THE BROOKINGS INSTITUTION

INNOVATION IMPERATIVE: THE FUTURE OF HIGHER EDUCATION

Washington, D.C.
Tuesday, November 27, 2012

PARTICIPANTS:

Welcome:

DARRELL WEST
Vice President and Director, Governance Studies
The Brookings Institution

Remarks:

JOSEPH E. AOUN
President
Northeastern University

Survey Results:

EDWARD J. REILLY
Global Chief Executive Officer
FTI Consulting

Panel Discussion:

DAVID LEONHARDT
Washington Bureau Chief
The New York Times

THE HONORABLE GEORGE MILLER
Ranking Member, House Education & the
Workforce Committee
U.S. House of Representatives

MICHAEL B. HORN
Co-Founder
Innosight Institute

DAPHNE KOLLER
Co-Founder
Counsera

MOLLY CORBETT BROAD
President
American Council on Education

PRATEEK TANDON
Economist
World Bank

JOHN SEXTON
President
New York University

* * * * *

P R O C E E D I N G S

MR. WEST: Good morning. I'm Darrell West, director of the Center for Technology Innovation and vice-president of Governance Studies at the Brookings Institution, and I'd like to welcome you to our forum on the Innovation Imperative: The Future of Higher Education. And this event is undertaken in partnership with Northeastern University and it is designed to discuss the many exciting innovations that are taking place throughout higher education.

Innovation is a key theme at the Brookings Institution. We focus on ways to change organizations, operations, and cultures in order to promote better approaches to doing things. We live in a world of fast paced change, and you'll be hearing about many of those changes later this morning.

Part of our mission is to look for ways in which educational institutions can improve quality, access, and affordability, so we're very pleased to work with Northeastern on this important topic.

To kick off the event, I'm delighted to welcome President Joseph Aoun to Brookings. He is the seventh president of Northeastern and a leader in higher education policy. As many of you know, Northeastern runs a very successful co-op program that has its students working, studying, and conducting research in 92 countries around the world.

He came to Northeastern from the University of Southern California where he was the inaugural holder of the Anna H. Bing Dean's Chair. He received his PhD in linguistics and philosophy from the Massachusetts Institute of Technology and he holds advanced degrees from the University of Paris and St. Joseph University in Beirut.

He has published eight books and written more than 40 articles. In 2006, he was presented with the Knight of the Order of the Academic Palms by the French

government. In 2011, he received the prestigious Robert A. Muh Award from MIT's School of Humanities, Arts, and Social Sciences.

He's a member of the American Academy of Arts and Sciences, the chair of the American Council on Education, and was recently named to the Academic Advisory Council for the U.S. Department of Homeland Security. So, he will deliver a keynote address outlining his views on higher education.

So, please join me in welcoming Professor Aoun to the Brookings Institution.

(Applause)

MR. AOUN: Good morning, and thank you, Darrell, for this nice introduction, and Congressman Miller, we're delighted to have you here with us. Secretary Cantor, thank you again for being here today.

We're delighted to work with Brookings on this survey and on this panel today. I also would like to thank Ed Reilly from FTI and Jocelyn Landau, who are going to really take us through the survey and the results of the survey, and I'm going to give you a kind of general overview of what we're doing and what happened and the results.

But before starting, let me mention that, you know, we were talking with the panelists and one of the major results was surprising to me. They said that presidents of universities, according to the survey I held in very high esteem, way up there with the military, with the officers, with the four-star generals. So, one of my colleagues, a president of a university, and I won't name him, said, well, that was before October, therefore before what happened recently.

So, you know, and he thinks that now presidents are ahead of the military. I don't agree with him. I still believe that the military are way up there and especially the four-star generals.

But let me talk a little bit about the survey, and what is surprising and what's not surprising to me, and I am going to focus on three major messages that I learned from this survey.

The first one is that in a period when people are questioning higher education, the overwhelming majority of respondents during the survey, through the survey, believe very strongly that American higher education system is a gem and American higher education system is a system that has to be nurtured, that it is an essential part of the American dream, it is also very important to allow people to reach personal fulfillment and economic success, and it is also the case that it allows the nation to remain strong, competitive, and a leader in the world.

So, that's clearly the case and you're going to hear from Ed about this aspect in detail.

At the same time, there are real concerns. It doesn't come as a surprise to you that the concerns are focusing on cost, but also it is the case that the concerns are focusing on the global competition. People of all ages are aware that we are facing a global competition that, in fact, many countries are investing heavily in higher education and that's a matter of concern. We have the best university system in the world, are we going to keep it?

They also have another concern beyond cost and beyond global competition and it's a personal concern: am I going to get a job when I finish? And especially here the young people, they are focusing on jobs, they are focusing on professional careers, they understand that clearly higher education is preparing them for life, but still this first job is a matter of concern.

What is also interesting is that many of them believe that they are going to have less opportunities than their parents. That's a matter of profound concern. So,

four concerns cost, global competition, jobs, and less opportunities than the parents.

They are also calling for higher education to innovate. Well, when you hear that, you say, but they are not in higher education. What does it mean for higher education to innovate? What do they expect? And it's interesting to see that they expect a certain number of features in what we deliver to them.

The first one is flexibility. Flexibility at all levels, you know, in terms of time, in terms of access, in terms of diversity of setting, in terms of online -- and I'll come back to that. They are embracing, and here we are seeing that the young people are embracing the online education and the hybrid modes of delivery, hybrid modes where you are delivering online first and then having settings which are interface settings.

Now, I was talking to some of you today and some said, but we're not part of this digital revolution. I feel very uneasy about the online. You feel uneasy, we may feel uneasy, they don't. They're embracing it, they want it. In fact, you are going to see very strongly that this is something that they are asking for.

Not surprisingly, they also want an integration between the learning experience, the classroom experience, or the online experience, and the work experience. So they want an integration between studying and working, because that's how they will reach two things, one is an approach to learning that will help them understand the world and understand themselves, but also getting them -- it will get them to reach a level where they will be competitive in the job market.

Interestingly, the survey shows that the young people want entrepreneurship, they want to study that, they want to learn that, they want to be given opportunities to practice, to risk, to fail, and to start all over again. Entrepreneurship has not been fully integrated in higher education. They want something along these lines. They want this dimension.

And finally, in terms of innovation, they want a global proficiency. They feel that they are going to compete and work on a worldwide level and that we have to prepare them in higher education for this global arena.

So, flexibility is something they want, online and hybrid is really welcome, experiential, what I call experiential, the integration of the classroom experience, however it is, and the work experience, entrepreneurship, and global.

Now, how are we responding in higher education? And in order to do that, let me briefly discuss what higher education is doing and what's happening to us in many ways. You know, we have been a vertically integrated endeavor. We were and we are in charge of the following: knowledge production, which is research, knowledge dissemination, which is teaching, assessment, and credentialing. And everything was done within the same institution.

This vertical integration is now being, not replaced, but being supplemented by a horizontal integration. What do I mean by that? I mean by that that -- you are seeing now the phenomenon very akin to what happened to the car industry. When the car industry started, everything was done in-house by the same company, from the tires to the brakes to the production. Whereas now, the car industry is much more horizontal. They buy the best brakes from another company; they buy this part, et cetera, et cetera.

Well, in higher education, something similar is happening. You know, you are going to hear from the panelists and the panelists with us have been part of this movement. They are providing online education. They are providing online education, they are not moving into the credentialing. They are not moving into the assessment. They are saying, we are here -- some of the panelists are going to discuss it -- to provide you with the knowledge.

So: knowledge transmission.

We have other institutions, other endeavors, including the American Council on Education, working with some of these institutions saying, we are going to assess what you're doing. So, you see now, we have a decoupling of knowledge transmission and the assessment.

Other institutions are stepping in and saying, okay, to their students, it's okay, go for this knowledge transmission, go work with Coursera, with Udacity, with edX, go work with whoever you want. The assessment is being done by others and we are going to take this assessment and assess you personally and give you the credentialing.

So, you see, every single aspect of our endeavor now is becoming a discrete endeavor that is provided by different entities. So, moving from vertical integration and supplementing it with horizontal integration.

Now, I don't want to give you the impression that, in fact, the horizontal is going to replace the vertical. We are going to see a situation where the two are going to coexist and the two are going to create a tension in the system, and you are going to see many experiments, and some of our panelists who are leading that are going to discuss it, but frankly, five years from now, the whole situation is going to change also. We don't know; we're just beginning to see the change.

So, now that we described how higher education is changing, so how is higher education responding to these issues about cost, about global competition, about effective preparation for life and less opportunities than the previous generations? So, you are seeing an explosion of innovation. Some are doing it within the vertical module. So, for instance, we are seeing institutions saying, you know, we are going to shorten the time to degree, we are going to give you a no-frill approach, so if you want to have a residential experience, you're going to pay full fare, $40,000. If you want the non-

residential experience, we welcome you and we are going to ask you to pay $10,000. Institutions are doing that.

And we are also seeing a movement not only from, you know, focusing not only on selectivity, namely input measures, but also out put measures. What do people learn at the end of their endeavor? What are people absorbing? You know, how are we going to evaluate our net worth, our value in higher education? Traditionally they said, you know, higher education is focused on input measures. People now are focusing also in addition on output measures. By the time they leave the college, by the time they leave the instructional endeavor, are they ready? Are they ready for life? Are they ready for work? What are the skills? What is the critical thinking that they have acquired?

So, we are seeing this change, this enormous change, and -- but, I mean, those changes assume the vertical paradigm is remaining as is. There are people also moving into the horizontal. You know, you are going to hear from Coursera and Daphne has been working on that. She's one of the cofounders of Coursera. Coursera, edX, Udacity, and others are really saying, you know, this knowledge that we have is available. Come grab it. ACE is stepping in.

At some point people said, the assessment is going to be an assessment of the whole curriculum. ACE is stepping in and moving it to another level, to the level of the course. We're going to look at each course and provide an assessment of each course and then say to the world, this course is ready. You can take it because it fulfills all the requirements that you expect from a course like that. That hasn't been done before.

