

Livingston Lecture Delivered by Professor Cristy Jensen on October 30, 2007

Thank you to the Livingston Lecture Committee and thank you, colleagues, for coming. I am most appreciative of the honor and especially eager for the opportunity to share some thoughts with you today. I came to the campus as a visiting faculty member in the Government Department in 1986, shortly after the death of Jack Livingston. So, unfortunately, I did not meet him, but certainly came to know Professor Livingston, and have felt his presence and values during my years here, through his colleagues in Government and across the university. Thank you, Mrs. Livingston, for being here today as we keep your husband's legacy alive.

I am reminded today of my first involvement in higher education policy when as a senior at UCD in 1966 I served as first Chair of Experimental College. I had been appointed by the new student body president as Chair of the ASUCDs Academic Affairs Council and we visited SF State that fall because they had started an Experimental College the previous year. We had a passion for innovation and experimentation in what and how we learned and wanted our education to be relevant to the world we hoped to build. I still remember the faculty members who were willing to join with us by using the 199/299 independent study as a vehicle for offering new and different educational experiences. Now, as a faculty member toward the end of my academic career, I want to bring this spirit of innovation and collaboration to my lecture this afternoon.

John Kingdon, a political scientist at University of Wisconsin, has built upon some earlier work on organizational decision making which offered provocative imagery and language for understanding the development of public policy. The original model used the metaphor of a “garbage can” to describe the “messy,” non-linear, non-rational context of decision-making in which streams of ideas, participants, solutions, problems, politics swirl. Unpredictability, serendipity, and a measure of chaos characterize the environment -- ironically, if I remember correctly, the authors used a College Dean search process as a case study. Kingdon’s model builds on the garbage can and helps us understand the dynamics of movement through those swirling streams - adding the role of policy entrepreneurs - those who have the capital and are willing to risk it to advocate and move ideas - and policy windows - which describe opportunities to take action. For me, the dynamic of “a solution in search of the right problem” has always captured the genius of this work which recognizes the importance of entrepreneurs, their crafting of ideas and their awareness of timing in the policy process. Those who work in the political process, know about the “boss” ideas and are alert to possible new problem understandings as a way to move that boss’ solution. Kingdon’s language is valuable for diagnosing or understanding the environment and then strategizing to move those ideas and changes - in today’s case, the policy soup of higher education.

I want to encourage us as faculty to be policy entrepreneurs: to develop, modify, and shape ideas and then watch for the policy windows to move them and secure the resources to make them real.

This afternoon, I want to examine a couple of the policy ideas in the soup which I think call out for our involvement as engaged faculty and, as I noted in my title to this talk,

ideas which are important to the learning success of our students and our engagement with the region and community. One of these ideas relates to the importance of keeping young people involved in learning through the middle and high-school years so that we receive engaged, confident and ultimately successful students. Another relates to the challenges of keeping our students engaged in learning once we receive them. The last two relate to meeting the needs of our region and community in graduate level education. Because I am and have always been a generalist with many interests in higher education, I hope you will indulge me here.

Before we talk about the specific ideas, following Kingdon's guidance, what does the current policy environment look like? Who are the players? What constraints and opportunities seem to be at play? I want to talk about six aspects of the policy environment which I see as critical to this discussion.

- First, are the pressures for accountability and a focus on measurable outcomes; we know this as assessment; but there are larger political forces across the spectrum asking us to be accountable for student success, both in timeliness and the difficult one, the "quality" of their education. It feels to some as though there is a more transactional dimension to that - more emphasis on what business and industry want, what the taxpayers expect. I acknowledge that we as faculty and our institutions have difficulties with that emphasis. I share those concerns but also think we also need to understand the nature of the accountability issue and the stakes. The Spellings Commission followed by federal legislative threats of a higher ed version of No Child Left Behind are manifestations of this pressure at the

national level; there is also state legislation. Luckily, we have colleagues like Nancy Shulock and the (Institute for Higher Education Leadership and Policy (IHELP), who has worked with legislators to shape accountability in California in terms of broad goal achievement, avoiding the pernicious standardized testing requirements advocated in other states.

