

Sarah Silverman Testimony in Support of Ohio H.B. 170

Thank you, members of the committee, Chair Brenner, and Vice Chair Slaby.

My name is Sarah Silverman. I grew up in central Ohio, just a few miles from here, and am a proud graduate of The Ohio State University. I'm now an educational psychologist and consultant to education innovators and technology countries across the United States. Because I see the importance of computer science education in my daily work, I partner closely with Code.org, a national nonprofit dedicated to expanding access to computer science education--especially for women and minorities. I'm here today to express strong support for House Bill 170 and to laud the work of the co-sponsors in bringing attention to a critical need in Ohio's schools.

There is unprecedented interest in computer science education: 93% of parents want their child's school to teach computer science. 75% of Americans believe computer science is cool --no longer just the purview of an elite few. And 50% of Americans rank computer science as one of the two most important subjects of study after reading and writing.

However, fewer than half of all schools offer computer science.

- Ohio had only 1,137 computer science graduates last year; only 18% were female. The problem begins in the K-12 pipeline.
- Today, there are fewer AP exams taken in computer science than in any other STEM subject area.
- Out of the 1,149 students who took the AP CS exam in 2016, only 20% were female, less than 3% were Hispanic or Latino, and less than 4% were Black.

Compare this with astounding jobs data:

- Ohio currently has 15,714 open computing jobs, which is 3.8 times the average demand rate.
- The average salary for a computing occupation in Ohio is \$79,972, which is almost double the average salary in the state (\$44,750). The existing open jobs alone represent a 1.2 billion dollar opportunity in terms of annual salaries.

And these jobs are across all industries. This isn't just about tech companies -- this is about all of Ohio. While nationally, $\frac{1}{3}$ of computer science jobs are in the tech industry, the other $\frac{2}{3}$ are in other fields ... think agriculture, manufacturing, banking, government. We need to support these opportunities for Ohio students to thrive in their home state.

Early access to fundamental computer science skills can be a game-changer for students both in terms of inspiring interest in computer science education and in giving students alternative routes to core academic skills. Take, for example, sequencing (pp. 193-195). By intentionally introducing students to the very basic concept of ordering in a step-by-step sequence as early as first grade, we can begin to build skills that are relevant across domains--but that also serve as a foundation for understanding computer science.

The pathway to building skills over time is high quality learning standards.

Consistent standards for learning help ensure that all students have access to the same learning progressions and are working toward the same knowledge and skills. While standards across states should aim to meet a consistent level of quality, states should also have the flexibility to define skillsets that are most essential to their students' and workforce needs. To support that aim, five leading computer science organizations led development, along with 22 writers from fourteen states and four school districts, of a framework for standards development. Computer science educators, academic researchers and industry professionals were among the hundreds of reviewers who helped develop a toolkit and guide for states like Ohio to use in building high quality standards. Code.org and others also provide technical assistance and support to states developing and implementing standards.

Today, Idaho, South Carolina, California, Colorado, Virginia, Wisconsin are all using the Framework to build standards and several others are looking to the Framework for upcoming standards efforts. House Bill 170 specifically recommends that Ohio employ the Framework's guidance as well, and I laud that.

In summary, House Bill 170 makes great forward progress toward helping more students get access to the skills they need for success--and also helps strengthen Ohio's economy by ensuring more Ohioans have the skills they need for Ohio jobs. I hope you'll strongly support this bill to Governor Kasich's desk--and along the way as it is implemented across the state.

Thank you for inviting me to testify before this committee and for your efforts to increase access to computer science education in Ohio. I'm happy to answer any questions.