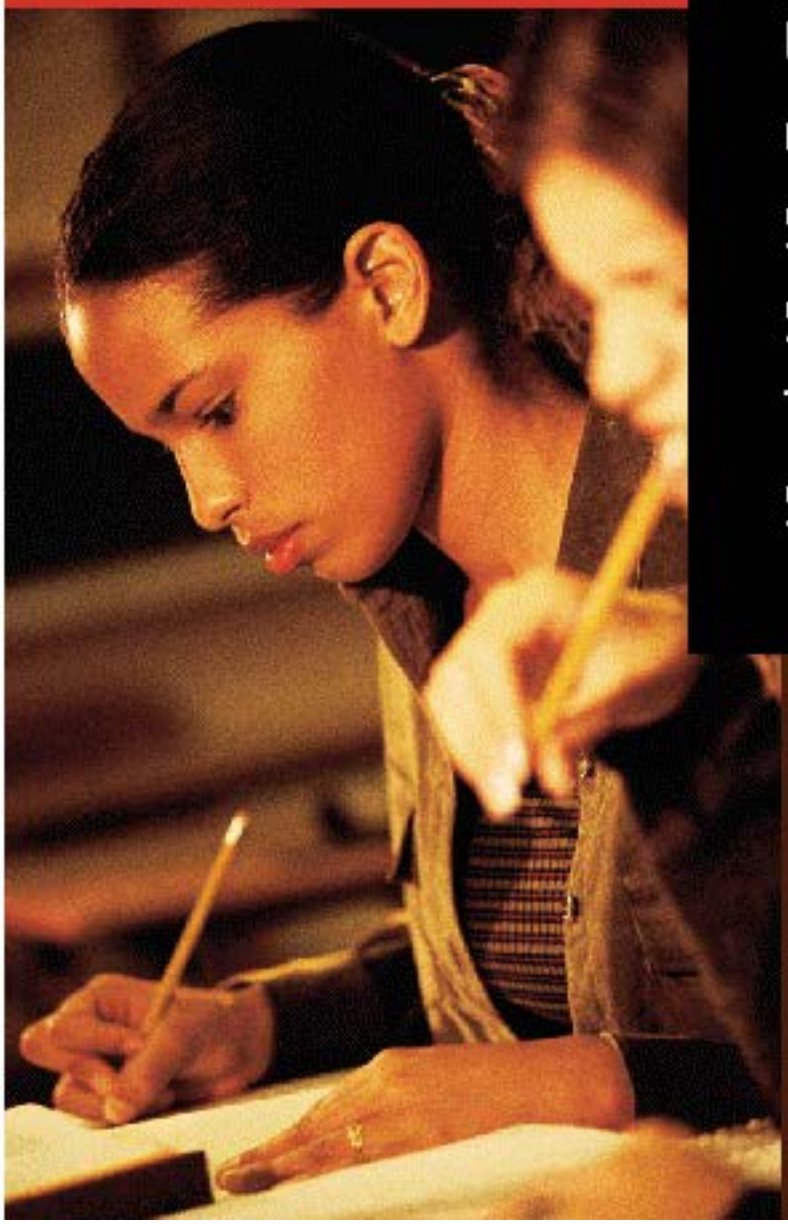
Center for Collaborative Education

Transforming schools for student success

HOW BOSTON PILOT SCHOOLS USE FREEDOM OVER BUDGET, STAFFING, AND SCHEDULING TO MEET STUDENT NEEDS



OCTOBER 2001

How Boston Pilot Schools Use Freedom Over Budget, Staffing, and Scheduling To Meet Student Needs

Center for Collaborative Education
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EXECUTIVE SUMMARY

[The] major dilemma for me, as a leader, is the entrapment that happens around this discrepancy between understanding and seeing what kids need and being able to implement that. So we get ensnared in the limitations of the organization, the limitations of all of us, people, money, whatever -- But you can see what a kid needs or a family needs or what a bunch of kids need, but you just don't have a person or the people or the resources, or you don't have the perspective that you need.

So that happens anyway, in a Pilot School, it happens all the time. But in a school that's run and dictated by a centralized bureaucracy, it would happen so often that I wouldn't be able to function. So the major autonomy, for me, is from the constraints that feel irrational…. What that does is take what is probably the most complicated and challenging, and potentially demoralizing, task that we've got in front of us, which is this business of educating urban children and supporting urban children and families well, which is just really hard, in 2000, in America. And give you some sense of control . . ..

This business of staying hopeful and staying empowered, in the sense of being able to make decisions that make a difference for kids and families and working conditions of teachers…. And the autonomies allow you to do that.

--Pilot School Director

Research suggests that schools that are able to meet two conditions—to create environments where students are well known to their teachers and to provide teachers with adequate time to collaborate (for example, Hawley-Miles & Darling-Hammond, 1998; Newmann, 1996)—are more successful in meeting the needs of their students. The challenge for schools, these studies suggest, lies in using their limited resources (of money, people, and time) to create these conditions.

The future success of public education is dependent upon crafting new models of learning communities within school districts, in which schools have increased autonomy over their resources – budget, staffing, curriculum/assessment, governance and policies, and scheduling - to create classrooms of excellence in exchange for increased accountability. The Boston Pilot Schools Network, a network of eleven small, innovative schools within the Boston Public Schools, is a unique endeavor that embodies these principles.

This study provides evidence and examples that effective implementation of autonomies in schools with clear visions for teaching and learning creates schools in which students have a better chance of succeeding. With the same per pupil expenditure as other district schools, Pilot Schools are able to create collaborative cultures among their faculty and foster higher student engagement and performance (CCE, 2001). School staff, district administrators, policy makers, and education researchers will find lessons of interest from the Boston Pilot Schools Network.

KEY FINDINGS:

- Pilot Schools have negotiated consistent and equitable per pupil amounts.

- Through budget autonomy, Pilot Schools are able to make the staffing and scheduling decisions necessary to carry out their missions and visions of improved student learning.

- Pilot Schools use their entrepreneurial nature to raise external funds, and are able to house them separately from the district for quick and easy access, to further support their unique missions.

- Pilot Schools create staffing patterns that best meet students' needs, rather than being assigned staffing patterns through district formulas.

- Pilot Schools use their budget autonomy to personalize their learning environments. In addition to being small in total student population, Pilot Schools have significantly lower class sizes and daily teacher loads (average less than 60 students per day) than do regular BPS schools while spending the same amount per pupil as non-Pilot schools. Some of this is possible through funds released from not buying discretionary line items/services, elimination of special programs like athletics, use of teachers for electives.

- Pilot Schools increase this personalization further by breaking their schools down into smaller learning communities so that teachers and students can affiliate with a subset of the whole school and by creating multi-year relationships between students and teachers through looping and multi-age groupings.

- Teachers play multiple roles in Pilot Schools, often teaching multiple subjects, conducting advisory groups, and assuming leadership roles which are beyond the confines of traditional teacher roles. Teachers are generalists first and teach in their areas of strength. As a result, other staffing positions are often eliminated, freeing up funds for the school's staffing priorities.

- Pilot Schools use staffing autonomy to increase the numbers of adults in schools by expanding staffing of existing programs, engaging more adults in instruction, and increasing the use of consultants, part-time staff, interns, and paraprofessionals. Student to staff ratios are 15:1 and less, in large part due to a reduction of specialized programs such as electives

and athletics which allows for more regular education teachers on staff. Most Pilot Schools have multiple adults in the classroom, further lowering the student:teacher ratio in classrooms that already have significantly lowered class sizes.

- Pilot Schools use their scheduling autonomy to create longer blocks of instructional time for students and to create time for advisory groups for students to receive additional academic and social support. Teachers still teach close to their contracted time, same as non-Pilot teachers. Their autonomy and smallness enable Pilot Schools to respond to student and faculty needs by changing the schedule, even during the course of the school year if deemed necessary.

- Faculty in Pilot Schools have significantly greater professional development time than do regular BPS schools for faculty to focus on improving teaching and learning. They schedule long periods of collaborative planning time during the school day, summer professional development time, and in-service professional development days. Staff are compensated for their time at these retreats through their budget autonomy.

- Scheduling autonomy and their smallness enable Pilot Schools to more fully involve all faculty in collaborative decision making around significant issues of teaching and learning through weekly full faculty meetings and other structures.

Providing schools with autonomies over their resources—money, people, and time—has implications at both the school and the district levels. Autonomies give schools a sense of control over decisions that affect students and over bureaucratic constraints. Schools must understand how they can make best use of these autonomies to meet the needs of their community. The study's findings indicate that when most Pilot School directors discuss their goals and uses of their autonomy, they use them to create those conditions in the school which they believe lead to reaching their respective visions of sustained student learning. This includes creating personalized learning communities for students and a professional collaborative culture for faculty.

Providing schools with autonomies changes the school and district relationship. Schools and districts must forge a new relationship that is mutually supportive, beneficial, and focused on the needs of students. In the creation of this new relationship, the district must transition from a role of mandating reforms and monitoring schools' implementation to a role of providing services and support to enable each school to use its autonomies and achieve its stated goals and mission. Districts must reexamine the schools' use of discretionary services, develop strong accountability systems for schools, and prepare educational leaders to manage these new autonomous schools.

HOW BOSTON PILOT SCHOOLS USE FREEDOM OVER BUDGET, STAFFING, AND SCHEDULING TO MEET STUDENT NEEDS

INTRODUCTION

> *What every principal or headmaster should have are the kind of conditions Pilots have. That's everything from size and scale to hiring their own staff to instructional flexibility to governance, the works* " (Pilot School director, Neufeld, 1999).

Today, the public shows a declining level of confidence in and support for our nation's public schools, particularly for urban schools, as shown by the increase of number of charter schools, rising enrollments in private and parochial schools, and calls for vouchers. Progress in raising student achievement has been slow and incremental. In particular, a stubborn gap in standardized test results between Black, Latino, and low-income students and white and more affluent students suggests that there is continuing lack of equity in educational access and negative stereotyping for Black, Latino, and low-income students. For example, the results of recent high stakes standardized tests in Massachusetts indicate that upwards of 70% of low-income, Black, and Latino students are in danger of not graduating, triple the rate of white students. Clearly, schools are experiencing difficulty in meeting the needs of these students.

Previous research suggests that schools that are able to meet two conditions—to create environments where students are well-known to their teachers and to provide teachers with adequate time to collaborate (for example, Hawley-Miles & Darling-Hammond, 1998; Newmann, 1996)—are more successful in meeting the needs of their students. The challenge for schools, these studies suggest, lies in using their limited resources (of money, people, and time) to create these conditions.

The future success of public education is dependent upon crafting new models of learning communities within school districts, in which schools have increased autonomy over their resources to create classrooms of excellence in exchange for increased accountability. The Boston Pilot Schools Network, a network of eleven small, innovative schools within the Boston Public Schools[1], is a unique endeavor that embodies these principles[2]. This paper provides an in depth study of how Pilot Schools use their autonomies over resources to increase their capacity to improve teaching and learning.

[1] Appendix A for Descriptions of Pilot Schools
[2] Appendix B for Pilot Schools Network Principles

BOSTON PILOT SCHOOLS NETWORK: SETTING THE CONTEXT

The Boston Public Schools (BPS) serve 64,000 students in 130 K-12 schools, with approximately 53% Black, 28% Latino, 7% Asian, and 11% White students. Eighteen percent of the district's students are designated as special needs, and 16% are bilingual students. The district has been historically low performing on standardized tests, similar to most urban districts.

The result of a unique partnership among the Mayor, School Committee, Superintendent, and Teachers Union, Pilot Schools were created in 1994 through the Boston Teachers Union contract to promote increased choice options within the school district. This agreement came about largely in response to 1994 state legislation creating first-time charter schools and the subsequent loss of Boston students to area charter schools. An additional reason for establishing Pilot Schools was *" to provide models of educational excellence that help to foster widespread educational reform in all Boston public schools*" (BPS, 1995).

Starting with five schools in the 1994-1995 school year, the number of Pilot Schools has slowly grown. There are currently eleven Boston Pilot Schools spanning grades K-12, including three K-8 elementary schools, one middle school (grades 6-8), six high schools (grades 9-12), and one secondary school (grades 6-12). Each Pilot School is small, democratic, and personalized, with enrollments ranging from 100-500 students. These schools enroll approximately 2,600 students, or about 4% of the total BPS enrollment. Pilot School enrollment matches that of the Boston Public Schools by race, gender, and income status[3]; Pilot School students are typical of students in the rest of the district. This demographic information is critical in demonstrating that small, personalized schools can be more successful in raising student performance and in engaging families than larger, more impersonal urban schools.

While all Pilot School teachers are members of the union, receive union salaries and benefits, and accrue seniority, these schools have autonomy over budget, staffing, governance and policies, curriculum/assessment, and the school calendar to provide increased flexibility to organize schools and staffing to best meet students' needs. A unique feature of Pilot Schools is that they create new models of teaching and learning within the Boston Public Schools, unlike charter schools. This relationship provides the opportunity for Pilot School practices and conditions to influence the larger BPS system, while providing Pilot Schools with economy of scale advantages such as facilities, payroll, and transportation. The goal is that Pilot School practices will influence the larger system through "reculturing" it rather than restructuring it (Hargreaves, 2000).