- **A second element is a more subtle but no less real shift in state legislators' mindsets from the segment privilege/responsibility thrust of the original Master Plan for Higher Education - CCC does this, CSU, UC do that - to a student focus - how do students experience the transition from high school to community colleges to four year institutions? Policy makers are much less tolerant of what they see as finger pointing across segments and turf protection by segments.**
- **Third and at the heart of this lecture, there is increased concern for retention and successful graduation all along the way - language of the "pipeline." If you haven't heard the statistics, let me give you the sobering ones:**

In California: think of a representative sample 100 9th graders – what happens in the educational pipeline?

- **70 graduate from high school**
- **37 enroll immediately in college**
- **25 are still enrolled as sophomores**
- **19 graduate within six years**

If we look at 100 Latino 9th graders:

- **46 graduate from high school**
- **26 enroll in college (17 in ccs and 9 in 4 yr)**
- **8 graduate in six year**

(data from Andrea Venezia, Developing Multiple Pathways for California's High Schools: Possibilities for Post Secondary Involvement, Institute for Democracy, Education and Access, UCLA, February, 2007)

Complicating these ethnic differences is the “new” gender gap, showing lower achievement by males, significant across the board and a source of great concern in the Latino and African-American communities. I looked at the high school graduation data, collectively and for each ethnic group, for each of our eight counties and in every instance, but one, young women are graduating from high school at a higher rate, in some cases significantly higher, than young men

First let's look at it statewide: 2005-2006

- **Of close to 350,000 grads, 52% women and 48% men**
- **Of close to 125,000 Latino high school grads 53% women and 47% men**
- **Of a little over 25,000 African-American grads 54% women and 46% men**
- **Of those graduates those who completed a-g (125,308 or 35.9%)**

There is an 8-10% difference between male and female college prep across all ethnic groups

In Sacramento County—the hub of our service region in 2005-2006

- **13,430 grads (6935 females and 6495 male) pretty even, but if you look at Latino and African American graduation rates and a-g completion**
- **2,200 Latino grads 53% women 47% men**
a-g preparation 57% women 43% men
- **1,800 African-American grads 55% women 45% men**
a-g preparation 64% women 36% men

(Data drawn from California Post Secondary Education Commissions, Custom Data Reports, 2005-06 Statewide High School Graduate Rates and UC/CSU Course Preparation, with County Data; see link at end)

We all know what this means to our access mission, but this reality of the policy environment generates questions of when, how and why are we losing these kids in the pipeline?

- **Fourth, the increasing deterioration of vocational ed capacity in our high schools in terms of labs, equipment, and qualified teachers has been taken up by the buildings and trades associations; there is a growing involvement of business and industry reps who have gained the ear of the Governor and Unions. They are working with Anthony Portantino, Chair of the Assembly Higher Education Committee, Fabian Nunez, Speaker of the Assembly and the Republican leadership.**

An interesting aside - part of the motivation for the industry activation on voc ed or career technical education was a consequence of being shut out of the Master Plan Review by the institutions of higher education. A new coalition calling themselves GET REAL is a major player in these efforts.

- **Fifth, there is a greater awareness of the need for workforce preparation, particularly in the sciences and technology, but also very generalized. A recent report from the Public Policy Institute of California speaks to California's growing deficits in college degree holders by generation – in age group over 64, California ranks 5th, ages 45-64, we rank 10th, ages 35-44, we rank 16th and 25-34 rank 23rd. Those inclined toward some suspicion that the academy is being overtaken by a polytechnic thrust, I urge you to read this report. (from Can California Import Enough College Graduates to Meet Workforce Needs? [Hans P. Johnson](#) and [Deborah Reed](#), May 2007)**
- **Finally, of course, all of this is occurring in an environment of reduced resources, growing intersegmental tensions, increased criticism from business leaders, faculty administration tensions in all the systems over executive compensation, low salaries, etc., a turbulent environment not at its most collegial, trusting and respectful.**

So what are these ideas and where are they coming from?

These ideas are coming from university research institutes (at UCLA and our own Institute for Higher Education Leadership and Policy), national think tanks (Sloan Foundation, NSF, Council of Graduate Schools), business and industry associations, advocates for Latino and African-American youth, legislators (our own Darrell Steinberg, Senator Jack Scott), other states, and Spellings Commission at the national level. These folks are policy entrepreneurs (good ones and bad ones) who are responding to a policy environment of reduced and inadequate resources, increasing concerns about student

success and I think an increasing expectation that universities and faculty need to do things in different ways. Here is the crux of it and the source of challenge and tension and why we need to be engaged.

