Michele Cahill: Good morning, everyone. Thanks to Betsy Brand, the American Youth Policy Forum, to Marty Blank and Helen Malone and IEL for the invitation to speak with you this morning in honoring Sam Halperin, and the tremendous legacy he left to all of us. He inspired us and took seriously the personal and societal responsibility to enable all young people to become fully prepared for lives of productivity in economic life and full participation in civic life.

Today, the challenge to prepare all young people to thrive as adults is daunting, as our society is experiencing broad economic and social changes. But it's also urgent as the fundamental promise, the social contract we've had with young people, which in many ways we've never fulfilled fully, due to racism, and other deep problems in our society, but which has lasted as a contract of opportunity linking effort and investment of self, with opportunity.

That is at risk. Greater disparities threaten the coming generations' important task also of renewing and revitalizing American democracy for a more diverse and pluralistic society. This challenge is daunting, as I said – yes, daunting. Yet there are great reasons to be optimistic about genuine progress. This morning, I want to speak to you about the landscape of change and the challenges this presents. What key institutional design changes are needed and why innovative thinking is essential. Why we need important policy shifts, something you're all deeply involved in, and also coming back to this, why there is reason for optimism even though we are in period that can seem in many ways very pessimistic and very threatening to the promise of our society and democracy.

We need to educate students to high levels of rigor—a challenge. And yet we do know more than we did a decade ago about how to do this. Youth themselves show tremendous aspiration for their own futures. There's greater maturity in the youth development field, in research, in the informal learning space of museums and after school world. We've built quite a lot in the last 20 or 30 years.

I believe it's possible that a convergence of learning from the cognitive sciences, modern developmental psychology, youth development and education can give us a new framework to make critical institutional changes and policy changes that can help us move toward progress.

First, to the challenge. Let's get this out of the way, so we can get to the optimism part.

[Laughter]

America is a very changing society. We have economic and labor market changes, demographic changes and diversity, and growing inequality and lack of social mobility and all of these are interacting. In the several decades since this extraordinary leader, Sam Halperin, first identified the “Forgotten Half”, youth left behind by our education and employment systems, the importance of education to thriving as an adult and its role in social mobility has dramatically intensified. Inequality has grown, and the challenge to creating education and youth policies that generate schools,
programs and practices that mitigate the impact of economic disadvantage, as opposed to contributing to this impact, is urgent.

The challenge of advancing educational attainment for all has grown in importance as it has also grown in complexity. What does the relationship between education and future success look like? On practical and concrete levels, it’s the relationship between attaining postsecondary education and participation in the middle class.

The demand for higher level knowledge and skills has been growing over the last 25 years, but Harvard economist Claudia Golden and Lawrence Katz in their influential book "The Race Between Education and Technology" in 2009 gave us a lot of data and ascribed the problem to two factors: Jobs lost to technology and outsourcing, and replacement of jobs in the service industries, such as health and education, that require postsecondary education. In about 2002, most economists were projecting that by 2014, about half of jobs would require postsecondary education.

Today, it's much closer to two-thirds. So the change has been very, very rapid. Today, we know that it is a steeper curve of change, and that technology is not only replacing routine technical jobs, but routine cognitive jobs as well, and that increasingly, also routine analytic. So anything that can be automated and is routinized will, likely, be automated. So the demand for a different kind of education to thrive as an adult is absolutely our society's tremendously important central challenge right now.

New employment, think about your own employment now, also demands much more collaboration, working as a team, greater communication skills, working in diverse environments, and associating work with problem solving, critical thinking, and interestingly, and importantly, the ability to adapt.

A really critically important dimension here is this skill of adaptation. Projections for young people who are in high school now, for 65% of the jobs they'll end up in, we don't know what they are yet. That doesn't mean that we don't know anything about these jobs. They relate to the kinds of skills we're talking about, but it also suggests a real need for adaptability. That young people, as they move into their futures, are going to have to be continuous learners.