Essentially, the Pilot Schools represent a different philosophical framework for how to create successful urban schools--provide schools with maximum flexibility in exchange for increased

[3] Appendix C for demographics of Pilot Schools

accountability. Pilot Schools are creating a new vision of public schools and districts in which schools are provided autonomy to create challenging learning environments, and the role of the school district is recast to provide these schools with increased support that the schools determine that they need.

The Pilot Schools have also made progress in gaining autonomy over their resources through affiliating with a third party organization. In Spring 1997, Pilot School directors realized that by forming a unified network that was coordinated by a third party organization, they would gain more leverage in their negotiations with the district regarding the extent of flexibility and autonomy that they received. At the same time, they formally affiliated with the Center for Collaborative Education (CCE), a nonprofit organization, to coordinate the network. This arrangement allowed school leaders to focus more on creating better conditions for teaching and learning, and less on dealing with district policies. CCE has played multiple and interconnected roles in supporting the Network and individual schools: advocacy, facilitation, coaching, professional development, and research. It is in its role as advocate for the network and individual schools that CCE has helped to shape the Pilot Schools autonomies. CCE is a liaison, translating concerns of Pilot School directors and faculty to the district and negotiating solutions.

With many schools currently implementing comprehensive school reform, the Pilot Schools offer examples that can help these schools and districts find new ways to manage their limited resources. Given the autonomies they have, and with a mission of being innovative 'lab' schools, these schools provide ideas and examples while raising challenges for other schools. Most critical is understanding how the Pilot Schools' use of their resources (budget, people, and time) create innovative and personalized learning communities.

AUTONOMY AS A FOUNDATION FOR SUCCESSFUL SMALL SCHOOLS

Boston Pilot Schools, unlike most public schools, have autonomy over their budgets, staffing, curriculum/assessment, governance and policies, and the school calendar. Along with the commitment to creating and maintaining smallness, these freedoms are necessary to promote successful learning.

Budget: Pilot Schools have a lump sum per pupil budget. Each school may spend its money in the manner that provides the best programs and services to students and their families. A Network Fiscal Autonomy Committee, works in collaboration with the district to increase the percentage of the budget over which schools have autonomy.

- Schools receive a lump sum per pupil budget, the sum of which is equal to other district schools within that grade span and that includes salaries, instructional materials, etc.
- The district has itemized all central office costs and now allows Pilot Schools to choose either to purchase identified discretionary district items and services or to not purchase them and include them in the school's lump sum per pupil budget

School Calendar: Pilot Schools have the freedom to set different school days and calendar years for both students and faculty in accordance with their principles or school reform models. In particular, research supports a correlation between faculty planning time spent on teaching and learning and increased student achievement. Scheduling which allows for summer and school year faculty planning time contributes to a more unified school community and educational program. Pilot Schools use this flexibility to:

- Increase planning and professional development time for faculty
- Increase learning time for students
- Organize the school schedule in ways that maximize learning time for students and planning

Curriculum and Assessment: Pilot Schools have the freedom to structure their curriculum and assessment practices to best meet students' learning needs. While acknowledging that all Pilot Schools are held accountable to state-required tests, these schools are given the flexibility to determine the school-based curriculum and assessment practices that will best prepare students for state and district

- Pilot Schools have autonomy from local district curriculum and testing requirements—they can choose what content to cover and how to cover it
- Promotion and graduation requirements are set by the school, not by the district, with an emphasis on competency-based, performance assessments

assessments.

Governance and Policies: Pilot Schools have the freedom to create their own governance structures that give school staff increased decision making powers over budget approval, principal selection and firing, and programs and policies, while being mindful of state requirements on school councils. The school's site council takes on increased governing responsibilities, including the following:

- Principal selection, supervision, and firing, with final approval by the superintendent in all cases
- Budget approval
- Setting of school policies, including schools' promotion, graduation, attendance, and discipline policies

Staffing: Pilot Schools have the freedom to hire and excess their staff in order to create a unified school community.

- Each school can decide on the staffing pattern that creates the best learning environment for students
- Each school may hire staff who best fit the needs of the school, regardless of their current status (member of the district or not, although every teacher hired becomes a member of the local teachers union)
- Schools may excess staff (into the district pool)

RESEARCH QUESTION

How do Pilot Schools use their autonomies over their resources to improve conditions of teaching and learning and to increase their capacity to better meet students' needs?

METHODS

Data for this study were collected through interviews, observations, and collection of key documents.

INTERVIEWS	Pilot School leaders from the eleven schools were interviewed about their schools' resource allocations. Researchers later met with leaders from ten of the eleven schools to ascertain the accuracy of the data. In addition, the Boston Public Schools Budget Director was interviewed about the process by which non-Pilot and Pilot Schools budgets are determined.
OBSERVATIONS	Pilot School staff are involved in a number of committees in which discussion of autonomies in practice are central topics. To that end, researchers observed these meetings whenever possible. These meetings included the Fiscal Autonomy Committee meetings, Pilot Schools Directors' meetings, and Pilot School leadership retreats. Observations of these meetings informed researchers about how Pilot Schools made decisions over budget use, staffing, and scheduling.
DOCUMENTATION	School calendars, school schedules, staff lists, class lists, and annual all funds budgets were collected and analyzed from the eleven schools. A list of quantitative indicators of student body and staff profiles, school practices, and student performance was generated from (1) previous research linking resource allocations and site-based management with improved student performance (Hawley-Miles, 1997; Odden 1997), (2) data that other school reform networks collect, such as the Coalition of Essential Schools, and (3) meetings with the Pilot Schools leaders themselves[4]. This paper draws heavily from data in the school practices section of this database[5].

[4] Appendix D for database indicator list
[5] Appendix E for Indicators of School Practices

FINDINGS

BUDGETING FLEXIBILITY IN PILOT SCHOOLS

Budget allocation process

Finding:
With the same per pupil spending as other Boston Public Schools, Pilot Schools are able to allocate funds to make the staffing and scheduling decisions necessary to carry out their missions and visions of improved student learning.

Like most school districts, Boston does not allocate a lump sum per pupil budget to individual schools. Rather, the district provides most of a school's budget to staffing (roughly 97%), which is allocated by 1) category (e.g., regular education, special education, Title I, bilingual education), 2) a predetermined class size formula for each category (e.g., the regular education class size limit for the middle grades is 30 students), and 3) the total number of enrolled students in each category. For example, based on projected enrollment for the coming school year, each traditional school is allotted a certain number of staff and administrative positions using BPS "staffing allocation rules" (Fiscal Year 2001 Budget, 2000). The rest of a school's budget (e.g., instructional supplies, substitutes, stipends, etc.) represents a minute proportion of a school's entire budget and is allocated by line item, meaning that funds must be spent within the allocated line item unless prior budget approval is given to move funds to another line item. Final adjustments are made after the actual enrollments are calculated in October of each school year.

In this way, most schools are limited in their budget flexibility to use their full resources in the manner in which they feel will maximize student learning. Innovative principals find ways to manipulate the budget and staffing positions to meet their instructional goals, but this process is limited in what can be accomplished, is often confronted with numerous bureaucratic obstacles, and takes valuable time and energy away from other pressing instructional priorities.

A fundamental premise of the Pilot Schools Network is that a school's budget has a primary role in creating flexible conditions for innovation, and that schools need maximum budget autonomy in order to best shape a program that serves the needs of its unique student population and instructional

philosophy. Without budget autonomy, Pilot Schools would not be able to make the staffing and scheduling decisions necessary to carry out their missions and visions.

Prior to CCE's budget work on behalf of the Pilot Schools Network, each school negotiated its own budget with the district. These separate negotiations resulted in disparate budgets across Pilot Schools. For example, upon close examination, six of the then nine Pilot Schools were receiving per pupil amounts under the district average for the grade level, with several over $1,000 less per pupil. With assistance from CCE, collaboration with the BPS Budget Office, and support from the Superintendent, a Fiscal Autonomy Committee was formed from Network participants to iron out the budget process and to seek ways for Pilot Schools to gain additional fiscal autonomy. The Committee moved to standardize the budget process across all Pilot Schools with the vision that eventually other schools in the district could use the same model. The committee decided that Pilot Schools would receive a consistent lump sum per pupil amount by grade level rather than a K-12 average, as it was the regular schools within respective grade levels to which Pilot Schools were to be compared. Elementary, middle, and high schools would receive differentiated per pupil amounts, just as the district's regular schools received (with elementary schools at the lower end and high schools at the higher end). In addition, the committee developed a consistent per pupil amount for roll-out costs (e.g., as schools added grades and had significant planned enrollment jumps) to allow for furniture, equipment, textbook, and materials acquisitions as students were added.

The committee then sought ways to create greater fiscal autonomy for Pilot Schools by looking at central district costs. After reviewing fiscal autonomy practices in other urban districts in the United States and Canada, the committee examined whether any central costs could become discretionary for Pilot Schools. The district's Budget Office then analyzed the district's budget to determine per pupil amounts for every line item as well as sub-line items. Committee members adopted the principle that if a central office service was non-essential, the Pilot School should have

"...We've been able to [use our budget flexibility to] keep a low student-teacher ratio and then commit to raising soft money for operating expenses. I wouldn't have been allowed to take that risk if we had normal funding or budget guidelines."
Pilot School Director
(Neufeld, 1999)

discretion over whether it purchased the service from the district. If the service was not purchased, the per pupil amount for that service would be added to the school's lump sum per pupil budget.

These services total approximately $400 per pupil, providing Pilot Schools with significant additional budget flexibility and program support. For example, a school with an enrollment of 400 students would potentially gain an additional $160,000 in funds to strengthen its instructional program, if it chose not to purchase any of the above services from the BPS central office. In general, Pilot Schools do not purchase these services, and thus the funds are added to its lump sum per pupil budget. The result of this added budget autonomy is that, while Pilot Schools spend a similar percentage of their total district-funded budget on staffing as do regular BPS schools, they can spend more total dollars on staffing because they have additional discretionary funds added to their budget. This added amount from discretionary funds is one reason why Pilot Schools have higher staffing numbers than regular BPS schools. Pilot Schools find creative ways to cover some of these line items in their school, such as using the expertise of teaching staff to cover athletics, student support, coaching.

This process, while providing Pilot Schools with significantly greater fiscal autonomy, has also benefited the district. The district now has a much more accurate and comprehensive picture of how district funds are allocated. As well, while still not an exact science, the budget conversion process to a lump sum per pupil amount has advanced far enough so that the district's Budget Office is now working to extend similar budget autonomy to a select group of regular district schools.

Discretionary Central Office Line Items Include:

- Overflow substitute account
- Textbooks
- Contracted Services
- Stipends
- Aides/Coaches
- Testing Materials
- AV/Library
- Miscellaneous
- Athletics Transportation
- Itinerant Pupil Support
- Parent Advisory Councils
- Math Coaches
- School-to-Career Program Support
- Safety
- Exam School Enrichment Program
- External funds

External funds

All public schools have the freedom to explore and acquire funds from outside the district to increase resources for professional development and other school needs. Non-Pilot Boston Public Schools have received significantly greater amounts of Annenberg Challenge funds than Pilot Schools in recent years. Some Pilot Schools are entrepreneurial in acquiring funds from other sources, in addition to their district-allocated budget, to provide additional support and services to students. Network schools have found that they have greater flexibility in the use of these external funds by housing them with an agency other than the school district. As the fiscal agent for the Pilot Schools Network, CCE administers the external funds of ten of the eleven schools. For schools, having CCE or other third-party organizations house funds streamlines access to the funds, requires less paperwork and time, and provides quicker disbursements.

Finding:
Pilot Schools are able to house the external funds they raise separately from the district for quick and easy access, to further support their unique missions.

External funds housed by CCE range in size from $16,500 to $289,000 annually per school, with a median of $19,800. Only three schools have more than $20,000 in external funds housed at CCE. At least four Pilot Schools house non-BPS funds outside of CCE. Three Pilot Schools employ development directors, whose roles are to forge partnerships and increase resources for their respective schools. External funds are used by Pilot Schools for salaries and personnel, professional development, student support, the arts, and athletics.

STAFFING FOR STUDENT NEEDS

Control over staff hiring

Finding:
Pilot Schools create staffing patterns that best meet students' needs, rather than being assigned staffing patterns through district formulas.

Research on school reform has found that a lack of control over staff hiring is a major barrier to success (Useem et al., 1997; Wells, 1999). Since the 1960s, school staffing[6] has become more specialized and students more segregated. While the average student-to-teacher ratio has dropped significantly in the past several decades, the average regular education class size has remained the same. Most of the new adults in schools staff pull-out programs with targeted populations, such as Title I or Special Education, resulting in larger regular education class sizes (Hawley Miles, 1997). The money spent on specialized staffing results in less individual attention for regular education students and less money for professional development. In order to individualize learning for more regular education students, and to meet the needs of students with learning differences, schools must rethink how they program and allocate staff.

