

DAVID Y. IGE
GOVERNOR



JOHN S.S. KIM
CHAIRPERSON

STATE OF HAWAII
STATE PUBLIC CHARTER SCHOOL COMMISSION
(‘AHA KULA HO‘ĀMANA)

<http://CharterCommission.Hawaii.Gov>
1111 Bishop Street, Suite 516, Honolulu, Hawaii 96813
Tel: (808) 586-3775 Fax: (808) 586-3776

FOR: SB 2142 SD1 Relating to Computer Science
DATE: February 18, 2022 10:00 AM
COMMITTEE: Committee on Ways and Means
ROOM: Conference Room 211 & Videoconference
FROM: Yvonne Lau, Interim Executive Director
State Public Charter School Commission

Chair Dela Cruz, Chair Keith-Agaran, and members of the Committee:

The State Public Charter School Commission (“Commission”) appreciates the opportunity to provide testimony in **STRONG SUPPORT on SB 2142** which allows Department of Education students to fulfill world language, fine arts, or career and technical education graduation requirements with computer science. Establishes a scholarship at the University of Hawaii to encourage students majoring in education to take a computer science course. Requires the University of Hawaii to establish computer science pathways for students majoring in education. Requires teacher licensing and certification to include computer science. Appropriates funds

The Commission appreciates the support and attention of this committee and the Senate in ensuring that public charter school students are included in the effort.

Thank you for the opportunity to provide this testimony.

DAVID Y. IGE
GOVERNOR



CRAIG K. HIRAI
DIRECTOR

GLORIA CHANG
DEPUTY DIRECTOR

STATE OF HAWAII
DEPARTMENT OF BUDGET AND FINANCE
P.O. BOX 150
HONOLULU, HAWAII 96810-0150

EMPLOYEES' RETIREMENT SYSTEM
HAWAII EMPLOYER-UNION HEALTH BENEFITS TRUST FUND
OFFICE OF THE PUBLIC DEFENDER

ADMINISTRATIVE AND RESEARCH OFFICE
BUDGET, PROGRAM PLANNING AND
MANAGEMENT DIVISION
FINANCIAL ADMINISTRATION DIVISION
OFFICE OF FEDERAL AWARDS MANAGEMENT (OFAM)

WRITTEN ONLY
TESTIMONY BY CRAIG K. HIRAI
DIRECTOR, DEPARTMENT OF BUDGET AND FINANCE
TO THE SENATE COMMITTEE ON WAYS AND MEANS
ON
SENATE BILL NO. 2142, S.D. 1

February 22, 2022
10:00 a.m.
Room 211 and Videoconference

RELATING TO COMPUTER SCIENCE

The Department of Budget and Finance (B&F) offers comments on this bill.

Senate Bill No. 2142, S.D. 1: allows Department of Education students to fulfill world language, fine arts, or career and technical education requirements with computer science courses; establishes a computer science in teaching scholarship program; requires the University of Hawai'i (UH) to develop a pathways program in computer science for students studying to obtain a degree in computer science; requires teaching licensing and certification to include computer science; and appropriates an unspecified amount of general funds in FY 23 for UH for the computer science in teaching scholarship program.

B&F notes that, with respect to the general fund appropriation in this bill, the federal Coronavirus Response and Relief Supplemental Appropriations Act requires that states receiving Elementary and Secondary School Emergency Relief (ESSER) II funds and Governor's Emergency Education Relief II funds must maintain state support for:

- Elementary and secondary education in FY 22 at least at the proportional level of the state's support for elementary and secondary education relative to the state's overall spending, averaged over FYs 17, 18 and 19; and
- Higher education in FY 22 at least at the proportional level of the state's support for higher education relative to the state's overall spending, averaged over FYs 17, 18 and 19.

Further, the federal American Rescue Plan (ARP) Act requires that states receiving ARP ESSER funds must maintain state support for:

- Elementary and secondary education in FY 22 and FY 23 at least at the proportional level of the state's support for elementary and secondary education relative to the state's overall spending, averaged over FYs 17, 18 and 19; and
- Higher education in FY 22 and FY 23 at least at the proportional level of the state's support for higher education relative to the state's overall spending, averaged over FYs 17, 18 and 19.

