Introduction

The SEMI Foundation is changing more lives since its inception in 2001. Our key to success is our industry driven model. We know our impact by maintaining connection with the students and teachers who have participated in SEMI High Tech U (HTU).

Our programs impact students. After attending an HTU program, students understand the education and career pathways that will lead them to high-tech fields, allowing them to make informed education and career choices. The SEMI Foundation commits to helping high-school students gain a better understanding of how Science, Technology, Engineering and Mathematics (STEM) are used to solve “real-world” problems. This realization fosters a renewed commitment to explore a future in high-tech industries.

In 2014, the Foundation, in collaboration with the Maricopa Advanced Technology Education Center, undertook an extensive retrospective survey of High Tech U participants who completed the program in the years 2006 to 2010. Our idea was to determine how those students persisted in their education, how they performed in school and work, and the overall impact HTU has had.

Methodology

We chose to survey 1,425 High Tech U Alumni from program years 2006 to 2010. From that survey pool, 252 HTU Alumni responded to a series of five to ten questions by phone survey for a response rate of 18%. Each phone survey took between five and fifteen minutes; in addition to the survey questions, over two-thirds of HTU Alumni offered comments reflecting on the impact of their HTU experience.

STEM education\(^1\) is a sequence of courses or a program that prepares students for successful employment and/or post-secondary education that requires different and more technically sophisticated skills including the application of mathematics and science skills and concepts.

Gender and Ethnicity

The demographic makeup of our U.S. High Tech U programs reflected the communities we serve. Of the students who participated in years 2006 to 2010, 56% were male and 44% were female.

**Our Programs Impact Education Paths**

A majority of HTU Alumni continues into higher education.

- 90% of the 252 HTU Alumni who responded to the survey are currently enrolled or finished their higher education degrees: 157 are currently enrolled in school; 71 completed their degree.
- 70% of those students continued in STEM-related majors.

Of the 157 HTU Alumni currently enrolled:
- 80% (125) attend a four-year institution.
- 20% (32) attend a two-year institution.

HTU Alumni overwhelmingly go on to study STEM fields or have completed a STEM-related degree.

- 71% (111 of the 157 HTU Alumni) who are currently enrolled in college are seeking a degree in a STEM field.
  - The number of STEM majors is more than double the amount of non-STEM majors in college.
- 68% (48 of the 71 HTU Alumni) who have completed their higher education earned a degree in a STEM field.
  - There are about three times more HTU alumni employed in STEM fields than there are in non-STEM careers.

<table>
<thead>
<tr>
<th>EDUCATION STATUS OF HTU ALUMNI</th>
<th>Currently enrolled</th>
<th>Completed education</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Yes, I am still in school.”</td>
<td>157</td>
<td></td>
</tr>
<tr>
<td>In STEM related majors</td>
<td>111</td>
<td></td>
</tr>
<tr>
<td>In Non-STEM majors</td>
<td>46</td>
<td></td>
</tr>
<tr>
<td>“Yes, I finished school.”</td>
<td></td>
<td>71</td>
</tr>
<tr>
<td>With STEM degrees</td>
<td></td>
<td>48</td>
</tr>
<tr>
<td>With Non-STEM degrees</td>
<td></td>
<td>23</td>
</tr>
<tr>
<td>“No, I am not in school.”</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>In a STEM related military job</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>Other STEM</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Total STEM</td>
<td>173</td>
<td></td>
</tr>
<tr>
<td>Total Surveyed</td>
<td>252</td>
<td></td>
</tr>
</tbody>
</table>

2 Employed in STEM field with no STEM degree.
Our Programs Impact Career Paths

Of the 252 HTU Alumni who completed the survey, two-thirds are currently employed.

71% of HTU Alumni are currently employed full-time, part-time, or in an internship. This includes HTU Alumni who are concurrently enrolled in school and working.³

Of the 180 who reported their employment, 110 specified their field or company. Of those 110, 88 (76%) are employed in a STEM field.

HTU Alumni in the Military

Eleven HTU alumni are active military and pursued STEM related work in nuclear, electrical, computer defense engineering.

The HTU Experience Made a Difference

78% of respondents said HTU directly influenced or influenced their choice of career or field.

Participants offered a variety of comments when asked, “What was the most memorable aspect of High Tech U?”

- 109 alumni remarked on the benefit of being exposed to professional work environments and higher education institutions. Alumni particularly discovered awareness about the high tech industry life via clean rooms, laboratories, and business offices.
- 33 alumni commented on how HTU motivated and/or reinforced their desire and efforts to enter STEM education and careers.
- 40 alumni mentioned appreciating developing networking skills with students and faculty. They particularly found that working in teams gave them insight onto group dynamics associated with the high tech industry and beyond.
- 25 alumni commented that the mock interviews and resume building helped build participants’ preparedness to enter college and the workforce.

Testimonials

“High Tech U definitely helped me network and to meet other students. You know in school, you’re always with the same classes, the same classmates, the same people. High Tech U helped me create a way of meeting different people than the ones I had been with at Latino College Prep.” — Alexa Dominguez, 2006.

Dominguez attributes much of her networking skills to HTU and helped expose her to a different kind of diversity.

“Keynote speakers at High Tech U definitely gave me a glimpse of what to expect in the future—not just in education, but in the workforce.” — Thomas Gajardo, 2007. Gajardo was a participant in the June 2007 program sponsored by AMAT and Intel held in Santa Clara, CA.

“Before even attending High Tech U, I didn’t even know anything about engineering. I didn’t even know what I wanted to do. It made me really interested in the sciences, like learning about nanotechnology. It was interesting to see the technological aspects of it and how even the little pieces make a huge difference in technology.” — Jackie Horrigan, 2009. Horrigan is currently studying Chemical Engineering and is with an internship at Exxon Mobile.

“I thought it was great that [HTU] cultivated an interest in the tech field, but paired it with an application of the job field. I remember doing mock interviews. It paired practicality with an interest in science. It made the sciences an option to me — it made me see that I can make a career out of this.” — Nicole Pham, 2009. Pham is currently studying Biology and researching full-time at Stanford University’s School of Medicine.

³ Not all HTU alumni who are seeking and/or have sought employment are in a STEM-related job or internship.