

1.

2.

3.

Relevance Strategic Designs
Boston Arts Academy

4.

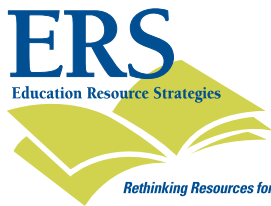
5.

6.

7.

8.

9.



Case Studies of Leading Edge Small Urban High Schools

Education Resource Strategies

Regis Anne Shields
Nicole Ireland
Elizabeth City
Julie Derderian
Karen Hawley Miles

Case Studies of Leading Edge Small Urban High Schools

This report is one of nine detailed case studies of small urban high schools. Each case study can be accessed individually or in one complete document at www.educationresourcestrategies.org.

Core Academic Strategic Designs

1. Academy of the Pacific Rim
2. Noble Street Charter High School
3. University Park Campus School

Relevance Strategic Designs

4. Boston Arts Academy
5. Life Academy of Health and Bioscience
6. Perspectives Charter School
7. TechBoston Academy
8. High Tech High School

Personalization Strategic Designs

9. MetWest High School

Also available on our Web site, www.educationresourcestrategies.org:

- Executive summary and full report: "Strategic Designs: Lessons from Leading Edge Small Urban High Schools"
- Detailed methodology
- Data request and interview protocol
- Introduction to the "Big 3" framework
- Comparative Leading Edge School data on diagnostic resource indicators (by school)

Thirty years ago, urban high school organization looked similar from one school to the next. Today, rising dropout rates and persistent achievement gaps have generated an urgency around redesigning the urban high school. Creating small high schools has become a central element of this redesign movement, with reformers envisioning improving instruction and, through the schools' "smallness," creating a supportive community of adult and student learners.

At Education Resource Strategies (ERS), in our work with school and district leaders, we have found that many school districts begin creating small high schools without a clear sense of how much they will spend or how to ensure that small schools organize in ways that will promote high performance. In response, the Bill & Melinda Gates Foundation supported ERS in a three-year effort aimed at building understanding and tools to support districts in creating cost-effective systems of high-performing urban high schools.

This report is one of nine detailed case studies of small urban high schools that served as the foundation for our report "Strategic Designs: Lessons from Leading Edge Small Urban High Schools" (available at www.educationresourcestrategies.org). We dubbed these nine schools "Leading Edge Schools" because they stand apart from other high schools across the country in designing new ways to "do school" while outperforming most high schools in their local districts.

We found that Leading Edge Schools deliberately create high-performing organizational structures, or Strategic Designs, that deliberately organize people, time, and money to advance their specific instructional models — the set of decisions the schools make about how they organize and deliver instruction. They create these Strategic Designs through four interconnected practices:

1. Clearly defining an instructional model that reflects the schools' vision, learning goals, and student population.
2. Organizing people, time, and money to support this instructional model by (a) investing in teaching quality, (b) using student time strategically, and (c) creating individual attention for students.
3. Making trade-offs to invest in the most important priorities when faced with limits on the amount, type, and use of people, time, and money.
4. Adapting their strategies in response to lessons learned and changing student needs and conditions.

Reviewing the case studies, readers will find that teacher characteristics, staffing patterns, schedules, and budgets look very different across the nine schools. Their instructional models reflect three broad approaches to teaching and learning:

1. **Core academics:** a rigorous core academic college-preparatory program for all students;
2. **Relevance:** a curriculum that is relevant to student interests and/or the world in which they live; and
3. **Personalization:** personal relationships between adults and students are fostered to ensure all students are known well by at least one adult.

All Leading Edge Schools incorporate some aspects of each approach, while tending to emphasize one over the others.

We also found that although no school organizes resources exactly the same, high-performing schools organize people, time, and money to implement three high-performance resources strategies. They:

1. Invest to continuously improve **teaching quality** through hiring, professional development, job structure, and collaborative planning time.
2. Use **student time** strategically, linking it to student learning needs.
3. Create **individual attention** and personal learning environments.

Using these strategies as our framework, we assessed case study school practices and quantified their resource use. We did this by creating a set of *diagnostic indicators* that describe how schools best use their resources for improving student performance. They are used throughout the case studies to illustrate resource use.

A detailed methodology, an in-depth introduction to the “Big 3” framework, and a full list of the diagnostic indicators can be found at www.educationresourcestrategies.org.

Education Resource Strategies hopes that these case studies will serve multiple purposes: to generate ideas about implementing strategies in schools; to help develop new small schools and reform existing schools; and to engage colleagues, principals, and teachers in conversations about what is possible in their districts. By detailing how these nine Leading Edge Schools organize their resources — people, time, and money — to improve student achievement, it is our hope that readers will be able to apply the findings to their own context and contribute to changing the national conversation around resource use from “how much” to “how well.”

Relevance Strategic Designs

4. Boston Arts Academy

174 Ipswich Street

Boston, MA 02215

617-635-6470

www.boston-arts-academy.org

Boston Arts Academy is the city's first public high school specializing in the visual and performing arts. Located in downtown Boston, and within walking distance of the Berklee College of Music, the school offers high-level arts training as well as a college-preparatory curriculum to approximately 400 students from throughout Boston.

Boston Arts' mission

Boston Arts Academy, a pilot school within the Boston Public Schools, is charged with being a laboratory and a beacon for artistic and academic innovation. Boston Arts Academy prepares a diverse community of aspiring artist-scholars to be successful in their college or professional careers and to be engaged members of a democratic society.

www.boston-arts-academy.org

Boston Arts was founded in 1998 as a partnership between Boston Public Schools and the ProArts Consortium, a collaboration of six Boston-area higher-learning institutions.¹ The school occupies a building with Fenway High School, another small school. The schools share a library, cafeteria, assembly hall, and some building and maintenance staff. As a “pilot” high school within Boston Public Schools, Boston Arts has autonomy over its budget, curriculum, staffing, calendar, and governance. This flexibility includes creating and allocating the school budget, developing a curriculum that supports its mission and theme, hiring and firing staff, determining the daily and annual school schedule, and governing its work.² Boston Arts' headmaster, Linda Nathan, views these autonomies as critical to the school's ability to make a difference and organize in ways that support students.

