



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

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Statement of
THEODORE E. LIU
Director
Department of Business, Economic Development, and Tourism
before the
**SENATE COMMITTEES ON ECONOMIC DEVELOPMENT & TAXATION
and
EDUCATION**
Monday, March 17, 2008
3:00 PM
State Capitol, Conference Room 225

in consideration of
HB 2587, HD1
**RELATING TO MAKING AN APPROPRIATION TO ESTABLISH
CREATIVITY ACADEMIES.**

Chairs Fukunaga and Sakamoto, Vice Chairs Espero and Tokuda, 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 (HB 3066 and SB 2988) which would establish Creativity Academies for middle and high school students. This collaborative initiative between the University of Hawaii Community Colleges, Hawaii Department of Education (DOE)-Career and Technical Education Pathways (CTE) program, the science, technology, engineering and math program (STEM), and the Creative Industries Division at DBEDT is a unique partnership dedicated to the creation of a standards based curriculum that fuses arts, technology and sciences to reach a broader spectrum of students in Hawaii. Arts + Science = Innovation.

The Creativity Academies has received wide spread support from those who believe the program can fulfill a critical need in Hawaii's education and workforce development. The program has also received favorable interest from the National Science Foundation and last week, KCC's STEM leader, John Rand, met with United

States Senator Daniel Akaka's staff who also see great value in the establishment of a Creativity Academies curriculum and will be supporting efforts to obtain federal funding.

With only 18 per cent of Hawaii's eighth graders test proficient in mathematics, compared with 38 per cent among top states in the United States, the establishment of Creativity Academies is a crucial step to engaging these students, providing a pathway for exploration in the sciences and mathematics via creative disciplines in animation, game design, digital media and creative publishing.

Keeping in step with the goals of the P-20 system, Creativity Academies will create a bridge from middle school to college, including at-risk youth in middle and high school, fulfilling a need area identified by business, and educators including the DOE and UHCC leadership.

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.

The Creativity Academies program is a key link to further developing the pipeline in education for building Hawaii's innovation capacity. As pointed out in recent dialogue between the CA team, Maui High School Digital Media faculty, Clint Gima and Candy Suiso, Seariders' faculty and founder of the successful Waianae program, by blending the science standards and digital media disciplines in a Creativity Academies pathway students will receive a much more comprehensive skill set to help accelerate their potential and succeed in the 21st century workforce.

Hawaii also has an opportunity to be a leader nationally by developing a cohesive creativity-infused STEM curriculum for middle and high school students with contextual learning in creative exploration (STEM) and creative expression (New Media Arts) at its core.

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 infusing the arts into STEM learning

- Implementing teacher training for all interested faculty statewide on Oahu at Kapiolani Community College
- Pilot testing the complete pathway program at Kapiolani Community College, Oahu as well as testing the middle school curriculum on a neighbor island
- Supporting hardware and software needs to ramp up program at participating schools
- Solicit additional funding from the National Science Foundation/ATE grants

Both the legislature and the administration have agreed that by providing Hawaii students better 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 fulfill this mission.

Thank you for this opportunity to address your committees and we urge you to show your strong support by passing HB 2587, HD1. Mahalo.

Date of Hearing: March 17, 2008

Committee: Senate Economic Development
and Taxation; Senate Education

Department: Education

Person Testifying: Patricia Hamamoto, Superintendent

Title: H.B. 2587, HD1, HSCR842-08, Making an Appropriation to Establish
Creativity Academies

Purpose: Appropriate funds to support the development of the creativity
academy program, including a turnkey digital media program.

Department's Position: The Department of Education (DOE) supports creativity academies.

The DOE recommends that the creativity academy program be facilitated jointly by the University of Hawaii community college system and the DOE. The continuity and transition from elementary programs to middle school programs to high school programs to postsecondary programs must be aligned to ensure progressive skills and knowledge development and avoid duplication. This program should be included in the Dual Credit Articulated Programs of Study (DCAPS) options for high school students. The DOE defers to the Department of Business, Economic Development, and Tourism (DBEDT) as to this funding priority.

