TO THE MEMBERS OF THE ACADEMIC COUNCIL  
FORTY-FIFTH SENATE REPORT No. 2  

Summary of Actions Taken by the Senate  
October 25, 2012  

The Senate heard a report on Online Education.  

Rex L. Jamison, MD  
Academic Secretary to the University  
Professor of Medicine, Emeritus
I. Call to Order
The Chair of the 45th Senate, Ray Levitt, called the second meeting of the 45th Senate to order at 3:20 PM. In attendance were 32 members and 11 ex officio members and many guests.

He began by announcing distinguished honors received by five faculty members.

Four members of the School of Medicine have been elected to the Institute of Medicine, established in 1970 by the National Academy of Sciences. They are:

Stephen Quake, the Lee Otterson Professor in the School of Engineering and Professor of Applied Physics and, by courtesy, of Physics;

David Stevenson, Vice Dean and Senior Associate Dean for Academic Affairs, the Harold K. Faber Professor of Pediatrics and Professor, by courtesy, of Obstetrics and Gynecology;

Lloyd Minor, who will become the new dean of the School of Medicine on December 1st,

Fellow senator and former chair, David Spiegel, the Jack Samuel and Lulu Willson Professor in Medicine.

Alvin Roth, the McCaw Senior Visiting Professor of Economics, won the Nobel Memorial Prize in Economic Sciences for his work on market design. Alvin will join the faculty full time in 2013. It’s a great way to welcome him back to Stanford.

Congratulations!”

[Sustained applause]

Chair Levitt commented: “As you see, Stanford Faculty have notched up one Nobel Prize per Senate meeting so far this year (plus all these other distinguished honors)! I trust this trend will continue for the rest of my term as Senate Chair.”

II. Approval of Minutes – (SenD#6676)
The minutes of the October 11, 2012, meeting of Senate XLV were approved.

III. Action Calendar: There were no items on the Action Calendar.

IV. Standing Reports
A. Memorial Resolutions:
1. Chair Levitt invited Donald Kennedy, President Emeritus, and Bing Professor of Environmental Science, Emeritus, to present the memorial resolution for Albert Hastorf, Benjamin Scott Crocker Professor of Human Biology, and Professor of Psychology, Emeritus. Guests in attendance were his wife, Barbara Hastorf, one of his daughters, Elizabeth, Marlene Wine and Memorial Resolution Committee members, Lee Ross, Stanford Federal Credit Union Professor, Department of Psychology and Jeff Wine, Benjamin Scott Crocker Professor of Human Biology.

Albert H. Hastorf (1925-2011) SenD#6686

Albert “Al” Hastorf, a pioneer in the study of social perception and esteemed member of the Stanford administration, died September 26, 2011 in Palo Alto. His contributions to psychology and to Stanford were profound and wide-ranging.

While an undergraduate history major at Amherst in 1942, he met Barbara Reck, a student at nearby Mount Holyoke. They married the following year, beginning a loving partnership that lasted until his death. From 1942–1946, Al served with the U.S. Army Air Corps Aviation Psychology Program, conducting research on the selection and training of aircrew members. Al’s teaching career began at Dartmouth in 1948, after earning his PhD at Princeton. There, he moved quickly through the professorial ranks becoming Chair of the Psychology Department from 1955–1959. Al joined Stanford’s faculty in 1961 and served as Departmental Chair from 1961–1970. He was also a founder of the University’s Interdisciplinary Human Biology Program, which became an increasingly attractive gateway for undergraduate students interested in medicine, health or environmental policy.

Al’s unique gifts as an administrator were apparent to all who knew him. His sound judgment, personal graciousness, good humor, and unquestioned integrity made him a natural choice as Dean of the School of Humanities & Sciences from 1970–1974, and later as Provost and Vice-President — a position he held from 1980–1984. After a sabbatical that gave him ample opportunity for his favorite pastime, fly-fishing with Barbara, Al rejoined the faculty as Director of the Terman Study of the Gifted. Under his leadership this groundbreaking longitudinal study of the lives of intellectually promising children that had begun in 1920 became a prime resource for researchers studying successful aging.

Despite his extensive administrative duties, Al authored several important papers and books. A landmark 1954 study of Al’s, coauthored by Hadley Cantril is cited in virtually every introductory social psychology textbook. The study entitled They Saw a Game, which documented how differently partisan Princeton and Dartmouth supporters “saw” and interpreted the rough play in a memorable football game between the two schools, paved the way for a continuing stream of research by later investigators on the impact of motivational and cognitive biases on perception. Much of that work was featured in Al’s 1970 book Person Perception (with David Schneider and Judith Polefka) and revised 1979 edition (with Schneider and Phoebe Ellsworth). Later, Al turned the field’s attention to a previously neglected topic, employing novel experimental designs and procedures to investigate the impact of physical deviances and disabilities on social interaction. He again produced a memorable book, Social

The particular esteem in which Al was held by the Stanford community was recognized with a succession of awards, including the Dinkelspiel Award for Outstanding Service to Undergraduate Education and the Richard W. Lyman Award for unique and dedicated service to the University. Yet another recognition of Al’s extraordinary contributions to Stanford came in 2004, when he received the unique title, “Emeritus Standing Guest of the Faculty Senate,” a designation permitting Al to respond with characteristic thoughtfulness on issues that came before the Senate. Although Stanford’s Psychology Department necessarily shared him with the rest of the University, his contributions to that department were profound: Graduate students benefited enormously from his mentorship. Young faculty colleagues marveled at the ease with which he commanded the classroom, and their elders universally respected Al’s good judgment and skill at moving a group to consensus on important decisions. Al and Barbara also contributed scholarship funds both at Stanford and Mount Holyoke. Al Hastorf was indeed a singular man who will long be remembered. In addition to his wife Barbara, Al is survived by his daughters Elizabeth and Christine and a grandson Nicholas.

Mr. Chairman, I have the honor, on behalf of a committee consisting of Lee Ross, Jeffrey Wine, and myself, Donald Kennedy, to lay before the Senate of the Academic Council a resolution in the memory of the late Albert Hastorf, professor emeritus of Psychology in the School of Humanities and Sciences.

At Chair Levitt’s invitation, everyone stood for a moment of silence in tribute.

Chair Levitt thanked Professors Kennedy, Ross and Wine.

B. Steering Committee

The Steering Committee is working on several agenda items for the fall, winter and spring Senate meetings, including both regular and executive sessions.

Senators filled out the “yellow sheets” to suggest agenda topics at the last Senate meeting. The Steering Committee will use that information to plan future Senate agendas. Chair Levitt invited Senators to use the yellow sheets at their seats if they had a topic or an issue they wished to hear more about and submit them to the Academic Secretary or any member of the Steering Committee.

November 8th: Vice Provost for Undergraduate Education Harry Elam will update the Senate on the status and plans for the governance boards involved in implementing the Committee on Undergraduate Standards and Policy (C-USP)-Study of Undergraduate Education at Stanford (SUES) recommendations.
This will be followed by an executive session (an informal, off-the-record session) at 4:30 PM in the Faculty Law Lounge on the second floor. Only voting and ex officio members attend executive sessions.