Students living in Boston who have graduated from the eighth grade can apply to attend Boston Arts. Although the school does not look at students' academic records prior to acceptance, students must audition in their chosen arts major — visual arts, dance, music, or theater — to be accepted to the school.

Developing artistic and academic leaders

Viewed as the “Center for the Arts” within the school district, Boston Arts operates on the belief that academics and the arts are equally important to student development and achievement. Students, dubbed “artist-scholars,” spend almost as much time in arts instruction and rehearsal as core academics. To that end, Boston Arts considers itself two schools in one: a laboratory for artistic innovation and an academic institution driving students to succeed in college and beyond.

Boston Arts strives to graduate holistic thinkers and problem solvers. In this effort, the school urges students to adhere to Habits of the Graduate, an intellectual framework, adapted from John Dewey’s Habits of Mind, that shapes the school’s teaching and learning in both arts and academic courses. The school often refers to the habits as the RICO framework — Refine, Invent, Connect, and Own — which requires students to reflect on their academic and artistic work on multiple levels. The school’s vision statement notes that Boston Arts students will “become desired, disciplined, well-trained creative artists and scholars who are aware of the world and of their responsibility to engage in it.”

Experienced staff committed to supporting students

Boston Arts’ teaching staff is a well-educated, experienced, versatile group; more than 80 percent have a master’s degree, and more than 40 percent are dual-certified in special education and regular education. Boston Arts organizes 225 hours of professional development and collaborative planning time a year, and it leverages the internal expertise of its teachers to facilitate this time.

In addition to academics and arts, Boston Arts also prioritizes supporting the “whole” student. Teachers meet daily with their advisory group of 10 ninth through 12th grade students, and they remain with the group for all four years. Teachers also visit each other’s classrooms to observe common students and learn different instructional strategies for students who may be struggling.

Student demographics

Students interested in attending Boston Arts must first demonstrate a passion for the arts. Prospective students participate in an admissions process that involves an audition in their major: visual arts, dance, music, or theater. Applicants’ previous arts experience, such as recitals and performances, is weighed less heavily than their audition and the intangible quality of “a light in their eye” that the school looks for. Academic performance is not considered in the admissions process: The admissions committee does not look at students’ academic records until after they are accepted. Headmaster Nathan says, “We feel very strongly that Boston Arts should not be an exam school for the arts and that all students should feel they have a fair shot at being accepted here.”

Boston Arts strives to reflect the diversity of the city, but its student population does not entirely match that of a typical Boston public school (see Figure 4.1). School administrators are working to address this difference and widen the applicant pool by partnering with Boston public elementary and middle schools to expose younger students to the arts. They also are hoping to start a middle school for the arts within Boston Public Schools as another way for Boston students to discover and cultivate talent and interest in the arts.

FIGURE 4.1

Student demographics: Boston Arts and Boston Public Schools district average, SY2004–05

	Boston Arts	Boston Public Schools district average
Race/ethnicity		
African American	43%	46%
Hispanic	29%	31%
Caucasian	21%	14%
Asian	4%	9%
Other	4%	1%
Socioeconomic status		
Free and reduced-price lunch	56%	71%
Program		
Special education		
Resource	13%	10%
Self-contained	0%	9%
English language learners	0%	17%

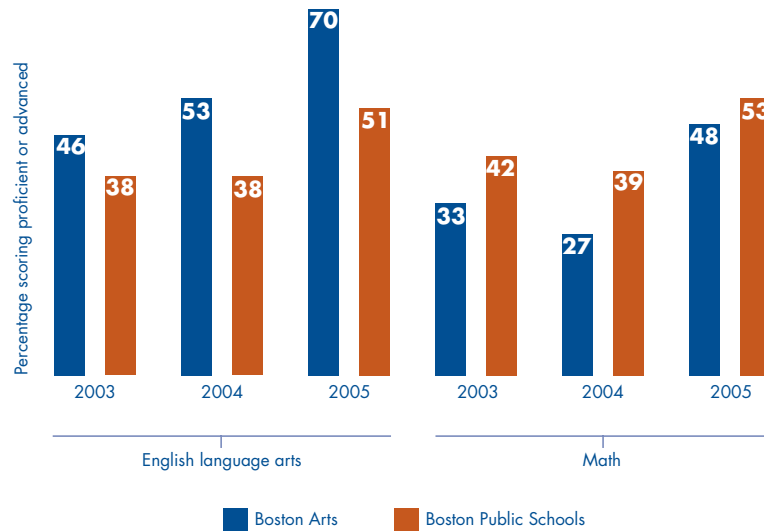
Source: Boston Public Schools, <http://boston.k12.ma.us/schools>, and Massachusetts Department of Education, <http://profiles.doe.mass.edu/>; percentages are rounded to the nearest whole number.

Student performance

Boston Arts is a positive-trending high school within Boston Public Schools based on student performance on the Massachusetts Comprehensive Assessment System (MCAS), a criterion-based test that all public school students must pass to receive a high school diploma. As shown in Figure 4.2, Boston Arts students outperformed the Boston Public Schools district average in English language arts in 2004, 2005, and 2006, but not in math. In 2005, 70 percent of Boston Arts students received a score of proficient or advanced on the English language arts MCAS, and 48 percent of Boston Arts students received a score of proficient or advanced on the math MCAS.

FIGURE 4.2

Percentage of students scoring proficient or advanced on MCAS: Boston Arts and Boston Public Schools, 2003 through 2005



Source: Massachusetts Department of Education, <http://profiles.doe.mass.edu/>.

On other dimensions of performance, such as attendance and college-going rate, Boston Arts exceeds the Boston Public Schools district average (see Figure 4.3).

FIGURE 4.3

Other indicators of student performance, SY2004–05

	Boston Arts	Boston Public Schools district average
Attendance	93%	92% ⁱ
Promotion rate	99%	93%
Out-of-school suspensions	1%	8%
Dropout rate	8%	8%
Graduation rate	84%	59%
College-going rate ⁱⁱ	85%	55%

Source: Boston Public Schools, <http://boston.k12.ma.us/schools>, and Massachusetts Department of Education, <http://profiles.doe.mass.edu/>; percentages are rounded to the nearest whole number.

ⁱ. Comparison may be slightly inflated, as district average includes elementary, middle, and high school attendance rates.