The U.S. Department of Education has issued rules governing how these maintenance of effort (MOE) requirements are to be administered. B&F will be working with the money committees of the Legislature to ensure that the State of Hawai'i complies with these ESSER MOE requirements.

Thank you for your consideration of our comments.



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

Senate Committee on Ways and Means

Tuesday, February 22, 2022
10:00 a.m.
Via Videoconference
Hawaii State Capitol, Room 211

Senate Bill 2142, Senate Draft 1, Relating to Computer Science

Dear Chair Dela Cruz, Vice Chair Keith-Agaran, and Members of the Committee:

The Board of Education ("Board") respectfully provides **comments** on SB 2142 SD1, which would, among other things, allow Department of Education students to fulfill world language, fine arts, or career and technical education graduation requirements with computer science.

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.

To this end, the Board opposes Sections 1 and 2 of this measure. These sections would essentially alter the Board's graduation requirements it set through Board Policy 102-15. Setting graduation requirements should be the role of the Board, and we believe the Legislature should leave the responsibility of determining educational requirements to the Board as a foundational part of statewide educational policy. **Therefore, we respectfully request these committees to delete Sections 1 and 2 of this measure.**

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 2022 Legislative Ad Hoc Committee



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

Date: 02/22/2022

Time: 10:00 AM

Location: CR 211 & Videoconference

Committee: Senate Ways and Means

Department: Education

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

Title of Bill: SB 2142, SD1 RELATING TO COMPUTER SCIENCE.

Purpose of Bill: Allows Department of Education students to fulfill world language, fine arts, or career and technical education graduation requirements with computer science. Establishes a scholarship at the University of Hawaii to encourage students majoring in education to take a computer science course. Requires the University of Hawaii to establish computer science pathways for students majoring in education. Requires teacher licensing and certification to include computer science. Appropriates funds. Effective 7/1/2050. (SD1)

Department's Position:

The Hawaii State Department of Education (Department) supports the intent of SB 2142, SD 1 and respectfully offers comments on this measure relating to computer science. The Department defers to the Hawaii State Board of Education (BOE) in regards to where the responsibility of determining educational requirements should lie.

The Department considers computer science as a separate subject area and not as an equivalent substitute for the world language, fine arts, and career technical education programs of study. The Department respectfully suggests the language in the bill be revised to add computer science to the list of programs of study through which a student could earn two (2) credits to meet the high school diploma requirement. This will allow students to choose whether to fulfill this requirement with two (2) credits in either world language, fine arts, career and technical education, or computer science.

Should this measure pass, the Department will need to seek approval from the BOE to revise this graduation requirement and respectfully requests the start date for this

implementation be extended to the Fall 2023 semester (or School Year 2023-2024 for the graduating class of 2028).

The Department defers to the University of Hawaii regarding admission requirements related to computer science course work, the scholarship program, and proposed computer science pre-service teaching degree pathways.

Thank you for this opportunity to provide testimony on SB 2142, SD 1.



david.miyashiro@hawaiikidscan.org
hawaiikidscan.org

David Miyashiro
Executive Director

February 22, 2022

Committee on Ways and Means
Senator Donovan M. Dela Cruz, Chair
Senator Gilbert S.C. Keith-Agaran, Vice Chair

Aloha Chair Dela Cruz, Vice Chair Keith-Agaran, and Members of the Committee,

HawaiiKidsCAN strongly supports SB2142 SD1, which allows Department of Education students to fulfill world language, fine arts, or career and technical education graduation requirements with computer science; establishes a scholarship at the University of Hawaii to encourage students majoring in education to take a computer science course; requires the University of Hawaii to establish computer science pathways for students majoring in education; requires teacher licensing and certification to include computer science; and appropriates funds.

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, 87% of HI high school students attend a school that offers computer science, but only 3.9% of students are enrolled in a foundational computer science course. Just 26% of students enrolled in computer science courses are female, and Native Hawaiian/Pacific Islander and Native American students are less than half as likely as their white and Asian peers to enroll in computer science. When you consider that Hawaii has averaged 1,903 open computing jobs each month, 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.¹

¹ https://advocacy.code.org/state_handouts/Hawaii.pdf

SB2142 SD1 proposes a simple yet extremely powerful change Hawaii could make to change how CS credits are recognized in a student's path to graduation. 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 minorities. Hawaii could follow suit by doing more than simply offering honors credit for Advanced Placement CS (which is the current case), and instead make CS count as a core requirement.