December 6th: Registrar Tom Black will give a short report on classroom scheduling and management. Following that there will be another executive session at 4:00PM in Room 180.

January 24, 2013. At the first Winter quarter meeting, Karen Cook, Vice Provost for Faculty Development and Diversity and the Ray Lyman Wilbur Professor, will report to the Senate on faculty gains and losses.

C. Committee on Committees (CoC)
   There was no report.

D. President
   President John Hennessy had no report and there were no questions.

   Provost
   Provost John Etchemendy announced that Chi Chang Kao has been appointed Director of the SLAC National Accelerator Laboratories. “Chi Chang came to Stanford just two years ago, in 2010 from Brookhaven National Lab and was brought to SLAC to be the Associate Lab Director for SSRL, the Stanford Synchrotron Radiation and Light Source. He was then made Acting Associate Lab Director for Photon Science. He’s a spectacular X-Ray scientist and an extremely talented administrator. This is a case where we did an absolutely thorough international search and found the person we wanted right here in our own backyard. I’m delighted about that and very excited to be working with Chi Chang.”

   There were no questions.

   Chair Levitt, observing that she had just arrived to take her seat as an ex officio member of the Senate, greeted our new Dean of Law School, Elizabeth Magill.

   [ Applause ]

V. Other Reports
   A. Online Education Discussion (SenD#6689)
      Chair Levitt introduced the subject, “Today we’re devoting the Senate meeting to a discussion of online education at Stanford. Those of you on last year’s Senate will recall that the Senate heard a panel presentation on online education in April (April 19, 2012, [SenD#6598]). The consensus was that more discussion was needed and that’s what today’s session is for. But online education is a fast moving target, and given the new developments over the summer, including the appointment of a new Vice Provost for Online Learning [VPOL], we thought it expedient to have a report by the new Vice Provost, John Mitchell, to bring us up to speed so that we can have a fully informed discussion. His comments will be followed by remarks by the Senior Associate Deans who have responsibility for online education initiatives in
two professional schools: Bernd Girod, from Engineering and Charles Prober, from the School of Medicine. Peter DeMarzo, from the Graduate School of Business, is traveling and unable to attend today. Bernd and Charles will speak for 5 minutes each, which will leave plenty of time for a thorough discussion. We have three people from the Graduate School of Business who can answer questions about some of their intended future plans. Audrey Witters, Shalini Bhatia, and Sherri Fujieda.

“Sent in your packets was a report by John Mitchell on Technology in Higher Education [Senate Document #6689]. Also sent to you by email were an interview with John Mitchell in The Atlantic, an article in The Wall Street Journal by L. Rafael Reif, the new president of MIT, a link to a TED* talk given by Daphne Koller on “what we’re learning from online education” and a link to online.stanford.edu which has a list of the funded seed grants and an updated version of Mitchell’s report [SenD#6689].

[*TED (Technology, Entertainment, Design) is a nonprofit organization that supports conferences to further “ideas worth spreading”].

“Please join me in congratulating John Mitchell on his appointment as Stanford’s Vice Provost for Online Education, and the three new Senior Associate Deans of Engineering Business and Medicine for their appointments.”

[ Applause ]

Vice Provost for Online Education John Mitchell

With the aid of slides, Vice Provost Mitchell began his presentation.

“Thank you. I’d like to comment about the committee that we had from January through June and about some of the conclusions of the report we wrote in July; then comment about things our office has been doing over the summer and fall. I’ll give you some idea of the emerging plans and process on campus to interact with others and seek input and ideas. Finally, there will be brief comment from each of the three schools mentioned, except Peter DeMarzo who is away. All of the schools are engaged in varying ways. There’s enthusiasm and activity all across campus.”

Presidential Advisory Committee
– Faculty: Peter DeMarzo (GSB), Harry Elam (Vice Provost for Undergraduate Education), Bernd Girod (Electrical Engineering), Larry Kramer (Dean, Law), Rafe Mazzeo (Math), Jim Plummer (Dean, Engineering), Charles Prober (Sr. Assoc. Dean, Medicine), Garth Saloner (Dean, GSB), and Dan Schwartz (Education)
– Ex officio: Charlie Junkerman (Continuing Studies) and Paul Marca (Stanford Center for Professional Development, SCPD)
– Supported by: Roberta Katz (President’s Office) and Megan Pierson (Provost’s Office)
– Guests: Ram Shriram (Board of Trustees), Amy Collier (VPOL), others
VPOL Mitchell resumed. “The Committee was appointed by the President. We started in February and met through June. We featured broad University representation from many different areas on campus, some *ex officio* members, some excellent support from two of my favorite new best friends in the back, Roberta and Megan, without whom I would be lying flat on the floor here.”

General Conclusions:

- Stanford’s primary educational mission is to teach students admitted to our programs
- Online technology supports multiple use
  - Stanford programs on/off campus
  - Use by other colleges, public distribution
- University should invest and experiment
- Concern over branding and disaggregation
  - Recognize value of Stanford brand, reputation for high quality, aggregation of lectures into classes into degrees
  - Stanford should protect its rights and interests
- Course ownership and faculty policy

“Our primary educational mission is to teach students that are admitted to Stanford. I think there’s a place for serving the public good, but our purpose was to focus on our primary educational mission of our students, seeing them through the programs that we admit them to.

“Another insight that is important in thinking about online teaching and learning is that the same technology, artifacts, learning objectives, videos, simulation of physics experiments — the same material can be used in various ways. We can develop something that helps in a class delivered on-campus and use that same material for online teaching of distance learners enrolled in our programs, or combine it with some other material and make it available freely for self-study around the world.

“If we start out learning how to build such material effectively, then we can learn how to use it. A central starting point of the strategy and activities we’re following is that we can develop material and understanding how to develop methods that have multiple purposes and used in various places. Our committee was enthusiastic about the opportunity, and there’s obviously been a huge amount of press, public attention, and large enrollment in free, public courses. We felt we should take this as an opportunity, invest some time and resources, experiment in the sense of try some things, see if they’re effective, learn from them, and try other things based on that learning — and become proficient and take advantage of the opportunity in front of us.

“We did have some concern over *branding* and how material that we produce is viewed outside the university. I’ve read a lot of comments from students who’ve enrolled in courses we’ve made available through Coursera. When I read, ‘Thank you, Professor Boneh, [Paul Boneh] thank you Professor Roughgarden [Tim Roughgarden], thank you for this great course and thank you for making it available to me,’ I’d like to also read, ‘And thank you Stanford! Wasn’t this a great course?"
Isn’t Stanford a great university? We should get some recognition and it would be better to have these lectures packaged and delivered in a way that gives our university acknowledgement.

Faculty ownership recommendation

“One tricky [thing] we debated at some length is the course ownership policy and faculty policies surrounding it. If you look at the Research Policy Handbook [available on the Senate website], it’s a little bit vague on some points. One of the points has to do with autonomy and decisions faculty can make in sharing course material. We thought about whether things we were doing were consistent with the policy. It was important to recognize traditional faculty authorship rights and make a statement in favor of the things many of us have been doing and were not clearly acknowledged in the existing policy. Many of us exchange lecture notes, slides, or syllabi, or put these on the web to share with our colleagues, and other like institutions. It wasn’t clear how these policies fit with the policy. Those all seem like productive, academic activities that further our efforts in teaching our students, and help build our relationships with our academic communities. Among our recommendations is that we recognize the value of those activities.

