfactory</b>
Almost all of the time	Most of the time	Some of the time	Less than half of the time
1. Students are actively engaged in learning.			
2. Students are successful in learning.			
3. Student behaviors indicate learning is at a high cognitive level (e.g., critical thinking, creative thinking, problem solving, etc.)	3. Student behaviors indicate learning is at a high cognitive level (e.g., critical thinking, creative thinking, problem solving, etc.)	3. Student behaviors indicate learning is at a high cognitive level (e.g., critical thinking, creative thinking, problem solving, etc.)	3. Student behaviors indicate learning is at a high cognitive level (e.g., critical thinking, creative thinking, problem solving, etc.)



4. Students are self-directed/self-initiated as appropriate to the lesson objective.	4. Students are self-directed/self-initiated as appropriate to the lesson objective.	4. Students are self-directed/self-initiated as appropriate to the lesson objective.	4. Students are self-directed/self-initiated as appropriate to the lesson objective.
5. Students are connecting learning to work and life applications, both within the discipline and with other disciplines.	5. Students are connecting learning to work and life applications, both within the discipline and with other disciplines.	5. Students are connecting learning to work and life applications, both within the discipline and with other disciplines.	5. Students are connecting learning to work and life applications, both within the discipline and with other disciplines.

### Recommendations for Boston Public Schools

- 1. Recognize the value of a strong evaluation system for all teachers, not just weak teachers.** Holding teachers accountable for their performance is only one function of evaluations. Evaluations are an important tool for giving teachers feedback. They can help good teachers become better teachers and can serve as a means to recognize excellence.
- 2. Implement an automated system whereby principals can submit teacher evaluation ratings and which is capable of generating the reports needed to hold principals accountable for conducting evaluations.** Many principals are not evaluating their teachers as required. The district should know which teachers have not been evaluated in each two-year period. Principals' supervisors must be held accountable for ensuring that their principals are evaluating teachers.
- 3. Allow senior leaders in schools to evaluate their peers and expand the team of central office observers to validate evaluation ratings.** The Performance Management team should be staffed up to not only validate evaluation ratings, but to ensure that principals are evaluating all teachers. Evaluations that incorporate the views of multiple trained observers (particularly experts in subject areas) allow the district to gauge the robustness of individual principals' ratings. When a principal's observations nearly match those of an evaluator from outside the school, teachers can be more confident that the principal is unbiased and skilled at evaluation. If they do not match, the school district can double up training efforts. Such additional observations and evaluations can be done randomly to the degree the district can afford. Even if only one teacher in the building is checked by a third-party evaluator, principals will take this task more seriously. *Boston can look to New York City for an example of the use of peer evaluators from outside the school.*
- 4. Make student learning the preponderant criterion for the evaluation rating.** The evaluation instrument should be structured so as to preclude a teacher found ineffective in the classroom from receiving a satisfactory rating. An instrument that puts "professionalism" and "reflection, collaboration and personal growth" on par with lesson planning and execution does not hold teachers adequately accountable for their most important function: student learning. Evaluations should use the value-added data provided to Boston teachers, in addition to other measures of student growth, to assess teacher effectiveness.

While factoring student performance can be more challenging in non-tested subjects, it is possible. The district can launch this process by assembling working groups of effective teachers for particular grades and subjects to develop appropriate learning benchmarks under a common curriculum.

**Some possible sources of objective student data:**

- Standardized test scores.
- Periodic diagnostic assessments.
- Benchmark assessments that show student growth.
- Artifacts of student work connected to specific learning standards that are randomly selected for review by the principal or senior faculty, scored using rubrics and descriptors.



- Examples of typical assignments, assessed for their quality and rigor.
- Periodic checks on progress with the curriculum coupled with evidence of student mastery of the curriculum from quizzes, tests and exams.

**5. Use multiple evaluation ratings to distinguish performance levels so the best teachers can be recognized.**

Boston's binary evaluation in effect places the emphasis on the lowest-performing teachers rather than developing teacher effectiveness.

**6. Collect and examine student feedback on teacher effectiveness.** The Boston Student Advisory Committee recently tried to introduce an organized system of “friendly feedback” at the high school level. While we are not recommending that evaluations from students be part of teachers’ formal evaluations, students’ feedback should be provided to teachers and to the teachers’ principals or department chairs. Students have the most to gain (and lose). Their observations can help teachers improve.

**A questionnaire for student feedback might look like the following:**

Directions: How much do you agree or disagree with the following statements?  
Circle one of the following answers.

1. When I work hard in this class, an important reason is the teacher demands it.	Strongly agree	Agree	Disagree	Strongly disagree
2. I don't like asking the teacher in this class for help, even if I need it.	Strongly agree	Agree	Disagree	Strongly disagree
3. The teacher in this class calls on me, even if I don't raise my hand.	Strongly agree	Agree	Disagree	Strongly disagree
4. I have pushed myself hard to completely understand my lessons in this class.	Strongly agree	Agree	Disagree	Strongly disagree
5. If I were confused in this class, I would handle it by myself, not ask for help.	Strongly agree	Agree	Disagree	Strongly disagree
6. One of my goals in this class is to keep others from thinking I'm not smart.	Strongly agree	Agree	Disagree	Strongly disagree

Source: The Bill & Melinda Gates Foundation.

**7. Require principals to annually identify their lowest-performing teachers.** Principals should report annually those teachers they consider to be in the bottom 15 percent, without consequences. As the district gains confidence in the fairness and accuracy of its evaluations, and principals grow accustomed to the expectation that they should not rate all teachers in the building as equally competent, the district can ultimately adopt strategies to reward the best and support (and if necessary dismiss) the weakest.



## Goal 6. The district requires that tenure decisions be meaningful.

### INDICATORS

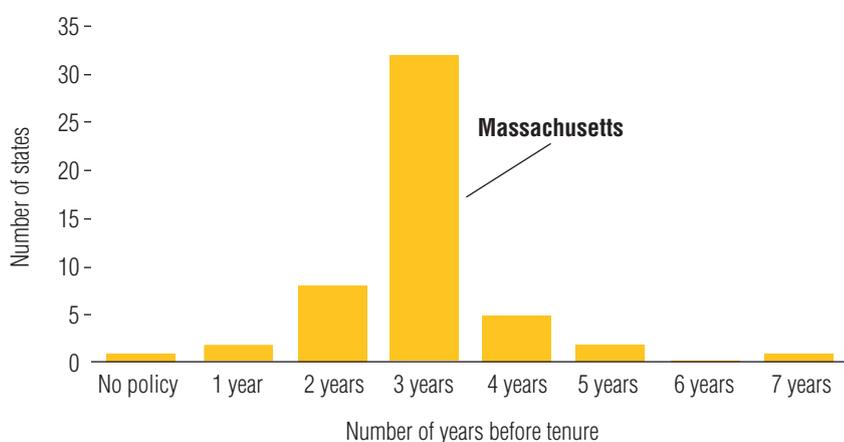
- i. Evidence of effectiveness is the preponderant criterion in tenure decisions.
- ii. Teachers are eligible for tenure after a minimum of four years when sufficient data become available to make a meaningful decision.
- iii. There is a formal process, such as a hearing before a tenure review panel, to make the final decision of whether to award a teacher tenure.
- iv. Teachers receive a significant pay increase after earning tenure, perhaps the largest of their careers.

### Making tenure meaningful

**Massachusetts teachers earn tenure after three years—not enough time to determine if they are effective in the classroom.**

Unlike the more protracted and considerably more rigorous process observed in higher education for granting tenure, states grant tenure (or permanent status) to public school teachers usually after only two or three years in the classroom, with little consideration of the teacher’s actual performance. Massachusetts is no exception. As mandated by state statute, teachers earn tenure after just three years in the classroom.

**Figure 12. How long is it before a teacher earns tenure?**



Source: 2009 NCTQ State Teacher Policy Yearbook.

As is true in most U.S. school districts, Boston teachers with an overall record of satisfactory evaluations receive tenure virtually automatically. The automaticity of this decision is the subject of much debate nationally, figuring prominently in federal Race to the Top grant discussions, for example. Tenure is not a decision to treat lightly. Once tenure is earned, a teacher has due process rights that effectively confer lifetime job protection, provided the teacher commits no crime or moral infraction. On the part of the district and state, tenure is a potentially \$2 million investment in individual lifetime earnings, benefits and pension.

Although the point at which tenure is granted is set by states, school districts can nonetheless play a more active role in the decision of whether to award tenure to a teacher. Boston principals have the authority not to renew a provisional teacher’s contract, thus denying tenure. Approximately 130 nontenured teachers were released in each of the past three years.



Early research examining the value-added performance of teachers suggests that by dismissing at least the bottom-performing 25 percent of teachers eligible for tenure would have a significant impact on the quality of the teaching corps as a whole.<sup>16</sup> Boston manages to dismiss approximately 10 percent of nontenured teachers each year. This figure includes teachers in the first three years of their career and not just those eligible for tenure.

