

Education for Futures

For the Honolulu District's Department of Education staff
September 12, McCoy Pavilion Auditorium, Ala Moana Park

My thanks to you all, and especially to May Kirimitsu for inviting me to speak with you today. I can't tell you how much I am in awe of the work you and all members of the DOE do. There is no more underappreciated, unjustly maligned, underpaid, overworked, and yet immensely valuable group of humans on the planet than you and the teachers in the trenches of the public schools of Hawaii.

I salute you.

I salute you as a person who is often next in line to receive the products of your labor. I have been teaching freshman classes at the University of Hawaii since the Fall of 1969 and I have seen a steady improvement in my students over that time, because of your good work.

I don't care what others may tell you, you ARE doing a good job and the graduates of Hawaii's public schools are vastly better in all ways than they were when I first began teaching them over thirty years ago. They think better, they know more, they write better, and they are more outgoing than they were before. Indeed, there have been some spectacular improvements over the last five years or so compared to previously.

If there is any thing that I personally regret about the freshmen students I teach now who are graduates of the Hawaii public school system is that, in spite of all they know and how well they can display their knowledge, they care less than students did thirty years ago. They are far, far more conservative, conventional, and afraid. They are very much focused on themselves and perhaps their families. They care little about others here in Hawaii and, though they are well-informed about world affairs, comparatively speaking, they care less about anyone who is not immediately around them.

Even though I deplore this, I think I understand why they are the way they are. It is hard to be an American these days without being conservative, conventional and afraid. And the better informed they are, the more they know they have reason to be afraid of the rest of the world, given the utter idiocy and self-centered irresponsibilities of our domestic and foreign policies over recent decades, especially those since the unelected President of the US took over in 2000 and, with his aged Cold War advisors, used the tragedy of September 11 to turn the US into a fascist, warmongering, indeed, war seeking, isolated and contemptuous nation.

With the death of Senator Sparky Matsunaga--one of the finest human beings ever to walk the halls of congress--and now the illness of Patsy Mink, the last remaining true and truly-courageous liberal in the US Congress, voices of reason, compassion and understanding will soon be entirely silent in the US federal government.

If you think the feds meddle clumsily and foolishly in the affairs of citizens now, just wait! The current gang in power nationally may still call themselves conservatives, but that label, which once was honorable, if nonetheless wrong, is now meaningless as a statement of respectable beliefs. Conservatives at one time stood for the sanctity of the individual, the right of people to govern themselves at the individual and grassroots level without well-meaning but burdensome bureaucrats interfering.

Instead we now have a government, backed by a stacked judiciary, that is systematically destroying consensual rules of fair play and sharing, and pushing mandates from on high down your very unwilling throats, none more odious and pernicious than the doublespeak found in the disarmingly phrased piece of legislation you are here to grapple with, "No child left behind." Orwell's Big Brother must be applauding in his literary grave, while Hitler and Goering, the masters of the Big Lie, must be shaking their heads in disbelief at the audacity of Ashcroft labeling a bill that swept away longstanding fundamental liberties the, "Patriot's Act", while Cheney and a roost of other Chickenhawks--men without a shred of military experience; men who were in fact draft dodgers in their draftable days--bang the drums of war against a nation whose main crime is that it sits on oil his business cronies want easier access to.

And what do the elected leaders of Hawaii say in response to this? Nothing. Silence. Acquiesce and in deed complicity, since war, and the preparation for war, has become the mainstay of our economy locally, as well as nationally.

So good luck! If you can find some way to pacify the feds and also educate Hawaii's children--and I know you will do your very best to do both--then I will have to salute you once again for your cunning and wisdom. I am very glad I am not in your slippers. I know I couldn't begin to do what you will do so well.

But I was not invited by May Kirimitsu to rage against the night. I was asked to say something about the futures of education from my position as a futurist and as an educator myself.

So please excuse me for my outburst. Ignore what I said before, as I am sure you will, and let me try to do what I was asked to do.