“We also thought long and hard about teaching for Stanford, teaching for other organizations, teaching for new, online operations that would own courses, have their own programs, follow their own path. And we concluded that our primary teaching responsibility is to Stanford. We all benefit from being part of the university and part of the community here. One of the simple ways of saying this is to say that teaching for an online university should be treated the same way as teaching for another brick and mortar university. If it will be a conflict of interest or commitment to go teach at Berkeley while teaching here, not as part of a sabbatical or other sort of exchange, then we ought to regard similarly developing a course for a for-profit online university as a conflict of interest and conflict of commitment.

“If you have to draw a line there’s a difference between people who are here with a 50% continual appointment or more [and those with less time here]. It’s reasonable for someone who’s mostly here to have his or her primary commitment to Stanford. Other adjunct or consulting faculty, who are not here primarily, fall into a different category.

“Looking forward, we may have the opportunity to receive revenue from distributing online the course material. We felt it was appropriate to pursue commercialization, in collaboration with faculty, with faculty agreement, so that we as teaching faculty are part of the decision on what happens with our material, and to have appropriate kinds of revenue sharing as a reward and incentive for participating in this process.

“Those are primarily where, after struggling with these issues for some time, we came down — not a great change from the previous policy. This was a clarification and an attempt to understand the spirit and intention of the existing policy in light of the current technology and opportunities, with recognition of some activities that many of us engage in as being positive and supportive of our activities and goals.
“In the last eight months I’ve made a lot of visits to departments and schools. I’ve given the same ten slides in fifteen minutes, and there’s been an hour of pandemonium thereafter. The most recent was a faculty information session a week ago. I will repeat some of the main points I covered there. Then we will entertain the questions and answers and discussions of what you’d like to have.

“We made an effort to work with different organizations on campus, including the Center for Teaching and Learning, which has been quite enthusiastic. There are some great activities in the School of Education that have galvanized interest and were very insightful for my team.

“How we should think about online teaching and learning is just this: What are the best ways to teach and help students learn, using combinations of new and old methods? We have new ideas stemming from web platforms, social network sites, process that they support, interactive video that can be divided into short segments and interspersed with interactive questions, automated assessment, ways to automatically grade or provide feedback to students on their work, and simulations of various kinds that can all be used to change the way we reach students. Among other things on campus the flipped classroom seems to have been successful in a number of cases; how good is that, in what cases are it effective? When are we better off with a phenomenal lecturer in front of a room, or fifteen students around a table, and when can we best use the new approaches and how do we learn how to use them best?

“Starting from that question, then how do we develop expertise in producing, and using high-quality, new, innovative material? We’d like to improve the learning within existing programs that ties in with our focus on our enrolled students, and enable the creation of new programs that support larger enrollment. What is learned in this process could be used in courses here distributed elsewhere, packaged into various kinds of experiences.

“Our approach has been to try to get faculty involved. With all of the exciting, creative people on campus, this will be a lot more fun if people think of this as a personal challenge; how could you improve your class if you see an opportunity? And can we help you do that? So we’d like to leverage faculty creativity and initiative and help you [faculty] do something exciting in your teaching activities.

“At the same time we’d like to know if we’re getting better. If there’s a new idea explored by one group in one part of campus, [we want to] understand why that was successful and transfer information about it to others. So we see our activities as supporting educational research of a laboratory sort and we’ve engaged a number of students and faculty from the School of Education.

“Since June, here’s a summary of what we accomplished.”

Progress
• June Seed Grants
  – 40 individual faculty and small teams proposals
  – 20 fully or partially funded
– Range of schools; balance between on/off campus
• Launched 16 free online courses this fall
  – Coursera
  – Class2Go
  – Venture Lab
• Media effort to recognize Stanford leadership
• Repeat seed grant process; seek flagship courses

“We put out a call for seed grants, in June. Forty individual faculty and small teams sent in proposals. They were across four schools, and relatively balanced between focus on doing something in class here, or making something available externally, through a web platform. We funded twenty of them, partially or fully. Basically we took all of the things that looked exciting and asked, *What do we need to fund here in order for this to go forward?* In many cases it didn’t require funding because the things our proposal was asking for was something we could provide and support from our team, without giving additional funding to the faculty. Most of the requests were for teaching assistants, graduate student support, equipment, or for some time by an editor or camera person.

“Two courses have turned into fall courses on campus, or online, or both, and many will come to fruition over this academic year. In the fall, we launched sixteen free online courses on three platforms; most of the courses from Stanford that are available publicly for free are on a platform produced by a startup company called Coursera, founded by two faculty on leave. That’s been very successful, it’s been a great company to work with.

“In response to the most common question, ‘Why can’t we do it ourselves, what do we need a for-profit company for?’ we have developed on campus our own platform by using building blocks that are publicly available. Our platform is called Class2Go. For as long as it seems like a good activity, we can have a slightly closer collaboration between faculty developing their courses and course ideas, and the platform features that are needed to support that.

“The third platform is called Venture Lab, developed by Amin Saberi [Associate Professor] in Management Science, and Engineering. That supports a different teaching and learning model but it’s very exciting. It’s based on group projects and peer evaluation; appropriate and effective in a different way than the Coursera and Class2Go model that has a lot of automated interaction. We’ll see how effective that is; there are five courses on there in the fall, of varying duration, primarily focused in the Management Science and Engineering and entrepreneurship area, and one from the School of Education.

“Through the help of David Demarest [Vice President for Public Affairs], Lisa Lapin [Associate Vice President for University Communications], and others we undertook a media effort to see if we could get appropriate recognition for our activities and shape the public discussion, at least to the extent we were able to do so we could draw attention to teaching and learning quality, as opposed to simply fanning the flames of MOOC [massive open online course] mania.
“We’ll continue to repeat the seed grant process on some scale depending on response. We would also like fund a few flagship courses or departmental activities. For example, I think the Biology core is an exciting opportunity. We’ve been recording video and using it there for a couple of years and I think we could make some interesting changes there. The English Department is very interested.

“I won’t summarize the fall public courses, you can find these online. Our office is offering help with pedagogy, how to teach, how to reorganize your course, and assisting with a framework for educational research.

“One of the most exciting things for me has been to walk around campus, get a little bit outside the School of Education [VPOL meant the School of Engineering. He may have become disoriented, see below, Associate Dean of OL for Medicine Charles Prober’s remarks] to find out how different people are. It feels like there are seven planets [referring to the seven schools that comprise the university]. They all speak different languages, use different currency, buy their clothes at different places, eat different food —

[ Laughter ]

“Here’s our website [above]. People often ask, ‘What are you talking about, how do I find out what you mean by an online course?’ Here are four featured courses that I
think cover different topics and illustrate different teaching and platform ideas; those could be a good place to start.

