

National Research Center for Career and Technical Education

Transcript: NRCCTE Programs of Study Live Seminar/Webinar at the 2010 ACTE National Policy Seminar with Jim Stone, Cathy Hammond, Corinne Alfeld and Kirsten Sundell

Jim Stone: We are here to talk about Programs of Study. First, the request for the in-house group, if you have a device resembles this, similar to, would you please switch it to what we like to call "pleasure mode."

Programs of Study, as you know, is a major component of the Perkins IV legislation and will evidently be an important part of what will be Perkins V. The National Research Center, as part of its research agenda and also its research and development agenda has invested a fair amount of its resources in studying Program of Studying.

The intent of this seminar, this webinar, is to share findings to date to talk about what we're learning about Programs of Study from multiple perspectives. The design of the various studies were intended to try to address some of the issues that arose from the evaluations that were done at Tech Prep in the previous iterations of both at the center, as well as other entities that tried to look at what Tech Prep was doing in the high schools and the colleges.

So the studies that we have involved, there are four. There are three research studies, and don't try to read this. For those in-house, we have copies of these for you. For those who are online, you can go to our Web site and pull down these documents. Everything that we do we produce as a PDF file so that it easily retrieved and costs you the time it takes to retrieve a PDF file. But the four studies were really designed to try to look at Programs of Study and understand the aspects of them that seem to work or the pieces that maybe are more or less useful in trying to move this agenda forward.

So the first study that we have in our portfolio is one that really started in the community colleges. We identified what we called "mature Programs of Study," predicated on the initial assumption, and then validated by the fact that we found some interesting sights, that even though the language was relatively new, the processes had been in place in my communities for sometime. So we looked for sites where there was already a documented stream of young people moving from high school into the community college, career tech, or workforce, or occupational programs. And then using a process that is referred to "backward mapping," we began to look see what it was that the high schools and community colleges were doing do create this stream. And so you will hear from Corinne Alfeld who is one of the PIs on that project.

A second study that we launched at the beginning of this center was designed to take advantage of the fact that in South Carolina they passed something called the EEDA [Education and Economic Development Act]. About four years ago?

Cathy Hammond: 2005.

Jim Stone: 2005. And it sort of predates the Perkins IV in the sense that it identified the notion of career majors, which look a lot of Programs of Study, and

also added other elements that were designed to help young people better organize their thinking about where they want to go and what they want to do as they move from high school into post-high school experiences. So we had the opportunity there to sort of look at the question of what happens when we really require every school to provide these kinds of experiences. We see that some schools more or less implement them, and we're looking it why that might be, and there are a number of other very interesting questions.

The third study in the series that we designed was to take advantage of the fact, again, that a number of states and school districts were actually already doing something like this or jumped on it right away, and the programs that they offered or the schools in which they offered them became so popular that they were, in our terms, over subscribed; that is, they might have 2,000 students who asked to be admitted in ninth grade to a school for which there might be as few as 500 slots. The advantage as a researcher is it gives us what looks like an experimental design; that is to say when they use the lottery to make the assignments. So some of the kids get in because they picked the lucky number, others move off into some other experience.

Some of you may be familiar with the career academy study that was done by MDRC. It started back in the '90s. They're now moving forward. I think they're in their eighth year follow up post-high school. They use a similar process, and it really allows you to more rigorously test the question. In this case the question is broadly, if schooled organized in this way, what are the advantages that accrue to the student over more traditional kind of high school experience?

And the fourth activity that we're involved in is what I call more of an R&D approach. Rather than asking research questions, here in response to requests from states we've organized technical assistance where we're putting teams out into, at this point, five states and helping them think through how you organize and plan for Programs of Study. So the first of those five, by the end of our fiscal year, which is going to be roughly June and July, will be able to talk about what they've done and how they've done it.

Now the PI for this project was invited to be part of this panel. Unfortunately, he was unable to join us today, but as this project moves forward, we will be putting information up on the Web site about it. Just as a brief reminder, what it says in the legislation, most of you are familiar from this. I'm going to skip through it quickly. But keep element are to incorporate secondary and postsecondary elements, and so part of what we're looking at is what does that mean? Challenging rigorous content, technical and academic; coordinated, non-duplicative progression of learning; prepare students to move into some post-high school education or training experience.

And finally, one of the key differentiating points, in my judgment, is the notion that this has to lead somewhere, unlike Tech Prep, which was more or less a continual adding of plus twos, here the intent is to actually lead to something; in this case, an industry-recognized credential. It could be a diploma. It could be a degree. It could be a certificate, but the idea is that it leads to something that actually has some down the road, presumably, industry or market-related payoff.

Now one of the things that, again, unlike Tech Prep, is an early recognition that even though the legislation has a limited set of things it requires, if this is really going to

work, it's going to take probably more than what the legislation specifically requires. And so the OVAE, working along with some states and others, is developing what are sort of components of Programs of Study. It includes things like the enabling legislation. Do states have legislation that permits dual credit, concurrent enrollment, and those kinds of things or not. The kinds of credit transfer agreements. It's not reasonable, in my judgment and the judgment of others, to expect somebody to come into ninth or tenth or eleventh grade and to know really what they want to be when they grow up if you don't have some career development going on prior to that. So if we really want to be serious about this, it seems to me that we want to have some career development kinds of things, it also seems apparent to others.

Professional development, the kinds of teaching/learning strategies that are different than what we used to do. So these are some of the elements. For those who like logic models and graphics, we have one, actually it's not mine, but I'll pretend it is. Arrows go this way. Arrows go that way. Soon to be a major motion picture. I'm not going to try to explain that here.

Finally, the center has, at this point, two reports on Programs of Study. The first we put out in our first year of operation, which was a look at the existing research on components of Programs of Study, and so that's the Lewis and Kosine publication, again, available on our Web site. The other thing that you'll find on our Web site, recently added, is the joint report of the three projects that are represented here on Programs of Study and what we're learning from our first year of two of work.

