National Research Center for CTE

Webinar: Green Programs of Study at Los Angeles Trade-Tech College

Leticia Barajas: Great, well thank you all for joining us. We're going to start our Green Programs of Study presentation with our college president, Dr. Roland "Chip" Chapdelaine.

Dr. Roland "Chip" Chapdelaine: Well hello. I' m not sure if it's morning, afternoon or evening in terms of where you are, but I'll just give a general greeting. I'm Chip Chapdelaine, President of Los Angeles Trade-Technical College. I've been president here for about five years. Basically, I want to talk a little bit about the Green College Initiative and how it got started here at Trade-Tech. In 2006, we were examining new potential programs using environmental scanning techniques.

And the whole concept of sustainability and green rose very quickly to the surface. What became evident though is that we're not talking here just about courses. We're talking about basically a vision, an actual attitude that we needed to incorporate within the entire organization to make this effective. So it had to be raised to the level of mission and vision if it's really going to take root and become part of how we behave and how we act. So, we can't just say, "Go green," it also has to be in the pragmatic sense "Go jobs."

But you know, we're primarily a career-technical institution, so we focus very much on the pragmatic applications of these concepts, not just theory. So, for example, those pragmatic applications have to be linked to industrial needs, advisory committees for example. It has to have measurable, quality outcomes and certification, and whenever possible, we have to infuse field experience to be able to give students real practical experience, on other words, with those combinations to give our students the edge, particularly as it relates to jobs in the green environment.

There are a number of areas that we've really kind of done some interesting things with, for example the green build environment. For example, we're talking about the design and building of zero-energy buildings. Not just new, but also retrofitting existing buildings, all of them which, basically by Board rule, we're moving towards LEED [Leadership in Energy & Environmental Design] certification. So, zero-energy buildings means, in terms of designing and retrofitting buildings that used demand side management. From something simple as changing to fluorescent or LED light bulbs to using more efficient blowers and fans, using motion sensors in rooms to actually physically positioning the building to be able to collect the solar energy.

And the other part is alternative energy. What can we do in terms of providing support systems to provide alternative energy. Of course, PV [photovoltaic] being an example, but we're also looking at storage using ice storage. We're looking at solar furnaces, we're looking at a whole variety of different options: hydrogen fuel cells, geothermal, the whole variety of options. And then also then load control. One of the things that we're doing that's kind of unique, we don't have enough land at this college to have a central plant. So we're actually looking at designing a virtual central plant. That is taking existing chillers and heaters, boilers and actually tie them all together so that we can, on a demand basis, move it from one building to the other, rather than having to put, for example, new chillers or upsize the chillers. So, the length of the life of these things should last longer because they're not going

to be in demand as much and so forth. So, that's in the process of being designed at the moment. The key on zero-energy buildings is innovative management and tying all these pieces together, not as separate parallel systems but as a single system.

Then, in terms of green practices, we're talking about how we actually promote and reinforce and reward green and clean practices on campus. So, for example, transportation, we actually subsidize faculty and staff who take public transportation. We also do the same thing with students in terms of the MTA [Metropolitan Transit Authority. And we actually have a recycling farm here on campus using big-belly solar compactors for example, but also composters in terms of our culinary program. Basically, we're really heavily involved in recycling everything that we do.

Green awareness, that is involving training programs, K-12. We expose them, bring them on campus and train them, for example, in terms of a STEM program. We actually introduce them to the whole concept of architecture and how you can develop sustainable buildings, actually designing vehicles such as go karts that are LP gas fueled, and alternative fuels. So they got the whole concept of designing these things from scratch, as an example. We also- it's really critical that we infuse this thought the curriculum. So it's, for example, dealing with the issue of our automotive program to actually get into using non-volatile paints in terms of painting cars and vehicles. We actually introduce new programs based upon trends such as weatherization. So we're talking about three different levels. We're talking about installers, we're talking about inspectors and certifiers.

All of this is all linked and tied together to comprehensive plans to actually make our college green and sustainable for the purposes of philosophy but also from the purposes of pragmatism in terms of training our students for the jobs that exist out there, but also modeling it to our community. Because a lot of the things dealing with green college is attitude.

Marcy Drummond: Hi, this is Marcy Drummond, and I'm the Vice President for Workforce and Economic Development. And next I'm going to talk about, one of the questions we get asked very often is how did we decide which programs to really- what existing programs to actually infuse green curriculum and technologies into and then how we decided what new ones to develop. And basically we started with a lot of industry labor market research and tried to identify what we thought were the most promising green jobs, and then identified whether or not there were training programs available for those. So anytime you start to look at what are the most promising green jobs, you have to look at where these four areas of focus actually converge. We look at technological innovation and advances, we look at economic conditions, what are energy prices and financing options that are available out there. We also look at public policy as well as public demand.

Okay, one of the areas that's really driven green jobs, particularly in California but also throughout the United States, is the public policy, and that's where we've really looked at first. And you can see to the left there, these are recently enacted legislation in California alone related to renewable energy, energy efficiency and clean transportation. And so we download all of those bills and we look at what are some of the actual standards that the state of California is trying to reach, as well as a lot of these have financing behind them in terms of training and education. And then many of you are aware of recent federal policy legislation. It really started with the Energy Independence Security Act of 2007, and really got a boost with the American Recovery and Reinvestment Act. And there's a lot of provisions in ARRA related to both renewable energy, energy efficiency and also clean transportation.

So, we thought that public policy was going to relate and turn into actual jobs. We actually did some of the matching between policy and jobs, and started projecting what sort of job growth would result from these policies both throughout the United States as well as in California.

Then we also look in terms of economic advancement and economic conditions. We also monitor venture capital investments. And again, we look at this venture capital investments, we look at it both internationally, nationally and then specifically in California. And here are some recent figures of recent venture capital investments in the state of California so you can see we're seeing a lot of investment in solar, energy management, wind and then other sorts of renewable energy technologies.

And so, this also will infuse a lot of jobs through this venture capital. The thing about venture capital is that it's delayed. So, when you look at when the venture capital is coming onboard, it usually starts with manufacturing-related jobs. And then it moves into the actual building of solar farms and solar facilities. So, you're looking at more construction-related jobs during the portion of the life cycle in which there's building. And then it goes to operations and management. So there's always a lag in when the jobs happen and what kinds of jobs will be generated by venture capital.

And then also we look at patent on the technological advances. And again, you'll see some common themes. These are just patents in Los Angeles alone. In the last couple of years, there have been 250 patents for solar. Fuel cells in vehicles is another key area in Los Angeles around transportation. And then green building and lighting is another area where we see a lot of advancement.

So basically, look at where all of these converge. And that, to us, signals as to where the green jobs are going to be. We look at the timing of those jobs, depending on when the venture capital and patents are happening. And then we came up with a strategic list of what we thought were the more promising jobs. We had what we called the top 10 list. And we used that list to then decide what programs, existing programs, to infuse green training into. And then, where we didn't have existing programs, that's where we focused on developing new ones. Solar is an example of program we didn't have that we do have now, after going through all of this labor market demand process.

