MATE Advanced

EDUCATION

CENTER

The Marine Advanced Technology Education (MATE) Center uses underwater robots (remotely operated vehicles or ROVs) as a way to get students in grades 4-16 excited about learning science, technology, engineering, and math (STEM). The program also exposes students to STEM career opportunities and helps them to see pathways to those careers.

MATE Underwater Robotics:

2016 Program Highlights

2016 marked the program's 16th year. Here's what the more than 2,000 students, 350 teachers, and 440 parents had to say:

An independent evaluation* found that after participating in the ROV program...







Students are more interested in math and science

- 85% wanted to learn more about science, technology, engineering, and math.
- 77% were more interested in a STEM career.
- 85% indicated that their ROV project helped them learn to apply STEM to solving real world problems.
- 75% felt that they were more self-confident because of their ROV project.

Teachers saw improvements in student learning

- 99% observed improvements in their students' STEM knowledge and skills.
- 99% also saw improvements in team building, critical thinking, and problem solving.

Parents provided positive feedback

- 96% said that their children were more interested in science, technology, engineering, or math.
- Parents reported that their children were better problem solvers (95%), critical thinkers (93%), team members (96%), and/or leaders (90%).

*For additional details regarding the evaluation methodologies, please contact the MATE Center.

For more information about the MATE Center and its ROV program, contact:

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Alumni survey results

The MATE Center launched a survey of competition student "alumni" in June of 2015. The survey included questions about their higher education, employment, internships, scholarships, and other opportunities that opened due to their involvement with the ROV competition. Highlights of the survey results are included below. MATE plans to launch a second alumni survey in the fall of 2017.

Competition's influence on students' educational and career paths:

- 85% of the college graduates had earned a STEM degree, and 85% of the then current college students were studying towards a STEM degree.
- 73% of the employed alumni were working a STEM-related job, and 22% had worked a job related to ROVs or other underwater technologies.
- Two-thirds (67%) of the alumni credited the ROV competition with influencing their educational or career paths.
- The ROV competition played a role in alumni attaining employment (37%), admittance into educational programs/college/university (36%), internships (30%), awards (21%), and scholarships (21%).

What participants had to say:

Students

This program opened my eyes to the world of technology and the use of courses such as math and science in the real world.

It has strengthened my relationship with my team members and has made me improve my math, science, and engineering skills.

Teachers

This is a wonderful program that teaches students many skills applicable to real life. Students are motivated, enthusiastic, and learn without even realizing it.

This is about so much more than robots. Students learn the 21st Century skills we always talk about in education but so rarely actually teach.

Parents

Her confidence level has sky-rocketed. She feels like she can speak up more; she has less fear of participation.

Our team of no college graduate parents envision themselves as future engineers.

Working Professionals

A great experience and possibly one of the best experiences I've had in my professional career. I'm amazed at the level of knowledge and professionalism that the students exhibit.

I wish that I could have participated in a program like this when I was young.

Alumni

In my acceptance letter into college, they referred to the MATE competition on my resume.

It showed me a deeper love for sciences and has influenced me to become a processing engineer.