The DOE requests the opportunity to work with the committee, DBEDT, and the community colleges to draft the language in this Bill to ensure current DOE initiatives are not duplicated by the actions proposed in this Bill.



UNIVERSITY OF HAWAII SYSTEM

Legislative Testimony

Testimony Presented Before the
Senate Committee on Economic Development and Taxation
and
Senate Committee on Education
March 17, 2008 at 3:00 pm
by
John Morton
Vice President for Community Colleges, University of Hawai'i

HB 2587, HD1 - MAKING AN APPROPRIATION TO ESTABLISH CREATIVITY ACADEMIES

Chairs Fukunaga, Sakamoto, Vice Chairs Espero, Tokuda, and Members of the
Committees:

I am here today to testify in support of House Bill 2587, HD1, that makes an appropriation to establish Creativity Academies within public high schools in partnership with the University of Hawai'i Community Colleges.

As described in the bill, the performance of our young people in mathematics and science lags behind the performance of most states. 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 Hawai'i's innovation economy.

I believe it is our responsibility as educators to provide the enriched environment that allows our people to develop the skills and knowledge that will allow them to fully participate in our economy and society. Over the past decade, the University of Hawai'i Community Colleges, in partnership with a growing number of DOE high schools and various industry groups, have developed a number of successful career-focused academies, including the Cisco Networking Academies, the Construction Academies, and the HiEST Academies that focus on the development of science, technology, engineering, and mathematics (STEM) skills and knowledge. Using contextual based hands-on curricula, these initiatives have increased the engagement of students who have previously not been involved in a rigorous program of study. This, I believe, is what we can expect from the implementation of the Creativity Academies Program.

The mission of Creativity Academies is to provide students with the knowledge, attitudes, and workforce skills in the creative use of applied technology/ Digital Media; skills necessary to become creative, innovative, and entrepreneurial in the 21st century. The fusion and blending of the creative and problem solving processes through animation, game development, and creative publishing is essential to both scientific and artistic endeavors, as well as to business, health and hospitality undertakings. This fusion is the cornerstone of the Creativity Academies and a life skill in the 21st century global community.

Furthermore, the Creative Academies focus on the creative application of technology and how this technology can be effectively used to teach core skills for the twenty-first century and how this technology can infuse and blend into STEM, the Arts, Hospitality, Health, and Business curricula. This blending and infusing of technology/digital media into STEM will attract students who feel challenged in Math and Science classes to major in STEM disciplines.

The University of Hawai'i Community College system is well situated to provide leadership in promoting education in STEM and Digital Media/ New Media Arts programs. Both Honolulu CC and Kapi'olani CC have been innovative and creative in their approaches to developing programs focused on different aspects of STEM and New Media Arts related careers. Most relevant to HB 2587, HD1, is the fact that Kapi'olani CC has developed and implemented a highly successful STEM Program for high school juniors and seniors. The goals of this program are to enhance the quality of science, technology, engineering and mathematics instructional and outreach programs; to prepare students for STEM careers; and to increase the number of STEM students transferring to 4-year degree programs. Kapi'olani CC's one year old STEM program enrolled 205 students of which 165 are native Hawaiian students. Also, Kapi'olani CC's Digital Media/ New Media Arts Program with 70 majors, has produced students who have won national and international awards for their creative use of an art form that uses technology as its medium. Through programs such as STEM and Digital Media/New Media Arts Program, our Community Colleges are promoting creative thinking, problem solving, and decision making through the sciences and the arts.

If we are to be successful in fixing our leaky educational pipeline, we believe it is important for our colleges to collaborate with the high schools throughout the State. The Creativity Academies Program as well as other similar initiatives, through the efforts of the UHCC system colleges and collaborating high schools, will provide our high school students with new skills to use in the innovation economy, as well as the opportunity to earn dual credit for their academic efforts, making a more efficient use of available resources.