LB: Good morning, or good afternoon. Now it's Leticia Barajas and I'm dean here of academic affairs at Trade-Tech College. And one of the questions we get asked most often is how do we develop our green workforce programs? Marcy talked a little bit about the labor market research, which gives us an indication of what we should be investing in and what are the new areas and the new trends. So, from my perspective, or actually from our implementation site here at the college, how do we now take that labor market information and implement? How do we know where to create? How do we know where we actually have to revise or revitalize? And so our approach here at Trade has been a very simple approach. We started off with the philosophy that we were not going to build a green program, per se. We were actually going to integrate green components, or sustainable education components in each one of our career-technical education areas in addition to our liberal arts and humanities areas. Today, with the programs you'll learn a bit more about, we're really focusing on the career-technical side.

So, just to give you a little bit of perspective about Trade-Tech College, we have over 55 programs that you could consider quote/unquote green programs that range from environmental science to wastewater technology. When we did this environment scan

and the labor market demand scan that Marcy spoke about, we recognized that we had to establish new programs in specific areas. Marcy and Chip both mentioned the solar programs and the alternative fuels program. And so those are two very specific examples of what we determined we had to innovate in our existing CTE areas.

But we recognized that we couldn't do it alone. And although we initially tried to do this revitalization and this transformation strictly with faculty, we recognized that we had to get into very strategic partnerships with community-based organizations as well as industry partners. Now industry partners, obviously if you're a CTE program, you know that it's a requirement, Perkins funding requires that you have these meetings and so forth. We now bring in very strategic community-based partners as well because, as we'll discuss in a second, with all the federal funding available, we recognize that we have to actually contract out or really partner with our community-based organizations for student support services and actually engage existing partners, industry partners, that we don't have. So that's been one of our lessons learned. And we had strengthened our industry partnerships in that now the employers that we invite over to our campus, they are now part of, aside from recruiting from our campus, they give us very immediate feedback via a strategy that we have where we enroll our recent graduates or our trainees in a cooperative education/internship experience that Jess Guerra will talk a little bit more about in a bit.

So, how did we select? Did we select all 55 programs? Not really, not to the same intensity levels. Aside from following the labor market demands, we did a strategic analysis and figures out who was really quote/unquote ready from our faculty side. When we have a lot of visitors come our campus, everyone says, "Oh, but you have fabulous faculty" or "Oh, well that's easy, you already have great tenured faculty members or you already have the programs in place."

Four or five years ago, we did not have the programs that are being featured today to this extent. As mentioned earlier, we have new programs but we also have the philosophy that we build it from within. Every program that we have, we have to make sure that it's sustainable and it's not relying on grants. In addition, if we don't have faculty expertise, we focus very heavy on our Perkins funding to do professional development opportunities and to really solicit input from our faculty members in what areas they want to engage in. Brano, who you'll hear from in a bit, Brano Goluza, who is our solar leader here on campus, he actually has a background that he'll discuss, which is from the electrical construction and maintenance. And so we have invested very heavily in his professional development to ensure that he is one of the leading faculty members now in solar PV installation.

With that, we also believe in persistence. And so, one of the ideas that we had, and another example of really looking at our existing faculty and finding another niche for them, is with our carpentry. With the construction labor demand going down here in California specifically, we had to redirect and reinvest in our carpentry faculty. And they have now become our leaders in the energy efficiency/residential retrofit world. So those are a couple of examples of where we've taken faculty, what we currently have, and retrained them, or invested very heavily in professional development to have them teach and lead and facilitate and create in a whole new other area. And our new aspect, or our new strategy as well that Marcy will talk about, is how we align all our existing programs in stackable certificate programs and an AS degree.

MD: One of the things that has been a premise of ours from the very beginning with our green programs and with all of our programs is that we want to build these

pathways for people to become prepared at various levels. We have a lot of students, as you know in community colleges, that come and go as life circumstances tend to happen. And so, we want to make as many stopping points for them as possible that are tied to some sort of either a job or a credential that will enable them to either enter into the career pathway, and then once they're in, to progress.

So, what you don't see on this slide is we do have a lot of what we call prep programs. These are very intensive short-term programs that are designed to get students into entry-level jobs and get those basic skills that they need to be able to become employable. Once they go through the prep program and then they transition into a certificate or credit certificate or degree program, then here's how we actually stack those certificates and degrees along the way.

So, everybody begins with what's called a fundamental certificate. This certificate actually focuses on industry-wide skills and competencies. For those of you who are familiar with the Department of Labor competency model framework, this certificate, the types of topics and materials that are covered in the certificate are in level 5 and 6 of that competency model framework. At each level we focus on and try to prepare students to garner some sort of industry-standard or -recognized credential. In the fundamentals, we're looking at some very general ones like those of you who are familiar with the NCCER [National Center for Construction Education and Research] credential, that's the one that we focus on that level.

Then, once they've obtained the fundamental certificate, they then move into a core technical area. So, they choose an area of emphasis. So some examples of core technical certificates that we have, we have one in solar PV, solar thermal, energy efficiency. And this certificate at this level, they're really now honing in on developing occupation-specific skills and competencies for that particular occupation such as a solar thermal installer. In the competency framework, we're now moving up to tiers 6 and 8. And we're looking at preparing those people for those competencies. And again this is tied to an industry-recognized standard or certificate.

So, for example in our solar program, this is where we're looking to prepare students to successfully do the NABCEP [North American Board of Certified Energy Practitioners] certification. Then, once they've taken the core technical certificate program, then they can move up and take what we call advanced technical courses. Now, we're starting to add things to this certificate that prepare them for more of the managerial level or supervisor level. So, for example, in this area they might be taking courses on codes and on supervision, on reading blueprints, that more of a field supervisor or a manager would have to have the skills to do. On the competency model framework now we're also focusing on tiers 8 and 9. And then an example of a standard that we're preparing students for at this level would be like BPI [Building Performance Institute] certification. Then, towards the top, after they've done the fundamental certificate, then the core technical certificate, they add the advanced technical courses. Then, all they need to do is take the general education requirements. Some of them average 18 units. And now, they have the AA or AS degree.

So basically, we've created these programs in a way that at any particular level, the student is getting a certificate, as well as they're leaving with some sort of preparation for an industry-recognized credential.

Kirsten Sundell: This is Kirsten at the Center. I'm going to just jump in here for a minute. And Catherine, I believe we have a video clip that we could load right now. I

wanted to talk about how Leticia and Marcy, you both talked in the video about your connections to the community and how LA Trade-Tech is trying to encourage access to postsecondary education. You know, for a community that really has a persistent low college-going rate, this clip that we're loading now is Marcy talking about how students who have already been exposed to the college, you know, at the middle school level and then into high school are able to get involved in a bridge to college program, take courses with Trade-Tech and then move onto acquiring later degrees. Catherine, are you ready?

(video clip) **MD**: … but they're actually concurrently enrolled in high school that leads to a degree or certificate here. And in fact, we call it the triple- if students engage with us, with our local high school partners and engage through middle school and high school, the triple crown is they will have graduated. They will have graduated from high school. They will have gotten their diploma with a certificate in a career-technical program and the general education requirements to transfer to a university. So, they in essence will graduate from high school with an AA degree if they go through this Program of Study with us, which we've always called pathways.