Just a little bit more on further evidence to these long-term trends. Again, thinking about Sam Halperin and the “Forgotten Half”. While the economic recession hit all young people hard, those who had only a high school diploma or less were hit the hardest. Anthony Carnevale, at the Georgetown Center for Education and Workforce, tracks this very closely, and tells us the number of jobs held by workers with a high school diploma or less declined by 6.3 million during the recession. These jobs were on a decline anyway, as I've said, from these big forces of technology and outsourcing, but without the recession the pattern of the decline projected about 2.9 million. So it's double.

Further, and this is the most important data element, Carnevale and colleagues report there's been no recovery of jobs for this group of workers -those who have a high school diploma or less. This doesn't mean there are no jobs for them, it's just that we can't keep up with replacement of lost jobs. The decline is happening faster than the growth.

Today's young people need to get a higher education, as I've been saying. We know that jobs held by workers with some college or associate's degree also declined during this recession, but this was
by about half of the lost jobs for those with only high school diplomas. And since the beginning of the economic recovery, jobs have increased by 2.5 million for workers with postsecondary education, and now there's about 700,000 more jobs for workers with this level of education than before the recession. (Carnevale, 2016.) So that's essentially saying we are in full employment, we are recovering, but postsecondary, some postsecondary education is far more the variable that is important for young people to succeed than in the past.

So how is America doing in responding to this structural change? A little bit of good news. We've increased graduation rates and they continue to grow. So it's no longer half -- no longer half not graduating from high school at all. In 2013-14, the last year for which we have data, 82% of young people graduated from high school. The rates are going up for all groups. Gaps remain, but the rate for Hispanic students is 76.3. For African-American students 72.5. For English language learners, about 62.6. Those numbers are not fabulous news. We need to do a lot better, but we do have to recognize that some of the policy and practice and design changes that have been happening at the ground level and through policy are getting us progress -- we're moving. We have to get the line going faster. But we have had positive changes.

Again, the gap these students represented are important. Our young people are not yet prepared for college. We have to recognize that high school graduation is important, but it is not sufficient. It matters as a pathway to college and career. Those of us who are my age and even a bit younger recognize that our society was not trying in the past to get everyone to college. We weren't even trying to get everybody graduated from high school. But certainly, college readiness is absolutely critical today for everyone.

Now, by that, I'm talking about postsecondary readiness. This can encompass two-year career degrees, but the thing that is really happening is that career and college are now intertwined and intersected. Young people going into more technical careers, at the two-year level, still need the same core academic preparation and complex skills as college readiness. We can get to details about specifics of that, but college and career are no longer separate tracks. It's a continuous development that requires cognitive skills, academic learning and socio-emotional and civic kinds of skills.

What happens if you're not prepared for postsecondary? While college completion is up, and it is. In 2002, the six-year graduation rate, was 26%. We're now up to 39%. Yet for our students who are working and having families, and going to school part time, college completion, graduating with a four-year degree in eight years, is only at 13%.

Again, this whole dynamic of social class and social opportunity becomes really important.

Let me move a little more quickly. So the forgotten half was not only about economic opportunity. It was also about the importance of young people coming to see a place in American society as contributors to their community and civic life, that everyone is a participant. We have challenges through diversity and integration, and immigrant integration is one of the most critical elements of this.

One in four children under 18 have one or more foreign-born parents. About 9.5 million children under 18 in low-income families have one or more foreign parents. About 2 million children under the age of
18 are foreign born themselves. Close to a million undocumented children under the age of 16 reside in our country, and 1.8 million undocumented youth between ages of 16 and 24.

This is critical issue of integration. We cannot have two societies, societies in which young people have an actual structural barrier to full participation when they grow up here after they go through our education systems, our other systems. And also it's problematic for everyone else, all the other young people, in that we need the talents of everyone in order for us to be a well-functioning economy and society.

This is not only about immigration, but about social participation and belonging, at the core. The Europeans call it social exclusion. Often we talk about social capital or lack thereof. But really, the notion that also, in the last 20 years, concentrated poverty and spatial inequality have been increasing. More low-income children and youth live in de facto segregated inner city and rural areas with limited contact and opportunity to experience social and economic experiences in the new economy of middle classes.

For young people, we know from youth development, identity formation is a critical need, and being able to try on identities and cross barriers and boundaries in our society is something important.