Function of Education/Role of the Teacher

I always say, and so I will say again, that the function of education and the role of the teacher are always and everywhere the same. The function of education is to help students acquire the attitudes and skills necessary to become effective members of the future society in which they will live. The role of the teacher is to be a living example of such a person - to model the attitudes and skills necessary to be an effective member of the future society in which the students will live. So, the basic and first question for any teacher, administrator, educational policy maker, or parent should always be: "What might future society be like? What attitudes and skills should students learn now in order to be effective in their futures?"

No teacher should dare enter a classroom (or a website); no administrator should place a teacher in a classroom (or authorize a website); no educational policymaker should train a teacher or devise a curriculum (or prepare a website); and no parent should send her child to a school or website until each has done her best to survey the futures of the student, and then trained the teachers, prepared the curricula, and established the support systems relevant to the futures of that student.

Every day of every class should start, not with a prayer or a pledge of allegiance to whatever god or nation is in vogue at the time, but with the question, "How is what I am about to teach, or to learn, relevant to the futures of those who are about to learn it? And how can I be sure?"

That is to say we must learn to pledge our allegiance, not only to the past or the present, but also and at least in equal measure to the needs and wants of future generations. We should not continue to teach what has been taught in the way it has been taught merely because that is the way we learned it and thus that is the way it is easiest to still teach, but because we have some good reason to believe that what we teach is what one needs to know in her future. We need to ask similar questions about what we do not teach, and be as certain as we can about why we do not explicitly teach it.

Even though the basic function of education and role of a teacher are unchanged, what is required to be a successful member of society, and thus what it means to be a teacher, has changed over time as societies have changed. For tens of thousands of years, humans lived in small, homogeneous bands and tribes. All information was transferred by watching and imitating, or by speaking and listening. We still learn best that way. We are biologically programmed to learn by doing. As someone said, "I hear and I forget; I see and I remember; I do and I understand."

Even with the advent of writing, most people continued to learn in this way, by direct experience, but some began to gather around the handful of scholars who owned the few handwritten texts available, to study and copy the information from them.

With the invention of handwriting, it was for the first time possible to contextualize and depersonalized ideas; to look at ideas, to examine them, and rearrange them into little trains of logical thought that ran down tracks of your own choosing, whatever the original writer might have intended.

This was powerful stuff.

And so the advent of writing destroyed societies based on song, dance, icons, and especially on the spoken word. Writing, and the personnel and institutions that supported it, and that writing itself made possible, swiftly marginalized the knowledge base, the ways of teaching and learning, and the knowledgeable persons of oral societies. Anyone who is familiar with the history of these Islands knows what happened here to knowledge and power when literate, Bible-toting "educators" came into contact with the powerful

and noble, but nonetheless preliterate, oral, culture that had been dominant for a thousand years, quickly overturning it by the power of the written word (along with the military, political, and economic institutions built upon the written word).

With the invention and dissemination of the printing press, society entered a new era. The printing press made it possible for many more people to have access to many more texts and ideas. The human and social consequences of this were immense. For example, in Europe, the Roman Catholic Church and its largely-oral and scribal Holy Roman empire lost its own thousand year monopoly on truth, Latin vanished as a universal language, divine monarchies were overthrown while representative governments, based on written constitutions and laws, were invented. Most importantly, industrialism arose, and so the modern school system--of which you are the tattered remnant--was created to transform most peasants into workers and gun-fodder, or some lucky few who tested well into managers and generals. Scientific research and technological development became a central part of societies in order to create the guns and goods modern capitalism required.

In such a world, where knowledge resided in books in libraries, and knowledgeable teachers were scarce, it made sense to bring people together in the late fall and winter, when the crops were in and the weather cold, placing them in rows in classrooms, facing the authority in front, and, in good assembly line form, see that they moved smoothly from grade to grade; that teachers and learners alike were probed and tested along the way to determine their quality, so that the graduates would then take their lifelong rightful places in the factories, offices, or barracks of the growing industrial state.

In the meantime, and as a consequence, the printed word took over all other institutions, reaching its pinnacle of influence with the idea of constituting a new nation by writing down fundamental laws, which then would be interpreted by people who devoted their lives to studying written laws and constitutions, and interpreting the meaning of these and all other words.

For several hundred years, until the middle of the 20th Century, words ruled supreme.