Finally, the credentialing. This is an area where the situation is still in flux. Traditionally, we gave the credentialing, institutions gave the credentialing. There

are many discussions about whether the credentialing has to be provided also at the different level. Some people are saying the states are going to do it; some people are pushing for some entities higher than the institutions to do it. It has profound consequences on us. We don't know where it will lead us and you are going to hear from the panelists that some are going to oppose it very, very strongly.

But the impression that I want to leave you with is that higher education is not standing still. When you hear that higher education is not moving fast enough, think again. You're going to hear from the panelists today and you're going to see that we are in a period of enormous experimentation and enormous innovation. Some will pan out, some will not. No one -- no one has the truth. Maybe John will contradict me. Where's John? John Sexton is here, he will contradict me.

So, let me close by stating the following: Why did we do that? Why did we launch this survey? We launched this survey for a simple reason. We live in a democracy and we have the most diverse system in higher education in the world. We have private institutions, public institutions, religious colleges, non-religious colleges, for profits, not for profits.

This diversity, it's what makes us unique. We value that. What is -- and in order to understand what we have to do with our students, with our customers, we have to be in tune with them, and that was the purpose of the survey. We cannot afford to say to the students, you know, we know what you need. In fact, they know what they need. And we have to look at ways of providing that. And frankly, we have to change many of our methods. So, that's the value of the survey.

But also another value is the fact that in this period of change, public policy has not kept up with what is happening. Actually, yesterday, talking with Daphne and Coursera, she was lamenting the fact that the military cannot access the material

and use it, but that they can use the for-profits and saying, you know, the public policy has not kept up with that. And that's an example.

We can give you other examples, and I'm sure the panelists are going to do it.

But finally, let me close with the following. American higher education flourished because it was built on a social compact between the citizens and higher education. We said -- we agreed that we have two roles, one is to educate the citizens and prepare them for a life of fulfillment and accomplishment, and also we wanted to ensure that the nation remains strong and competitive.

You are seeing now that the survey is a wakeup call for us saying, yes -- the public is saying, yes, we believe in this social compact, but at the same time, we want you to be more in tune with our needs. This is a wakeup call for us and we cannot afford to ignore it.

The social compact has to be rethought, redefined, and we are here to do that. Thank you very much.

(Applause)

MR. REILLY: Thank you. Thank you, President Aoun, thank you to Brookings, to our colleagues at Northeastern also who we've had a chance to collaborate with on this project, which has been very interesting.

I'm now going to go into public opinion and what people believe about higher education, which is not to be confused with reviewing all the facts. This is a perception of the facts. So, some of the things that people know is just not so, but we'll start from there.

The second point I would make is that in having some experience in presenting data like this, we're not going to present everything or the room would empty,

but this will be a very quick review of some summary findings that hopefully will spur on conversation and questions from all of you as you engage with the panelists.

But in the event that you would like to delve a little bit deeper into the data, we're all happy to do that with you and to share with you the questionnaire, the actual detailed findings if there's something in here that you find of particular interest.

This survey was fielded in October between the 13th and the 18th. We did 1,000 adults. It is a nationally representative sample. We did it via telephone, landline and cell phone. The margin of error of the total sample is plus or minus 3.1 percent.

We also then did an online survey of an additional 250 respondents, an oversample of younger respondents, 18 to 30 years old, that is of 250. The margin of error of that group would be about 6 percent.

In terms of key findings, you know, one of the things that is most important in this is that Americans strongly value higher education and consider it to be an integral part of the American experience. They see higher education as being one of the key tools by which they can achieve upward mobility and talk about it with a great sense of familiarity and aspirations within their own households.

Many believe -- or the respondents believe that college is more important today than it was to previous generations and there are more opportunities to pursue that education than in prior generations.

Americans, by and large, believe that there is a consensus that we are a global leader in higher education, but there is this sense that greater investments, change, innovation is required in order to maintain that leadership position.

And so, while Americans sort of are very supportive of this, feel that they have an intimate relationship with the idea, the concept, the experience of higher

education, they also see that there are significant obstacles that are developing that are making it harder and harder to achieve that four-year degree, that college degree that many of them aspire to have, either for themselves or for members of their families.

And in that they see, you know, a need for the institutions to change, to innovate, to meet them in the workplace in a way that allows for a more adaptable solution to lifestyles that they are living and to the challenges that they face as they look at those opportunities.

Seven in ten Americans believe that college is extremely or very important to achieving the American dream. This is an important part of that upward mobility with 70 percent saying either extremely or very important.

You'll note a couple times as we go through the survey I'll make a couple of demographic breakouts just of interest. If you look at this in terms of respondents that identify themselves as either being white, black, or Hispanic, you see that Hispanics give the highest rating to that at 77 percent, black Americans at 75 percent, and white at 69 percent. One of the things we have found in this survey as well as in other surveys, is that the most optimistic people right now in the United States about their future and their ability to achieve upward mobility are those of Hispanic or African-American or black origin.

Most Americans believe that a college degree is important because of the intellectual and personal benefits that it offers as well as job opportunities. We were struck by -- in asking what is -- how important would you say college education is for the following, even though we are in this time of people feeling great economic insecurity and dislocation, they speak of the college experience most importantly in terms of intellectual benefits, like for training and for critical thinking, new ways to analyze information, being able to enrich their personal development, broaden their social contacts, and to come in

touch with, you know, people of more diverse backgrounds, then listing, you know, finding a job, having job mobility, success, and getting promoted or advancing your career.

So, these sort of -- these more qualitative measures on top in terms of contributing to the quality of one's life and one's intellectual capacity, then moving on to discuss jobs.

Younger Americans are much more likely to believe that college will also help them to build a global perspective. One of the themes that came across through this in asking the question how much do you agree or disagree with the following statement, an important part of college is the opportunity to study or work abroad or gain a global perspective. You see with those on the younger side that is slightly more popular than as a sample as a whole or as those age 50 and older.

On a number of responses there was this key break between those who are 30 and younger and those who are 50 and older in terms of how they look at higher education.

Americans, particularly older Americans, believe that college is more important today than it was to previous generations and recognize its importance in terms of continued competitiveness. Would you say that achieving a college degree is more or less important today than it was for your parent's generation? Those 18 to 29, 66 percent scaling up to 79.

I think the important thing on this, though, to note, is that three out of four Americans believe that it is more important today than it has been in the past.

And then, in terms of, well, many feel that there are more opportunities to get a college education today, they are less optimistic or a little more ambivalent about what lies ahead in the future.

When we asked about, you know, opportunity to compare to the previous generation, there's a broad recognition that there is more opportunity today to achieve a college education than there has been in the past. However, when we asked them to look forward on this, you know, you see the drop off down to 45 percent from 64 percent as people begin to think about what might happen for the next generation. This is very much tied to the sense of the rising demands of their life and how they can fit the college experience into that.

I think that there is some fear that this becomes an experience that is potentially available to less and less people.

Yet, individuals -- this might fall into the category of what they know that just ain't so, but yet individual's expectations remain very high that their children -- this question was asked of those who have children under the age of 18 years -- how likely do you think that your children will go to college? Eighty percent saying extremely likely, 14 percent saying somewhat likely, 94 percent expecting that their children will go to college, so great optimism on that measure.

To flip to the other side of the equation briefly, we asked Americans, you know, what about the obstacles that are in the way of experiencing the college education? What are the big obstacles? The bright red bar is the sample as a whole, the lighter shaded bar underneath it are the younger respondents, 18 to 30 years old. So, what you see is that 86 percent, the top response, and 89 percent of those 18 to 30 say paying for college, including the cost of tuition, living expenses, and books, is the greatest barrier followed by navigating the financial aid process, including figuring out what are the best loan options and how much you will owe, navigating the finances of it remain the largest barriers. And you see that particularly among younger voters.

Balancing college with family and work commitments, the ability to step

out of whatever life's commitments are for a period of time to pursue higher education, a very pressing concern, as well as the time required to get into it.

We also asked respondents: do you or any of your close friends, family members, have you decided to postpone or not go to college because costs were too high? So, on the one hand, while you see this very high expectation of parents, you see this sort of overwhelming support for higher education being an important tool, you also see this experience that they all have where, you know, evenly divided, half of respondents, saying that a close friend or family member had had to either postpone or not go to college because of costs, and among younger respondents, 18 to 30, you see that that's 64 percent to 35 percent, that's really in their daily experience.

So, while great optimism and great ambition, also recognition that there are people around them who are not able to do that.

Americans continue to believe that the quality of education in the U.S. is among the best in the world. When we asked, thinking about emerging economies such as China, India, and Brazil, and more mature economies, such as Japan and those in Europe, how do you think the U.S. ranks in terms of quality for each of the following -- and then we asked about different areas -- government, institutions, business, corporations, banks, and financial institutions.

Ranking highest in that among the national sample saying that we're ahead of most, were institutions of -- were colleges and research universities, is the way that we phrased the question. Seventy-five percent of the national sample and 73 percent of those in the younger age group, 30 to 18, agree that the United States -- that America is ahead of those other economies when they are compared to -- in terms of delivering a quality experience and product.

Most ranked the U.S. higher education system positively, but one in

three, you know, give it a fair rating, 46 percent saying either fair or poor with 51 percent saying excellent or good. So, while we are seen as being ahead of other people, there is this sense that also there is some ambivalence in the response about how they would rank the quality.

When we asked this question of those who had attended some college or graduated from college, regarding your personal experience, when thinking about the costs and benefits, was college a good investment for you, 83 percent of the sample say yes, that it was a good investment. Only 16 percent say no. And when you look at those younger, it drops off to 76/24, but even in that age group you basically see an overwhelming positive response that the investment in higher education had paid off for them.

This sort of tracks along with age. Basically, the further you get away from your university experience, the more you value it. It's too bad, but we wish they all knew a little bit earlier. But it is a piece of data that tracks along age lines.

We also asked college attendees, you know -- we asked, was the burden of college -- the college costs, was it very worthwhile for you, the payback substantially outweighs the burden, was it reasonable in terms of the costs and the benefits are equivalent, or was it excessive? And again on this, you see basically 79 and 75 percent of either the national sample or the younger sample say that it was either very worthwhile or a reasonable investment in terms of the return that they achieved from that. Only 19 and 26 percent respectively saying that it was excessive.