What do we know about the knowledge, skills, and attributes that are needed? OK. This is really exciting and important from my perspective. We’ve spent time in the XQ school design work on articulating this.

As I said, we know a lot more. One of the things that we know is that you gain all of the kinds of capacities that are needed in an integrated way. This is what we need to get to. We need to have young people who are masters of all the fundamental literacies, that they build an academic core, they are critical readers, compelling writers, mathematical thinkers, right? Are skilled in understanding data. You need that for every kind of job.

Also, foundational knowledge. It's not as sometimes people talk about 21st century skills as if skills exist by themselves. Right? We need to have learning experiences that generates the attributes of curious people, who think about science, who understand science, who want to understand how our world operates. You need that both for jobs but also for citizenship. Think climate changes change. Think discussions about energy that are political and social and require voters to make choices. Generous collaborators for tough problems, original thinkers, we need creativity, and learners for life.

How are we going to get this? How are we going to move this? What are these data points telling us? What does this aspirational goal tell us?

It's the integration of knowledge, skills, and attributes and being able to apply this in new ways. For both educators and policymakers, the aspiration is to prepare students for college and career, as I said, reaching this level of education for all. One fundamental change we are going to need is to rethink high school and create pathways of opportunity that give all young people an opportunity to engage and contribute. We need high standards in content areas, but need deeper learning and development across these youth development skills and attributes. We need this to happen seamlessly in a young person’s life -- that you don't go somewhere to get a deposit of academic, then somewhere else where you get to do critical thinking and collaboration and community.
So high school needs to be redesigned, re-created with young people at the center, learning experiences that build knowledge, enable youth to form positive identities that affirm their family and cultural backgrounds, but also offer opportunity to full participation crossing boundaries and a broad society. We need to increase their social capital and integrate this with academics. Young people want this.

Can you play the video? Young people want this. We have these examples. I've been going around the country doing this road show with XQ. I've been to many, many cities, and in these cities XQ has been asking youth development organizations and others to have young people come to a booth and tell their stories.

We have more than 10,000 youth voices now. Also voices from adults about their youth experiences. What you see, what we know is that young people have great aspirations for their futures. They know they're bored. They know that they don't know enough for their futures, and they want more. -- Central to this effort is that it shows a conversion between youth development, education and drawing on the assets of the community. I really want you to hear these youth voices. Maybe we will have to end with it in another couple of minutes. Let me tell you a little about what this has meant.

Youth Voices in the video:

>> We're not prepared to be involved in the future.

>> I never thought I was going to go to college. School changes the way you see things.

>> My intended major is going to be political science and/or criminal justice. I want my career to be a lawyer.

>> In the future I want to own my own business, animation company everyone

>> Something I really want to do is architecture. That's kind of what my heart desires.

>> I intended to major in molecular biology and minor in French.

>> I would like to be an OB-GYN.

>> That would be number one, to build a relationship with my teachers and they with me.

>> I had people that would sit down with me and listen to what I had to say. It starts to develop a stronger personality in me, because my voice mattered.

>> With the job outside of the education system can help steer you towards a career path that you might want to do.

>> Not everybody learns the same way. You may feel ignorant or stupid. It's not that you don't get it, but you don't get the way it is taught.

>> You need to pick the student's brain. Why? Why? Or give them something that will interest them.

>> If the community in the school was set up in the way that we all agree about, by the age of 18 we will all know where we will be headed in life.
This idea of mutual respect needs to be fostered from the moment that we enter the education system.

It's one thing to sit there and let a person talk about what they want. There's another thing to actually act on it. I think if students were given a chance to express the voice that they have, we will have a more innovative learning environment.

We want this for our schools, community, like I said before, it will be just an amazing thing.

Those students were from all over the country. From rural Appalachia, from Los Angeles, New Orleans, Jackson, Mississippi, New York, all over. Some of the students who you heard say things like I want to be a molecular biologist - that was a student in a transfer school in New York. A transfer school, is what Betsy referred to earlier as multiple pathways when she was referring to what I was involved in setting up for young people who already dropped out in New York City. They can come back to “transfer schools” that partner with community-based youth development organizations and offer academics to renew and earn the same kind of diploma as all students.

Youth aspirations are one of our greatest sources of energy and optimism.