## Recommendations for Boston Public Schools

- 1. Convene a tenure review to decide whether to award tenure to teachers.** Tenure should be a significant milestone in a teacher's career and only be awarded after deliberate and thoughtful consideration of a teacher's performance. Boston should develop a process, such as a formal review, where the cumulative evidence of teacher effectiveness would be considered for each teacher and the determination made of whether to award tenure. The principal should not serve on the panel but make the case for or against tenure. Such a process also protects the teacher's rights, ensuring that the teacher is fully aware of the process and has an opportunity to participate. *Boston can look to Minneapolis as a model for how to implement a meaningful tenure review process.*
- 2. Develop a tenure "tool kit" to assist principals in making informed and deliberate tenure decisions.** Principals need guidance to make sure that they understand the importance of a teacher's probationary period. The tool kit should offer resources for how teachers can improve, and provide an organized place to track a teacher's progress, ensuring that principals meet deadlines for denying and granting tenure. *Boston can look to New York City, which has implemented an online "tenure tool kit" to help support principals making tenure decisions. The number of teachers denied tenure or placed on an extended probationary period doubled from 25 in 2005-2006 to 66 when the tenure tool kit was introduced the next year. In 2007-2008, 164 teachers were denied tenure and 246 had their probationary period extended.*

## Recommendation for Massachusetts

- 1. Increase the probationary period for new teachers to four years.** Tenure in Massachusetts comes at too early a point in a teacher's career for sufficient and adequate evidence of a teacher's effectiveness to have been collected. Ideally, districts would accumulate four to five years' worth of data. A robust data set would prevent effective teachers from being unfairly denied tenure based on too little data, while also preventing the district from granting tenure to ineffective teachers. Delaying tenure until a teacher has completed four or five years would also permit a more meaningful hearing process to be administered.

<sup>16</sup> Goldhaber, D. & Hansen, M. (2009, December). *Assessing the potential of using value-added estimates of teacher job performance for making tenure decisions*. Seattle, WA: Center on Reinventing Public Education.



## **Goal 7. Teachers who demonstrate instructional deficiencies receive assistance; teachers who do not improve should be dismissed.**

### **INDICATORS**

- i.** A teacher is placed on an improvement plan after one negative evaluation and should be eligible for dismissal after two negative evaluations.
- ii.** There is a clear mechanism to assist struggling tenured teachers.
- iii.** Observations occur early enough in the year to provide sufficient time for poor-performing teachers to improve and for administrators to make a decision about a teacher's continued employment by the end of the same school year. Remediation plans are never carried over into the next school year.
- iv.** Teachers are allowed to appeal a decision for dismissal only once, and such an appeal should not be made in a court of law, but before a panel of educators.
- v.** Teachers are not allowed to file a labor grievance over a personnel action.

### **Holding teachers accountable for their performance**

**Boston's principals are not holding teachers accountable for their performance; less than one percent of teachers were found unsatisfactory last year.**

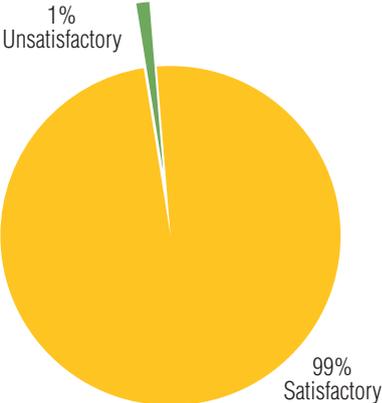
There is little correlation between teacher performance, as assessed on performance evaluations, and teacher performance as measured by student progress. In short, evaluation ratings for Boston teachers appear to be inflated. In the 2008-2009 school year, only 41 teachers out of 4,873 teachers received a final rating of unsatisfactory, not even one percent of the teaching force.<sup>17</sup>

Such "grade inflation" is not unique to Boston. NCTQ found similar results in both Hartford and Seattle where 0.5 percent and 0.8 percent of teachers, respectively, were found underperforming. The New Teacher Project's recent report, *The Widget Effect*, found much the same absence of negative ratings. Less than one percent of all teachers examined across 12 school districts had received an unsatisfactory evaluation, even in schools where students were chronically underperforming.

<sup>17</sup> Seventy teachers received an interim unsatisfactory evaluation rating, but 29 improved enough over the course of the year to receive a final rating of "meets standards" at the end of the year.



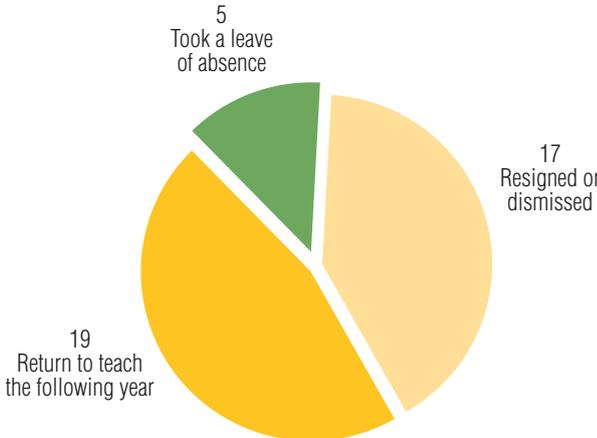
**Figure 13. How many teachers were rated unsatisfactory in the 2008-2009 school year?**



Source: Boston Public Schools, 2009.

Less than one percent (0.85 percent to be exact) of teachers were rated unsatisfactory in the 2008-2009 school year. This figure includes both tenured and nontenured teachers, though some poor-performing nontenured teachers are simply dismissed rather than evaluated.

**Figure 14. What happened to the teachers who received an overall unsatisfactory evaluation rating for the 2008-2009 school year?**



Source: Boston Public Schools, 2009.

Of the 41 teachers who received an end-of-year unsatisfactory evaluation in the 2008-2009 school year, 17 (41 percent) were dismissed or resigned, 19 (46 percent) returned this school year to teach and five (12 percent) took a leave of absence, perhaps to return. Nearly half of the teachers who were rated as underperforming returned to teach the following school year.



## Support for struggling teachers

**Boston’s remediation procedure for low-performing teachers gives teachers too much time to improve and is prone to procedural errors that risk voiding the process.**

In an evaluation year—every year for nontenured teachers, every other year for tenured teachers—teachers are required to be observed and evaluated at least once. Only when the tenured teacher is not meeting expectations (as judged, we conjecture, by informal evaluations on the part of the principal) are additional observations and evaluations scheduled. A principal can simply not renew a nontenured teacher’s contract if she is not performing.

In Boston, a principal can place a teacher on remediation for failing to meet expectations in any one of the eight areas assessed on the evaluation. This is a strength of Boston’s evaluation instrument. Other districts often require failing ratings in multiple areas of the evaluation, no matter how severe or important to student learning any one of them might be.

**Timeline of the improvement plan.** As Figure 15 below shows, the evaluation and remediation process entails multiple steps which must be completed within a prescribed period of time. Importantly, the time allowed to complete each step is computed in school days, not calendar days. In other words, 30 days does not mean a month, it means 30 schools days, about a month and a half.

Any missed deadline or procedural misstep can derail the entire process. If a teacher is absent, the improvement plan must be extended, as teachers must be *present* for the entire time before the plan can move onto the next step. Teachers seem to be well aware of this provision as teachers with at least one unsatisfactory evaluation had twice the average absences of teachers as the district average in the 2008–2009 school year.

Average sick leave usage for all Boston teachers: **6.3 days**  
 Average sick leave usage for teachers in remediation: **13.1 days<sup>18</sup>**

**Figure 15. How does an improvement plan work for tenured teachers?**

Step	Requirements
1. Teachers are evaluated	No date is given for when the evaluation must occur for the tenured teacher; nontenured teachers must be evaluated by November 15.
2. Principal must schedule conference with teacher.	Conference scheduled within 10 school days of evaluation.
3. If the teacher is given an unsatisfactory evaluation, principal must place the teacher on an improvement plan.	Improvement plan lasts 30–60 days.
4. The teacher is evaluated again.	Evaluation occurs no earlier than 30 school days and no later than 60 school days after first evaluation.

<sup>18</sup> Data available for 56 teachers. Attendance records missing for 16 teachers with a DNMS evaluation rating.



### **If the teacher still has not improved, the process begins again**

5. The principal must conference with teacher.	Conference scheduled within 10 school days of evaluation.
6. Teacher is given another opportunity to improve.	Improvement plan lasts 20 to 50 days.
7. End-of-year evaluation.	Evaluation occurs no earlier than 20 days and no later than 50 school days after second evaluation; final evaluation completed by May 15. Final evaluation must be at least 50 days prior to the last day of school, otherwise the evaluation cycle continues into the following school year.

As this timeline shows, dismissing a tenured teacher within a single school year is difficult. A teacher with an unsatisfactory evaluation must receive the final evaluation before May 15, otherwise the evaluation cycle continues into the following school year. The result is that not one, but two classes of students are likely to be assigned to a teacher with a substantial record of weak performance.