Multiple Pathways

Multiple Pathways is a policy idea which emerges out of what many feel is the tired, old, either/or vocational education vs. college prep tracking debate. Tracking seems to me to be very anti-American at its core and particularly anti-Californian, I think, at this point in our history. Jeannie Oakes, Director of the UCLA Institute for Democracy, Education and Access is the policy entrepreneur. Her model of multiple pathways comes out of a strong sense that we need to keep kids connected and motivated to learn, that we are losing too many in high school, that different children learn in different ways and finally that we need to prepare them for both college and careers.

Oakes argues that connecting academics to real world context leads to high levels of student interest and engagement and hopefully can reduce high school dropouts. Students and their families would have choices among various pathways blending career technical education and college preparation in high school. All high schools would be expected to provide rigorous curriculum, good advising, in these pathways, and here is the key, with semi-permeable or permeable boundaries, which allow students to evolve/grow through the high school years and still be prepared for maximum options. Of course the degree of permeability is part of the issue which boils down to: how much Career Technical Education is recognized by the four-year institutions for a-g admissions requirements?

To give you a sense of the CTE/A-G issue: in 2005-2006 there were a little over 4,000 CTE courses approved by UC and CSU for a-g. Of those about 50 were in history/social sciences, math, English or languages and the remainder were in lab science (almost 700), visual and performing arts (over 2000) and electives (1200). (Venezia)

The ideas are short on specifics right now. But that is precisely my point about faculty involvement in shaping these ideas. Some are recommending all students take one or two career tech courses as part of their high school curriculum. As I understand it, Sacramento Unified School District has the goal of making all career tech options recognized as meeting a-g. Other states are going the direction of multiple pathways with impermeable boundaries, not an attractive choice, I think, for California.

An additional piece of this, which I am sure is noted by our Ed faculty, is the need for more teachers (and a different kind of teacher) who are prepared to teach career technical education. As evidence of the growing importance of these issues, I attended last month a forum for school board candidates in Davis sponsored by the CTE educators at the jr. high and high school levels.

What are the challenges for us?

- As this policy discussion evolves, we will be asked to provide clearer signals about what success in post-secondary institutions requires beyond course completion.**
- As noted earlier, the permeability of the boundaries (what doubled counts for CTE and a-g) is a big challenge.**
- Proponents are talking about more flexible programs such as dual enrollment (though primarily at this point thought in terms of high school to community college) what are the implications of community college CSU dual enrollment?**

- **There are worries about compromising standards for college eligibility.**
- **Some argue there are equity issues and suggest that the implications of CTE might not be “equally relevant for the three segments” - translated “CTE courses that would be valued in the community colleges, maybe in the CSU and never in UC.”**
How do we work with that issue?

Thematic Curricular Initiatives

There is a common thread between this second idea and the first - the notion of contextualized learning which draws upon an integration or application of theory into an applied setting; opens up interdisciplinary academics and different pedagogies which lend themselves to problem solving. Just as the UCLA folks have asserted that thematic learning “hooks” high schoolers, so do educators in the science and technology realm hope that these concepts will nourish and help retain university students.

The STEM (Science, Technology, Engineering and Mathematics) Initiative sponsored by the National Science Foundation is designed to encourage young people, including minority students, to enter the sciences. We have submitted a funding proposal under the leadership of Professor Barrena to the NSF to support our Center for STEM Excellence. Our campus program draws across departmental, college lines to build a truly thematic, interdisciplinary thrust. The Center on campus is led by Tom Landerholm in Biology and Scott Gordon in Engineering. In looking at the notes from the STEM Pipeline Summit on campus this past spring, some ideas stand out which make a direct link to the earlier UCLA Multiple Pathways work:

- **The goal of capturing the imagination of kids early;**

- The concern some college requirements interfere with taking STEM coursework in high school; and,
- An interest in strengthening CTE programs as STEM Pathway.

Although there are multiple goals and strategies for the STEM program, I am excited about the strategy of “strengthening STEM education and research” (part of the stated mission) via a curricular component which envisions interdisciplinary teams of faculty teaching courses. Interdisciplinary courses where engineers and biologists might team to lead students through a learning experience which integrates a rigorous theoretical curriculum with critical thinking, writing, and problem solving skills is an exciting idea.