LB: Sure, and I could speak a little bit about that, tying it to basically some of the work that you've seen highlighted so far, some of the initiatives that Chip and Marcy talked about, again the labor market research and the program development side. And what you'll hear from our leading faculty here really begs the next question as to what is really- how do we get this done and what is the new role that we have as administrators.

And so, to those administrators we have out there, we just want to mention that it's really transformed what, at least through my typical role as the Dean of Academic Affairs, which is the title that I have, it's changed the ratio of what I do from basic faculty and departmental supervision being historically 80 percent to now those day-to-day routine matters are more like 15 to 20 percent. They still exist, but now 80 percent of what I do is really focusing on faculty and developing faculty innovation and making sure that the faculty members have the ability to have any resource they need - and I think they'll each talk about that – that they need to make the classroom experience and the learning a lot more exciting for our students.

So again, we changed the faculty perception which existed here on campus for well over 20 years: we can't do that because we don't have this or, no, that's not possible. So, we changed, you know, the whole notion of rules of past practice. Now, our favorite word is pilot or create or innovate. And we've actually looked at every funding opportunity to really reward them and ensure that our faculty have assignments during the winter terms and the summer terms, even in budget crisis years. We've actually also redone how we do our strategy for Perkins.

But we changed how we fund and what we fund in our Perkins plan. So, a lot of colleges always tell us, "Well, you have all this access to funding and we don't." Any college that has CTE programs receives Perkins funding, so I always challenged the faculty or the administrators who are asking me that question. If you have Perkins funding, there's no reason why you can't integrate this in your Perkins plan and reward your funding programs that innovate and modernize. So, that's what we chose to do, and that's been a strategy that's been very helpful, at least the last couple of years.

One thing to think about, a lot of people say, "Well sure, this is great. You've been doing it for a while." Just one thing we'd like to note is that two of our leading three programs here on campus did not exist at all before 2008. Brano will talk about our solar program and Jess will talk a bit about our alternative fuels program. Aside from those two programs, we didn't have the electrical lineman program, we didn't even have the equipment. We used Perkins, and we actually built a program from the ground up. So, things are possible and they're possible in a very quick timeframe. The other lesson learned, or in terms of our role as administrators is we really rarely take "no" for an answer. And one example of that is that we've been working on becoming a national- and a state-recognized weatherization training center. And although we were turned away for quite some time, we were persistent and we are now both. So the lesson learned there is persist and have tenacity.

So with that, I'm going to now hand this over. And you'll hear from one of our new exciting areas. One of the strategies that we've done also is to change the name of certain areas so that people recognize our faculty members and our students recognize that our departments change with the emerging needs of the economy, of our students, of our employers. And one of the areas where we've invested quite a bit of resources is in the area of transportation. So, what used to be called Automotive is now called Transportation. And so, Jess Guerra will actually start off, and he will talk about that experience in this work. Jess?

Jess Guerra: Hi, I'm Jess Guerra. I'm one of the associate professors of diesel, alternative fuels and hybrid vehicle technologies here at LA Trade-Tech College. And I want to talk a little bit about our alternative fuels and diesel technology program. As Leticia just mentioned, this is one of the disciplines that is housed under our Transportation Technologies, which has training in automotive, motorcycle repair and collision repair as well. This particular program here with the alternative fuels and the heavy equipment repair, it trains the new workforce in order to be able to work on anything from a truck, a transit bus, locomotive and other types of heavy equipment.

But the real thing that we want to highlight, not only in this program, but also in our Transportation Technology Department overall, is that all of our programs include alternative fuels and green transportation technologies. Depending on what the discipline is, for instance in automotive, we have an emphasis on hybrid vehicles. In the heavy equipment, if we're doing training that's related to transit buses or trucks, maybe we emphasize liquefied natural gas and compressed natural gas technologies and collision repair water-based paints and other areas of certification as well.

So, all of our different disciplines in our Transportation Department we have looked to infuse the green side of it, even in motorcycle where we're now seeing a spur of electric motorbikes and things like that. We are constantly looking to impute this new technology into the training programs. But one of the things that we felt that was probably the most important was to get our students real-life experience in this. This is the reason why we were able to partner with one of the local transit companies here, which is Santa Monica Big Blue Bus, and expose our students to a seven-week internship where they get to work on actual live equipment, real buses that are out there and serviced day-to-day, and be able to learn the new technology first-hand. We felt that that was very important because many a times, a lot of the municipalities become the testing grounds for the new technology. And there's nothing like actual hands-on experience in order to be able to back up the instruction that they receive here at the college.

But one of the other things also is that the training programs that we have here don't only have a focus on mechanical repair. We have invested a lot of time and effort into infusing technology into our curriculum. One of the ways that we've been able to do this is to create or set up all of our classes as if they were online courses. This has brought the need to have the students learn computer literacy skills. Many of them that have come to us maybe in the past have never even used a computer. But by the time that they leave our program, they also create an e-portfolio, which is an electronic resume. And they are able to navigate through a computer that's not only going to help them to be successful out in the field but it's also the basis for our troubleshooting tools and everything that's green out in the transportation industry, as well as infusing basic skills and workplace success workshops. And with all of these, having an emphasis on transportation-related assignments, everything from the mathematics to the English assignments that they're getting, everything's related to transportation.

One of the things that we've been able to do as well is to pilot a new approach to meet the demands of industry. And one of the ways we've done it is by launching our 10-month accelerated diesel mechanic program. Even though this is an accelerated diesel mechanic program, it also has all of the green aspects of the heavy duty industry in it. And that's one of the ways that we're able to meet the demand for the shortage of technicians out in this industry.

But, aside from training a new workforce, we've also had to train incumbent workers. All of these new technologies that are out there and available today such as compressed natural gas, hybrid vehicle technologies, biodiesel. All of those are creating the need to have to retrain an incumbent workforce. And we have become the avenue of providing that kind of training. So we are definitely participating in that as well.

But the key here for us to be able to develop these types of programs that not only prepare a new workforce but also train incumbent workers is to have industry partnerships. And these are essential. If we have the industry partnerships, then we are able to meet the needs, the changing needs, of the transportation industry. Nowadays, technology really is what dictates or directs where we are going to go with our training. And we're constantly having to update our course outlines and the content of our classes so that we can meet the changing demands.

And those are some of the lessons that we have learned. Many times when we've had to develop training for these type of new technologies, we found that there is no training out there available. So, many times we've had to partner with the Toyotas, with the Cummins Engine Corporation and some of the other hybrid vehicle companies out there so that we can train on this and develop the training for a workforce not only for our own programs but also even for the companies themselves. And also we've worked very closely with the California Air Resources Board and doing a lot of the research on the effectiveness of these new technologies and how these will continue to evolve in the coming years.

So, other lessons learned as well as the importance of continued training for our faculty, green technologies and new transportation technologies are changing. Today's hybrid vehicle is not what it was four years ago. And this has also led us to see that we have to be willing to change our teaching methodology and be able to infuse technology into our classes so that we can make them readily available for students that have different schedules, that can be new, that can be out of high

school, or that could actually be incoming workers, as I mentioned before, and simply need retraining.

