

# Laying the Foundation for Future Success

**F**ebruary 9, 2010, marked the 100th year anniversary of Worcester (MA) Technical High School. The school opened as Worcester Boys' Trade High School on February 9, 1910, with 52 student ironworkers and woodworkers attending on weekdays and Saturday mornings—the beginning of vocational education in Massachusetts.

The philosophy of Milton P. Higgins, the school's founding father, was, "To make a good living; to have a happy family; to make preparation for hard times; to wear overalls in the shop with the same dignity as good clothes are worn on Sunday; to be confident that you are laying a sure foundation for any future success; to feel that you are master of your work and that you share the creative spirit; that is the wholesome philosophy of learning a trade." That philosophy holds true today.

In August 2006, what was then

Worcester Vocational High School was transformed into Worcester Technical High School and moved to a new \$90 million, 400,000-square-foot facility. Although the demographics of the city and technology and workforce demands have changed, the school's charge remains essentially the same: "to educate and prepare our students, both academically and technically, to meet the challenges of a global society."

Worcester Tech has 1,400 students in 24 technical programs within four small learning communities: Alden Academy, Coghlin Construction Academy, Health/Human Services Academy, and IT/Business Academy. It is the largest of seven high schools in the City of Worcester, and its students are 51% female and 49% male.

Worcester Tech has met adequate yearly progress (AYP) goals for all four years, exceeding benchmarks in English, mathematics, and every subgroup, including special education. The graduation rate for the class of





2008–09 was 85.4%, and the school’s drop-out rate was 4.2%, outperforming the district and state in all subgroup populations for graduation and drop-out rates. It is a special source of pride at Worcester Tech that no African American students have dropped out.

The school has achieved significant gains in Massachusetts Comprehensive Assessment System (MCAS) scores. In 2009, mathematics and English scores continued to increase in the advanced/proficient categories and the failure rate decreased. For example, as 11th graders, 78% of the class of 2011 scored in the advanced/proficient categories in English/language arts and 70% in mathematics compared with

26% and 34% three years earlier.

Worcester Tech enrolls increasing numbers of students in honors or AP courses. The reasons for those increases are multifold, beginning with the Jump Start program, a three-day program that students attend in the summer before freshman year. Jump Start introduces them to the larger campus and to academic and technical opportunities, student services, and student life and students complete an individual career assessment and begin their personalized career plan. This program is continually modified to meet the students’ needs and the school’s goals. In 2010, a Tech Scholars piece was added to the program to

include honors and AP courses.

By state law, advisory boards must be established for each technical area. The boards must include industry partners, higher-education students, parents, and teachers. In consultation with the general advisory chair, the board makes recommendations for technical curricula, equipment purchases, student outcomes, and continuing education and employment opportunities.

The general advisory board solicits and establishes entrustments, which provide the school with continually updated equipment and technology. The entrustment leases have garnered attention and support from national



pared to compete successfully in the 21st century workforce. It is important that each of the vocational areas address relevant technical skills and in doing so, prepare students to enter not only the world of work but higher education as well.” One visit to this school verifies that “The School That Works” is not just a motto but also a daily reality at Worcester Tech.

## PREPARATION AND MOTIVATION

**Principal Sheila Harrity has held many roles in public education, including teacher and assistant principal, but she didn't have any experience in vocational/technical education. She candidly discusses how she used her experience, knowledge, and skills to allow an experienced vocational education staff to soar and to guide the recent success of Worcester Tech.**

When I had the good fortune to be hired to open the new Worcester Technical High School in 2004, I brought a unique combination of experience, knowledge, and skills with me. The success of our school is the result of many factors, and my contributions are squarely connected to my prior work and experience. The success of our school is the result of our redefining the role of vocational/technical education. In doing so, we have emphasized academic standards, teamwork, and motivation.

My background in a suburban high school prompted me to develop programs with extensive college-preparatory experiences for students and to hold them accountable to high academic standards. The technical components of our vocational programs provided an opportunity to make rigorous programming relevant

and international organizations and companies.

The school also employs a cooperative education coordinator who oversees the placement of eligible senior students in paid positions with industry partners. In addition, the coordinator also qualifies students for placements in internships or externships within the community and provides job placements for students and alumni.