ⁱⁱ. Includes two- and four-year private and public colleges.

Per-pupil spending

As a pilot school, Boston Arts receives a lump-sum per-pupil budget from Boston Public Schools over which it has discretion. The school also can choose to purchase certain specified services from the district, or it can choose to take the dollar equivalent. Boston Arts' leaders find that funds provided by Boston Public Schools are not sufficient to meet the school's commitment to offer both core academic and specialized arts training. Consequently, the school funds a significant portion of its arts program through external resources (26 percent of its fully allocated operating budget, as shown in Figure 4.4). To determine how much external funding is necessary, Boston Arts conducts a gap analysis of what they need to achieve — as dictated by the school's strategic plan — and what resources they need to get there. Boston Arts has a development team that typically raises an additional \$1 million annually to bridge this gap.³

Part of what makes Boston Arts unique is how it blends distinctive partnerships and affiliations into a seamless program and philosophy. The school's partnership with the ProArts Consortium provides Boston Arts with resources and expertise from six different higher-learning institutions. Boston Arts shares space and some facilities with Fenway High School, and therefore, it is able to leverage some facility costs. The schools share the library, cafeteria, and assembly hall as well as custodians, librarians, nurse, cafeteria staff, and security. Boston Arts also draws support from the Pilot School Network in Boston and the national Coalition of Essential Schools network.⁴ Boston Arts' headmaster believes the partnerships are essential. "Schools need to have the mindset that you really can't do it alone," says Nathan. She adds that in the best partnerships, both institutions are transformed in their thinking and get something from the collaboration.

Boston Arts' total per-pupil expenditures are double those of the Boston Public Schools comparison high school (see Figure 4.4). Offering a full arts program necessitates a wide variety of visual arts, dance, music, and theater courses and a faculty of specialists. These unique needs are reflected in a student-to-teacher ratio that is half that of the comparison school.

Flexibility dimensions⁵

As a pilot school within Boston Public Schools, Boston Arts has autonomy over the hiring and firing of its staff and altering the length of the student and teacher day,⁶ the school year, and class size (see Figure 4.5). Although Boston Arts does not control teachers' salaries — it must at least match the union salary schedule — it does have autonomy over budget (particularly staffing composition) and the ability to carry over external funds.

Boston Arts' headmaster believes that the autonomies granted to pilot schools are critical to schools' ability to make a difference and organize in ways that support students. She states, "Schools will get to a place, and without the autonomies that the pilot schools realize, you are not going to be able to do it." She believes that "the autonomies are not the panacea, but they are the conditions from which you must work." Additionally, she does not think it makes sense to rate one autonomy as more important than the others, as it is the interconnectedness of the autonomies that make a difference in schools. "You can't do one autonomy without the rest. All of the threads have to unravel together."

FIGURE 4.4*Per-pupil operating expenditures, SY2004–05*

	Boston Arts	Boston Public Schools comparison schoolⁱ
Total fully allocated operating budget ⁱⁱ	\$6,638,083	\$14,022,980
General education spending per pupil (unweighted, fully allocated, including private, no geographic adjuster)	\$15,229	\$8,169
Percentage above that is privately funded	26%	N/A ⁱⁱⁱ
Percentage spent on instruction	56%	48%
Student-teacher ratio	9:1	18:1
Percentage spent on leadership ^{iv}	6%	8%
Percentage spent on pupil services ^v	6%	10%

i. Comparison schools are the highest-performing, nonexam schools in the district that were selected to provide a comparison to the Leading Edge Schools' per-pupil cost.⁷

ii. Fully allocated operating budget includes the costs of running a school on a daily basis.⁸

iii. Data on private funding were not collected for the comparison schools.

iv. Leadership coding includes all functions associated with governance, school administration, secretaries and clerks supporting school leaders, and accountability (research, evaluation and assessment, community relations, attendance tracking, student assignment, etc.).

v. Pupil services coding includes all functions associated with noninstructional programs.⁹

FIGURE 4.5*Flexibility dimensions*

Flexibility dimension	Boston Arts
Hiring and firing	Yes (except when there are layoffs in the district)
Teacher time	Yes (some limitations as of 2007–08)
Class size	Yes
Student time	Yes
Staffing composition	Yes (within special education requirements)
Salary	No (must pay at least union salary schedule)
Option to opt out of district services	Yes (limited specified services)
Discretion over nonsalary budget	Yes

Resource strategies

The following sections highlight Boston Arts' practices around three resource strategies of high-performing high schools: the school's investment in teaching quality, its strategic use of student time, and the provision of individual attention to students.¹⁰

Boston Arts resource strategy highlights

- 1. Invest to continuously improve teaching quality through hiring, professional development, job structure, and collaborative planning time*
 - Strategic hiring and evaluation system that ensures teachers are experienced, expert, and versatile with an arts background
 - Significant investment in professional development and collaborative planning time for teachers, totaling 225 hours annually
- 2. Use student time strategically, linking it to student learning needs*
 - Schedule balances core academic time and arts time and is reviewed and annually adjusted, if necessary, to meet student needs
 - Students spend significant time on English language arts through humanities classes and a writing seminar
 - Academic support time is available and flexible based on student needs
- 3. Create individual attention and personal learning environments*
 - Block schedule each semester reduces teacher and student load
 - Personal relationships fostered through advisory groups of 10 students who stay together all four years

■ Resource strategy 1

Invest to continuously improve teaching quality through hiring, professional development, job structure, and collaborative planning time

- *Strategic hiring and evaluation system that ensures teachers are experienced, expert, and versatile with an arts background*
- *Significant investment in professional development and collaborative planning time for teachers, totaling 225 hours annually*

Strategic hiring and evaluation system that ensures teachers are experienced, expert, and versatile with an arts background

As a pilot school, Boston Arts uses its autonomy in staffing to hire teachers who align with its philosophy and needs. Eighty percent of Boston Arts teachers have master's degrees, and only 13 percent have three or fewer years of experience.¹¹ Thirty-three percent of Boston Arts staff has received teaching, academic, or professional awards, and more than 40 percent has dual certification. Additionally, Boston Arts values teachers with arts backgrounds, and it looks for teachers who can be both specialists within their field and generalists, playing multiple roles at the school. As specialists, Boston Arts teachers design and teach their own curriculum in specific subjects, such as "Principles of Musicianship" or "Movement for Actors." As generalists, they teach writing and serve as advisors for students.

