



**DEPARTMENT OF BUSINESS,  
ECONOMIC DEVELOPMENT & TOURISM**

No. 1 Capitol District Bldg., 250 South Hotel St., 5th Flr., Honolulu, Hawaii 96813  
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804  
Web site: [www.hawaii.gov/dbedt](http://www.hawaii.gov/dbedt)

Tel.: (808) 586-2355  
Fax: (808) 586-2377

Statement of  
**THEODORE E. LIU**  
Director

Department of Business, Economic Development, and Tourism  
before the

**HOUSE COMMITTEES ON EDUCATION  
and  
HIGHER EDUCATION**

Wednesday, February 6, 2008  
2:15 PM

State Capitol, Conference Room 309

in consideration of

**HB 2587 HD1**

**RELATING TO MAKING AN APPROPRIATION TO ESTABLISH  
CREATIVITY ACADEMIES.**

Chairs Takumi and Chang, Vice-Chairs Berg and Bertram, and members of the Committees.

The Department of Business, Economic Development, and Tourism (DBEDT) strongly supports HB 2587, HD1, as it is also part of the Administration's package (HB3066 and SB2988) which would establish Creativity Academies for middle and high school students statewide. This initiative, created in partnership with the University of Hawaii Community Colleges, Hawaii Department of Education-Career and Technical Education Pathways (CTE) program, the science, technology, engineering and math program (STEM) leadership, provides a blended arts and science curriculum that is technology based, to reach a broader spectrum of students statewide.

The Creativity Academies initiative is receiving growing support from digital media, science and math faculty, students in new media arts, as well as the science and technology community. As John Morton, Vice President for Community Colleges at the University of Hawaii noted in his testimony, "It is critical that we adopt new approaches that get an increasing number of students to engage in educational programs that prepare

them with the skills necessary for their future success, as well as enabling them to contribute to the expansion of Hawaii's innovation economy.”

In a recent gathering of the STEM Leadership Conference, it was noted that Hawaii students experience a sharp decline and interest in math and science, particularly after sixth grade, signaling a need to find new ways to engage young minds in the core skills needed to develop new innovative businesses or find high paying jobs in the future. We must ignite the interest of those students who may learn these core skills better through a more creative learning environment.

By its very nature, Hawaii is a magnet for creativity, nurtured by our natural environment and rich cultural heritage. From our native artisans to the artists who now call Hawaii home, this synergy of elements fosters an environment in which a thriving creative sector can flourish, resulting in high paying jobs and better quality of life for us all.

Development of Hawaii's innovation capacity through programs such as DOE's Career and Technical Education Pathways (CTE), Project EAST on the neighbor islands, Kea'au Middle College High School and Youth Business Center on the Big Island, the Seariders production and digital media programs at Waianae High School have all proven that students are drawn to and succeed when they engage in creative activities. Likewise, the growth and success of University of Hawaii's Academy of Creative Media, Kapiolani Community College's New Media Arts program, and digital media, animation and music programs at our community colleges shows the keen interest of our students in pursuing academic and career paths in these creative sectors.

As pointed out in recent dialogue between KCC STEM leadership, John Rand and Candy Suiso, DOE faculty and creator of the Waianae Seariders program, by blending the science standards and digital media disciplines, a more comprehensive skill set for students will accelerate their potential in the arts and sciences, ensuring their success in these fields.

The Creativity Academies bridges the gaps and provides a pipeline of education with a more holistic approach.

Successful educational institutions are already taking this approach nationally, including the Louisiana School for Mathematics, Science and the Arts, and in higher

education, Stanford University with their cross-disciplinary institute, Stanford Institute for Creativity and the Arts, linking the arts with fields such as engineering, natural sciences and design.

Hawaii has an opportunity to develop and provide a cohesive creativity-based curriculum for middle and high school students with contextual learning in creative exploration (STEM) and creative expression (New Media Arts) at its core. This fusion of the arts and sciences is the fuel that will help provide a pipeline to develop workforce skills in creative problem solving, innovative thinking, as well as postsecondary training and career options in science, technology, math, digital media, interface design, animation, and creative publishing – all key elements to launching and sustaining a career in the twenty-first century economy.