So what I'd like to do at this point is just introduce my colleagues. Kirsten Sundell on my far left is one of the two PIs working on the rigorous tests of Programs of Study. That's the one that is the experimental approach to asking the question about the differential effects of Programs of Study. Corinne Alfeld, next to her, is the lead PI on the study that's looking at starting with the community colleges and looking backwards, if you will. And then Cathy Hammond, to my immediate left, is one of the PIs on the South Carolina study, which is looking at that one that, as I described earlier, where the entire statement, all high schools are supposed to be doing these things that are like Programs of Study.

So here is what I'd like to do. I have a few questions. I'm going to let my colleagues talk about their thoughts in response to these questions. For those of you here with us today, we'll have time to try to respond to questions you may have. For those in our online audience, I would ask you to use the technology through the webinar process and send questions in. We will attempt to answer as many as time permits. So with that, let me just start.

And, Corinne, maybe you could just talk a little bit about in the sites where you were working, how did they come to the decisions about the focus for their Programs of Study?

Corinne Alfeld: Well we found that the most well developed sites are really linked with regional labor force needs. In one site, the workforce board really pushed for having the program at the college and worked with local employers to set up an advisory board and provide resources to get the programs started. In another site, the state actually offered tax incentives for companies in the industry to move into the area, and so that was a large labor-force need and also has legislation requiring students to have at least one dual-enrollment course during high school, so that also stepped up the development of the programs. And finally, in the third site, really the

colleges wanted to create linkages with many different high school programs, so it wasn't really linked to specific programs.

Jim Stone: So we saw different kinds of sort of strategies thinking about that. Kirsten, what about in the schools and districts where you're working?

Kirsten Sundell: Well there were a whole variety of strategies in place in our districts. First, obviously since we were doing a randomized trial we were looking for districts that used lotteries. And it was not a struggle for us to find really great high-functioning programs in these schools because most of them already had great tech programs or career academies already in place. Now in one state, the state unilaterally decided that that all CTE programs that already had a postsecondary component of some kind would have to develop a Program of Study. If they didn't have any postsecondary component, say, like a cosmetology program, they wouldn't have to create a Program of Study. In the other district, there were a variety of forces at play, labor market, convenience. There was a local community college serving our school that had a really strong IT program that they had developed through funding, and so that was like their starting point, was existing strengths.

Jim Stone: Okay. What's the story in South Carolina? How did they come to these kinds of decisions?

Cathy Hammond: Well, South Carolina is a little bit different because they're doing Programs of Study across the curriculum. It's not just CTE. And so what the state started with this, they required all the districts to develop three career clusters around the 16 federal clusters. So each district got to decide which of the three that they would focus on, and they can do more than three, but start with three. And under each of those, they needed to know career majors or Programs of Study. And the schools that we visited, there were a wide variety of ways of doing this. It ranged from one thing that they were already doing, as you all explained, that they had track records for that they were ready to go with. They had local businesses actually campaign for certain ones because they needed certain skills in their labor force. Some of them actually did labor force data collection through their advisory councils to find out what was needed. In the future, for example, building nuclear power plants, they need welders. And we found that several schools, welding became a big issue that they wanted to prepare.

But we also found another interesting thing, is some of the teachers actually surveyed their students. And television is having an impact on some of our Programs of Study. CSI has had a major impact in several schools. So crime lab kinds of things were very popular in some schools. So it's over a variety of kinds of ways.

Jim Stone: Okay. CSI. For those of you online, we're having head nods here in the audience, which either means they're going to sleep or they agree. We agree, yeah. I'm convinced the reason CSI is so popular is because as you watch TV you're either going to come out as a studly dude or a really attractive young lady, and that affected the program. It is, by the way, a testable question.

So what we're learning and what we're observing--I'll just keep moving along here folks. What we're learning in terms of what we're observing is that there are a number of perspectives that were brought to bear. There isn't one thing going on. It isn't just close attention to labor market. In some cases it's student demand. In other cases it is labor market directed in some cases in an attempt to sort of bring

industry into the community. In other cases it was taking advantage of what they already had in place that would seem to be working, let's build on that and add the other pieces.

So this sort of leads into the second question, and this is somewhat philosophical, but again, I'm interested in the perspectives that people seem to be bringing to bear on the question, and that is the extent to which a Program of Study is envisioned as either a workforce development, occupationally-oriented kind of program or effort, or is it seen as an alternative halfway to college for kids who might perhaps not make the usual group. And, again, I'm curious about what you're seeing in your states. Cathy, what are you seeing how there?

Cathy Hammond: Because it's statewide it's probably very different from the focuses of the other two projects. From the South Carolina legislation it's very broad. I'm going to read you a quote from the law. "The legislation is designed to provide a well-rounded education for students by fostering artistic creativity, critical thinking, and self-discipline through the teaching of academic content, knowledge, and skills that students will use in the workplace, further education, and life.

So the bottom line is from this perspective it's both and more. It includes dropout prevention as well. So one of the reasons that the law was passed was people had been looking at the graduation rates from South Carolina, also employers were having trouble getting skills for employees, and so they decided to use this legislation to focus careers and help get students started on that kind of thing. They're also trying to get away from career prep versus Tech Prep during this process, so a variety of things are happening through this law.

Jim Stone: Corinne?

Corinne Alfeld: Well, in my experience of the sites that I visited, really the Programs of Study are the only pathway really into the regional workforce. They're not an alternative pathway by any means. It's this is how students are being trained to work in their communities whether after a two-year or four-year college, or earning other kinds of credentials. So this is really just a pushing off point.

Jim Stone: Okay. Kirsten?

