Senator Maria Cantwell

Floor Speech on Perkins and the Importance of Coding in Education

July 31, 2018

CANTWELL: Mr. President, I come to the floor to speak about the importance of teaching computer science and coding in our education system. Throughout the United States, and especially in my home state of Washington, our internet economy is booming. Nationwide, it represents 7 percent of our GDP and makes up 13 percent of Washington's economy. In Washington, more than 13,000 internet companies provide more than a quarter of a million jobs. And we want to keep this American success story going. But to do that, we need to make sure that these start-ups have the workforce of tomorrow that they need, and that's why it's so important for children throughout the United States to be able to learn to code in school.

Every student in America should be taught the tools they need to enter our 21st century economy. I laugh and say all the time, I took typing and Latin as my prerequisite requirements in college. I'm not saying that typing and Latin didn't help me today. But I question whether we are teaching the same skills today that we need for the 21st century economy. Every student in the United States should have the opportunity to learn about the internet, about algorithms and about applications. In Washington we're making progress in this area because [31%] of our high schools offer coding classes, but still more needs to be done.

According to a great organization, Code.org, 90% of parents in the United States want their children to study or understand computer science. However, only 40% of their children are taught anything about computer programming. Computer jobs are the number one source of new jobs in the country. Currently, there are more than 500,000 computer job openings in the United States. And this is a skills gap that we have to close if we want to continue to develop these new products and services.

That is why I worked with my colleague from Louisiana, Senator Cassidy, to introduce the High School CODES Act earlier this year. Our legislation created a new federal grant program to help high schools throughout the country establish or expand coding education programs for their students. With 90% of parents who want their children to study computer science, we should be giving more opportunities. Parents in cities and suburbs and rural communities all should have access to these computer science programs.

And as I mentioned in my state, the demand for computer science and coding programs is clear. Washington has more than 16,000 good-paying job openings in computer science right now. Still, only 31% of our state's schools offered computer science courses for the high school level between 2016 and 2017.

So what's standing in our way? Well, in many cases it's the cost of developing a computer science curriculum and getting a program up and running in their high school. And that's exactly the problem our legislation tries to solve, by giving local communities the resources they need to develop and implement good computer science curriculum that make the most sense for those communities.

And as I said, not everybody will necessarily go into computer science; just as I took typing and Latin, it gave me a fundamental understanding of both of those things. What's wrong with having everybody have a fundamental understanding about the language of the 21st century: computer programming?

So I was excited, with Senator Cassidy, when we were able to include language in the reauthorization of the Perkins Vocational and Technical Education bill that the president is signing today to move us closer to this goal. The language in the bill that was passed that's going to be signed by the president would allow federal funds to support "efforts to expand, develop, and implement programs to increase the students' opportunity for rigorous courses" in coding and computer science and "support statewide efforts to create access to implementation of coding and computer science."

This is a great example of what we can do in working together in a bipartisan manner. It is the first of an important step to make sure that every student understands some level of what our economy is going to be built on in the future. We will have plenty of work to do, and as I said, not everyone will enter into computer science, but having a basic understanding of just about how everything in your home is going to work, in your workplace is going to work, even your cars and other applications that you have – having a good understanding will be a good bridge to this economy.

So we're going to continue to work together to find ways that computer science and coding can be taught in our classrooms. At the federal level, we don't have a lot of control over that curriculum at the local level, but we can incent, like we are doing today, schools across the nation with a little federal support to make sure that coding and computer science is a key part of the high school education.

I want to thank my colleague, Senator Cassidy, for working on this important issue with me and helping get it included in this Perkins legislation, and thank all of my colleagues for voting for it, and for the president signing that legislation today.

This economy of the future can leave people behind, but not if we help prepare them for the future. And part of preparing them for the future is just a basic understanding of how programming and computer science works. So I hope that many schools across the United States will take up this opportunity. I hope that it will lead to many, many new applications, new job creation, and greater awareness of what STEM education is all about. Having people trained in these areas of science and engineering and math and technology is key to our country's future, and I'm so glad the president is signing this legislation today. I thank the president. I yield the floor.