

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

Corey Rosenlee
President
Osa Tui, Jr.
Vice President
Logan Okita
Secretary-Treasurer
Wilbert Holck
Executive Director

TESTIMONY BEFORE THE HOUSE COMMITTEE ON
FINANCE

RE: HB 247, HD1 - RELATING TO SCHOOLS

TUESDAY, FEBRUARY 26, 2019

COREY ROSENLEE, PRESIDENT
HAWAII STATE TEACHERS ASSOCIATION

Chair Luke and Members of the Committee:

The Hawaii State Teachers Association **supports HB 247, HD1**, relating to schools.

It's hot in Hawai'i. According to the National Weather Service, our state set over 50 high temperature records in the summer of 2015, with the heat and humidity lingering well into the start of fall. In our schools, children and teachers alike became ill from the blistering conditions. Kalaheo High School science teacher Micah Pregitzer recorded temperatures as high as 108 degrees inside his classroom in 2016, telling reporters, "You're dripping in sweat when you're just sitting there grading papers by yourself with no students in the room. You get the room packed with 36, 38, sometimes 40 students, and it just boosts that temperature up even higher."

A recent study conducted by University of California at Los Angeles researchers showed that the percentile gap between students learning in air conditioned and non-air-conditioned environments can reach as much as 17 percent on achievement tests, clearly evincing the impact of a comfortable classroom environment on student success. In a longitudinal analysis contained in "Effects of the Physical Environment on Student Learning," moreover, Glen I. Earthman of Virginia Polytechnic Institute and State University found that students between 4th and 9th grade at demographically similar schools showed increased gains in reading vocabulary, total math, problem solving, math procedures, pre-writing, and editing at schools with air conditioning, as compared with peers from non-cooled schools. Earthman demonstrated that the longer and more consistently students are exposed to classroom cooling, the better and more stable their performance gains tend to be. Conversely, students exposed to thermal conditioning for only short or intermittent periods of time achieved less than their peers. These findings are supported by U.S. Department of Education sponsored research, which claims that



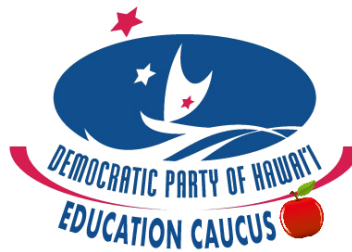
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proper cooling systems lead to better attitudes toward learning, fewer disciplinary problems, and sustained achievement.

In 2017, thanks to Hawaii lawmakers, legislation was passed to cool 1,000 classrooms by appropriating \$100 million for heat abatement. At the same time, other legislation required achieving netzero energy usage by 2035. Due to the replacement of fluorescent lights and the installation of much more energy efficient LED lights in our schools, plus other energy-saving measures, the electrical demand on many of our schools has diminished enough to now be able to install regular window A/C units, without having to rewire entire schools. This is great news and now installing A/C will cost a considerable amount less not only to install, but it will also not cause a higher energy usage that when we had fluorescent lights and other energy-draining appliances in our schools. HSTA is excited about this news and looks forward to cooling the remaining 7,000 classrooms that need cooled across our state.

School should be cool. To make our classrooms more suitable for student learning, the Hawaii State Teachers Association asks your committee to **support** this bill.



HOUSE BILL 247, HD 1, RELATING TO SCHOOLS

FEBRUARY 26, 2019 · HOUSE FINANCE
COMMITTEE · CHAIR REP. SYLVIA LUKE

POSITION: Support.

RATIONALE: The Democratic Party of Hawai'i Education Caucus supports HB 247, HD 1, relating to schools, which appropriates funds for the Department of Education to install air conditioning in public schools that prioritize the project.

If school is cool, then our classrooms should be, too. Yet, classroom temperatures regularly exceeded 90 degrees, reaching as high as 108 degrees in one Kalaheo High School classroom in 2016. Studies show that the achievement gap between cooled and non-cooled classroom environments can reach 17 percent on standardized tests. While local schools' outdated electrical infrastructure often cannot support traditional air conditioning technology, experiments in renewable energy cooling systems have lowered departmental projections for comprehensive cooling. We continue to believe that using available energy efficient technology—including on-grid, off-grid, microgrid, and photovoltaic technology—*should* reduce the cost of classroom cooling to \$8,000, or a total of \$40 million for the approximately 5,000 classrooms currently in need.

Therefore, we strongly support passage of this measure, which provides additional funds to the Hawai'i State Department of Education for heat abatement. During the 2016 legislative session, lawmakers appropriated \$100 million for heat abatement, heeding Gov. David Ige's call to cool

1,000 classrooms by the end of the 2016-2017 school year. Available estimates of \$20,000 per classroom indicated, at the time, that \$100 million would cover heat abatement for thousands of classrooms beyond the governor's call. Unfortunately, contractor bids have been higher than expected. During the initial round of bidding, the "highest low bid," meaning the highest bid on a project that was also lower than all bids on the same project, was \$135,000. Other bids were even higher. Contech Engineering submitted a bid of \$360,770, for example, to install solar-powered air conditioning in one portable at Ewa Beach Elementary, a project for which the lowest initial bid was \$102,000.