Kirsten Sundell: Our Programs of Study really come from every cluster and so it kind of depends on the program in question, you know, how much postsecondary connection they have and whether they're concerned with the workforce development. I will say one our sites, one of our directors really sees their mission as more workforce development oriented because they see their programs as the key to developing the local economy. This state allows its district to form more local articulation agreements, and so you'll see greater and lesser degrees of involvement on the postsecondary level depending on the program in question, and you'll see greater and lesser industry and business involvement.

The other state has a much more diverse economy, and this one, I think, has more of a focus on preparing students for post-second through its Programs of Study.

Jim Stone: Okay. Yes.

Cathy Hammond: Just a further example from South Carolina. If you look at the top ten career majors of eighth to tenth graders for the 2008/2009 school year, you will see there's a mix of industry and college prep. Of the most popular, 14 percent of the students were in Allied Health so health services. But Visual and Performing Arts was the second one, and then Engineering was third. The tenth one is ROTC in South Carolina, and there are business studies, legal study, and construction, also, so it is a mix of industry and post-second education.

Jim Stone: I don't see college professor on there.

Cathy Hammond: No, you don't. Oh, teacher, here's Teacher Ed though.

Jim Stone: Oh. Okay. Multiple levels. Okay. Thank you. That sort of leads us into the next question, which is--and it relates a bit to this--is what are the kind of driving forces at play here? One of the things that in my own experience in visiting schools and looking at programs over the years, whether it be Tech Prep or other kinds of initiatives is that there's often either a person or a thing that really seems to drive this. And in the context of Programs of Study then, Kirsten, in the school that you're in, what's really seems to be the driving force here?

Kirsten Sundell: It really depends, again, on the Program of Study. But if we had to commit to one answer, we would say it's safe to say that the end game is generally on the college-degree-oriented program, along with whatever certifications, credentials students can learn along the way. And a good example of that, you know all of our sites really value these certifications and credentials. A good example is like in the IT field, students have the opportunity to earn, say, their Cisco certificates or CompTIA A+, so they could be getting those while they have opportunities to participate, say, in a community college program that is not at their school, plus they're preparing to make that postsecondary transition.

The more college-oriented push of our Programs of Study generally comes out by the example of Project Lead the Way, which is almost always held up as the jewel in the crown. That or National Academy Foundation programs, those are usually held out there. And from the districts and schools perspective, the benefit of participating in things like Project Lead the Way or National Academy Foundation is that they get the guaranteed academic and technical rigor. They have the professional development opportunities. They have those nationally recognized credentials for their students. And so participating, although it requires a lot of time and money and personnel resources, it potentially has a better payoff or bigger payoff than, say, developing a homegrown program from scratch.

Jim Stone: Corinne, what about at your sites?

Corinne Alfeld: Well, because the sites that we chose had already been doing this for quite a long time before the legislation even came out, I think the driving force behind them were different reasons but very much focused on getting students to continue their education beyond high school, and, again, really linked with the regional or local employers and the industry needs.

Jim Stone: Okay. Anything different going on in South Carolina, or does that capture it?

Cathy Hammond: It captures it, but there's actually the broader transition just in general. One of the things that the EEDA wants to do is reform schools and transform the curriculum, and so it's a broader swatch of things, but it does both career focus and further education, post-second education. So it's a little bit broader in terms of encompassing all that have and school reform.

Jim Stone: Would it be reasonable to say that one of the things the EEDA is doing is using the focus on careers and, indeed, career and tech ed as a strategy for whole school reform?

Cathy Hammond: Yes. Yes, it would. And the way to improve achievement, to get kids engaged, to get better outcomes all around, both while they're in high school and after.

Jim Stone: Uh-huh. You were sharing earlier about how some of the non sort of traditional CTE programs were looking. You want to say a little bit more about that?

Cathy Hammond: The law kind of got rolled out, and there was kind of training here and there. But what happened is the school sites that we visited--there are eight of them--we found that the people who really knew what was going on with career clusters, many of them were CTE faculty. And so many of the schools actually used them as the resource to help develop their career clusters and their career majors, because they already had the expertise, they already knew how to build advisory councils and business, and they knew what was needed in the community. So they actually used the CTE teachers as mentors and as the advisory group. And it's actually the reason that in two of our schools that they were so far along in implementing majors and clusters.

Jim Stone: Okay. All right. Thank you. And, again, next question sort of flows from this, and Kirsten alluded to it. But the question of the end game, you know, is this simply the idea that we're just trying to get kids to move to postsecondary, or how focused or general is their thinking or is their planning in your sites, and, Cathy, maybe you could start the conversation.

Cathy Hammond: Each of the students now in high school, actually in eighth grade, they develop an individual graduation plan, so actually they want the planning to be very specific course wise, career goals, as well as what they plan to do postsecondary, whether it's going to training or the military or further education. So it's very specific in terms of where they're planning it out.

Jim Stone: Okay. All right. Kirsten, you're nodding your head.

Kirsten Sundell: I'm just nodding. All of our study schools across both states and districts have the same thing. They call it different things; four-year plans, IGPs [individualized graduation plans], but they all have the students thinking very concretely--sometimes even before they come into ninth grade--about what their career plan will be and courses they need to take and how they need to prepare in order to get to career postsecondary.

Cathy Hammond: And they have them do their goals and lay them out?

Kirsten Sundell: It depends on the program.

Jim Stone: So, you know, for years in special education you had these individualized plan that's had multiple adult players involved. How extensive or narrow is, for example, the process in South Carolina or in some of your schools?

Cathy Hammond: It depends on the school actually. Some of them are really building the individual graduation plans are now online so that they can actually share data statewide, which is why I knew what the majors were for the '08/'09. But it depends on the school as to how much is entered. It could be a lot, and it actually can connect that to the students' data file, so you could have everything there. You'd know their scores. You'd know what they had been passing. You would know what majors they have. Have they changed majors? You would know what their career goals. How many times they changed. You would know all that if the school actually input.

Jim Stone: But do parents have to sign off each year?

Cathy Hammond: Absolutely.

Jim Stone: They do.

