

FOREIGN GRADUATE STUDENT ENROLLMENT AND THE U.S. ECONOMY, UNIVERSITIES AND SECURITY

President Robert C. Dynes
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Keynote Address – “UC Foreign Graduate Students:
Why A World-Class University Needs the World’s Best Minds”

I’m delighted to be here. This is a really important issue for the state of California and for the nation, as previous speakers have already outlined. Declines in foreign graduate student enrollment have had an impact on the University of California, and will continue to have an impact, and I’m going to talk about that. Also, I have spent the last week in China, and I’m going to talk about that trip, because it is relevant. There are some enormously positive and worrying things going on there, and I want to talk about them as well.

Like our peers across the country, we’ve been struggling with visa issues and competition for foreign students with other countries who have been very aggressive in the past few years in recruiting the best, however you define the best. They recognize that their well-being depends upon their ability to attract the best graduate students, and I include post-docs in that group.

This issue is especially compelling for the University of California. We are the largest public institution in the U.S., and we have had a unique advantage in bringing in foreign graduate students and foreign post-docs. But we’ve been seeing declines in their enrollment, and I will give you some of those numbers.

The conclusion that I have come to is that if we do not attract international students, particularly in science, engineering and mathematics, if we do not turn that around, California will be just another state and the University of California will be just another university. And I believe all the implications from that statement are troubling.

The University was established shortly after the Morrill Act in 1868, and the founders envisioned a very strong international presence. They anticipated that California would mostly look to the Pacific and that we would have a very strong presence in the Pacific. In fact, the first major gift to the University was made by a Regent, Edward Tompkins, to create the Agassiz Professorship in Oriental Languages. In making the gift, he intended it to, and I quote, “extend intellectual hospitality” to students from Asia and from other nations.

The first UC business school, the College of Commerce at Berkeley – since renamed the Haas School of Business – was established to enrich trade opportunities between California and Asia. Throughout the history of the UC, it has been the place to go, mostly for Asian and Pacific students but not only for them. It has been a launching pad for careers and lives. And I saw that in China. We have 2,000 alumni in China that we can track and probably many more. A number of people came up to me during my trip and proudly told me that they are alumni of UC Berkeley, UCLA, UC San Diego, and the other campuses. These are people who have gone back to China and maintained enormously strong connections to California and to the University of California.

To give you one example, in Beijing, I met two young men, computer scientists from UC Berkeley. They have started up a chip design company in Beijing. It's been in operation now for four or five years, and I'm told that it's very successful. Both of these young men live in Beijing and also in Emeryville near Berkeley, and they move back and forth. The company is in Beijing, and the primary investors are in the Bay Area. And that's the way it's going to be. And you have to ask: Is that to this nation's advantage? I would argue, "Yes." This company was mentioned to me by the Minister of Science as an example of success for China. We have to ask ourselves: Is that a success from our perspective? I would argue, "Yes," because these guys are so proud of being UC alumni and of making connections to UC Berkeley.

I remember first hearing about the University of California, and specifically of UC San Diego, when I was a physics student in London, Ontario. I remember one of my professors pointing to San Diego on a map and saying, "There's a new UC campus here and the physics community is very excited about it." At the time, I couldn't see my way clear to getting there. But after about 30 years, I finally made it there, and I have had no regrets.

As a UCSD professor of physics in 1990 and then as UCSD Chancellor in the late '90s, I saw two pressures converge to drive down the enrollment of foreign graduate students. The first was a series of increases in graduate student tuition and fees that was imposed on us because of decreases in state support for the University. We had a plummeting budget, and we were forced to increase fees, especially for non-resident students. The second was a general erosion in support for graduate education. There was incredible pressure to increase enrollment of undergraduates because there was so much social pressure to enroll as many students as possible, so people weren't paying attention to graduate students. And they certainly weren't paying attention to foreign graduate students.

From the peak year of 2001, foreign graduate student enrollment at every one of the then-nine UC campuses dropped even though the entire student population was soaring. Let me give you some of the numbers:

- In the life sciences, UC-wide foreign graduate enrollment dropped steadily from a 2001 high of 207 out of 967 students, or 21%, to a 2004 low of 168 out of 1136 students, or 15%.
- In the physical sciences, foreign graduate enrollment dropped from a 2001 high of 159 out of 692 students, or 23%, to a 2004 low of 97 out of 613 students, or 16%.
- And in engineering and computer sciences, foreign graduate enrollment dropped from a 2001 high of 889 out of 1948 students, or 46%, to a 2004 low of 628 out of 1944 students, or 32%, which is a 14% decline.

Those numbers tell us two things. First, the number of graduate students in the sciences and engineering did not go up during that period because of a combination of fiscal pressures and the fact that we had done such a lousy job of K-12 education. And in the course of that time, the number of foreign graduate students and post-docs went down. And let me remind you that the public universities educate the vast majority of students. The privates are our competition, but they do not match our numbers. So when the publics go down, the United States goes down.

