

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

**House Committee on Higher Education & Technology**

Friday, February 10, 2023  
2:30 p.m.  
Via Videoconference  
Hawaii State Capitol, Room 309

**House Bill 503, House Draft 1, Relating to Computer Science Education**

Dear Chair Perruso, Vice Chair Kapela, and Members of the Committee:

The Board of Education ("Board") respectfully provides **comments** on HB 503, which would, among other things, require the Board to work with the Department of Education to conduct an analysis on the need, impact, and feasibility of making computer science a graduation requirement and require the Board to determine whether making computer science a graduation requirement would be in the best interests of public school students and the public.

The Board generally opposes proposed legislation that diminishes the Board's power to formulate statewide educational policy as envisioned and established by Article X, Section 3, of the Constitution of the State of Hawaii. The Board had strong concerns with the original version of this bill, which would have essentially altered the Board's graduation requirements it set through Board Policy 102-15. We appreciate the amendments made by the House Committee on Education and believe this bill now respects the education policymaking role the Board plays.

Thank you for this opportunity to testify on behalf of the Board.

A handwritten signature in cursive script that reads "William N. Arakaki".

Sincerely,

Bill Arakaki  
Chairperson, Board of Education 2023 Legislative Ad Hoc Committee

JOSH GREEN, M.D.  
GOVERNOR



KEITH T. HAYASHI  
SUPERINTENDENT

STATE OF HAWAII  
DEPARTMENT OF EDUCATION  
KA 'OIHANA HO'ONA'AUAO  
P.O. BOX 2360  
HONOLULU, HAWAII 96804

**Date:** 02/10/2023

**Time:** 02:30 PM

**Location:** 309 VIA VIDEOCONFERENCE

**Committee:** House Higher Education &  
Technology

**Department:** Education

**Person Testifying:** Keith T. Hayashi, Superintendent of Education

**Title of Bill:** HB 0503, HD1 RELATING TO COMPUTER SCIENCE  
EDUCATION.

**Purpose of Bill:** Requires the board of education to work with the department of education to conduct an analysis on the need, impact, and feasibility of making computer science a graduation requirement. Requires the board to make a determination on whether making computer science a graduation requirement would be in the best interests of public school students and the public. Requires a report to the legislature. Appropriates funds for teacher professional development in computer science. Effective 7/1/3000. (HD1)

**Department's Position:**

The Hawaii State Department of Education (Department) respectfully offers comments on HB 503, HD1.

The Department defers to the Board of Education as to the responsibilities described in Section 2 of the bill.

The Department supports the additional funding that will help expand the number of Hawaii Qualified Teachers in Computer Science to meet the goal of providing all students with computer science learning opportunities, as long as it does not impact the priorities identified in the Department's Hawaii State Board approved budget.

Thank you for this opportunity to provide testimony on HB 503, HD1.



david.miyashiro@hawaiikidsan.org  
hawaiikidsan.org

David Miyashiro  
Executive Director

February 10, 2023

Committee on Higher Education & Technology

Rep. Amy A. Perruso, Chair

Rep. Jeanne Kapela, Vice Chair

Aloha Chair Perruso, Vice Chair Kapela, and Members of the Committee,

**HawaiiKidsCAN strongly supports HB503 HD1**, which requires the Board of Education to work with the Department of Education to conduct an analysis on the need, impact, and feasibility of making computer science a graduation requirement; requires the board to make a determination on whether making computer science a graduation requirement would be in the best interests of public school students and the public; requires a report to the legislature; and appropriates funds for teacher professional development in computer science.

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. We strongly believe that all students should have access to excellent educational opportunities, regardless of family income levels and circumstances.

As computer science (CS) skills become more foundational to quality academic and career success, Hawaii must ensure that students have equitable access to CS courses and credits. In Hawaii, just 20% of public elementary schools offer computer science learning, and just 13.9% of all public school students were enrolled in a CS course in the 2021-2022 school year. When you consider that Hawaii currently has 2,718 open computing jobs, and that these open jobs have an average salary of \$83,548, it's clear that we are not fully setting our kids up for success.<sup>1</sup> Additionally, the COVID-19 pandemic has cemented remote work in computing as a normal and common career choice, particularly in STEM fields, which opens up additional opportunities for employment for Hawaii residents without forcing them to leave for the continent to pursue high-quality jobs.