This initiative is consistent with the planned University system strategic outcomes that include: to develop the educational capital of the state; to develop our workforce; to diversify the economy; and to increase our efforts on behalf of underserved regions and populations, particularly Native Hawaiians.

We support HB 2587, HD1, provided that its passage does not replace or adversely impact priorities as indicated in our Board of Regents approved Executive Supplemental Budget.

University of Hawai'i
KAPI'OLANI COMMUNITY COLLEGE
Arts and Sciences Counseling Services

Date: March 13, 2008

To: Senator Carol Fukunaga, Chair
Senator Will Espero, Vice Chair
Members of the Committee on Economic Development and
Taxation

Senator Norman Sakamoto, Chair
Senator Jill N. Tokuda, Vice Chair
Members of the Committee on Education

From: Teri Durland, Counselor
Kapi'olani Community College

Hearing: Senate Committee on Economic Development and Taxation
Senate Committee on Education
Monday, March 17, 2008 at 3:00 p.m.

Measure: HB 2587-Making an Appropriation to Establish Creativity
Academies

Thank you for the opportunity to present testimony in support HB 2587.

The Creativity Academies is a pilot program for high school students where science, technology, engineering and math (STEM) is infused with creative expression (New Media Arts) in an integrated curriculum. Students will explore science and mathematics in combination with digital art and animation in an engaging, project-based curriculum. This integrated approach encourages students with passion and skills in digital media to learn and synthesize STEM knowledge, concepts and skills in a new and relevant way. It also offers students directed toward the STEM discipline the opportunity to explore a creative medium to develop and strengthen their learning. Students in the Creativity Academies may earn dual high school and college credit.

For the last five years, I have worked as a counselor at Kapi'olani Community College in two workforce development programs - one in the STEM discipline and one in the New Media Arts discipline. These two programs have collaborated on several on-campus initiatives and I have glimpsed the possibilities of what an integrated STEM and New Media Arts curriculum might look like and the benefits it will provide to students, especially as it is developed to respond to the unique educational needs of our Hawai'i students.

In the last seven weeks, I've had the opportunity to visit digital media programs on Oahu and Maui, and to learn more about what is offered on the Big Island. I hope to also familiarize myself with the digital media programs on the other islands. The Creativity Academies bill is well positioned to strengthen and enhance these high school

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An Equal Opportunity/Affirmative Action Institution

programs and provide a better student pathway to the community colleges.

The uniqueness of Creativity Academies and the collaborative partnership of DBEDT, DOE, UHCC and industry, make this an especially exciting and well-reasoned initiative.

Thank you for allowing me to testify today in support of House Bill 2587.

Sharon Sussman

KCC | Arts & Humanities
808-734-9382
ssussman@hawaii.edu

March 14, 2008

To: Senator Carol Fukunaga, Chair,
Senator Will Espero, Vice Chair, and
Members of the Senate Committee on Economic Development and Taxation
Senator Norman Sakamoto, Chair,
Senator Jill N. Tokuda, Vice Chair, and
Member of the Senate Committee on Education

Thank you for the opportunity to submit testimony in support of the HB 2587 and the Administration's bills HB 2587 which would establish Creativity Academies for middle and high school students statewide. This is a forward-thinking step in continuing what is already in place for preparing students in Hawaii to be competitive in the digital media workforce.

I have been a professor of New Media Arts/Animation at Kapi'olani Community College (KCC) for the past five years. I came here from a 6-yr tenure at DreamWorks Feature Animation in Los Angeles.

I see that the New Media Arts (NMA) program at KCC gives students a direction in life and a confidence in their abilities. My students describe how the New Media Arts (NMA) program at KCC has changed the direction of their lives. They have expressed how their high school years would have been years of engagement rather than years of indifference had they had a program like NMA at the high school level. They describe KCC's New Media Arts program as a turning point from failure to success. These students found their way back to college, but where are the ones that did not?