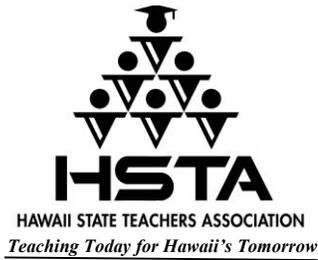
We agree with the DOE's suggestion in prior testimony to keep computer science as a separate subject area from world language, fine arts, and career and technical education, and thereby adding computer science as a fourth subject area option versus a replacement for one of these other areas.

SB2142 SD1 also takes a bold approach regarding increasing the CS teacher pipeline coming from the higher education level. HawaiiKidsCAN is supportive of any actions that result in making it easier or more attractive to become a CS teacher in our K-12 public schools.

We did want to note that we anticipate the Hawaii Board of Education and/or the University of Hawaii may oppose SB2142 SD1 on the grounds of the legislature overstepping its policy authority. If that is the case, we strongly urge both institutions to consider adding these topics to an upcoming agenda for further discussion on their end so that legislation is not needed.

Mahalo for your consideration,

David Miyashiro
Founding Executive Director
HawaiiKidsCAN



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

Osa Tui, Jr.
President

Logan Okita.
Vice President

Lisa Morrison
Secretary-Treasurer

Wilbert Holck
Executive Director

TESTIMONY BEFORE THE SENATE COMMITTEE ON WAYS AND MEANS

RE: SB 2142, SD1 - RELATING TO COMPUTER SCIENCE

TUESDAY, FEBRUARY 22, 2022

OSA TUI, JR., PRESIDENT
HAWAII STATE TEACHERS ASSOCIATION

Chair Dela Cruz, and Members of the Committee:

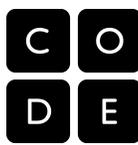
The Hawaii State Teachers Association **supports SB 2142, SD1** relating to computer science. This bill will allow HIDOE students to fulfill world language, fine arts, or career and technical education graduation requirements with computer science. It also establishes a scholarship at the University of Hawai'i to encourage students majoring in education to take a computer science course and requires UH to establish computer science pathways for students majoring in education. Finally, the bill requires teacher licensing and certification to include computer science, as well as appropriates an unspecified amount to UH for the computer science scholarship program.

In the 21st century, computer science is an increasingly necessary and useful educational track for high school and college students. This bill will lower barriers and create incentives for more teachers to take up computer science as their primary subject area. By providing computer science as an option alongside a foreign language or fine arts is certainly laudable.

While HSTA supports this bill and its goals, we don't believe curriculum requirements should necessarily be set in statute, we respectfully request one amendment to the bill. Under Section 5, part (d) of the bill:

(d) By June 30, 2023, any program of teacher preparation leading to a license or certification shall [~~include~~] offer, as part of the curriculum, instruction in computer science and computational thinking as applied to student learning and classroom instruction that are grade-level and subject-area appropriate."

To provide incentives and opportunities for our students and teachers in Hawai'i to excel in computer science, the Hawaii State Teachers Association asks your committee to **support this bill**.



February 22, 2022

Re: SB 2142 SD 1; Support

Dear Chair Dela Cruz, Vice Chair Keith-Agaran, and Members of the Senate Committee on Ways and Means,

Code.org enthusiastically supports SB 2142 SD1, which would: a) elevate computer science to a core subject area by adding it to an option that students must fulfill for graduation and aligning this with higher education admission, b) provide financial support for pre-service educators to develop content knowledge in computer science, c) develop pre-service educator pathways to become certified to teach computer science, and d) include computer science and computational teaching in all educator preparation programs.

The provisions of this bill are essential elements to ensure that the K-12 system has a robust computer science education available for all students.

Hawaii has made incredible progress in ensuring that every school will provide students with access to computer science courses. In 2018, Act 51 required all Department of Education high schools to offer at least one computer science course by the 2021-22 school year; and in 2021, Act 158 required all middle, elementary, and charter schools to offer computer science by the 2024-25 school year.