Boston Arts' 2004–05 school goals

1. To create a culture of excellence by cultivating seriousness of purpose
2. To increase students' access to critical conversations by supporting their functional and cultural literacy
3. To begin to name and confront the dominant ideologies that affect our world and our teaching

Boston Arts also has a comprehensive evaluation system in place to ensure that each staff member is growing professionally and continues to be a good fit with the school's instructional model and mission. In addition to the formal evaluation that the headmaster and assistant headmaster perform with each teacher once a year, each staff member creates individual professional development plans that are connected to the school goals and the teachers' personal goals. Twice a year, teachers submit written reflections to administrators on the progress they have made toward reaching their goals. The administrators meet with the teachers to review the plans, and they provide feedback for improvement. The headmaster follows a similar process, sharing her goals with, and soliciting feedback from, the board and staff.

This process provides a structured way for the school's leadership to remain connected to the growth and development of its 49 teachers.

Boston Arts is a full-inclusion school in which all students with special education needs are integrated into regular courses. In SY2004–05, 10 faculty members participated in professional development courses toward their special education certification. This certification supports teachers in acquiring the knowledge and skills they need to serve students with special needs through differentiated instruction. Having dual-certified teachers allows the school to be more flexible with its staffing resources by being able to support students of all skill levels through heterogeneous groupings.

Significant investment in professional development and collaborative planning time for teachers, totaling 225 hours annually

Professional development is a central component of teachers' schedules and work at Boston Arts. Each week, teachers have 210 minutes of collaborative planning time in addition to professional development with the entire faculty for an hour every Friday, as shown in Figure 4.6.

FIGURE 4.6*Boston Arts teacher professional development meetings*

Type of meeting	Amount of professional development time	Day meeting held
Content teams	90 minutes	Every Monday morning
Grade-level teams	60 minutes	Every Tuesday afternoon
	60 minutes	Every Friday afternoon
Whole faculty professional development	60 minutes	Every Friday afternoon
Weekly professional development	270 minutes	

Boston Arts schedules both grade-level and content meetings for teachers to ensure that they can work collaboratively with a range of colleagues (see Appendix 4.3 for a sample teacher schedule). The whole faculty professional development is organized around the school's goals for that year. Unlike the typical day that extends to 4 p.m., on Fridays, students leave at 1:30 p.m., so teachers can meet together.

In addition to the weekly time allocated to professional collaboration, in SY2004–05 Boston Arts had 11 professional development days spread throughout the school year. This included seven days before school started in August, two days in the middle of the year for a retreat, and two days for reflection in June.

Boston Arts teachers participate in professional development and collaborative planning time a total of 225 hours a year, or 15 percent of their total time. This equates to almost 200 more hours in professional development than is required by the union contract for Boston Public Schools.¹² In all, Boston Arts devotes \$611,904 to professional development and collaborative planning time each year, about 10 percent of the school's total operating budget.¹³ This equals approximately \$14,000 per teacher (of which, most goes toward teacher and administrative time).

Although administrators ensure that structures are in place for collaboration, Boston Arts teachers decide the best use of their professional development time. One stipulation is that the focus of the professional development must be related to the school's annual goals (see Boston Arts' 2004–05 school goals). The goals are developed by the faculty during the professional development days in June as they reflect on the previous year's successes and challenges.

Boston Arts teachers also have numerous opportunities for individual growth and leadership outside of their work in the classroom. They can serve as department head, assessment coordinator, or curriculum coordinator, as well as in other positions with administrative responsibilities. Boston Arts tries to compensate these additional roles with money or release time from instructional duties, but it cannot always do so. In these instances, teachers take on these additional roles as a way of participating in a professional community, even if they are not paid a stipend for their work. Teachers also may participate in teams that meet regularly, such as the curriculum or leadership teams, and Board of Trustee meetings.

■ Resource strategy 2

Use student time strategically, linking it to student learning needs

- *Schedule balances core academic time and arts time and is reviewed and annually adjusted, if necessary, to meet student needs*
- *Students spend significant time on English language arts through humanities classes and a writing seminar*
- *Academic support time is available and flexible based on student needs*

Schedule balances core academic time and arts time and is reviewed and annually adjusted, if necessary, to meet student needs

Boston Arts' schedule reflects its dual focus on the arts and academics. Arts courses consume more than one-third of the students' school day. To accommodate this heavy focus on arts, while still providing a college-preparatory curriculum, Boston Arts extends its school day from 8 a.m. to 4 p.m. (a typical Boston high school day is 7:30 a.m. to 1:30 p.m.). Boston Arts students are in school for 1,278 hours a year, of which, on average, 539 hours are in core academics.

In its eight years of operating, Boston Arts has had the same schedule only twice because the staff is always thinking about how to most effectively use student time. Within the school day, the schedule is always adjusted to meet students' needs first. For example, one year the dance department needed a different collaborative planning time than the other departments because the students required a longer block of time to warm up and cool down. The special meeting time complicated the school schedule, but according to Headmaster Nathan, "It's worth making things more difficult for adults if it works for kids."

School leaders also examine data to see whether a certain time of day affects student performance in particular courses, and they adjust the schedule to balance students' learning needs. Originally, Boston Arts students were required to take four academic classes each semester in addition to pursuing a major in visual arts, dance, music, or theater. Overwhelmed by the competing demands on their time, many students felt forced to choose which core academic course to fail each semester. In response to this identified student need, Boston Arts revised students' schedules so that students only take two of the four core academic courses each semester. For example, if a student took Humanities (an integrated English language arts and social studies course) and science in the fall, she would take math and a foreign language in the spring. This allows students to focus deeply on two core subjects each semester in addition to a writing course and their arts major. As Boston Arts is accustomed to doing, the school might revisit this schedule in the future, as the six- to nine-month gap in math and foreign language instruction makes it especially difficult for students to pick up where they left off the previous year.

