

## 2020 MANUFACTURING MONTH STUDENT VIRTUAL EVENTS/TOURS Summary Report

Manufacturing (MFG) Day/Month is an annual event that starts on the first Friday of every October, this national outreach effort helps show the reality of modern manufacturing careers by encouraging thousands of companies and educational institutions around the nation to open their doors to students, parents, teachers and community leaders. MFG Day/Month empowers manufacturers to come together to address their collective challenges so they can help their communities and future generations thrive. MFG Day is an initiative of The Manufacturing Institute, with the Fabricators & Manufacturers Association as a founding partner. Events have typically included in-person plant tours; however, due to COVID-19, 2020 MFG Month events went virtual.

Since 2013, with the support of the Florida Regional Manufacturers Associations and partners, the Florida Advanced Technological Center of Excellence (FLATE), now under FloridaMakes umbrella, has facilitated over 1,060 student tours, impacting 29,480 students and 1,969 educators who have visited 873 manufacturing companies across the state of Florida-table 1. Companies from fifty of Florida's sixty-seven counties have hosted a student tour at least once.

Data from the Florida MFG Month hub and other sources reported that over 192 students (grades 6-12) from 52 schools, 683 parents, educators and others participated on 29 virtual/online events/tours, see table 2. Ethnicity data shows that the majority of the students (72.2%) are white. Based on the 101 total online survey responses, approximately 95% of students agreed that the virtual event/tour gave them new information about careers in advanced manufacturing and nearly 93% stated that they learned about new technologies used in advanced manufacturing industries.

We look forward to working with companies, schools and organizations in Florida in 2021 to provide student tours of manufacturing facilities every year. We thank our many partners in this effort because we certainly could not do it alone. You can find more information about MFG Day/Month on [FLATE](#), [FloridaMakes](#), [CreatorsWanted](#) website, and tour resources on our wiki site, [www.flate.pbwiki.com](http://www.flate.pbwiki.com).

[www.flate.org](http://www.flate.org) -- [www.madeinflorida.org](http://www.madeinflorida.org) -- [www.mfgday-fl.com](http://www.mfgday-fl.com)



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<b>FL Dashboard</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017*</b>	<b>2018*</b>	<b>2019*</b>	<b>2020**</b>	<b>Total Cumulative</b>
Counties	23	39	50	32	32	21	19	na	-
Students	2,307	3,150	4,770	4,846	5,070	5,075	4,262	192	29,672
Teachers	110	174	318	268	359	392	295	53	1,969
Parents/other	66	113	318	217	120	129	117	438	1,518
Student Tours	72	95	159	186	165	178	176	29	1,060
Student Surveys	1,286	1,496	2,076	1,764	2,202	1,237	1,492	101	11,654
Manuf. Employees	225	350	636	569	680	798	683	>29	>3,970
In-kind & Cash	>\$30K	>\$50K	>\$145K	>177K	>\$412K	>429	>1,222M	na	>\$2,479 M

*\*Years 2017, 2018 & 2019 included virtual tours/events, \*\*Virtual Student tours/events, na: not available*

**Table 1. 2013-2020 - Florida Manufacturing Month Student Tours/Events**

Virtual Student Events: 29	Industry Hosts: 29	Reported Students: 192 from 53 Schools	Reported Participants: 683								
Data sources: MFG Month Hub-On24 (October-November 2020), Florida Regional Manufacturers Associations, Pasco-Hernando CareerSource & Pasco-Hernando State College											
<b>Online Student Surveys</b>											
Total online received surveys: 101, Girls' survey responses: 33 (33%), Boys' survey responses: 68 (67%)											
Participating Counties: Polk (3), Orange (9), Okaloosa (88), Hillsborough (1)											
<b>Grade</b>	6th	7th	8th	9th	10th	11th	12th				
<b>Students</b>	36 (35.6%)	26 (25.7%)	26 (26.2%)	0	3 (2.9%)	4 (3.8%)	6 (5.9%)				
<b>Ethnicity</b>	Asian	Black	Hispanic	White	Other						
<b>Students</b>	11 (10.9%)	23 (22.7%)	14 (13.9%)	73 (72.2%)	nr						
<b>Post Tour Survey Questions &amp; Answers</b>											
<b>Measuring Impact on Students</b>					<b>No Girls</b>	<b>Yes Boys</b>	<b>No Girls</b>	<b>No Boys</b>	<b>Total Yes</b>	<b>Total No</b>	<b>Total Responses</b>
1. I was considering a career in advanced manufacturing before the tour.					6	15	27	91	21 (20.8%)	80 (79.2%)	101
2. My teachers have talked about advanced manufacturing with my class.									75 (74.3%)	26 (25.7%)	101
3. Today I learned about technologies used in advanced manufacturing industries and manufactured									94 (93.1%)	7 (6.9%)	101
4. This virtual tour gave me new information about careers in advanced manufacturing.									96 (95.1%)	5 (4.9%)	101
5. The virtual tour helped me understand how STEM subjects are put to work in advanced manufacturing industries									74 (73.2%)	27 (26.7%)	101
6. I would recommend that other students have the opportunity of this tour.									86 (85.2%)	15 (14.9%)	101
7. After this virtual tour I am now considering a career in advanced manufacturing.					16	30	17	38	45 (44.6%)	56 (55.5%)	101

