

Senator Jeff Merkley  
121 SW Salmon Street, Suite 1400  
Portland, OR 97204

Dear Senator Merkley,

Thank you for the opportunity to voice my appreciation for all that you are doing, as you, your colleagues, and staff, work to reauthorize the Elementary and Secondary Education Act (ESEA). As a High School Student, who participates in the FIRST (For Inspiration and Recognition of Science and Technology) Robotics Competition, I know just how much STEM (science, technology, engineering and mathematics) principles and education can help you to succeed. I also know that it has become increasingly difficult for students to get experience in these fields as funding becomes ever more scarce.

Personally, I have gained and learned much through my experience in the FIRST program, and have come to care about not just my team but the organization as a whole as if it were my family. When revising the ESEA, it is important to remember that not only are students a priority, but teachers need training and stipends for working after hours with students. To truly excel in STEM pathways students need to be led by experienced individuals who have the knowledge to and skills required to not only teach but impress them. Working as an intern at Autodesk, Inc. this summer, I have witnessed the premium that industry is placing on students with STEM experience, and our schools need to reflect that.

The modern day class is taught to a test and a white board and PowerPoint dominate the stage. Only those of us who have had the opportunity and the time to participate in after school activities that give us an application for the subject matter are able get excited when traction coefficients are discussed. Only a FIRST robotics student can take the electrical lessons of a Physics One class and make them relevant to his after school activities. This is why I participate in FIRST, because if I did not I am unsure whether I could make it to graduation.

But not everyone dreams of being an engineer, we live in a world where you either go to college or are told that you have failed. The average age of the American Machinist is approaching 60 years of age, if we want to succeed in maintaining ourselves as the idea center of the world, we will need people to make those ideas. We need to stop failing students who dream of working on the parts of a 747, or welding bike frames. College is not for everyone, in fact for some it can be the ending of a brilliant future. We do not need to bring back the old shop classes of book shelves and table, but what we need is the modern shop class of welders, robots, and electric vehicles. This is our future, and this is why STEM matters.

Sincerely,  
Nathan Fuller  
Age 17-Team Captain  
FRC Team#2733 "The Pigmice"