Students spend significant time on English language arts through humanities classes and a writing seminar

Boston Arts' focus on literacy includes a semester-long humanities course and a writing course held four days a week for the full academic year, in all four grades. Boston Arts students spend on average 20 percent of their total instructional time in writing and humanities. In contrast, on average, they spend 10 percent of their total instructional time in math.

Both in content and in meeting time, the writing course provides a consistent thread for the curriculum. Each faculty member co-teaches a section of the writing course with a colleague — usually an arts teacher joining an academic teacher. Writing classes average 20 students with two teachers, providing students with more personalized instruction. The approaches to writing developed in the course are integrated throughout all subjects at the school. Additionally, the course prepares students for their senior project, which requires them to write an original grant proposal for an artistic work that has community relevance. Students present the proposals to a panel of outside funders; 15 students are awarded grants based on their proposals.

Academic support time is available and flexible based on student needs

Boston Arts offers an academic support period at the beginning and end of each day for each academic course students take. These scheduled blocks of time, piloted in SY2004–05, provide students with more individualized academic support or more advanced work for students who wish to pursue the honors option. Attendance at the academic support block is not mandatory unless the teacher asks a student to attend for one of the following reasons:

- The student needs extra support with the course material.
- The student needs homework help or a structured time to complete it.
- The student wants to pursue the optional honors component for a particular class and needs to complete extra assignments and/or projects.

The broad range of options for this period gives students the flexibility to receive additional help in one subject while potentially pursuing the honors option for a different course. Making it part of teachers' schedules — so teachers, as opposed to outside volunteers, facilitate the support — ensures that the support is targeted to students' individual learning needs and is building on the curriculum and assignments of the class.

■ Resource strategy 3

Create individual attention and personal learning environments

- *Block schedule each semester reduces teacher and student load*
- *Personal relationships fostered through advisory groups of 10 students who stay together all four years*

Block schedule each semester reduces teacher and student load

Boston Arts has created a semesterized block schedule, which means that each semester students take only two of the four core academic courses. In addition to lightening the course load for students, it also reduces the teaching load to 46 students per teacher, as compared to a typical teacher load in most urban high schools of approximately 125 students.¹⁴ This smaller load allows Boston Arts teachers to get to know their students well and have the time to provide them with more individual attention.

Although such scheduling means core academic teachers meet a new group of students with whom they need to build relationships each semester, thus doubling their annual teacher load to 84 students, Boston Arts has several classes and programs in place to ensure that students are known well: advisory groups, a yearlong writing course, arts concentrations, and weekly planning time for teachers to discuss students and their progress. Individual student “contracts” also are made with struggling students to help them get the support they need to be successful.

The small teacher load allows teachers to focus on students’ strengths rather than their deficiencies. For example, academic teachers will informally visit arts teachers’ classrooms and vice versa to see how their students might be succeeding through a different mode of instruction. The arts component of the school stretches faculty to think about the many components of intelligence and to see possibilities of different types of success. Boston Arts staff members also challenge themselves to think of new ways to teach students the material. Says the headmaster: “We can be clear about what we want kids to know and be able to do, but we have to be very open ... in how we help them get there.”

Personal relationships fostered through advisory groups of 10 students who stay together all four years

Boston Arts places a high premium on its students’ well-being. School leaders mention research that shows that artistically talented teenagers are more likely than the average teenager to suffer from eating disorders, depression, and anxiety due to their keen awareness and outward expression of their emotions. Boston Arts has created an advisory period during

which students talk about the stresses they face and what they are or are not doing well. The groups consist of 10 students in grades nine through 12 who share the same arts major, and they stay with the same teacher for their tenure at Boston Arts. Students spend 15 minutes, four days per week in advisory to support their social and emotional well-being. The small size, consistency, and common arts focus of the group allow students to develop close relationships with their peers and teachers to develop supportive, ongoing relationships.

NOTES

- ¹ The ProArts Consortium consists of Berklee College of Music, Boston Architectural Center, The Boston Conservatory, Emerson College, Massachusetts College of Art, and School of the Museum of Fine Arts.
- ² Per agreement with the Boston Teachers Union, the only time pilot school autonomy in hiring is overridden is when there are layoffs within the district, forcing all schools to accept “permanent” (tenured) Boston Public Schools teachers who have been “bumped” from their previous jobs. This has happened once in Boston Arts’ seven years.
- ³ In SY2004–05, Boston Arts had \$560,000 in carryover money from previous years’ external funds. Total external funds in the SY2004–05 budget were \$1,626,724.
- ⁴ Coalition of Essential Schools network emphasizes a personalization of instruction to meet students’ needs, a focus on depth rather than breadth in learning, and a school community in which teachers play many roles.
- ⁵ Flexibility dimensions are a school’s ability to use its resources — people, time, and money — as it chooses. Schools can be limited by legal or administrative constraints, such as federal or state laws, union contracts, or district policies. The degree of school flexibility depends on both how much it has and whether it can use the resource as it chooses.
- ⁶ Per agreement with the Boston Teachers Union, the only time pilot school autonomy in hiring is overridden is when there are layoffs within the district, forcing all schools to accept “permanent” (tenured) Boston Public Schools teachers who have been “bumped” from their previous jobs. This has happened once in Boston Arts’ seven years.
- ⁷ In Boston, our partnership with the district allowed joint identification of the comparison school and access to the detailed coded budgets. Boston Public Schools comparison school demographics: 1,286 students; 47 percent African American; 6 percent Asian; 6 percent Caucasian; 40 percent Hispanic; 81 percent free or reduced-price lunch; 19 percent students with disabilities; 12 percent English language learners (www.mass.doe.edu).
- ⁸ These costs include provision and support of the academic program; administration and support services; provision and maintenance of the physical plant; and auxiliary services such as food, transportation, and security. For district schools, some of these costs are administered at the district central office level. If a charter school has a charter management organization (CMO), some of these costs are administered at the CMO level.
- ⁹ These include social and emotional needs (social workers, character education, mentoring, parent programs, etc.), physical health (itinerant therapists, nurses, etc.), students with disabilities and English language learners evaluation/diagnostics, career/academic counseling, and other noninstructional programs (athletics, truancy, etc.).