The Boston Public Schools allocate a certain number of staff to each school based on student enrollment. For example, at grades one and two, schools receive one regular education teacher for every 25 students and at Grades 3-5, one for every 28 students. The formula for determining regular education teachers is more complex with middle and high schools. In general, though, the allocation is approximately 28 students to one teacher[7]. Likewise, the allocation of assistant principals[8] and guidance staff[9] is based on a student-to-position ratio.

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[6] By school staff we refer to all adults who work in a school, both paid and unpaid. They include core academic teachers, administrators, non-instructional staff such as secretaries and nurses, special education, bilingual education, student support, and subject specialists such as art or music teachers.

[7] The allocation process first involves an allocation of 1 teacher for every 30 middle school or 33 high school students, which is then modified according to enrollment of students in special programs, such as bilingual education and special education.

[8] For elementary and middle schools, a second assistant principal is allocated at 450 students, and for high schools, at 700 students.

[9] This is a school-based management decision for elementary schools; the ratio is 400 to 1 for non-bilingual students in middle school and 300 to 1 for non-bilingual students in high school.

Allocations of staff for special education and bilingual programs are determined on a program-by-program basis.

In contrast, all Pilot School leaders described a rationale for staffing that started with students and knowing their needs.

Staffing autonomy allows schools to hire staff with similar educational philosophy and mission. Pilot Schools are able to use their control over staffing to create unique, unified professional learning communities (French, 2001). In the following three sections, we present findings on how Pilot Schools use their staffing autonomy to implement the school's vision and the Network's principles through creating more personalized environments, using creative definitions of staff roles, and employing different and more staff positions than traditional schools.

"We try to build a program that has in place a lot of the supports that students need. So that's where budget allocation really begins. It starts with who the students are, what their needs are, and then we build a program, a staffing plan that attempts to meet most of their needs."
Pilot School Director

Structures to create more personalized environments

All of the Pilot Schools are small schools, serving less than 500 students each. Pilot Schools believe that the people closest to students, the school staff (and not the district), should make decisions around teaching and learning, and that schools should be small and personalized learning communities so that teachers and students know each other well.

Pilot Schools Directors understand that having a small total population in the school, while an important step in personalizing the school environment, is not enough. Pilot Schools recognize the importance of staffing and scheduling to increase personalization, including creating opportunities for more individual and small group attention.

Finding:

Pilot Schools use their budget autonomy to personalize their learning environments. In addition to being small in total student population, Pilot Schools have significantly lower class sizes and lower daily teacher loads than do regular BPS schools. Pilot Schools increase this personalization by breaking their schools down further into smaller learning communities and by creating multi-year relationships between students and teachers.

Small Class Size

Pilot School leaders believe that a small class size is crucial to personalizing instruction. Keeping the staff to student ratio low in the classroom was the starting point for many schools in their thinking about budget and staffing.

> We look at the budget, and we look at how many teachers we can get. What is an appropriate teacher:student ratio? We know our students, and that they say that they want a smaller place, and that they have a range of academic needs that can only be met with a very small teacher:student ratio. So we try to keep it at 1 to 18.

> The flexibility that we have in having the Pilot status is we're given our budget, and then we can pick and choose what we want to do. It's important for us to have small class sizes, so we have class sizes of 20…

Of the three Pilot elementary schools, two have an average 1st grade class size of 21 or below. Four of the high schools have a ninth grade English or Math class size of 21 or below, and all six schools have classes of 24 students or less. These low numbers do not reflect the total number of adults that may be in the classroom, such as interns, parents, and paraprofessionals.

Pilot Schools have the flexibility to modify their staffing and scheduling in order to decrease class size. For example, without increasing spending, one school established a multi-age classroom of 20 students rather than increase the class size in one grade due to over-enrollment. The school could do this because it was not driven by a district formula of student assignment to grades (Hawley-Miles and Darling-Hammond, 1998).

Small Teacher Loads

Pilot Schools further personalize education for students by ensuring that teachers have direct responsibility for a small number of students during a term. In the middle and high schools, teachers are responsible for only two or three courses. At the middle and high school level, daily teacher

loads[10] range from 26 to 105 students, with an average of 60 students. Only at four of the ten secondary schools do teachers have a daily load of more than 80 students. Pilot elementary school teachers' student loads are small; teachers are directly responsible for the 20 or so students in their class. Having smaller student loads allows teachers to spend more time with each student and on that student's work, and to get to know their students more deeply.

Small Learning Communities

While all Pilot Schools are small, more than half of the schools organize into even smaller learning communities, called houses or teams, so that students and teachers identify with a subset of the whole school. The purpose for creating smaller learning communities is to create a sense of community between teachers and students, to further personalize the school environment, and to allow students and teachers to know each other well.

"For us, the most important thing about our school is building community. So each house has the same ages. So the [A House] has from kindergarten to seventh grade, the [B House] has from kindergarten to seventh grade, and the four teachers in each house are responsible for thinking about the 80 students within their house."
Pilot School Director

Each Pilot School creates smaller learning communities in its own way, depending on student needs and context. Some schools divide vertically, so that students from different age groups are in the same unit, while others divide horizontally, so that students from the same age groups are in the same unit. Each way of dividing into smaller units has its own advantages. Advantages to dividing vertically include giving students and staff more time to know each other better and to develop a shared sense of responsibility for each other. Advantages to dividing by grade level include scheduling simplicity and allowing teachers to understand more deeply the unique needs of students at specific ages.

[10] Appendix F for definitions of school practice indicators used throughout the paper

Multi-year Relationships Between Students and Teachers

Five of the eleven Pilot Schools are structured so that teachers and students stay together for more than one school year. In two of the schools, teachers and students stay together for three years. While looping allows for teachers and students to get to know each other well, it also creates challenges for staffing. One school realized that it was too difficult to have teachers develop curriculum to cover three grade levels. Therefore, this school is cutting back to having students and teachers remain together for only two years.

Two of the three elementary schools use multi-grade classrooms as a way for students and teachers to spend multiple years together. In one school, all classes are multi-grade, covering two years (K-1, 2-3, 4-5). In the other school, most of the classes are multi-grade, and the school is moving to make all classes cover two grade levels.

Creative definition of staff roles

A Pilot School Network principle is that Pilot Schools should have high expectations for each and every student. The expectation of Pilot Schools is that all staff are responsible for all students in the school, not just the ones they teach in their own subject or time slot. All staff, including non-teaching staff, must buy into high levels of responsibility and direct service for students.

Because Pilot Schools are small schools, with low total numbers of staff, they need staff who can meet student needs in a variety of ways. Therefore, staff members must be able to fill multiple roles. The nature of staff roles being closely tied to students and creating opportunities for leadership make working at a Pilot School attractive.

By virtue of their smallness and culture of responsibility, Pilot Schools use creative definitions of adult roles to staff their schools. Consistent with other research on staffing allocations (Odden, 1997), Pilot Schools view teachers as generalists first and specialists second, believing that teachers should be able to teach more than one subject. Five of the six

Finding:
Teachers play multiple roles in Pilot Schools, often teaching multiple subjects, conducting advisory groups, and assuming leadership roles which are beyond the confines of traditional teacher roles. Teachers are generalists first, and teach in their areas of strength. As a result, other staffing positions are eliminated, freeing up funds for the school's staffing priorities.

high schools have teachers who teach more than one subject. Some of these teachers are also responsible for teaching electives based on their own non-academic interests and for co-teaching interdisciplinary subjects.

> We like to use the term "generalist," because while you're teaching, you may be responsible primarily for one academic area, but it's expected that you can do other areas. We're trying to create interdisciplinary curricula here, so that requires people to be a lot more flexible and willing, and really desiring to do that.

Pilot School staff are committed to the entire school and therefore fulfill multiple roles in addition to teaching their classes. Many structures, like student advisories, looping, and electives, contribute to this sense that all adults are responsible for all children. Several schools are experimenting with using all staff and administrators, not just core academic teachers[11], as advisors.

When teachers take a generalist role in the school, traditional job descriptions must be rewritten to fit the school context and student needs. At one Pilot School,

> We knew that oftentimes guidance counselors were…performing in the traditional mode, which is to say, "Okay, you go to college. You should go to the military. Let's consider work." We wanted to recognize anorexia. We wanted to recognize suicidal gestures. We wanted to recognize bipolar symptoms, depression. We wanted to see what we could do about surfacing issues, and then getting help. So we needed people with clinical experience. So when we became a Pilot School, it enabled us to recast the job description and say, "This is not about traditional guidance counseling. This is a very different job description. This is running groups. This is running advisories. This is supporting teachers, supporting students. This is making connections with students and parents to local clinics and neighborhood services." It was a much bigger, much different job description. So we were able to recast the job

[11] Appendix F for definitions. This term is applicable to large, comprehensive high schools that have historically offered a wide range of courses like multiple electives, study halls, and driver's education. As we describe in this paper, Pilot Schools provide a new model of schools in which choices are fewer but those courses offered are multi-disciplinary and project based. These new types of schools need the freedom to define core subjects in a way truly descriptive of the courses. For example, Pilot Schools emphasize internships, community service opportunities, and arts-based courses which they would consider "core" to their students' education but do not fit the currently standard definition of "core academic."

description, and we were able to break out of the [BPS allocated] ratio.

Teachers are also given significant leadership roles, which expand the teachers' personal and professional growth.

Typically, teachers who take on significant other responsibilities are compensated with stipends or reduced teaching loads.

"We also use staffing autonomy to bifurcate, trifurcate, quadruple-furcate teachers' job descriptions. So [teacher name] is the head of the master schedule. She's a full-time math teacher. But she does the scheduling."
Pilot School Director

In order to stay within their lump sum budget and increase the number of staff involved in instruction, Pilot Schools often eliminate traditional job categories found in non-Pilot schools. Specialist teachers, guidance counselors, coaches, and staffing for some special programs have been eliminated in many Pilot Schools. Current staff assume the roles of teaching electives such as foreign languages and non-core academic courses (like computers). As teachers take more responsibility for curriculum planning, some schools no longer have a need for a director of instruction. For each specialist role eliminated because the function is assumed by an academic teacher or other staff person, the Pilot School creates space in its budget for its staffing priorities.

Other specialized programs for which Pilot Schools have reduced staffing include electives and athletics. Several schools have few to no electives, or courses of choice. Offering a greater number of electives generally drives the regular education class size up because most electives have smaller class sizes than regular education classes. For the few electives that they do offer, Pilot Schools often use their own teachers rather than hiring full-time specialists, such as music teachers or foreign language teachers, enabling them to maintain a higher number of regular education teachers.

Several high schools offer very small sports programs compared to traditional high schools. For athletics, Pilot Schools contract out for facilities or use staff members as coaches rather than hiring staff coaches.

Further, in the six schools with student advisories, all staff in the school lead student advisories, including school administrators, secretaries, and student support staff. In Pilot Schools, staff are prepared to play multiple roles in both instruction and leadership, creating more opportunities for adults and students to know each

other in many ways and less need for non-instructional staff positions.

Expanding the school staff community

Pilot Schools hire more staff per pupil than do regular BPS schools. For example, all of the schools have a regular education student-to-teacher ratio of 15.2 to 1 or less, and nine are 14 to 1 or less. Pilot Schools use a variety of strategies to increase the numbers of adults in their buildings while staying within the lump sum per pupil budget – for example, (1) the elimination of specialists who serve few students and the assumption of these duties by regular education teachers, (2) the use of inclusion of students with special needs in regular education classrooms, and (3) the increase in their budgets through not purchasing selected BPS central office services and instead having these funds added to their budget to use on staffing.

Finding: Pilot Schools use their budget autonomy to expand the number of adults working with students. Through the creative hiring of part-time staff and consultants, Pilot Schools provide added support to teachers. Pilot Schools often create new staff positions to meet emerging student needs. Most Pilot Schools have multiple adults in the classroom, further lowering the student:teacher ratio in classrooms that already have significantly lowered class sizes.

Expanding staffing of academic and student support programs

Based on student needs, Pilot Schools increase the numbers of positions for certain programs they find most effective and useful in supporting students. For example, Pilot Schools have increased staffing in areas such as content specialists, student support, and/or bilingual education.

Several Pilot Schools have hired extra academic content area teachers. Based on beginning of the year needs assessments, several schools needed literacy or math specialists to support both students and staff.

> It was painfully clear that our math program needed serious attention. And we needed to bring someone in who could work with both students and with [teachers]. So student performance is why we brought a fourth person in … I prioritized that person helping our other three math teachers grow, not just working with kids. The other obvious way to structure it would have been to have a second math class, but I wanted the contact between teachers...That structure has paid off in exactly the way we wanted: Real movement in two of our three math teachers.