We then asked -- we gave respondents some facts. In recent years, the number of people graduated from college has decreased, and last year showed a decline in the number enrolling in college. Do you think America can remain globally competitive if these trends continue into the future? And, again, overwhelmingly of the sample as a

whole, 75 percent said that this would cut to the issue of competitiveness, 67 percent also seeing that of those in the age group 18 to 30.

We then asked about the U.S. government and should it invest more in higher education, and this series of questions and the data, the internals that underlie it, you know, begin to talk a little bit about people's recognition that more investment is necessary in order to maintain that leadership position, 68 percent saying -- agreeing with the statement that cuts in funding to universities and colleges has lowered our country's standard as a global leader in education, 78 percent of younger respondents believe that.

I also just wanted to point out on this question, we also asked people to identify themselves as either Republicans, Independents, or Democrats, and you'll note that there's basically a very strong pattern where this is a consensus issue across how people identify themselves politically in terms of their party identification.

We also then followed on with our government needs to invest more in the higher education system, 81 and 88 percent respectively agreeing with that, and, again, while you see slightly less support among Republicans for that, you still see 64 to 30 percent in agreement with that statement, 81 percent among Independents, 91 percent among Democrats.

So, this knows really no ideological boundaries.

Americans, particularly young Americans, say the U.S. higher education system must change in order to remain globally competitive. When we asked that question, 83 percent of the sample agreed with that, younger voters up to 90 percent. Interestingly, when we then got into a couple of the issues about how that might manifest itself, to remain globally competitive the government should grant visas to international students that graduate in the U.S. so that they can remain in the country and work here. Interestingly enough, and maybe somewhat counter intuitively, you see that those who

would actually be in competition with those young graduates are most supportive of that view, 75 percent saying that they support that.

To recruit the best talent, American colleges and universities should give financial aid to deserving international students, 67 percent of those in the 18 to 30 group support that. There is a drop off underneath the majority to 49 percent among the sample as a whole, so you can see that in that group, as you get above 30 years of age, that is a much more contentious issue, financial aid to foreign students.

When asking about innovative options that would help defray the cost of education, the no-frills option, which has been mentioned, 73 percent support that concept of being able to opt for an economy class program, so to speak, in order to bring down costs. Seventy-two percent say that they would have opted to spend one or two years in public service if in return that could have reduced their tuition costs, so broad-based support there.

When we asked individuals about some programs offer online degrees by taking college level courses on the Internet rather than in-person classes in traditional classroom setting, do you think an online college degree provides a similar quality of education? Now, here's where you begin to see the sort of age difference. The national sample, the sample as a whole, 49 percent, a little more ambivalent about this, particularly older voters, but among younger voters, those -- respondents, those who are experiencing this right now, 61 percent saying that they agree with that statement, only 36 percent disagreeing.

And then, when we asked them, will those degrees, those online degrees, be just as recognized and accepted among employers as a traditional college degree in the near-term future, about five to seven years, again you see 68 percent of younger respondents, 18 to 30 years old, agreeing with that statement that the market

will recognize that degree more as being on par with a traditional degree.

We then asked the question about the hybrid experience. Some colleges offer hybrid programs that provide a mix of online and in-person instruction. Do you think the hybrid programs involving both online and in-person instruction are a good option for working people interested in going back to school? Eighty-seven percent agree. Provide greater access to college for more students? Eighty-four percent agree with that. ...are a good way to provide more flexibility and choice for students? Eighty-four percent agree with that. And provide more benefits to students than online courses alone? Eighty-three percent.

Just one note, this question was asked of those in the 18 to 30 age group only in the online survey, but of that group, you see this pattern continuing with broad acceptance -- overwhelming acceptance of these kinds of options.

We also asked: some colleges and universities are developing new ways to educate students and prepare them for the workforce. Please indicate how important you think each of the following is for U.S. colleges and universities to focus on. Teaching students about entrepreneurship, including how to start their own businesses, overwhelming support for this. And this came up in a couple of other questions where the idea of getting genuine work experience and that kind of training which will immediately translate into making the graduate or the student more employable get a very, very high level of support, particularly among younger voters.

Granting certificates or credit for prior experience including previous work, 60 to 63 percent, a little less support, but again, an overwhelming majority supporting this.

And then, finally, some colleges offer cooperative education programs in which students alternate semesters of academic work with semesters of full-time paid

unemployment through work internships in their chosen field. Do you think this type of cooperative learning involving a mix of classroom and work during college is a positive experience? This received the highest levels of support from respondents. Again, this was asked of the total sample. Is a good way to help students find the right career path? Over 90 percent agree with that. Helps students develop more applied skills for real world experience? You see 92 percent of 18 to 30 year olds agree with that. Develops candidates who are better prepared for the real world? Ninety-two percent supporting that. And better prepares graduates to find employment in today's job market? Ninety-three percent supporting that.

So, that is a quick, treetops tour of some of the things that we looked at. As I said, we can -- and any way that we can help you, if you want to delve into the data a little more, we'd be happy to do that offline. But hopefully this will help to provoke the beginnings of a good discussion. Thank you.

(Applause)

MR. LEONHARDT: Good morning, everyone. Okay, I'm David Leonhardt with *The New York Times.* Thank you all for coming. We're going to spend a bit up here talking amongst ourselves with this great panel that we have and then we're going to open it up and have a larger conversation with you all and when we do, I'll say so, and we'll have some microphones circulating throughout the room.

So, I'm going to start by introducing our panel and making sure everyone's sitting in their assigned seats.

Thank you all for coming. I was just saying, if you missed it, that we're going to start by talking amongst all ourselves, we really have a fabulous group of people here to talk about these issues, and then we're going to open it up and I think we'll have some microphones going throughout the room and I'll acknowledge folks.

So, I'm going to start on the other end of the panel with President Sexton, who is the president of NYU and before that was the Dean of the law school there during a period when, anyone who is familiar with New York, as I am, or with law schools, knows the law school really had an incredible run and entered the very, very top echelon.

President Sexton also has some familiarity in a direct way with economics having been the chairman of the board of the New York Federal Reserve.

Sitting next to John Sexton is Prateek Tandon, who is an economist at the World Bank with an emphasis on innovation and the economics of higher education. He wrote the Bank's recent 2011 flagship publication on higher education and he also has a specialty in Asia and the Pacific, which is important, obviously, right now, in so many ways, both economically and in terms of higher education. And Prateek is a Rhodes Scholar.

Next in our line is President Broad, Molly Broad is currently the president of the American -- I always refer to it as ACE, does it have a fuller name? Are we allowed to use its fuller name? American Council --

MS. BROAD: Council on Education.

MR. LEONHARDT: -- on Education. Okay. American Council on Education, and before that was the president of the University of North Carolina during a period when it went through a rapid expansion. And in some ways, I think, expanding of our existing universities is an issue that we don't pay enough attention to. One way to educate more people, of course, is to build new universities. That's not the easiest thing. Another way to do it is to do so by expanding our existing ones.

And President Broad also has -- her academic background is in economics.

Next coming down our row we have Daphne Koller, who is a cofounder and co-chief executive of Coursera, one of the MOOCs that I'm sure many of you have heard much about. Her academic background is in machine learning and probabilistic models, and I love that probabilistic models has now become a buzzword in Washington as well.

She is a 2004 MacArthur Genius.

Next to her is the Honorable George Miller. Congressman Miller, I'm sure many of you recognize, is the senior Democrat on the House Education and Workforce Committee. He is one of the authors of and the force behind many of the most important education bills that people here know of and that continue to affect education policy. This is subjective. There are many other fine institutions of higher learning, but I think Congressman Miller is the product of the single most impressive American Institution -- set of institutions of higher learning, the public universities in the state of California.

And next to me is Michael Horn, who runs the education practice at Innosight Institute and has spent a lot of time thinking about disruptive innovation, particularly with Clayton Christensen. He and Professor Christensen have coauthored a book, which is called *Disrupting Class: How Disruptive Innovation will Change the Way the World Learns*, and the basic idea that Michael spent a lot of time thinking about is how to transform the factory-centric model of student learning into a student-centered model.

I'm going to start with some very brief remarks. I'm David Leonhardt, the Washington Bureau Chief of *the New York Times*. I used to be an economics columnist, and exaggerating only slightly, I'm the only person in my family who's not a teacher, so I like the chance to hang out in education settings whenever I can.

I'm going to start with just a couple quick remarks to try to sort of set the groundwork for where we're going to be and the well go from there.

I think there's no question that there's an enormous amount that works today about American higher education, although I also think we're going to spend less time today talking about what works than what doesn't because it's probably more productive to focus on what doesn't, but we should spend some time on what works. And I would say there are two broad things that are clearly working. At its top levels, American higher education remains the envy of the world; it remains the place that people want to come from all over the world, to be a part of, to work at, to study in.

And the second issue is that for all of the problems with the broad part of education, it continues to deliver a phenomenally high return. The unemployment rate for college graduates today is 3.8 percent. You can think of it that the United States of college graduates are not currently in a recession or even a particularly tough economy. The rest of the economy is. The unemployment rate for everyone else is about 8 percent.

You can look at all kinds of academic studies that try to control for different things and find that higher education tends to deliver pretty high value or you can look at much more obvious things than that. You can look at the fact that in almost any subgroup of the population, the most educated -- the more educated a group is, the more money it tends to make. And I understand the causality goes both ways there and so you can look at those more sophisticated studies if you want, but I think some of the broad looks help as well.

If you look at what's happened over the last 30 years to men's educational attainment, it's stagnated. What's happened to men's wages? They've stagnated. What's happened to women's educational attainment over the last 30 years?

It's gone way up. What's happened to women's wages? They've gone way up.

If you look at the two most educated religious groups in this country they are Hindus and Jews, those are also the two highest earning religious groups in the United States.

If you look around the country and look at which cities that have lost large parts of their former economic base and have still thrived, they are often cities that educate large numbers of their students, that have institutions of higher learning, and that attract highly educated people. Why is Boston so prosperous while so much of upstate New York is not? Why has Minnesota done so much better than other parts of the industrial Midwest? Education is not the only answer, but it's a big part of that answer.