Brano Goluza: Hi, my name is Brano Goluza. I'm the solar electrical instructor here obviously at LA Trade-Tech. This is our fourth semester that we're about halfway through it. It started off with me, actually I was involved with solar some 12, 14 years ago. This was, I believe, the third attempt at making solar stick, as they say. And didn't really happen. This time around, obviously it's happening and it's well on its way. The latest from the grapevine is about a 300,000-megawatt system being in the process of being built by Edison: billions of dollars – I don't think I can even say how many, but that's the magnitude of the project.

So, we started off basically by me going to different seminars because with ever-changing technology I have to catch up. With the electrical background, it obviously was a big plus. The seminars – and I know there's going to be questions probably down the road, "Where do I start?" Brian Herd and the hands-on solar, that's basically where I started with. And I also keep in touch with him still to this day. Went to one about a month ago, as a matter of fact, with Jim Dunlop, who's the author of a photovoltaic systems book. And that's another great resource. That particular textbook is actually becoming the standard right across the country. We started off basically with different disciplines and working with them. What we managed to do in the process is teach the students about carpentry but at the same time, cleverly enough, we were building a solar lab. So, they were getting a lot out of it. Solar students are getting a lab out of that.

Now, once we started the program, what we have is a variety of students anywhere from what we call here "homeys" all the way up to PhD and a rocket scientist, as a matter of fact, last semester. What you see on the slide there is one of the industry professionals. Luke is his name. That's the guy on the knees, on his knees demonstrating to the students fine points of his profession. He's a roofer. He wanted to get onboard with solar, and so we got him in the classroom. After talking to him – I get to know the students and their backgrounds right at the beginning of each semester – and so this is what came out. I had a roofer in there, so I said, "Hey, let's utilize him. Let's have him share his experiences." Students can only hear so much that the instructor says, but if you bring industry experts into the program, they get an extra listen out of it.

The bottom left side that you see is basically what's work without a little play? You have to play a little bit. So, this came out of a summer program that we had for high school kids. They were building go karts. And I approached the welding instructor and I said, "Hey, how about couple of them? Can we keep a couple?" And he says, "Why not?" I went over, talked to Jess in the Transportation Department. I think there were four of them. And I said, "Well, I'll do something with solar if you do something with alternative fuels." And together, we're actually hoping that we can come up with some kind of a new, improved high-mileage car with the students that we have here. We got a lot of resources. And of course, obviously, everybody's onboard.

Obviously all of these technologies with the green technologies … what it used to be, we had specific trades. Now, the landscape of education is actually changing where all these different trades are overlapping and here we are. So the solar go kart, as you see it, is in a sense a stand-alone system, something that you would see out in a remote location like a cabin. What it has, it has solar modules, charger, charge controllers. We've got three batteries and a motor to run it.

So, we're in the process of acquiring, thanks to our Dean Barajas and Marcy Drummond, they've been just absolutely fabulous. If I didn't have the two of them, I would be literally pantomiming a lot of this stuff in a classroom. But there's the result. You see it in the picture. We're in the process of acquiring some instruments where we can actually monitor the batteries getting changed, discharged, the usage on the motor and so on. We can take that data into the classroom and have the students work with numbers while they're actually feeling, touching, looking at the actual thing right before them. That's pretty much all I have for now. Thank you.

Marcela Oliva: Hi, my name is Marcela Oliva and it's a pleasure to be with all of you. I'm going to talk about four big concepts that have informed our program. You can see the certificates of the programs that we offer in alignment with the Trade-Tech mission. And basically, number one is following what Chip was saying: bringing meaning into the classroom. What does it mean to be sustainable? Why is it important to understand how the built environment affects who we are? And you can see there are all of our students: various ages, backgrounds, disciplines. I mean aligning with our colleagues we use the knowledge that they bring with them.

Number two: very, very important, these new roles. We bring our partners into our classrooms, into all these new strategic planning from our colleges. And I'm just going to give you a few examples. For the Historic Preservation Society, we are retrofitting old buildings with green strategies. We're going to be doing a model for the second-oldest house, wood construction in the city of LA. With Jefferson High School, we're creating and designing the Green Alleys. With the Los Angeles River Urban Master Plan, we're designing ecohealth? centers. With the City of Hermosa we're designing the Green Idea Sustainable Landscape. And then we're also working with interdisciplinary projects within our campus to design and build a portable tech fountain so we can do applications for engineering and architecture. So all of these programs, instead of our advisers being outside of the classrooms, they are in the classrooms. They bring their challenges and opportunities and their [inaudible] into our classroom.

Number three, we are able to retrofit our courses and also create new programs. Like we have an IC program with LAUSD [Los Angeles Unified School District] high schools, from older high schools. We created a program that is transferable. And we basically teach them the why, the tools and the integration of economic, social, built environment, a natural environment to creating holistic solutions – very successful program.

And number four, our last one, is that we utilize new tools. Chip was talking about the virtual central plant. We utilize CAD—computer-aided design—GIS, GPS, energy simulation. And all of these technologies allow us to look at the world in new ways. And our students have the free software, professional software, our students have the free software. We get certification from all the different software companies.

And thanks to the integration of these four things, meaning new roles within our administration and our faculty, new programs in retrofit, and bringing our partnerships into our classrooms is what I think is having great challenges and great opportunities for our community. Thank you.

LB: So, you've heard from our fabulous faculty here, and we love to brag about them. And again, this is all the idea of being supportive of the role of faculty here.

One of the things that I think Chip will talk about in a second is how we've changed as an organization.

Again, this is Leticia Barajas, Dean. One of the things that we have defined and we have to support our faculty and our staff with is really changing the role of a community college in today's world. What we've primarily relied on with our workforce center partners, which is the role of actual job placement and recruitment and job openings, we've revamped it here at Trade as a result of all our funding and as a result of the whole idea of how accountable we had to be, both to our funders and primarily to our students and our community.

As we mentioned earlier, we're part of a community, a very strong community here in south Los Angeles. We're part of the Vernon-Central Network. As such, we get asked all the time, "How many students do you place in jobs? How are they doing, post-employment?" So this is not just the Department of Labor or our Perkins survey or a questionnaire that needs this information, but it's our local politicians and our community leaders. As such, we've had to revamp how we recruit our new students and how we monitor them and how we assess them. And so, on our Web site and on our resource site, you'll see quite a bit of supplemental resources that indicate some of our lessons learned and the sheets that we've developed and some of the activities that we've engaged in.

This slide shows you an example of how we recruit people who normally wouldn't access community college for training. They might go to a proprietary school or they might go straight to a workforce center for training. We've established a portal to get them in and get them identified, where we ask them some information, background information about who they are. And with this, we can do an initial screening for program eligibility. But we also do monthly orientations where we guide this whole cadre of community members or job seekers and people who are looking for training into the right program. So this is how we get them into our college, because once they're here we tell them, "Look, you may be interested in very short-term job training, however your future is endless." I mean we could actually train you into a two-year certificate program and degree program. And we'll make sure you have a career ladder and you have an education ladder."

So we're all about pathways. These are just some bullets that Marcy will kind of expand on when necessary. But our lessons learned: as you know, faculty is key to program success. And you've heard that several times, but we are able to really foster and develop the faculty we have now. And our goal is to, in every new faculty member we hire, we also have a strategy that during the tenure review process, we actually have them go through industry training, incumbent worker training and working with a special population. Because we hold our population here in south Los Angeles very near and dear, specifically working with youthful offenders and students who lack the requisite basic skills for success in college. We also, as I mentioned earlier, all our practices require constant monitoring, evaluation and adjustment.