“Here’s some information about a great course, Educ 403 on Tuesday nights. This is a free-form discussion course so that if you pop in, you’ll get something out of any meeting that you come to. It’s led by Roy Pea [Professor in Education] and Mitchell Stevens [Associate Professor in Education]. Two of our education students that are working with us are in this picture.
“This is Peter DeMarzo’s slide on some activities in the GSB. Basically, the three areas of emphasis are first, to develop online supplements for on-campus courses, and second, to extend the reach of the GSB through distance education programs and other activities aimed at populations known to the school. The third area is kind of distance telepresence — highly interactive discussion between two video-conferenced and otherwise connected rooms. For example, to have a conference between here and Peking University.

“I’m very pleased to be working with Bernd Girod from the School of Engineering, on new directions and new thoughts, and new potential strategy for the School of Engineering.”

Associate Dean of Online Learning for Engineering, Professor Bernd Girod
Professor Girod took over. “I just have one slide.”
“This slide captures the ongoing discussions in the School of Engineering. In the middle — and rightfully so — are Stanford academic courses. That’s where our priorities should lie for online learning. On the right are the professional education courses and on the left the Stanford online courses that are offered without Stanford credentials. So this is the area that the MOOCs fall into. We have chosen credentialing as the way to distinguish one from the other. Because of MOOCs’ access to high-quality content MOOC is becoming a commodity, and credentialing really matters.

“For the online courses without the Stanford credentials, our current discussions revolve around two important reasons why we should offer free online courses to the world. The first one is that these MOOCs can be a wonderful showcase for us, a showcase for Stanford Engineering education. The second, and arguably the more fascinating one is that MOOCs can be a large-scale learning laboratory. With online learning you can organize the learning process in great detail and collect a lot of data about how students learn. This is a fantastic opportunity, particularly at this scale. You can gather data that would correspond to a hundred years of teaching small classes on campus, in just one year of a MOOC. This would help us in our first priority, the Stanford Academic courses, to enhance learning outcomes. In the long run we believe there is a tremendous potential of online learning techniques, particularly if combined with our classroom teaching to enhance learning outcomes and improve the student experience.
“For more near-term goals, we can leverage the flexibility that online classes offer — online and blended classes. We’ve been discussing ideas like a Head Start program for admitted graduate students, so they could take classes before they arrive on campus. We’ve been discussing combination internships, maybe a 50% internship with a number of courses they would take at the same time. We’ve been talking about the participation of Engineering undergraduate majors in the Bing Overseas Study Program. Often they can’t do that because missing a quarter here on campus would lead to a large delay of their studies.

“Last but not least, the professional education courses, on the right side of the figure, are a vibrant and growing area. These courses are very different from the academic courses; typically they are much shorter and tailored to industry needs. There’s no academic credit associated with these courses. It’s a good way of connecting with engineers, managers and executives in their jobs. We want to build on this growth we’re currently seeing in this area, and the growth that we’re imagining would reflect the strength we have in research areas. That seems to be the right approach for top tier research universities.

“There seems to be an opportunity to create a system of lifelong learning incentives. We compare this to an airline loyalty program; if you’ve taken a lot of classes then you maybe are higher on the waiting list for Professor Levitt’s [Chair Ray Levitt] oversubscribed course. So we’ve even thought of things like ‘For the most loyal of our lifelong learners’ we could have something like Stanford Alumni status, which is something that the Business School already does today.

“We hope this is going to lead to a broadly supported strategic plan, which by the winter quarter, we hope to be able to present to the rest of the university. In the meantime we are encouraging experimentation in the school through participation in the university’s faculty seed grant program that John has already talked about. We also have a specific program in the School of Engineering to encourage departmental online learning initiatives, and we’re asking departments to particularly focus on the middle column.

Associate Dean for OL for Medicine, Charles Prober

Associate Dean for OL for Medicine Prober took over. “I’d first like to publicly acknowledge and congratulate John Mitchell for an extraordinary job at first of all leading the presidential advisory committee, coming up with a series of recommendations, developing a new office, and supporting the whole effort. He’s become clearly so embedded in this whole process, that [turning to VPOL Mitchell] John, during your remarks, you said from time to time you get out of the School of Education to walk around campus, and you were actually in the School of
Engineering when this all started.”

[ Laughter ]

Associate Dean Prober, “The other comment that I’d make is about your comment about different planets on campus, and the dress code is different, as I look at my colleague, Dr. Arvin, [Vice Provost and Dean of Research, who was dressed elegantly] even within one of those planets, there are different dress codes and eating patterns.

[ Laughter ]

“At the School of Medicine I’ve had the pleasure of being Senior Associate Dean for education the last six years. That education includes undergraduate students — meaning medical students — postgraduate students — meaning residents and Fellows — and continuing medical education [CME], for physicians in practice. The reason I mention those three populations, is that each of them may benefit from strategies in online learning, but for none of them have we figured out the strategy that’s going to be most effective. But we’re very interested in looking at opportunities.

“Our interest in the Medical School goes back a year and a half. Preceding this effort, I wrote with Chip Heath in the Graduate School of Business, a prospective in the New England Journal of Medicine entitled, “Lecture Halls Without Lectures: A New Proposal for Medical Education.” That piece has gotten a lot of attention because we talked about the didactic, factual part of medical knowledge. Why not deliver it to people in their own time in their own space? They can watch it as much as they want, and then we can bring those students together in the classroom in an interactive environment where the embedding of that medical knowledge becomes more relevant. Because our medical students suffer — or at least they claim to suffer — especially during the first two years when they’re asking, ‘What has this got to do with anything I care about?’ because they can’t see the relevance of the information. So the interaction becomes important.”
“The reason we developed this site about four months ago, Stanford Medicine Interactive Learning Initiatives, is because many of our faculty thought that we were talking literally about online education for medicine, [the idea that] we package all of medicine in online format, deliver it and call it a day. That was never the intent. The intent was to provide factual knowledge that you could either get in a textbook or see online but that the interactive part was the key element. That’s what we’re spending a lot of our time and effort in trying to create, which are those interactive sessions, and we feel fortunate to partner with John and his group at the School of Engineering. The group from the School of Education who can help us think through adult learning theories and practices; the people from the Center for Teaching and Learning and colleagues in the other schools, can bring together a team that we couldn’t do alone at the School of Medicine. That collaborative opportunity, regardless of what the output turns out to be is, very enriching for us at the School of Medicine.”

Chair Levitt thanked all three speakers.

[ Applause ]
Question and Answer Period.
Professor Tom Wasow was the first questioner. “John, in the report that you wrote in the spring, you expressed some concern about the possibility of aggregators, taking our MOOCs and selling them for profit. Are you still worried about it, do you have some ideas as to how to prevent it?”

VPOL Mitchell nodded, “That’s an issue. The important thing is that we understand our goal and what we’re accomplishing by delivering content through a particular platform. We would like to see things branded in a particular way. That’s part of our discussion and process with any external hosting company; to make sure that things are reflective of Stanford’s reputation. One of the reasons that we have our own platform is to see what we would really like to do, give us some flexibility on that issue.”

Associate Dean Girod added, “I think we are seeing the process of platforms becoming aggregated. If you extrapolate into the future, I think we’re going to see degree programs offered by these aggregators. But do these degree programs represent a competitive threat to our university? I think the answer is no. But is it a threat to maybe a regional university? There I think the question is not so clear. It could well be that an online program leading to a degree that is just an aggregation of the courses from top universities might be as valuable or even more valuable for learning certain subjects than the education you would receive from a struggling regional university. We have to differentiate what the strata are there.”