Cathy Hammond: There's an annual review and parents are required to be there for the first one. And what we're finding is the eighth grade, 80 percent of the parents in '08/'09 came to signed the IGP for their eighth grader, but it drops off as the years go to 50 percent by tenth grade. But, yes, every year there is an annual meeting, and it's required to have a parent or designee, and that's the kicker, the designee is often a teacher so.

Jim Stone: Because by the time the child is 15, they no longer talk to their parents. I know this.

Kirsten Sundell: We also have parents looking at or students' graduation plans. And another nice piece, we don't see this in every school, but some of our schools have built in kind of a portfolio component to students' four-year plan. So if they're involved in a school that's doing project-based learning, they are amassing interesting projects within their programs. You know, it might be IT or marketing or engineering, but those projects go into that portfolio that then follows them through their four years. And then in some cases the students are getting feedback from business and industry. They'll do like mock interviews and they'll show their work, and so that's something that they can then carry into postsecondary or jobs to help them.

Jim Stone: Corinne, are you seeing similar or different things in your site?

Corinne Alfeld: Well I have seen the portfolio used for some of the project-based kinds of things, and also I just wanted to say that really your question is about the end game, and it really depends on, as Kirsten said earlier, it depends on the program, the industry that it's connected to, what kinds of degrees are or credentials or levels you need for what type of employment you would need afterward. So if you need a PhD, then, you know, they would be continuing to push on through that program all the way through. If it doesn't require that much--there are different exit points along the way and different credentials. I have seen some employers actually working with the program on developing a certificate program so that they know that

these students will have these skills when they come in. I mean it's a local, it's not a nationally recognized certificate, but it is something that is used in that community.

Jim Stone: So a couple things we're seeing is the increased use of these plans that involve parents and significant other adults. We're seeing use of certifications; you mentioned welding for example. And in some cases they're perhaps creating them so they have some sense of the extent to which students master this stuff. Okay.

This, again, sort of rolls into the next question, and we're hearing part of an answer to this. And, you know, the idea is to have this business and industry involved in these Programs of Study, and has always been career and technical education. It's work more or less well or been more or less used. In the programs that you're in and what you're observing, how intense or un-intense--is that a word--is business and industry involvement?

Corinne Alfeld: Oh, that's right. Because I am looking at established programs, a lot of these have had long-term relationships with the local employers, and all of the programs that I've looked at have advisory boards that meet frequently and that talk about course content, curriculum, sequencing assessments, equipment that's needed, updating type of things like software or a method of doing something.

Very often the relationships between the faculty and the employers are close enough that the faculty can actually sort of hand pick, or the employers can hand pick through the faculty which students they would want to work with or hire afterwards. I think that unless there is that kind of established advisory committee, you're not going to get a lot of employer involvement. So there needs to be a really concerted effort to have that happen to bring them in and help them see the big picture of why it's important for them to be involved in education in a more substantial way than just, you know, having a speaker or something like that.

Jim Stone: Kirsten.

Kirsten Sundell: I would agree with that. In all of our sites, all of our school sites, this is an industry where we work very closely with program study faculty, CT administrators. They are constantly assessing the quality of the programs, the rigor of the course offerings, the developing labor force needs. In some cases they provide material support, so if there's funding they can provide or equipment or whatnot, that I will do that. There are strong relationships not just between business and industry but also with postsecondary. In one district we have these joint technical skills committees. You know, they will meet several times a year, you know, to talk about standards and curricula across secondary programs, postsecondary programs and how they are turning out students that are going to benefit business and industry.

Jim Stone: I'm curious, because South Carolina sort of provides an opportunity to sort of look at how this works. You have some extraordinarily rural communities.

Cathy Hammond: Yes. They make--I mean it's just really, really rural, where there really isn't much business and industry that you can identify. Or cell phone service.

Jim Stone: Or cell phone service. Paved roads. How did they deal with this--this is a requirement that involves business and industry. How did that deal with that when there really isn't much in the local community?

Cathy Hammond: They're struggling with that because students, if they want to have extended learning opportunities in work world are required or at least it is expected of all students, and often it's 20 or 30 miles to get there. So they're struggling to actually find businesses that will allow students to come visit and actually getting them through transportation issues. And some schools just are not doing it. The virtual shadowing is actually happening. That's becoming a bigger thing.

But one of our schools has trouble with Internet access, so they're not going to be able to do that either. So we're not sure how they're going to be able to do that. But industries vary in terms of their interests in working with some schools. One of our rural schools has very high interest and involvement of business, because they've made it a point to do that because they know it's their labor force. And so they've made it a point to work with the school and make transportation available. But it really takes an effort on the school and the businesses' part.

Another interesting issue is not only identifying businesses but actually who can screen and monitor. Teachers and schools are worried about sending students out into businesses that they don't know. So if you're not connected with them, they're worried about safety and harassment issues. So we've found that that's another stumbling block. But the legislation requires businesses to be highly involved, and, in fact, one of the reasons the legislation passed was because of business. They wanted to improve the ability skills.

Jim Stone: Interesting.

Corinne Alfeld: I just wanted to add one thing that, is that where those connections are very strong and the industry is able to work really closely, then there's very little on-the-job training that's needed so it really is sort of less remediation.

Jim Stone: By the way, just as a caveat, all of these projects involve the longitudinal look at what's going on, so we're part way through a process. By next year about this time we'll begin to have some actual data that we'll be sharing. So some of the, you know, final questions for, you know, we're a year or two away from really knowing.

But I'm curious about this business involvement. Recently, I think a number of IT industries are involved in this consortium that has pledged to hire 10,000 IT graduates next year. Now that's not a very large number, but their concern is that they're not getting enough IT people out in the field and so forth, and they thought this might be a way to sort of motivate young people to study, you know, in the IT area.

