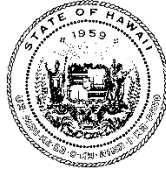


JOSH GREEN, M.D.
GOVERNOR



WARREN HARUKI
CHAIRPERSON

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

December 21, 2023

TO: Board of Education

FROM: Warren Haruki
Chairperson, Board of Education

AGENDA ITEM: Board action on report of findings and recommendations required by Act 174, Session Laws of Hawaii 2023, relating to computer science education

I. BACKGROUND

One of the reports due from the Board to the Legislature, prior to the 2024 legislative session, is the Board's findings and recommendations related to computer science education, pursuant to Act 174, Session Laws of Hawaii 2023 (Act 174). Act 174 required the Board of Education (Board) to:

- Work with the Department of Education (Department) to analyze the necessary timeline and appropriate process for making computer science a graduation requirement by no later than the 2030-2031 school year;
- Determine whether making computer science a graduation requirement would be in the best interests of public school students and the public, based on the analysis conducted;
- Make a determination on how students can be allowed to complete computer science courses as a substitute for core academic courses to satisfy graduation credit requirements, beginning with the 2024-2025 school year; and

- Submit a report of its findings and recommendations, including proposed legislation, to the Legislature no later than 20 days prior to the convening of the Regular Session of 2024.

II. FINDINGS

The report is included as **Attachment A** in this memorandum.

III. RECOMMENDATION

I recommend that the Board approve the proposed legislative report included as **Attachment A** in this memorandum. I also recommend authorizing myself, as Board chairperson, to make any technical, non-substantive changes to the report for clarity and consistency before issuing it to the Governor, Legislature, and public.

Proposed Motion: “Moved to approve the Board’s report on computer science education, pursuant to Act 174, Session Laws of Hawaii 2023, included as Attachment A to Board Chairperson Warren Haruki’s memorandum dated December 21, 2023, and to authorize the Board chairperson to make any technical, non-substantive changes to the report for clarity and consistency before issuing it to the Governor, Legislature, and public.”

Attachment A

Board Report on Computer Science Education to the 2024 Legislature



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

LEGISLATIVE REPORT

SUBJECT

Act 174, Session Laws of Hawaii 2023, required the Board of Education (Board) to:

- Work with the Department of Education (Department) to analyze the necessary timeline and appropriate process for making computer science a graduation requirement by no later than the 2030-2031 school year;
- Determine whether making computer science a graduation requirement would be in the best interests of public school students and the public, based on the analysis conducted;
- Make a determination on how students can be allowed to complete computer science courses as a substitute for core academic courses to satisfy graduation credit requirements, beginning with the 2024-2025 school year; and
- Submit a report of its findings and recommendations, including proposed legislation, to the Legislature no later than 20 days prior to the convening of the Regular Session of 2024.

REFERENCE

Act 174, Session Laws of Hawaii 2023.

ACTION REQUESTED

Report to the 2024 Legislature.

REPORT

The Board recognizes the importance of computer science education for Hawaii public school students. This report provides information on the Board's work in this area thus far.

One way to ensure Hawaii's public school graduates have the computer skills they need to succeed and thrive in their post-secondary lives would be to impose a high school graduation requirement that students pass a computer science course. Before deciding whether to adopt such a mandate, the Board would like to work with experts at the Department of Education (Department), people in business and industry, researchers, and community members to decide what skills our 21st-century graduates need; how best for them to acquire those skills, and how to measure whether students have what they need to succeed.

We expect this process to continue into Fall 2024, including the convening of a task force to paint a portrait of a graduate. With this in hand by the end of the 2024-2025 school year, we will review high school graduation requirements.

Hawaii currently requires students to have 24 credits to graduate, which is the highest number of credits of any school district in the country. Rather than simply add another course requirement, we want to look at the larger context, for example:

- If we add a computer science course as a requirement, do we need to take away something else so as not to overwhelm students or the schedule?
- Are there better ways for students to gain mastery of computer skills, e.g., through purposeful integration of computer skills, data literacy, and data science into other coursework?
- Are there better ways to measure whether students have the computer science skills they need – by passing a competency exam or substantively demonstrating their computer science competency?

These questions and others are relevant and important to address. We want to make sure we have done our best to answer them thoughtfully before deciding whether to impose a requirement, as the Legislature has proposed, that students must pass a computer science course in order to graduate.

The Department provided a presentation to the Board's Student Achievement Committee (SAC) on November 2, 2023, through agenda item, "Discussion regarding Act 174, Session Laws of Hawai'i 2023 (House Bill 503, Relating to Computer Science Education) and Senate Concurrent Resolution 56, 2023, Requesting the Board of Education to Review Various Programs and Subject Matter Areas for Implementation in Public Schools." As a follow-up to the SAC meeting, the Department will be convening a computer science task force that consists of stakeholders who will meet in Spring 2024 with recommendations on including computer science as a graduation requirement.

In line with the Board’s Strategic Plan Implementation Plan Action Item 1.3.3.1., “Convene a task force to review and realign the high school framework (Vision of a High School Graduate, Personal Transition Plan, graduation requirements and distinctions, college and career planning and counseling, high school structures) to current and projected community and workforce needs (SY2023-24),” the Department anticipates that a task force will also address this larger action item beginning Fall 2024. The action item reflects the importance of considering the wider context and implications of any additional or new graduation requirements, as current requirements would also need to be reassessed for relevancy. As part of this work, the computer science task force’s recommendations would be included in the overall discussion on any relevant and applicable graduation requirement changes for Hawaii public school graduates.

As of the 2022-2023 school year, 100% of Hawaii public high schools already offer a computer science course. A total of 41,185 students, or 27% of 2023 graduates, took a computer science course in high school or middle school – an increase of 9%.

While the Board moves forward with its portrait of a graduate and review of graduation requirements, including whether to add a course requirement for computer science, we are pleased to see that the Department plans to expand its computer science offerings. As briefed by the Department at the SAC meeting on November 2, 2023, and as described in the written materials submitted for that meeting, the Department proposes, among other things, to:

- Focus on providing upper elementary educators (grades 4-6) in Hawaii the resources and preparation needed to integrate computer science education into their teaching;
- Build and strengthen Hawaii’s local information technology talent pipeline by aligning the computer science program to meet the needs of Hawaii’s information technology sector; and
- Increase the number and diversity of students in the pipeline to computing and computing-intensive degrees by supporting state-level computing education reforms.

The Board appreciates the Legislature’s interest in and commitment to ensuring our public school graduates have the computer science skills they will need to succeed and thrive. We look forward to continued dialogue with the Legislature as we chart the best course toward this shared goal.