Pilot Schools see the need to expand student support, including the capacity for one-on-one work with individual students. Most secondary non-Pilot Schools are allotted one guidance position per 300-400 students (a school-based management decision for

elementary schools), one student support coordinator per high school (a school-based management decision for elementary and middle schools), and a community field coordinator based on school-based management decisions. Eight of the Pilot Schools studied have more than three people in student support positions, even though their total enrollments are less than 400 students. In addition to student support staff and advisories to increase personalization, Pilot Schools have created such positions as school-to-career counselor, freshman coordinator, and college liaison.

> We have more [staff for student support]. We have the SPED person. We have the social worker. We have a community person. [We have increased student support] because of our students' needs…Such as problems at home, not having anybody to talk to, or having somebody work with them with finding housing… We've had students who have been raped. We've had students who've gotten pregnant. You name it, we've had it.

Another common student need among Pilot Schools is after hours programming for students whose caretakers are not home during the work day. Several elementary and middle schools have formal after-school programs to staff.

"We realized really soon, in the opening of the school, that it wasn't enough to just have the after school [program] on the backs of volunteers, and that if we didn't make it a full-fledged program with its own coordinator, that ninth graders just wouldn't stay…we knew urban ninth graders with low skills needed extra time…And so we hired both a freshman coordinator and an after school person who does kind of split shift." Pilot School Director

Other positions that have been created by individual Pilot Schools include development director and college and career counselor. In response to a particular crisis, one school hired a counselor who taught a psychology class to a specific population of students.

> We realized we had a rash of dropouts, two years in a row. White girls from the projects in Charleston and Southie…where are these kids going? What are they up to? Not only were they dropping out of school, they were going nowhere. It wasn't that they dropped out because they were going for the YES program ……We got a retired counselor/psychologist in who runs groups in the schools. And we've gone specifically after those kids. We put them in groups. He teaches an elective class, Human Psychology, which is a back door into self esteem--who am I, how am I going to fight the neighborhood ethos of heroin and crime? He's remarkable. He's already had direct impact on that.

Another strategy Pilot Schools use to engage more adults in instruction is to include special education students and staffing in regular education classrooms. As a Network, Pilot Schools

ascribe to the principle that classrooms should be inclusive. As articulated in the Pilot School Network Special Education Principles[12], Pilot Schools believe that they serve special education students well because they are able to personalize each student's learning environment through small class sizes, small schools, looping, and other regular education structures, and because of the services provided to teachers to support students in inclusive classrooms. This belief is one reason why the numbers of students classified as special education students are lower in Pilot Schools.

Use of part-time, contract staff, interns or paraprofessionals

Every Pilot School uses part-time staff and teachers, and others who work part of the school day or school week. While the total number of part-time staff is low, the flexibility to create these positions allows Pilot Schools to recruit or retain certain people. In several instances, these arrangements were made for people who were already on staff to accommodate family or continuing education needs. For Pilot Schools, retention of strong staff members who buy into the mission and practices of the school, but can only work part time or on a consulting basis, is one way that staffing autonomy is used.

At least seven of the schools use interns, or graduate students studying to be teachers, in their classrooms to lower the adult to student ratio and provide training opportunities for future teachers. While the interns may not yet be certified, they have enough training in the pedagogy and culture of the school to participate in teaching and learning, and in some cases to cover classes while teachers observe each other or attend professional development. One school contracts interns through a partnership with a local college's teacher preparation program.

[12] Appendix G for Pilot Schools Network Special Education Principles

Case Study: Student Support Team at Greater Egleston Community High School

Greater Egleston Community High School serves approximately one hundred students, many of whom have arrived there after experiencing failure at more traditional public high schools. Students at Egleston are 16-21 years old, and about 65% Black, 26% Latino, and 9% Caucasian or other. Fifteen percent are parents. School staff include two administrators, six full time core academic teachers, and twelve other staff members (full time and part time). The school's mission is to create a community of learners who provide responsible local and global leadership and participation.

The school strives to create a personalized environment and provide the needed support to students of the school. The director describes the rationale for staffing:

They're older students, 16 to 21, who have experienced a lot of failure in larger settings, who have social and emotional needs that really need to be attended to. Without that, there is no academic goal that can be achieved. So in knowing that, we try to build a program that has in place a lot of the supports that students need. So that's where budget allocation really begins. It starts with who the students are, what their needs are, and then we build a program, a staffing plan that attempts to meet most of their needs.

The autonomy to budget according to school needs, rather than follow the allocations given by BPS, has allowed Egleston to form a unique partnership with Ensuring Stability through Action in our Community (ESAC). ESAC is a community-based, non-profit organization that strives to improve the quality of life for residents of Boston and eastern Massachusetts, particularly the young and the old, through innovative programs in homeownership, education, and community service. ESAC is the lead partner agency with the school, serves as the fiscal agent for the school, and, provides additional essential services for Egleston students, such as student support, administrative support, athletic programs, and the arts. Through ESAC, Egleston uses its discretionary funds to pay for facilities, a school van, seven consultants, and educational materials.

Eight staff members work part time at the school. Part time staff and consultants offer experience and expertise specific to the school without the constraints of full time positions.

Student Support Team (SST)

Given the unique needs of Egleston's older students, parenting students, and students who have had difficulty in more traditional settings, the school has created an extensive student support team. The school's philosophy is that by being small and more personal, students achieve more:

…if we increase the number of students, we'll get more money. But that doesn't help our school, because what we need is a smaller school for students who do not want to be in, and cannot function in a larger setting.

Each member of the student support team has unique responsibilities and crisis response procedures to follow. In addition to the Director, the student support team includes three full time Case Managers, one Assistant Director who serves as the student support coordinator, and three other part time positions, including a college liaison, a special education teacher, and one social worker.

One case manager coordinates recruitment of new students and college preparation classes and procedures. Another case manager coordinates partnerships with outside organizations and monitors DSS/DYS relationships with caseworkers, and Project Adventure (a leadership training program for students). The special education liaison evaluates and adjusts Individual Education Plans and advises the SST on special education concerns. The student support coordinator counsels pregnant and parenting students and links students to outside agencies. All of these staff members maintain regular contact with a cohort of students.

The staffing is key. We add other staff outside of BPS [allocations]. Two of them actually are co-teaching. One of them is co-teaching with a regular academic teacher, a human development class. That's the student support team member that deals primarily with pregnant and parenting teens…So that makes it even smaller, because you can have two people in the classroom.

A unique feature of the student support team is the opportunity provided to both staff and students for on site one-on-one and group counseling. A licensed social worker is available for weekly sessions with students. Another licensed social worker teaches a course on Life Skills once per week. Recognizing the stress and burnout that happens frequently with teachers, the social worker also offers weekly support groups for teachers.

THE USE OF SCHEDULE AUTONOMY TO MEET STUDENT AND STAFF NEEDS

Pilot Schools have the autonomy to set their own calendar and schedule. They are able to allocate teacher time during the day in ways that meet the specific needs of their students. Pilot Schools' use of schedule autonomy is influenced by the Network principles.

- Schools should be small and personalized, so that teachers and students know each other well;
- The school culture should promote innovation and risk-taking, and professional development should be an integral part of daily school life;
- Learning should be purposeful, authentic, challenging, and creative, and build students' capacity to take responsibility for their own learning;
- The people closest to students should be the policy makers and the decision makers, including teachers, administrators, parents, and students themselves; this calls for democratic forms of school governance and facilitative leadership.

Finding:
Pilot Schools use their scheduling autonomy to create longer blocks of instructional time for students, and to form advisory groups for students to receive additional academic and social support. Their autonomy and smallness enable Pilot Schools to respond to student and faculty needs by changing the schedule even during the course of the school year.

Meeting students' instructional and support needs

Varying the length and schedule of instructional periods

The autonomy to set their own calendar allows Pilot Schools to shape their school days as the curriculum requires. Pilot Schools have used their schedule autonomy to create instructional learning blocks of different lengths that may be scheduled in different ways, which allows teachers the freedom to teach in varied ways. All of the middle and high schools have at least one block that is one hour or more, and seven of the eight schools have blocks that are at least 90 minutes. Two of the elementary schools have periods of two hours or more in which teachers can choose how to use that time. Teachers in Pilot Schools have used these longer learning blocks to address students' academic needs in many ways.

First, teachers use the flexibility of longer learning blocks to pursue a subject to its fullest. As one director said,

> Sometimes they might say, O.K., we're going to just cancel [another planned activity] and we're just going to keep going, because this is just exciting. So, yeah, the timing is sort of estimates. We try not to do that, when it's affecting other people. But if, say in [teacher's] classroom, if her [class] is going well and she knows her next activity is something she's organizing, let her make the decision to cancel this…If we have the momentum going, we'll learn so much more keeping this momentum going than stopping abruptly.

Second, with longer blocks of time, teachers can more easily go off campus to pursue a topic.

"The underlying principle was that we wanted to provide a teaching team a group of kids for a block of time that they could make flexible instructional decisions, so that the schedule didn't ruin plans if a teaching team wanted to go out of the building all day, if they wanted to take half the kids, if they wanted to have a project day all day. We didn't want the schedule structure to be the decision maker in those instructional choices."
Pilot School Director

Third, with longer blocks of instructional time, teachers have the possibility of team teaching and of teaching interdisciplinary curriculum. Several Pilot Schools created schedules that allowed teachers of different disciplines to collaborate with each other, both in planning interdisciplinary curriculum and in teaching together. Planning could occur during in-school collaborative planning time and during professional development days. In one school, a computer teacher collaborated with a history teacher to teach entrepreneurship. In the same school, math and science teachers routinely work together on curriculum.

Fourth, classes do not have to meet every day of the week when instructional blocks are longer. The Pilot High Schools' directors stated that they found that longer class periods that meet fewer times per week were often more productive than having a class five days per week. To make this structure work, teachers in some schools end up teaching more minutes some days per week. While Pilot Schools have the autonomy to require teachers to teach longer than the limit stated within the Boston Teachers Union contract (which states that teachers may only teach a maximum of 240 minutes/day, and 160 minutes without a break, planning period, or lunch duty (BTU, 2001)), it should be noted that even in these schools the total weekly minutes of instruction required of teachers is quite close to the BTU contract limit.

Another way that one Pilot School modified the traditional five days a week structure was by designing courses for semesters rather than for the whole school year. For example,

in one school, humanities and sciences courses are taught in different semesters. This school found that students were overwhelmed with course demands, and that the best way for them to focus on these classes was to alternate them by semesters. Thus, one half of the students take their humanities course in the fall and science in the spring, while the other half has the opposite scheduling.

Student advisories

All Pilot middle and high schools have student advisories. These advisories meet from one to five days per week, although most meet for at least three days each week. In every school, students are in advisories for at least 50 minutes a week; however, students in most schools meet for at least 90 minutes per week.

> [Advisories offer] regular contact with significant adults, support groups for kids…Maybe on a ninth grade level, the best we can do is ... learn a little bit about each other. By twelfth grade, they're so nice and kind to each other. So concerned. They coach each other for exhibitions. They give each other suggestions, in terms of work. They call each other in the morning to make sure you're getting up on time. They co-plan exhibitions, or they co-plan college trips. So the advisory is the kind of co-parenting function, institutionalized. And it allows us to say to all teachers, "It's not just about you and your biology, or you and your math. It's about you and kids' relationships."

Advisories serve many functions for schools. Most schools use advisories to teach students skills such as life needs or conflict mediation. Other schools have their advisories focus on meeting certain academic needs, such as writing or reading.

Modifying the school schedule and calendar

Pilot Schools also use the schedule to respond to student needs, both academic and non-academic. The schools have the flexibility to build time into or to quickly modify the existing schedule to meet these needs. For example, Pilot Schools can change the schedule during a given school day, based on how engaged students are in the task at hand. Pilot Schools are also able to alter their schedules both mid-year and between years (e.g., semesterizing courses), or offer new classes at mid-year to respond to a need (e.g., course designed

"We began the first semester by looking at a more college-like schedule, open, and letting students choose…Most of the students said the schedule didn't work for them ... So they asked that we go back to a block schedule. They wanted to be in pods, with some flexibility around electives and advisory. So we did that. And that's actually brought up the attendance."

Pilot School Director

for retention of high-risk students). Pilot Schools have the flexibility to change their schedule based on student feedback.

Pilot middle and high schools are able to determine the start and end times for their schools (elementary schools are still constrained by the district bus schedule). Using this autonomy, most Pilot middle and high schools start later in the day than regular BPS secondary schools, responding to research that has found that adolescents are not at full optimal learning potential in the early morning (Wahlstrom, 2001). In some schools, this flexibility allows them to release students early one day a week to allow for full staff and other meetings. Although Pilot Schools can change the length of the school year, they do not do so because they create more teacher-student time during the school day.

Case Study: Scheduling
At The Harbor School

The Harbor School is an Expeditionary Learning Outward Bound middle school in Dorchester, MA. There are 265 students in grades 6-8. The faculty consists of 16 core academic teachers and 19 other staff (student support, technical support, specialists, and administrators). Students and teachers are divided into Grade Level Teams and Crews, or advisories.