#### **Peer Assistance**

In addition to the required improvement plan, struggling tenured teachers may elect to participate in the BTU-BPS Peer Assistance Program. The district employs four Peer Assistants, hired jointly by the district and the union, who each work individually with up to 12 participating teachers.

It is important to note that Boston's program is not a peer assistance *and review* program, though it was modeled after a longstanding Toledo, Ohio, effort that offers both services. In Boston, peers can only assist struggling teachers; they cannot evaluate them.<sup>19</sup> Both the Boston and Ohio programs were negotiated between the teachers unions, which are affiliates of the American Federation of Teachers (AFT), and their respective school districts.

Even though Boston's peer assistance program does not have an evaluation component, it nonetheless serves as a way to coach teachers out of the classroom. About a third of the 47 teachers who participated in the Peer Assistance Program in the 2008–2009 school year left BPS at the end of the year. Another third improved and the remaining third continued in the program this school year.<sup>20</sup> Based on the Toledo data, there is little evidence that adding a review component would work to dismiss more ineffective teachers from the classroom.

<sup>19</sup> The collective bargaining agreement does not permit members of the same bargaining unit and job classification to evaluate each other. 2006-2010 CBA, Art. V, F. 2.

<sup>20</sup> Sixteen teachers remain in the program this year, 16 improved and no longer participate and 15 left the district (resigned, retired or were terminated).



## Dismissal timeline

### Excessive appeals unnecessarily extend the process to dismiss tenured teachers in Boston.

According to the teacher contract, a teacher may be removed from the classroom at any time during the school year, even prior to the end of the required improvement period, provided the teacher's presence is proven to be detrimental to students. Criminal behavior or gross misconduct has generally been the only cause considered grave enough to result in such a removal.

In order to remove an underperforming teacher from the classroom, a teacher must have received two unsatisfactory interim evaluations and one end-of-year overall unsatisfactory evaluation, or four interim unsatisfactory ratings over the span of 12 months. Tenured teachers are then granted due process rights to appeal their termination, which can extend the dismissal process for months longer.

Only 21 teachers in the past five years have received a notice of dismissal. Seventeen teachers appealed their dismissals to arbitration. Only three teachers successfully challenged their termination and were reinstated. Six cases are pending. One teacher is waiting for a meeting with a principal. The remaining 11 cases were either settled, dismissed or Boston Public Schools prevailed at arbitration.

**District level:** Principals can only *recommend* dismissal. The superintendent makes the formal decision, based on the evidence presented by the principal in the form of evaluations and classroom observation records. After the superintendent signs off, the principal must then submit a letter to the teacher with notification of the *intent* to dismiss. The teacher, already having gone through no fewer than two improvement plans, is given 10 school days in which to request a meeting with the principal to discuss the principal's intention. Only after that meeting is the teacher dismissed.

**State education commissioner:** Tenured teachers have 30 calendar days to ask the Commissioner of Education to consider an appeal for arbitration. The district and union must mutually agree upon one of a list of three arbitrators from the American Arbitration Association, and a decision is rendered within 30 days of the conclusion of the arbitral hearing. If the finding is in the teacher's favor, the teacher is guaranteed back pay, benefits and reinstatement.

**Courts:** A teacher may appeal a negative decision by the arbitrator twice, once to a trial court (in Massachusetts, the Superior Court) and then to the state's highest court (the Supreme Judicial Court).



## Recommendations for Boston Public Schools

**1. Streamline the evaluation and remediation schedule.** The current system is unnecessarily long and complicated, risking the process being derailed on the basis of procedural error and not merit. A simpler evaluation and remediation schedule would require that administrators evaluate all teachers by the end of the first semester. Any teacher not meeting expectations would have 90 days to improve and be eligible for support from Peer Assistants. At the end of the 90-day period, the principal would decide whether or not to dismiss that teacher. *Boston can look to Washington, D.C., for a model timeline.*

### Model timeline for remediation

1. Teachers evaluated by January 15. Conference follows by January 30.
  2. Teachers who are not meeting expectations are placed on a 90-day improvement plan and receive assistance from peer coaches. Timeline is not extended if teacher is absent, unless extenuating circumstances exist.
  3. After 90 days (roughly April 15), principal reevaluates teacher and, if warranted, makes recommendation for dismissal. Superintendent approves the final decision.
- 2. The remediation period should specify calendar days—not school days or days during which the teacher is present.**
- 3. Allow teachers only one opportunity to appeal the district’s dismissal decision and prohibit evaluation ratings from being subject to a grievance.** Allowing teachers to file a labor grievance over an evaluation rating can have a chilling effect on a principal’s honest appraisal because of the drawn-out process that is set in play. *Boston can look to Chicago whose contract prohibits an evaluation rating from being subject to a grievance.*
- 4. Scale up the Peer Assistance Program to play a greater role supporting teachers with an unsatisfactory rating.** Teachers with content area expertise, particularly on the secondary level, can offer principals valuable assistance in the remediation process.

## Recommendation for Massachusetts

**1. The final decision to dismiss a teacher should be made by a panel of educators, not an arbitrator or a court.** The decision to terminate or retain a teacher belongs in the hands of educators.

## Working Conditions and Compensation

### **Goal 8. The schedule and duties assigned to a teacher support the teacher's ability to be effective.**

#### **INDICATORS**

- i. The district's calendar creates time for teachers to work without students before, during and after the student school year to ensure common planning, team collaboration and professional growth.
- ii. The district provides adequate planning/preparation time to teachers during the work day.
- iii. Teachers work an eight-hour day on site.

#### **Length of the teacher work day**

**Boston requires teachers to work a significantly shorter day than is required of teachers elsewhere in the nation.**

The work of an effective teacher goes far beyond direct contact with students in class. Excellence in teaching involves planning, preparation, evaluation of student work and collaboration with colleagues and parents. It requires extra time to work with students individually. Yet the current structure of the work day in Boston and in most American school districts no longer matches (if it ever did) the demands of the profession. For example, Boston teachers are with students in class approximately 80 percent of the work day, leaving little time to support effective teaching.

Although most American school districts operate under a similar schedule for teachers, it is a model of schooling that differs radically from that in highly successful American schools, such as the KIPP charter schools, or in high-performing nations such as Singapore and Japan. For example, teachers in Japan are with students only 60 percent of the day with the remaining time spent mostly planning lessons, collaborating with other teachers and meeting with students one on one.<sup>21</sup>

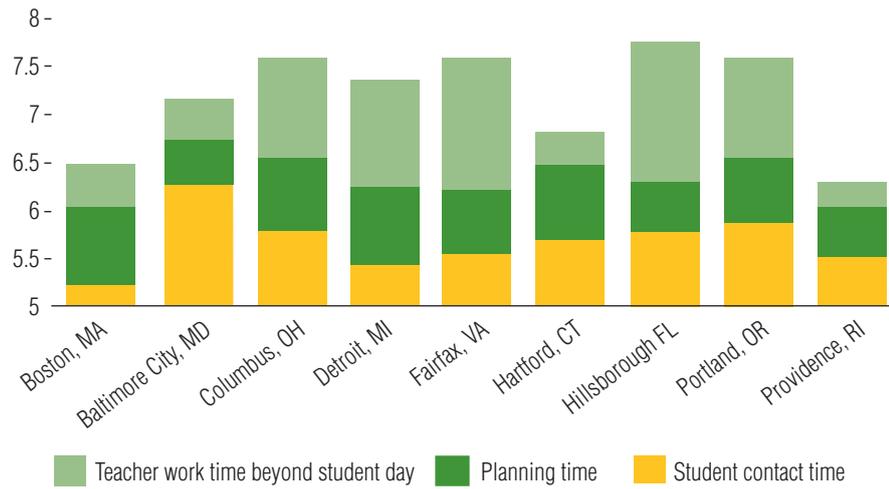
The Boston teacher contract ensures that all teachers will have 68 minutes a day without students: a 48-minute "preparation" period plus 10 minutes both before and after the student day.<sup>22</sup> Teachers work approximately 6 hours, 30 minutes. Although there are many teachers who work well beyond the contractual time whether at home or school, the rules do not encourage this practice.

21 Stevenson, H. & Stigler, J. (1992). *The learning gap: Why our schools are failing and what we can learn from Japanese and Chinese education*. New York: Touchstone.

22 This is a slight decrease from the previous contract (2003-2006), which required teachers to be on site 30 minutes beyond the student day; teachers at Boston's Pilot (charter-like) schools also work an extended day.



**Figure 16. How is the elementary teacher work day structured in other American school districts?**



Source: TR<sup>3</sup> database ([www.nctq.org/tr3](http://www.nctq.org/tr3)).

Boston Public Schools has one of the shortest elementary teacher work days in the country.<sup>23</sup> Only 2 percent of the 100 TR<sup>3</sup> districts have an elementary work day as short as Boston's. Although the structure of the work day and the shorter work hours are similar in many of the school districts that surround Boston, the BPS work day is nonetheless shorter than that of comparable districts nationally.