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<sup>1</sup> <https://code.org/advocacy/state-facts/HI.pdf>

As amended, HB503 HD1 recognizes the authority of the Board of Education (BOE) to set education policy for the state. At the same time, it puts the responsibility on the BOE to ensure that computer science is a core part of the student experience. This is important for achieving equity, as states that count computer science as a core graduation requirement see 50% more enrollment in their AP Computer Science courses and increased participation from underrepresented groups of students.<sup>2</sup> We do not believe the BOE has put computer science on their agenda since 2018, when they adopted the Computer Science Teachers Association’s K-12 Computer Science Standards.<sup>3</sup> In the absence of BOE action, the legislature has responded to growing interest and frustration from community members, students, and teachers.

HB503 HD1 also supports Hawaii’s hard working public school teachers by investing in high-quality professional development. All teachers deserve the opportunity to learn from great local programs like STEMworks. There is clear evidence of this from other states, such as Arkansas, which first began investing in computer science education in 2015. Thanks to their strategic planning and large investments in computer science professional development, the state was able to remove computer science teachers from its critical teacher shortage list within five years. Therefore, we applaud this legislation for its inclusion of much-needed funding for computer science professional development to grow our computer science teaching staff and meet the needs and ambitions of our Hawaii students.

This bill builds on recent efforts by the legislature – Act 51 in 2018 and Act 158 in 2021 – to significantly boost computer science access and equity. Without additional action by the legislature, it’s unclear if the Hawaii DOE will meet the ambitious targets of these laws, including:

- Beginning with the 2021-2022 school year, ensure that each public high school offers at least one computer science course during each school year.
- Beginning with the 2024-2025 school year, all public elementary, middle, and intermediate schools shall offer computer science courses or computer science content.

Mahalo for your consideration,

David Miyashiro  
Founding Executive Director  
HawaiiKidsCAN

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<sup>2</sup> [https://code.org/files/Making\\_CS\\_Fundamental.pdf](https://code.org/files/Making_CS_Fundamental.pdf)

<sup>3</sup>

<https://www.hawaiipublicschools.org/TeachingAndLearning/StudentLearning/CSforHI/Pages/default.aspx>

**HB-503-HD-1**

Submitted on: 2/8/2023 9:25:30 PM

Testimony for HET on 2/10/2023 2:30:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Phaedra Robinson	RAI Hawaii	Support	Written Testimony Only

Comments:

Please vote in favor of this bil. Our students desperately need access to teachers & programs to learn to be digitally fluent. They need to learn computer science starting in pre-k through high school throughout their classes as an integrated subject and even as another language.



**TECHNET**  
THE VOICE OF THE  
INNOVATION ECONOMY

TechNet Southwest | Telephone 505.402.5738  
915 L Street, Suite 1270, Sacramento, CA 95814  
[www.technet.org](http://www.technet.org) | @TechNetSW

February 9, 2023

The Honorable Amy A. Perruso  
The Honorable Jeanne Kapela  
House Higher Education and Technology Committee  
Hawaii State Capitol  
415 South Beretania Street  
Honolulu, HI 96813

**Re: HB 503 – Relating to Computer Science Education – SUPPORT**

Dear Chair Perruso, Vice Chair Kapela, and Members of the Committee,

TechNet respectfully submits this letter in support of HB 503, which would require an analysis of computer science as a graduation requirement and appropriate funds to the department of education for teacher professional development in computer science, both which are a critical component of the skills development pipeline.

TechNet is the national, bipartisan network of technology CEOs and senior executives that promotes the growth of the innovation economy by advocating a targeted policy agenda at the federal and 50-state level. TechNet's diverse membership includes dynamic American businesses ranging from startups to the most iconic companies on the planet and represents over five million employees and countless customers in the fields of information technology, e-commerce, the sharing and gig economies, advanced energy, cybersecurity, venture capital, and finance.

Computing is the fastest-growing, highest-paying, and largest sector of new jobs in the country. In Hawaii, open computing jobs have an average salary of \$83,548. Computing skills are needed in virtually every field, making it foundational knowledge for those entering the job market. All students in Hawaii need and deserve access to the computer science education they will need to succeed in the future. HB 503 is a critical step towards ensuring that the next generation of Hawaii residents remain competitive in our global, interconnected, and technology-driven economy.

