Katie Hendrickson Testimony

Ohio Senate Education Committee

October 11, 2017

Thank you members of the committee, Chair Lehner, and Vice Chair Huffman.

My name is Katie Hendrickson. I live in Athens, Ohio, where I taught middle school mathematics for six years. I’m the director of state government affairs at Code.org, a 501c3 nonprofit dedicated to increasing computer science in K-12 across the country especially for female students and underrepresented minority students. Code.org strongly supports the passage of House Bill 170 and would like to thank the sponsors, Representative Carfagna and Representative Duffey, for elevating this issue of CS access.

**Preservice:** One of the biggest issues currently facing expansion of CS education is a lack of qualified teachers, and unclear policy related to teacher certification in CS. Due to increasing demand for CS courses, we need to be able to scale the teaching force in CS to meet the demand for these courses, while also making sure that these teachers are adequately prepared to teach computer science. It takes time to develop preservice programs -- and in 2016, of 75 graduates nationwide prepared to teach CS, not a single Ohio teacher graduated prepared to teach Computer Science. Meanwhile, Ohio graduated 624 teachers in mathematics and 450 teachers in science.

**Certification:** While those comprehensive certifications and preservice teacher programs are being developed, teachers could be allowed to teach CS under a temporary license after receiving high-quality professional development to demonstrate their content knowledge. But, in addition, for all secondary CS teachers to have modern CS knowledge, it’s important for all elementary teachers to receive professional development in computer science if they are going to be teaching it. If students are exposed to computer science early on, it gives them a chance to get excited about learning it before they begin choosing classes to take in secondary school.

**Code.org PD:** Teacher professional development is a key part of preparing teachers in CS. Code.org is thrilled to partner with three individuals and one organization in providing professional learning in computer science fundamentals to Ohio teachers. So far, over 130 high school teachers, 25 middle school teachers, and 2000 elementary school teachers have been trained by Code.org to teach computer science in their classroom. Code.org has seen successful results in preparing teachers from other subject areas to teach computer science for the first time. Tonkia Bridges, a Cincinnati teacher who attended our professional learning with Battelle in Ohio this summer, said that although she “had a lot of uneasiness” about teaching something she didn’t study in college, she walked away from the workshop thinking, “teachers don’t have to know everything.” She shares this message with her students every day: that she is learning the computer science content along with them, and she can help guide them through the process of learning.

**Make CS count:** When students have opportunities to take CS, it’s important that they are able to fit it into their schedules. Allowing rigorous computer science courses to satisfy a math or science graduation requirement will not require students to take computer science or schools to teach it. What it ***will*** do is encourage more students to take it, as recent data shows that in states where computer science counts, enrollment is as much as 50% higher. It will also demonstrate the value and importance of computer science education to help students prepare for college and careers of all kinds. I recognize that there have been some questions about the substitution of computer science for Algebra II. However, this bill does not recommend that students take less math; instead, it gives flexibility to school districts and gives them the autonomy to determine the best options to provide for their students.

Code.org appreciates the enthusiasm and support around computer science and we look forward to working with legislature in the future to support high-quality implementation of this effort. The bill already establishes a framework for interested districts to develop a technology fund, but long-term implementation will benefit from investments in educator development including pre-service training and in-service professional development. Ohio can join states like Arkansas, a national leader in CS education, in funding learning opportunities that can transform availability of high-quality CS education across the state. Recently, the President announced a competitive advantage for several federal grants that will enable Ohio and others who have adopted laws like HB 170 to receive preference in their grant applications. That’s an opportunity to maximize Ohio’s investments by supplementing them with federal dollars.

Investing in teachers will increase opportunities for schools to offer computer science experiences for students.

Thank you for your work on behalf of Ohio’s students, and for the opportunity to testify before you today in support of House Bill 170. I would be happy to answer any questions.