

LESC bill analyses are available on the New Mexico Legislature website (www.nmlegis.gov). Bill analyses are prepared by LESC staff for standing education committees of the New Mexico Legislature. LESC does not assume any responsibility for the accuracy of these reports if they are used for other purposes.

LEGISLATIVE EDUCATION STUDY COMMITTEE
BILL ANALYSIS
53rd Legislature, 2nd Session, 2018

Bill Number	<u>SB146</u>	Sponsor	<u>Kernan</u>
Tracking Number	<u>.209558.1</u>	Committee Referrals	<u>SCC/SEC/SFC</u>
Short Title	<u>Statewide Robot Playshops & Competition</u>		
Analyst	<u>Bedeaux</u>	Original Date	<u>1/26/18</u>
		Last Updated	<u>1/29/18</u>

BILL SUMMARY

Synopsis of Bill

Senate Bill 146 (SB146) appropriates \$50 thousand from the general fund to Eastern New Mexico University (ENMU) to support statewide playshops for students and teachers in third through 12th grade. The playshops will include lessons for students to learn, design, build, and program autonomous robots. The program is intended to culminate in an international robot competition held annually in New Mexico.

FISCAL IMPACT

SB146 appropriates \$50 thousand from the general fund to ENMU for expenditure in FY19. Any unexpended or unencumbered balance remaining at the end of FY19 shall revert to the general fund.

SUBSTANTIVE ISSUES

The appropriation is intended to support the nonprofit Inquiry Facilitators Inc. in offering RoboRAVE “playshops” in New Mexico public schools. ENMU will act as the fiscal agent for Inquiry Facilitators Inc. ENMU has received appropriations for this purpose in previous years. In the General Appropriations Act (GAA) for FY15, ENMU received \$100 thousand to support a “youth robotic competition.” In FY16, ENMU received \$225 thousand. However, the FY17 GAA and FY18 GAA did not include this line item. It is unclear how many students, schools, and school districts were impacted by the appropriation in previous years.

RoboRAVE playshops blend robotics with the public school curriculum, offering children hands-on experience with designing, building, programming, and testing a simple autonomous robot. Students are tasked with creating a robot that can complete a task, like firefighting, carrying cargo, or completing a maze.

Student involvement in extracurricular activities can improve student engagement and help students begin down a career pathway. According to a 2013 study by Brandies University, students

who participate in high quality science, technology, engineering, and math (STEM) extracurricular activities are more likely than similar peers who do not participate to attend college, major in a STEM field, participate in internships or apprenticeships, and work in high-skill STEM careers. As an example, one such extracurricular activity, Systems Go New Mexico, a rocketry program administered by the Pecos Valley Regional Education Cooperative, engages students from several school districts in a comprehensive program where students design, build, and launch a rocket. In a presentation to LESC, students reported learning about project management, designing a rocket, building simulations of their rocket's launch, and having to deal with day-of-launch troubleshooting. Many of the students reported learning leadership skills, developed an interest in applied math and science, and intended to study a STEM field in college.

ADMINISTRATIVE IMPLICATIONS

ENMU would act as the fiscal agent for RoboRAVE International to support the latter in coordinating and conducting playshops in third through 12th grade classrooms statewide and holding an international robotics competition.

OTHER SIGNIFICANT ISSUES

The \$50 thousand appropriation will be supported by funds raised by the nonprofit through partnerships with Intel, Sandia National Laboratories, Los Alamos National Security, the City of Albuquerque, and many other groups. Sponsors for individual events during the May 2018 RoboRAVE International competition in Albuquerque include New Mexico Tech for a fire-fighting robot challenge and the University of New Mexico School of Law for a RoboEthics debate.

RELATED BILLS

Duplicates HB237, Statewide Robot Playshops & Competition.

SOURCES OF INFORMATION

- LESC Files

TCB/rab