All stakeholders are justifiably proud of the progress Worcester Tech has made in a short period of time. Within days of opening the new facility, the staff dubbed it “The School That Works,” which suggests the traditional role of vocational education to prepare for the world of work, but means much more.

According to Principal Sheila Harrity, “Our motto signifies that our school must work to meet the needs of our students as members of a global workforce. The needs of the workforce have changed in recent years and the face of vocational/technical education has changed with it. Our school must meet the needs of students to be pre-





to our students. Each of our vocational programs examined its offerings to ensure that students were being exposed to cutting edge technologies and methods. In our academic programs, we redoubled our efforts to simultaneously prepare students for the demands of the state testing program and for college preparation. We closely mapped our curriculum to align it with the state standards and increased the academic rigor of all our programs. The number of honors-level courses doubled, and we have implemented AP courses. Worcester Tech is one of two vocational/technical high schools in the country to receive national and state funding to implement AP courses. Currently we have 125 AP students, a number that will certainly grow as our program continues to develop and more courses are offered.

Redefining academic standards has been integral to our students' success, but our emphasis on teamwork and motivation is just as important. My experience as a college athlete has contributed to my belief that teamwork and proper motivation are important components of student and school success. All important decisions in our school are made by the instructional leadership team, which includes me, the assistant principals, the vocational/technical director, and the department heads in the academic and technical areas.

The team works together to identify focused goals and targeted professional development and to develop a school culture that is marked by high expectations for teachers and students. The team also makes every effort to coordinate professional development on the basis of intensive analysis of student data. Faculty members use that analysis to develop targeted interventions for students and respond to the high expectations of our school

culture by becoming and remaining experts in their content fields.

Finally, I believe that motivation is important for student and staff success. When I was a basketball player at Providence College, I never ran onto the court without a pregame talk from a coach who provided inspiration and motivation to win. Much of what we do at Worcester Tech draws on this lesson from the world of sports. For example, two weeks before students sit for the state exams, the entire student body and faculty take a field trip to a local historical theater to hear a speaker who has overcome personal adversity address students about the importance of overcoming obstacles and reaching personal potential.

Such events are the cornerstone of our school's effort to address the needs of our students and the challenges that they face as residents of our city. The reforms that have been undertaken in our school give students the vehicle they need to take them to a successful life. This assembly program and our school's general focus on the importance of student success provide them with the motivation.

**LEADING A CULTURAL SHIFT**  
**The instructional leadership team at Worcester Technical High School provides strong leadership. Many team members were at the school to see the remarkable turnaround with the opening of the new facility and the hiring of a new principal in 2006. When quizzed about the most significant accomplishments at the school over the last five years, the team was able to paint a very clear picture of how these successes came about.**

# Worcester Technical High School

WORCESTER, MA

**Principal**  
Sheila Harrity

**Grades**  
9-12

**Enrollment**  
1,383

**Community**  
Urban

**Demographics**

White.....	51%
Hispanic .....	34%
Black/African American ....	10%
Asian/Pacific Islander.....	4%
American Indian.....	1%
Free or reduced-price meals eligible .....	
	65%
Special education .....	20%
English language learners.....	6%



*Note: Demographic data are from Spring 2010.*



The mission of Worcester Technical High School is to educate and prepare our students, both academically and technically, to meet the challenges of a global society.

## Keeping Up in a \$90 Million School

Although Worcester Tech's 400,000-square-foot physical plant and structures are extraordinary, they need to be regularly updated with the very latest technology and equipment. A plan to do so was devised by Edwin B. Coghlin, Jr., chairman of the general advisory board: "We started a program called 'entrustments,' in which we would partner with a business, a manufacturer, or a major supplier, and that supplier would provide its equipment, its expertise, its knowledge into the school," he explained. "In return, we would give that particular supplier exclusivity as far as use of the products." It was a groundbreaking strategy that had not been previously implemented at any trade school.