The Creativity Academies program can not only catch at risk students with the allure of digital art and animation, but with the integration of Science, Technology, Engineering and Math (STEM) at the core of this curriculum, it may open doors that might never have been possible. This innovative program will help students develop math and science skills in tandem with digital art and animation tools. This has the potential to bring these students to the top of the career ladder in animation or to open math and science doors that were seemingly unattainable to them.

I strongly urge you to support House Bill 2587. Thank you for this opportunity to testify.

Sincerely,
Sharon Sussman
Assistant Professor, New Media Arts

Testimony for STEM bill.

BRIAN BUEZA • KCC New Media Arts Student

My name is Brian Bueza, I'm a student at KCC and a part time, professional Graphic and Web designer, a profession that fits comfortably within classification of New Media Arts, especially since part of our program, at KCC, trains new professionals to enter this field. I have several years experience in this field and have attained an Art Director title in my professional career. I've designed Daniel Inouye's 2004 campaign website, and Linda Lingle's "Economic Momentum Commission" website through my former employer, Firefly Interactive.

I myself returned to school to retrain in what I believe is a profession that mirrors my true passions, being a creative professional for the entertainment media industry, specifically, 3D Computer Graphics (CG), animation and special effects for the game, broadcast and feature length movie industries.

I wanted to give testimony today on behalf of my instructors, colleagues, the young people of Hawaii, and of course, this Creative Academies Bill.

As a full time student, and part time professional, registered voter, a local resident taxpayer, and a transplant from San Francisco, California, I have to admit, prior to moving here, I had once believed that the beautiful state of Hawaii was a one-industry state. The industry in particular I am referring to is tourism. Once I've had moved here, fearing that I would not find employment as a designer, I quickly learned that it wasn't a one-industry state that only focused on tourism; there were other industries, particularly technology. However, tourism was, and is, an integral part of the state's history, the predominant industry in the state that puts the people to work. I was fortunate my former boss and coworkers from the Bay Area had also transplanted here, so I was able to quickly find myself a job as a designer making a good living. Again, since the industry here is tourism, I was designing for tourism oriented companies like Starwood Hotels, Aloha Airlines, Hawaii Visitors and Conventions Bureau.

If I can offer any testimony of worth, it would be that the bill is essential to not only Hawaii's young people, but for Hawaii overall in terms of its economy. Hawaii's young people are the future of Hawaii after-all. The future of Hawaii should include a diversified industry where not only Tourism continues, but new and emerging technologies are also embraced as a viable industry. Today's young people are the key to that future, and the proverbial seeds need to be planted for that to become a reality.

Hawaii simply must move beyond having one bread-and-butter industry, to move forward into the future. Tourism flows and ebbs depending on the same economic forces as the technology industry here. But, tourism itself is subject to other possible hindrances, for example, like a sewer pipe breaking, the Ala Wai flooding, the beautiful shores unsafe for tourists. Watching Howard Dicus, of Pacific Business News give his assessment on rooms filled in hotels, occupancy rates, and dollars spent here by visitors. One would believe Hawaii depends solely on tourism alone to exist as a functioning state. Again, my point is Hawaii needs to further diversify it's industries, mature them and invest in the technical skill levels of its people, particularly young people, which this bill would certainly make possible, and move them into these sectors.

It would seem game developers and film industry related owners find that conditions in Hawaii, economic or otherwise, are favorable to set up shop. But these businesses still have to backfill positions that require specific technical and artistic training. I learned first hand how Hawaii does try to take care of their own, first, and rightly so, they should, by hiring local people first, an unwritten rule I'd figured out, as I had to find new work here and there as a freelancer to supplement my income. I was fortunate to find enough contacts in the industry here weren't local themselves. I also respect that each state overall should implement certain protocols or programs to ensure its people stay competitive in the job markets available here.