DOE officials subsequently rejected all exorbitant bids and expanded their pool of pre-qualified applicants. Since that time, the average cost of heat abatement projects has declined, with projects now running \$60,000 to \$70,000 per classroom. Contractors cite labor shortages and the cost of upgrading energy efficiency infrastructure as reasons for the extra expense, noting that policymakers also required the DOE, last year, to set a goal of becoming net-zero with regard to energy use by 2035. Today, the department officials plan to cool roughly 1,300 classrooms with the \$100 million appropriated in 2016 (actually, \$125 million, with carryover funds also used to fund heat abatement projects), an average cost of \$70,000-\$80,000+ per classroom. In April of 2016, however, after NextEra Energy Hawai'i donated 33 hybrid solar air-conditioning units to Kaunakakai Elementary and Kilohana Elementary schools on Moloka'i, Greenpath Technologies Inc., a Honolulu-based renewable energy company, performed air conditioner installations at a cost of \$20,000 per classroom, showing that classroom cooling can be accomplished sustainably and at a reasonable cost.

Thus, we believe that while DOE's current heat abatement project costs were unnecessarily excessive, the process of awarding contracts for heat abatement work during a booming construction market, along with the need to maximize renewable energy reliance throughout the state, clearly demonstrates the need for an additional, dedicated, and recurrent funding for the DOE's heat abatement program. **Moreover, it is our understanding that the department has increased its energy efficiency capacity enough to install "split AC" units at schools in need of heat abatement, which cost significantly less than previously employed classroom cooling units.**

HB-247-HD-1

Submitted on: 2/25/2019 10:24:48 AM

Testimony for FIN on 2/26/2019 12:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Melodie Aduja	O`ahu County Committee on Legislative Priorities of the Democratic Party of Hawai`i	Support	No

Comments:

HB-247-HD-1

Submitted on: 2/25/2019 10:28:04 AM

Testimony for FIN on 2/26/2019 12:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Kelly R Nitta	Individual	Support	No

Comments:

Representative Justin H. Woodson, Chair

Representative Amy A. Perruso, Vice Chair

Committee on Lower & Higher Education

Support for H.B. No. 247, Relating to schools

Hello I am Kelly Nitta, a sophomore at Kalaheo high school and I am writing in support for HB 247. This bill will use appropriate funds to put air conditioning into more than 1000 classrooms every year. This bill will appropriate funds for 2 installations of air conditioning in Hawaii's public school 3 permanent classrooms and portable classrooms that have not yet 4 received air conditioning units

The average classroom temperature in Hawaii's classrooms is a large issue that is plaguing our communities, the temperatures in some classrooms reach over 80 degrees which can lead to students having poor learning environments which leads to them not being able to perform as well in school.

The Hawaii DOE has already made an effort to track the temperatures in at least one classroom in every public high school across the state, these classrooms have temperatures ranging in the 80s-90s and humidity has reached a high point of 90%. These high temperatures and humidity rates can lead to dizziness, fatigue, nausea, and overall be distracting. By passing House Bill 247, you can help students to be more on focus and learn better.

Mahalo for taking time to read and consider my testimony, I hope you support House Bill 247.

HB-247-HD-1

Submitted on: 2/25/2019 10:33:54 AM

Testimony for FIN on 2/26/2019 12:30:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Clara Kathman	Individual	Support	No

Comments:

Representative Sylvia Luke, Chair

Representative Ty J.K. Cullen, Vice-Chair

Representatives of the House Committee on Finance

February 25, 2019

Support of House Bill 247, relating to schools

Hello, I am Clara Kathman a freshman at Kalaheo High Schools and I fully support HB 247. This bill will appropriate funds to put air conditioning into more than 1000 classrooms each year. More specifically this bill will appropriate funds for the 2 installations of air conditioning in Hawaii's public school 3 permanent classrooms and portable classrooms that have not yet 4 received air conditioning units

The Governor and lots of legislatures already agree that classroom temperature in Hawaii is a very large issue. They already know that temperatures over eighty degrees can lead to students not performing well on exams. The legislature finds that hot classrooms cause students to be drowsy, inattentive, irritable, and unmotivated. Overheated classrooms can also cause headaches, nausea, and heat rash. All of which affect student concentration on school work and exams.

Hawaii DOE has already put thermometers in at least one classroom in every public school across the state. These show that in a majority of classrooms have temperatures usually in the 80's-90's and humidity as high as 90%. Temperatures and humidity this high can lead to dizziness, headaches, and nausea. All of this will lead to students not performing as well as the could in school. By passing House Bill 247 you will be investing in the students future.

Thank you for taking the time to consider my testimony, I truly hope that you will support House Bill 247

DAVID Y. IGE
GOVERNOR



DR. CHRISTINA M. KISHIMOTO
SUPERINTENDENT

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

LATE

Date: 02/26/2019
Time: 12:30 PM
Location: 308
Committee: House Finance

Department: Education

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

Title of Bill: HB 0247, HD1 RELATING TO SCHOOLS.

Purpose of Bill: Appropriates funds for the Department of Education to install air conditioning in public schools that prioritize the project. (HB247 HD1)

Department's Position:

The Department of Education supports HB 0247, HD1 provided adequate electrical capacity is available in the locations air conditioning (AC) units are desired. Minor electrical upgrades such as the relocation of an existing outlet are typically nominal in cost. Major electrical upgrades are costly and could easily expend the majority of funds available. The Department recommends that a separate appropriation for an electrical upgrade should be made for those situations.

Thank you for the opportunity to provide testimony on this measure.

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.