Wordmongers still insist on the primacy of print, and force learners to take classes and endlessly remedial classes in their mother tongue over and over. At UH, for example, we still insist on Writing Intensive courses across the curriculum in the vain hope that people who otherwise never read or write anything, because there is no need to do so, will nonetheless eventually learn to read and write as some subset of English teachers think they should.

And so it is your duty to teach your students how to jump through the hoops UH has set for them. And you do a great job, judging by how well my students, your graduates, do in fact write.

But for at least half a century now, we have been in the throes of another social transformation of and by communication technologies. It began first innocently over a century ago with the telegraph, telephone, and camera, then the radio, and black and

white and then color motion pictures, and then first broadcast black and white and then cable color television, first audio and then video tape, then computers, satellites, networks, electronic memory, the internet, cell phones, PDAs. Soon we'll have biochips, molecular- and nano-technologies, teleportation, and then.... Well, the transformation is extremely fast and far from settled.

In the meantime, the formal education seems to struggle unsuccessfully to keep up. Yet in reality, all educational reforms I know of in the US are ultimately shams. As the former dean of the UCLA College of Education, John Goodlad, said after his extensive survey some years ago of many attempts at educational reforms: "'Back to Basics' is where we have always been. My grandmother would be quite at home in any classroom anywhere in the US".

Or as the educational futurist David Snyder put it more recently:

"...since the publication in 1983 of *A Nation at Risk*, no major national reforms have been adopted by US public schools, and there has been no significant improvement in overall student achievement. In fact, there is not yet a consensus among educators that truly transformational change is necessary. Currently, for both K-12 students and for graduates of schools of education, the dominant reform activity involves mandating stringent tests of student achievement and teacher competency.

"The 'standards and accountability' movement is the culmination of this twenty-year sequence of largely ineffective initiatives including the 'back to basics' movement of the early 1980s, through dress codes and school uniforms, site-based management, gender separation, reduced class size, [and] the restoration of corporal punishment".

Matters became significantly worse when George W. Bush, against all sensible advice to the contrary, pushed through Congress legislation requiring standardized testing by all schools in all states of the union. The results are, and certainly increasingly will be disastrous.

In other words, every time there is a call for educational reform, instead of looking frankly at what learning means in our postmodern world, we simply go back to basics over and over, denying or ignoring the massive changes going on around us.

What Age-Cohort Analysis might also tell us.

Now, let me focus your attention on another issue for a moment:

One of the tools that I find useful in thinking about the future of anything is called "age-cohort analysis." Let me say a word about it. It is based on the fact that different "age cohorts" (also sometimes called "generations")--people born and growing up during the same time span, and in the same place--often share ideas and beliefs about the world which are very different from the ideas and beliefs held in common by members of age cohorts only a few years older or younger than they are.

Thus, when an age cohort with one "worldview" retires and leaves political and economic power, and a new age cohort with a very different "worldview" comes in, the world may change because, holding different beliefs, the actions and policies of the newer cohort differ from those of the older cohorts.

In the US, the cohort which grew up during the Great Depression of the 1930s, and then became deeply involved in the Second World War (often termed the "G. I. Generation"), still carries with them the memory of profound scarcity and deprivation, the horror of war, and then the sweet triumph of complete victory and global dominance--tempered by the death of so many friends and loved ones. They have a "can do" attitude towards almost anything, having been tested, tempered, and triumphant.

But other cohorts, born only a few years later, have never experienced significant economic deprivation or war of any kind. They only know, and expect as a natural right, peace and prosperity without their having to struggle for it.

Childrearing fashions change too. One of the largest cohorts ever born in the US--the so-called "Baby Boomers" born between the late 1940s and 1960--were all basically reared by parents who followed the advice of Dr. Benjamin Spock in his book, *Baby and Child Care*. The parents of the Baby Boomers were the first to live in suburban isolation usually without experienced grandparents around to guide them. Dr. Spock's book filled a great void, telling them to just let their children "do their own thing," freely, and without restraint. Trust your children's basic instincts.

Yet children born before them in the 1930s-40s were reared in a completely different way--according to "the clock". They were expected to eat at specific times (not sooner or later), to move their bowels on command (and not before or after the command), to take naps and go to bed on an exact moment on the clock, and in general to be disciplined to strict, mechanical, external forces--not to their own whims and internal rhythms.