At my company now, we need to hire skilled qualified help. And, we would also endeavor to hire a local employee. Unfortunately, there is a shortage of these people, and the company does not want to spend on relocation for an out-of-

state employee, or worse, off-shore the development to a country outside of the United States. Both of these aspects that touch on a much deeper and broader socio-economic and political discussion I won't delve into here.

But I digress; allowing this bill to proceed would address issues like these, and contribute to nurturing young people and grooming them for employment in a lucrative, creative, and pervasive industry. As a colleague of mine had mentioned, the creative works of those involved with New Media Arts, Science and Tech is not a niche industry. If one took their young children to see an animated feature length film, played video games, or have seen a movie at the theater, there's a multitude of people who took a direct hand in creating that content, content that sells in a growing, burgeoning, multibillion dollar industry. The state of Hawaii can secure a piece of economic phenomenon and put its young people at the precipice of a new component to the state/local economy.

If we can reach young people early, give them an opportunity up to where they haven't found anything else interesting, and cultivate their passions with New Media, math science and technology; they will continue on into this industry. These young people will not have to leave the islands to search for creative and lucrative careers elsewhere, they can stay in Hawaii near their families, and they'll be more likely to buy homes, pay taxes while building up another strong industry in Hawaii. These are the reasons I pledge support behind this bill.

Thank you,
Brian Bueza
808 271-5890

testimony

From: Rosa & Hugh & Zane & Lex [rosa.hugh@usa.net]
Sent: Thursday, March 13, 2008 11:32 AM
To: testimony
Subject: testimony for HB 2587, HD1

Please submit testimony for hearing for HB 2587, HD1 to

EDT/EDU, WAM

for Monday, March 17, 2008, 3 pm , Conference Room 225

Re: HB 2587, HD1

Appropriates funds to support the development of the creativity academy program, including a turnkey digital media program. (HB2587 HD1)

March 13, 2008

Rosa Russell

Kilauea School PTSA

PO Box 336, Kilauea, Kauai

I am strong support of HB 2587, HD1. I am currently working very hard to create an afterschool program in Kilauea. The need is so great and yet the resources are limited.

Firstly, I would like to express my enthusiasm comes from experience. As a child I was raised in Manhattan and a neighboring town. I was constantly exposed to the myriad extremes of human creation. I participated in a wide range of arts enrichment programs such as art camp, afterschool drawing, crafts at the community center, poetry contests, etc. These programs provided a fresh look at being a student, opened my perspective to work/play, offered me an outlet for my

frustrations and inner turmoil, provided healing, and helped prepare me for university.

A local organization recently held a meeting for those interested in arts enrichment for the Kilauea community youth. It was fantastic! It was clear that the community recognizes that currently there are very few options for the youth. Many of the resources are there such as teachers and facilities, yet the funding is not. And limitations set on the local public school are frustrating.

There is a great need. I believe strongly in the power the arts play in education and life preparation. Please support HB 2587, HD1.

Thank you,

Rosa Russell

COMMITTEE ON ECONOMIC DEVELOPMENT AND TAXATION

Senator Carol Fukunaga, Chair
Senator Will Espero, Vice Chair

COMMITTEE ON EDUCATION

Senator Norman Sakamoto, Chair
Senator Jill N. Tokuda, Vice Chair

testimony

From: Chris Gargiulo [gargiulo@hawaii.edu]
Sent: Friday, March 14, 2008 6:41 AM
To: testimony
Subject: Support for HB 2587 - Making an Appropriation to Establish Creativity Academies

Chris Gargiulo
Instructor in New Media Arts
Kapi'olani Community College
4303 Diamond Head Road
Honolulu, HI96816
gargiulo@hawaii.edu

March 14th, 2008

To: THE SENATE
THE TWENTY-FOURTH LEGISLATURE
REGULAR SESSION OF 2008

COMMITTEE ON ECONOMIC DEVELOPMENT AND TAXATION

Senator Carol Fukunaga, Chair
Senator Will Espero, Vice Chair

COMMITTEE ON EDUCATION

Senator Norman Sakamoto, Chair
Senator Jill N. Tokuda, Vice Chair

From: Chris Gargiulo, Instructor - KCC New Media Arts

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

I am writing to offer 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. This is an important step in developing the potential of all of our students to compete in the twenty-first century workforce.

