How to prepare young people for the New World of Work

**FIRST® AS A SOLUTION TO BUILDING A 21ST CENTURY WORKFORCE**

Rapidly changing technology is outpacing the capabilities of the workforce, leading to a shortage of qualified workers to fill these roles in both technical skills and more holistic 21st century (e.g. critical thinking, problem solving, communication, collaboration, creativity) skills. In our society, the new world of work requires young people to enter the workforce “career ready” with a strong foundation of knowledge, skills, and capabilities needed for work in the 21st century in order to make meaningful contributions in their respective pathways.

The 21st century economy is producing new professions at a rapid rate. Employers struggle to find candidates with the skills they require. The need for tech-savvy workers who have critical thinking and problem-solving skills is urgent across multiple industries. Employers report difficulty in identifying potential employees with essential skills.

### ESSENTIAL SKILLS STUDENTS BUILD WITH FIRST

1. Critical Thinking and Problem Solving
2. Collaboration
3. Adaptability
4. Innovative Thinking
5. Entrepreneurship
6. Communication
7. Accessing and Analyzing Information
8. Curiosity and Imagination

### GAINS IN SKILLS

<table>
<thead>
<tr>
<th>Skill</th>
<th>Percentage</th>
<th>Students Reporting Gains</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication</td>
<td>90%</td>
<td>90%</td>
</tr>
<tr>
<td>Conflict resolution</td>
<td>93%</td>
<td>93%</td>
</tr>
<tr>
<td>Time Management</td>
<td>95%</td>
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**ADDITIONAL INFO**
**WORKFORCE SKILLS**

*FIRST* is one of the world’s leading organizations providing experiential workforce development skills in a STEM setting.

For 30 years companies have invested in *FIRST* to develop their workforce. Today, we’re one of the world’s leading organizations providing experiential workforce development skills for STEM industries.

- Industry professionals as coaches and mentors
- Regionally based internships and apprenticeships
- Using *FIRST* experience toward work-based learning credits
- Earning industry certifications and credentials through access gained as part of a competition team
- Career exploration that builds curiosity and awareness of future career opportunities
- Integrated industry-relevant practices in program design such as the use of machine learning and artificial intelligence
- Experiential opportunities to use key Industry 4.0 technologies

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**FIRST ALUMNI**

**Declared a major in STEM**

81% of *FIRST* alumni declared a major in STEM compared to 58% in the comparison group.

- *FIRST* alumni: 81%
- Comparison group: 58%

**Declared a major in engineering or computer science**

68% of *FIRST* alumni declared a major in engineering or computer science compared to 26% of the comparison group.

- *FIRST* alumni: 68%
- Comparison group: 26%

**Declared majors in STEM by their 4th year in college**

69% of female *FIRST* alumni declared majors in STEM by their 4th year in college compared to 49% of the comparison group.

- *FIRST* alumni: 69%
- Comparison group: 49%

Positive impacts are evident for all *FIRST* students regardless of race, gender, income, or community type.

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Detailed information about the study can be found at [www.firstinspires.org/impact](http://www.firstinspires.org/impact)

Sources: *FIRST* Longitudinal Study: Findings at 84-Month Follow-Up, Brandeis University, March, 2021,

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