This was actually noted in 1997 by the UC Council of Graduate Deans in a report they published titled "Excellence at Risk: The Future of Graduate Academic Education at the University of California." And they really lamented the ongoing decline in support for graduate studies. That, coupled with cost-of-living increases in California, really was a double hit on all graduate students. If you then add fee and out-of-state tuition hikes, that's a triple hit.

In 2000, my predecessor, Dick Atkinson, and Board of Regents Chair Sue Johnson appointed a UC Commission on the Growth and Support of Graduate Education. That Commission issued a report in 2001 titled, "Innovation and Prosperity at Risk: Investing in Graduate Education to Sustain California's Future." Now remember, this was about the year that the economy went south. The report was read and understood by everybody. But in fact, we were sustaining steep declines in support in the state budget. If you look at the growth in the number of students and at the commitment that the state had made for this increase, and then where we are now, there is about a \$1 billion gap in the extrapolation of where we would have been had the state supported us. So the timing of that report was intellectually superb but functionally awful.

I have raised the alarm over the past year that we have to do something about this. This year, the Board of Regents endorsed my recommendation to exempt graduate students from non-resident tuition hikes. I will make that same recommendation next month, in November, but I'm going to go even further than that. I've identified some areas where we can further extend graduate student and foreign graduate student support. And I'm going to recommend that after graduate students pass their candidacy, they will no longer pay out-of-state fees. This will make a huge difference and will put financial barriers somewhat to rest for foreign students.

We have to and will continue to work on putting together our collective thoughts to our nation's leaders about the threat to our own security that is posed by restrictions on foreign graduate students. That threat to our security is greater than other perceived threats, as long as we are diligent citizens and mind our own store, making sure we're careful in bringing those students in. But we must bring those students in.

On my trip to China, I brought with me two Chancellors and two Regents, and of the five of us, only one was born and educated in the United States. I didn't design it that way; it just happened that way. The Chinese were in awe of that. And that is our strength. It's something they won't have. The fact that we can accumulate and bring students, graduate students, and post-docs to the U.S. to learn, not only to learn biology and to learn physics, but to learn what a vibrant, innovative, creative society is all about. Some of them stay here, and the ones that go back, as I learned in China, love us for the most part. They are some of our best ambassadors.

I was in China, in Beijing and Chendu and Shanghai, trying to build a concept of what we call "10 + 10." When I think about the University of California, and I ask, "Why haven't the privates blown us out of the water?" the answer, I believe, is our breadth and depth, our size. If we want to go in a particular direction, and if I can convince the faculty, the intellectual resources already exist on our 10 campuses. And that is evidenced by the four California Institutes for Science and Innovation, which are all multi-campus entities teaming up with industry and government to benefit the state of California. And most other universities can't do that. We have an advantage.

So we're talking with what we perceive as the top 10 universities in China about building a "10 + 10" collaboration. They'd like to build a university that looks like UC, there's no ambiguity about that. They would like to understand how you can spin off companies; they're trying, but it's not there yet. From my perspective, I would like to get an avenue open to get the best students in this enormous country of 1.4 billion people. Tsinghua

University in Beijing admits one in 1,000 applicants. If we don't get our finger on this here in the state of California, somebody else will.

Now, I could go down the list of people who were not born in the United States but who came to the University of California and became tremendous assets. There are people in this room who have done that. I don't want to single anyone out because I'd probably miss somebody. But I will name some people who are not in this room just to make a point that people who have been a tremendous asset to California and the nation might have been lost to us if foreign graduate enrollment declined.

- Ishaq Shahryar was Founder of Solar Utility Company and Solec International. In 2002, he returned to Afghanistan to serve as the first recognized Afghan Ambassador to the United States in 23 years.
- Andy Grove was a co-founder of Intel.
- Three Nobel Laureates – Daniel Kahneman, Yuan T. Lee, and Mario Molina – were UC doctorates. Two other Nobel Laureates – Ahmad Zewail and Kurt Wuthrich – were Berkeley post-docs.
- Let me tell you the story about Walter Munk at Scripps Institution of Oceanography in San Diego. Walter was almost deported in World War II because he was born in a land that was then our enemy. The scientific community at that point intervened, and he stayed at Scripps, and he plotted the ideal surf conditions for the Allied amphibious invasions of Northern Africa, the Pacific Theatre, and Normandy. And he was almost deported.

The list is huge. You can go up and down the state of California and find many such stories. I would argue that this has made us the most innovative, the most creative, and the most intellectually enriched society in the world. In my visits to the universities in China, the young people regarded me as a rock star. Their reverence for education is beyond belief. And while I've heard this before, now I've seen it: Their dream is to go to the University of California.

I'm grateful for this forum; I'm truly grateful. I feel like I'm a little bit in the choir right now, and to some extent, it's a little bit of a griping choir. We've got to get through that and do something. I've tried to describe some of the things that we've been doing. As I see it, my job is to make sure California sustains its phenomenal record of success and global leadership by bringing in the very best domestic and foreign talent to the University of California.

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