As an interface design teacher within the New Media Arts program at Kapi'olani Community College (KCC), I am familiar with the demand for more education in the areas of art, new media, and all related creative local industry sectors associated with digital arts such as animation, web design, graphic design, digital video, gaming, film, and television, amongst others. 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.

Creativity Academies are a unique opportunity for middle and high school students to synergize their interests across multiple disciplines. KCC's STEM (Science, Technology, Engineering, and Math) program has already had great success with students using a turnkey inter-disciplinary curriculum that will act as a model for the curriculum that will be developed for the proposed Creativity Academies.

Most importantly, Creativity Academies will provide the opportunity needed for Hawaii's students to succeed in our growing creative economy and for the state of Hawaii's innovative economy to flourish.

By creating a curriculum and learning environment that combines the arts and sciences, with digital technology as a bridge, the goal is to provide a framework of study that will encourage students to continue their post-secondary education and to develop workforce skills in creative problem solving, innovative thinking, science, technology, math, digital media, interface design, animation, and creative publishing (ie. graphic design, music production, fashion, etc) – all key elements necessary to sustain a career in Hawaii’s growing creative economy.

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.

Sincerely,

Chris Gargiulo

testimony

From: Jake Yoshio Shimabuku [jakes@hawaii.edu]
Sent: Friday, March 14, 2008 3:09 PM
To: testimony
Subject: HB2587

Testimony for HB 2587, HD1
MAKING AN APPROPRIATION TO ESTABLISH CREATIVITY ACADEMIES.

COMMITTEE ON ECONOMIC DEVELOPMENT AND TAXATION Senator Carol Fukunaga, Chair Senator Will Espero, Vice Chair

COMMITTEE ON EDUCATION
Senator Norman Sakamoto, Chair
Senator Jill N. Tokuda, Vice Chair

Monday, March 17, 2008
3:00 p.m.

Hi my name is Jake Shimabuku and I'm currently a student of the New Media Arts Program at KCC and I'm in support of this bill. For almost my entire academic life I believed I was a failure. i graduated high school with a 1.6 cumulative gpa and it carried over to college as well. It wasn't till a program like the NMA that got me excited about school. It was only then that i started to change everything around and started a successful path. After this semester my cumulative gpa will pass 3.0 I have never in my life until recently got a quarterly gpa of higher than 2.4. If high schools and middle schools had a program like the Creative Arts I'd like to believe that I would've jumped on this path years ago. I would've had a direction and an unquestionable drive to succeed at a earlier time in my life.

Aloha,

I am writing to voice my strong support for HB 2587, HD1- Making an Appropriation to Establish Creativity Academies.

I have served as an educator in the field of new media arts for over five years and have been involved with computer graphics for over a decade. As a professor in the New Media Arts Program at Kapi'olani Community College, I have witnessed firsthand the dramatic impact that digital media education can have on Hawaii's youth. Graduates from the program have gone on to work for leading local, national, and international companies in the Arts & Entertainment sector, including: Atlantis Cyberspace, Electronic Arts, Konami Computer Entertainment, Madskill Productions, Pacific Focus, Polygon Pictures, Sprite Entertainment, and Ubisoft. The fusion of creativity and high tech skills empowers students to pursue rewarding careers and contribute to the diverse industries that utilize digital media. The Creativity Academies will infuse digital media education into high schools & middle schools with the goal of catalyzing engagement with STEM.