And at the same time, our system of education has big problems. For one thing, only about half of people who enter colleges manage to get a degree. That is true even when you do all the controlling of graduation rates that colleges ask us to do. It's not as if all the dropouts are going and graduating from somewhere else. There are massive gaps by economic status. Well off kids tend to become college graduates. Kids who don't grow up with a lot of advantages tend not to.

And while cost is a tricky issue, because it is still true that higher education is a good investment, it is true that list prices don't capture what the actual cost that many students pay. Cost is still a problem. You saw in these survey results, many people think it's a problem and so there are many people, even people who could get financial aid, who aren't going to college.

And so then the question that faces all of us is: what is it that higher education can do to innovate, both within itself and in terms of disruptive innovation coming from the outside to try to address some of these problems.

And I think I'm going to start all the way on the other side with President

Sexton and ask you that broad question, which is, what is it, really, that higher education can do to start to keep its strengths and address its weaknesses? And we'll go from there.

MR. SEXTON: Well, I think the single most important thing that higher education has to do is what it does best, and that is, think. And thinking is the essence of what universities have been doing for a thousand years and as we think, we should be unafraid to disrupt the received wisdom. That's also been a great strength in the advancement of knowledge. So, you bring that to this context, I think we have to be creative and innovative.

That having been said, we have to be very, very careful to think in a nuanced way and I worry that conversations about the future can become bipolar very quickly whereas actually I think one views, as Joe said, American higher education as a great symphony of diversity, one should be thinking about that which we will discuss today and the various disruptions that are coming both from technology and from globalization.

We should embrace them as opportunities to create blended, nuanced solutions, and my greatest fear, as we enter this, is that we're going to get caught in a kind of pervasive zeitgeist that I call "the cost cloud" where the fixation is only on creating the cheapest possible delivery mechanism for what is a unit called knowledge instead of remembering that what we're trying to develop is an education for fulfilling lives for as many of our citizens as possible.

So, for me, I worry about, as we do the good thing, which is think about how we spread the benefits of education, not just transmitted knowledge, but education to as many people as possible, that we don't create stratification, which exacerbates the exclusion of people who aren't connected or don't have the resources.

So, I think we have to think, think creatively, but remember the core assets that have made higher education perdure through millennium and American higher education as great as it is.

MR. LEONHARDT: President Broad, what would you say to someone who said, I have no idea what kids are learning in college. There are no tests that they take at the beginning and at the end. There was a study, I believe by an NYU professor, that I know got some criticism but suggested that kids didn't -- there wasn't a huge amount of value added.

What would you say to a parent or a student who said, how do I know what people actually learn when they attend colleges?

MS. BROAD: Well, that's a very good question and it is the focus of a considerable amount of effort today in the issue of assessing learning outcomes and to ensure that the things that really matter, that ability to have intellectual skills, to have some deeper knowledge in a specialized area, to apply what you have learned in a real world environment, and to be able to communicate effectively orally and in writing, those are the things that I would urge they look for.

MR. LEONHARDT: Any other thoughts about measurement from anyone else?

MR. TANDON: Well, I can say a couple of words about what some countries are doing in East Asia in terms of echoing some of the sentiments that we saw in the findings in terms of connecting labor market outcomes and the education system together. And so, in a number of countries, like Indonesia, Philippines, Vietnam, what we're seeing is that employers want students, tertiary graduates, who have better technical skills, better academic skills, but also as President Broad just said, also a suite of non-cognitive skills that make them effective in the workplace, their communication,

their leadership, their teamwork. And these skills are developed throughout the life cycle, but as students get closer to the labor market, they seem to take on a greater preeminence.

So, beyond learning outcomes, beyond looking at a transcript, employers also want some kind of evaluation system for how a student works in a professional setting or what their communication skills are.

MR. LEONHARDT: I guess, even if there is sort of agreement about what people should learn, I sort of wonder, how do we know whether they are learning it? Is that something, Congressman, that you think about? I mean, you send a lot of money to higher education. And is there an argument that you should ask for more accountability in return or do you think that's a bad idea?

CONGRESSMAN MILLER: No, I think we want to ask for more accountability in return. The obvious question is, how do you achieve that accountability and how does that accountability not become burdensome in the process of learning? Because it can obstruct learning, as we've seen, I think, in some cases people's perceived notion of accountability in the K-12 system has obstructed learning and certainly has obstructed comprehensive learning as they've tried to break it down into bits and pieces for accountability. But when student debt is approaching a trillion dollars and we're spending annually $240 billion on tax incentives and student aid, you bet people are starting to ask for accountability.

I would be remiss if I didn't wake up and say fiscal cliff -- fiscal cliff here, but the fact of the matter is, people are going to start asking all across the federal budget, what are we getting for the dollars we're spending? And certainly people who are borrowing money are asking that question.

And yet at the same time, those questions sound as though they're

dampening this conversation about the remarkable things that Daphne and other people are doing. In fact, they should enhance that conversation because we want to look at where do we find value for students and families who are seeking an education so that they can participate in this broader economy, in a broader democracy. And accountability and the questions of what is it I'm paying for should, in theory, in my mind, enhance that discussion.

I think of it as a way to put a wet blanket over all of this by asking those questions and the trick will be whether or not the Congress can do it the other way.

MR. LEONHARDT: Professor Koller, you have a foot in both the legacy -- I always cringe when people say legacy media -- legacy higher education and also obviously a very big foot in the newer part of it. Seeing it from both those perspectives, what take have you emerged -- what is your view about should we do more to try to evaluate what kids are learning or is that a dead end? Should we just trust that, to some extent, the market's going to sort that out?

MS. KOLLER: Well, I think one of the things that has emerged from the use of technology in education is that the question of what exactly are people learning and how do we assess it has to come to the front and center of how these new courses are constructed because it's not possible, especially when you start talking about how do we assess formative and summative assessments for courses that have thousands of people in them, it's not possible to just use the traditional sort of, somewhat, ad hoc assessment mechanisms that we've employed in higher education. And I can say that having been, as you say, in both camps that typically the assessment mechanisms that we use in most higher education courses are what the instructor comes up with as a good exercise to use that week. And there isn't, in many courses -- in some there are, but in many, sort of a really rigorous sort of structuring of learning outcomes and how

assessments align with those learning outcomes. And when you're constructing a course for thousands of people, that effectively has to occur because it's impossible to construct a course effectively otherwise.

And so I think this is not the solution to the assessment problem, but it's a very valuable step along the way.

MR. LEONHARDT: I mean, is this a decent rule of thumb that we should give people great flexibility in the methods they use, but we should ask to see the results?

MR. HORN: Yeah, that's a very strong principle of the innovation, we see, to unconstrain it. When you are very -- you dictate the processes and inputs by which people can use, you necessarily hamstring innovation. The analogy I always like to think of is if you said, we want you to make a dinner for us and we want it to be truly innovative, but you have to follow this exact recipe and you have to use these exact ingredients and so forth, you would get exactly what was in the cookbook, not something terribly innovative.

And that's a lot of times what we do in public policy when we look at education is we are very constrictive around -- or restrictive around these inputs and so forth, whereas an innovation mindset would say, these are the outcomes we're expecting. We expect lots of different approaches to solving these, depending on the circumstances, depending on individual goals and so forth, and you start to see a flowering of options.

And I think our higher education system, when you think about what it does well, it's something that's well suited for and I think it's really important what the Congressman said, which was, being really mindful as we move to this outcome framework of a way to think about it that allows for that plurality of outcomes and doesn't get so micro-targeted on learning outcomes, when people go to higher education for all

sorts of things, from culinary reasons to getting expertise in management to learning liberal arts curriculums and so forth. Having an expansive view of what those outcomes could be, I think, is also important.

MR. MILLER: I think also, if you look at the current system of accountability, if you will, if that's the term you want to use, it ties you to a person, a place, and a particular process, as opposed to knowing the competencies you want to achieve, where can I go to find the best presentation of these competencies, as opposed to a particular day, and a particular hour, and a particular place, and that's very limiting for a population that finds that very often they have to spend some of their time working to provide the wherewithal to continue their education, and that's a remarkable difference And I think the question is now, do you have, as we're looking at K-12 education -- do we have the ability to measure those competencies, not on an ad hoc basis, but based upon what either employers or graduate schools or others believe the competency should be for your participation in that particular system.

MR. SEXTON: So, I think this has taken a very good turn in terms of the values that I think are important for higher education. Let's assume we create the world that's just been described where we've got this proper balance and transparency and a dashboard of capabilities that each institution of higher education provides, and let's assume we haven't gotten ourselves into this modality where cost is the essential driver, okay, where we understand people -- if the dashboard is fulsome and they want and can handle a fulsome dashboard, ought to pay more for that and, at least for some, we should have that available.

Now two issues come right to the front. Are there parts of the demographic out there who don't have the knowledge or the confidence to access that information? Should we have something like guidance counselors for America in inner

cities, which I think frankly would be extremely important, that would go to courses that might be online and show capacity in such courses and develop self-confidence in such courses? And then, can we create a finance mechanism that doesn't create a symphony of higher education opportunities where only the wealthy and well informed and well connected can get to the violin section? Or where at least, if a person is a great oboist, we get them to the oboe section and don't relegate them to percussion.

This is the challenge then. How do we get the information out to populations that don't have the sophistication that is assumed in a simple transparency model? And then how do we create a financing mechanism that allows the poorest to access the highest quality if that's the right match for them?

MR. MILLER: Do I get to compare the new system against the current system? Because I think I can beat you right now.

MR. SEXTON: No, no, there's absolutely no question that we're nowhere near the world that has been described either in your accountability or in what I've described as accountability 2.0. I'm just saying, as public policy makers, we have to know the real target we're aiming for, and you're noted for that, but the Congress isn't.

MR. LEONHARDT: President Broad, you wanted --

MS. BROAD: So, I think it is not a huge surprise that we are seeing the richness of the diversity of students trying to find options for them that don't exactly fit, from institutions that were established to take 18 year olds from adolescence into adulthood in a setting where they were fed and housed and provided medical care and counseling and so forth.