The Achievements

This case study focuses on the decisions that led to the school's schedule, which successfully creates 1) large blocks of time for teachers to collaborate, 2) high core academic instruction time and intensive electives for students, and 3) large amounts of time in advisories, which increases the personalization in the school.

<table>
<tr><th></th><th>Monday</th><th>Tuesday</th><th>Wednesday</th><th>Thursday</th><th>Friday</th></tr>
<tr><td>7:40AM</td><td>Breakfast</td><td>Breakfast</td><td>Breakfast</td><td>Breakfast</td><td>Breakfast</td></tr>
<tr><td>8:00 AM</td><td>Science</td><td rowspan="2">Humanities</td><td>Science</td><td>Science</td><td rowspan="2">Humanities</td></tr>
<tr><td>9:00 AM</td><td>Math</td><td>Math</td><td>Math</td></tr>
<tr><td>10:00 AM</td><td rowspan="2">Humanities</td><td>Science</td><td rowspan="2">Humanities</td><td rowspan="2">Humanities</td><td>Science</td></tr>
<tr><td>11:00 AM</td><td>Math</td><td>Math</td></tr>
<tr><td>12:00 PM</td><td>Lunch</td><td>Lunch</td><td>Lunch</td><td>Lunch</td><td>Lunch</td></tr>
<tr><td>12:30 PM</td><td>Reading</td><td>Reading</td><td rowspan="4">Faculty Collabora-tion Time</td><td>Reading</td><td>Reading</td></tr>
<tr><td>1:00 PM</td><td>Crew</td><td>Crew</td><td>Crew</td><td>Crew</td></tr>
<tr><td>1:30 PM</td><td>Computers</td><td>Phys Ed 2</td><td>Computers</td><td>Phys Ed 2</td></tr>
<tr><td>2:30 PM</td><td>Phys Ed 2</td><td>Computers</td><td>Phys Ed 2</td><td>Computers</td></tr>
<tr><td>3:30 PM</td><td colspan="5">End of School Day</td></tr>
</table>

This simple schedule includes class periods of either one or two hours. These blocks of time are the same for every team and every day of the week; classes are "in frame" with other grade levels. With regularly blocked times, double periods can be accommodated at any time of day. Classes meet from 8:00 am-3:30 pm every day except Wednesdays, when students are released at 12:30 so that faculty can meet. Core academic classes meet five days a week, and the academic team has the same four hour instructional block for flexible use each day. Physical Education, Advisory, and Language Skills meet four days a week. Double blocks are used for Humanities classes.

The principal of the school described the scheduling principles:

It was a shell…that provided two things: simplicity, so that the whole structure worked, across all three grade levels. If the schedule is complex and esoteric at any one grade level, it just gets compoundedly more complex. That's difficult. And … one of the real structural strengths of this school is that our schedule model has remained pure and simple.

Two, the underlying principle was that we wanted to provide a teaching team a group of kids for a block of time that could make flexible instructional decisions, so that the schedule didn't ruin plans if a teaching team wanted to go out of the building all day, if they wanted to take half the kids, if they wanted to have a project day all day. We didn't want the schedule structure to be the decision maker in those instructional choices. We wanted to create a large, flexible block of time for teachers to make choices.

Common Time for Teachers to Collaborate

Four days a week, grade level teams have a double block (2 hours) during the school day to plan, collaborate, or prepare individually. Of those eight hours, three hours are for team collaboration and five hours are for individual preparation. Throughout the week, collaborative time includes facilitated grade level team meetings and student study team meetings for behavior and special education issues (including a pre-referral process for academic learning needs). Teams meet while students are with specialists (physical education, computers, and creative writing). In addition, on the early release Wednesday afternoons, there is a three-hour block of time for teachers to meet. Three Wednesdays a month, the whole staff meets for one hour of that time. Typically, the remaining time is spent on a rotating basis for the following groups and activities—grade level teams, subject teams, looking at student work using protocols, and externally facilitated workshops focused on school-wide priorities.

In addition to the in-school time, the school has committed to two department release days, with classes covered by paraprofessionals, in which teachers of a certain discipline can work together on curriculum planning across grades.

High Core Academic Instruction Time and Intensive Electives for Students

The Harbor School has a seven-hour student day length (average over 5 days). The time spent on core academic instruction is four hours. The amount of time on core academic instruction, which includes Humanities, Science, and Math, is high partly because during most of the school year, there are no courses of choice. However, electives are still offered. For two seven-week periods a year, Wednesdays are devoted to electives. These are teacher-developed, intensive courses of choice for mixed grades. Teachers volunteer their expertise and passions to this endeavor. Examples of elective titles include "Lift Ev'ry Voice" about the relationship between African American music and African American history, "Motor-vation" introducing students to engine building, and "Students in service for a caring community" to design a community service project.

Plenty of Time in Advisories

The Harbor School uses advisories, or Crews, to create smaller learning groups of students. Crews create a feeling of community within the larger context of the school and ensure that at least one adult in the building knows each student well, both academically and socially. Crews meet for two thirty-minute blocks of time four days a week. Currently, crews stay together for three years. Half of the advisory time is spent in sustained silent reading. The other half of that time is spent in community and leadership building activities. The school is working towards involving all adults in the school in advisories, to bring the student to adult ratio down, improve outreach to families, and spend longer periods of time building community.

Refining the schedule

The defining goal of the current schedule was the desire for a two-hour block of time for teachers to collaborate. When the school was first opened, the principal designed the original schedule. With staff input, it has slightly changed each of the three years the school has been in existence.

In the school's first year, the enrollment of one grade level (grade 6) did not permit the hiring of enough specialists to provide coverage for students two hours a day. Core academic teachers taught the special classes like physical education and computers. In the school's second year, enrollment allowed the hiring of two specialists. By the third year, with the addition of the third grade level (grade 8), the school was able to employ four specialists, enough to cover classes two hours a day.

Suggestions for schedule changes emerge from conversations among grade level teams, the representative leadership team, and the whole staff. Changes to the schedule are made by consensus. The school's culture is such that staff feel empowered to suggest changes that benefit them.

The school's administration has recognized the importance of "giving people control over what they do with their students when they have them" (Assistant Director). The schedule allows teams to rearrange their time as they see fit because it is independent of, but in frame with, the schedule of other teams. Teachers feel empowered to "work within the confines of time to do what works for them and the kids. They feel they have the autonomy" (Assistant Director). For example, the eighth grade team recently decided that they needed more time in their Crews to work on academic issues and student portfolios. They moved the silent reading time, which happened in advisory before, into the two-hour humanities block, freeing up time for a study period. Within advisory, the students worked on their portfolio elective.

Challenges of the current schedule

Traditional Boston Public Schools have a six-hour and forty-minute school day. One challenge that the school faces with an 8:00 am to 3:30 pm school day is that it is too long for some students. These students have trouble focusing and staying on task the last two hours of the day. Staff decided by consensus to explore with BPS reducing the day length by half an hour. This change would have direct effects on the amount of common planning time, the amount of core academic time, and the amount of time in advisories. The after school program would correspondingly increase enrichment work with students in most need of extra academic attention.

Another challenge of the current schedule is that because specialist teachers provide coverage during the grade level team common planning time, specialist teachers cannot meet with core academic subject teachers. In addition, specialist teachers do not teach all students in a grade level team. Without the time to plan together and without specialists working with all of a team's students, it is impossible to create cross-disciplinary curriculum between specialists and core academic teachers. For example, if all students do not take computer class, they cannot be expected to complete a project involving computer knowledge.

Providing professional development for faculty

Collaborative planning time for faculty

Teachers at Pilot Schools teach about the same amount of time as teachers in BPS. However, more than half of the Pilot Schools work contracted time longer than that of BPS schools. Much of this is due to the emphasis on teacher collaboration, and preliminary evidence suggests that the collegial atmosphere, high buy-in to school practices, and opportunities for leadership lead to lower teacher turnover and higher rates of teacher satisfaction. Johnson and Landman (2000) studied the time spent on the job by teachers in Boston public, charter, and Pilot Schools. They found that Pilot School teachers, like charter school teachers, work much longer hours than their contracted day, but that Pilot Schools were more able to meet the basic needs of their teachers. Pilot Schools offered teachers greater job security, a procedure for grievances, and salary levels guaranteed by their status as BTU members.

Finding:

Pilot Schools have a significantly greater amount of professional development time - collaborative planning time during the school day, summer professional development time, and in-service professional development days - than do regular BPS schools for faculty to focus on improving teaching and learning.

Pilot Schools have scheduled between one to 10.5 hours of time for common planning time each week. Although school schedules do not specify how often this time is used for collaborative planning, Pilot School directors believe teachers use the majority of this time to discuss issues of curriculum and instruction collaboratively. In some schools, decisions to use some of this time for individual planning may occur. Five schools schedule this kind of collaborative planning time at least three days/week. Pilot School directors view common planning time both as in-school professional development and as a way for teachers to have flexible time to best meet the needs of students and parents. This professional development time is in contrast to traditional BPS schools, which function under a negotiated contract regulation requiring one 48-minute common planning time period and four 48-minute planning and development periods per week for K-5 schools and five periods of individual preparation for 6-12 grade schools. Further, non-Pilot schools may not have more than two planning periods per day. (Note that the BPS regulations are for planning and development time and not specifically for common planning time for faculty.)

> We have so much extra professional development time just to be able to deal with the needs of the students, and train the teachers ... trying to get the curriculum in a direction that will meet the needs of the students

> Since it's a small staff and we meet for three hours, collectively, as a whole staff each week, and then by house for two hours, we learn about our colleagues' practice…. we just realized how important the houses are, to really know ... our colleagues' practice, questioning why is a teacher teaching a particular way.

One of the ways that Pilot Schools have created extra common planning time is by moving administrative business to specific times during the week. For example, Pilot School directors said:

> We try to do all the administrative stuff in written announcements. That's a big push we're working on.

> One of the complaints the staff made was that there were too many meetings happening, and it didn't allow them common planning time. So we shifted our whole meeting schedule to keep administrative meetings one hour a week, and basically all meeting time is focused on staff planning…

Pilot School directors also recognize the need to give teachers long and varied blocks of common planning time. Just as students learn best when they have the time to fully engage in an activity, teachers also need extended, uninterrupted time to meet and plan with one another. Eight of the schools have at least one two-hour block for teachers to collaborate, and three have at least a three-hour time period per week. Longer blocks of time also allow for teachers to work with a wide range of other teachers during their meeting times. If teachers need to work with a specialist, for example, they have overlapping common planning time.

> Well, the schedule changed, and gave us more professional development time. This schedule has a lot of openings in the day for teachers to meet. That's been really helpful. The math and world language teachers only teach four days a week. It's the most amazing schedule. Other teachers have two and a half, three hour blocks free, if you want to call it free, non-contact hours with kids.

> We have three levels of how [teachers] meet. They have common planning time where they meet with their grade; it's teachers teaching the same grade…. So grade one teachers have their 90 minutes in which they do that. Now let's go back to the 90 minutes that we have once a

> week. In those 90-minute periods, there is time for them to meet as loops. And there're times that we have divisional meetings where the lower school meets as a group, the upper school meets as a group…The SPED teachers, sometimes they meet as a group because we have three SPED teachers. Sometimes they meet as a team of three and sometimes they meet with the divisionals -- In other words, it depends on the need, it depends on the discussion, it depends on what we're addressing.

Finally, common planning time is flexible in that teachers have decision-making authority over the content of their planning time. Teachers often raise and focus on current classroom concerns.

> Each cluster determines how long they're going to be ... and then they have individual planning time. ... Clusters meet for an hour and a half, so they have three hours before Friday… So on a good week, they have five hours of interdisciplinary meeting time. On a great week, they'll have seven.

> It happens more within the houses because each week the houses meet for two hours. So the teachers are talking about the curriculum and they're saying, " Oh, I want my students to come in and share this." Then the houses also have "child studies," where a teacher might say, "I have a concern about a child, I need support." So everybody in the house will go and observe that student before the child study takes place, and the teacher would present the student, and they'll get feedback on what they saw and figure out the strategies and try to help the teacher. This past year the houses actually had a lot more of the sharing and learning about practice.

Summer professional development and school year staff retreats

At least six of the Pilot Schools extend the teacher-contracted year by scheduling professional development time both before and after the school year. All are able to pay teachers for this time as part of their hiring contract. This time is used both to reflect upon the previous year and to plan for the next year.

At least two schools schedule weekend retreats during the school year. These retreats allow schools to reflect on and assess their progress during the year, to change course midstream, and to suggest any modifications in staffing, scheduling, and curriculum.

"Each year, we spend 15 days beyond the school year together. Traditionally, it's five days at the end of the year, and ten days before the year starts. We actually have two weeks in the summer. We have a week after the students are dismissed ... and then in the summer we meet one week for curriculum team meetings."