So let me just tell you a little about what rethinking high school can be about and how everyone here can participate. Did you hear that?

First, we need to actually hear young people. Then we need to understand what I was talking about, about the challenges in the 21st century. Let's hear about their experience, right? It's very hard to keep going on the same old path, doing the same thing, when you hear what the experience of young people is.

Another reason for optimism is that we now know so much more about the science of adolescent learning. As I was saying earlier, cognitive science has told us so much in the last decade, and the shorthand is there are two dimensions of it. One is mindset. And the interaction of high expectations, with a young person's understanding and attribution theory of why you think you can or can't do something -- effort vs. ascription. People are smart or not or effort and instruction leads to learning. The second, this is really exciting, I will point you where you can read about this, see videos, etc., is that we now know that the adolescent brain has much more plasticity than we thought in the past. So I don't know how many of you have had the experience that I've had hundreds of times in which people have told me high school is too late. It's not too late. We knew that from a values point of view. We now know it from a cognitive science point of view, and that, for example, as young people who are adolescents struggle in mathematics, their brain grows. That is really the case-- their brain grows. That is a really powerful thing to know, it is not merely that you have to be making gaps up by remediating. That in fact, greater challenge and struggle aligns with good teaching. There's no question this is hard to do. But the important thing here is that we know a lot about how people learn, and that that is really critical.

What you're seeing here, I'm just going to do three slides on this, is what we put together that you can find on the XQ website, which are 13 knowledge modules. You just saw the first four. Now here's the next, which is how do you redesign high school. You start with the question of what do we know now?
What do we know from young people? What do we know from where we have to get to, what kind of education is needed for young people's future economic and civic life.

Then what we know from cognitive science. Then we move into we need to have a purpose for our high schools. Right? They're not just custodial places where teenagers live for a while. They have to have a purpose that's owned by everyone. That's what we call here mission and culture. Schools that are engaging, challenging, and see themselves as helping young people, both with their task to form identity -from positive identities, and build competencies together. That changes how you then do teaching and learning, personalized instruction, meet high standards, thinking about who teaches, and drawing on the assets of community. What we call networks and partnerships. So that for the young person their high-school years are years in which they are having experiences in which they contribute and learn. This can be career oriented, such as internships, or in community service, in projects, such as doing research, working on important problems, whether they be scientific, ecological problems, social issues, political issues. By political I mean the issues of social change in their communities. Also project-based learning is just one kind of example. We really need to change what actually happens in school. And from youth development we know the importance of understanding that each time we're making a change, we have to keep in mind that young people learn by what they do, who they do it with, and how they make meaning. So the relationships. Even though we're using technology in new ways and everything, the contextual embedded relationships are really critical.

Once you have that kind of design, then if you start there, then you tackle the difficulty issues, the difficult issues of staffing, of financing, because there's a purpose to making change. There's a purpose to using, getting more money or using public dollars differently, because we're trying to get to a different kind of outcome for really critical reasons.

What is all of this, what are we looking at? What if America rose to this challenge? I have another piece I want to go back to for a minute. In addition to the challenge of high school, the purpose is also to have more young people get through postsecondary education successfully. Therefore, we need a vertical integration. We need to also be changing where they're going to as their next step. As I said, we are not graduating students there as well. And there are key ways in which the same kind of design needs to happen, particularly at the community college level, and particularly on some high impact moments, such as entirely redesigning remediation. There's innovation in this area very clearly going on, so that young people can experience higher standards, navigate differently and accelerate their learning. All of this comes to us from cognitive science.

What if America rose to this challenge?

We would prioritize innovation. We would prioritize youth voice. There's innovation going on in pockets, using the example of community college. We have totally new pathways that are showing dramatic, dramatic changes, from 10% to 15% of students getting through remediation and getting college credit in math in their first year, to 50% and 60%. The same students randomly sent to different things. That has to become policy. That has to be something that states take on and say, We're no longer going to do things this way. We're not going to put funding in those ways. We're not
going to have those kind of policies. The same for high school. We're no longer going to allow two tracks, double, different kinds of diplomas. We're going to redesign and learn from innovation.