The great strength of American higher education is its diversity, and we're seeing the composition of who are American college students become more and more diverse. Only 27 percent are those 18 year olds who graduated from high school

and are going full time at college.

So, I think it is a natural extension of the openness and innovation of our diverse system that we are exploring new ways of delivering.

MS. KOLLER: Well, I wanted to speak to President Sexton's comments about the guidance that's necessary to make sure that people end up in the right place, and I completely agree with that. I think there are large populations, large factions of our population, that don't find the right match for them and end up going in a direction that's -- that doesn't allow them to live up to their full potential.

But I'd like to speak to the other side of that coin, which is, the access component. That is, today, even if someone did have that ability to match themselves into the right place, in many cases, they just do not have the ability to end up in that place because of financial, geographical, or family constraints. And I understand your point about the costs and that we shouldn't over obsess about the costs, but I think we should make sure that our system of higher education does provide those people with the ability and the motivation, with a path that allows them to make full use of their potential. And right now I don't think we are in that position because costs have gotten to the point, and we saw that in the study, where I think -- certainly in perception, but also in reality, large numbers of people are not making use of their potential by going to college and getting the education that they deserve. And that's something, I think, we should spend at least as much time thinking about.

MR. SEXTON: I agree.

MR. HORN: I was going to add on two thoughts to that, one being on the mentorship, if you will, to help people find pathways. I suspect that two things will happen to help that along. One will be, I think you'll see a lot of technological innovations that help people in very low cost, more accessible was, start to find these pathways. And

the other thing, I think, is as K12 education becomes a more blended learning development, combining online learning with schools, you're going to see a change potentially in the labor force where you'll actually have lots of team teaching with people who are similar to the Western Governors University model in higher education where you have mentors that are there with the students through that experience.

You may start to see the same thing develop in K12 education, which I think would be a great thing toward moving that forward.

The second thing that I just thought was worth talking about is, I agree, we shouldn't be talking about the cost for the cost's sake, if you will, but there's a number of institutions across this country that are in a fiscally unsustainable position, whether we like it or not, and so while it's true that in many cases we can expand certain colleges that are already existing, in the state of California where I live, that's actually not possible right now, and we're doing the opposite right now, we're actually shrinking, among our community college system, it's like 400,000 students or something like that, within the state university system and so forth, because we have these models where fundamentally when you add students, if you don't also add -- while you get increased tuition, because the cost is more than the price that they pay, you actually lose money.

So, it's basically a catch-22 of a recession. When people want to go back to school, there isn't public dollars to help these people go back to school and these universities have to contract at the same time and it's become really exacerbated. And what I suspect you'll see is these disruptive innovators, like Coursera, partnered with institutions, low-cost institutions that help make meaning of these things like a UniversityNow, their university's New Charter University, things like that, I think you'll start to see these interesting partnerships come up and solve these problems and then help people so that they can have these different opportunities when it makes sense.

MR. LEONHARDT: We'll circle back to cost in a minute. Let's just spend another minute on this -- some of this idea of information and how can students get it. One thing that strikes me is, imagine any number of different kinds of students. Imagine an 18-year-old who has just, against all the odds, thrived in her high school that is not so great and now wants to find the college that is known for helping kids who need some remedial work but are deeply ambitious, right, or let's imagine the 18-year-old who wants to become a nurse and wants to figure out what school in a certain geographical area is going to best help him learn a certain set of skills, or a 25-year-old who has a year of college.

Think about any number of these potential students. Where do they go to get actual information? And as best as I can tell, the answer is nowhere. Right? As best as I can tell, there is nowhere for those students to go and actually get a sense for how do these places stack up in terms of what they actually teach.

MR. MILLER: Where does anybody get information today?

MR. LEONHARDT: I don't know.

MR. MILLER: Where do they go to get information that they really want? They go on to a network of their friends and they eventually find themselves at the destination that might look like what they need. If there's a waiting list at the community college for the basic sciences or the basic nursing courses for a degree in nursing, then what are the options available to me? And pretty soon you'll start searching out and you'll find Coursera that might be able to provide you 9, 10, 15, 20 units available that you can take now while you're waiting to get into those classes that you'll have to take the labs or what have you that you will need.

And the fact, these young people, this generation generates a huge amount of content and information for one another, we just don't allow them to use it in a

school setting, but they do generate this amount of information. It does not take long to get a very complicated question answered. And I think that's the difference here.

I mean, right now there's this maze. If you can take the finance end of the college education and the navigation of a campus, it's a pretty complicated process. It's changing, but it's very complicated for parents and others. That's the system we have to beat, for the moment.

MR. LEONHARDT: Right. I guess --

MS. KOLLER: I just wanted to say that one of my favorite aspects of the online education model is the fact that it allows for risk-free exploration so that students who don't exactly know what they're looking for have the opportunity to try out different disciplines, different levels of challenge, and see what suits them best as opposed to just relying on their friend for advice and what their cousin did when they went to school and various other less rigorous forms of trying to figure out what's right for them.

And it's risk-free because it doesn't cost them anything, it doesn't translate into a failure on their transcript, they don't need to go away from home in order to try things out, and I think the fact that it allows people to really find their calling and potentially aspire to a level of challenge that otherwise they might have steered away from because no one in their family had ever aspired to that level of selective university. I think that's one of the biggest opportunities that we have in order to make sure that people really do end up in the place where they belong.

SPEAKER: My worry is that the information that students now have, to use a political analogy, is akin to trying to judge who's winning a campaign based on the size and enthusiasm of rallies, right, which we know is meaningless, and what we need to get kids is something more akin to polls, like -- I don't mean actual polls, but I mean objective information that would say, hey, you know what, half my friends who want to

study nursing, who want to become nurses, went here and half went there, and well, lo and behold, the ones who went here learned twice as much. And my concern is that there is literally no kind of consumer information in our system for that.

MR. TANDON: Sure, I think it's a very valid point in terms of marshaling this type of information in a very systematic way. So, in some countries like in Japan and Korea, they are giving their institutions much more autonomy over delivering their services in terms of their financing, in terms of their budgeting, in terms of their staffing, in terms of their curricula. Countries are also demanding much more accountability by putting a very fine point on the external quality assurance, for example, by mandating the transparent disclosure of labor market outcomes or the graduation rates or the learning outcomes or the research outputs of institutions, and that's done in a very systematic way.

You know, I'm not sure the extent to which that type of repository exists here, but it could be one step to answer that kind of question that you just raised.

MS. BROAD: So, kids from middle income families whose parents went to college can figure it out very well, thank you. You know, they go to the College Board websites and they mine those to try to advantage themselves and pick out the best institution for them.

It's for the kids whose parents didn't go to college, who maybe did well in high school, but even the cost of applying for college for their family, if they file three or four applications, would be a significant financial question at the kitchen table, and we don't make it easy for those students to find the path to the best college for them. I think that's what the short answer is.

MR. SEXTON: So, again, at the risk of being utopian here, I think the ideas around social media that have been developed and the use of things like Coursera

are wonderful. I think there's a step farther we can go. So, think about the LEEDs standard for environmental rating of buildings. A voluntary system, it's not a ranking system, best practices, and you get, you know, platinum, gold, silver, bronze in a kind of peer rated thing. And this makes a difference. People pay extra rent or take extra pride in having a LEEDs building.

In higher ed, something called the Jed Foundation is in the process of creating a similar voluntary system in and around student wellness program. Their particular interest is student suicide. But one could imagine a university that wants to put a lot of effort into student wellness trying to get to a platinum Jed Standard.

Now, one could imagine a dashboard of any number of things where you could have such transparency, and a student or a family could decide what's important to it and could see that correlation.

This is a sharp difference from the information that is most available to the social networking students, which frankly is very destructive and that is these ranking systems, which are flawed, but assume that there's one number one, one number two, as if we were dealing with football teams. Even the football (inaudible) are in -- Notre Dame should be number one, but put that aside, there isn't the number one university. This is the question of the match and the -- so, I think we have to develop techniques, I suggest this dashboard idea, for example, to supplement the social media and so forth and then I come back to this, we must get students, recent college graduates, out into the neighborhoods where the poor and uniformed are to tell those kids, first of all, have hope, you know, those brains are being wasted because of a lack of expectation and a low horizon. And secondly, give them the information to use the various devices that are here.

MR. LEONHARDT: So, one of the issues here, I guess, all the issues

surrounding accreditation, right, and we just had something interesting, which is ACE has said it's going to evaluate some Coursera courses, right, and there's been some debate about whether this is a threat to your current members. Can you talk a little bit about your thinking behind that decision and then --

MS. BROAD: Sure. So, ACE has been evaluating the college credit worthiness of offerings outside of accredited institutions for like 60 years. So, every course of every branch in the military is evaluated for whether it is college equivalent at the technical level, lower division, upper division, or graduate. And we do the same thing, and have been doing it for a long time, to major departments of the federal government -- the IRS, the federal aviation -- and we do it for major corporations.

So, this is something we've done -- we have teams of faculty, an inventory of more than a thousand faculty members, and so shifting that focus now to a new means of delivery, namely, the MOOC, is an exciting opportunity for us to raise our game.

I can tell you, some of the best faculty, when they hear about this, ask if they can be on the team because they think they're going to learn a lot from the process of evaluating these courses.

So, we'll be making some modifications, as I say, to raise our game as a result of the different ways in which this delivery occurs, but we're also going to, I think, get smarter collectively from taking advantage of the data that is gained from what works in these courses for students and what doesn't work and how do you enhance it and what are the circumstances in which students learn better, is a game interface, what is -- how does video -- how is peer review, crowd sourcing, a whole set of new techniques, how do they work? And are the comparable to the ways in which our standard courses are evaluated?

So, I think we are in the midst of a fascinating experiment and we're going to learn a lot.

MR. LEONHARDT: Can you talk about it from your perspective? I mean, do you think long run -- and I don't just mean capital A, Accreditation, but things like accreditation, including Accreditation, will be a really important part of the online world? Or do you think it will be more -- and I don't say this negatively -- more of a kind of Wild West free market in which things like accreditation don't matter but the market sorts it out?