Pilot School Director

In-service professional development days

All Pilot Schools provide their staff with individual professional development days.

> … staff have two half-days each month, that they can spend for their own professional development. So if a teacher wanted to go to observe another classroom in another school, because he wants to get better at a math lesson, that's his choice. You have a calendar, people have to write on the calendar, we need to know when people are out.

Professional development is viewed flexibly. Directors use their school's scheduling autonomy to help teachers meet the needs of students as they arise by making the content of the meetings based on teacher needs.

"We don't take professional days when the rest of the system does. We take them when we want them and need them."

Pilot School Director

Case Study: Professional Development At The Mission Hill School

The Mission Hill School is a member of the Coalition of Essential Schools and is located in the Mission Hill neighborhood of Roxbury, MA. There are 163 students in grades K-8, divided into two Houses. This case study focuses on the role of the House in providing professional development opportunities for teachers (Straughter, 2001).

The Goal

Creating multiple opportunities for teacher professional development

The Achievements

- Weekly three hour meetings as a full faculty for school-wide business topics—all 10 K-8th staff
- Weekly two hour House staff meeting (two houses), plus middle school teacher planning time
- One weekend retreat during the school year
- Five days at the end of the school year
- Ten days at the beginning of the school year
- Two half-days each month for individual professional development

The role of the House in creating professional development opportunities

The Mission Hill School is structured into two Houses. Each House contains four multi-grade classrooms, from kindergarten to seventh grade, and the four teachers in each house are responsible for all 80 students within their house. The school's 8th grade class is from both houses and is located in the middle of the school. The House structure serves many functions in the school, including helping the school create personalized learning environments, ensuring that teachers and students know each other well, and serving as a part of the school decision-making process.

The House structure helps teachers to get to know their colleagues' practice, and to question why a teacher is teaching in a particular way. Houses have formal two-hour weekly meetings during which teachers share questions, concerns, and best practices with each other. The topics of House meetings depend on the teachers' needs; a meeting could focus on a child study, curriculum, parent meetings, or other topics. House meetings occur after school but during contracted time for teachers.

Ensuring time to meet outside of the school year

Mission Hill teachers have a weekly retreat during the February vacation and fifteen days of summer professional development time split between the end of the school year and the beginning of the following school year. The June time allows teachers to reflect on the year just ended. The August time helps teachers to "hit the ground running" when they start school again, as they have the time to, for example, plan for the year—even set up their room--and not feel rushed.

Mission Hill School has made concentrated amounts of time for teacher professional development a budget priority. The school has allocated some of its funding--the equivalent of another full time position, to pay staff stipends for this professional development time, although these stipends do not cover the entire cost of teacher time. The culture of the school is that staff understand that this additional time is critical to the success of the school.

Providing staff with flexible, individual professional development during the school year

Mission Hill staff have two half-days each month that they can spend for their individual professional development needs. Mission Hill does this planning within each House. A teacher decides to pursue a particular opportunity and brings it to the House. For example, a teacher can decide to observe a class at another school. Sometimes this time is used for working on a House task. The other teachers in the House decide if the teacher can be gone for that time. Conflicting events or other teacher requests for time may make the date impossible. If there are no conflicts, then the teachers decide on how to cover the classroom for that length of time. A decision is recorded on the school calendar for all to see. It is not the responsibility of the school administration to ensure that a class is covered.

We're going into his room, we're documenting what we're seeing, we're taking notes, we're seeing what he's doing, the way he's presenting it, the way students are doing it. Then we come to the meeting where everybody at the house is present, he presents his curriculum and what's his thinking, and then people respond, both with cool and warm feedback where [people say], "I love this, this is great." And people went, "[teacher name] what the hell were you thinking about this?" So, people, they're talking about their practice, they're defending it. And not defending it in a negative way. When our students are defending their portfolios, it's, "we want questions, we want to challenge you. Can you answer these questions?" … So there's that formal structure, but it's the House that's determining what needs to be done.

It is important to note that teachers are allotted two half-days each month. Teachers are not out for a full day, so there is less stress on other teachers to cover a classroom. In addition, the half day ensures that the teacher has daily contact with his or her students.

Teachers at Mission Hill still have the opportunity to attend full- or multi-day professional development sessions. Teachers who would like to take advantage of such an opportunity must present their request to the House, which most likely would send the request to the full staff. Full staff awareness helps to ensure that everyone understands and is comfortable with the decision to grant time away from the school. There are also some conferences that have been identified school-wide as important for staff to attend, such as the Coalition of Essential Schools Fall Forum. These conferences are sponsored and supported by the whole school community.

Several additional part-time staff supplement the intra-school professional development work. A part-time general curriculum consultant works with the school to locate resources, preview trip possibilities, bring in expertise, order special materials, etc. Through Boston's math professional development program, the school is also provided with a part-time math consultant who worked one year with one House, the next year with the second House and the third year will work with both. A part-time volunteer helps staff document their work and has developed an archive of student work supportive of student and curricular case studies, as well as student self-assessment. A partnership with Northeastern University starting in the fall of 2001 will extend various forms of professional development work—particularly with respect to special education, science, and math. The school is also committed to the professional development of new teachers and has a program that provides for classroom assistants for each teacher as well as a program of professional support for such teachers. Assistants usually receive a small stipend.

Involving staff in school-wide decision-making

A principle of the Pilot Schools is that "the people closest to students should be the policy makers and decision makers." To do so requires that the school operate collaboratively and that teachers are integrally involved in decision-making. Collaborative school cultures are built when everyone in the school community shares a vision for the school, when administrators create opportunities for teachers and parents to become leaders, and when organizational structures are in place for decision-making to be shared, such as groups (house teams, leadership teams, and full faculty) and meeting times for those groups. Pilot Schools find the time to allow staff to come together to discuss and make important decisions. Pilot Schools are able to make this time because they have the autonomy to lengthen and shorten their school days.

Finding:

Scheduling autonomy and their smallness enable Pilot Schools to more fully involve all faculty in collaborative decision making around significant issues of teaching and learning.

Ten of the eleven Pilot Schools have a weekly all faculty meeting. This time is viewed as integral to the functioning of the school. Pilot Schools engage teachers in a collaborative decision-making process, and this weekly all staff meeting provides time for this decision-making to occur.

> We make the plan of what we want to work on at the beginning of the year, and then we also check in at staff meeting every Friday. So we have been working on refining the portfolio guidelines, and we've been working on special education and literacy ... and also working with Project Adventure.

> We decided based on staff saying, "This is what we need." We decided everything about schedule, curriculum. We make all those decisions here, at staff meetings. To give you one example, last year we had decided that staff meetings should probably be on Tuesday, just because it changed the psychology of students saying, "Well, Friday is only a half day. Why should we go at all, period? Let's take a long weekend." And we did that for about one trimester. We also realized that we hated having it on Tuesday. We said, "We need it on Friday, where we can also think that we have more time. We don't have to do something tomorrow. We can spend more time. It's a more relaxed time ... So we moved it back.

Nine of the ten Pilot Schools that schedule all staff meetings do so by shortening the school day once a week and extending the time in school the other four

days. Whereas the Boston Teachers Union contract calls for 390 minute (for elementary schools) and 400 minute (for middle and high schools) school days, most of the Pilot Schools have longer days to allow for their collaborative meeting time while not shortening teacher time with students.

IMPLICATIONS

Providing schools with autonomy over their resources – money, people, and time -has implications at both the school and the district levels. Schools must understand how they can make best use of these autonomies to meet the needs of their community. Further, providing schools with autonomies changes the school and district relationship. Currently, there are few models to help schools and districts learn to work effectively in different ways. This section discusses implications for how schools can best use their autonomies and for re-conceptualizing the school-district relationship.

AUTONOMIES ASSIST SCHOOLS TO REACH THEIR VISION OF TEACHING AND LEARNING

Hawley-Miles wrote, "There is little rationale for restructuring resources without an underlying educational design (1997)." Indeed, our findings indicate that when most Pilot School directors discuss their goals and uses of their autonomy, they refer specifically to using them to create those conditions in the school which they believe lead to sustained student learning. The use of resource autonomy is directly related to their underlying vision for what a school should be. Research has found that schools that create environments where students are well known to their teachers, and that provide teachers with adequate time to collaborate, are better able to meet their students' needs. For the same per pupil cost, Pilot Schools use their autonomy to meet these ideals in a variety of ways, each of which has implications for school practice.

For example, Pilot School directors believe in creating a personalized learning environment in their school community in order to better meet student academic and support needs. Pilot Schools are able to do so in many ways, including having more individual time for students, organizing into smaller learning units, having smaller class sizes, creating smaller student:teacher loads, having more staff focused on core instruction, creating student advisories, using looping, and giving additional help to students who need it. They increase the numbers of staff involved in instruction by decreasing the number of programs, having less isolated or pull-out programs, and using interns, paraprofessionals, part-time staff, and consultants in the classroom. Finally, they use creative approaches to hiring such as using innovative job descriptions, hiring generalists, and giving teachers opportunities for leadership.

Pilot Schools also use their autonomies to provide more time for teacher professional development, both during and outside of the school day and year. Pilot Schools schedule summer professional development and school year staff retreats, use in-service professional development days when they feel they need them, and create more and varied blocks of collaborative planning time for teachers during the school day. They do so by modifying the length of the school day, adding extra days to teacher contracts, and using their schedule autonomy to ensure that teacher collaborative time is a priority. Underlying the use of this time is that common planning time is flexible. Teachers have decision-making authority over the content of their planning time. This allows teachers to raise current issues and to focus on classroom concerns.

Pilot Schools are start-up small schools, so they are able to staff, schedule, and budget from scratch. For existing schools trying to restructure, changing the existing culture may be more difficult. The pull of tradition may hinder implementation of the autonomies. Depending on how decisions are made to

implement the autonomies, staff buy-in may be lower than for a startup school. Also, depending upon how large schools roll out their conversions, issues of equity among staff and student assignment may emerge.

AUTONOMY PROVIDES SCHOOLS WITH FLEXIBILITY IN RESPONDING TO NEED

One of the most important lessons of how Pilot Schools use their autonomies is that these autonomies allow the schools to be flexible, responsive, and innovative in meeting the unique needs of their school community. Pilot Schools can and do respond quickly to perceived school needs, can respond in varied and multiple ways, and have the flexibility to modify their response as they go. This flexibility allows Pilot Schools to address issues earlier and provide more support than other schools might be able to. Schools have the time and flexibility to design courses around a specific situation that arises in a school, to modify course schedules or offerings based on student feedback, or to allocate budget resources to an area of need.

In addition, our findings show that Pilot Schools have flexibility built directly into their schedule. For example, Pilot Schools have long and varied blocks of instructional time. This variety allows teachers to modify instruction based on how a lesson is going, to explore learning opportunities outside the classroom, to offer interdisciplinary courses, and to meet at different times of the day and on different days. Having long and varied blocks of common planning time allows teachers to meet with others to plan interdisciplinary work or to ensure that a grade level teacher, specialist, and special education teacher can meet to quickly respond to a student's needs. Having flexibility with the daily schedule allows schools to add in advisories and after school programs. Without this autonomy, quick responses to student needs are not possible.

THE ROLE OF THE DISTRICT IS CRITICAL IN HELPING SCHOOLS MAKE BEST USE OF AUTONOMIES

Providing schools with autonomies has critical implications for the role of the district and its relationship with schools. Schools and districts must forge a new relationship that is mutually supportive, beneficial, and focused on the needs of the students. There are few models to which schools and districts can turn. For example, while public charter schools do have autonomy over these resources, they do so without district support. Separate from the district, they must arrange for their own transportation, food services, and facilities. This puts added stress on the schools and takes away from the school's focus on using all of its resources—including people, time, and money—to create the conditions that best support students.

A similar innovation with a group of seven public schools in Edmonton, Alberta, Canada gave comparable results to those described here (O'Neil, 1995/6). With what they termed school-based management, schools were given budget, staffing, and schedule autonomy. While they remained accountable to district curriculum frameworks and accountability, they made decisions over how money was spent. The experiment was so successful that the district decided to grant the same autonomies to all schools. The district, rather than seeing the need for its services decrease, instead saw demand rise. Michael Strembitsky, the superintendent at that time, argued that, "People who had all the answers when they couldn't make decisions found that they could benefit from a second opinion, especially if it was free… The schools didn't want people who told

them what they had to do. Schools were looking for advice that they could sift through to see whether it made sense for them." The relationship between schools and the district changes to be one of mutual support.

By providing schools with autonomies and flexibility, the district is required to adopt a new role of service provider in helping schools to improve and raise student learning. In the creation of this new relationship, the district must transition from a role of mandating reforms to be implemented and monitoring to ensure that schools implement them, to a role of providing services and support to enable each school to achieve its stated goals and mission. This has several implications.