This "Silent" Generation, born in the 1930s and 40s, was very small in number--one of the smallest in American history. Few babies were born, since children were a great burden during the Depression. So the Silents became a tiny, ignored, and heavily-disciplined sliver of humanity sandwiched in between the older, more numerous G. I. cohorts who went off to fight and win World War Two, and the Baby Boom children of the War Heroes who then turned to Drugs, Sex, and Rock 'n Roll before they grew up and became financial consultants or school teachers, with a preference for Prosac and Muzak.

Ironically enough, being small in number, and highly disciplined, the Silent Generation turned out to be doubly blessed: older competitors were often killed in the war, and those who did survive produced many children for whom the Silent Generation could then become teachers, employers, manufacturers, and leaders. Members of the Silent Generation never had to worry about jobs. With the older cohorts weakened by war and a huge number of young people to provide for, there were always jobs for them.

But they then proceeded to block entry into all kinds of jobs for the younger Baby Boomers, who then, with their vast numbers, blocked jobs still more for the much smaller numbers in "Generation X" which followed them.

This kind of thinking--seeing how common galvanizing experiences influence the thought and behavior of an entire generation of adults--is called "Age Cohort Analysis." It is one of several ways futurists try to anticipate changes and continuities in the future.

The World War Two G. I. Generation is rapidly dying off. Soon there will be no one alive who can literally "Remember Pearl Harbor."

A major "galvanizing experience" of the Silent Generation, as well as the Baby Boomers, was the Cold War between the United States and the Union of Soviet Socialist Republics. The Cold War was the major event shaping, and warping, the lives and lifestyles, of all Americans during the 1950s, 60s, 70s, and 80s.

And then suddenly it ended and can never return in its old form. A new generation of Americans has already been born for whom the Cold War is merely a curiosity they read about in text books. It has no direct, personal meaning for their lives.

They live in a world totally different from that of the old Cold Warriors. When the Cold Warriors finally retire, and die off, and Generation X and the Millennials, as they are called, take over, they will not see the world through the same lens the Cold Warriors use to see everything. They will literally "live" in a different world.

Bill Clinton, Al Gore, Newt Gingrich, and George W. Bush became national leaders without having been war veterans. Indeed, they were never in military service at all. That entire life-shaping experience of military life which conditioned, for better or worse, almost all males and many females (and certainly all major political leaders) for 50 years came to an end--at least for a while--as the Chickenhawks took over.

Bob Dole was the last American to run for the US Presidency by trying to live off of World War Two memories. It just did not work for Dole--there are not enough Americans around who cared deeply about the personal sacrifices he made. And so a person who was arguably a war resister--and certainly a draft dodging, dope smoking womanizer (and thus a perfect model of Baby Boom yuppiedom)--Bill Clinton--won the presidency.

His successor in the White House, George W. Bush, is also a Baby Boomer by birth, but lived a life that kept him immune to the influences of most of the "galvanizing experiences" of his generation. Moreover, Dubya surrounded himself not with other Boomers and Gen Xers, as Clinton did and as one would expect a Boomer to do. Rather Bush has advisors who are throwbacks to his own father's Silent Generation. With Dubya in the White House, America stepped back two Generations.

This might not have mattered much had not the terrorist attacks of September 11, 2001 occurred. The airhead, playboy W. Bush was totally unprepared for these horrific events, and so his Cold Warrior advisors responded in the only way they knew how--massive military retaliation externally, and suppression of fundamental civil rights internally.

Imagine what the response to 9/11 might have been if a "real" Boomer, or member of Gen X, had been in charge instead!

But time flows on. So what's next? How will the comparatively numerous and tremendously pampered and protected members of the "Millennial" Generation, currently in and emerging from high school, respond?

When one cohort leaves power and a new one comes in, the world changes.

Given what has been said (I think accurately) about the Millennial generation just emerging from high schools, it is highly likely that we will have, over the early part of the 21st Century, a highly-disciplined, hardworking, well-trained, orderly, rule-loving and adhering, highly-literate, and comparatively numerous age-cohort entering a world that requires exactly the opposite of the skills and mindsets the Millennials have, preferring instead people who possess flexibility, adaptability, risk-taking, visual imaging, adaptability, creativity. Everything the Millennial age-cohort in the US does not have but which in fact is being fostered, belatedly, in Europe and even Japan. A fun time will be had by all, when our rule-obsessed Millennials try to enter the global market place!