MS. KOLLER: So, there are different kinds of populations of students that have come through our doors and they have very different needs. The first population, that was the bulk initially of our student pool were people who were continuing education. These are people who have a degree, often more than one degree, and are looking to learn something new either because they want to change their career, their lives, or just because they want to expand their knowledge. And I have to say that for them the question of whether a course is credit bearing in the traditional sense of the word, is completely moot. They're never going to go back to school and get another degree and they could care less.

And so, for them, a meaningful credential, something that they can present to an employer, that's important, but does it have to correspond to a traditional credit bearing class at a university? The answer is no.

And so, I think in that respect there is a demand for something that's not traditional college credit, and I have to say, having looked a little bit at this whole notion of continuing education and the kind of accreditation that happens there, we're already in the Wild West as far as that's concern. I mean, except for vertical, like medical education, and even there, the lack of sort of consistent standards is quite striking.

Now that we have moved and expanded our courses to more of the introductory courses, undergraduate courses, we have a lot more demand from students who are more traditional college goers, that is people who do not yet have a degree. And I personally don't see the degree as going away any time soon. I certainly hope it won't, because I think there is more to a degree than the isolated set of courses that you have taken and you can sort of present as a transcript. I think the degree is one of those cases where the whole really is bigger than the sum of the parts.

And so, I would hope that as the ecosystem around this evolves, we come up with a notion of a degree that is able to assimilate some of these less traditional offerings that might occur either via online experience such as Coursera or via some other mechanism like other prior learning that the students might have had while still not losing the benefit of having sort of an umbrella degree that provides a student with a more sort of holistic experience.

MR. LEONHARDT: Is the whole bigger than the sum of the parts because it is a task that a student has to complete and when the student does, it is a lesson and a sign that they can do that? Or is it something else?

MS. KOLLER: Well, I think partly it is the fact that you've completed a much larger course of study and you've been able to make your way through it, but I also think that you develop a much bigger picture from having a set of interrelated topics that you've learned that suddenly gives you a much broader perspective than just each one of them in isolation. So, I think it's more than just that.

I also think that for colleges, certainly the good ones, the social experience, the maturing experience, the sort of being put in an environment where intellectual discourse is part of the norm of daily life, I think that is an experience that more people should have access to and I don't think we should get rid of colleges.

MR. LEONHARDT: Let's spend a few minutes on cost before we open it up.

MR. MILLER: Let me just interject here, not for discussion, but for consideration. You know, we're looking sort of college forward but if you looked at college backwards, if you said, what's the impact of this on K through 12? What about the students that believe they have a lot of time and they're not challenged and they've taken the AP courses but they'd like to take additional courses for credit? Credit becomes very important to them in terms of their entering college or presenting it as part of their total transcript, and I'm just trying to think of what that impact means flowing back the other way, because I think we're at a point here where colleges have maybe their second chance in history to have a profound influence on K through 12 education.

MS. BROAD: So, imagine --

MR. MILLER: They could be drivers of K through 12 change.

MS. BROAD: Imagine the high school kids who instead of wasting their senior year, decide to take these MOOCs to try something new that their high school didn't offer, and they have some evidence of their achievement. Isn't that a great advantage?

MR. MILLER: The data sort of suggests that, you know, young women are prepared to move on after their sophomore year, young men are waiting for the last strike of the last baseball game in the spring and maybe the one more swimming meet and then they'll leave.

SPEAKER: And their 30th birthday.

MR. MILLER: But there is great opportunity in terms of students time and, again, back to the cost.

MS. KOLLER: We have 13 year olds who have taken our courses and

have -- more than one, including some courses that are advanced undergraduate, even graduate level courses, and I think providing students the opportunity to move ahead a their own pace is just a remarkable thing that we can do.

SPEAKER: I do think in certain situations that can work really well because for a kid who's at a high school, if the high school is not giving them stuff to stimulate them, they need something, they can't wait. But I do worry a little bit about some of the notion of how much we're accelerating kids. I mean, I think BC calculus for some of the best math students in the country can still be challenging as a 12th grade course, and I do worry that there's a little bit of this arms race in which we've decide it's good to have an eight grader take calculus, whereas I think it would be good to have more challenging calculus courses for high school students rather than shipping tenth graders off to the local college.

MR. HORN: But I think if we break apart the factory model notion of time as fixed and learning is highly variable from students, it's going to throw out all the assumptions we think about, you are this old, you take this course, out the window, and I don't even think we know what this will look like in 10, 15 years if we go there. What the observation in competency based learning system tends to be is that both people who are typically underperforming as well as over performing actually all accelerate much faster through the material, and what we think they can do versus what they can actually do, we tend to underestimate that.

So, I don't think we'll actually know what this will look like, but I don't think we have to have preconceived notions one way or the other. It will be when you've truly mastered it, then you move on, not, gee, you ought to be in BC calculus as an eight grader just because we said so.

SPEAKER: I worry that the preconceived notion now is the earlier you

take a course, the better it is.

MR. MILLER: You could make their parents take it first and then they could decide whether that's --

SPEAKER: Exactly. I like that idea.

SPEAKER: And Sal Khan makes a great point of this book *Khan Academy*, right, which is that today with the tracking systems, because if you don't get onto that high track, then it has already led to some destination for what it means for you in college and so forth, that's a flaw of the underpinnings of the system today that goes top to bottom, but this is going to disrupt that.

MR. LEONHARDT: And if you look at what trouble multimillion dollar businesses have projecting how good a 22-year-old athlete will be in three years, it should give you great humility about protecting how good a 5-year-old will be in 12 years.

MS. BROAD: David, we should have the problem of too many young people taking calculus.

MR. LEONHARDT: That's fair. Okay, so on cost, Congressman, there have been several efforts in Washington to try to restrain costs, shame lists, other things. I'm going to give you a quick analysis in part so you can disagree with it or so you can use it as a launching point.

It seems to me the attempts to restrain how much colleges spend on students and their list price have largely not succeeded. There is relatively little sign that policy on a state or federal level has really helped colleges restrain that portion of the cost.

The way that policy has succeeded is by expanding things like Pell, and so I guess the question I would have is, is there a way to have more success on restraining cost growth on the front end, and then on the back end, do you think in the

fiscal cliff and going forward, you can keep Pell not only where it is, but growing at the rates it would need to grow?

MR. MILLER: I think I've got to go.

(Laughter)

MR. MILLER: We have done a pretty good job with the last higher education bill, the financing of making student debt more manageable, providing for some forgiveness, which is part of the managing of it, making it somewhat less expensive, making college more affordable. We haven't touched the idea of really having any impact on cost because we've been outrun by the withdrawal of resources by the states. Anything we would do is de minimis compared to the state of California dropping from 80 percent support for its public institutions to 30 percent. That just overwhelms everything else.

And you had this -- right before the crash, you had this situation where you were better off as a middle class student financially getting into Stanford than you were in to Berkeley. What the hell was that about? You know, a big endowment, I guess that's what that was about.

But the question of cost, to me, is what happens with the MOOCs and these related issues, because we live in a capitalist system, and I've spent a good period of my time dealing with for-profit institutions that wanted all kinds of reimbursements for units that didn't exist, units that weren't comparable, and all of the accreditation in the world couldn't keep up with them.

By the same token, hundreds of thousands of millions of kids have gone to those -- young adults have gone to those only to find out later that they weren't transferrable units, they weren't going to be accepted, they had to double back and increase their cost.

So, the question of what is it we have here and what values are we going to assign to it for the traditional unit, I think, Karen or somebody said the other day, when we're doing seat time, we're measuring the wrong end of the student here, but that's how we measure it in college and even in K through 12. So, we have to rethink that whole question because as it was suggested in some story the other day that you can take a MOOC and you can link it up to Duke and Duke says, well, it costs us about $5,500 to present a course, and so that course is going to cost you $5,500. Wait a minute, Duke's 500 miles away from where I'm taking the course. Why am I paying $5,500? Well, because you want to get credit from Duke, that's the going price.

So, there's a lot to sort out here. I don't have any of these answers. I've got a hell of a lot of questions, but you know, I don't know yet, but I know that as we think about spending federal dollars, the Congress and the parents, representing taxpayers, and people loaning the students money, are going to ask about value and how do they assign this value. This is a wonderful opportunity in terms of access and civil rights and a lot of other things. But what's the cost and where do I walk away with something of value that I can then use in the current American society viewed writ large?

MS. BROAD: Now you've asked the question for which none of us has the clear answer, but I can tell you that, you know, we evaluate advance placement for its college credit worthiness and it is almost universally accepted. Over 80 percent of the students who we confer a transcript to say that their credits are accepted by a college or university. When we ask them why they're doing this, you know, no surprise in the answers, they're trying to complete a degree, they're trying to accelerate their time to the degree so they can get into the job market. It's all the things that you would expect.

Now, are there a set of institutions that just, in principle, will not accept a credit from any other source? Sure. But I think the attention that you all are giving, as

well as the work of higher education, is likely to increase the awareness of and the acceptability of accepting these credits toward their degree.

MR. MILLER: We've got to get rid of the friction. When people are borrowing money, you can't stand a lot of friction in the system, and so it's not just whether some institution will never accept another institution's credits. In the public systems, within states, they haven't figured this out yet. They're working on it, but it's very expensive to not get it done so you can certainly move from the community college system to the University of California in a frictionless system in terms of what units are valued where.

MR. SEXTON: So, it's my role, I guess, to play Don Quixote. So, I will tilt a windmill. I think it's always good in a public policy context to step out of the picture, be free of the status quo constraints, and say, where would we go if we could get to the best place, and then you work back from that through practicalities.

First, I want to thank the Congressman for his efforts and he's on these issues, he sees them, and I'm going to urge him to take an idea, which has begun to grow under his nurturing and the Administration's nurturing, and develop it.

If we can get transparency -- and we've talked about many ways to try to get that -- and accountability, such that there was a real deliverable, I think there is a public policy answer here that is Pareto optimal, and that is -- call it Australia, call it the Brown plan in the UK, call it income contingent repayment. It aligns all of the incentives -- the institution's incentive to try to keep the cost down and thereby be able to attract better students, the individual, even the poorest, because you could afford to go the best place you can go, and all of -- and, by the way, the governments, because in the end what are today presented as grants could become the delta between the interest that's charged to people and the amount that their income can sustain.