For these reasons, TechNet strongly supports HB 503. If you have any questions regarding TechNet's position on this bill, please contact Lia Nitake, Deputy Executive Director, at [Lnitake@technet.org](mailto:Lnitake@technet.org) or 310-940-5506.

Sincerely,



Lia Nitake  
Deputy Executive Director for the Southwest  
TechNet



**HB-503-HD-1**

Submitted on: 2/8/2023 6:21:42 PM

Testimony for HET on 2/10/2023 2:30:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Caroline Azelski	Individual	Support	Written Testimony Only

Comments:

Support.

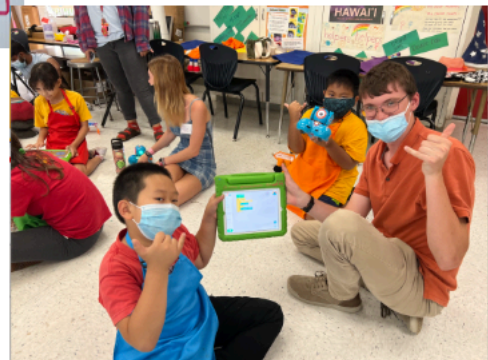
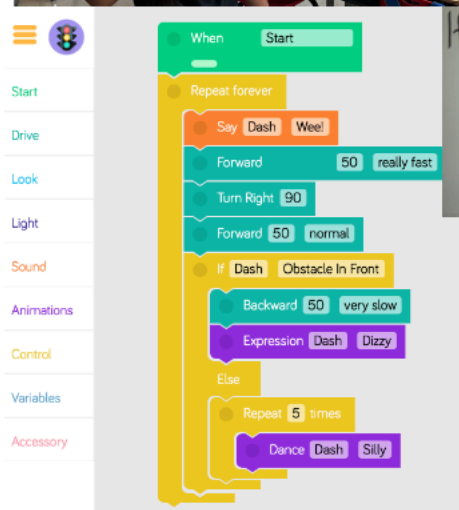
February 10, 2023

Committee on Higher Education & Technology  
Rep. Amy A. Perruso, Chair  
Rep. Jeanne Kapela, Vice Chair

Aloha Chair Perruso, Vice Chair Kapela, and Members of the Committee,

As I rush off from my lunch break to teach a class, I am trying really quickly to write a letter of support for HB503 HD1 and show you some recent photos of our wonderful students learning Computer Science from each other. In one photo, first graders learn to read blockly code that their upper grade friends have coded into dances. Another shows how we are learning about the complicated Computer Science term “conditional” with an unplugged activity Conditionals with Cards, where students create their very own card games! Then, we have students proudly sharing their programs that use Conditionals to get Dash robots moving for a dance party! University taught our elementary students about conditionals and our kids taught college students how to program Dash robots. Let’s keep everyone learning from elementary through college!

Mahalo,  
Celeste Endo



**HB-503-HD-1**

Submitted on: 2/10/2023 5:27:34 AM

Testimony for HET on 2/10/2023 2:30:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Amber Davis	Individual	Support	Remotely Via Zoom

Comments:

Dear Chair Perusso, Vice Chair Kapela, and members of the committee:

Thank you for your consideration of HB 503.

Every student is capable of learning computer science. We believe that it is a foundational subject that every student would benefit from learning and it has become increasingly clear that we cannot leave those opportunities to chance.

Hawaii has made great strides in access to computer science education. All high schools are required to offer computer science, however, there are still 23% of schools that do not offer computer science.

While this gap is closing every year, unfortunately who enrolls in computer science is not equitable amongst all students. When you look at the gender breakdown, of the 3.8% of students that are enrolled in a computer science course, only 23.8% of those students are female.

While this is a stark gender gap, it is not unique to Hawaii. The only states that we have seen solve this problem have been states that have passed a Computer Science Graduation Requirement, and that is why we are advocating for this policy. We are encouraged by this legislation to require the Board of Education to evaluate this policy.

We are grateful for the provision of this bill that includes \$600,000 for professional development for computer science teachers to help close this gap.

Thank you for your time and consideration.