No wonder they are not opposed to (if still not entirely in favor of) bombing everyone in sight now. It might reduce the future competition.

So, with the lessons of "age-cohort analysis" and of new and emerging communications technology well in mind, what should we do? Rather, what should YOU do, faced with the mandates of "No child left behind" in the face of the individual and societal needs and possibilities ahead that the mandates may ignore?

Well, first of all, consider that business and the military are eagerly embracing new educational media. There is a lot of talk and writing, and some action, about these media going on in educational circles. The hottest educational item of the last year of the Second Millennium was a statement, widely redistributed, by Arthur Levine, president of Columbia University's Teachers College. Levine recounted a meeting he had with Michael Miliken, the once and future junk bond king. Noting the growing obsolescence of formal education at all levels, Miliken's taunt was, "You guys are in trouble, and we are going to eat your lunch".

Now, the sudden collapse of the dot.com bubble seems to have eaten Miliken's lunch--along with yours, if you invested your retirement funds in the stockmarket--but if Miliken and the stockmarket do regurgitate--if we do somehow miraculously avoid a major depression (and I am not sure we will, given our huge and growing amounts of consumer, credit-card debt--the only thing keeping the economy afloat now)--if, as I say, we do

avoid a major depression, then we can be pretty sure that Miliken and all of the many new "edupreneurs" at Virtual High Schools, the University of Phoenix, The American Public University System, Jones International University and the rest will have their way--and so far nothing the old establishment in the US is doing seems about to stop them--there will be fewer and fewer public school systems, higher or lower, within a few decades. Instead, there very well may be three kinds of learning delivery systems:

1. A few enormously expensive, prestigious, and exclusive campus-based schools which serve to socialize the rich and famous (Punahou and Harvard);
2. Thousands of "fast-food" learning outlets, offering "just in time", "performance-based" training at all levels and all subjects, on demand and at bargain prices, mostly over the Internet (and its successors) with the rest available wherever there is a room for rent and an instructor for hire (Virtual High and Phoenix);
3. And a few niche, private schools and colleges offering old-fashioned scholarship in the old-fashioned way for those still nostalgic, and able to pay, for it (Dartmouth and Waldorf).

Moreover, with more and more people teleworking from home, rather than gathering in central urban locations, "home schooling" might continue to grow in popularity, eventually becoming the norm once again. Day and/or night childcare facilities might exist for those who must work outside the home, or whenever parents need to travel, but the educational role of these centers might well be minimal - certainly nothing like that of public schools today.

Needless to say, the liberal arts, humanities, and most social sciences will be completely marginal in this environment. Unions, tenure and academic freedom will cease to exist. Athletic programs (though the heart and soul of the American educational system now) will be taken over by for-profit organizations (a process also already well underway).

In the revived New Economy of "The Long Blur" where everything is commodified, education becomes just one more utility to be bought and sold on the open market according to the wishes of the highest bidder. That for which there is no demand, there will be no supply.

At least that is ONE alternative future emerging from the ashes of the old liberal welfare state here in Hawaii and throughout the US.

IF OUT OF TIME OMIT THIS. GO TO "THE ELECTRONIC CAMEL" OR TO "SO I END WHERE I BEGAN"

Models, Media and Knowing

Many years ago, I came to realize that what we know and how we know it is completely dependent on the models and media we use to apprehend and communicate the world around us. That revelation came to me first as I tried to learn how to observe and then to express political behavior through mathematical formula rather than merely in words.

Like almost all social scientists of my generation, I had been trained to be a wordsmith. Research meant, to me, reading lots of books, pulling some good bits from the books, thinking about what I read, and then writing something based on what I read and what I thought.

But I became, for a time, part of that smaller cohort who wanted to develop a real political SCIENCE, based on mathematical formulas, computer models, and statistical inference. I discovered that thinking mathematically was very different from thinking linguistically, and resulted in a very different political science from the one I knew before simply because I was now viewing the world through a different model and medium.