But there are models out there, in Australia and in UK, that are highly successful in this regard and provide access and that would allow the diversity of the American system -- this is the important thing, because what's lost in the conversation is -- there's the horror that is occurring with the withdrawal of state subsidies, California, the example you used, being the most notable desecration of quality, and nothing the Congressman does, short of income contingent repayment up to the 80th percentile of tuition, will solve that, and that's a major rethinking of this.

The high endowment schools are okay, because they can give as much financial aid as they want, but there are roughly 2,000 private tuition-driven schools in this country and I'm trying to run an elite institution, research institution, which is tuition-dependent, okay, and I can tell you the way to enable us to do that, incentivize us to keep our costs down and everything else, is income contingent repayment, and allow the best students to get those through good information and accountability.

MR. LEONHARDT: Last comment and then we'll open it up.

MR. TANDON: Sure, I just want to echo what the president has said, that a lot of countries are experimenting now with income contingent loans, but they're also combining it with variable fees, as to try to sustain that mechanism, and they're instituting those variable fees at the institutional level but also the course level, the department level, and there's a lot of room for maneuvering there.

Just the last point I want to make about income contingent loans is that they usually require very large, up front capital investment to make them work because students are paying back later. So, some governments are putting public money into trying to finance those systems, but they're also looking at other ways of mobilizing private financing up front to get those kinds of schemes off the ground.

MR. LEONHARDT: So, Professor Koller is going to add one more thing

as we get the microphones in. Do we have microphones or no? Yes, we do. Okay. So, let's go one over there and we'll go second here. Go ahead.

MS. KOLLER: I just wanted to say one final thing about cost. The discussion that we've had about cost has been on the outer end, the cost to the students, but in order for us to have flexibility on reducing the cost to the students, we need to first have a reduction of cost in terms of the production of the content, that is, how much does it cost us as an institution to educate these students, because if we don't reduce those costs, we don't have any flexibility on reducing the cost to the students.

And one of the interesting things about education, in general, and higher education, in particular, is that there have been no cost reductions in the 300 or 400 years since we started -- well, 800 if you go all the way back to Cambridge and Oxford -- there has been no cost reductions, no use of technology, no use of any other source of leverage to reduce those costs, and we need to have that there in order for us to be able to provide potentially lower cost tuitions to our students.

MR. LEONHARDT: Great. I was happy to see a whole bunch of hands go up, so I'm going to ask that people keep their comments or questions pithy.

SPEAKER: Hi. Michael with Education Writer's Association. This question is about transparency. So, we have a model that gives us the debt-to-income ratio of certain programs, gainful employment. Why can't we apply that wholesale to all the programs in higher ed to have a very true and real system of transparency?

MR. LEONHARDT: Who wants to take that?

SPEAKER: Not me.

SPEAKER: So, I'll jump in. I think that that's been one of the problems with the debate over the last, call it, two or three years is that because of the way that the law was written, it does create these categories and rather than asking the broader

question that Daphne started to go toward, which was not just price to the student, but total cost, and is it a good investment not just for the student but for the taxpayer in general and start to ask that.

But one of the fundamental problems in today's system that creates an oddity when having this conversation, is that the way Title IV works with the dollars is it's all or nothing access for the institution to those dollars. You either clear a bar and you get access to finance your entire institution with it, as many for-profit institutions have, or you don't and you get disbarred from using it. And because the government has a very vested interest in extending access, they can't make that bar go too high lest they roll back that access in today's system.

And so what I'd like to see is a more flexible system where based on how you're doing relative to your peers along a number of measures -- you named a few of them -- I'd also like to see student's satisfaction rate in there to get a little softer sense of whether the experience was good holistically. For example, a sliding scale of how much percentage of your institution you can finance through these Title IV dollars, it would basically push students to start to make decisions about not just the lower price, but basically to be discerning about biggest bang for the buck, in essence, in a more holistic sense.

MR. LEONHARDT: Do you agree that we should have student satisfaction only if we also have empirical measures of learning?

SPEAKER: I'm actually very suspect of empirical measures of learning as a policy instrument I higher education just because of the plurality of programs that we start to see. I can see that in a dashboard type setting where you would have a more voluntary way of doing it. And I actually think for the MOOCs, that will be a very one-to-one correlation, that will be a very natural pathway, but from an institution perspective of

a degree, I have a lot of suspicions about that.

MR. LEONHARDT: One thing I've heard from people in higher education is one of the problems with student satisfaction in terms of evaluating professors is that there are some perverse incentives there.

SPEAKER: So, I wouldn't do it in terms of evaluating professors, right, we're talking about in terms of institutions and I would think about it in four ways, is the way we've conceptualized it, although I think the income contingent one may actually just solve it in a neater way, but the first measure would be the job placement rate, call it 180 days out or whatever you want -- whatever's a fair number. I would have some notion of the difference in income that you get from attending the institution divided by the total cost of the degree itself. I'd have the student satisfaction rate there. And then I think if you want to put in the cohort default rate adjusted for income, you could use that too. So, it's not just one thing standing out by itself, but it's some sense of this and then a sliding scale.

And then there's obviously political considerations about how you weight each of those factors, and that's a political conversation that I'll stay out of.

MS. WERTHEIM: This has been really fabulous. I'm Mitzi Wertheim with the Naval Postgraduate School. I have the title there of professor though I never went to graduate school. My mother was a mentee of John Dewey and he was my godfather, so she told me not to go to graduate school because by 1950 you didn't have to have any new ideas in your thesis.

I have just a few comments. First of all, for the Congressman, I think you need -- and all of you -- you need to talk about continuous learning, not college, because there are people who need to learn how to be better plumbers, but they don't need to go to college to be a good plumber.

I don't know how many of you have seen Arnie Duncan's new international strategy document that he's just put out -- have any of you seen that? You need to look at it because he talks about K through 12 having to have an international thrust where these kids have to learn language and, in fact, one of the basis of this particular strategy comes from a navy captain and a marine colonel who worked for Mike Mullen and Bob Gates and wrote something called the National Strategic Narrative. You ought to look it up, signed by Mr. Y, because it's the alternative.

MR. LEONHARDT: Let me ask you, one more comment or question, please, so we can keep it going.

MS. WERTHEIM: How do we get rid of tenure?

(Laughter)

MR. SEXTON: We don't. And you wouldn't want an education system that did. Now, that's different from a form of the question, which is, how can we create a blended faculty that includes a core of tenured faculty -- I assume you're talking about higher education, because the system changes if you ask me for K through 12, but in higher education you would not want to eliminate tenure for the core of at least most of the higher education institutions in this country.

Now, in this symphony orchestra, there may be places where the question becomes more like the question of K through 12, but certainly at the research university you would not want to eliminate tenure.

MR. LEONHARDT: Anyone disagree with that?

MR. HORN: I would just say, I think it will be somewhat moot in terms of some of the disruptive and continuous learning that you're talking about because they're unlikely to have tenure and so it's going to be appropriate for the institution you're talking about.

MS. WERTHEIM: I would like continuous learning on the part of tenured professors and I don't see that in many places.

MS. DROBNIS: Hi. Thank you all. I'm Ann Drobnis, actually, a math and computer science high school teacher, and I was very glad to, very occasionally throughout, hear comments about the rest of the students but then too often the conversation got back to, oh, but the advanced placement or the kids taking BC calculus, and I really want to know what we can do in higher education to make sure that 50 percent that enter our doors aren't leaving or to make sure those students who need mentors in their neighborhoods are getting in the door and how we can innovate in higher ed to reach the entire population.

Because if you start with the survey we started with, 94 percent said the way to make our country better is for more kids to go through higher education and get college degrees. So, how can we innovate to get the entire population there to get the true diversity of this country so that we can move forward?

MR. LEONHARDT: Great question.

MR. MILLER: Well, I think we see everyday in models and examples and systems within the K through 12 system that that population of students that you say are the ones who get to go there, can be dramatically expanded, but that goes to the question of the quality of the teachers, the quality of the curriculum, the assessments, and what we're looking at with those students. But it's very clear it's demonstrated every day in some of the poorest neighborhoods and the most chaotic environments that these students can learn. But it's a question of how we present the opportunity to learn. What is the learning environment and the teaching environment that we create?

If we're going to wait to have one great teacher in every classroom for every subject, we'll never get there, so now we're looking at models that present this.

And imagine that same student being able to just tap onto that video and explore one of these courses, a subject matter that maybe he or she only heard about but has never been presented.

In my district, I have students that live 30 minutes away from the University of California Berkeley don't know it's there, especially when they're not doing well in football. But it's a crisis. And let me tell you what happens when they get on campus. In many instances they're completely isolated. It's not that they couldn't do it, but it's a question of how we present the opportunity and the support systems for that to happen.

So, I would enlarge that universe of individuals. That's why I'm very excited about the possibility, the exploration that can take place here now -- can take place here now among those students because we're rapidly moving to a system where those students will all be engaged with some form of smart pad.

MS. BROAD: (Inaudible) is a remarkable achievement. When you think about it from the kind of diversity we had in K12 to have almost all the states come together about a common core of college and career-ready standards for the completion of high school is really an extraordinary accomplishment, but we're not there yet and in fact, as the time for reaching that goal gets closer and closer, education leaders across all the states are in a panic because the students aren't prepared to take the upper courses, the teachers are not prepared.

So, we have a huge issue, but we must have staying power even if it takes us a little longer than we wish but to not shortchange the set of standards that we're trying to reach.

MR. SEXTON: David, I think there's actually a virtuous circle that can be created here through things like Coursera. NYU is involved with a low-tech version called

University of the People where we have actually discovered, don't put national boundaries on it, we found kids in Haiti, in Sub-Saharan Africa, who demonstrated through Coursera, through, in our case, University of the People, the capacity to do the work. And then we've reached out and pulled them up. And I think this is a very felicitous development in that regard if you think search engine, searching for talent and kids.

