

# Promising Practices to Support the Development of K–12 Manufacturing Programs: Spotlight on Hamden High School’s Data

## Background

The Manufacturing Skills for Connecticut (MSforCT) project, funded by the U.S. Department of Commerce National Institute for Standards and Technology, aimed to establish a menu of effective educational best practices that Manufacturing Extension Partnerships (MEPs) throughout the country, and manufacturers and school systems across CT and beyond, can use to establish and advance effective career pathways. [CONNSTEP](#), CT’s MEP representative, was the lead organization partnering with [ReadyCT](#), a statewide nonprofit focused on K–12 education and career-connected learning; [CBIA](#), CT’s largest business organization; the Connecticut Manufacturers’ Collaborative, a statewide, policy-focused collective composed of the nine major manufacturing associations within CT; and [WestEd](#), a non-partisan research, development, and service agency.

As part of the MSforCT project, WestEd executed a multistep process to identify 13 manufacturing programs with evidence of using promising practices intended to support high-quality programming. This process included developing a statewide survey; identifying all existing manufacturing programs across CT for survey administration; developing and using a rubric to rank manufacturing programs on their use of high-quality, high-impact practices; and considering site demographics and industry recommendations to choose the final 13 program sites. WestEd then conducted 13 program reviews which included interviews/focus groups with key program stakeholders and a review of student administrative data. Ultimately, the MSforCT project created numerous resources including [The MFG Skills-CT](#) website, a [Promising Practices guide](#), and [13 program-specific reports](#), including [Hamden High School’s manufacturing program](#).

## Hamden High School Manufacturing Program Data

The current summary of Hamden High School's manufacturing program data supplements the site-specific report. This document summarizes data from CT's Statewide Longitudinal Data System (SLDS): the Preschool Through 20 Workforce Information Network (P20 WIN). The data included all students enrolled in the high school during the 2020-21 academic year. Manufacturing program students are defined as students taking at least one manufacturing program course. Manufacturing students are included in the overall school population.

**Table 1: Student Demographics, Academic Year 2020-2021**

Student Characteristics	Manufacturing Program Students (n = 53)		Overall School Population (n = 1,622)	
	n	%	n	%
American Indian or Alaska Native	*	*	*	*
Asian	*	*	110	7%
Black or African American	17	32%	543	33%
Hispanic/Latino of any race	7	13%	340	21%
Native Hawaiian or Other Pacific Islander	*	*	*	*
Two or More Races	*	*	83	5%
White	19	36%	543	33%
Female	14	26%	768	47%
English Language Learners	*	*	62	4%
Students with Disabilities	6	11%	260	16%
Free/Reduced Lunch Eligible	6	11%	543	33%

Note: Cells with five or fewer students are noted with an asterisk and are restricted from reporting.

In the 2020-2021 academic year, there were 53 students enrolled in the manufacturing program at Hamden High School. Among these manufacturing program students, more than a third (36%) were white and slightly less than a third were Black or African American (32%). These subgroups participated in the manufacturing program at comparable rates to their overall school enrollment - 33% white students and 33% Black or African American. However, Hispanic/Latino students of any race participated in the program at lower rates than their overall school enrollment (13% vs 21%). Female students also participated in the program at lower rates than their overall school enrollment (26% vs 47%). Among manufacturing program students, 11% were eligible for free/reduced lunch compared to 33% free/reduced lunch students enrolled in the overall student population.

**Table 2: Academic Characteristics, Academic Year 2020-2021**

Metric	Manufacturing Program Students (n = 53)					Overall School Population (n = 1,622)				
	Mean	Median	SD	High	Low	Mean	Median	SD	High	Low
Attendance	166.2	170.0	14.8	177	81	149.3	163.5	35.6	177	0

Note: Attendance is defined as the total number of days attended in a given school year.

During the 2020-21 academic year, the average attendance among manufacturing program students was 166.2 days (SD 14.8). This figure is higher than the average overall school attendance of 149.3 academic days (SD 35.6).

**Table 3: Standardized Assessment, Academic Year 2020-2021**

Metric	Manufacturing Program Students (n = 6)					Overall School Population (n = 330)				
	Mean	Median	SD	High	Low	Mean	Median	SD	High	Low
English SAT	506.7	495	117.4	670	370	471.6	460.0	10.3	750	200
Math SAT	456.7	460.0	114.8	580	290	452.9	445.0	97.3	780	200

Six manufacturing program students took the SAT in 2020-21, and averaged 506.7 (SD 117.4) on the English section and 456.7 (SD 114.8) on the math section. During this same year, 330 students across Hamden High School took the SATs and averaged 471.6 (SD 10.3) on the English section and 452.9 (SD 97.3) on Math. On average, the manufacturing program students' English scores were higher than the overall school population's average English scores.

**Table 4: Secondary Graduation Rate, Academic Year 2020-2021**

Metric	Overall School Population (n = 377)	
	n	%
Graduated	345	91.51%

Note: There was not enough data to calculate and report the graduation rates for manufacturing cohort students..

From the overall school population more than 90% of the seniors graduated in 2020-21.