Brano was very modest, but one of the things that Marcy discussed a little earlier was that the stackable certificates and degrees, that's not something that evolved overnight. We did that after we heard a lot from our industry partners that people needed to have a lot of options so that they would not be quote/unquote stuck in one job occupation. And, as Chip will discuss, most of these require organizational culture change. And that's something we've been working on for the past five years. And so, I don't know if there's anything else that you'd like to add on lessons learned before we hand it over to Chip for final comments.

MD: No, I think in the interest of time, we'll just go ahead and hand it over to Chip and then open it up for questions and answers.

CC: Okay. I'm supposed to bring this all to some fantastic conclusion here. So, first of all, you have to understand that Los Angeles Trade-Technical College is the most inner-city located college in our district. Of the nine colleges, by all definition, by any statistics, we are the most inner-city college. We have about 30,000 students' headcount in any given year. And if you look at our demographics, for example the most recent Puma study identified the fact that this ZIP code area that it serves, principally serves, is the most challenged neighborhood in the United States, not in LA, okay, but in the United States.

I point that out because there are individuals sometimes who look at those kind of statistics and they listen to the kinds of things that we're doing and saying, "How can you do that? How can you deal with students, you know, who have reading, writing, language challenges, who are undocumented?" You have all the whole statistics that are out there, who have poverty levels that are significant, whose college bound rate is probably the lowest in the area. And yet, look what we're doing. It is fantastic. Those kind of statistics are not negatives, they're opportunities. And we are here to provide opportunities, as a true community college, to be able to serve those students.

So, let me give you a little more framework in terms of the green initiative. Our board has been incredibly supportive of this whole concept of green. For example, they have mandated by policy that all our buildings, renovated or new, have to be LEED certified at some level. And because of our clout, that is our size of our district, they've been able to impact, for example, certain kinds of products. For example, all carpet that is purchased by the college and put in all buildings has to have glue that is non-volatile. In other words, it doesn't have the chemical evaporation rates that you see in a lot of products. So they basically influenced an entire industry to be able to come up with a product that works, basically saying that we're supposed to energy efficient. The goal of the board is the fact that in incorporation of all these various technologies, our buildings should have a net zero energy usage. Now obviously, that's a goal. In reality, that may be a little more difficult to implement. But it certainly is a goal. Obviously, we're dealing with a challenged budget situation. So when we build new buildings, we have obviously energy costs, air conditioning, other things that are on there. The concept is to be able to do that.

We have done some interesting things that I think are really critical. We have, for example, we are one of the founders, if you will, or one of the key colleges to be involved in something called SEED, the SEED Center, which is Sustainable Education and Economic Development, basically sponsored by AACC [American Association of Community Colleges] and Eco Systems. And this is basically to provide free access to information in terms of curriculum, programs and ideas, to be able to provide this, all the collective knowledge of the community college systems in helping you achieve this kind of goal. This college also, along with every college in our district, has signed the President's climate initiative, which obviously is putting our money where our mouth is.

And I could obviously talk about this for a long time. But I'm going to be able to basically come down to this. We are, as one of the more challenged neighborhoods, we consider ourselves dream makers. Our students, however, to be able to achieve a dream you have to have hope. You have to be able to have a foundation or you can't

achieve success. That is what we do. We provide the hope that allows them to dream. And not only that, but we provide them the hope to be able to dream green. And hence, the green ties in with the jobs, that ties in with attitude, that ties in with philosophy, all of which collectively can have a very positive, and will have a very positive impact on our community and ultimately our nation.

KS: Well, thank you to all of you. If none of the Trade-Tech gang have anything more to add, I thought I would get straight into questions. And I have a big one to start out with, kind of a global question, and I would love to get perspectives from all of you. So, if you have comments to offer, please jump in. And the question is, if you were to suggest one item, just a first step that a college should consider when working toward integrating green technology, what would it be? Now, more than one step is fine, but this questioner was just looking for where to start.

MD: Hi, this is Marcy. I'll start off and then other people could chime in. And I don't know if they would choose the same step that I would. Basically, even if you look at the labor market information and all of the public policy coming out, everything really points to being more energy-efficient and implementing simple solutions not only on the college campus but encouraging your students to implement simple solutions in their own homes. And I think everybody knows these. These are simple energy-efficiency-related items that they can do such as changing out the flashbulbs to the more efficient light bulbs, the new ones, you know, weather stripping and things like that. So, it's not- we don't have to do something that's really large, but if we can just focus on increasing people's awareness of- and I think people are aware of global warming but there's still some debate about how serious it is, and particularly now that our economy is bad and people are more focused on jobs they tend to be less focused on the sustainability agenda. But I think just increasing their awareness about how it's simple things that everybody can do to make a huge impact on the environment and sticking to what those core principles are and teaching, raising their awareness as well as teaching them how to employ some practices that are going to do a lot to increase our efficiency.

JG: This is Jess Guerra. I'd like to kind of follow on Marcy's comment. And I do think that the biggest impact we can have is teaching and infusing these types of technologies in areas that affect our daily life. I think that transportation is one of the key areas. And a reason for that is obviously most people utilize some form of transportation whether it's our own vehicle or public transportation. The goods and everything we have are transported to us one way or another. But one of the reasons why I think this would be a good place to start is because transportation technologies are one of the more common programs that may be out there in terms of having a college or an institution that already teaches automotive repair or some kind of transportation-related repair. So, that would be an area where there's plenty of advancement and plenty of legislative push behind it to implement this kind of training where you may even already have some of the resources to get the program started.

KS: And Chip?

CC: I think the key is, you know, you can have all these esoteric conversations in the world about how good and important green is, and it is. But in dealing with, I think, the pragmatic aspects of it, you have to have the ability to tie it to something practical. You have to be able to tie it to a job. And in the process of training an individual to a job, you can then infuse the concept, the attitude ongoing. So, you have to have it link to something that is going to have some practical outcome in

me. Because putting food on the table, in terms of Maslow's hierarchy, is critical. But once they see the practical application, they see the potential for a job, then inculcating green and doing it as part of the training activity I think will have long-lasting implications and impact.

KS: Okay, anyone else? I brought up this issue when I broke into your presentation earlier, when I mentioned the Bridge to College program. And I've had other questions come in now asking more about what kinds of outreach you do to K-12, what kinds of activities are involved in that outreach and also what barriers you've had potentially to overcome, including high school students into your programs.

LB: So, this is Leticia Barajas, and I'll take that question because, as Dean, I coordinate that, the Bridge to College program and really the implementation side of virtually all the programs that you've heard today, which is our Bridges to Success Center. So, if I can recall correctly, you really have a three-part question. Number one, how did we engage our K-12 partners? What do we do to sustain it and what are some of the challenges behind it?