First, by making many central office costs discretionary, the district becomes more accountable to the needs of each school. For example, if a significant percentage of schools choose not to access certain discretionary central office services, and instead have the per pupil funds (that the service would cost) placed in their lump sum budget, then central office has fewer dollars by which to staff and program central office. The district must then make decisions about which services are requested by schools and should be staffed and funded, and which are not viewed as valuable and should be phased out or restructured. The district must review all of its current programs to assess their value in improving teaching and learning, and develop a more responsive organizational structure.

Second, the district must develop strong accountability systems to ensure that schools are taking advantage of their increased autonomy and flexibility, and are showing improvement across multiple measures. Schools will need ample data sources on a range of indicators to assess their progress and gaps, and to use this analysis to drive improvement efforts. As well, these indicators should provide ample information to the district and larger public about how well each school is serving its students. The district will need to have a clear process in place to work with schools that are not demonstrating progress over time.

Third, the district needs to have a process in place to train and prepare a new cadre of educational leaders who are prepared to lead innovative and autonomous schools. Such schools require a new brand of visionary and entrepreneurial leaders who are able to use the autonomies of budget, staffing, curriculum/assessment, governance, and time to create unified learning communities that better serve the needs of a diversity of students. Districts should have in place principal preparation and certification programs to lead these new schools, as well as professional development for current principals.

FUTURE DIRECTIONS

The practices and policies implemented by the Pilot Schools have been described generally. Future studies will examine specific practices to determine how it is that these practices support students and teachers. For example, all the middle and high schools have student advisories: What occurs in these advisories? How are they arranged, and in which ways do advisories seem to be effective? In addition, future studies could address in more depth how faculty use their collaborative time to contribute to student learning. A more accurate picture of collaborative time in Pilot Schools will go far to inform us about how scheduling autonomy improves student and teacher learning.

We must also understand more fully new models of relationships between schools and districts to support schools' use of autonomies. Currently, the Boston Pilot Schools Network is unique among US public schools in its formal autonomies from district constraints. Pilot Schools work within a district unlike state charter schools, have worked together to form strong bonds and working relationships with each other, and are supported in their work by a third party organization. How the district and the Pilot Schools can support one another has important implications for extending autonomies to other schools, both within the district and in other districts considering granting schools these autonomies.

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APPENDIX A
DESCRIPTIONS OF THE PILOT SCHOOLS

The Boston Arts Academy

The Boston Arts Academy, opened in September 1998, is a high school committed to the preparation of talented, highly motivated students for entry into the profession, conservatory, arts school, or liberal arts college of their choice. The mission of the Boston Arts Academy is to develop the artistic potential of young people interested in dance, music, theater, and the visual arts within the context of a rigorous academic program.

The Boston Arts Academy is a partnership of the Boston Public Schools and the Professional Arts Consortium (Pro Arts), a non-profit organization of six institutions of higher education in the arts, including the Boston Architectural Center, Berklee College of Music, Boston Conservatory, Emerson College, Massachusetts College of Art, and the School of the Museum of Fine Arts. These higher education partners are committed to an integral, ongoing involvement with the school.

Integration of the arts and academics into a curriculum that is challenging and relevant to a diverse student population is a primary goal of the arts high school. To facilitate such a curriculum, which is both arts-centered and linked across disciplines, the Boston Arts Academy has incorporated innovative methods of teaching and learning, including block scheduling, faculty team teaching, core subject areas, and portfolio and performance-based assessment.

The Boston Evening Academy

The Boston Evening Academy is a diploma-awarding, competency-based school which offers a full high school curriculum. Its mission is to provide an alternative, evening high school program to students who, for a variety of reasons—including parenting, the need for full-time work, or the inability to successfully participate in a regular day program—have not been successful in their past school experiences.

The BEA provides an experienced and enthusiastic staff committed to developing an alternative but rigorous program. Motivated students participate in a curriculum which incorporates competency-based and project-based learning experiences. In addition, the school's work experience component demonstrates the link between school and work while preparing students for the realities of the world of work. Summer training at University of Massachusetts Boston and a mentoring program with Fidelity Investments employees add to the opportunities provided to students at BEA.

The "whole student" is the focus of the BEA. Personal responsibility by the student, achieved through strong school to home ties and parental/family support, is strongly emphasized. Smaller student-teacher ratios, family involvement, health care and counseling services, an alternative curriculum, and work experience combine to help each student reach his or her goals.

Fenway High School

Located in the Fenway area, Fenway High School's mission is to create a socially committed and morally responsible community of learners that values its members as individuals. The school's philosophy reflects a commitment to the principles of the *Coalition of Essential Schools.* Fenway, through close work with its collaborating partners (Children's Hospital, CVS Pharmacy, and the Museum of Science) and a required six-week senior year internship, provides every student with the skills necessary to achieve a successful transition into college or the workplace.

In the spring of 1996, the US Department of Education named Fenway as one of twelve New American High Schools across the country. This award recognized Fenway's innovative integrated, curriculum, strong school-to-career program, and pioneering work on authentic assessment.

Fenway's academic program demands that each student achieve at a level that challenges his or her capabilities and builds the confidence to become a lifelong learner and a critical thinker. Habits of mind, academic excellence, self-esteem, collaborative learning, and leadership development are guiding principles in the design of the curriculum.

Students demonstrate their depth and breadth of knowledge through portfolio and exhibition. Parents are encouraged to sit on a graduation committee. Proficiency is required in Math, Humanities, Science, and Technology. Students receive exposure to World Languages and the Arts. Much of the program is project based and includes a special whole-school Project Week. Fenway students attend college at a rate of 90+%.

Greater Egleston Community High School

The Greater Egleston Community High School was established by the Egleston Square Coalition in 1992 as a demonstration program of the United States Department of Labor to decrease the dropout rate, improve the educational achievement of program participants, decrease negative gang activity, and empower the entire community .The mission of the Greater Egleston Community High School is to create a community of learners who provide responsible local and global leadership and participation.

The Greater Egleston Community High School provides a safe, caring, nurturing, affirming, and respectful environment where 100 students can learn to use their minds well and develop academically, socially, artistically, and spiritually so that they may be conscientious, productive, and happy adults. Egleston's non-traditional curriculum encourages active participation via hands-on learning and interdisciplinary projects, while emphasizing creative and critical thinking skills in all areas. Model projects such as Project ProPel, to support pregnant and participating students, and Diploma Plus, through which all students present portfolios, exhibitions, community action projects, and Senior Seminar products, all contribute to the strong community built into the goals of the school.

Parents and students can expect personal attention, a caring environment, challenging academics, and guidance in planning of the future, be it higher education and/or a career. As D. Gethers, a student, proclaims, "I've dreamed of a school like this all my years in high school. We learned how to communicate not only with each other but with the community as well. We work together but learn

separately. I enjoy coming to school every day, and that is not usual in schools these days. The best thing about GECHS--they are here for me."

The Harbor School

The Harbor School: An Expeditionary Learning Center is a challenging, small, and caring middle school. The school opened in September 1997 with sixty sixth grade students and has grown to an enrollment of approximately 264 students, grades 6 through 8. The Harbor School has an average class size of 22, an extended school day and a strong commitment to rigorous academic preparation. Students stay with a team of teachers for three years to create an environment in which each student can find attention, challenge, guidance, and inspiration.

The Harbor School focuses on academic excellence and instilling such traits of character as taking initiative, becoming responsible community members, caring for other people and the environment, and providing service to others. We strive to provide students with the skills, attitudes, and experience they need to be leaders, to think independently, to gain admission to the high school of their choice, and to make wise decisions about post-secondary education and life after high school.

The school's real-world approach to learning is centered on the notion of students as professionals: students work in the field and within the classroom as journalists, authors, historians, scientists, and mathematicians. Through meaningful projects, students apply and refine their knowledge and skills and demonstrate what they know and are able to do. Students frequently exhibit their work to parents and community partners.

Families are vital partners in the life of the school. Families have a voice in school governance and are encouraged to enrich our curriculum with their expertise and interests.

The Harbor School's resources will be enhanced by partnerships with University of Massachusetts Boston, Thompson Island Outward Bound Education Center, The New England Aquarium and Expeditionary Learning Outward Bound, New American Schools design team.

Health Careers Academy

The Health Careers Academy is a small, academically rigorous learning community for students who express an interest in the health professions. HCA supports students as they develop the academic, social, and personal skills they will need to succeed in higher education and in health care careers. Individual guidance and support help each student set high expectations for personal achievement. Located on the campus of Northeastern University, the HCA offers students an opportunity to experience their high school years within an urban college environment.

The HCA provides an academic curriculum which integrates health and health careers into the academic disciplines. Students are able to explore career opportunities through community service, internships, and work experience in a variety of health care settings. HCA students are involved in a variety of student organized activities, including: student council, mock trials, film society, girls group, peer leadership, community involvement, and HCA scholars. Academic support is available through after-school tutorials, student study groups, and individual teacher one-on one tutoring. Parents can

expect a commitment to frequent and open communication and the opportunity to meet regularly with HCA teachers and student services staff about their child's progress in the school.

The HCA continues to be committed to the children of Boston and to public education and believes that hard work combined with constant, effective effort will lead to positive results. The HCA is a collaborative effort of the Boston Public Schools, Northeastern University, and the Center for Community Health, Education, Research, and Service (CCHERS).

The Mission Hill School

The Mission Hill School opened on Mission Hill in the fall of 1997. Designed and directed by Deborah Meier, the school is built on the successful twenty year experience of the Central Park East schools in East Harlem, New York.

Classes are small and multi-age. The pedagogy and curriculum stress the integration of traditional subject matter in the sciences and history with a focus on learning through the arts. An emphasis on building both the skills and habits of mind needed to be life-long learners are its basics. Modern technology is integrated into all classroom work. Classrooms are designed to be a cross between art rooms, libraries, math, science, and computer labs. Most student work is done in small groups or one-on-one.

School and family collaboration is central to its operational life. The school itself is a laboratory for democratic conversation and debate. Graduation from 8th grade is built around collaboratively designed performances that demonstrate the capacity to fulfill high school expectations and enter into young adulthood. All members of the school community are responsible for making such expectations realizable.

New Mission High School

New Mission High School's mission is to empower students in the city of Boston to become self-directed, life-long learners. NMHS provides an intellectually rigorous high school education in a small, supportive, personalized learning community. Enabling students through multiculturalism, community, creativity, and inquiry are at the core of this school's culture.

Inquiry as an innovative approach to education is at the foundation of the essential habits, skins, and content that are the basis for NMHS's educational program. The humanities, science, mathematics, and the practical and performing arts are ways for students to investigate the world around them and search for and fashion meaning, transforming the exploration of learning from passive to active. A project-based approach to curriculum allows students to investigate areas of interest and helps them develop responsibility for their own learning by placing them at the center of the learning process.

The assessment system at NMHS complements the inquiry and project-based approach, functioning primarily as a feedback system to assist a student's development. The traditional grading system is replaced by an intensive portfolio development process. These portfolios are monitored by advisors and reviewed several times a year by parents. The process requires students to document their learning by collecting evidence and presenting it in "exhibitions" to teachers, parents, peers, and the larger community. Students are not grouped in the traditional manner, but are promoted based on their

demonstrated ability to assume more independence in designing their own learning projects. Graduation is determined by demonstration of competency in the essential learning requirements of the school, not by the traditional system of points or time attended.

Central to life at NMHS are the Advisory Learning Teams, which form the hub of NMHS's personalized learning system. Small groups of students are assigned to an advisor with whom they meet daily over the course of several years. These teams provide the structure through which students and teachers get to know each other well and learning becomes more personalized to better meet the needs of the individual learner. As one student explains, "I never believed I would find a high school where I really felt I mattered, where people, teachers and the other kids too, really care about each other."

The Patrick Lyndon School

As Albert Einstein reminds us, human beings are born with an insatiable desire for knowledge. It is this innate sense of human curiosity that the Patrick Lyndon School hopes to capitalize upon as it strives to create the highest quality learning environment possible for its students. The school's over-arching goal is to foster a lifelong love of learning in students while helping them develop the specific skills needed for ongoing academic success and personal maturation. The Lyndon works to help students become successful, contributing community members and responsible future citizens.

The Lyndon School's commitment to its students is displayed by its pledge to the parents. Parents can expect full participation in their child's schooling in a number of different capacities such as parent forums, fundraising projects, and hiring personnel. In addition, this school's unique governance structure, consisting of a management team of three, a teacher-led Education Committee, School Site Council, and a Parent/Teacher Association, aim to capitalize on the collective wisdom of a wide range of individuals. This helps to ensure that the school is responsive to parental and community concerns.

The teachers at the Lyndon develop an interdisciplinary curriculum around the ongoing theme of "Community." Sub-themes are developed throughout the school curriculum in relation to this over-arching theme of community. Students study computer science music, art and physical science in cross-classroom groupings to promote the integration of bilingual with monolingual students. After-school programs offering chess, dance and visual arts are operated by the parents. Lyndon students can expect an enriched curriculum that encourages them to construct knowledge in an active, exploratory mode.