Section 4 and 5

In order to ensure that schools and teachers are prepared to enact these requirements and begin teaching computer science, a focus on pre-service educators is necessary. SB 2142 SD1 does this by ensuring that pre-service educators for all grade levels and subject areas will be prepared to incorporate fundamentals of computational thinking and technology into their instruction. Elementary teachers are generalists and are expected to have a foundational knowledge of all subject areas, and in just a few years, computer science will be one of those. This bill ensures that teachers entering the profession are well-prepared for teaching computer science and integrating it with other content areas.

Section 3 and 4

Currently, there are no pathways for pre-service teachers to work towards computer science certification while preparing to become a teacher. SB 2142 SD1 will not only begin the creation of these programs, but the scholarship provision will incentivize all pre-service teachers to learn some fundamentals of computer science prior to entering the classroom.

Section 1 and 2

Allowing computer science as a core graduation credit is crucial for increasing student options and elevating computer science in high schools. While students can currently apply an AP computer science course to the required math credits for the Academic Honors Recognition Certificate, this provision does not apply to all

students and their required courses for graduation. The bill proposes expanding these options to allow students to take 2 credits in computer science as an option alongside world language, fine arts, or career and technical education.

Though we strongly support the bill as written, we have a few suggestions to amend the bill language to increase opportunities for more students and teachers:

- 1) Change the deadline in section 1 to a later date to ensure an adequate timeline for implementation.
- 2) Instead of allowing two computer science courses to substitute for the world language, fine arts, or career and technical education courses, add “computer science” as a fourth option.
- 3) Broaden the Computer Science in Teaching Scholarship program to allow in-service teachers and pre-service teachers to apply for funding for any preparation for teacher certification in computer science, including test fees for the required Praxis assessment in computer science.

Specifically, we suggest replacing Section 1 (p. 1, lines 5-9) with the following:

Beginning no later than school year 2023-2024, the department shall add computer science as an additional program of study option to the high school diploma two (2) credit requirement in world language, fine arts, or career and technical education/JROTC. For the graduating class of 2028, this will allow students to choose whether to fulfill this requirement with two (2) credits in one of the specified programs of study in computer science, world language, fine arts, or career and technical education/JROTC.

Computing is a foundational skill for K-12 students. It develops students' computational and critical thinking skills and teaches them how to create—not just use—new technologies. And Hawaii has averaged over 1,400 open computing jobs each month over the past year. Businesses in every industry are in need of students graduating with computing knowledge. There is incredible interest in supporting K-12 computer science education right now, and this bill furthers the DOE's existing initiatives and leverages the public support for K-12 computer science.

Thank you for your efforts in providing students in Hawaii with opportunities to pursue computer science education. If you have any questions, please contact Katie Hendrickson at Katie@code.org. Thank you for your consideration of this matter.

Mahalo,

Dr. Katie Hendrickson
President
Code.org Advocacy Coalition
www.code.org

SB-2142-SD-1

Submitted on: 2/18/2022 9:40:13 AM

Testimony for WAM on 2/22/2022 10:00:00 AM

Submitted By	Organization	Testifier Position	Remote Testimony Requested
Jon Bernstein	Testifying for JNCL-NCLIS	Oppose	No

Comments:



February 18, 2022

Dear Chair Kidani, Vice Chair Kim, and Members of the Committee:

The Joint National Committee for Languages and the National Council for Languages and International Studies (JNCL-NCLIS) represents over 300,000 language educators and professionals throughout the United States. On behalf of our members, I write to you today to oppose the substitution of world language credits with computer coding courses outlined in SB 2142. We believe that this legislation proceeds from three deeply flawed premises, namely: that world language study has no benefit to high school students, particularly students with disabilities; that the study of computer coding and world languages is essentially the same and that one can be substituted for another; and that biliteracy is irrelevant to the workplace. We could not disagree more.

Knowledge of a second language has been shown to confer a wide array of cognitive benefits on the individual at all life stages. In early childhood, acquisition of a second language has strong, positive behavioral and developmental effects, including greater cognitive flexibility and improved problem solving. In K-12 schools, language education, particularly the growing trend of dual language immersion, improves test scores for native English speakers and English learners alike and narrows achievement gaps. The University of Hawaii recognizes these benefits, with world language courses counting towards Freshman Admission Requirements. For an adult, language proficiency has been associated with stronger executive function in the brain, greater likelihood of recovery from stroke, and delayed onset of Dementia-related ailments. Knowledge of a foreign language pays its dividends over a lifetime.