## Length of the teacher work year

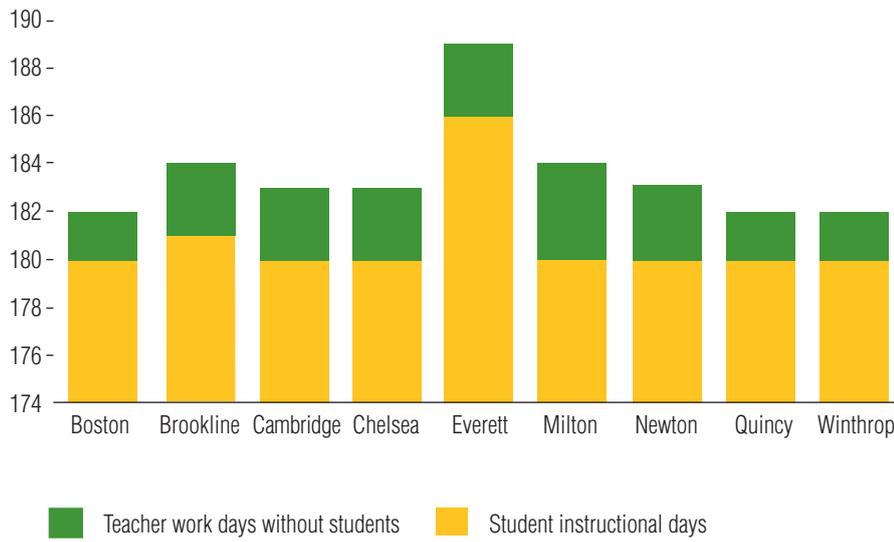
**The Boston teacher contract only provides teachers with two additional work days beyond the student school year.**

Boston teachers are only officially scheduled to be on site for 182 days, one of the shortest teacher work years among the 100 TR<sup>3</sup> districts. Teachers formally work only two additional days beyond the student school year. Principals do have flexibility to schedule an additional 18 hours of work time, what amounts to approximately three work days, for professional development and planning. This time can be scheduled after school, on weekends or before or after the student school year. It appears these 18 hours are an attempt to meet the Massachusetts state law which calls for a teacher work year of 185 days. NCTQ has seen no evidence of how schools are utilizing this time.

<sup>23</sup> Secondary teachers work 20 minutes longer per day than elementary teachers.



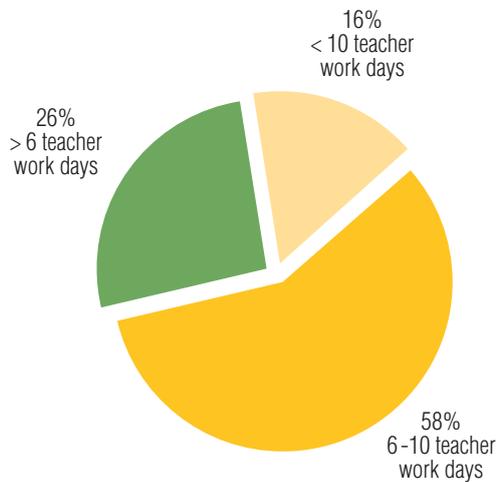
**Figure 17. How does Boston’s work year compare with that of surrounding districts?**



Source: 2009-2010 calendars from Boston and surrounding school districts.

Most districts in the Boston area provide relatively few teacher work days, and at only two such days, Boston is no exception.

**Figure 18. How many work days do teachers in the 100 TR<sup>3</sup> districts have?**



Source: TR<sup>3</sup> database ([www.nctq.org/tr3](http://www.nctq.org/tr3)).

The 100 districts in the TR<sup>3</sup> database provide teachers with an average of eight work days beyond the student year. With only two teacher work days, Boston’s calendar includes too little work time away from students.

## Recommendations for Boston Public Schools

- 1. Extend the teacher work day.** Create an additional teacher work period after students leave at the end of the day. This time can be used to work with students individually or in small groups, meet with parents, collaborate with colleagues, analyze student data or prepare lessons.



## Goal 9. Policies encourage teacher attendance and minimize the deleterious impact of teacher absences.

### INDICATORS

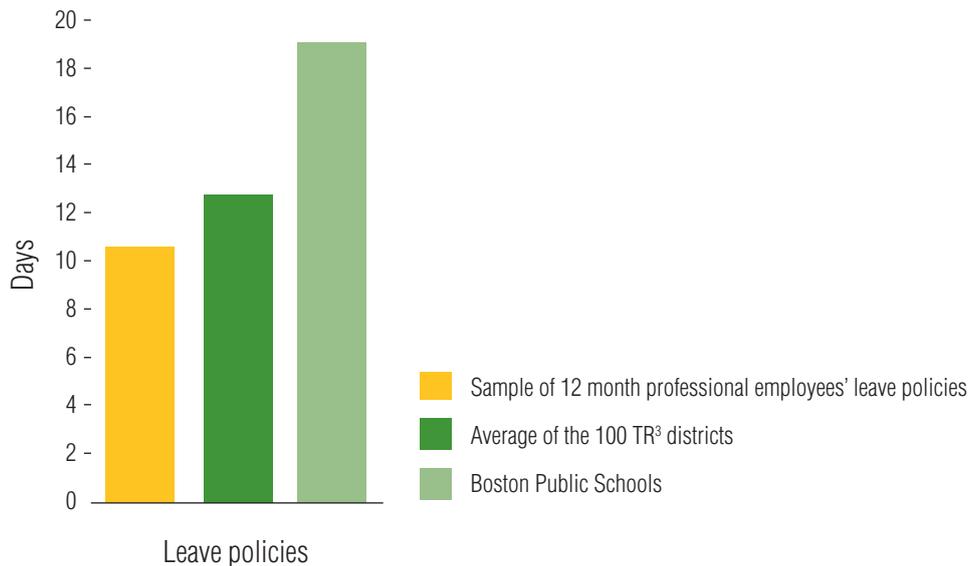
- i. Sick leave is commensurate with months worked (e.g., 10-month contract provides 10 days of leave).
- ii. Teachers are required to notify the principal or principal's designee of each absence.
- iii. Principals (in addition to the payroll department) have access to data on teacher absences on a monthly and annual basis.
- iv. The district requires medical documentation for habitual use of sick leave and can require additional documentation from a doctor (other than the teacher's own) should sick leave abuse be suspected.
- v. Attendance is a factor in teacher evaluations.

### Boston's sick and personal leave policies

**Boston teachers have commendable attendance rates, using less than half of their allotted sick and personal leave.**

The Boston teachers' contract grants teachers 19 days of combined sick and personal leave a year: 15 days of sick leave plus an additional four days of personal leave per year. This is a generous allotment compared both to what teachers in other school districts and other professionals receive. The average sick leave allotment in the 100 TR<sup>3</sup> districts is 10.7 days and the average combined sick and personal leave allotment is 12.7 days.

**Figure 19. How do Boston's sick and personal leave allotments compare with those of other school districts and professions?**



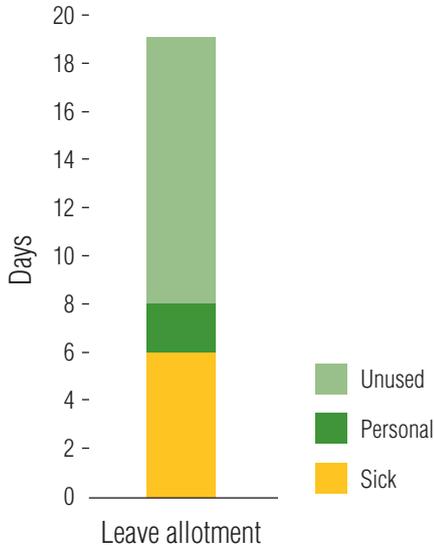
Source: Bureau of Labor Statistics, TR<sup>3</sup> database ([www.nctq.org/tr3](http://www.nctq.org/tr3)), BPS/BTU 2006–2010 collective bargaining agreement.

Boston's leave policies are far more generous than what is seen in other school districts.



While Boston’s leave allotments are among the highest nationally, teachers’ attendance rates are commendable. In the 2008-2009 school year, teachers averaged six sick days per year and used around two days of personal leave, less than half of their allowance.<sup>24</sup> This rate is all the more impressive as some research shows that higher leave allotments lead to higher rates of absenteeism.<sup>25</sup>

**Figure 20. How do Boston teachers use their allotted sick and personal leave days?**



Source: Boston Public Schools Human Resources 2008–2009 attendance data.

Although Boston’s contract excuses up to 19 absences a year, teachers are absent only eight days on average.

