



STATE OF HAWAII
DEPARTMENT OF EDUCATION
P.O. BOX 2360
HONOLULU, HAWAII 96804

Date: 03/13/2019
Time: 02:45 PM
Location: 229
Committee: Senate Education

Department: Education

Person Testifying: Dr. Christina M. Kishimoto, Superintendent of Education

Title of Bill: HB 1274, HD1 RELATING TO EDUCATION.

Purpose of Bill: Provides for computer science professional development for teachers. Appropriates funds. (HB1274 HD1)

Department's Position:

The Department of Education (Department) supports the intent of HB 1274, HD1 to expand direct access for teachers to computer science professional development opportunities, and respectfully provides comments.

During the 2017-2018 school year, the Department collaborated with stakeholders to create a strategic multi-year computer science action plan focused on advancing innovative outcomes and learning experiences for all students. The action plan includes the delivery of high-quality professional opportunities and embedded coaching that is essential to building teacher capacity and confidence in the development of rigorous computer science instruction in grades PreK-12.

Recognizing the need to build upon an array of resources, a professional services list of qualified prospective providers was established in October 2018 to expedite a complex area's or school's ability to procure services related to computer science learning and outcomes.

The Department's imperative is to build and sustain high quality STEM and computer science opportunities to ensure academic, economic and work force success. Equally important, the Department is cognizant that teachers must be equipped with appropriate, high-quality computer science professional development opportunities to ensure high quality instruction and a collective response to the exponential growth of computing skills required in the job industry. Additionally, there is a sharpened focus to ensure access for under-represented populations and growing the capacity of educators ranging from novice to accomplished practitioners.

The Department looks forward to continuing to leverage the ongoing collaboration with its valued stakeholders as we advance the vision of computer science and STEM. Further, the Department is appreciative of the appropriation included in this measure provided that its passage does not replace or adversely impact priorities as indicated in our Board of Education

approved budget.

Thank you for this opportunity to testify on HB 1274, HD1.

The Hawaii State Department of Education seeks to advance the goals of the Strategic Plan which is focused on student success, staff success, and successful systems of support. This is achieved through targeted work around three impact strategies: school design, student voice, and teacher collaboration. Detailed information is available at www.hawaiipublicschools.org.



1200 Ala Kapuna Street ♦ Honolulu, Hawaii 96819
Tel: (808) 833-2711 ♦ Fax: (808) 839-7106 ♦ Web: www.hsta.org

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TESTIMONY BEFORE THE SENATE COMMITTEE ON EDUCATION

RE: HB 1274, HD1 - RELATING TO EDUCATION

WEDESDAY, MARCH 13, 2019

COREY ROSENLEE, PRESIDENT
HAWAII STATE TEACHERS ASSOCIATION

Chair Kidani and Members of the Committee:

The Hawaii State Teachers Association **supports HB 1274, HD1** relating to education. This measure would appropriate funds to the department of education to establish a program with eligible entities to develop and implement teacher professional development for computer science courses and content.

The landscape in the area of computer sciences is ever-changing, thus the requested program is necessary to help guarantee that teachers are able to provide our public school students with the most up-to-date information in this rapidly expanding field. Without a robust capacity of computer science educators, our public schools will not be able to offer students the computer science opportunities that will make them competitive in the 21st century labor market.

At this time, the majority of computer science jobs offered in Hawaii are filled by mainland hires who can fulfill the job requirements remotely. In order for the state of Hawaii to build a strong workforce in this sector, it is crucial that our public schools expand their computer science curriculum. This cannot occur, however, without a pool of qualified educators to teach this content. An appropriation to the HDOE to offer computer science professional development opportunities is imperative provided these professional development opportunities are made easily accessible for any and all K-12 public school educators without restrictive application requirements.

Passing this bill will help ensure that the Hawaii Department of Education is able to quickly build its capacity of computer science educators so that our students have the opportunity to be competitive in the 21st century job force. For this reason, the Hawaii State Teachers Association asks your committee to **support** HB 1274, HD1.



david.miyashiro@hawaiikidscan.org
hawaiikidscan.org

David Miyashiro
Executive Director

March 13, 2019

Committee on Education
Senator Michelle N. Kidani, Chair
Senator Donna Mercado Kim, Vice Chair

State Capitol
415 South Beretania Street
Honolulu, HI 96813

Aloha Chair Kidani, Vice Chair Mercado Kim, and Members of the Committee,

HawaiiKidsCAN supports HB 1274 HD1, which supports teachers with appropriate professional development opportunities by appropriating funds to the Hawaii State Department of Education (DOE) to enter into a contract or agreement with one or more entities to develop and implement computer science (CS) professional development programs directly accessible to teachers.