Creativity Academies requests an appropriation of \$1,629, 474 to develop the program, including:

- Conducting an inventory on best and promising practices statewide
- Developing the turn-key curricula
- Implementing teacher training
- Pilot testing the program at Kapiolani Community College, participating feeder schools on Oahu and neighbor island community colleges, middle schools, and high schools

Just as Walt Disney launched generations of “imagineers“, the Creativity Academies will develop generations of innovators in Hawaii by:

- Fostering creativity, innovation, and entrepreneurship.
- Supporting department of education framework to graduate students in the areas of math and science.
- Providing integrated programs from kindergarten through age sixteen to job market, with dual credits for high school students.
- Providing at-risk youth an opportunity to engage in contextual learning in arts and sciences.
- Provide dual credits for participating high school students.
- Creating employment opportunities for UH-ACM and Kapiolani Community College New Media Arts graduates.

- Establishing a pipeline of education in science and the arts K-16.
- Develop more innovation-based companies, entrepreneurs and attract off-shore investments in these areas for Hawaii.

Both the legislature and the administration have agreed that by providing Hawaii's youth with access to education in the areas of science, technology and the creative arts is crucial to the development of our innovation economy. The Creativity Academies provides the opportunity needed for Hawaii's students and future generation of innovators to succeed; locally and globally.

Thank you for this opportunity to address this committee and we urge you to support HB 2587, HD1, and the administration's bills, HB3066 and SB2988.

LATE TESTIMONY

**berg1-Liz**

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**From:** diana nicholette jeon [jeon@hawaii.edu]  
**Sent:** Wednesday, February 06, 2008 5:33 AM  
**To:** EDNtestimony  
**Cc:** diana nicholette jeon  
**Subject:** Testimony in support of HB No. 2587

**Diana Nicholette Jeon**

Lecturer in New Media Arts  
Kapi'olani Community College  
4303 Diamond Head Road  
Honolulu, HI 96816  
808-734-9000  
[jeon@hawaii.edu](mailto:jeon@hawaii.edu)

**February 5, 2008**

**To: HOUSE OF REPRESENTATIVES  
THE TWENTY-FOURTH LEGISLATURE  
REGULAR SESSION OF 2008**

**COMMITTEE ON TOURISM & CULTURE**

Rep. Ryan I. Yamane, Chair

Rep. Joey Manahan, Vice Chair

**From:** Diana Nicholette Jeon, Lecturer, KCC New Media Arts

## **HB No. 2587, Making an Appropriation to Establish Creativity Academies**

I am writing to offer testimony in complete support of HB 2587 and the Administration's bills HB3066 and SB2988, which would establish Creativity Academies for middle and high school students statewide. These serve a critical role in developing our youth in the areas of science and creative technology, an important step in building the potential of all of our students to compete in the knowledge economy of the twenty-first century workplace.

As a lecturer within the New Media Arts program at Kapi'olani Community College, I witness the demand for more education in the areas of art and technology. HB 2587 and the establishment of Creativity Academies seek to meet this demand in accordance with the Hawaii legislature and administration's recognition of the value of education in the creative arts as critical to our future workforce development.

The Creativity Academies would provide a unique opportunity for middle and high school students to become involved in and excited about both art-driven technology careers and post-secondary education at a critical juncture in their development. Kapi'olani Community College's expertise in the STEM (Science, Technology, Engineering, and Math) program has already shown significant success using an inter-disciplinary curriculum; this will serve as a model for the proposed Creativity Academies.

By creating a curriculum and learning environment that combines the arts and sciences, the Creative Academies will provide a framework that will encourage students to pursue post-secondary education and to develop workforce skills in creative problem solving, innovative thinking, science and technology. These are essential elements necessary to sustain a career in, and help to further build and develop, Hawaii's growing creative

economy. I cannot understate how important I feel about the latter in stemming the loss of our best and brightest youth to jobs in the continental US.

Thank you for allowing me to provide testimony in support of HB 2587 and the Administration's bills HB3066 and SB2988 which would establish Creativity Academies for middle and high school students statewide.

Regards,

Diana Nicholette Jeon





HB 2587, HD 1 - MAKING AN APPROPRIATION TO ESTABLISH  
CREATIVITY ACADEMIES

Testimony Presented Before the Joint  
House Committees on  
Education and  
Higher Education

February 6, 2008 at 2:15 pm  
by

Mark Loughridge  
Ulua Media

HB 2587, HD1 - Making an Appropriation to Establish Creativity Academies

Chairs Takumi and Chang, Vice Chairs Berg and Bertram, and Members of the  
Committees:

Thank you for this opportunity to offer testimony in support of the HB 2587 to establish Creativity Academies for middle and high school students statewide. I think this is a very important step in helping all of our students gain 21<sup>st</sup> century skills to compete in the rapidly changing global economy.