### Leave patterns by grade level and school characteristics

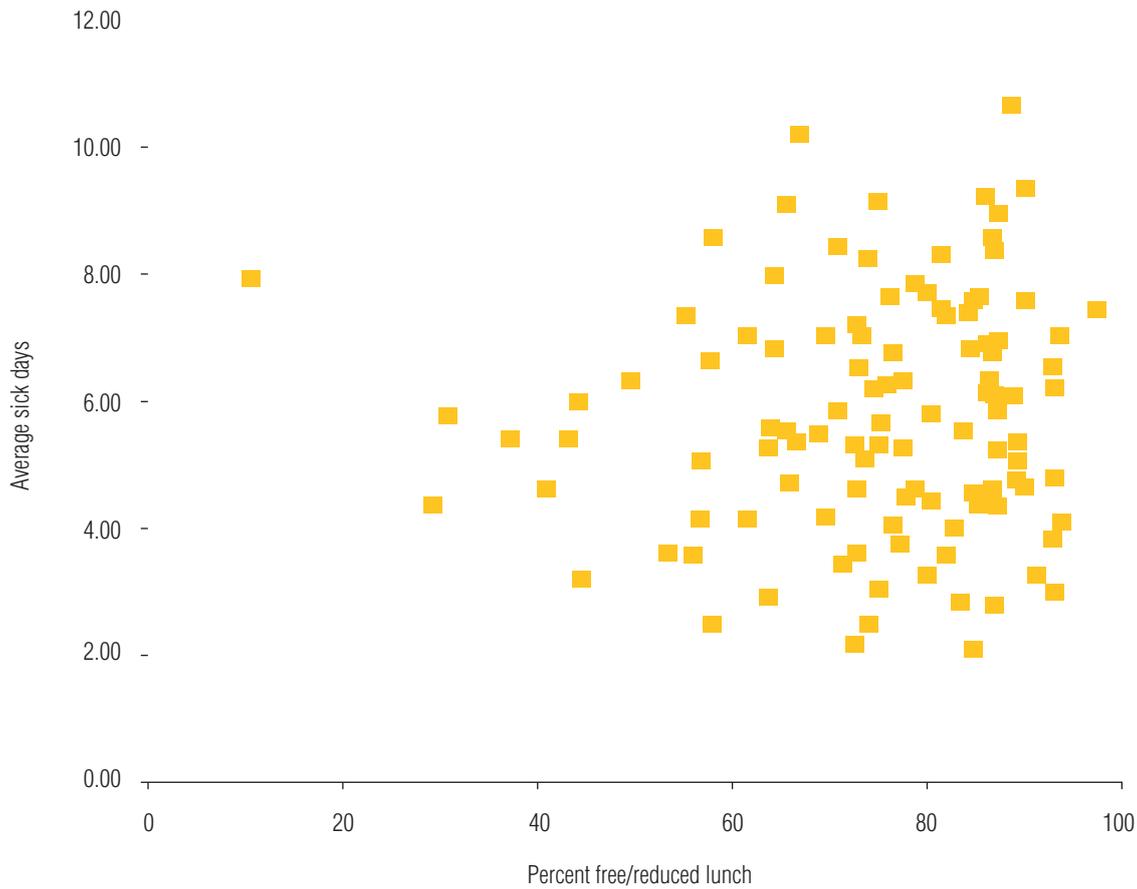
**There appears to be no correlation in Boston between teacher absences and school characteristics.**

Some research has found a correlation between higher teacher absences and both elementary schools and schools with high poverty rates (defined as more than 50 percent of the enrollment eligible for free or reduced lunch).<sup>26</sup> Although we looked at only one year’s attendance records, Boston data contradict those findings: average leave rates are near equivalent across all school levels and on average hold true in even the neediest schools.

24 Sick leave calculations exclude leave classified as positions filled by long-term substitutes.  
 25 Ehrenberg, R.G., et al. (1991, September). *School district leave policies, teacher absenteeism, and student achievement*. National Bureau of Economic Research Working Paper No. W2874, Cambridge, MA.  
 26 Clotfelter, C., Ladd, H., & Vigdor, J. (2009, Spring). Are teacher absences worth worrying about in the U.S.? *Education Finance and Policy*, 4(2), 115-149.



**Figure 21. What was the relationship between Boston schools' poverty levels and teacher attendance in 2008-2009?**



Source: Boston Public Schools and Massachusetts Department of Elementary and Secondary Education School Profiles, 2008–2009.

A large number of Boston schools serve low-income student populations, but there is no correlation between school characteristics and the number of absences at a school. This figure illustrates teacher attendance is no worse in schools with high poverty rates.

### Factors contributing to Boston's good teacher attendance rate

Any number of factors may explain Boston's good attendance rate, including:

**Detailed records.** Boston keeps detailed records of teacher absences. At the same time, the district retains more than 100 codes classifying different kinds of leave, producing a system that is too complicated to provide uniform data from school to school or give school leaders useful data. For example, sick leave can be captured in the database as personal illness, illness of child, illness of parent and long-term illness.

**Reporting directly to an administrator.** Although teachers are only formally required to report absences to an automated substitute-finder system, some principals also require their teachers to notify a school administrator, a department head or a designated teacher if they will be absent.

**Restriction of personal leave.** The teachers' contract restricts personal leave on the days that immediately precede and follow a holiday and on days that five percent of the staff has requested personal leave.



**Documentation.** According to policy set forth in superintendent circulars, teachers are supposed to present a doctor’s note after six consecutive days of absence or when abuse of leave benefits is suspected. Additionally, principals are encouraged to meet with employees who are absent four or more days surrounding a holiday or break, whose leave is projected to exceed 15 days in the year, and those who have repeated unacceptable attendance patterns specifically outlined in the policy.

“At my old school you had to call the principal at the crack of dawn if you were sick. It definitely cuts down on absenteeism.”  
-Boston teacher

**Disciplinary measures.** Consequences for egregious absenteeism include requiring a physician’s certificate for all subsequent absences, unsatisfactory performance evaluation, a letter of reprimand that goes in a teacher’s personnel file and finally a suspension without pay.

### Attendance incentives and leave reimbursement

**Boston’s leave policies are unnecessarily generous, resulting in a considerable obligation to reimburse teachers for unused leave upon retirement.**

Boston not only offers more days of leave than most districts, it also offers more kinds of leave. For example, other districts include religious and bereavement leave in their personal leave allotments. Only half of the 100 TR<sup>3</sup> districts allocate personal leave at all.

**Figure 22. Types of Absences**

Type of leave/absence	Total number of leave days available <sup>27</sup>
Sick	15
Personal	4
Bereavement	5
Religious <sup>28</sup>	2
Union-related	district-wide bank of 150 days
Professional development	district-wide bank of 2,000
Unpaid absences	n/a
<b>Total</b>	<b>~27</b>

Like many districts, Boston allows teachers to cash in unused leave upon retirement, posing a significant financial liability to the district. Teachers may accumulate unused personal and sick leave indefinitely and at retirement be reimbursed at their per diem rate for 40 percent of their accumulated days. *For a Boston teacher with a master’s degree and 30 years of service, this formula can potentially yield a retirement bonus of up to \$114,237 (in 2009 dollars).*

<sup>27</sup> These figures are pro-rated for teachers that are hired after the start of the school year.

<sup>28</sup> Religious leave is restricted to specific Jewish and Muslim holy days.



**Figure 23. How much might Boston save in retirement buy-back costs if sick leave days are reduced?**

	<b>Current leave policies</b>	<b>Reducing sick leave by one-third</b>
Average days accumulated after 30 years of service	330	180
Days eligible for reimbursement (40 percent of accumulation)	132	72
Total payout at retirement	\$66,137	\$36,075
Estimated annual district cost <sup>29</sup>	\$7,936,440	\$4,329,000
<b>Savings</b>		<b>\$3,607,440</b>

A teacher who is absent the district average of eight sick and personal days per year carries over 11 days each year, accumulating 330 days after 30 years of service. If Boston reduced its sick leave allotments by one-third, to 10 sick days, the average teacher would carry over six sick and personal days, reducing the accumulation to 180 days after 30 years of service.

Although the district stands to achieve considerable savings by reducing the number of sick days teachers can take or for which they get reimbursed, it may find that absent the payout, teacher attendance could decline.

**Recommendations for Boston Public Schools**

- 1. Reduce the number of sick leave days from 15 to 10.** Boston teachers generally work for 10 months and thus should have 10 days of sick leave, about the national average for teachers. Boston attendance records indicate that this policy change would be adequate to meet teachers’ needs.
- 2. Make personal leave inclusive of bereavement, religious and other kinds of leave, reducing the available leave that can carry over.** If personal leave is unused, the days roll over into sick leave and become a pay-out burden on the district when teachers retire.
- 3. Evaluate the cost to the district of reimbursing unused sick days at retirement.** A reduction in the allotment of sick days would decrease the cost of reimbursing retiring teachers without having to lower the current 40 percent reimbursement rate. As the high reimbursement rate may be encouraging high attendance, the district may not want to reduce this benefit.
- 4. Issue attendance reports with simplified leave codes.** Redundant absence codes need to be eliminated and the district should work to make sure all schools are coding absences uniformly. *Boston may want to look at St. Louis Public Schools’ leave policy, implemented in its 2003 teachers’ contract. Instead of allotting multiple types of leave (e.g., sick, personal, bereavement, etc.), St. Louis allots nine days of “Paid Time Off” allowed for any reason with 48 hours notice (or as much notice as possible for illness/injury/emergency). Teachers cannot accumulate unused leave days; instead, at the end of each year, teachers are compensated for unused days at 50 percent of their daily pay rate.*

29 Estimation based on 120 teachers retiring in 2008-2009.



### Goal 10. Compensation is strategically targeted to attracting and rewarding high-quality teachers, especially those in hard-to-staff positions.