First, it starts from the top in that we have a commitment here at Trade-Tech College that, regardless of the good times or the bad times in the economy, we will partner with our K-12 schools one way or the other to a degree of intensity. So, what we've done is, at any given time, we actually enroll over 1,400 concurrent students who are primarily in grades 7-12. As Marcy mentioned earlier about the triple crown project, we engage over 20, both public schools and charter schools, in our college in that students who are in grades 7-12 can apply and they can attend an orientation with their parent or guardian. And they get enrolled at the college in a degree applicable program. So our program for Bridge to College, which is on our college Web site, is not meant to be a remediation or a credit-deficiency makeup program. It's intended to provide students with early-on career exploration and hands-on career-technical education training so that they can actually get a good start on college and be more, better informed as to their career choices.

How do we do that? Four years ago, we had a summit with all our K-12 partners. We made this commitment, informing them that their students would be welcome. We streamlined our enrollment process. So our K-12 students do not go through the normal admissions process. They never see an admissions clerk. They actually go to this one-stop center where people there, the staff there, are cross-trained and they understand all the programming guidelines. That's a challenge. It's a challenge two ways, number one, because we had to change our system of operating here on our campus. And we had to change some faculty perceptions, and perhaps Brano could speak to this. We had faculty who have always been very welcoming to this population, people like Marcela. And we've had people like Brano who have, as time has gone on, they've evolved in the sense that thinking that, you know, can students really participate this early on and get experiences that are up to par with our regular college students. All our K-12 students are enrolled in regular college classes. We do not water down our curriculum. We actually have very rigid academic standards. Once students are able to get into Bridge to College, in order for them to continue their experience here on our campus, they have to maintain a 2.5 GPA or higher. And so, we screen eligibility each term.

And I think one of the most recent challenges is every time we bring a new either administrator or a new faculty member, we have to train them on this mentality because we don't consider our K-12 students to be a source of enrollment growth. We consider them to be like any other student here. Because our overall goal is to

increase college-going rates in our community. I don't know, if Brano, if you want to add how your perceptions have changed on K-12 students.

BG: Well, it just kind of struck a note with me. I'll be honest with you. At the very first, first time I had to teach a class that involved high school students, or actually we had other groups that would come in. I wasn't used to the attitude in the classroom. And, as Leticia put it, yeah, we bring them up to date and they definitely- they'll stop texting. They'll get off the phone and start paying attention. We don't compromise anything. And I constantly keep reminding them that every morning that I drive in, I see the word "college" on the side of the building.

So, they do grow over a course of either a month or four months, whatever the case may be. They do grow rather quickly because the bottom line really, what we're trying, the outcome of this whole thing, where do they go after they're done with these classes. Hopefully, they're going to end up out in the industry, if not right after the semester or their training ends, maybe they'll take some general classes. Maybe they'll go into the industry a year or two down the road or six months down the road, whichever the case is. Either way, they're facing the reality. And that reality is what we're trying to instill in them here.

With the faculty that we have, most of us, if not all of us, come up from the field. We've basically years of experience out from the field into the classroom where we've seen or experienced coworkers coming late, about 15 or 20 minutes one day, the next day and the next day. Eventually, they're terminated and not so politely. It gets rough out there. Those are the things that we try to instill in them and tell them, "Look, you're up on the building three floors, safety. You can't be working, playing with your telephone while you're up on the roof or while you're on a construction site." All these things, we try to instill in them as much as we can so that when they do get out into the industry, it's a familiar environment or at least they've had some cautions from us. The mistakes that we've made as workers out in the industry, those are the things we're going to bring into the classroom and tell them about it so that they can learn on our mistakes. The labs, the classes, we make it into a safe environment where they can actually make mistakes. And anyone that does not make mistakes is not learning. So, we'll get them in there, we'll cut them loose, go ahead and make mistakes. But they're in a safe environment, a controlled environment where it's safe for them to make those mistakes and then consequently learn from them.

LB: So, just to kind of revamp because I know in Marcela's presentation, she mentioned the IC program. And again, that is the case that was focused on K-12 students. And Brano earlier in his presentation talked about the go kart component. And that was initially geared towards sophomores, juniors and seniors in high school. So in each one of the programs we've heard here today, there are students who are concurrently enrolled and attending their classes as well. And I think one of the things we also want to mention is that, just when you hear back the Webinar, is that Jefferson High School – Jefferson High School is the largest K-12, largest senior high school in our community and one of the lowest performing ones as well. So the work on the Green Alleys that Marcela mentioned is something you want to highlight. And we'll put more information on our Web site for you to review.

KS: This is Kirsten again. I wanted to ask you all what has been the response from employers in the community to your graduates and to your students that you're placing in internship programs like Marcela's e7 program that's going on?

So, I'll let all three of them talk briefly about it. Jess, do you want to start, then Brano, then Marcela?

JG: Yeah, I'll start off. The response has been very, very positive. I think that when the employers have seen that we are looking to modify our curriculum and our training in order to infuse all of these changes in technologies, they become much more receptive to forming partnerships, to lending support both ways from the college to industry and also from the industry to the college. And this is what also has led to internship opportunities in the transportation industry, in particular with us here at LA Trade-Tech. So, I think that the response has been excellent and I think that the industry also feels a sense of support on the part of the community college.

KS: Brano?

BG: One of the companies that comes to mind is Solar City, which their operations span across several states. We've had recent conversations with them. The plan is to actually bring them into the classroom and talk to the students. I've had several opportunities where I went out into the field to simply find out exactly what it is that they need, in addition to our advisory committee that we had. The goal was to go out into the field and see exactly what their operations are like and what exactly do they need so that we could take the students and basically fit their needs for the job placements and so on. That's just one of them. There have been several others. We're still working on several other partners to work with and to basically help the students get out there and get a job.

MO: Hi, this is Marcela. It was the president of our college that called the district office and said, "Look what our students can do with these tools and these utilization tools." And we were the founders of that program and now, thanks to the ability that our students can have on manipulating the CAD, the GIS and all these tools that we teach you at Trade-Tech, industry is looking at us as kind of like the leaders in the profession for simulation technology.

MD: I would add – this is Marcy – I would add that most of these programs, when they were designed, we had a lot of active industry participation in the actual design of the program, so there's a lot of buy-in and ownership of it on the part of industry members, because we've designed it to meet their needs, both while students are in it through internships and they come as guest lecturers, and oftentimes they provide equipment and resources and materials, but also in the end in terms of employing the students once they've completed it.

But I will be honest. One of the things we have been struggling with are our short-term programs for entry-level positions. Again, many of these – I think there's a misnomer that a lot of the entry-level jobs are not necessarily that you need to focus more on soft skills and basic skills and a little bit of the technical skills. And one of the lessons learned from us is that we need to go a little further in-depth on the technical skills as well, especially if we're trying to get students to meet some sort of entry-level certification. I think in some cases, especially when some grants were written, we anticipated that a lot of those skill gains could be done in a shorter period of time. And we're finding out that it takes longer than what we initially anticipated to bring students up that have absolutely no technical skills, never have touched a tool, don't know the difference between counter-clockwise and clockwise, and "righty-tighty, lefty-loosy," and principles like that that help people accelerate in their technical skills. We have people that are coming in with no skills whatsoever, and just the time that it takes to bring them up has been a lesson learned for us.