I'm curious the extent to which these employers who are involved are willing to make even remotely similar commitments; that is to say that if I'm involved and you all design a program that really addresses our needs, what sort of level of commitment is there to really motivate the young person that I've got a shot at a job here in this industry or with this employer? Kirsten.

Kirsten Sundell: Well I wouldn't say that our business and industry partners that we see in schools, I wouldn't say that they offer firm commitments of jobs, but they have already committed to working with the schools, as I mentioned, through, say,

portfolio reviews and mock interviews. They offer opportunities for mentorships and internships to the students, and in most cases when they participate in things like that and the students are actively involved in that, the employers know that they're going to get a high quality student out of that particular program.

I would also add that many of these programs build in a soft skills component, whether it's sort of meshed into courses as a whole or it's offered as a separate course, like one of our schools has a ninth grade course that really concentrates on professionalism and promptness and how to dress and, you know, how to behave in the workplace. So the business and industry partners know what they're getting, and they may not be guaranteeing jobs, but in many cases, the students they take on as interns end up being employed in the summer while they're going to college or all year long while they're going to college many times. So there's definitely a pipeline from the program to the partners. It may not be promised, but it's there.

Jim Stone: Yeah. Okay. I want to take kind of a look at this from two perspectives. What does the Program of Study look like if you're in a high school working with it, and what does it look like in the college if you're working with it. And, for example, the legislation talks about these secondary and postsecondary elements, the notion of linkages, the use of dual credit, concurrent enrollment, whatever label may be used. You know, are high school counselors aware of this and are they supportive? I mean there are all kinds of things we can think about this, but let's start with sort of the high school perspective. You know, what's different than what was, if you now are doing this Program of Study? How might you characterize that? Yes.

Cathy Hammond: That's an interesting question. It depends on the school you're in, of course. But for the schools that are really going gung-ho on this, students actually have by the tenth grade an idea of what they want to do or possibly want to do wasn't they're out, so they actually have an idea thinking about secondary courses. They've actually thought about what certifications might be available. One of the interesting things that we heard is a lot of people want to be pre-med until they're put in a pre-med class, and they find out it's Science and there's some Math. And our teachers laugh because one of the best things that's happened about Programs of Study and students find out what they don't want to do, that pre-med may not be where they want to go, but that they like biology or they want to be a med tech, or they go Health Science anyway.

But all of our schools are doing dual enrollment and dual credit, and that's across the board. It's not just for CTE. And, in fact, there's new articulation agreements across the state so that there will be articulation between high schools and two-year, and between two-year and four-year colleges. It's a mandate on the law that higher Ed actually work on those articulation agreements. And they have to actually report on how much dual enrollment is going on. And for the 2007/'08, 29 of the state's 33 postsecondary institutions were doing dual enrollment courses. And it involved about 186 different courses and 46 subjects. And 72 percent of those were actually two-year schools.

Jim Stone: Do they have a minimum grade point average in order to be able to participate in that if you're a high school student?

Cathy Hammond: It depends on what kind of course it is. Some of them are available at the high school level with the high school faculty teaching, and then the grade point average doesn't matter necessarily. Or it could be taught by the

postsecondary faculty on the high school campus and then it might be different in terms of grade point or at the college.

Jim Stone: Do all of them yield concurrent credit?

Cathy Hammond: No, they do not.

Jim Stone: Okay.

Cathy Hammond: It varies.

Jim Stone: Okay. That's often a question. Okay. Thank you. Corinne, what about in your sites from the high schools? I know you're starting from the college perspective.

Corinne Alfeld: Yeah. Well it's very hard to separate because the sites where I am have very strong linkages already, and it's hard to separate from the high school or from the college perspective. However, I think that from both sides there is a give and take. Both sides have to be willing to sacrifice something, and they both have to have the students' outcomes, and the best thing for the students in mind when they come to the table. I think that from the high school perspective I think that some the concerns that I've heard, the challenging they had to overcome, involve logistics of scheduling so students could take a college course or transportation for that course or certification or credentials if the teacher at the high school is going to teach the college course, those kinds of logistical things.

Also, in some places there has been some confusion about whether the college or the high school get sort of the credit, the funding for that student when they're taking dual enrollment. So there are a lot of hurdles, but from the high school perspective, the main thing is that students are able to have a taste of what could be. If they go to college, more students might be engaged and willing to continue their studies and graduate and move on. Also, that they could do that with credits under their belt, a huge thing for parents to have some free college credit while their child is in high school.

Jim Stone: Kirsten, what about in the place where you are?

Kirsten Sundell: I was thinking about our more top-down state where they have statewide articulation agreements between the schools and the local community colleges and four-year institutions. They also encourage more local-level agreements between local community colleges and secondary. And in thinking about our study site, which is like a multi-academy site, they have longstanding very strong relationship with the local community college in their engineering department, and so at least in the recent past, students in this program were able to either take a community college class at the local community college, or they could have a community-college-level class taught at their high school by community college faculty.

But with the budget crisis hitting this state, as it has most states, first the funding for transportation for the kids to go to the community college, which was their preferred option, that when away, and then they cut the funding for the program, period. It was not a good thing. To a somewhat lesser extent--well first the local community college felt like, you know, they had gone out of their way to help develop these programs, and they even rearranged their course schedules to allow

the kids to come on campus and have this experience of a community college experience with a high school cohort. So the funding went away to support that, and then they also feel, I think, to a certain extent that some of those students who might normally have gone on to the community college having had that experience, are being poached away by four-year institutions. So that even the principal of that particular school said he wants his kids to go to four-year universities, and he's quite candid about it.

I mean if a kid has a choice between Harvard or MIT offering him \$100,000 to go to their program or go to a local community college, it's pretty obvious where the student is going to choose to go. But the principal has also been pretty candid about the question of preparation of his students. You know, in the previous year, he had a dozen kids apply and get accepted to a state flagship institution, very well regarded, and then the year following, none of the kids got accepted. So there are preparation issues for postsecondary that need to overcome.