#### INDICATORS

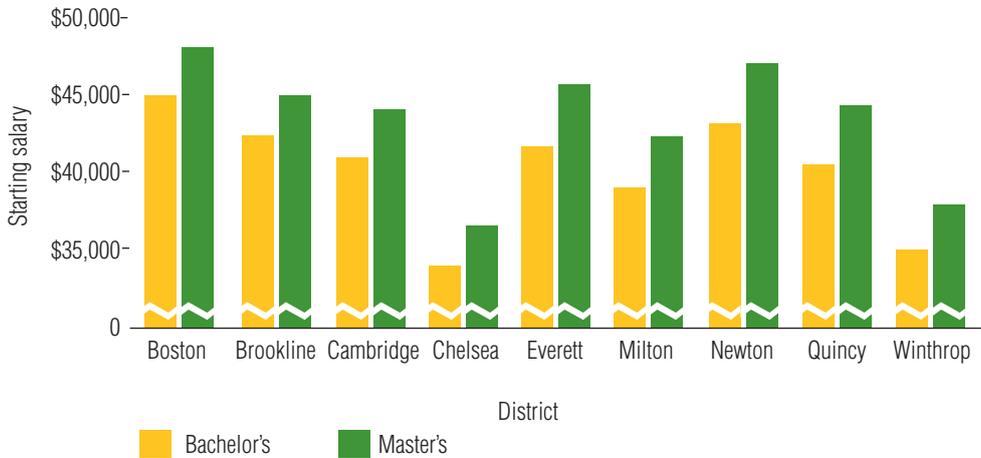
- i. The district's starting salary is competitive with other school districts in the area.
- ii. Additional compensation and financial incentives, including bonuses and tuition reimbursement, are targeted to filling positions or retaining teachers in high-needs schools and critical shortage content areas.
- iii. The salary schedule does not award permanently higher salaries for advanced degrees or credits.
- iv. Raises associated with experience are distributed relatively evenly throughout a teacher's career, with a large pay raise at tenure.
- v. Teachers reach their maximum salary in less than 15 years.

#### Starting salaries

**Boston's teachers average the highest salaries in the state.**

Boston teachers have the highest starting salaries in the region and the highest average salaries in the state of Massachusetts.<sup>30</sup> Its high salaries may account for the district's ability to attract so many teachers with strong academic backgrounds, as discussed in Goal 3.

Figure 24. How do Boston's starting salaries compare to those in surrounding districts?

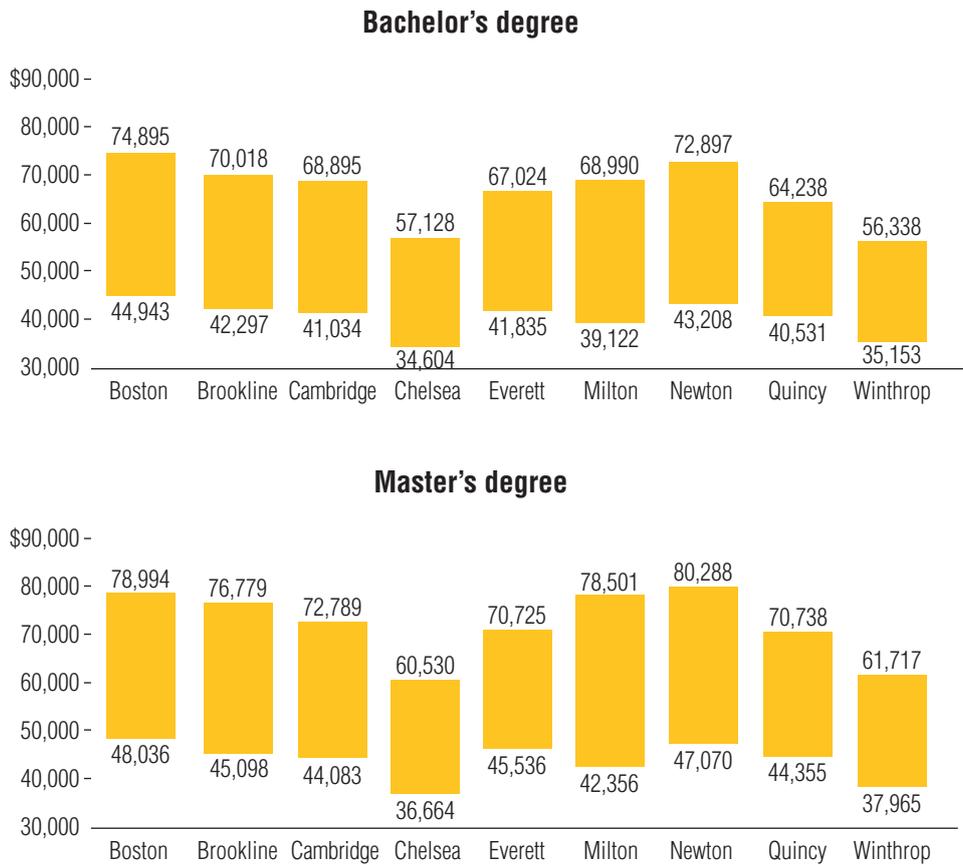


Source: Boston and area school districts' salary schedules, 2008-2009; Milton and Quincy salary schedules, 2009-2010.

30 Massachusetts Department of Education data 2006-2007, from [http://profiles.doe.mass.edu/state\\_report/teachersalaries.aspx](http://profiles.doe.mass.edu/state_report/teachersalaries.aspx)



**Figure 25. How does salary growth in Boston compare with surrounding districts?**



Source: Salary schedules from Boston and surrounding school districts, 2008–2009; Milton and Quincy salary schedules, 2009–2010.

Salaries for Boston teachers fare favorably across all steps and lanes of the salary schedule. Not only do Boston teachers have the highest starting salaries, but they stay competitive throughout their careers.

## Climbing the ladder

**Teachers receive their largest annual raise after only one year of experience, too early to know whether that teacher is effective and too early to serve as a smart retention strategy.**

**Boston spends \$33 million a year on teacher raises associated with coursework.**

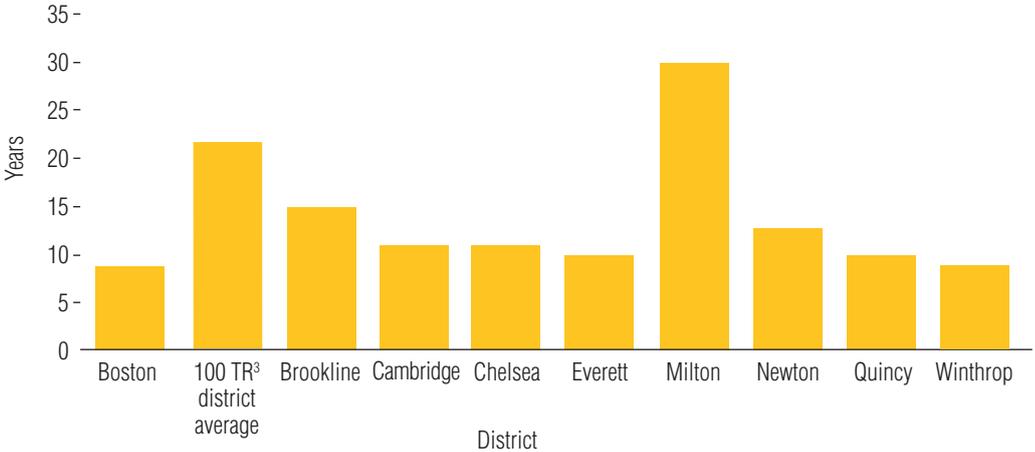
School districts across the nation, including Boston, base teachers' salaries on two elements: the years a teacher has served and whether the teacher has advanced degrees or other graduate coursework.

**Experience.** Too often, teachers must work 20 to 25 years to achieve their maximum pay, a period that is so protracted that it likely discourages some prospects from considering a career in teaching. By way of contrast, Boston teachers can reach their maximum salary in just nine years, far less time than the national average of 22 years and slightly less time than it takes teachers in surrounding school districts to earn their maximum salary. In fact, Boston's trajectory is the shortest of any district in the 100 district TR<sup>3</sup> database.



Boston’s model also compares favorably to other professions, such as medicine or law, where it generally takes closer to 10 or 15 years to realize maximum earnings.<sup>31</sup>

**Figure 26: How long does it take a teacher to reach the highest salary?<sup>32</sup>**



Source: Salary schedules from surrounding school districts, 2008–2009; Milton and Quincy salary schedules, 2009–2010.