VPOL Mitchell agreed. “Let me just give you one specific example; someone in my department had an algorithms course. When we started with Coursera that was the only algorithms course available. We had a huge enrollment and he (the departmental colleague) felt like he was the algorithms teacher for the world. That was a great feeling and he had a great experience with it. And then three months later there are several more algorithms courses on Coursera, and he came into my office and said, ‘What did I do wrong?’

VPOL Mitchell continued, “Of course he didn’t do anything wrong. That’s the natural direction: a company wants to put as many courses as possible, a line we’re likely to follow, and so our faculty member was disappointed, he wanted a little more recognition for his initial offering and so on and we’ll get enough to figure out how this is going to work. But you can understand the concern of someone if his or her course is getting lost in the shuffle, it’s not worth the time; payback for your time is less and is less. So we’d like to figure out how to present things in a way we feel [faculty] would be rewarded for this.”

Professor Andy Fire, Pathology, remarked, “I have to admit that I bring myself back to the question of what the university does. If we just delivered lectures this [online education] would be tremendous. In the old days faculty when they taught a course would write a book. The book would be in some ways a more articulate definition and exposition of what the faculty member was going to say in his lectures.”
“And yet, why was it important for that person to stand up in front of a group of students and explain it? Well, one of the important reasons is to actually get the feedback from the class as to what should be there. Two things I worry about. One is the struggling local universities… I doubt that through online education you can deliver the same quality of education that someone would get even at a struggling university if the faculty there are trying. But that’s not something that will be obvious to certain political and administrative forces that will conclude, ‘It’s a lot cheaper just to educate all the people in this county with online education, and get rid of the state university, state college, and the odd community colleges.’

“So I worry that the attractiveness [of online education], at least in the short term, will lead to greater cheapening of the faculty at our sister institutions, which often feed us and certainly benefit society. The other thing is — as more classes are given online, which do you take? How do you describe them? Which is better, which is worse, for the student? And in some ways we aggregate courses, we aggregate faculty, we aggregate interactions together to build an education out of that. That’s not something that happens online any more than you would get out of a library. So one of the things to watch over time is whether this is really an effective way of training people. We should try in our graduate programs to get applicants who are doing their undergraduate training online. I don’t think I have ever seen an application for graduate school from somebody who was coming from an online university. Maybe it just hasn’t happened. And I’m curious why that is and where people are going with this kind of question.”

VPOL Mitchell followed up, “To add to this comment, one exciting question is — what constitutes an undergraduate? I don’t know how many lectures I actually remember being a student here thirty years ago. Some were really memorable, but I think I got something else out of some other activities, too.”

Associate Dean Girod observed, “It will be interesting to see whether we admit any high schools students that came out of the online high school. I think we do quite a bit actually.”

Associate Dean Prober weighed in. “I have a reaction to Dr. Fire’s insightful comment about being with faculty as opposed to seeing them only on video, because I don’t think that one precludes the other. I think that many students may get their content from a course in Pathology. Part of it is just let’s say, factual content, that you really want them to know, like where the organs are.”

[ Laughter ]

“Then when they come to your classroom and they see you or somebody else in the online space they have the opportunity to interact with you on a low student to teacher ratio. In the usual classroom, the likelihood is small that a student will feel she is really interacting with the professor. There was a question asked of Sal Khan (founder of the Khan Academy) at the American Association of Medical Colleges, ‘Listen, if we create all of our educational content and we put it up, then why are they going to want to come and see me? Why do they want to come to our university?’ I
thought Sal’s reply was clever, if not accurate: ‘You know, there are a lot of people in the rock world and the music world who produce CDs, and they’re very vibrant, listened to by everybody all over the world. Then they come to town and you pay a fortune to go and actually see them in person, because you really want to be there with them.’ So I think that’s sort of a separate point, but I think that opportunity for more rich interaction with faculty can be augmented with certain of our courses.”

Eric Roberts, Professor of Computer Science, was very concerned. “Two weeks ago we had the Tanner lectures where we talked about the prices in academia and the question of whether online education would be the solution. In the discussion that followed the second lecture, Daphne Koller was described — I think correctly — as having missionary zeal. She certainly didn’t question that. One of the problems with missionary zeal is one tends to think that any confirming evidence, no matter how slight, is proof positive, and anything non confirmatory, that goes against the prevailing wisdom, is considered an outlier that should be discounted.

He continued, “One of the things that I’m hearing is that there’s excitement all over the university! It would be fair to say that there’s also concern all over the university and at our department meeting there was a lot of each of those things voiced. I worry about that because I think in this rush to embrace this technology there has been some, I think, fudging of the data, or at least selective reporting of the data.”

[ Laughter ]

“One of the points that I raised at the meeting is that if we look within our own department, where the foundational course, the gateway course for our undergraduates has been taught in this MOOC form with the attempt to gain all the advantages. But the course has fallen by two-thirds in popularity and been replaced by the one which doesn’t even offer its courses on Stanford Center for Professional Development. Students are voting with their feet and we are not hearing the results of those votes.

“At the same time one of the concerns that I have is — as I said last year when we were talking about requirements — the university is judged more on what it funds and what it promotes than on what it requires. We’re funding this effort a great deal. And I think the message — why this kind of residential education is important — is being lost out there. People talk about it eloquently in our department, that we want minds to grind against minds. If everyone believes these online courses are fully adequate substitutes we will lose the ability to attract those students. It will change the nature of that sort of social contract around the university. I think we need to spend, as a university, as much time and as much energy defending the notion that to get people to interact with each other, those are valuable activities, that’s why one comes to a university.

“At the same time I think we need to say that, at the level of a Stanford education, almost anything you can evaluate automatically, where you can do online assessments, e.g., like Scantron tests is not interesting. The companies in my field, the Google’s and the Facebook’s, are not using these tests to determine whom they’re going to hire.
Job applicants are interviewed by these companies and are being asked hard questions, because they want to see how people think, how people problem-solve and those are things you cannot assess [online]. We need to go on record — more than we have — about the importance of this because what I hear, quite frankly, from a lot of what goes on in support of the MOOCs and online education is just increasing the amplitude of the tsunami, which Andrew Delbanco [director of American Studies at Columbia University], quite correctly noted in those Tanner Lecture commentaries is not at all selective, and is universally disruptive.

“The editor of the flagship journal in computer science, the Communications of the ACM, [Association for Computer Machinery] yesterday published an editorial entitled, ‘Will MOOCs Destroy Academia?’ In it he writes, ‘If I had my wish I’d wave a wand and make MOOCs disappear but I’m afraid we’ve let the genie out of the bottle.’ There is concern out there that we need to stand firm for what has made the Stanford educational process so important for so long and I don’t think that message is getting out as much as the message that we are hell-bent to get to the next stage in technology.”