KS: Another question for you, Marcy, and for all of you. How have the economy and the current policy climate – how have these things impacted your programs? Have you related specifically to the employers who have really invested in your programs? I mean, have you sensed a reduction in the amount of students that they are then able to maybe take on after the students graduate, or have they had to scale back in how involved they are with you, or is the level of investment and involvement holding strong?

MD: Well, basically the economy has had a very dichotomous impact on the college. First of all, we have more students wanting to come and go through the programs; and the green programs are some of our most popular ones. We could actually offer a lot more sections of solar, for example, and they would fill; because the demand on the student side is overwhelming. But on the other side, which you very aptly point out, on the side of actually getting them jobs once the training is completed, that has decreased. Our employer relationships haven't, in terms of providing resources for the training programs and actually staying engaged with us while we're working on the curriculum. That has been as strong as ever.

But we've done a lot. For example, in the utility industry where when we started this several years ago, the utility industry was anticipating large numbers of retirements – more than 60 percent of their workforces at or reaching retirement ages – and they were anticipating huge waves of retirement. Now that hasn't transpired because of the economy. A lot of people in that industry are postponing retirement until the economy comes back. A lot of them had money invested in stocks and bonds, and those took a hit; so they're waiting for things to come back up. So on the actual placement side, it has not been as high as we would like to have it be because of the economy. But on the actual training demand side, it's been astronomical.

I don't know. Leticia, you do a lot around job placement. Do you want to add anything to that?

LB: I think I'll let Brano, one of our faculty members, speak to that.

BG: One of the things that's deceiving about job placement is, for example, with solar. There would be a lot of companies, and we've had a lot of students, that are basically cross-training. So there is a company that does electrical. Well, the construction obviously, the work is down. So now they're cross-training to get into solar. We're not seeing the numbers out there. But what's really happening is the company, rather than lay off all of its workers, it just manages to stay afloat by cross-training their workers. Now they're concentrating more on the solar installations. You'll see that. I mean, that's evident everywhere. Because if you look at the want ads, you don't see that many people up for hire. Mind you Craigslist, just as an example, looking at it for the past three or four months, since this time around last year there has been a big increase.

You're also looking at these large-scale installations. It used to be kilowatts. Now we're into megawatts and gigawatts. Somebody's doing this, and chances are pretty good that there are companies out there that are cross-training their workers; and a lot of them come through our program. They are the ones that are actually taking those jobs. So, yes, we won't see the numbers out there; but that's a good part of what's going on out there.

LB: And this is Leticia. I think in terms of the level of employer engagement, in a sense we're somewhat fortunate here at Trade because we've benefitted quite a bit from our funding. And so we have quite a bit of funding resources right now to provide, whenever possible, paid on-the-job training or internships for some specific programs. So what we've found is employee engagement isn't down; it's actually up for us. And I think it's really our strategy on how we engage them.

One of the things we didn't get to mention is our approach isn't necessarily on advisory committees. Ours is really picking up the phone and constantly communicating with the employers. So it's not just once a semester or once a year sitting down and having a lunch. Like I tell my faculty, that's really 80s and 90s. It's really real-time information, getting follow-up about the student placement that we had, and really tweaking the curriculum on the spot based on employer feedback.

CC: One final point on that is because we're Trade Tech, when we actually put out a bid for a contract to build a building or to install a particular system, we require that that successful bidder incorporate elements of that into a laboratory format. So they're putting on PV systems on the roof; part of that PV system has to be capable of being addressed, worked on, disconnected and then reinstalled by our students.

And then secondly, in terms of the building operations side, we just went through a recent selection process for a construction trade building – a $90 million, 150,000 square foot building – and one of the questions was, "How many interns are you willing to take on the job, in all the various fields, while it's being constructed?" Paid internships – correct. And it was interesting in terms of responses we got. We got their attention because the next time they came through with the final offer, things changed a lot. So it's a matter of also practicing what we preach and incorporating the industry in terms of actually being exposed to or working to and helping our students.

KS: This is Kirsten again at the Center. One of the things I remarked on, and my crew did too, was how you have been greening the campus at Trade Tech. Can you talk a little about – in fact the one building in which we did our interviews was a beautiful LEED-certified building. Can you talk a little bit about how you've been greening your facilities and how you've involved students in that process?

Perhaps Chip can start it off; and the, Marcy, you can fill in?

CC: Well, part of my remarks on both the opening and the closing identified the fact that a great deal of credit needs to go to our Board of Trustees in terms of basically stating, not by choice, but that we will have LEED-certified buildings; that we will have energy efficient buildings; that we will use products; we will recycle. So that's very powerful, very strong, and very dedicated leadership. Then it's of course up to the President and the Vice Presidents and deans and others to actually get this thing implemented, and it's up to the faculty in terms of finding ways in which they can incorporate this stuff in terms of helping students.

So it just so happens, at Trade anyway, that this fits in like a glove and a hand, both in terms of what we're doing in our curriculum; in terms of what we're doing in terms of our strategic plan; our vision and mission; and it just fits in perfectly. Our students when they graduate from here, because of the practical experiences, because of the course work, because of the emphasis in the various trades, we hope certainly are walking out of here with a whole different perspective on what green is – that it's not only a job, it's also a lifestyle.

MD: I think Chip touched on a few things that have been really important as foundational items to us as we do all of this work – both the greening of the campus, as well as the development of new education and training programs. First of all, when we started our Green College Initiative in 2006, it was basically an initiative that was approved by our college's what we call College Counsel. So most colleges have what they call a large, shared governance committee that has representation from all the constituent groups on campus. Ours is called the College Counsel; and there were several presentations made, and they basically adopted going forth with what we call the Green College Initiative.

Subsequent to that, we wrote in 2008 a four-year strategic plan; and in our strategic plan, that Green College Initiative was actually one of the primary goals in the plan. And it included three objectives. One was to adopt/build environment standards, policies and practices to make sure that all of our existing facilities were greened, and any new facilities meet the highest of the green standards. The second one was also to adopt standards, policies, and practices that meet clean-and-green and green-certified standards that businesses often employ, such as using preferable cleaning products, conserving water, composting, doing pollution-prevention measures, and pollution mitigation. Things like buying copiers that are double-side print. And actually we've got to a networked printer solution, so that multiple departments are all networked to one printer to cut down on the number of printers and the waste from printers and things like that. And then the third component, which we've talked about a lot here, was developing educational programs that meet the green workforce needs.

One of the things … also in terms of getting students engaged in this, we've done various things. We added a program this summer called "SAVE LA." "Student Ambassadors for the Environment," I think is what the acronym stands for. So we had a cadre of students on campus during the summer who were trained how to do some of the simple, energy-efficient measures that I spoke about earlier, as well as to do simple energy audits. And then they were available to go around to departments on campus to do a simple audit and then make recommendations as to what those departments could do to increase their energy efficiency and reduce their carbon footprint.

And then throughout the year, we host a lot of events on our campus – green events – to increase awareness around all of these items and these topics. And our students are active participants in those events. As well as usually when we host those events, we usually do tours of what we're doing on campus which would include looking at some of our education and training programs, going to some of these measures that we're taking such as our composting and recycling fields, and things like that. So we are trying to hit it in all areas as much as possible.