- ¹⁰ This framework for analysis, the “Big 3” resource strategies of high-performing schools, is more fully described in Appendix 4.1.
- ¹¹ The average experience of Boston Arts teachers exceeds the Boston Public Schools district average.
- ¹² The Boston Teachers Union contract 2003–06 specifies 30 hours per year in professional development. Although the contract specifies that high school teachers will have administrative periods, the contract does not require these periods to be used for collaborative planning time.
- ¹³ This number includes 15 percent of teacher salaries as well as additional funds devoted to professional development.
- ¹⁴ Average teaching load for a typical comprehensive urban high school was calculated by multiplying a typical class size of 25 students by five teaching periods per day.

APPENDIX 4.1

Resource strategies

Resource principles	What we see in the school	Diagnostic indicators
Invest in teaching quality		
Hire and organize staff to fit school needs in terms of expertise, philosophy, and schedule	<ul style="list-style-type: none"> Multiple in-person interviews Focus on content expertise, versatility, as well as a background in and/or appreciation for the arts 	<ul style="list-style-type: none"> Use of a rigorous, strategic hiring process 13% of core academic teachers with three or fewer years of experience 48% of core teachers teaching more than one subject Leverage outside experts for arts classes
Integrate significant resources for well-designed professional development that provides expert support to implement the schools' instructional models	<ul style="list-style-type: none"> 11 full days devoted to professional development spread before, during, and after school year 270 minutes of weekly professional development with content and grade-level teams and whole faculty Dismiss students at 1:30 p.m. every Friday 	<ul style="list-style-type: none"> \$2,759 per teacher on professional development (not including teacher time) 5.6% staff with instructional leadership roles
Design teacher teams and schedules to include blocks of collaborative planning time effectively used to improve classroom practice	<ul style="list-style-type: none"> Teachers participate in 120 minutes of grade-level collaborative planning time and 90 minutes of content-team collaborative planning time each week 	<ul style="list-style-type: none"> 15% of teacher year in professional development (with collaborative planning time) 225 total yearly teacher professional development hours (with collaborative planning time) 210 minutes collaborative planning time per week 24% professional development in content-based teams
Enact systems that promote individual teacher growth through induction, leadership opportunities, professional development planning, evaluation, and compensation	<ul style="list-style-type: none"> Teachers play leadership roles, such as curriculum or assessment coordinator, although they are not consistently paid stipends for the work 	<ul style="list-style-type: none"> Ratio of teachers to school-based evaluators is 22:1 Regular review of teacher performance and growth 0% of teacher compensation for leadership roles

(continued)

(continued)

Resource principles	What we see in the school	Diagnostic indicators
Use student time strategically		
Purposefully align the schools' schedules with their instructional models and student needs	<ul style="list-style-type: none"> • Continuous revisiting of schedule to emphasize both core academics and arts courses • Decision to semesterize core academic courses to reduce student load • School matches length and frequency of arts classes to content of course 	<ul style="list-style-type: none"> • School schedules reflect instructional model and academic needs of students • 440 total yearly hours in noncore academics • 34% of student year in noncore academics • 34% in theme-based courses (arts)
Maximize time on academic subjects, including longer blocks of uninterrupted time	<ul style="list-style-type: none"> • Core academic courses meet in 75-minute and 85-minute blocks • Writing course is foundation of school's curriculum and lasts for full academic year, across all four years • Use of consistent graduation requirements for all students 	<ul style="list-style-type: none"> • 1,278 yearly student hours • 539 average yearly hours in core academics • 606 yearly hours in ninth grade core academics • 460 yearly hours in 12th grade core academics • 42% of student year in core academics • 2,156 total core academic hours over four years
Vary individual student time when necessary to ensure all students meet rigorous standards	<ul style="list-style-type: none"> • Support and enrichment periods facilitated by teachers scheduled for each core academic course during the school day • Participation can be mandatory for students who need extra academic support for a period of time or voluntary for those who wish to pursue the honors option 	<ul style="list-style-type: none"> • 9% student time in academic support • 108 yearly hours spent in academic support • Ratio of time in ninth grade math to average time in math: 1.02 • Ratio of time in ninth grade English language arts to average time in English language arts: 1.02
Create individual attention		
Assess student learning on an ongoing basis and adjust instruction and support accordingly	<ul style="list-style-type: none"> • Regular discussions about student progress 	<ul style="list-style-type: none"> • Use formative assessments systematically to guide instruction throughout year
Create smaller group sizes and reduced teacher loads for targeted purposes	<ul style="list-style-type: none"> • Full-inclusion model • Effort for teachers to be dual-certified in special education and regular education 	<ul style="list-style-type: none"> • Average class size overall: 20 • Average class size core: 16 • Average class size English language arts: 13 • Average class size math: 19 • Average teacher load overall: 71 • Average teacher load core: 46 • Average teacher load English language arts: 35 • Average teacher load math: 37
Organize structures that foster personal relationships between students and teachers	<ul style="list-style-type: none"> • Advisory of 10 students in ninth through 12th grade who stay with same advisor for all four years 	<ul style="list-style-type: none"> • 10 students assigned to an adult advocate providing academic or personal support • Student to core academic teacher ratio is 17:1 • 36 total yearly teacher hours spent in social and emotional support • 395 students in grades 9–12 • Looping practices around strategically grouped students through advisory

APPENDIX 4.2

Boston Arts sample student schedules

Semester 1

	Monday	Tuesday	Wednesday	Thursday	Friday
7:55–8:40	Open	Foreign Language support	Humanities support	Foreign Language support	Humanities support
8:45–10:10	Humanities (9:30–10:45)	Humanities	Humanities	Humanities	Humanities (8:45–10:00)
10:15–11:40	Advisory (10:50–11:05)	Foreign Language	Foreign Language	Foreign Language	Foreign Language (10:05–11:20)
11:40–11:55	Lunch (11:05–11:30)	Advisory	Advisory	Advisory	Open
11:55–12:25	Foreign Language (11:35–12:50)	Lunch	Lunch	Lunch	Lunch
12:30–1:20	Writing (12:55–1:45)	Writing	Writing	Writing	Open
1:25–2:50	Vocal Technique (1:50–3:05)	Vocal Technique	Vocal Technique	Vocal Technique	Vocal Technique
2:50–4:00	Chamber Choir (3:10–3:55)	Chamber Choir	Chamber Choir	Chamber Choir	Chamber Choir
4:00–5:30				Concert Chorus	