Provost Etchemendy responded, “I was going to add to what Andy [Fire] said. But let me say [in response to Eric Robert’s comment] that it seems to me what’s going on right now is a great deal of enthusiasm and excitement and panic, not just at Stanford, but nationwide, and in the press, with some people thinking this is the death knell of the university. Then, largely within the university, there are also a lot of people making good points about what can’t be done and what will probably never be achieved with the online technology, in comparison to their residential universities. I think both views are extremes; that is, the people who think this is the be all and end all and is going to have a huge detrimental effect on residential education, and the people who say, ‘We’re doing something really great and let’s just ignore this [concern], and wave the magic wand to make it go away.’ I think they’re both wrong. The right response is somewhere in between. It’s important to remember that online education is not new and online degrees are not new. Western Governors University [an accredited online university offering online bachelor’s and master’s degree programs] has been running continuously for at least twenty years now. You can get a degree from it and many of the degrees the University of Phoenix offers are also provided online. That hasn’t destroyed any sector of the university ecosystem; it hasn’t had any effect on community colleges; it hasn’t had any effect on state institutions or private institutions. But I think it’s important to understand this is a technology. It’s not the same old technology; there are some and interesting different phenomena.

“At the presentation [to the Senate] I gave last year, I noted the interesting social interactions that you get in these MOOCs, the kind of crowd sourcing, and group assessment that you can get in these courses and how that might be marshaled in the educational process. We need to figure out what we can do with that, how we can import that into our own education. It’s not something to be ignored; on the other hand it’s not something I think that we, or anybody else, should expect to have a devastating effect on residential education.
Looking at Professor Roberts, “Eric, I don’t know whether we are articulating that well. I suspect probably not. I suspect we wouldn’t be able to get attention by articulating that. It would look defensive, or, more likely, the *New York Times*, or whoever, would not be interested in it. They want to be able to say for at least the next few months, ‘Is this the end of the university?’ And then it will eventually settle down and no longer be of interest. You won’t be able to see these articles predicting the end of the university. Anyway, that’s my hope.”

Bruce Clemons, Professor, Department of Material Science and Engineering noted, “I’m teaching one of the Class2Go classes this quarter, that’s offered free to the world, and I thought it might be useful to explain why I did that. My class is a class on solar cells, fuel cells, and batteries, and it attracts a huge range of students. I have freshmen to advanced graduate students from at least twelve different majors on the campus taking the class. So I have students who already know, basically, everything I’m going to talk about in any of the areas, and students who don’t know anything about any of the areas.

“I found when I was giving my lectures my feedback that I got on the course was that half the class was lost and half was bored and there was maybe one person right in the middle for which it was perfect. And so I was looking for a solution for that problem. The class also tended to be large, at least by the scale of my classes, and I asked hard problems — that’s part of my goal in educating students, to raise their level of problem-solving sophistication. I challenged them with things that aren’t easy, aren’t straightforward, and they were getting frustrated. I was unable to give them individual attention. So I wanted to address that, too.

“After learning about the idea of a flipped classroom I decided to try that. I give lectures and record them and students can watch them, But they can look at them while watching reruns of *The Andy Griffith Show* if they know this stuff already, or watch them and rewind them many times over, because, ‘What was he saying here, I don’t understand it! They could also look at the slides and take more time with it if they don’t have the background. Then in the class time I have question and answer sessions where I stand there, waiting for questions. I’ve instituted ways to encourage questions, and I also have problem sessions where I’ve grouped the students in purposely designed groups, with varying abilities within the group, so I have undergrads and grad students and engineering majors and non-engineering majors all in the same group. Then I assign problems of the type that I want them to be able to solve; hard problems. They sit and think about them, ask questions about them and explain them to each other. We had absolutely fantastic experiences in these problem-solving sessions where the students are helping each other. One student, a woman, was expressing with uncertainty her understanding of the field, and she just said, ‘Is it like this?’ — and she spouted out a perfect explanation of exactly how to think about it. And I said, ‘That’s exactly right!’ I just happened to overhear her and turned to her, ‘That was a perfect explanation of what’s going on here! Now you really do understand.’ Those learning experiences are happening in the interaction. I think I’m getting to know the students better than if I stand up there and lecture and say, “Are there any questions … anybody, anybody? Bueller?”
He continued, “You don’t get a lot of back and forth in the typical lecture thing, so I’m not a big fan of that stand-up-and-lecture format anyhow. For reasons that are now lost in the fog of war, I decided to offer it free to the world as well. We have about ten thousand people signed up for it and we have a very active forum. I have a whole Facebook group, groups in Spanish, where people transcribe every word I say embarrassingly to the camera, and then translate it into Spanish and have discussions in their own languages. I have people from around the world taking this course and there’s a lot of negative comments that I try not to take personally in the forum; one guy, I once wrote him, I said, “Look, it’s clear this free class isn’t meeting your needs, maybe you should go find another free class that would meet your needs.”

Parviz Moin, Professor of Mechanical Engineering, inquired, “The biggest planet in the Stanford system is Humanities and Sciences, at least in the court here, and I didn’t see H&S faculty prominently featured in your slides. Are they onboard? Is there Chemistry, Mathematics, Statistics?”

VPOL Mitchell responded, “In the initial seed grant set of 40 proposals, nine or ten were from H&S, and among those a range of different topics were covered. Most of those were about a change in material for a particular class. For example, from the drama department there was a proposal for set design and lighting design course, a way for students to upload their drawings and comment on each others’ drawings online. A number of different ideas have been discussed with members of the English Department.”

Richard Saller, Dean of H&S, “I think the problem with H&S is it’s more varied than any of the other schools. So it’s not possible to think about a paradigm to lay before the faculty teaching literature that would be comparable to that for a faculty teaching physics. At this point we’re taking a kind of the segmented approach. The attitudes of the faculty are quite different from one place to the next, varying from the interested faculty to a Humanities faculty who asked, ‘What’s a MOOC?’

Dean Saller continued, “We are getting feedback in the Natural Sciences; there’s a lot of concern about the time that would need to be invested to come up with a plausible course. I’m not, at this point, prepared to push faculty where they don’t see the value themselves. We have been a little more proactive in the Humanities; we’ve invited a handful of faculty who have the capacity to be star lecturers in some of these courses, and we’re meeting next week with John [Mitchell] to talk about what’s involved. What we don’t have is the tradition that the Engineering School has of offering an online degree program that goes back for years.”

Michael Shaw, ASSU Graduate Student Representative, commented, “I noticed in the report and hearing discussion on the issue, graduate students and teaching assistants were not mentioned. I worry about the evolving relationship of graduate students to their faculty, and to their academic environments, and the effect of these MOOCs and
other online courses. While there are significant potential advantages and wonderful opportunities, there are also real downside risks that graduate students who have TAships as part of their academic experience might be seeing significant change in their responsibilities. A TAship that used to be a 10-hour-a-week commitment now becomes an incredibly varied time commitment, as the new resources available online have to be actualized by some people. It will often end up being the TAs for the Stanford courses themselves, working with the new software, working with many more students and all the different environments involved. There’s a real risk, and I’d love to know that Vice Provost Mitchell and others are thinking through the implications on this evolving relationship between TAs and the courses that they’re teaching.”