Founded in 2017, HawaiiKidsCAN is a local nonprofit organization committed to ensuring that Hawaii has an excellent and equitable education system that reflects the true voices of our communities and, in turn, has a transformational impact on our children and our state. Last year, our centerpiece campaign sought to increase equity and access for STEM and computer science learning experiences. These opportunities expose students to skills connected with high-wage, high-growth industries, giving them more options upon graduation.

Hawaii has made significant progress in terms of expanding access to CS learning opportunities, with numerous local partners stepping up to provide quality learning experiences to students and adults alike, and the Hawaii DOE rolling out a comprehensive and aggressive Action Plan for CS Education. However, more work is required to increase equity and access throughout our state, especially given the shortage of qualified and trained CS teachers. Nationwide, only 75 new educators completed their pre-service teacher preparation in CS in 2016—and none of these teachers were prepared in Hawaii.¹

CS and other science, technology, engineering and math (STEM) knowledge will become increasingly important as our diverse economy evolves. Between 2017 and 2027, STEM-related occupations are projected to grow by 8 percent in Hawaii, compared with just 4 percent for all

¹ “Universities aren’t preparing enough CS teachers.” Code.org. *Medium.com*. September 1, 2017. <https://medium.com/@codeorg/universities-arent-preparing-enough-computer-science-teachers-dd5bc34a79aa>

other occupations.² In particular, some of Hawaii's fastest growing occupations between 2014 and 2024 will require CS experience, including web development (26 percent growth), computer systems analysis (20 percent growth) and software development (18 percent growth).³ In 2016, these and other computer and mathematical occupations carried a median hourly wage of \$35.87 in Hawaii, nearly double the median hourly wage of \$19.24 for all jobs that year.⁴

These new skills are becoming increasingly important as our economy changes, with reports suggesting that automation may eliminate a third of our nation's jobs by 2030.⁵ An initial investment in our students in these skills will be more than paid back as students become our workforce of tomorrow, ensuring that Hawaii is poised to not only survive this changing global economy, but thrive.

The world around us is changing. We must embrace the challenge of providing our children with an education that keeps up with the world. For more data on the importance of CS education in Hawaii, please see HawaiiKidsCAN's *State of Computer Science Education in Hawaii 2018* report at <https://tinyurl.com/StateofCS>.

Mahalo,

David Miyashiro
Founding Executive Director
HawaiiKidsCAN

² "ECS Vital Signs: STEM Demand Hawaii." *Education Commission of the States*. <http://vitalsigns.ecs.org/state/Hawaii/demand>

³ Software development includes systems software and applications software. "Employment Projections for Industries and Occupations." August, 2016. *Hawaii Workforce Infonet*. <https://www.hiwi.org/admin/gsipub/htmlarea/uploads/Long-TermProjections-2014-2024-State.pdf>

⁴ "Occupational Employment and Wage Data - State of Hawaii 2016." August, 2017. *Hawaii Workforce Infonet*. https://www.hiwi.org/admin/gsipub/htmlarea/uploads/OES_2016_publication.pdf

⁵ "Jobs Lost, Jobs Gained: Workforce Transitions in a Time of Automation." Manyika, J. et al. *McKinsey Global Institute*. December 2017. <https://goo.gl/GLShNP>

March 12, 2019

Members of the House Education Committee:

I am writing to enthusiastically express my support of HB 1274, which would fund computer science professional development opportunities for teachers in the state.

Hawaii has much to be proud of in the leadership role it has taken in computer science education opportunities for students. To continue that work and expand access for all, it is imperative that we have professional development for teachers, as in 2016 there was not a single teacher graduating from a Hawaii university prepared to teach computer science.

Professional learning opportunities for teachers have proven to be successful in bridging this gap. High-quality professional development, as written in the bill, has produced student results in line with overall national averages in computer science.

And, we have shown through our research at Code.org that funding professional development correlates strongly with increased access to computer science in states.

Thank you for your consideration of this crucial initiative toward expanding access of computer science for all of Hawaii's students.

A handwritten signature in black ink, appearing to read "Sean Roberts". The signature is fluid and cursive, with the first name "Sean" and last name "Roberts" clearly distinguishable.

Sean Roberts
Director, State Government Affairs
Code.org