



Future of Higher Ed in the Brave New World

California State University, Northridge

Executive Summary

**What will graduating students encounter as they enter a brave new world?
What will it require of the student?**

This symposium was another in a series of hosted open forums examining the future of higher public education. Its theme: “**Higher Ed in the Brave New World**” humorously refers to the difficult challenges higher education is encountering. The symposium raised two fundamental questions; first, what are the *best models for delivery* in this new world, brick and mortar or online? The second question queries as to *what higher education should achieve*, should it just be functional and limited in the service of getting a job or should it serve larger objectives in service critical and creative thinking?

As the symposium noted on several occasions, this “new world” is diverse in almost every respect; it is global and evolving. What is higher public education to do to prepare students for unpredictable situations as they encounter a revolution in knowledge: knowledge doubling every 5 years - not to mention the ease to its access, and of course the amazing evolutions in technology that delivers almost anything imaginable. In tandem, job market opportunities are also in a state of flux, particularly at entry levels. Added to this perplexing picture is the rising cost of higher education and diminishing political/financial support for higher education systems across the nation. The prognosis from business is that we are not producing enough qualified graduates to meet the demands of the modern work place. At risk is an ill prepared citizen ready to participate in our democratic experiment but not prepared.

Cal State Northridge is situated in an interesting place in this conundrum. Positioned in the middle of California’s dense population, it is one of the larger campuses in the CSU system, the largest higher education system in the nation. As a higher education public university, its faculty and student body are diverse in most ways. Walking into a classroom would be like walking into the United Nations building. (*The Student Profile prepared for the symposium offers interesting insight into the nature of the student body that faculty educate and inspire. This document, like the discussions at the event, indicated that a “one size fits all” approach to resolving educational issues would be counterproductive.*)

Dr. Koller, co-creator of the Coursera Project deftly explained the need for education world-

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wide, that in so much of the world there are no options for higher education and that free open online courses have been a lifeline to many underserved people. Known as MOOCs (massive open online courses), Coursera endeavors to bring education to all who are interested. This project, though a work in progress has an impressive worldwide reach with much success and yet it acknowledges limitations in some teaching effectiveness and student completion rates.

William C. Allen, President and CEO of Los Angeles County Economic Development Corporation, spoke to the critical link between education and economic development in the community and the economic health of the economy. Education does not happen in a vacuum, that it serves the community in several important ways: it prepares students for the work place, it prepares students to be contribution citizens, and it prepares students with attributes that allow them to adapt to changing environments by asking the right questions. Mr. Allen remarked: *“The challenges that higher education in California faces today are truly unprecedented. The increasing demands our economy is placing on your institutions to supply the educated, skilled and creative workforce and entrepreneurs necessary to complete in the global economy, the need for applied research to innovate in that environment, the difficulty in planning and staffing the delivery of relevant curriculum in an age when technology is rapidly disrupting key industries, occupations and career pathways, combined with the complexity of educating the unprecedented numbers of first generation college students representing more language and cultures than ever before in our system, all at a time when the great global recession forced our state government to dramatically, and I would assert unwisely, reduce its investment in education at all levels, and most acutely in higher education. It’s nothing short of daunting with a capital “D.”*

Matthew Moen, Dean of the College of Arts & Sciences, University of South Dakota, in the service of defending the values of a *liberating arts education* reminded the audience that we can never teach students all that they will need to know...but we can teach them how to learn what it is that they will eventually need to know. Out of this process students need to discern truth, to be good citizens of this world and to lead satisfying lives. Life is complex and therefore education must serve the students ability to navigate this complexity. Education is about so much more than a first job out of college, or a financial return on investment. It’s about better understanding, about living an inquisitive life. It’s about a tolerance for complexity. It’s about our responsibilities as a free people.

Cal State Northridge University President Harrison stated that: “What is important for this brave new world of higher education is that students graduate with the intellectual skills needed for the 21st Century....The most important outcomes for college graduates no matter what their major, or the mode of delivery...are an ability to think critically, to communicate clearly, to solve complex problems, skills that enable them to contribute to innovation in the workplace, ethical judgment, integrity, and civic responsibility, intercultural skills, the capacity to learn beyond the years of formal education.