Further, studying computer coding and world languages are fundamentally dissimilar activities, yielding results that are not equivalent. While computer coding is unquestionably a valuable skill, its study does not allow students to gain the intercultural skills, insight, and perspectives to know how, when, and why to express what to whom. Additionally, unlike world language study, computer coding cannot be used by people to interact and negotiate with other people. Finally,

we must note that the coding community itself suggests that the most logical place to locate coding would be among the sciences and mathematics, not in world languages.

Finally, we assert that the bill's underlying assumption that businesses value computer coding skills and view world language skills as irrelevant is belied by the facts. A 2019 report from the American Council on the Teaching of Foreign Languages, entitled "Making Language Our Business," found the following:

- 9 out of 10 US employers rely on employees with world language skills.
- 1 in 3 foreign language-dependent employers reports a language skills gap.
 - The construction sector (40%) and healthcare and social assistance sector (37%) report the greatest foreign language skills gap.
- 1 in 4 employers lost business due to a lack of foreign language skill.
 - 35% of employers in the construction sector and 29% in the professional and technical services sector are most likely to be unable to pursue or have lost business in the past three years due to a lack of world language skills.

If enacted, SB 2142 would steer students with disabilities away from world language study and potential workforce opportunities to their detriment, to the detriment of U.S. employers, and to the detriment of the U.S. economy.

All Hawaii students need and deserve world language skills. Substituting computer coding for world languages will put Hawaii high school students at a significant disadvantage in school, in the workplace and throughout their lives. Therefore, to protect every student's right to a free and equal education that prepares them for higher education, the workforce and life, JNCL-NCLIS opposes SB 2142.

Sincerely,



Amanda Seewald

JNCL-NCLIS President

February 20, 2022

Dear Chair Dela Cruz, Vice Chair Keith-Agaran, and Members of the Committee:

My name is Howie Berman, and I am the Executive Director of ACTFL, an individual membership organization representing the professional and career development needs of 13,000 world language educators in the U.S. and across the globe. ACTFL is based in Alexandria, VA.

I submit this written testimony in opposition of SB2142. As written, the bill would empower the Hawaii Department of Education “to allow each student to fulfill up to two credits of world language, fine arts, or career and technical education required for a high school diploma with up to two credits earned in computer science courses.”

What SB2142 does is force students in Hawaii to make a false choice between computer science and world languages. Students should be encouraged to pursue both, as both are essential to competing and succeeding in our 21st century global society. Further, computer science/coding and world language coursework are not equivalent or interchangeable—in neither the processes they employ nor the results they yield.

World language coursework prepares students to communicate effectively in multiple languages and across numerous cultural contexts with an understanding of diverse perspectives on a variety of issues. World languages promote enhanced cognition, problem-solving, and critical thinking, as well as improved communication skills, heightened tolerance, and empathy. These skills promote career-readiness, supported by recent findings which point to an increasing and urgent demand for multilingual talent in our workforce—with 90% of U.S. employers citing reliance on employees with language skills other than English ([“Making Languages Our Business: Addressing Foreign Language Demand Among U.S. Employers.”](#) ACTFL, 2019).

Computer coding is not a method of expressing thoughts or feelings and does not meet the standards outlined in the [“World-Readiness Standards for Learning Languages”](#) (National Standards Collaborative Board, 2015). Coding credits are also not accepted universally by colleges and universities to fulfill world language entry requirements. As put bluntly by Hadi Partovi, CEO of Code.org, a nonprofit whose goal is to expand access to computer science for all students in K-12 schools: “Code.org opposes the idea of classifying computer science as a foreign language. [...] The only people who would suggest that computer science is akin to learning a foreign language have never coded before.”

A state like Hawaii, with a wealth of language and cultural assets, should be doing everything in its power to provide its students with the gift of global competence. While we don’t argue that computer science/coding plays an important role in preparing the next generation of American workers, it

shouldn't at the expense of building critical language capacity in the state and around the country. Our students should be encouraged to pursue both pathways.