So what does this mean? We have lots of examples. I can talk about them, and at some point if anybody wants to hear examples from around the country. But what's the conclusion for policymakers?

I know all of you in the fellowship aspire to be or are currently in policy roles. We clearly need strategies that enable deeper and more rapid improvement at scale. We need convergence. We can't think of youth employment as simply job training. Or youth career preparation as separate from academic learning and social skills.

We need to draw on all of the assets in the community and the funding streams that are working separately. We need to redesign those kinds of separate experiences that happen in narrow disconnected ways.

We need changes for higher standards and better design at the same time. We need policies for innovation, state innovation zones, for time, technology and mastery learning. So that R & D can take place and be learned from in a virtuous cycle. We need to incentivize partnerships, service learning career partnerships in these innovation zones. Keep tracking it and studying it. We need to incentivize innovation in teaching for stronger preparation and different staffing models that mix formal and informal teachers. We need to think carefully about performance assessment, invest in R & D around graduation assessment. We need to change and redesign our community colleges.

Finally, we need to broaden understanding of these changes and generate participation in finding solutions. These solutions are not going to come from on high. These solutions are going to be a conversation in the country that elevates local solutions and marries them across, so that they benefit from our new kinds of communication. The XQ competition invited the largest open call last September to people in the United States to rethink their high schools. We thought we’d get about 400 concepts coming in. We got 1480 between September 11 and November 15. 1480 came in from every state in the country and Puerto Rico. People had a hunger to respond and to think about their high schools differently.

And one of the most interesting things about this is this picture is of applicant teams, of those 1480 approximately 700, full teams put in applications for rethinking, either redesigning high schools or starting new high schools, and while they were substantially educators, you see that in the big blue circle. Look who all those others were: artists, writers, policymakers, entrepreneurs, scientists, we had doctors that joined teams. We have a matching directory, and what you see is there’s all this knowledge and expertise out there of people willing to think about, willing to raise their hand for our adolescents. Youth themselves are on teams.

So the optimism, I want to leave you with, is that the time is now, that this kind of open call suggests that no matter what our divisions are, no matter how hard these problems are to solve, that there is a sense in communities of diversity of people wanting to contribute, wanting a future for our young adults, and that all of us can be contributors to this. Thank you.

[Applause]
We have time for two questions.

[Laughter]

>> What do you think will be the change that needs to happen within the schools to change from this instructional type of model to this inclusive model where we value youth work and youth development? What do you think it will take?

> Michele Cahill: So I think it will take a combination of evidence that we have, for example, Bob Balfanz at Johns Hopkins has shown how this great rise in graduation rate has been driven by the closing of the dropout factories in large cities, and replacing them with more effective schools. Redesigning of schools. We have a major study in New York about the creating of schools with community partners that are small scale, youth development and others that now have substantially raised graduation rates. The study has been repeated by MDRC and MIT. Duke University researchers. So evidence is one important thing, but evidence isn't carrying the day. It's also this kind of organizing and participation, and elevating what can be. So people can look at and see and participate in this. It's also going to take creativity, courageous action, and opportunities to invest in service and participation, so that young people themselves become a voice demanding this.

>> I had a question. You mentioned the need to really change remediation and what that looks like. I know that's been an ongoing struggle in our schools. I'm really curious to know, do you have resources to suggest? Do you have models? What has worked for remediation?

> Michele Cahill: Let me send you to the Complete College America website. The Dana Center at the University of Texas Austin website. And the Carnegie Foundation for the Advancement of Teaching. Look at the community college pathways programs. Look at the programs for cohorts and guided -- intrusive guidance and cohort and co-registration. So you take with supports, the actual college course with supports. OK. The final one? Go ahead.

>> I was wondering, you were talking or mentioned the revision to career pathways. And that random trial. Can you talk about some of the characteristics of the pathway design that was proving so much more successful?

> Michele Cahill: Yes. That is what I was referring to. That was at the community college. There's two different kinds of pathway changes. One is integrating academics and career. The community college pathway is the same, you will find it on the same websites, and it's called Statway, which is a new statistics pathway for first-year college, and new Mathways, which is replacing remediation and college algebra. Thank you very much.

[Applause]