BG: If I may jump in just for a second, I just wanted to add that LA Trade-Tech is actually green in a true sense because we go so green to the point where we actually recycle students. And I am one of those fine examples. I was recycled as a student and turned into an instructor, self-admitted here. All of our instructors – most of them – I'm sure I'm safe to say most of them attended Trade-Tech at one point or another. So in that sense, LA Trade-Tech is truly green.

MO: Can I add one more thing? So as we're developing our new, high-performance building for the construction, design and manufacturing – working very close with all the faculty, the criteria architect, also on-the-spot thanks to our administrators – we

work some of our students with a criteria architect developing some of the green standards for that building. So that was also a very participatory environment for our students.

KS: This is Kirsten again. I had a question about whether you have been doing any work in the area of using wind energy. Do you have any programs in that area, or do you have interest in wind energy?

LB: This is Leticia. We're actually – when we've created the stackable certificates and degree programs, we've actually saved some room there to really expand on our wind energy programs. So we cover some of those aspects in the sustainable energy and renewable sides of the instruction, specifically in electrical construction and its related programs. We will be ramping up an entire wind energy program.

Part of the challenge is what makes sense given our location. And so since we're Trade-Tech, we've gone back and forth with Brano and with others in the faculty area as to to what extent can we provide real job opportunities in our community, because we've been focusing primarily in serving the needs of a specific LA region. As DWP [Department of Water and Power] and Edison and other of the public and privately-owned utility companies increase their employees, we'll be ramping up. We don't create programs that don't – or we're not in the business of employing courses or programs that don't have an employer at the end.

MD: Yeah, I will add to that. Right now in terms of wind, the number of jobs in our area hasn't transpired yet. We have a few large-scale wind farms that are out in the desert communities; but there are community colleges closer to where those jobs are that are doing that training. We are monitoring offshore winds. That goes back to my beginning where I talked about patents and venture capital, and we belong to several listservs so that we know what large-scale utility wind projects are up for approval and what phase they are in the approval process. But in some parts of the country I know offshore wind is looking very, very promising – like in the Great Lakes area off the East Coast and off of Texas.

And so we just keep monitoring. Like Leticia said, it's been on our radar screen; but we haven't seen a large number of jobs yet in our particular area related to wind. The other thing we're watching is the whole … microturbines. They are about the size of a satellite dish – maybe a little bigger than a satellite dish. They're a very promising technology that would translate into similar jobs. It would probably be a similar market to the residential solar market. But that again hasn't transpired yet. And so we just keep watching and waiting; and when we think that the jobs are then, we're ready to deploy some of the training programs.

KS: I get these e-mails from ACTE about things that are happening in the field. And I saw one just a couple of days ago with a shocking headline that said, "California Community Colleges Not Preparing Future Workforce, Study Finds." And I'm sure you are familiar with this article. They're citing something that appeared in the LA Times about a report that came out of the Institute for Higher Ed Leadership & Policy at Cal State Sacramento. And this report found that students who failed to obtain a degree or transfer in six years eventually dropped out; only 15 percent were still enrolled; and basically, they're talking about the failure of students seeking degrees at California community colleges to actually follow – their failure to actually follow through and complete. How did you react? I'm sure you saw the article. How did you react to it, and what is your response to that report?

MD: Well, actually, very much similar to what we did with responding to the green economy. Before this report ever came out, we're constantly – and I'll ask the President to chime in in a second – we are always looking three to five years ahead. And we're constantly gathering data on how well we are doing. How well we are in terms of getting students successfully through programs to the point where they obtain a credential, a one-year certificate, a two-year degree and transfer. We're also looking for those who go through short-term training. Are they getting employed? Is their earning potential, is it raised and going up? Are they staying on the job, retaining in it for – we look at initial retention and then long-term retention. And so we're always looking at these things; and in fact we became very aware of this issue as a college a while back. And we've already been implementing some key strategies to try to improve student success. And one of them you saw in this presentation, where we're putting things into these stackable certificates and degrees so that students have these milestones that they can meet where they are at least obtaining certificates along the way and industry credentials, and doing it in sort of a stepping-stone type of approach so that they're reaching these critical milestones instead of only having two-year milestones and sorts of attainment for students.

We also started something called the "Trade Bridge Academy," which I'll ask the President to talk about; and it's a campus-wide initiative really focused on student success. But part of that whole initiative is we revamped how all students coming into the college actually come in. We have a very intensive orientation program where there's a class that they actually take. We've completely redone how we do our assessment exam. We don't actually ask students to immediately take the placement exam upon coming into the college. We do much more – we use the Trade [Bridge Academy] and do diagnostic assessments and then do some math/English refreshers before students take the placement exam.

We also are looking at key milestones for student success in terms of unit accumulation in the first year, grade point averages, and things like that that seem to be evident – shows key momentum points for students actually completing a certificate and a degree. And we're focusing on implementing things at the college that will enable students to hit those key milestones or momentum points.

And then, Chip, do you want to talk a little bit about the Trade Bridge Academy Initiative?

CC: Yeah, first of all one of my favorite quotes from a colleague of mine is the fact that "Universities achieve excellence by creaming the top of the applicant pool. Community colleges achieve excellence by including everybody and teaching them to be excellent." That's a whole different set of challenges. And I'm not going to get defensive about that because to a certain degree that that is correct, we have a real challenge in the fact that we are an open-door institution, and that's a positive, that we accept everybody. That's also a negative; we accept everybody. So the challenge is then the diversity, for example, in a given classroom with the faculty that are sitting here are unbelievable. As you heard them say, they have individuals walking in with master's and doctoral degrees, and those who can barely read. And that's a challenge. That's why we're here. We're here to effect, as I said being a dream maker and effect dreams; however, we can always do better.

And quite frankly, the TBA – which is the Trade Bridge Academy – this year we said, "That's it. We're going to find a way that we can significantly improve student retention and focusing on the basic skills in an accelerated way." Because many times the whole ability to benefit issue is the fact that students have taken basic

skills for three years; and they never actually get into the actual coursework. So we deal with things like conceptualized learning; we deal with things in terms of putting students in courses and then supporting the courses with reading and math faculty – writing faculty. And part of it is the orientation. It's how can we prepare students to be successful? So now we have a nine-hour mandatory – not mandatory but nine-hour program, because we can't mandate – orientation. And then based on that orientation, we then look at boot camps to be able to improve the reading and writing and math; and basically bootstrap them to be able to score higher on the placement tests, which then allows them to move through the system quicker.

So there is a problem. We admit it. We're trying to address it. But to be a little defensive is the fact that we're not a university. People sometimes have to –on the research side – have to understand, okay, the fact that the challenges of working with our people who work sometimes two or three jobs. They have families. The key is to bring income into the home. And if the choice is between home and school, then home wins out.

So there are a lot of variables out there that come into play; however, that's not an excuse. What we have to do is find a way to address it; and through TBA, we think we have something. Five thousand students went through that program as of September of this year. And I think we've got something really positive in terms of fine-tuning it, and we'll see what the results are in the next six months.

KS: Well, thank you for that response. I think that's an excellent place to end the Webinar. I want to thank all of you for a really exhilarating and exciting talk. I want to thank our audience, who have hung in with us for an hour and a half. We are going to be archiving this Webinar. It's going to be available shortly.