VPOL Mitchell acknowledged, “You raise a number of interesting and important concerns and we’ll try to watch for them. I think the time commitment should be a fairly cut-and-dried issue, within the department or faculty. [If a grad student signed up for a certain number of hours, that’s all he or she should have to work.] That seems to be the university policy and should be straightforward. As far as the kind of activity and how this is changing, one way in which I feel fairly good about the proposals we’re seeing from faculty is that many of our PhD and graduate students [in their future careers] will go off and teach, and if what we’re helping people learn about is a better way, or a different way, or another way to teach, then that may be useful to them in their academic careers.”

David Spiegel, Professor of Psychiatry, introduced himself: “I’m from an outlying planet across Campus Drive.”

[ Laughter ]

“There are two main components to this that have been discussed several times over the past few years in the Senate. One is the process of teaching, using computer interaction and the other is the dissemination. I worry that the dissemination is so easy that we shift our focus, particularly at a place like this, away from what is really exciting, which is that this is a different way of teaching. Last year the Senate reviewed the undergraduate curriculum. We talked about three stages of learning — acquiring knowledge, evaluating knowledge, and creating knowledge. It used to be, in the old days, that there was one lecturer and one book to transmit the information to the students. That’s not the case any more. As Professor Clemens said, Daphne Koller gave beautiful examples of how the actual transfer of the information was taken care of. And the teaching was devoted mostly to the interaction. Those ways of using these new technologies help us change the way we teach. I think it’s much more important than the easy part, which is disseminating the information. I’m concerned that we focus too early on the dissemination part.”

Associate Dean Girod agreed, “In the School of Engineering we think along the same lines.”

Associate Dean Prober added, “At the School of Medicine, to which we both belong, we’re experimenting with our own students, which are few in number, in their own
class, delivering content for courses online and then having the students interact when they come to class.

“To the point about the TAs, TAs under the [flipped classroom] model have a much richer interaction with the students than they had before because they’re no longer trying to remind the students about the facts that they forgot — because they can go watch the video again. Instead they’re working with the students to help them understand what the facts mean in the context of the course material that they’re learning. The best example right now, in the School of Medicine, is in one of our basic science classes in biochemistry, in my opinion, with the basic science biochemists [having] created this information that was delivered online. Then in the classroom, they divided their class into tables of ten students. The TAs and the faculty go around the class as they each struggle with a problem, which is taking the biochemistry principle and putting it in the context of human elements, a metabolic disease. The class is actually quite enlivened; there’s lots and lots of conversation going on, as opposed to one voice.”

Professor Robert Dutton, Electrical Engineering commented, “I’d like to pick up on two and a half points. Bruce [Clemens] — was impressed that [the online approach] helped you deal with a diversity of people, which is an incredible thing. Eric [Roberts’s] point was that, as bright and wonderful as we all think we are, it’s our students that count. We have customers, whether they are industrial customers or academic customers, it’s about producing people. You don’t get the experience if you aren’t here with the right people — and we produce the people — that’s my take home from all this discussion.”

Margaret Fuller, Professor of Genetics and Developmental Biology, observed, “I teach in human biology programs to sophomores, a core course, and we lecture four hours a week. If I had those lectures taped and I asked the time commitment of my students to watch them at home and then they came for another four hours to class to discuss my lecture or something, what kind of time commitment is expected of a student in the normal class? Are we doubling it? How does that work? We’re denying them more contact with us because they’re supposed to go home and watch it?”

Associate Dean Prober replied, “Early in our courses in the School of Medicine we observed the following. If a lecturer’s been giving four hours of material when they make the mini videos ten or so minutes in length, and focus on the objectives and still give the same message they give in those four hours, typically that is a 25-50% reduction in the total amount of time. This has been true of biochemistry, endocrinology, women’s health, genetics, and now in cardiovascular physiology. When the professors focus on those core objective and messages they want to deliver, and they look at doing that in a pithy way, they end up reducing their time by that percentage.

He continued, “Our goal in the School of Medicine is to be time-neutral, in terms of the exercise. If a course takes 20 hours and it’s ten hours of lectures and ten hours of interaction present state, then in the online mode, it should still take 20 hours when
you finish it, by combining online and in-presence. There would be a real problem, if we doubled the amount of time that our students are meant to spend in that activity.”

Kathryn Moler, Professor of Physics and Applied Physics, remarked, “Parviz [Moins], you asked about physics. I am from Physics, and wanted to say online is an active topic of discussion by the faculty. To a certain extent a lot of it doesn’t seem that new. I watched Sandy [Professor Alexander] Fetter’s lectures on videotape; the entire graduate IHUM sequence in 1989. It was a great thing to be able to fast-forward and rewind him on videotape. And I’ve been using clickers and online quizzes in my classes since I started teaching here in 1998. So this seems like a natural evolution, and it’s fantastic to have the university putting the resources into it.

“What’s really new is not only the scale of resources, but also the possibility to be going outside the credentialed programs. But as we talk about what we’re going to do, individually, and collectively, two of the questions that come up are first of all, IP [intellectual property] issues. So could you say a little bit more about what you see as being unsolved in terms of IP issues? Second of all, the ideal thing, in my view, is to use online methods to flip classrooms, to let the students watch the lectures where they can fast forward and videotape them and then have interaction in the classroom. MIT’s been doing that for decade with their studio physics program. They invested a huge amount in the studio physics classroom, a classroom where the students sit at tables of eight, and move back and forth for a few hours between short lecture clips, doing problems, and doing experiments. So I wonder if you could comment on those two issues.”

VPOL Mitchell answered, “They’re both complicated and excellent questions. On the resource issue, lecture halls, classrooms, the kind of facility you described would be very effective for that particular use. I don’t know how we will get from here to there and what demand or the cost-benefit ratio looks like, as we evolve, but that’s a university-wide issue to discuss. I have seen successful experiments in the lecture hall where you just ask a question and say there are three or four different approaches to solving this, and could people raise their hand if they want to take approach number one or approach number two, or approach number three. You form small groups in the lecture, discuss the question and then choose one group from each of those three or four approaches, and have them report.”

Professor Moler had more questions, “It’s still unclear to me, who owns what. For example, my library clicker questions, which I wrote, intending to use in my classroom. The big barrier to my taking my course online outside the university is that I don’t where all those clicker questions are from. I’m sure that’s a problem.

She continued, “The other question is — who owns what after the lectures have been produced? These two issues are probably addressed in your report, so my other question is — are there other issues that aren’t addressed in your report? What are the big, thorny issues that we see?”

VPOL Mitchell responded, “On the first point, though I’m not a lawyer, those [questions you mentioned] sound like individual questions. I think you should discuss
that with someone who’s familiar with copyright, for using any individual question, how to trace that back and what the process would be. We did try to understand how to square this notion that the university owns the class, and the class is something you produce for the university, whereas something like a textbook or an individual handout might be something you could put in a book and be treated differently. There didn’t seem to be a clear distinction. The best way to approach some of these things is on specific case by specific case basis.”

Professor Moler: “Who owns group lectures? That’s a specific case.”

VPOL Mitchell answered, “In dealing with Coursera, for example, we’ve decided that the university owns those things that we’ve helped produce and we don’t transfer ownership to the delivery platform.”

Associate Dean Girod weighed in, “Maybe I can answer about Bruce’s lectures. As the cognitive Senior Associate Dean, the university owns those lectures.”

