IAF SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)
Enabling the Future - Developing the Space Workforce (5)

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ENHANCING THE STEM PIPELINE – USING PUBLIC POLICY TO PROMOTE SPACE INDUSTRY ACCESS TO A HIGHLY SKILLED WORKFORCE

Abstract

Since the late 1950's the industries required to support space exploration and utilization have become well known. Satellites have connected us globally as never before, humans have walked on the moon, and we've explored numerous distant worlds. Now on the eve of our next stellar advances, we run the risk of stunting our own progress because of an insufficiently prepared STEM workforce.

In the United States, young students may have a spark of interest to pursue a career in aerospace, however, that interest often fades due to the lack of hands-on STEM education exposure in schools as they enter high school. Additionally, the increased exposure to other subjects encourages students with highly prized STEM skills to pursue careers in other fields. Through the Wolverine CubeSat Development Team (WCDT) at The Weiss School middle school, students are fortunate to have a strong STEM education program and a strong exposure to aerospace science. As part of their contribution to the growth of the space industry, WCDT students work towards preparing themselves for STEM careers.

The WCDT began in August of 2015 as an after-school club and activity with the ultimate aim of deploying a CubeSat into space within three years. In December of 2018, the WCDT successfully launched WeissSat-1, a 1U CubeSat selected in the 24th round of NASA's ELaNa Program and the CubeSat Launch Initiative (CSLI). WeissSat-1 made history as the first CubeSat to be built, tested, and launched by middle school students.

Students of the WCDT are also active members of the Aerospace Public Policy Institute (APPI) where they work to expand hands-on STEM education in the United States. In the U.S. Congress, House Resolution 85, originally composed by the students, was introduced to the United States Congress with the aim to increase public awareness of the educational benefits of the CubeSat Launch Initiative (CSLI) and to prioritize its funding in the annual budget. This initiative is currently in progress and has been

assigned to the Science, Space, and Technology committee. Students also work on a State level legislation to increase the available funding for experiential Title 1 teacher STEM training in the State of Florida. Through this integrated partnership with Title 1 Public schools, and through attending legislative blitzes, students raise awareness and propose solutions to producing a more educated workforce for the future of aerospace industry.