



**Marilyn Barger, PhD**  
P.I., Executive Director  
FLATE

**Marie Boyette, PhD**  
Associate Director

**Janice Mukhia**  
Communications Specialist

## FOCUS ON THE **WorkForce**

### Florida Celebrates Manufacturing Day with Purpose

**T**he National Science Foundation (NSF) through its network of Advanced Technological Education (ATE) centers has been leading a national effort to strengthen, train and build a world-class technical workforce. ATE regional centers of excellence serve as hubs for educating and training high-tech, high-skilled technicians who play a critical role in leading innovation in high-tech industries across the nation.

In Florida, FLATE (Florida Advanced Technological Education Center) is the go-to organization for manufacturing and advanced technical education, best practices and resources supporting the high-performance, high-skilled workforce for Florida's manufacturing sectors. Since 2004, the Center is Florida's leading resource for education and outreach, project leadership, and services that promote and support career pipelines for a skilled workforce in the advanced manufacturing community statewide.

FLATE's Manufacturing Day outreach strategy, before, during and after the event, enabled statewide participation. This strategy not only helped build in-roads for communities across Florida to create sustainable partnerships and outreach between regional manufacturers associations, school districts, economic development and workforce organizations and manufacturers, but enabled regional manufacturing teams to independently organize tours, proclamations, and sponsorship for official Manufacturing Day T-shirts.

This year, 3000 middle and high school students in 36 counties toured 112 high-tech manufacturers as part of National Manufacturing Day/Month in Florida. A total of 165 events were planned throughout Florida, with many taking place throughout October 2014. This year's Manufacturing Day initiative marks a rise not only in the number of tours (112 vs. 80 tours last year), but also in the number of

FLATE's "Made in Florida" industry tours have been an effective outreach strategy to educate and inform secondary and post-secondary students, educators and the community at large about high-tech manufacturing and STEM-based careers.

To date, more than 5000 students have been joined by 516 parents and teachers to tour nearly 400 high-tech facilities across Florida. Growing recognition and support for National Manufacturing Day has expanded the "Made in Florida" tour experience to reach students in 36 counties across Florida. This means that there were Manufacturing Day tours and activities in over half of Florida's counties.

This year marked the second year that FLATE led a statewide outreach campaign to celebrate National Manufacturing Day in Florida. This cohesive, statewide effort was highly successful not only in organizing industry tours for students, but positioning Florida as a national leader in implementing a statewide strategy for National Manufacturing Day.

students (3000 vs. 2000 students) and industries opening their doors for Manufacturing Day in Florida. Ten counties in Florida also issued proclamations recognizing Oct. 3 and the month of October as national Manufacturing Day/Month.

In addition to tours, FLATE once again designed official Manufacturing Day in Florida T-shirts. FLATE also worked with regional manufacturers to arrange statewide media publicity for industry tours. This effort yielded Manufacturing Day in Florida-related stories in 20 print and broadcast local/regional outlets. This year FLATE also developed curriculum for elementary as well as 7th–10th grade students. Several schools across Florida are currently piloting these lesson plans as part of Manufacturing Day 2014.



Our statewide outreach strategy was highly successful as evidenced by post-event survey data formulated, collected and tabulated by FLATE. Indeed, data collection and subsequent assessment are important and integral to comply with FLATE's NSF mission. FLATE coordinated statewide collection and compilation of student opinion surveys for Manufacturing Day/Month in order to help evaluate tour impact. Survey results from responding participants of the student tours will be compiled by FLATE and distributed regionally. Early results, however, suggest a positive impact.

### Measuring the Results

Based on responses received as of Oct. 10 from 730 students, 95% (n=641) agreed or strongly agreed that the tour gave them new information about careers in advanced manufacturing. Eighty-eight percent of students agreed or strongly agreed that the tour helped them understand how STEM subjects learned in school are put to work in advanced manufacturing industries, and recommended the tour for other students.

Post-tour/event survey data also showed that the "Made in Florida" industry tours for Manufacturing Day appeal to a wide range of learning styles: hands-on opportunities appeal to tactile/kinesthetic learners, auditory learners enjoy hearing about manufacturing from the perspective of actual workers in industry.

Interpersonal relationships such as those displayed by teamwork, as well as solitary work such as using a microscope, are typically observed during tours and provide students with a wide range of career possibilities to consider.

On the educator side of the continuum, 16 teachers responding to a survey as of Oct. 10 also found Manufacturing Day tours valuable for their own professional development. All of those surveyed agreed that the tour helped them understand how STEM subjects learned in school are put to work in advanced manufacturing industries, and found the tour helpful to their understanding of Florida high-tech jobs and career opportunities. All of those surveyed also reported that they would now be able to promote careers in advanced manufacturing for their students. Many teachers also asked to participate next year.

FLATE research has proven that teachers are highly influential on their students, and are critical to the positive promotion of advanced manufacturing college and careers. Teachers used a variety of activities to follow up with students after the tour. These included: FLATE industry connected lesson plans, post-tour class discussion, reflective writing assignment, advanced manufacturing college and career discussion, and



*In addition to tours, FLATE once again designed official Manufacturing Day in Florida T-shirts, as worn by these young students.*

application of tour to other STEM courses and/or curriculum. Educator feedback was equally positive, and included suggesting college tours that focus on those STEM skills needed in manufacturing careers. FLATE responded to similar suggestions last year and in 2014 began offering the "Engineering Technology Experience" showcasing state and community colleges' high-tech labs for high school student groups.

FLATE also surveyed industry hosts to ensure Manufacturing Day and FLATE's "Made in Florida" tours met their needs as well. To date, all 10 hosts said that tours are a good use of their time and resources. Responders shared that the tour provided involvement in educational facilities in the community, which is part of FLATE's mission statement, and that tours could lead to future interns and employees for manufacturers. The kinds of positive feedback received from students, teachers, parents, and participating manufacturing community hosts are unified in working together to promote advanced manufacturing college and careers. **ME**

For more information on FLATE's statewide Manufacturing Day in Florida initiative visit <http://madeinflorida.org/manufacturing-day>. Or, contact Marilyn Barger, executive director of FLATE at [barger@fl-ate.org](mailto:barger@fl-ate.org) or 813-259-6578.