Sound a bit like some innovations put forth a couple of years ago for upper division GE? Remember the recommendations about thematic, interdisciplinary 9 unit modules? If you didn’t hear about it, it’s because it was one of the ideas that came from a committee of our colleagues which didn’t make it very far - something about loss of FTES enrollments and loss of budget resources to some departments on campus.

Over the years, there have been a number of ideas floating about modifying GE to somehow integrate the depth of the major and breadth of GE components. I remember discussions of GE modules - thematic curriculum - specially designed around different clusters of majors which might contextualize the learning. In one stimulating discussion, I remember someone talking about an English class for Business majors which would, for example, assign the Merchant of Venice.

We need to watch what our STEM colleagues are talking about and find ways to learn from them. I personally think that GE creates a great opportunity for the kinds of

contextualized learning maintaining theoretical and classic rigor - which the STEM Initiative offers.

So what are the challenges here?

- **We need to confront the FTES Budget issue;**
- **We need to find ways to encourage experimentation and collaboration across departmental and college boundaries. I've often been amused and frustrated by that question on the new course proposal form - what other departments have courses that may be threatened by your new proposed course? Of course, not worded that way, but the thrust is: how do I work around this description to get it approved for OUR DEPARTMENT? There's little incentive to acknowledge commonalities and build coursework in some areas to take advantage of the strengths we have here;**
- **We need to explore structures like the graduate group concept at UC Davis, which is a mechanism for developing and supporting interdisciplinary/theme based learning;**
- **We need to find more time to talk and hang together – I will speak a bit more about that in a few minutes.**

I'd like to turn my attention for the next few minutes to policy ideas pertaining to graduate education and the link of graduate preparation to regional and community needs – a specific thrust of the proposed Strategic Plan.

Professional Master's of Science Degrees

Another big idea linked to those above is the Professional Master's. The Sloan Foundation and, more recently, the Council of Graduate Schools have been the policy entrepreneurs at the national level. Professional Science Master's (PSM) programs are an innovative approach to earning a master of science degree that is designed to prepare students for science careers in business, government, or non-profit organizations. Several CSUs are actively developing PSM programs within the next three years, which will be implemented in a variety of fields including: bioinformatics, biostatistics, biotechnology, clinical project management, computational science, ecological economics, environmental science and forensics.

The two-year degree programs are designed around three major elements:

- interdisciplinarity that fuses scientific fields at a level of depth and complexity hard for undergraduates to achieve (e.g. astrophysics); in other cases the fusion may be with computer or information sciences; in others integrated study may include training in management, law, ethics or other professional domains;
- strong theoretical-applied integration; and,
- and a research emphasis which includes an internship linked to the thesis.

I think there is tremendous potential here for the Center for Practical and Professional Ethics which Chris Bellon in Philosophy heads.

The Sloan Foundation is providing seed money and anticipated congressional appropriations include \$37 million this year for the support of PSMs.

Our campus has a planning grant and a core of faculty, including Hossein Partovi in Physics and Astronomy and Suzanne Lindgren in Biological Sciences are some of our local policy entrepreneurs.

While the current emphasis is on the sciences, mathematics, engineering and technology, the Council of Graduate Schools is also talking about other fields of study for future work: a Professional Master of Arts in Social Science and the Humanities. The development of the Master's in Gerontology being led by Cheryl Osborne, and work by my PPA colleagues, Ted Lascher in judicial administration, and Rob Wassmer and Jaime Alvajay from Business in urban land development, seem promising in this direction. But there are other possibilities too.

So what are the challenges here?

- **FTES and Budget issues are real here too. But this time I suggest there is a the-whole-is-greater-than-the-sum-of-its-parts possibility. Disciplines with very small graduate enrollments have the opportunity to partner with other academic programs to build enrollment.**
- **We don't need to fight a bogus artificial war - the old "real university" vs. "others" fight in the old days when I first came - we can support the highest levels of scientific work and then supplement with what are called "plus courses" which may include business, public policy, ethics, etc. coursework.**

Applied Doctorates in the CSU

Finally, most of you are aware of the EdD program – an independent doctoral program which the legislature authorized several years ago to prepare future education leaders in k-12 and community colleges. The impetus for this program came from our Education Faculty statewide, the Chancellor, but also the professional associations in the education field. There are similar efforts in other professional areas such as audiology, physical therapy, nursing, where the UC PhD research emphasis has left a void in public higher education for professional development. In some fields the doctorate is emerging as the required entry-level degree. When people, primarily from UC but also our own CSU colleagues note the master plan designation of UC as the doctoral granting institution and question our involvement – I feel it is important to recognize that the understanding of doctoral education in the 1960s (when the MP was developed) was limited to the research PhD degree. The professional degrees and the interdisciplinary understandings of theory-action intergrations were in the infant stages.