Josiah Quincy Upper School

Connected in mission, culture, and climate through the consistency of its student body to the Lower school, the creation of the Josiah Quincy Upper School will result in the only unified K-12 program within the Boston Public Schools. This Pilot School will have a unique programmatic structure consisting of four pavilions: the Information Pavilion, centering on science, technology, and mathematics; the Cultural Pavilion, developing historical and cultural sensitivities; the Pathfinding Pavilion, encouraging individual expression and exploring 21st century issues; and the Renewal Pavilion, focusing on mental, emotional, and physical health. This school will also feature a longer school day and an outward bound program.

The mission of the Upper School, in concert with the Lower school, is to deliver an academically rigorous program that will empower every student to learn, to achieve success, and to participate responsibly in a pluralistic and global society.

The Upper School will be located temporarily across the street from the lower school in new, state-of-the-art modular classrooms. Its permanent site will be near to the downtown financial district, universities, cultural institutions, health care providers, and government offices. This will facilitate extensive partnerships with these entities that will enrich our academic life.

Young Achievers Science and Math School

Young Achievers school community believes that all children are capable of great things. At this school, high expectations for learning in a safe and socially responsive school environment are in place to promote academic achievement. Meaningful collaborations with colleges and universities stimulate and facilitate reflection, experimentation, and assessment through teaching and learning. The curriculum engages children in their learning and actively involves students in asking questions, followed by an exploration of a range of responses and reactions. Students compare and analyze information, then construct knowledge and understanding through a rigorous teaching and learning exchange between and among students and teachers.

The use of rich curriculum materials and resources and students' interests--rather than a textbook-driven teaching and learning experience--is one of the foundations upon which Young Achievers operates. Responsive classroom teaching and learning strategies and techniques are integrated through morning meetings, an extended school day program, learning centers, and a system of discipline that facilitate and nurtures self-management, responsibility, and self-discipline. An additional approach is that of looping-a system in which teachers and students spend two years together.

Recognition and acknowledgement (through curriculum) of the culture, history, traditions, celebrations and values of the students and their family is a strength of Young Achievers. Strong relationships within the school, and also between the school and families, form a basis for a caring school community and a student-centered learning environment. Decisions are made collaboratively with teachers, administrators, and parents. Faculty believe that the power and the responsibility to work hard, to achieve, and to make a difference in the lives of others is a personal as well as a shared endeavor within and between the individual and the collective school community.

APPENDIX B
PILOT SCHOOLS NETWORK PRINCIPLES

- Pilot Schools should have high expectations for each and every student, and the education students experience should reflect these expectations;

- The people closest to students should be the policy makers and the decision makers, including teachers, administrators, parents, and students themselves; This calls for democratic forms of school governance and facilitative leadership;

- Schools should be small and personalized, so that teachers and students know each other well;

- The school culture should promote innovation and risk-taking, and professional development should be an integral part of daily school life;

- Learning should be purposeful, authentic, challenging, and creative, and build students' capacity to take responsibility for their own learning;

- Authentic forms of assessment, such as portfolios and exhibitions, are key to improving learning and teaching;

- Families are critical partners in creating high performing pilot schools;

- The people who are responsible for the learning and decision making should be held responsible for the impact of the school in the lives of learners and of the community.

APPENDIX C
DEMOGRAPHICS OF PILOT SCHOOLS AND BPS*

Percent of students by ethnicity in Pilot Schools and BPS

	African-American	Hispanic	Asian-American	White	Native American	Total Enrollment
All of BPS	48%	27%	9%	15%	<1%	62645
Pilot Schools	49%	22%	8%	20%	<1%	2607 (4%)

Percent of students by status in Pilot Schools and BPS

	Free / reduced lunch	Sped (SS and MS) ****	First language not English
All of BPS	46597 (74%)**	11505 (18%)**	12927 (21%)**
Pilot Schools	1353 (52%)***	225 (9%)***	426 (16%)***

* Figures as of June 2001.

** Of all BPS students

*** Of all Pilot School students

****See Appendix F for description of the Network's philosophy on special education classification and services

APPENDIX D
LONGITUDINAL QUANTITATIVE DATABASE INDICATORS

The Research and Evaluation team has developed a web-accessible, longitudinal, quantitative database for the Network. CCE uses multiple indicators of student and school performance in addition to standardized test scores, developed in collaboration with school communities, district administrators, and Network personnel. CCE will collect this data annually. The database includes some of the indicators below:

Student Body Profile	# students by grade and gender
	# students by grade and gender and by ethnicity
	# students by grade and gender and by free/reduced lunch
	# students by grade and gender and by special education
	# students by grade and gender and by bilingual status
School Practices	average # students/ core academic teacher/day
	average 9th grade English class size
	average 1st grade class size
	average student:-teacher ratio in algebra (or algebra equivalent)
	minutes/week for collaborative planning and/or review of student work
	predominant length of a typical instructional period, in minutes (academic; give 3 possible lengths)
	school structured in small learning communities
	length of school day (in minutes)
	daily time on core academic instruction by teachers, in minutes
	daily time on core academic instruction by students, in minutes
	minutes/day for a student for electives (choice of courses)
	number of electives offered
	average teacher load per day
	average teacher load per term
	# years teachers and students stay together

APPENDIX E
INDICATORS OF SCHOOL PRACTICE

High School: Indicators of School Practice[13]

	HS1	HS2	HS3	HS4	HS5	HS6	BPS
Average number of students seen by core academic teachers each day	77	45-60 Sr 30-45	18	65	50	53	
Average daily teacher load	91	45-60 Sr 30-45	26	79	50	59	
Average 9th grade English class size	19	15-17	21	24	17	24	33:1[14]
Average algebra equivalent class size	16	17	21	22	17	24	33:1[6]
Regular education teacher:student ratio	8.5	13	15.2	12.6	10.1	9.5	
Length of student school day (min)	393	212	311	351	387	420	400
Length of school day including after school contracted faculty meeting time (min)	423	347	360	388	421	431	400
Minutes per week common planning time	505	300	237	255	530	57+(?)	240[15]
Number of days of common planning time per week	Up to 5	5	2	2	5	1	
Average daily time on core academic instruction for a teacher	178	164	194	204	160	164	240[16]
Average daily time on core academic instruction for a student	226	140	182	204	237	290	
Daily time on electives for a student	44	10	14	68	48		
Number of electives offered	7	16	9 +/-	7	16 +/-		
Lengths of instructional periods	90	50	81	70	60	55	
	55	65	75	145	55	59	
	150	70	60	60		110	
School divided into Small Learning Communities	No	No	No	Yes	Yes	No	
Number of years students and teachers stay together	1	1	2-3	3	1	1	
Advisories	Yes	Yes	Yes	Yes	Yes	Yes	
Min/week in advisories	35	50	110	180	328	90	

[13] See Appendix F for a definition of the terms used in these charts.
[14] According to Boston Public School Fiscal Year 2001 Budget. This number does not take into account modifications due to special needs or bilingual students.
[15] This includes individual planning and development periods as well.
[16] This includes all teaching time, not just core academic time.

Middle School: Indicators of School Practices[17]

	MS1	MS2	MS3	MS4	BPS
Average number of students seen by core academic teachers each day	68	15	21	90	
Average daily teacher caseload	68	37	40	105	
Average first grade class size	n/a	n/a	n/a	n/a	25:1
Average algebra equivalent class size	19				33:1
Regular education teacher:student ratio[18]	13.4	12.3	13**	14.1	
Length of student school day (min)	414	360	480	456	400 MS
Length of school day including after school contracted faculty meeting time (min)	450	432	480	480	400 MS
Minutes per week common planning time	640	330	240	260	240 MS
Number of days of common planning time per week	5	3	2	5	
Average daily time on core academic instruction for a teacher	240	230	291	200	240
Average daily time on core academic instruction for a student	240	230	291	200	
Daily time on electives for a student	20	32	45	32	
Number of electives offered	15	3+	3	11	
Lengths of instructional periods	60	105	120	100	
	120	70	90	50	
			45		
School divided into Small Learning Communities	No	Yes	Yes	No	
Number of years students and teachers stay together	3	2	1	1	
Advisories	Yes	No	No	Yes	
Min/week in advisories	120			125	

[17] Two K-8 schools structured their elementary and middle level education differently and so their indicators of school practice are listed separately.

[18] This number represents the teacher:student ratio across the entire school, including the elementary and middle school.

Elementary School: Indicators of School Practices

	ES1	ES2	ES3	BPS
Average number of students seen by core academic teachers each day		20	21	
Average daily teacher caseload	50	20	21	
Average first grade class size	25	19	21	25:1
Average algebra equivalent class size	12			33:1
Regular education teacher:student ratio[19]		12.3	13	
Length of student school day (min)	365	360	480	390
Length of school day including after school contracted faculty meeting time (min)	383	432	480	390
Minutes per week common planning time	180	300	240	192
Number of days of common planning time per week	2	3	2	
Average daily time on core academic instruction for a teacher	270	237	291	240
Average daily time on core academic instruction for a student	270	237	291	
Daily time on electives for a student	18	varies	45	
Number of electives offered		3	3	
Lengths of instructional periods	45	140	120	
		75	90	
		40	45	
School divided into Small Learning Communities	Yes	Yes	Yes	
Number of years students and teachers stay together	2	2	1-2	
Advisories	No	No	No	
Min/week in advisories				

[19] This number represents the teacher:student ratio across the entire school, including the elementary and middle school.

APPENDIX F
DEFINITIONS

Common planning time: for this study, we did not include a breakdown of how the various chunks of time are spent. We included AVAILABLE common planning time, any time when teachers could collaborate, although some of this time is spent in individual prep.

Core academic instruction[20]: time teaching core academic subjects, not electives, advisories, or specialties.

Core academic teacher: a teacher of science, math, and/or humanities. Humanities includes English, social studies, history. Electives, advisories, and specialist subjects (like physical education and art) are not considered core academic subjects.

Daily teacher load: the number of students a teacher sees a day, including electives, advisories, etc.

Length of instructional period: we include up to three lengths of instructional periods, if applicable.

Length of school day including after school contracted faculty meeting time: this length adds in time when teachers are not in contact with students (early release time), but are contractually obligated to be in the building.

Length of student school day: since many Pilot Schools release students early one day a week, day lengths are the average over a five day week.

Number of years students and teachers stay together: In some schools, there is looping where the teacher moves with the student up grade levels. In other schools, teachers teach the equivalent of two grades in one classroom.

Regular education teachers: includes core academic teachers and specialists and electives teachers. The term does not include teachers of substantially separate special education students.

Small Learning Communities (SLCs): a small learning community allows students to identify more closely with a subset of the whole school population. An SLC is different from a grade level—the grade level must associate with other grades in an SLC.

Student advisories: small groups of students with one or more adult who meet regularly throughout the week to accomplish various academic and nonacademic goals, depending on the school.

[20] As noted in footnote 11, the term "core academic" derives from large, comprehensive high schools, does not accommodate Pilot Schools' definition of their courses, and needs to be changed to reflect the schools' offerings.

APPENDIX G
NETWORK SPECIAL EDUCATION PRINCIPLES

- We believe that all children have strengths and challenges and that Pilot Schools work towards meeting each student's individual academic, social, emotional, and physical needs.

- Some students' challenges are defined by state law as disabilities which therefore entitle them to services and additional supports which meet their specific needs.

- Pilot Schools honor and embrace the moral and legal obligations to provide all students with a continuum of services which range from typical to atypical.

- One goal of the Pilot School Network is to provide services to students to the maximum feasible extent in inclusive settings with flexible groupings.

- Pilot Schools believe that the very nature of their smallness and how they are designed which includes lower class size, teachers knowing their students well, multi-year student-teacher relationships (looping, multi-age classrooms), multiple adults in the classroom, individual learning plans, and multiple assessments are integral aspects in providing students with a continuum of services. These aspects of small schools represent conditions that are often provided to special education students. This preventive model of schooling minimizes the over identification of students with special needs.

- Pilot Schools support all teachers in providing a continuum of services to students in inclusive classrooms. This support includes common planning time, professional development, child study, student support teams, and teaming.

- Pilot Schools believe in strong and thorough pre-referral approach which identifies a student's challenges and articulates needs and appropriate strategies which are delivered in inclusive settings. In doing so, Pilot Schools are committed to working collaboratively among faculty, administrators, families and students to determine the need and extent of services.

- All students should have access to Pilot Schools regardless of disabilities consistent with the access to all Boston Public Schools. We recognize that students and families need to be appropriately matched with schools that can meet their needs and that in some cases there may be agreement that a student's needs may be more effectively addressed in another school or educational setting.

CENTER FOR COLLABORATIVE EDUCATION

The Boston Pilot Schools Network is supported by the Center for Collaborative Education, a non-profit organization supporting networks of progressive public schools. CCE's mission is 1) to improve student learning by promoting educational change that is focused on school and system-wide change and 2) to influence the larger public's view on education to better support change that fosters democratic and equitable schools.

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