Semester 2

	Monday	Tuesday	Wednesday	Thursday	Friday
7:55–8:40	Open	Science support	Math support	Science support	Math support
8:45–10:10	Science (9:30–10:45)	Science	Science	Science	Science
10:15–11:40	Advisory (10:50–11:05)	Math	Math	Math	Math
11:40–11:55	Lunch (11:05–11:30)	Advisory	Advisory	Advisory	Open
11:55–12:25	Math (11:35–12:50)	Lunch	Lunch	Lunch	Lunch
12:30–1:20	Writing (12:55–1:45)	Writing	Writing	Writing	Open
1:25–2:50	Vocal Technique (1:50–3:05)	Vocal Technique	Vocal Technique	Vocal Technique	Vocal Technique
2:50–4:00	Chamber Choir (3:10–3:55)	Chamber Choir	Chamber Choir	Chamber Choir	Chamber Choir
4:00–5:30				Concert Chorus	

APPENDIX 4.3

Boston Arts sample teacher schedule

	Monday	Tuesday	Wednesday	Thursday	Friday
7:55–8:40	Content-based collaborative planning time (7:55–9:30)	Science support	Planning and development period	Science support	Planning and development period
8:45–10:10	Science (9:30–10:45)	Science	Science	Science	Science
10:15–11:40	Science (10:50–11:05)	Science	Science	Science	Science
11:40–12:10	Lunch (11:05–11:30)	Lunch	Lunch	Lunch	Lunch
12:10–12:25	Advisory (11:35–12:50)	Advisory	Advisory	Advisory	Planning and development period
12:30–1:20	Writing (12:55–1:45)	Writing	Writing	Writing	Grade-level collaborative planning time
1:25–2:50	Planning and development period	Planning and development period	Planning and development period	Planning and development period	Faculty meeting
2:50–4:00	Science support	Planning and development period	Science support	Planning and development period	
4:00–5:00		Grade-level collaborative planning time			

APPENDIX 4.4

Boston Arts graduation requirements

Arts major requirements	Academic requirements	Portfolio requirements	Senior project with distinction
4 years of major instruction with: <ul style="list-style-type: none"> • C– or better in ninth grade • C+ or better in 10th grade • B– or better in 11th grade • B+ or better in 12th grade 	<ul style="list-style-type: none"> • 4 years of writing • 4 years of humanities • 4 years of math • 3 years of science • 2 years of Spanish 	<ul style="list-style-type: none"> • Students must meet proficiency ratings to graduate on the following portfolios: <ol style="list-style-type: none"> 1. Humanities 3 portfolio 2. Senior portfolio 	<ul style="list-style-type: none"> • Each senior writes and presents an original grant proposal to a panel of outside funders • 15 students are chosen to implement grants

Source: Boston Arts Handbook.