Hawaii's need for greater economic diversification is well known. Events of the recent past (9/11, SARS, etc.) have demonstrated how concentrated and consequently precarious the local economy is. The twin engines of tourism and defense spending cannot provide the requisite high-skilled living-wage job opportunities to sustain future growth. Hawaii needs to invest in innovative educational initiatives to help generate robust new industries that can thrive in an increasingly competitive global economy. The Creativity Academies initiative is ideally suited to this objective; it will provide students with cutting edge workforce skills in Science, Technology, Engineering and Math and Digital Media/ New Media Arts. The aforementioned skills are at the core of emerging knowledge based industries. For example, the entertainment sector has undergone unprecedented growth in the past few years, creating strong demand for artists with high-tech skills. In a 2004 study, the US Department of Labor projected a 39.5% increase in multimedia and computer animation related jobs in the next decade. By establishing the Creative Academies, we will provide Hawaii's youth with the opportunity to profit from this growth and succeed in an era of rapid technological change.

By providing innovative curriculum that encompasses both STEM and Digital Media/ New Media Arts, the Creative Academies will promote a progressive integration of art and science. This will enable the next generation to effectively utilize technology to solve complex scientific/artistic challenges, and communicate with diverse media such as film, television, music, video games, and the web.

In conclusion, I believe the Creative Academies will provide a powerful stimulus to an educational system that is increasingly out of touch with trends in the competitive global economy. The Creative Academies will leverage the unique capabilities of the UHCC System and DOE to support and enhance the tremendous potential of Hawaii's youth. Thank you for the opportunity to testify in support of HB 2587, HD1- Making an Appropriation to Establish Creativity Academies.

Sincerely:

Joseph Tremonti

Cherie Tsukayama
tsukayam@hawaii.edu

March 14, 2008

Senator Carol Fukunaga, Chair
Senator Will Espero, Vice Chair
Members of the Committee on Economic Development and Taxation

Senator Norman Sakamoto, Chair
Senator Jill N. Tokuda, vice Chair
Members of the Committee on Education

Notice of Hearing
Date: March 17, 2008
Time: 3:00 PM
Place: Conference Room 225
State Capitol
415 South Beretania Street

I am a student at Kapiolani Community College in the New Media Arts – Animation program. I will be graduating from the program in the summer of 2008. I support bill HB 2587, HD1 100%. I attended Castle High School and was one of the students that floated in the middle with no guidance or direction. I was interested in gaming but had no idea about how it was made or the process of it. I spent a lot of my high school career gaming. School was a priority but it seemed to tailor to all the other types of studies except art. For example, there was a class that prepared students and alerted students about the nursing field, business field, entrepreneurship, athletics, student government, science, foreign languages but there was nothing for the arts. That's where they lost me. I had a .7 GPA in high school and once I entered the program a year later I had a 4.0 GPA and I maintain that GPA till present.

While entering in this program I learned so much about the arts, not only does this program teach computer graphics but it covers how having fine arts skills are important to do well in the industry. It sparks curiosity about opportunities that would have been nice to have in high school, for instance only after entering this program, I am starting to look into going to an art college/university to better my 3D skills. Alerting the high school students who are interested about the requirements that are needed to attend an art college early on helps so much in getting ahead. My grades suffered in high school because nothing interested me, so it made classes harder to deal with, in effect I had to take classes in college that I could have taken in high school making the transition slower, and pushing me a year back.

In this program you build a community that helps drive you and keep you on track with your goals. It's a positive community that this program provides. I am surrounded by people with the same interest as me and have been through similar struggles as me in high school. We support each other by doing critiques and helping each other out when we have a question about anything, work or life.

Another thing that I feel this program will provide for the high school and intermediate students, is guidance. Whether it be on how to go about starting a career in the computer graphics industry or

bettering their skills as an artist or, what I feel is most important, guidance about getting through school and life. The creative learning skills that they would learn in the program can be used in every aspect of their life. The reason that I feel this program is important is because if I had this type of community in high school I'd feel that there would be people or someone that could understand me, coming from an artist point of view. I had questions but no one to answer them; I had problems but no one that could understand my train of thought; I had potential but no one to see it or help it grow.