Keynote speaker Dr. Debra Humphreys of the Association of American Colleges and Universities, in support of the future requirements of college graduates stated, *“In an era when knowledge is the key to the future, all students need the scope and depth of learning that will enable them to understand and navigate the dramatic forces – physical, cultural, economic, technological – that directly affect the quality, character and perils of the world in which they live.”* Narrow learning is not enough. On graduation day the student needs 1) knowledge of human cultures and the physical and natural world, 2) intellectual and practical skills, 3) a sense of personal and social responsibility and 4) problem solving skills using integrative and applied learning. She noted that we have a quality shortfall on the capaci-

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ties most important for student success and for economic and democratic vitality. The 21st Century workplace demands more and different capacities. Our Democracy also demands more and different capacities. Human work will increasingly shift toward two kinds of tasks: solving problems for which standard operating procedures do not currently exist, and working with new information – acquiring it, making sense of it, communicating it to others...today, work that consists of following clearly specified directions is increasingly being carried out by computers and workers in lower-wage countries. The remaining jobs that pay enough to support families require a deeper level of knowledge and the skills to apply it.

Stanford researcher, Dr. Clifford Nass shared research findings on challenges that students face in today's learning environment. There are very alluring distractions invading the learning space. He framed his findings by saying that it is common that when the average student sits to study he/she will be plugged into several devices: music in the ear plugs, the TV on in the back ground, the laptop open for surfing and of course the smart phone for occasional texting, etc. All of this is "unrelated" informational content. When measuring learning outcomes from students using traditional study techniques against students who multi-task themselves, showed that learning did occur but the multi-taskers could not connect the dots: they remember bits of information but could not use it. As a complex enterprise, effective learning requires skills and practice and is not an automatic behavior. With all the positive effects of new technology it also has had a negative effect of learning that needs reconsideration.

The symposium concluded with observations from Provost Hellenbrand. Speaking to the changes confronting higher education he stated: *"Change is certainly going quickly. But that's been a human complaint for 2,000 years from what I can tell... Institutions like the CSU began mainly as normal schools. They began focusing on education and public outreach. That is the DNA. What we're facing now is how people learn and how they learn in an era of changing technology."* In this context...*"what the liberal arts mean is that it is a way of thinking that allows you to free yourself from as much prejudice, preconception, partisanship, and provinciality as possible so that you can think clearly and act accordingly... When Cicero wrote his book on oratory, he did not see any contradiction between the liberal arts, civil service and the being in the militia: because understanding was one thing, acting accordingly was another thing...which involved virtue. And virtue meant working with others to improve their state."*

At the very least, a graduating student needs a workable knowledge. It is a reasonable assumption that if one goes to an institution of higher learning that one is thought of as *more highly educated* which would imply that with a higher level of knowledge, wisdom and creativity would follow! One cannot have wisdom without experiential knowledge; one cannot experience creativity without ideas and exercised imagination to be creative with. One of the important rewards of education is when links, euphonies, connections are made: where math connects with music, where history connects with athletics, where science and spiritual matters connect.

Leaders in business, society and government comment with concern about the state of flux and rapid change of the modern environment: that they need a labor force which can adapt to this phenomenon.

A regular comment from the work groups was the concern for the lack of "learning skills" in too many of the student body. In the science of cognition and the education process there is not just one type of

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learner; there are “**active learners**” who are self motivated and do well in almost any circumstance. “**Passive learners**” (the larger part of a student body) require help and motivation. On these two points the choice for the models for delivery matter in providing an effective and efficient learning environment. Even though the changing times offer teachers exciting opportunities and new challenges it is important to remember that the brain has not changed in how it learns as research demonstrates.

No matter what delivery or teaching model, there are five principles that when employed overcome obstacles to student learning.

1. Cultivate student **motivation** by highlighting the values of the course that are success oriented and supportive.
2. Build on students’ **prior knowledge** and experiences.
3. Encourage the **organization** of knowledge in explicit structures.
4. Provide many opportunities for targeted **practice and feedback**.
5. Design for **deep learning** and progression to **mastery**.

Part of the learning experience is about information; the other part is about that information interacting with other people, the art of collaboration. Benjamin Bloom, among others, has also identified the phases of cognitive development (higher order reasoning). Course design and instructional strategies play a large role in moving students to the levels of reasoning and habits of mind so values both within higher education and increasingly within the world of career/professional practice.

Michael Hoggan