SB2142 promotes a misleading and out-of-date concept that would ultimately disadvantage both our learners and our greater communities. I sincerely hope that you will join me in seeking and supporting more effective ways to enhance our students' education. Every learner deserves access to language, which pays respect to their culture and sets them up for future success. For these reasons, ACTFL opposes SB2142.

Sincerely,

A handwritten signature in black ink, appearing to read 'Howie Berman', with a long horizontal flourish extending to the right.

Howie Berman
ACTFL Executive Director



February 22, 2022

Aloha Chair Dela Cruz, Vice Chair Keith-Agaran, and Ways and Means Committee,

We are the Hawai'i Society for Technology in Education (HSTE) we support SB2142, with the following revision as suggested by the Hawaii Department of Education: *“The Department supports the measure to allow computer science to fulfill up to two credits of world language, fine arts, or career and technical education high school diploma credits. However, the Department considers computer science as a separate subject area from world language, fine arts, and career and technical education and believes that adding computer science to the list of subject area options may be more appropriate.”* This specific comment allows for computer science to be offered alongside world languages, fine arts, and career and technical education instead of looking to replace these opportunities for our students.

As teachers, we find that when students skip curricular steps along the way, it becomes very difficult for learners to regain momentum and catch up with peers. In computer science, when there is a void of experiences to practice and hone skills, students fall drastically behind. It is imperative that we provide a continuous pathway in support of all students looking to include computer science as part of their learning journey from elementary to college with confidence and necessary skills.

Instead of leaping into the unknown, let's gift our haumana CS wayfinding knowledge from shared learning journeys with like-minded friends and mentors. Preparing teachers with a CS foundation will empower educators to learn CS innovations alongside our eager youth. Education is a difference maker in our lives. Let's take this path of progress by supporting computer science education in Hawai'i.

Mahalo for your consideration,

Hawai'i Society for Technology in Education (HSTE)

SB-2142-SD-1

Submitted on: 2/16/2022 6:35:55 PM

Testimony for WAM on 2/22/2022 10:00:00 AM

Submitted By	Organization	Testifier Position	Remote Testimony Requested
Michael Press	Individual	Support	No

Comments:

My name is Michael Press. I am a teacher at Ilima Intermediate in Ewa Beach on Oahu. Please support and pass this bill. Mahalo!

Aloha awakea Chair Dela Cruz, Vice Chair Keith-Agaran, & Members of the Ways and Means Committee,

As a PreK-5th grade Computer Science teacher at Queen Ka'ahumanu Elementary, plus a parent with a son at Kalani High & daughter at UHManoa, **I super support superb SB2142**, with the revision to keep computer science as a separate subject area from world language, fine arts, and career and technical education, and thereby adding computer science as a fourth subject area option versus a replacement of one of these other areas.

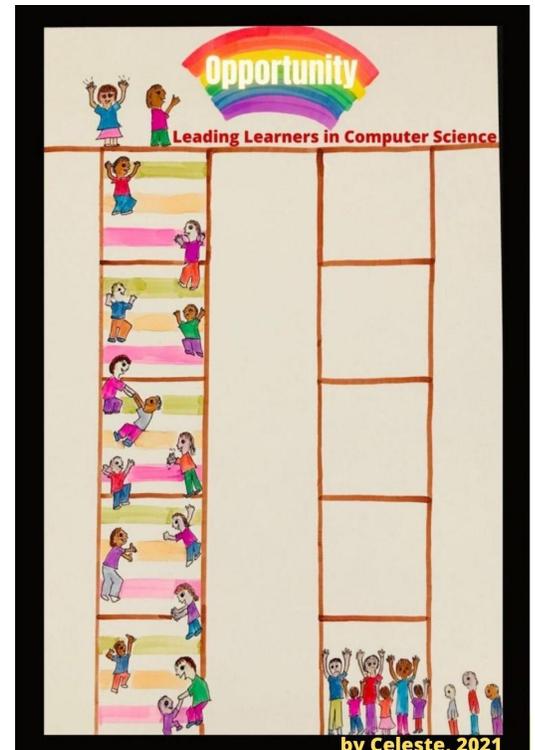
When I took Computer Programming, at the UHM College of Education decades ago, shh don't tell anyone but bruh it was so boring! The saving grace were rolling chairs that we could scoot around on to rescue our minds from deep sleep oblivion.