Cathy Hammond: Kirsten, you had said that yours is attached to postsecondary push. Are there advanced placement versus dual enrollment issues at your schools?

Kirsten Sundell: Well they have some of both. I mean there are AP courses in both of our study sites, and there are dual enrollment opportunities. But in the one state in particular, the one I was just referring to, the funding support for those types of dual-enrollment opportunities have really declined over the past years. I mean when we first visited this site, it was all they could talk about were these different community college opportunities that students had, and now that we went back in the fall, they said, they were hard hit.

Cathy Hammond: Oh. Because we're getting conflicting kind of information. Some of our schools have having trouble with the tension between AP courses and dual enrollment. Who gets it. If you're college prep, should you be doing that or not. And that's several of our schools are really struggling with that. I wondered if it was at yours.

Corinne Alfeld: Cathy, I have a question for you.

Cathy Hammond: Okay.

Corinne Alfeld: Because in some of my sites because the issue really just focused on Programs of Study and CTE, the counselors I've found are not as aware as they perhaps should be of the career technical options and dual enrollment in those areas, and I was wondering in a state like South Carolina if the counselors are more aware of those and are able to talk with students about those?

Cathy Hammond: Guidance counselors in South Carolina are key to the whole policy, and so they know--they're involved in all of it. They're actually the ones that help with the individual graduation plans. So they actually now are learning more about CTE than they ever knew before. And so they are actually--CTE faculty actually told us they were very happy because they're no longer getting students dumped on them. They're coming in on purpose, that they're focused on a goal, there's a reason for them to enrollment, and they're finding some changing in that. So having guidance involved has changed the ballgame for CTE courses in many cases, and they can help get a broader picture across certification, as well as education. Yeah, it's made a huge difference.

Jim Stone: I point out too, in the South Carolina legislation, they were very specific about the importance of guidance, and actually--and I can't remember the exact number--added money in to hire more counselors so that the student/counselor ratio would be reduced --

Cathy Hammond: 300 to 1.

Jim Stone: -- so they could actually do this. And I think it's extraordinary because, again, it's acknowledgment of the importance of counseling. And if you look at the expanded list that the OVAE is working with and thinking about what's necessary to make a Program of Study work, counseling is an important part of that. Well, for any of us in education I think you realize how important this actually is. So it's having an effect.

Cathy Hammond: It is definitely having an effect. It's having an effect for the guidance counselors, as well as for all the faculty because of how the students are getting placed now in terms of interests, and also there's somewhere else to go for guidance other than--actually people are stumbling onto CTE. And I know there's also--there often used to be the negative connotation of going to the career centers. There's career centers in South Carolina. But now that it's involved in a whole overall system, and the guidance counselors are now saying "These are options," it looks very different the to students. So we're also finding those kind of barriers are coming down as well.

Jim Stone: Mindful of time. We have a couple more questions that I'd like to get at before we open it up for questions from you. Evaluation around Programs of Study, as such, is not a current requirement of the current legislation. But I'm curious if the locals or the states are in any way trying to assess the impact of Programs of Study, and if so, what might they be doing? And there's sort of a second evaluation question is the level of support. And again, we've touched on some of this. But I'd like to comment that you're observing in the sites that you're--that are part of your work.

Cathy Hammond: Ours is the accountability for the assessment policy is sort of up in the air still. It's the CTE Programs of Study, specifically, are doing much more follow up than others. But statewide, they really are wanting to look at the impact of this kind of career-focused policy on graduation rates, as well as achievement and outcomes after postsecondary, whether it's work or education. But it's probably not as specific in terms of following an evaluation as for these other specific mature programs.

Corinne Alfeld: Well, actually if the state isn't requiring and the federal government is not requiring accountability in terms of asking who is in a Program of Study, how many students are there, there's really in formal identification of students in a Program of Study, and have and how do you count them? Are they just taking courses in that area? Are they identified, unless there's a career major or something like? It's really difficult to know. And students change their mind, they move around. And it's really hard to pin that down. It would be really nice from a researcher point of view to just have them stay in one place, but they don't do that.

I know that in some states end-of-course assessments are required, and in those cases they can be counted. And I think that probably is the most feasible way to go if we are going to be trying to count students in Programs of Study is look a who is

taking and passing those end-of-courses stuff, meaning end of the sequence of courses.

Jim Stone: Yeah. Kirsten.

Kirsten Sundell: I guess we're kind of spoiled because all of the students across both of our sites are essentially wall-to-wall academy. So with very few exceptions, they are in very clearly defined sequence pathways. Of course they have to apply to a lottery in order to get into their particular program, so identifying them is not a problem.

As far as assessment goes, in our more top-down state, they have a system of assessments they give at the end of every course, and all of the questions are derived from a state level test bank. In the other state, they are currently working to develop a new system of end-of-program assessments, and these would be derived from third-party assessments. And they're planning to pilot that this year in just a few programs, so we're eager to learn how that's going. But they're very concerned about how to move forward, given that they are understaffed and underfunded. And they're particularly worried about how they're going to afford performance testing in their programs.

Jim Stone: Another aspect of assessment, of course, is the extent to which people show up the next day for the same thing, and that's kind of the second bullet is the extent to which there's support. And Corinne I know in yours, at least one of them, I think it has origins in the early 1990s. And one kind of assessment is the extent to which it's expanded; that there are more students are involved. I mean, you know, again, some are too new in the process perhaps, but I'm curious about any sense of the support from the community, business community with the parents and so on?

Corinne Alfeld: I think it will be interesting to hear from my colleagues here, because in the established programs that I visited, the people who have been working on these for many years are very, very excited, very enthusiastic, really gung-ho, very invested, very dedicated, and they're--you know that comes across, that comes through. And their business partners are very enthusiastic. You know, the school is meeting the needs that they have. They're postsecondary partners. You know, so you hear all this positive.