I am very supportive of this project and would like to see it put in action. Thank you for the opportunity to testify in support of HB 2587, HD1.

Cherie Tsukayama

testimony

From: jennifer nobrega [girlssurf2@yahoo.com]
Sent: Friday, March 14, 2008 11:10 AM
To: testimony
Subject: Email testimony

March 14th, 2008

To: THE SENATE
THE TWENTY-FOURTH LEGISLATURE
REGULAR SESSION OF 2008

COMMITTEE ON ECONOMIC DEVELOPMENT AND TAXATION

Senator Carol Fukunaga, Chair
Senator Will Espero, Vice Chair

COMMITTEE ON EDUCATION

Senator Norman Sakamoto, Chair
Senator Jill N. Tokuda, Vice Chair

From: jennifer, KCC New Media Arts student

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

I am writing to offer 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.

As an interface design student within the New Media Arts program at Kapiolani Community College, I would like to see more educational opportunities for middle and high school students in the areas of art, new media, and all related creative local industry sectors associated with digital arts such as animation, web design, graphic design, digital video, film, etc. 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.

Creativity Academies will be helpful for young students to develop workforce skills in creative problem solving, innovative thinking, science, technology, math, digital media, interface design, animation, and creative publishing – all key elements necessary to sustain a career in Hawaii's growing creative economy.

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.

Sincerely,

Jennifer Nobrega

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

Testimony Presented Before the Joint
Senate Committees on
Economic Development and Taxation
and Education

March 17, 2008 at 3:00 pm
by

Mark Loughridge
Ulua Media

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

Chairs Sakamoto and Fukunaga, Vice Chairs Tokuda and Espero, 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 21st century skills to compete in the
rapidly changing global economy.

Ulua Media works in education and technology to help learners of all ages gain 21st 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 21st 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 21st 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 launching 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. 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 21st 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.

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

Testimony Presented Before the Joint
Senate Committees on
Economic Development & Taxation and Education
March 17, 2008 at 3:00 pm

by
John Rand PhD
STEM Program Director/Professor, UH Kapiolani Community College

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

Chairs Fukunaga and Sakamoto, Vice Chairs Espero and Tokuda, and Members of the Committees:

I am here today to testify in support of House Bill 2587, HD1 - Making an Appropriation to Establish Creativity Academies. I have been teaching Physics and Engineering at the University of Hawaii and at Kapiolani Community College for twenty years and I am the Program Director of the Science, Technology, Engineering and Mathematics (STEM) initiative at the College.

This appropriation will allow a curriculum design team made up of partners within the Hawaii Department of Education, Community Colleges, State Government, and private entrepreneurs to develop a creative, unique academic pathway that will not only increase the high school graduation rates, but will also increase the number of students who attend college in Hawaii, and will ensure that Hawaii's students will have 21st century skills needed for 21st century jobs.

Jobs in digital media development, including animation and gaming technology are among the fastest growing segments of workforce needs in the nation. These jobs are being largely outsourced to foreign countries because of a lack of skilled workers in the United States. By establishing these academies in the near future our state will be in the forefront in providing these contemporary workforce skills. Hawaii will become a leader in the production of a well-trained, globally competitive workforce. These high technology jobs are high paying and will undoubtedly increase the standard of living here in the islands, as industries dependent on this technology look to our state and its emerging workforce.

By blending the curriculum from science, engineering, and mathematics with digital arts and creative writing, the Creativity Academy will inspire students from a broad range of academic interests. The academy will formalize the education that they are already getting as they navigate the internet, play digital games, create animations and manipulate digital video. This new media incorporates science, math and art in a convincing and demonstrative way, allowing the otherwise unmotivated or uninspired students to see value in having these skill sets that truly emphasize application.

I strongly encourage you to support this legislation.