It takes Boston teachers just nine years to reach their maximum salary—sooner than nearly all of the surrounding districts. This results in higher lifetime earnings.

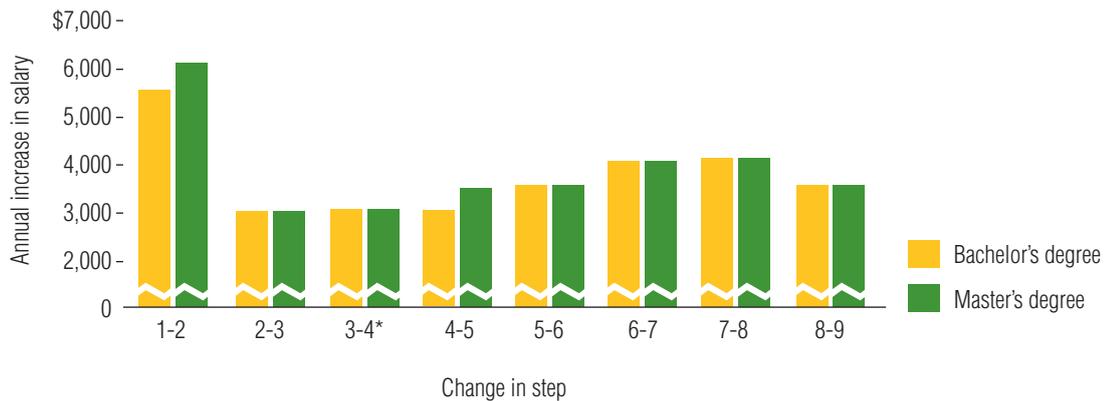
The largest raises a Boston teacher receives occur early in a career, again contrary to the practices of many other school districts. Significantly increasing teachers’ salaries early on, as Boston does, is more likely to alleviate high attrition rates of teachers, when teachers are more apt to be persuaded by cash than benefits such as pensions or a good health care plan. Early raises also correlate with observed patterns in teachers’ professional growth. Research shows that teachers improve dramatically between their first and second years of teaching, considerably so between their second and third, and relatively little in subsequent years.<sup>33</sup>

However, Boston’s approach takes this thinking a bit too far. The largest raise occurs between a teacher’s first and second year. Such a large investment after one year may be wasted when the district has little time to assess whether that teacher is effective, worth retaining or worthy of tenure. Furthermore, many teachers naturally cycle out of the classroom if their own volition during this time. It makes sense for Boston to delay this large pay jump until slightly later in a teacher’s career, ideally after a teacher’s fourth year of service, when the tenure decision should be made.

31 Vigdor, J. (2008, Fall). Scrap the sacrosanct salary schedule. *Education Next*, 8(4), 37-42.  
32 The length of the salary schedule varies by lane. For example, in Quincy, the bachelor’s lane includes nine steps while the master’s lane includes 10.  
33 Hanushek, E., Kain, J., & Rivkin, S. (1998). *Teachers, schools, and academic achievement*. Cambridge, MA: National Bureau of Economic Research.



**Figure 27. How much are annual raises in Boston?**



\* Tenure is awarded after three years in Massachusetts.

Source: Boston teachers' salary schedule, 2008–2009.

Unlike many districts that withhold significant raises until later in a teacher's career, Boston teachers receive the biggest raise after their first year. Teachers also earn bonuses for their "longevity" of service, after 14, 19, 24, 29, 34, 39 and 44 years in the district. Longevity bonuses range from \$1,250 to \$5,050. In 2008-2009, Boston spent nearly \$5.4 million on its longevity bonuses.

**Graduate credits.** While many assume advanced degrees (generally master's degrees) result in increased teacher effectiveness, the education research over the last 50 years has found otherwise, particularly for degrees not related to the specific subject matter taught. The appendix provides a meta-analysis of this research, showing the weak to non-existent correlation between teachers' advanced coursework and higher student achievement.

Why doesn't more education make a difference? It may be because school districts (and often states) routinely boost a teacher's pay for *any* advanced degree, regardless of whether it actually helps the teacher become more effective.<sup>34</sup> For example, few teachers select a degree that will advance their subject matter knowledge. Nationally, even at the secondary level, less than one in four degrees is in the teacher's content area. At the elementary level, only a small fraction of these degrees (seven percent) is in a content area.<sup>35</sup>

Boston's salary schedule looks much like salary schedules across the nation, awarding higher salaries to those teachers holding a master's degree, but also for completing increments of graduate coursework. As a result, Boston teachers are encouraged to earn as many credits as they can, up to the equivalent of *three* and a *half* master's degrees. More than 40 percent of teachers have the coursework equivalent of *two* master's degrees; 22 percent of Boston teachers have the coursework equivalent of *three* master's degrees. The cost for this ineffective incentive is significant: nine percent of its annual teacher payroll.

34 Although the state does not *require* teachers to earn a master's degree in order to achieve "Professional" certification, it is one of four options teachers must fulfill (the others being an approved district-based program for the professional license; programs leading to eligibility for master teacher status, such as those sponsored by the National Board for Professional Teaching Standards; or a department-sponsored assessment program).

35 National Center for Education Statistics. (2002). *The condition of education 2002*. Washington, D.C.: U.S. Department of Education, Table 32-2.



**Figure 28. How much do advanced degrees cost Boston Public Schools?**

Lane	Number of teachers	Additional cost to the district for incentive
Bachelor's	529	n/a
Bachelor's + 15 credits	492	\$971,654
Master's	978	\$3,760,285
Master's + 15 credits	747	\$4,313,369
Master's + 30 credits <sup>36</sup>	573	\$4,599,408
Master's + 45 credits	399	\$4,015,489
Master's + 60 credits	372	\$4,606,678
Master's + 75 credits	681	\$9,538,402
Ph. D.	82	\$1,211,650
<b>Total</b>	<b>4,853</b>	<b>\$33,134,935</b>

Source: Boston Public Schools, 2008–2009.

“I could take art, dance. I could even take chemistry. None of which have any relevance to what I teach, but they still count.”

–Boston teacher

Boston requires substantially more coursework than surrounding districts to qualify for its maximum salary, perhaps as justification for having the highest maximum salary in the region. The number of courses Boston incentivizes its teachers to take is excessive compared to both surrounding school districts and other large districts in the nation. Boston's salary schedule includes a total of nine “lanes”—columns on the schedule that represent raises for increased coursework—significantly more than the 100-district average in the TR<sup>3</sup> database.

**Figure 29. How many credits do Boston and the surrounding districts require teachers to have to earn the highest salary?**

District	Number of lanes	Highest number of credits on final lane	Highest salary
Boston	9	MA + 75	\$88,579
Brookline	5	MA +45	\$84,436
Cambridge	7	MA +60	\$80,037
Chelsea	4	MA + 30	\$63,512
Everett	10	MA+60	\$78,921
Milton	5	MA+45/BA+75	\$81,243
Newton	5	MA+45	\$86,745
Quincy	6	MA+30	\$77,239
Winthrop	8	MA+60	\$68,933

Source: Boston and surrounding school districts' salary schedules, 2008–2009; Milton and Quincy salary schedules, 2009–2010.

36 MA +30 is the coursework equivalent of two master's degrees.



## Tuition reimbursement

In addition to earning higher salaries for taking additional coursework or completing a master's degree, Boston Public Schools subsidizes associated course fees up to \$500 per teacher per year, far less than what many districts provide with a national average of \$1,760 per teacher, an expenditure for the district of less than \$100,000 a year.<sup>37</sup> Teachers with less than nine years of experience are eligible.

While the district requires that all coursework be approved by the administration, it does not go as far as explicitly limiting reimbursement to high-needs subjects or other areas of greatest need to the district.<sup>38</sup> The district also stipulates that any teacher who accepts a tuition reimbursement must continue service in Boston for three consecutive years.

“ I use my reimbursement every year—I’m up to the Master’s + 45 lane and I’m only in my 5th year of teaching.

-Boston teacher

## Differential pay

**Although the Boston Public Schools has initiatives to attract teachers to hard-to-staff subjects, it falls short on efforts to recognize excellence in its teachers.**

### Pay for hard-to-staff subjects and schools

Boston's teacher contract states that newly hired teachers in critical subject areas can be placed on any step of the salary schedule. The contract lists other possible incentives which the district can elect to pay, including moving costs or other up-front, nonrecurring payments. Such a policy is potentially good as it gives the district flexibility to provide incentives to attract the most desirable candidates. It is unclear how often Boston utilizes this policy.

There are currently no incentives to attract teachers to hard-to-staff schools; however, the district plans to implement such bonuses in the 2010-2011 school year.

“I find it really hard to be a professional when I am paid only on years of service and coursework.”

-Boston teacher

### Bonuses for National Board-certified teachers

Boston offers all of its teachers with National Board certification a four percent bonus (\$2,000 to \$3,600) for the 10-year life of their certificate. Boston's policy is similar to the bonuses offered in other districts around the nation. The district also reimburses the application fees for teachers who successfully earn National Board certification, with the promise that teachers remain in the BPS system for at least two years. In 2008, Boston had 40 National Board-certified teachers; 38 of those teachers were working in its Title I schools.