If you had asked me then, if I thought Computer Science was for everyone, I would have said "Heck No!" as I wiped away sweat & tears. Computer Science was not for everyone YET. Fast forward! Now we have experienced incredible innovations & instrumental contributions to improve CS instruction.

Collaborative efforts of the smartest and kindest minds in CS have brought upon amazing advances in CS education. Computer Science is in a learning revolution. It is up to Hawai'i to step up and join the movement toward trailblazing progress.

As a Computer Science Lead Learner, I could tell you all about our interactive chant, coded dances, command movements and glorious code.org curriculum that is FREE and mega fun for keiki, yet today I would really love to tell you about my son.

My son from an early age showed a keen sense of creativity. He would tinker with LEGOs and as a toddler would imaginatively build all kinds of intricate LEGO designs, just like so many of our keiki at home! He learned coding and robotics in elementary, yet when he got to middle school didn't have Computer Science experiences. At Kalani, he gets to learn CS from one of Hawaii's best CS teachers. He enjoys Computer Science class, but doesn't feel confident to continue after this year. Let's close the huge ladder gaps in learning Computer Science by providing pathways and incentives for preservice teachers, fulfillment of more graduation requirements for high schoolers, and overall more support for educators to teach Computer Science. **Now is the time. Let's go Hawai'i!!**



**Growing up to be
Lead Learners.
Making steps to be
Lead Learners.
Raising the roof for
Lead Learners!
Woot, woot, woot, woot!**

With Love, ♥ Celeste Yukiko Endo

February 20, 2022

Committee on Ways and Means
Senator Donovan M. Dela Cruz, Chair
Senator Gilbert S. C. Keith-Agaran, Vice Chair

State Capitol
415 South Beretania Street
Honolulu, Hawaii, 96813

Aloha Chair Dela Cruz, Vice Chair Keith-Agaran, and Members of the Committee:

As a computer science teacher at Kalani High School, I wholeheartedly support SB2142 SD1 and respectfully ask you to join me in doing so.

The COVID-19 pandemic has brought with it a sea change in the structure of the workplace along with a realization that business-as-usual is no longer good enough—particularly for a state with as distinctive a geography and population as ours. Although it goes without saying that technology will play a crucial role in our future, the availability of a skilled workforce to support, create, and innovate these new technologies is far from assured. Education is both the solution and the problem. While a strong computer science education pipeline from pre-kindergarten through graduate school would ensure a generous supply of home-grown talent, the infrastructure and incentives needed to construct that pipeline are not yet in place to do so. SB2142 SD1 would address both sides of the pipeline—the supply and the demand side—by acknowledging the universality of computer science and computational thinking across the curriculum on the one hand, and providing formal pathways for teachers to become highly qualified computer science educators on the other.

As a teacher I see students who choose not to enroll in my computer science classes because they need to prioritize other classes to meet other graduation requirements, and I see schools that are not able to offer robust computer science programs because of the lack of qualified teachers to support them. Both situations are untenable and both can be alleviated through the provisions in SB2142 SD1, and I therefore invite your consideration and support.

Mahalo for your time and attention.

Respectfully,

Michael P. Ida, PhD

SB-2142-SD-1

Submitted on: 2/20/2022 3:51:34 PM

Testimony for WAM on 2/22/2022 10:00:00 AM

Submitted By	Organization	Testifier Position	Remote Testimony Requested
Sarah "Mili" Milianta-Laffin	Individual	Support	No

Comments:

February 22, 2022

Aloha Chair Dela Cruz, Vice Chair Keith-Agaran, and Ways and Means Committee,

As a Computer Science (CS) teacher at 'Ilima Intermediate School in Ewa Beach, who is a 2021 Hawaii State Finalist for the Presidential Award for Excellence in Mathematics and Science Teaching (PAEMST) in the CS category, I strongly support the ideas and goals of SB 2142. Modern problems require modern solutions, and the ideas in this piece of legislation focus on making our state and student-citizens future ready.