Ulua Media works in education and technology to help learners of all ages gain 21<sup>st</sup> century skills. We are already working towards this vision in partnership with public and private schools throughout the state, with local colleges as well as with the MIT Media Lab and the California Institute of the Arts. We are contributing capital, industry talent, and many hours to help make these programs work. We are recruiting other local firms to join in the effort, including Aloha Island Inc and Avatar-Reality. The Creativity Academy programs we have helped start here are generating great excitement and excellent results among middle school students. We seek your support to help expand this public-private partnership. We seek your help to accelerate the effort so Hawaii can lead the country and the world in innovative programs that teach STEM and creative arts in ways that truly excite and empower students. Top global institutions such as the MIT Media Lab and the California Institute of the Arts (best animation school in the world) are eager partners in what we are pioneering. The Chinese Ministry of Education and leading digital media companies in Beijing, China and Singapore are also eager to extend partnerships. Please signal that you, too, are interested in helping Hawaii lead globally in education and innovation.

Hawaii is at a crossroads. As reported recently in the media, the visitor industry is on a gradual decline with no reversal in sight. Fuel costs are escalating and inflation is rising here faster than most of the US. By and large, visitor industry jobs are not high-paying. Are we equipping our students with the right skills to earn a better wage as traditional industries decline and costs rise?

Unfortunately, a disheartening number of students in Hawaii do not graduate from high school, do not go to college, and many of those who do go to college require serious remediation. Meanwhile, studies show that the gap in earning power between college

graduates and those who do not attend college is widening substantially. Students without a solid-grounding in 21<sup>st</sup> century skills are ill-prepared for the ways in which the global economy is quickly transforming.

The world is rapidly moving toward a knowledge-based economy with extreme competition. In many ways, US education is failing to keep up with rising global standards, and the US is losing dominance in industry after industry. Earning power is declining for labor with low skills as more and more industries outsource to less expensive countries. The skills needed to survive and thrive in our flat, hyper competitive world are radically different and much more complex than just a few generations ago. How can we practically help our students here in Hawaii to compete effectively in the future?

The Creativity Academies give students the opportunity to grow important 21<sup>st</sup> century skills in ways that truly engage them.

These programs develop fundamental skills in creativity and technology, help students explore fascinating careers, spur innovation, and ignite their passions to learn and master new fields. The Academies use project-based learning where students invent original works that combine skills from mathematics and science (STEM), and the arts. For example, the skills learned in the Game Academy program – core academic skills, brainstorming, computer programming, art and animation, project management, and team work – are lifelong skills that apply to a wide range of careers in digital media and beyond.

We have seen the magic of these programs at work. A Game Academy course for middle school premiered at the Iolani Summer School in 2007. It was the most oversubscribed course in the summer school. It received high marks from the students— an average ranking of 8.7 out of 10— and the graduates of the course have been requesting the opportunity to continue with an advanced course.

Meanwhile, the reception in public schools has been equally enthusiastic. Again, the course was oversubscribed when offered at Niu Valley Middle School in the fall of 2007. Informal pre and post tests revealed marked improvement in mathematics for those students who engaged in building and playing math-based games created during the course. Again, students gave the program high marks. Other public schools on the Big Island and Oahu are now eager to launch Game Academy courses this spring (2008). Kealakehe High School on the Big Island responded to our program with the strongest student response ever for an after school program. We launch in the coming weeks. One of our goals is to equip their older students to then turn around this fall and teach the elementary school students in their complex how to make their own games and animations while developing 21<sup>st</sup> century skills.

As digital media become ubiquitous, every industry and sphere of life is transforming. The future is hardly predictable, companies of all sizes are less stable and more vulnerable to competition than ever before, and *everyone* needs to learn to be more self-reliant and better equipped to shape their careers. The Creativity Academies deeply

engage students and effectively teach STEM, creativity, and entrepreneurial skills— the skills that are essential for students to take charge of their futures and lead in a rapidly changing world.

Here is an example of what we have in motion that combines all the stated goals and demonstrates decisive action to blaze new paths:

We have assembled a coalition of citizens and organizations eager to help

Thank you for this opportunity to provide testimony in support of House Bill 2587.