Just as the EdD in Ed Leadership has emerged as a multidisciplinary academic program, some of the emerging professional doctorates may also deserve our exploration. I feel that the CSU is uniquely capable. I like the word “nimble” here. We have faculty deeply engaged in the community doing applied research and atuned to the needs and the potential link to the community. We all know examples.

And the challenges here?

- To work out workload and dissertation guidance issues.**
- To lobby for the legislative funding support for these programs. Charging private sector fees will hurt access.**

So, we have some big ideas. There is a strand which draws them together of multidisciplinary, thematic curricular offerings, action-theory integration, new pedagogies and contextualized learning, applied research opportunities, and multiple pathways.

How to shape, support, and move these ideas?

The barriers are within us and our culture and they are also institutional. Faculty members are trained to be analytic critics; we tend to do our most important work in solitude. It's been my experience that we are best at pulling things apart and critiquing ideas and plans and processes. That shouldn't be surprising to us . . . it is part of our preparation as academics. We are less well trained to build collaboratively. Sometimes we are resistant to change. When we use the appeal of "protecting quality," we owe it to our students to be sure it is not a cover for "protecting the status quo."

This cultural habit I think is accentuated by the reactive nature of much of shared governance. In many areas, we are reactive – we find ourselves "advising" after the fact, after the issue, and thus, the choices and the solutions have been framed by others. The curriculum is our responsibility and it is clear we have some efforts underway which need our support and which we need to continue to build. We need to position ourselves to be defining these opportunities.

The incentives, especially when resources are strained, are to protect and defend. FTES protection becomes the requisite to protection of faculty positions - experimentation with curriculum means risk, collaboration is risky, and sometimes it feels that anything but marginal adjustments to curriculum is deadly.

The public policy literature suggests that when faced with resource cuts organizations and institutions, not surprisingly, pull in the reins, become exceptionally formulaic and restrictive. That is precisely the wrong mindset for us at this time.

How can we collectively break out of bad habits? I have seven ideas:

- 1. Insist that the administration develop policies and practices to “hold harmless” departmental and interdepartmental collaboration and experimentation in the curriculum.**
- 2. I advocate for budget allocations or budget structures which can support interdisciplinary work.**
- 3. Reinstitute the once-a-semester research conference with faculty panels on interdisciplinary approaches; we need to learn from each other.**
- 4. Involve ourselves with intersegmental discussions in our disciplines; for example, high school science teachers, community college science and CSU science teachers in our region.**
- 5. Have the Senate ask the Curriculum committee and GE Committee to look at ways we can create incentives, identify possibilities to support interdisciplinary curricular work**
- 6. Join with other faculty to educate legislators about these needs and the importance of resources. Legislators see us as only concerned about compensation - more for us and less for administrators. Important issues, believe me, but not the only ones. Maybe this is a good time for the Senate to appoint a governmental affairs committee to watch the policy**

environment downtown and keep the faculty up to date on the movement of ideas and issues.

- 7. Support one another to build new ideas which can engage our students, keep them excited about learning and help them see the importance of what they are learning to their future lives.**

Thanks for listening and I would love to engage in conversation about these ideas with any of you who are interested.

1.For data on statewide and countywide data:

The link to CPEC's Custom Data Report; follow directions to specify your data needs

<http://www.cpec.ca.gov/OnLineData/OnLineData.asp>

2.The link to the Public Policy Institute of California

www.ppic.org

3.For more information on Multiple Pathways

The link to UCLA's Institute for Democracy, Access and Education

<http://idea.gseis.ucla.edu/>

4.For more information about the Professional Science Master's Program

The link to Sloan Foundation

http://www.sloan.org/programs/edu_careers.shtml#newmastersdegrees

The CSU link re: Professional Science Master's Degrees

<http://www.calstate.edu/psm/>

The CSUS link re: PSM

<http://www.csus.edu/psm/>

5.For more information about STEM

www.nsf.gov

<http://www.csus.edu/stem/>

www.calstate.edu/stem