But then I asked them questions about the community, and then it's a little more like, "Well, parents are still learning about it, you know, there's still a stigma attached to CTE." You know, there's some marketing going out in some places. But really it's still a new thing, I think, for the general public, and even other educators. But I was wondering if there was places where, you know, the whole school is really doing something? Maybe there's more of a community, you know, involvement.

Kirsten Sundell: Well I would say that the level of support in our sites for Programs of Studies is pretty obvious given the fact that our districts have to run lotteries in order to fairly place the kids. I mean in our study schools, I mean we would have double and triple the number of students applying as were seats available. So you know, you might have 1500 kids for 500 spots maybe.

What we found really remarkable in this study, we did an informed consent mailing to parents to get feedback on whether their kids could participate and interview with us. And we were shocked by the number of phone calls and e-mails we got from

parents. We had never seen this in a previous study. But so many parents wanted to talk to us about, first of all, what was the study about; what might their child get out of participating. But they also--now a few were fearful that the fact that the school was in a study meant perhaps that they were being evaluated and they were in jeopardy. And we said, "No. No. That's not what we're here to do. But we're from the state. We're here to help."

You know, most were just completely enthusiastic about what was happening in these schools, and they were freely offering information about how well their kids were doing, how stimulated they were academically, what interesting things they were doing related to careers and college. So we were shocked. And it would be very interesting in later years, the study--if we got a little more funding--to maybe look into the parent involvement piece there. But consistently a great response, not only from parents but also from the schools themselves, postsecondary partners, business partners.

Jim Stone: Yeah. Okay.

Cathy Hammond: Across South Carolina it's been an interesting kind of mix. Some schools and communities have loved this, and some have mixed responses, and some are overwhelmed by all the responsibility, So when we're going to schools, we actually found among schools, a lot of people were overwhelmed by it and some were really excited. The concept they really liked of students having a career goal and being able to focus on their plans. But that in itself produced another interesting tension. There are camps that say Programs of Study narrows students to soon, and then there's people who say that it's good to be narrowed and be able to shoot right out from secondary to postsecondary. So in a lot of our schools, there's a major rift or a conflict going on about what we should be doing. And parents are actually very vocal on one end or the other about that in some of our schools. So that's one of the conflicts going on.

But the business community seems very supportive for the most part, and so do parents. The parents like the fact that their children are actually getting some real-life experiences and thinking about their careers, and teachers like that too. But it's still mixed reaction.

Jim Stone: Okay. Thank you. I've got one last quick question, and that is around the notion of professional development. We're asking teachers, administrators, a number of actors in this thing called "Programs of Study" to behave in different ways, to do things differently. And I'm curious the extent to which there is support through professional development available for either the high school or the postsecondary partners to help them think about how they do things differently to make this work. You're chuckling.

Cathy Hammond: I'm chuckling.

Jim Stone: You're allowed to chuckling. Okay. I assume it has something to do with the question.

Cathy Hammond: It's just the question, I promise.

Jim Stone: With Cathy, I always have to ask.

Cathy Hammond: Yeah, you do. We have the same kind of mixed thing about that. Some of the schools--part of it depends on whether they've been doing school reform in some other way; for example, through high schools that work, they've gotten training through that way. Many of the districts in the beginning gave training and then they just let go. So we at first initially asked teachers if they felt prepared to integrate, you know, curriculum, technical and academic and think about career planning with the students, and they would say, "Yes." We said, "Well give us an example of what you do," and they couldn't. And some of them said in some of the schools, "We're left on our own." Frankly there's no money. There's no help. You know, it's left up to us. One of the schools, because the superintendent and the principal were behind it, they were getting training a lot. There is some statewide training available, but there's not a lot of money going into it right now.

Jim Stone: What did you want to say?

Kirsten Sundell: This is Kirsten for the webinar audience. I would say there's almost nothing happening in professional development that is specifically related to Programs of Study in our schools. Now the exception might be project-based learning, which is the organizing principle at one of our schools in particular, and then it's also used to a greater or lesser extent at other study schools. But at this particular school, the principal as firmly committed to finding the time, the money, the resources to support his teachers in doing project-based learning in working with each other on curriculum integration. Now at other schools, they continue to do project-based learning but only when the funding supports it.

Corinne Alfeld: I've seen professional development for administrators on what Programs of Study are and kind of filtering down from the state level, but I think it needs to trickle down even further to the teacher level. The teachers who have become involved have mainly done it on their own because of their own interest in having a student be better prepared to enter the postsecondary and have sought out those connections. But really, I think Programs of Study really need to have a lot more teacher involvement and professional development, because I think it could be very interesting for them and potentially just a really good professional development opportunity for them.

Jim Stone: Well I want to now take questions from folks here and also from our online colleagues. But before I do that, just, again, thank you to the panel and thank you--I neglected to mention, thank you to ACTE for helping to arrange this and providing time and space for us here today. I want to, again, remind everybody that as we develop new knowledge, as we like to say, we do make it available online, and you can go online and look at our current reports and learn more about the individual studies that we're talking about here, get more detail about the sites.

Now what I will tell you is that--thank you--tell Jim to advance slide. I'm trainable. So where was?

The description of the sites and where we are in our materials, I will warn you ahead of time, we're not going to tell you the schools nor give you contact information. And for those of you who do research of any time you realize the limitations that are placed on us. If you have specific questions about a specific site, we can ask the site if they would like to have a communication with you, and we're happy to try to facilitate that if that's something that you desire. So, again, thanks to ACTE. Thanks to all of you. Now I'll start with a few questions have been flooding in--I love

technology--to my cell phone. How did they know I was here? But for folks here in the audience, are there questions that you would like to address to the panel? Yes, ma'am.

Questioner: I hate to be first.

Jim Stone: That's okay. Someone has to break the ice.

Questioner: In a Program of Study where a student has a four-year plan for their future, what happens when they get two or three years into that plan and then they choose another focus? Is there help to get them redirected? How does that work in this?