**Table 2. 2020 - Florida Manufacturing Month Online Student Virtual Events Survey Results Questions 1 to 7.**

## **Day/Month Virtual Events: Student Perception and Impact**

FLATE has developed and implemented processes for collecting online surveys and determining the impact on students and educators.

A total of 101 online student surveys were collected from the 2020 MFG Month and are summarized on table 2. Based on the responses, before the virtual tour 20% (21) of the students had considered a career in manufacturing and after the tour, 44.5% (45) reported that they were now considering a career in advanced manufacturing. The relative change between the initial responses before the tour (21) and the responses after the tour (45), represents a 114% increase in interest for both boys and girls considering a career in advanced manufacturing before and after the tour. Demographic data shows an increase for both genders, from 6 to 16 in girls and 15 to 30 in boys considering a career in advanced manufacturing after the tour.

An impressive 93% of students reported that they learned about new technologies used in today's advanced manufacturing industries and 95% of students felt that the virtual tour gave them new information about careers in advanced manufacturing. Approximately 73% of the respondents agreed the virtual tour help them understand how STEM subjects they learn in school are put to work in advanced manufacturing industries. About 85% stated that they would recommend that other students have the opportunity of a virtual event/tour.

Even though the reported numbers are not as high as previous years with in-person tours, the unique conditions of the 2020 MFG month continues to provide strong evidence of positive impact on students and to reinforce that MFG facility tours, in-person and virtual, are an invaluable and significant outreach tool to promote manufacturing careers. Participation in industry tours helps to dispel misconceptions about what today's manufacturing industry really looks like, and the exciting, and high-wage careers it offers.

### ***“What did you like most about this virtual event?”***

*Top three responses from students*

- *Approximately 56% stated they liked learning about careers, positions and related job requirements.*
- *Around 41% indicated that they liked learning about machines and how they work*
- *Nearly 35% stated they liked learning about advanced technologies, testing, quality, precision.*

Figure 2 below, represents responses from students about question “*What did you like most about this virtual event?*”

One thing they have learned about Manufacturing that they didn't know before”.

Answered: 101 Skipped: 0

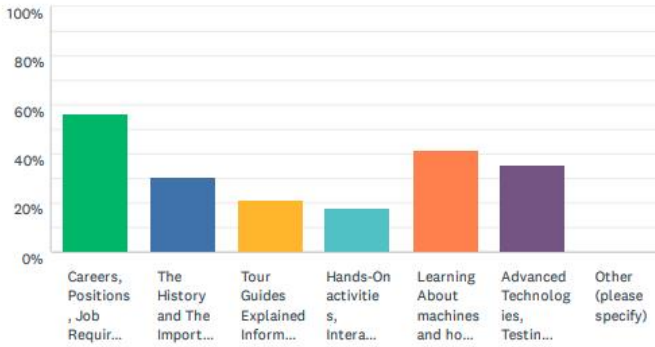


Figure 2, Responses from students about question “What did you like most about this virtual event?”

Some statements from students’ survey write-in responses about “One thing they have learned about Manufacturing that they didn't know before”

- *I learned about new technologies and how they function*
- *That manufacturing can be fun*
- *I learned about 3D printing*
- *I learned you can print metal parts with 3D printers that are bigger than my room*
- *I learned about cool new technologies and how water can cut metal*
- *Manufacturers like Fort Walton Machining made all the seatbelts at Disney World*
- *I learned the importance of math and science in manufacturing*
- *I now know the real meaning of manufacturing and how it helps us in our daily lives*
- *You can make a lot of money and earn six figure salary if you are good at it.*