[ Laughter ]

Chair Levitt looking at Professor Clemens sympathetically, “Bruce, I hope that’s not a surprise to you. Hold on!”

[ Laughter ]

Shahab Fadavi was next. “I’m Shahab Fadavi, the undergraduate student representative from the undergraduate senate. As an undergraduate student I want to make a comment and then ask a question. In response to the concern about doubling the students’ time
commitment, there’s an incredible option on the videos, especially, computer science videos that the students have long discovered, which is the 1.7x speed.”

[ Laughter ]

Boldly, Shahab continued, “Usually professors who are 50+, tend to speak slowly, so at 1.7x …”

[ Laughter ]

Chair Levitt dared to compare speeding up a faculty member’s lectures to the sound made by a chipmunk!

Shahab’s question was, “As a student I’m primarily concerned about two things, one is the quality of education that we’re providing as a university, and two, how online education can contribute to the education of undergrads on campus. As a computer science and economics major, I feel that the videos we have in the Computer Science Department have supplemented and enriched my experience as a CS major. So my questions are: a) Are we degrading the Stanford education experience, and b) What are the ways that the committee thinks this can contribute to undergraduate education in particular?”

VPOL Mitchell replied, “I think the videos you commented about were produced historically by SCPD [Stanford Center for Professional Development] for many engineering and computer science classes and have been valuable. Most of what we’re now discussing are approaches beyond just a video recording of the lecture given in a class. Our approach has been to put that question to faculty. Their answers come in different forms for different fields for different teachers. Take a look at some of the grants on the website. You’ll see a lot of different ideas for different fields on how people think that they can put a portion of their course, in an online form, and continue to have a valuable course, and maybe improve their experience from both the teacher and students’ point of view.”

Chair Levitt had a question: “We’ve talked about one part of what the university’s mission is, the knowledge dissemination, and you’ve mentioned that knowledge creation can occur for educational scholars looking at how this technology helps create knowledge. Have you thought about how online media can be used to create new knowledge in other fields, rather than just to disseminate their knowledge? Or is this a conversation mostly about online teaching and learning, not about online knowledge creation. I’m thinking in maybe Social Science fields.”

VPOL Mitchell nodded, “There are interesting studies of social networks, and social process online, so one direction that comes to mind is these online discussion forums as on-campus courses. There’s a different kind of record for publicly delivered courses with tens of thousands of people, and there’s probably a gold mine of data for someone who’d like to understand certain kinds of social processes.”
Vice Provost Harry Elam had a reply about undergraduate concerns. “Three things: first, all the energy that’s happened or is going to happen around online education has got faculty thinking about teaching and delivering courses, and that can’t but help undergraduates, in terms of what happens in the classrooms. Secondly, one of the ways we’re hoping to see an advance [in the undergraduate experience] is — as more classes come online, that will make it possible for students to go overseas and take a course that they couldn’t take over there now. Third, for athletes who oftentimes have the responsibility to play in an event, and have to somehow study for their course, and miss class, online courses would make it possible for them to continue to have that class.”

Professor Jon Osborne said, “I’m Jon Osborne at the School of Education. This is just by way of a comment, that there is a danger in a lot of this attention and interest in online education, but is driven primarily by issues of what you might call technocratic efficiency. You see this in the kind of language people use, particularly ‘delivery’ in education, as opposed to ‘how the process is used’ for delivering information. That is not good quality education. Good quality education is what you experience when you engage with other people, where you have an opportunity to share your thinking, and to elaborate and understand ideas. If Stanford wants to be seen to be offering good quality education, the argument all the time about online education has to be about how it improves the quality of the student experience, here and if it can be done outside, but the emphasis has to be on how it improves the quality of students’ learning experience here.”

Provost Etchemendy agreed, “I think that’s our number one goal. I’d just like to say something about Kathryn Moler’s question about IP issues, and also Bruce’s [Clemens’] shocked look.”

[ Laughter ]

“First of all, something that I think is important to get out there is that the university doesn’t view online education as a potential source of large new streams of revenue. I’ve always viewed the fact that university takes ownership of patents and lectures or courses and software that is created using university resources as actually a protection of the faculty; it protects in the sense that it’s much more likely that somebody’s going to hesitate about stealing or misusing that piece of intellectual property if the university’s name is behind it. And any revenue that actually does come, if any revenue comes in it will be shared basically, exactly the way the patent revenue is shared, moving it down to the departments and to the faculty and not kept centrally or seen as a pot of gold.

“So from a faculty member’s perspective I see it as a good thing that the university takes care of that side of the intellectual property concerns.”

Chair Levitt had another question, “A number of people are teaching courses jointly with faculty from other universities. Have we given thought to how we manage intellectual property issues? I suspect that we can manage but are there other issues?”
VPOL Mitchell smiled, “Since there is so far, no revenue, that simplifies things.”

[ Laughter ]

“But I would guess it would initially be like two co-authors for a book or another kind of marketable piece of material; we would just share it with the other university, although we would have the use of anything we participate in to conform to our goals and expectations. We haven’t had to deal with anything too complicated yet, and we’ll have to figure it out when we get there.”

Professor Clemens: “I actually am now worried about the fact that the university owns my lectures. I’m happy they’re willing to even own up to that, but I may have second thoughts about it. One IP issue that is a big deal for me, and that is, like many people in Engineering, I want to use materials from most the recent results, and so I want to present my students with the data and figures from papers, showing best batteries and solar cells in the world. That we don’t own, so if I can’t use [the latest data] on my videos, that’s a big deal. It’s caused me a huge amount of time to just try to replace all that with drawings of my own and figures that are available that I can use. That’s an issue I think we’re going to have to address if you want to have this to be an effective type of teaching material.”

Chair Levitt, “On that note I think we’re going to wrap it up for this session.”

[ Applause ]

VI. Unfinished Business
There was no unfinished business.

VII. New Business
There was no new business.

VIII. Adjournment
A motion to adjourn was seconded and passed unanimously. The Senate adjourned the meeting at 5:00 PM.

Respectfully submitted,

Rex L. Jamison, MD
Academic Secretary to the University
Professor of Medicine, Emeritus
### RECORD OF ATTENDANCE

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<th>Name</th>
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**Present on Invitation or by Request:**

Don Kennedy, Barbara Hastorf, Elizabeth Hastorf, Lee Ross, Jeff Wine, Marlene Wine, Arnet Ball, Chinere Nwabugwu, Madeline Udell, David Siegmund, Sally Gressens, Eamonn Callan, John Mitchell, Bernd Girod, Charles Prober, PaulMarca, Dave Olson, Roberta Katz, George Triantis, Megan Pierson, Marty Higgins, Alan Louise, James Gross, Keith Devlin, Mark Budolfson, Chris Golde, Robert Edgar, Luis Meja, Bill Cockayne, Audrey Witters, Shalini Bhatia, Sherri Fujieda, Derrick Bolton, Stephen Shireffs, Laura Remillard

**Present on Standing Invitation:**

Stephanie Kalfayan, Ruth McKay, Alexander Fetter, Mike Antonucci, Shahab Fadavi, Michael Shaw

**Outside Press:**

Shahab Fadavi, Michael Shaw

**Legend**

P = Present
A = Absent
E = Excused absence