MR. MILLER: Coursera and the Khan Academy may be the best how we have of eliminating the need for remedial math and the failure of remedial math at the college level. That screens more young people out of college than almost any other event that takes place. Now you have the opportunity here to change all of that, rather rapidly. Will the colleges go along with it? Will they accept it? They don't know. Well, the longer they deliberate on this question and we can't figure out what's the quality way to approach this, we're going to lose those students. They're going to be in debt and out of school.

MR. LEONHARDT: If you asked us to name a couple examples of K through 12 schools that were doing a phenomenal job of educating low-income kids, my guess is most of us could do that. Is there an equivalent for higher education, specific school names that anyone wants to mention that are taking kids who tend to fail in large numbers and having large numbers of them succeed instead within their population?

SPEAKER: They're all over the country.

MR. LEONHARDT: Are they? I mean, when I look at dropout rates of schools with high numbers of low-income kids --

SPEAKER: Are you talking -- excuse me. Higher education. I'm sorry.

MS. BROAD: David, you know, there is new work that is going on about how we track students who are part-time and who transfer, and the outcomes are looking

a lot more positive than, as Martha knows very well, the IPEDs data, which is the only official data that we can use about completion, is only for first-time, full-time freshmen.

We've just worked with a national clearing house and produced a report that suggests that these students who transfer or go part-time and they get lost because they're going to a different institution, that the track record is improved by something like 20 percentage points.

So, you know, maybe we're not losing quite as many as we think we are.

SPEAKER: We're losing a lot though, right?

MS. BROAD: We are. We are.

SPEAKER: Yeah, I'm interested in the disruptive innovators in this regard. I think Portmont University, which is a new university that's going to be screening kids based on grit and then trying to boost academic skills, New Charter University, which is a competency-based model similar to Western Governors, I think as we start to see these new models, it will start to address that question, but I largely agree with your assessment.

MS. SMITH: Thank you. My name is Lauren Smith. I'm a journalist with CQ Roll Call and this question is mainly for Congressman Miller. With the reauthorization of Higher Ed Act coming up this year, how do you plan to sort of address some of these issues? And have you and Chairman Klein talked at all about a broad timeline, specifically I'm thinking of the July deadline for when the student interest loan rate is set to expire once again?

MR. MILLER: It depends whether or not that particular date and that particular event is caught up in the overall larger negotiations. We'll wait and see about that. We have not discussed what the agenda will be leading up to the reauthorization of Higher Ed.

As you know, the last couple years it's been fairly stagnant on the issue of education, although I will say that I think that Congresswoman Fox has held, at the end of the session here, a couple of really important hearings, hopefully, that will begin that process of the necessary oversight. Because I think we're presented now with some very old questions, but a remarkable buffet of new answers, and whether or not the Congress can deal with those, in what I would say is a rather restricted time, actually, for this, it sounds like a lot of time to do this and I'm always berating the colleges to work faster, but we are presented now with options that we haven't encountered before and I would say, clearly, it sounds so crushing, but the question is, what are we going to pay for here and how are we going to allow the students the versatility and the ability to spend dollars in different places where they may get -- we assume will get comparable values, but they'll be able to negotiate that. Do they have to spend it all in one place? Do they have to spend it based upon a semester or a class? Or what are these new units where they're going to have to spend down an account, whether they're borrowing money or it's their Pell grant? And how do we incentive the best use of those resources? Because when they're gone, they're gone.

And so I think, you know, these questions, to me, appear almost larger than the timeframe.

MR. LEONHARDT: In the way back we have a question.

MS. IMMERMAN: Thank you. I'm Suzanne Immerman with the U.S. Department of Education, and forgive me to my colleagues Martha and David up there, perhaps you already know the answer to this question, but I want to go back to President Sexton's first answer around higher education institutions ought to do what they do best, which is think about this stuff, and I guess maybe present company excluded I would ask, where is the best thinking coming around new models -- obviously we have some

examples, Western Governors and the MOOCs, but outside of that, where can policymakers turn for some of the best thinking about -- and this is a question to all of you -- new business models and new policy models for this new environment that we all want to see?

MS. BROAD: So, let me start by saying lots of places. I don't know an institution that isn't thinking hard about these issues. When ACE did a survey of our 2000-member presidents and vice-presidents and said, what are the highest priority issues on your agenda and what services can we provide. At the top of the list was: identify emerging trends and help us in understanding their implications. Help us with strategic budgeting. So, help us with productivity, a word that we used to think of as the "p" word that you didn't utter in polite company academically.

So, there is a lot of work going on in just about every institution. The community colleges, particularly some of them, I think, have really raised their game and have focused on how can we more effectively serve the students who are coming to community colleges.

There are lots of major institutions that are looking at globalization strategies and looking at ways to more effectively utilize networking and information technology.

So, I think there is a lot of ferment at this moment going on in virtually every institution and the ones where it isn't going on, I think their future isn't so bright.

MR. LEONHARDT: Can we get a microphone up here for our last question as other people answer this one? I would just throw out one answer to that, which is, I think policymakers for a long time have been writing blank checks to both students and universities.

Some of the most interesting things that I've seen are places where they

no longer write blank checks. So, in West Virginia, to get the (inaudible) scholarship program students must remain on track to graduate in four years. Lo and behold, that's increased their graduation rate there according to an academic study of it.

There are also instances in Indiana and other places where the states have asked to see some results from the colleges, and I don't know which of those are going to work, but I think all of those are interesting. Instead of just paying to fill seats, paying for something that policymakers actually want.

MR. MILLER: I would also say, you can look at some of the top flight chief information officers in universities and the thought that they're giving to how this adaptation can take place and how this connectivity can take place so that you can remove these boundaries that tie people in a very restrictive fashion to that place, and I think some of that is -- some of the work they're doing with college presidents is really very exciting in thinking about how you put down the bones for this future structure.

MR. LEONHARDT: Time for one last short question.

MR. MCCRAY: Christian McCray, Micro Education Summit. Question from Muhammad Yunus who started asking this to a couple hundred colleges around the U.S. If you were to start a new university in America's poorest county, to the extent that it was located anywhere, and you could change the four pillars, which one started with and not just make them horizontal, but make them bottom up, what sort of processes would you design into that university right from the start?

So, Yunus is using student competitions, but in a very different way where the winner basically gets that curriculum changed by the school so that that social problem, if you like, you know, turning societies back into laboratories where professors go out with their students to solve these things.

MR. SEXTON: Well, we were actually given a mandate to create a

school from scratch and the first question you have to ask is, for whom, what's your constituency, what are you trying to do with it? In our case we were told by Abu Dhabi to create the World's Honors College and to make it a liberal arts college and our constituency is the world, so we have students that come from Rwanda, from Ethiopia, from every class of society, and the object is to produce leaders that are ecumenical and cosmopolitan for global civil society that have been prepared better than any others.

So, my first answer comes from the place whence Joe and I come, which is the Jesuits, which is to say, you have to tell me -- and I think this is the key to everything that has been said here -- what's the ratio studiorum? Tell me what the goal is and then that will affect what we do.

And then now you move back from that, it's really kind of a perfect place to end, I think, to the symphony that is American higher education, you have to think of it in the diverse way that Joe presented it, and each of these elements can be mutually elevating and reinforcing to the whole that's greater than some of the parts if we don't assume that each unit should creep towards a unitary mission. We have to understand the elements of it.

And just as I close I want to, David, one footnote on something you said. The number of students that we lose from the system is tragic and we must address it and work's being done here. But I want to emphasize, there are many students in the system who are in the wrong place in the system and are under matched and their talent is being lost and that is the easy, low hanging fruit. They don't need remedial work; they just need better information to get them to a better place and a financing system that allows them to get to that place. And this is why I think we have to keep pressing, quixotic as it is, for the utopian because we're going to get closer to it. It's Pascal's wager. If we give up on it, we won't get there at all and I have to say the Congressman

has gotten the camel's nose under the tent with income contingent repayment. We now have to get it all the way in.

MR. LEONHARDT: I want to invite President Aoun up for a closing word and I want to thank our panel.

(Applause)

MR. AOUN: Thank you, David, and I would like to thank also the panelists. I would like to thank also Darrell West from the Brookings Institution one more time. Thank you for your hospitality. Ed Reilly and Joselyn Landau, who conducted the survey for us.

Let me go back to what we learned today and what happened today. You know, it is clear that the American public has a great appreciation of the higher education system. It is also clear that the American public has concerns. And it is clear that the American higher education system is at an inflection point.

Many things are changing and some will be changing for the better and some will be changing for the worse. We don't know. No one has the truth.

But let me tell you what keeps me awake at night, and here I want to go back to something personal. I had the opportunity to study on three continents with three systems and John and I disagree on who had the best education with the Jesuits. That's a different matter. But let me tell you something, what makes us unique, what makes our system unique in the world, is that there is innovation, there is collaboration, and there is competition.

We do not have a Ministry of Education that is dictating what the curricula are going to be, what the research is going to be, and what the approaches are going to be. That's unique. Let me remind you that the German system was viewed as the best system in the world. It declined because of this centralization. The worst thing

that could happen for us to for an edict to look at what we do in a uniform way, as an income measure, or as an outcome measure.

We are diverse and if you believe that innovation and experimentation are going to lead us and sort, you know, the winners from the losers, yes, we have a disruptive innovation, yes, the system is changing, but the system is unique in being extremely resilient, extremely innovative, and we need to cherish that and we need to continue.

Now, what's next? After today, we will come back, we will have other opportunities to build on what happened. Stay tuned and thank you all for coming. Thank you.

(Applause)

* * * * *

CERTIFICATE OF NOTARY PUBLIC

I, Carleton J. Anderson, III do hereby certify that the forgoing electronic file when originally transmitted was reduced to text at my direction; that said transcript is a true record of the proceedings therein referenced; that I am neither counsel for, related to, nor employed by any of the parties to the action in which these proceedings were taken; and, furthermore, that I am neither a relative or employee of any attorney or counsel employed by the parties hereto, nor financially or otherwise interested in the outcome of this action.

Carleton J. Anderson, III

(Signature and Seal on File)

Notary Public in and for the Commonwealth of Virginia

Commission No. 351998

Expires: November 30, 2012