Bills like this one give more opportunities to our students, and grows CS Education statewide, which is a benefit to everyone. Please join teachers like me in supporting SB 2142.

With Aloha,

Sarah "Mili" Milianta-Laffin

SB-2142-SD-1

Submitted on: 2/20/2022 6:26:41 PM

Testimony for WAM on 2/22/2022 10:00:00 AM

Submitted By	Organization	Testifier Position	Remote Testimony Requested
cheryl B.	Individual	Support	No

Comments:

I support this bill.

We need more educators prepared to teach computer science and to date there have been no teachers graduated in this field since 2018. Preservice programs need to be developed immediately. The gap is huge.

I would like to add that I support with this addition to the bill as stated by the DOE.

“The Department supports the measure to allow computer science to fulfill up to two credits of world language, fine arts, or career and technical education high school diploma credits. However, the Department considers computer science as a separate subject area from world language, fine arts, and career and technical education and believes that adding computer science to the list of subject area options may be more appropriate.” This specific comment allows for computer science to be offered alongside world languages, fine arts, and career and technical education instead of looking to replace these opportunities for our students.”

Thank you.

SB-2142-SD-1

Submitted on: 2/20/2022 10:21:33 PM

Testimony for WAM on 2/22/2022 10:00:00 AM

Submitted By	Organization	Testifier Position	Remote Testimony Requested
Greg Nakai	Individual	Comments	No

Comments:

I am a former language educator and a parent raising our multilingual child in Hawai‘i. While increasing access to computer science is important, computer science is not equivalent to world language, fine arts, and CTE. Code.org has published that “computer science is not a foreign language” (Hirotaka, 2014). SB2142, as it currently reads, is promoting computer science over world language, fine arts, and CTE. World language, fine arts, and CTE are inherently different yet equally important programs of study to help diversify our workforce and prepare our students to become successful community contributors and well-rounded world citizens. Please do not pass the bill as is, because computer science should not be promoted at the expense of world language, fine arts, and CTE. I agree with Code.org’s recommendation to amend the bill: Instead of allowing two computer science courses to substitute for the world language, fine arts, or CTE courses, please add “computer science” as a separate fourth option. Mahalo.

February 21, 2022

Aloha Chair Dela Cruz, Vice Chair Keith-Agaran, and Ways and Means Committee,

As a parent, public school teacher and computer science trainer, I support SB2142: Relating to Computer Science. I agree with the HIDOE suggestion in prior testimony to keep computer science as a separate subject area from world language, fine arts, and career and technical education, and thereby adding computer science as a fourth subject area option versus a replacement for one of these other areas.

When I look at my own children, I can only hope that they are given opportunities I did not have in education. By providing this option for our students, SB2142 will empower all students to **choose their own path** through the learning journey. Not every student is going to become a computer scientist or engineer, but one cannot deny the impact that computer science makes to every industry. Regardless of the career focus, computer science provides a relevant, applicable skill set to supplement any area. SB2142 would allow more students to take computer science credits at the high school level and have it count towards graduation.

Many testimonies that you read will focus on the statistics related to careers. These statistics are staggering no doubt, but one that stands out to me is **\$164, 171, 820** in lost opportunities for our keiki. With 1,965 open computing jobs with an average salary of \$83,548 our students are not given the skill sets to fill these positions. Wouldn't it be great if our keiki were prepared for these opportunities?

Oftentimes, what we don't say is more powerful than what we do. When we exclude such **a relevant skill** set such as computer science, we are telling our students and communities that it is not important. Let's show CS students that we value their future by allowing CS credits to count towards graduation requirements.

As a computer science trainer, I have personally trained over 1200 educators to teach computer science to our students. Fortunately every educator to this point was provided with a scholarship to attend. Many of these educators have attended training off work hours and show that they too are seeking the skill set. Providing scholarships and a pathway within the COE is a strong move towards empowering UHM pre-service teachers to learn CS and in turn offer computer science to each child they reach. With Act 51 and Act 158 requiring schools to offer computer science, it is the logical next step to prepare our teachers.

Mahalo for your consideration,

Shane Asselstine

Parent of 2 public school students (9 and 11 years old)

HIDOE Complex Area Teacher (Focused on computer science)

Code.org K-8 Facilitator (Hawaii)