After months of selling this innovative concept, Coghlin and other staff members were able to persuade more than 30 companies to partner with the school. Some were major national brands, a number were small local

entities, and still others were foundations, but they all had one thing in common: dedication to the success of Worcester Tech and this new approach. Within the five-year renewable entrustments, the companies place their cutting-edge equipment in the school and advise teachers as they instruct students in its proper use. In return, the school, in its role as a conference and training center, provides a place for the companies to train current employees and sales staff and perhaps identify future workers. The result is a win-win situation. The school has ongoing access to state-of-the-art equipment and techniques each year, and the businesses are able to bring prospective clients to the school for a firsthand look at the latest innovations. As they enter the workforce, graduates will be skilled in using the sponsors' latest tools and technology and may be more likely to use those tools and products on the job.

## WTHS Small Learning Communities

### Alden Academy

- Automotive Technology
- Automotive Collision
- Drafting
- Electromechanical Technology
- Machine Tool Technology
- Welding

### Coghlin Construction Academy

- Carpentry
- Electrical
- HVAC/R
- Painting and Decorating
- Plumbing and Pipefitting
- Sheet Metal

### Health/Human Service Academy

- Allied Health
- Cosmetology
- Early Childhood Education
- Environmental Technology
- Horticulture
- Veterinarian Assistant

### IT/Business Academy

- Business Technology
- Culinary Arts
- Financial Services
- Graphic Communications
- Hotel/Restaurant Management
- Telecommunications





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The most significant accomplishments of Worcester Tech are considerably intertwined with one another. The major gains in student achievement, the changing culture of the school, the extensive use of technology, and the community perception of technical education have all positively affected student success.

A change in facility and leadership moved the traditional trade school physically, technically, and intellectually into the 21st century. The school's mission, philosophy, faculty, and students remained essentially the same, but the new building's design incorporated four student-centered small learning communities with state-of-the-art technology, communications, and equipment. The days of leaking pipes and roofs; no power, heat, or phones; and crossing a six-lane highway between classes were gone, and the focus could return to education. The new principal brought a big picture vision for the school, its students, its programs, and its culture. The possibilities were endless, and the faculty, staff members, and students became rejuvenated and highly motivated.

The most recognized accomplishment is the significant gains in student scores on the MCAS in English/language arts, math, and science. This achievement is the result of a data-driven school improvement plan, directed professional development, integrated academic and technical subjects, and personalized instruc-

tion. The school has met AYP in the aggregate and in all subgroups for four years. Student and faculty attendance are the highest in the district, along with the highest graduation rate and lowest drop-out rate.

Increasing rigor included doubling the numbers of honors classes, offering AP courses, and receiving the Massachusetts Math Science Initiative grant (MMSI) awarded by Mass Insight Education; Worcester Tech was one of two vocational/technical high schools in the country to receive it. New offerings in the technical areas included veterinary tech, biotech, and expanded environmental tech. Technical programs, along with expanded articulation agreements offering college credit in high school programs, all support our goal to offer relevant and rigorous academic and technical educational opportunities.

Each student is required to maintain a career plan that involves course selection; career pathways; and guidance from their counselors, cooperative education coordinator, and technical instructors. The expanded course offerings, counseling, personalization, and increased opportunities have resulted in a student body that continually achieves at higher levels. Worcester Tech's focus on college readiness has resulted in increased student acceptance to two- and four-year colleges and technical schools, offering students a choice of continuing their education, working in their technical area, or both.

A third—and possibly the most challenging—accomplishment has been to initiate a positive change in the school culture and public perception of vocational/technical education. Expectations for higher student achievement have had to keep pace with the sophisticated knowledge necessary to successfully function in many of today's careers.

Modern professionals work in teams, not in isolation. As one travels throughout the school during the day, students and teachers can be observed working together in a variety of activities, such as supporting technology hardware and software through the student help desk; building robots; running the student-operated restaurant; and serving customers in the bank, school stores, and salon. The vision of a school building that is open well beyond the school day is exemplified in the many student activities, sports, adult education, and other academic pursuits that occur during afternoons, evenings, and weekends.

All around, one can observe a sense of belonging to the school community. This culture shift has been recognized by the community and supported by parents and industry partners, and the transformational work has garnered local and national recognition for Worcester Tech as a highly respected educational institution. The accomplishments have replaced the traditional image of a trade school with one that not only produces world-class tradespeople but also academic scholars. **PL**