

UNIVERSITY OF HAWAI‘I SYSTEM REPORT



REPORT TO THE 2010 LEGISLATURE

Report on Hawaii Excellence through Science
and Technology Academy Pilot Program

Act 111 SLH 2007 (Section 8)

November 2009

INTRODUCTION

The 2007 Hawaii State Legislature passed SB 885 SD2 HD3 CD1, which appropriated \$261,020 to Kaua'i Community College and \$26,730 to the Department of Education to collaborate on the establishment of a Hawaii Excellence through Science and Technology Academy pilot program.

The desired outcome of Act 111 is, "...to increase the readiness and motivation of Hawaii high school graduates to pursue post-secondary training and career options in science, technology, engineering, and mathematics disciplines."

The first year of the biennium was designated a planning year and the second year was to be the implementation of activities and beginning the process of measuring results. A November 2008 Legislative Report outlined the first year activities, which included establishing planning principles and sharing results of that planning period. The strategy underlying the Kaua'i STEM activities was to facilitate change in the high school classroom by supporting the high school teacher in that classroom, not by replacing him/her. The College reallocated funds internally to cover the costs of the participation of its own faculty in the project, specifically to retain as much money as possible from the allocation to allow all three high schools to participate. Ni'ihau School was later added to the project. The project began with six teachers in fall, 2007 and ended the school year with nineteen (19) signed on to be a part of the effort. Support for the project was strong, results good, and excitement to continue was high.

Funds for the second year were never released.

IMPLEMENTATION PHASE, 2008-2009

Although funds for the implementation phase of the project were not released, students continue to benefit from the new equipment and supplies for science classrooms provided to all three Kauai high schools and Niihau School utilizing year one funds. Despite the lack of funding, the Kaua'i partnership team continued to work on the project. During School Year 2008-2009, the partnership grew from groups of mathematics and science teachers meeting separately to dialogue and develop a relationship between the faculties of KCC and KCA to a dynamic partnership of mathematics and science teachers developing an understanding of the a) skills needed to be successful and b) developing targeted learning which meets student academic needs for a related cluster of courses at the college and high school level. In addition, some of the

teachers in the high schools involved in the project are conducting project research on student performance.

In addition to the continuing efforts at KCC and the high schools, Naomi Nishida, District Educational Specialist, in partnership with Kaua'i Community College's Division Chair of Math and Science Brian Yamamoto, wrote a successful grant proposal for a Department of Education Mathematics and Science Partnership Grant. Through this grant, further work is being done on the project. The list below indicates the progress on each of the objectives for the implementation phase of the original project.

- Establish a tracking system and track the success of students using the waiver, vs. past student performance -- completed
- Establish a COMPASS waiver procedure for ALG II/ Math 25- to facilitate a better pathway for high school students into higher education -- completed
- Implement classroom hands-on, applied math activities in both math and science classrooms and involve additional CTE teachers from both the College and the high schools -- ongoing
- Develop additional integrated math/science activities and share across high schools -- not yet begun
- Develop island wide, coordinated STEM activities building on current school specific activities and integrate into the classrooms, rather than only as extracurricular activities -- Waimea and Kapa'a High Schools are participating in this.
- Develop island wide, coordinated STEM activities using a Sustainability and Environmental Monitoring theme, including clean, renewable energy building on community interest and business/industry participation, e.g., KIUC, HCEI, KEDB -- ongoing
- Develop place-based science-centered, research/instructional activities at each high school -- not yet begun
- Agree upon performance measures both in high school and KCC to measure student learning outcomes. Develop tracking and reporting mechanism -- ongoing