That awareness expanded greatly when I went to Japan, and discovered, while trying to teach political science in Japanese for six years in the College of Law and Politics of Rikkyo University in Tokyo, that I was no longer thinking or behaving as I had before. The more I thought and taught in Japanese the more fundamentally different a person I became simply because the world experienced and expressed through Japanese is different from the world in English.

When I moved from Rikkyo University to Virginia Tech, I became influenced by the British architectural group called Archigram, and I began to try to think about politics as architects and artists think - visually, and often in three-dimensional models. I spent several years trying to develop a political science based entirely on direct observation and three-dimensional models - no words at all.

However, when I went to Hawaii, I was asked to transform some of my classroom courses into television shows. In that process, I soon discovered it was not just a matter of taking the classroom content and videotaping it. I had to rethink everything I had previously done and find new ways to do it, or else not do it at all, while thinking and doing in entirely new ways as well. The result, "Tune to the Future" and broadcast over KHET won a national award for creativity.

Similarly with courses I have taught on radio, or entirely via newspaper or, more recently, on the web: using each new medium to teach my old courses requires each time that I completely rethink what I am doing all over again. The medium IS the message. What you know DOES depend on the models and media you use to perceive and communicate that world. Change your medium and you change your world. And not trivially, but essentially - root and branch, heart and mind, body and soul.

As Neil Postman mournfully put it, "Technological change is not additive; it is ecological. A new technology does not merely add something; it changes everything".

The Electronic Camel

Like much of the rest of the old Modern World, and especially the dinosaurs in charge of educational policy in Washington these days, most educators remain captivated by the

printed word. We still privilege reading and writing, and treat all other modes of modeling and mediating (except, for some of us perhaps, mathematics) as inferior, if not actually harmful. Even though everyone, including most educators, actually learn about the world primarily from television, movies, radio, and now the Internet, I know of no public education system anywhere which takes media literacy as the basis of education, and treats reading and writing as just one form of modeling and mediating, a form that allows us to do some things well, but that can't do other things as well as other models and media can.

We educators can pretend that all we are doing is "tele-computerizing" the old logocentric school system, making it up to date, more efficient, more personalized. That may be all we intend to do.

But once the nose of the camel is under the tent, whether reluctantly let in by you or eagerly escorted in by an edupreneur, it will be impossible to keep the rest of the camel out. And the camel is already huge and growing outside the educational tent. Indeed, as far as I can see there are nothing but camels surrounding all the tents of education, old or new.

As all of the electronic media converge, growing both more wired and more wireless, more global and more local, requiring no literate or typing skills at all but only the ability to talk, touch, feel, smell, and hear (indeed, as they break through these interface limitations and become part of our central nervous system); as biological computers replace silicon computers, only themselves to be replaced by the many hybrid intelligences of the 21st Century; and as the world everywhere becomes more completely artificial than it already is while "nature" retreats to the tokonoma in everyone's cybernetic cottage, the herds of chattering chimeric camels will unwittingly trample the old educational tents, enabling new teachers, new students, and new things to be taught and learned in new ways.

So I end where I began.

It is your daunting task to help Hawaii respond to wrong-headed federal mandates so as to do minimum damage and retain maximum funding, while at the same time trying to pacify those here in Hawaii who are afflicted with the same backward bug the feds are.

If the polls are correct, and you have a Republican governor for the next four years or so, no matter how nice a person she may be, she is still a Republican and will have to staff government offices with people who share Dubya's views, or worse.

If it is true that we here in Hawaii have more than our share of children who come from nonliterate homes and cultures--and I perhaps we do--then we should use that as a fundamental reason to move beyond reading and writing as the basics of education, and begin to utilize the ways of thinking and expressing these children naturally prefer. They are the natural preference of the rest of us, as well, if we were allowed to think about it and say so.

None of us see our parents, friends or peers reading and writing much, but we do see them watching TV, playing video games, and instant messaging on the internet and cell phones.

So I challenge you to base your curriculum on these media--on the audio-visual and tactile models and media people here in hawaii--and throughout the world--naturally use, and stop shackling education to the powerful but now obsolete print technologies of the past.

You can do it.

But will you do it?

I dare you.