### Performance pay

Boston does not offer teachers any pay based on raising student test scores or any other measure of effectiveness, such as consistently strong performance evaluations. An initiative by the nonprofit Mass Insight to pay Advanced Placement teachers a \$100 bonus for each student who received a grade of 3, 4 or 5 recently ended, having been the subject of a grievance by the Boston Teachers Union and ruled a violation of the collective bargaining rules.

37 Of the 100 districts in the TR<sup>3</sup> database, 22 specify caps on the amount of tuition reimbursement available to an individual teacher.

38 Superintendent's circular: HRS-PP03.



## Recommendations for Boston Public Schools

- 1. Push back the largest raise on the salary schedule from after Year 1 to after Year 4, ideally the point after which a teacher earns tenure.** Since teachers are still reaching their full potential during the first couple of years in the classroom, it serves as a better retention strategy to reserve the largest salary raise for teachers who have earned tenure and provide only a modest increase after the first year when teachers are still exploring their careers in the classroom.
- 2. Eliminate intermediate lanes on the salary schedule.** Because advanced degrees show little or no relationship to teacher effectiveness, Boston should consolidate the salary schedule, beginning by eliminating all “intermediate” lanes based on coursework and ultimately having only one lane on the schedule, regardless of the degree held. These intermediate lanes are BA + 15, MA + 15, MA + 30, MA + 45, MA + 60 and MA + 75. Teachers who are currently in these lanes can be exempted from this policy.
- 3. Redistribute career increments (longevity bonuses) and degree-based incentives to recognize teacher contributions to student achievement.** The district should redistribute funds dedicated to rewarding teachers for advanced credits (\$33 million) and longevity (\$5.3 million) to a pay structure which rewards teachers for increased student outcomes in the classroom.

## Appendix

### The Impact of Teachers' Advanced Degrees on Student Learning

*Metin Ozdemir, Ph.D., & Wendy Stevenson, Ph.D. UMBC*

An extensive review of the studies published in peer-reviewed journals, books, and reports was conducted. For the purpose of literature search, we relied on multiple data bases including ERIC, EBSCOHOST, PsychInfo, and PsychLit. In addition, we carefully reviewed the reference sections of each article and chapter to locate additional sources. We also used online search engines such as Google and Yahoo search to locate updated publication lists and resumes of researchers who frequently publish in this field.

For the current meta-analysis, 17 studies (102 unique estimates) were selected as they have provided statistical estimates which allowed us to calculate effect sizes and re-compute the p-values for the meta-analysis.

All studies included in the meta-analysis were focusing on testing the effect of teachers' advanced degree (a degree beyond bachelor's degree) on student achievement measured as grade, gains in grade over one or two years, scores on standardized tests, and gains in standardized tests over one or two years. Teachers' advanced degree included M.A. degree, M.A. + some additional coursework, and Ph.D. Student achievement variables included achievement in math, reading, and science areas

Out of 102 statistical tests that were examined, 64.7 % (n = 66) of the estimates indicated that teachers advanced degrees did not have any significant impact on student achievement. On the other hand, 25.5% (n = 26) indicated a negative effect, and 9.8% (n = 10) suggested a positive effect of teachers' advanced degree on student achievement.

It is important to note that all 10 of the estimates suggesting positive effect ( $p < .05$ ) of teachers' advanced degree on student learning were with analyses conducted on 6th and 12th grade students' math achievement. On the other hand, 23 negative effects ( $p < .05$ ) were reported by studies focusing on achievement in Kindergarten or 5th grade achievement in math and reading, and the other three were on 10th and 12th grade achievement. Studies which reported significance level at  $p < .10$  were not considered as reporting significant effect.

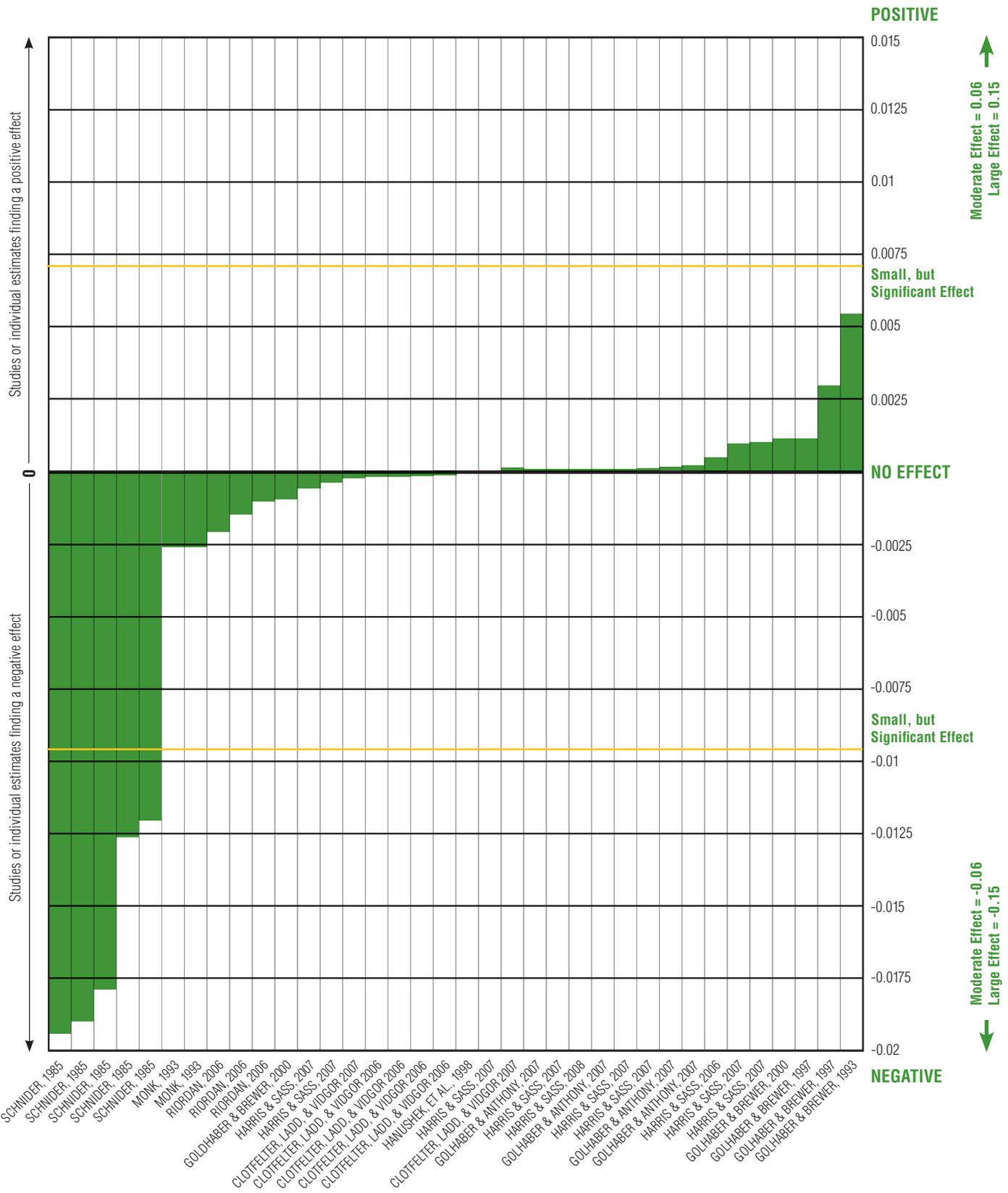
The studies examined in this meta-analysis had varied sample sizes. The minimum sample size was 199 whereas the maximum was over 1.7 million. Further analysis showed that there was no association between sample size and the direction of findings.

The average effect size estimate of all the 102 statistical tests was very low (.0012), which suggests that the impact of having advanced degree on student achievement is low. The highest effect size was .019, suggesting small effect.

One major concern regarding the studies reviewed in the current meta-analysis was that most studies to date did not identify the type of advanced degree they examined. In the current study, we identified only two studies (e.g., Goldhaber & Brewer, 1997; 2000) which examined the effect of subject-specific advanced degree on student learning. Specifically, Goldhaber & Brewer (1997) examined the effect of M.A. in math on grade 10 math test scores. They reported a positive effect of teachers' M.A. degree in math on math test scores. Similarly, Goldhaber & Brewer (2000) reported positive effect of M.A. in math on math test scores of 12th grade students. Of note, both studies reported low effect sizes.

It is possible that categorizing different types of graduate degrees under a single category of "advanced degree" resulted in biased estimates of the impact of teachers' graduate training on student achievement. Future studies should examine the impact of subject-specific degrees on student achievement in the respective disciplines so that the findings would improve our understanding of the value of teachers' advanced degree in improving student learning. Given this major limitation of the literature, the findings of current meta-analysis should be interpreted with caution.

# The impact of teachers' advanced degrees on student learning





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