APPENDIX 4.5

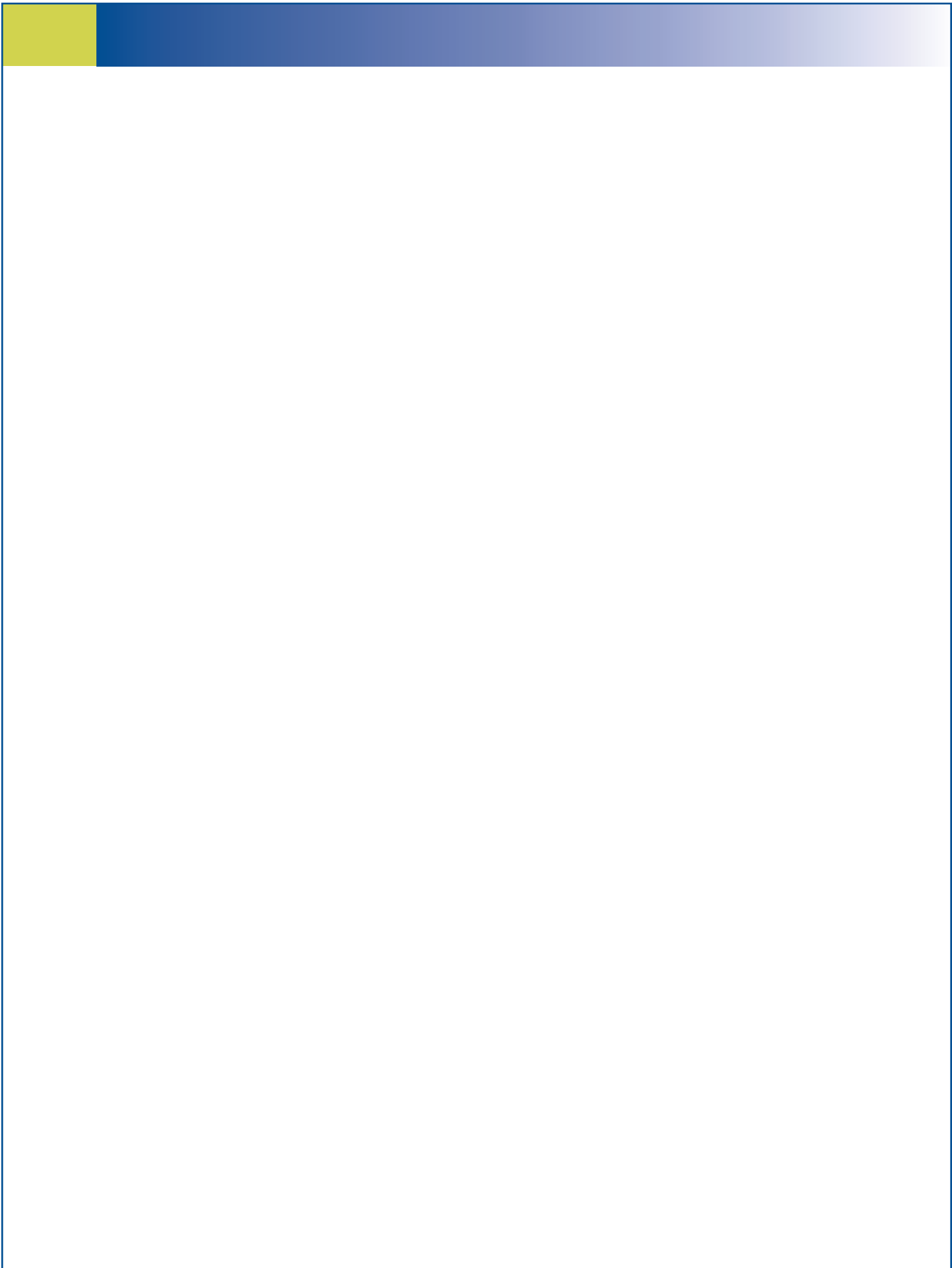
Boston Arts staff list

Position	Full-time equivalent	ERS coding categories	Other
Headmaster	1.0	Leadership	
Assistant headmaster	1.0	Leadership	
Executive director, Boston Arts Foundation	1.0	Business services	
Director of external affairs	1.0	Business services	
Development	1.0	Business services	
Admissions/outreach/recruitment	1.0	Business services	
Development/executive assistant	1.0	Business services	
Registrar	1.0	Pupil services	
Business/operations manager	1.0	Business services	
Building manager	1.0	Operations and maintenance	
Secretary	1.0	Leadership	
Director of technology	1.0	Instruction	
Security	1.0	Operations and maintenance	Budgeted from central
College career counselor	1.0	Pupil services	
School police	1.0	Operations and maintenance	
Librarian	1.0	Instruction	
Head of student support	1.0	Pupil services	
Head interpreter		Pupil services	Budgeted from central
Family support coordinator	1.0	Pupil services	
Wellness coordinator	1.0	Pupil services	
Interpreter		Pupil services	Budgeted from central
Nurse	0.5	Pupil services	
Community field coordinator	1.0	Pupil services	
Humanities	1.0	Instruction	
Spanish	1.0	Instruction	
Math	1.0	Instruction	
Visual art	1.0	Instruction	
Science	1.0	Instruction	
Humanities	1.0	Instruction	
Theater	0.5	Instruction	
Humanities	1.0	Instruction	
Theater	1.0	Instruction	
Artistic dean	1.0	Instruction	
Math	0.75	Instruction	
Assessment coordinator	0.25	Leadership	
Humanities	0.3	Instruction	

(continued)

(continued)

Position	Full-time equivalent	ERS coding categories	Other
Curriculum coordinator	0.3	Leadership	
Special education coordinator	0.4	Leadership	
Spanish	1.0	Instruction	
Special education	1.0	Instruction	
Visual art	1.0	Instruction	
Humanities	1.0	Instruction	
Math	1.0	Instruction	
Science chair	1.0	Instruction	
Special education	1.0	Instruction	
Music: Vocal/instrumental/general	1.0	Instruction	
Biology	1.0	Instruction	
Music: Vocal/instrumental/general	1.0	Instruction	
Special education	1.0	Instruction	
Theater	0.5	Instruction	
Spanish chair	1.0	Instruction	
Math chair	1.0	Instruction	
Music	0.5	Instruction	
ASL	1.0	Instruction	
Dance	1.0	Instruction	
Visual art chair	1.0	Instruction	
Dance	0.5	Instruction	
Visual art	1.0	Instruction	
Biology	1.0	Instruction	
Special education	1.0	Instruction	
Dance	1.0	Instruction	
Theater	1.0	Instruction	
Freshman coordinator/video	1.0	Instruction	
Music: Vocal/instrumental/general	1.0	Instruction	
Biology/math	1.0	Instruction	
Music chair	1.0	Instruction	
Music: Vocal/instrumental/general	1.0	Instruction	
Photography	1.0	Instruction	
Theater chair	1.0	Instruction	
Costume design	0.5	Instruction	
Health education	1.0	Instruction	
Math	1.0	Instruction	



Acknowledgments

We would like to thank the Education Resource Strategies staff for the support, energy, and insight that made this report possible.

We also would like to thank the staffs of the Leading Edge Schools for participating in this study, sharing their insights, and devoting their precious time for interviews, data collection, and review of the case studies.

We are grateful to the Bill & Melinda Gates Foundation, for both providing funding for this report and serving as a champion for excellence in high schools across the country. Please note the Foundation did not influence content of this report.

Education Resource Strategies, Inc., is a nonprofit organization that has worked extensively with urban public school systems to rethink the use of district- and school-level resources and build strategies for improved instruction and performance.

Our mission is to be a catalyst for the creation of high-performing urban school systems by promoting and supporting the strategic management of education resources. Our unique strength is in our action research where our partnerships with school systems bridge research and practice. We support our clients with Web-based tools, research and training, and diagnostic analyses tailored to their districts. Together, we outline strategies that are actionable and transformational both within and beyond the districts in which we work.

ERS's work and research have identified several areas in which school systems effectively leverage their resources to improve instruction, forming the basis for our five practice areas: Strategic School System Design; School Funding and Staffing Systems; Strategic School Design; School Support, Planning, and Supervision; and Human Capital.

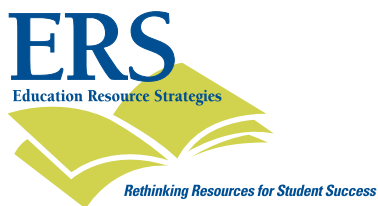
For more information on Education Resource Strategies and our work and practice areas, visit www.educationresourcestrategies.org.

Rethinking the Cost of Small High Schools Project

The Bill & Melinda Gates Foundation supported Education Resource Strategies in a three-year effort aimed at building understanding and tools that would support districts in creating cost-effective systems of high-performing urban high schools.

Out of our extensive research, we created the following reports and tools to support leaders as they consider and design small high schools in their districts. All materials are available at www.educationresourcestrategies.org.

- *“The Cost of Small High Schools: A Literature Review”*
- *“Strategic Designs: Lessons from Leading Edge Small Urban High Schools”*
- *“Case Studies of Leading Edge Small Urban High Schools”*
- *“District Spending in Small and Large High Schools: Lessons from Boston, Baltimore, and Chicago”*
- **Going to Scale Tool**
- **Small Secondary School Design Tool**
- **District Assessment Tool**



Education Resource Strategies

1 Brook Street
Watertown, MA 02472
617.607.8000
www.educationresourcestrategies.org