Cathy Hammond: In South Carolina the annual meeting is where they can change. Actually you can change your major twice a year in some places. So for Program of Study, if you select one that you don't really like, then you meet with your guidance counselor and then somehow you can change what that is, and then they redirect you in terms of certain courses. They can't do it mid semester, but they can do it after the semester. So there is a way to be able to change as you go through the process.

Questioner: Okay. All right.

Cathy Hammond: I don't know about in other--

Kirsten Sundell: Now in our district, students are a little more regimented in what courses they can take. I mean they applied to get into these academies and these programs, and it can be very hard for them to break out if they decide, well I don't like that. So we have in one school students are expected to take courses, you know, within their four-year plan. They're expected to take them. And then if they're not crazy particular about their area, then they're free to branch out into other CTE offers, programmatic offerings across the rest of the academies in that school.

Then in our other district, it's a little harder still for students to get out of their particular programs if they're not happy. And we've seen an interested phenomenon where sometimes kids will end up in a particular program maybe because mom and dad like the school and it had a reputation for safety or academic excellence or college going, and sometimes those kids will screw up a little bit so that they--you know, they'll flunk a few classes or get in a bit of trouble so that they could flush out of that school and then go back to their home high school.

But many teachers and counselors and administrators have told us that once the student is into that program, basically, unless they choose that way out, you know, they're kind of--they're there. But they do have some freedom to play around with courses within each general program.

Questioner: That's because you have wall-to-wall academies.

Kirsten Sundell: Wall-to-wall academies, that's just the structure.

Jim Stone: So is it also reasonable to assume that whatever the state requirements are for graduation are represented in all the Programs of Study?

Kirsten Sundell: Yes.

Jim Stone: So they're not being shorted in math, science, social studies.

Kirsten Sundell: They'll come out ahead. The academy experience benefits them in a lot of ways. They get all the graduation requirements and then they get all this experience, so they'll benefit regardless. But some of them find that they don't like their program.

Questioner: All right. Thank you very much.

Jim Stone: One of the online questions has to do with settings and actually a couple, and I'll just put them out. And one has to do with regional centers and the extent to which Programs of Study might be housed in or generated within a regional center that might serve multiple school districts, regional career centers and so forth. And another has to do with the community college Programs of Study, the extent to which they might involve--is there any thinking or any activity that involves returning adults, for example. I mean how far--is it only a high school to two-year college or college things, or is it broader? And then the high school setting, is it only in comprehensive high schools? Do we find it in regional centers? What are you seeing out there? And does it differ from different settings?

Corinne Alfeld: Well it's been very, very difficult for teachers to work together on curriculum integration, academic and CTE if there's a regional center because they're physically separated from each other, and I think that's the biggest hurdle in that case. But then, again, the tech centers do have a lot of resources and equipment and, you know, the high-tech stuff, so there are pros and cons. Regarding the community colleges, bringing adults back in, I've seen it in some cases, but I haven't heard about it because I haven't asked about it.

Jim Stone: Okay. Kirsten, are any of the--and I'm trying to picture them--are any of the schools in the sites where you are, are they regional, or are they all sort of comprehensive high schools?

Kirsten Sundell: Well these operate more like magnets. So they draw kids from all over the district. You know, it's basically anyone with that --

Jim Stone: They spend all day there.

Kirsten Sundell: They spend all day there. It's not like a tech center.

Jim Stone: Okay. It becomes their home school.

Kirsten Sundell: It becomes their home school. Now some of them--you know, some of these schools don't offer things that home schools do like Band or Athletics, and so they have an opportunity, some of these kids, at the end of the school day, to go back to what might have been their home high school in order to take advantage of those things, but they become their school.

Jim Stone: Okay. Questions from the audience? Because I have many more here. Yes. I'm sorry. Ma'am, you were--

Questioner: I have two questions. First of all, I know that you're not able to give us particular sites, but I am curious, can you regionally tell us where these schools are placed across the United States where you're surveying.

Kirsten Sundell: Sure. And we actually do that in our Joint Technical Report, we can speak more generally. Our more top-down states is in the eastern U.S. That's where we have the multi-academy singular site. And then our randomized control trial multi-academies across the whole district is in the southwestern U.S.

Corinne Alfeld: My sites are two in the Midwest, one sort of upper Midwest, and then one in the Southwest.

Cathy Hammond: We're in South Carolina.

Questioner: That was very helpful because the United States is very diverse. The second part of it--the second question I really have for you, is I'm a huge person about community of education and I have a collaborative partnership. You guys talk about business, business, business, business. But what about local government? What about your Chamber of Commerce involvement, you know, being a part of, let's say, that Venn diagram, or your mayor or your local Workforce Development or Social Services, if you is a low income area? How about those people? Do they participate in trying to strengthen their community?

Corinne Alfeld: I've seen the Chamber of Commerce and the local Workforce Agencies, Department of Labor Agencies involved in the Advisory Board.

Kirsten Sundell: I have not personally witnessed that level of involvement, but I have heard of their involvement in the joint technical skills committees and advisory committees.

Cathy Hammond: And in South Carolina the Chamber has been very involved across a variety of community, but also statewide.

Questioner: And you spoke of the legislative. Quick question. Would that be the Midwest or Southeast?

Corinne Alfeld: For Chambers of Commerce? Well, I guess it's the Midwest, yeah.

Jim Stone: I'm curious, still on the same line, what about nonprofit organizations?

Questioner: That was the other thing, nonprofits, you know, like your United Ways.

Jim Stone: Habitat for Humanity.

Cathy Hammond: In South Carolina, some of them have got involved in extended learning opportunities. Where you go out and have some work-based experience, but that's probably the only place so far that we've seen it.

Jim Stone: Okay. Thank you.

Questioner: You're welcome.

Jim Stone: Chris? Yes, you must come to the mike.

Chris Lyons: Another precursor of the Programs of Study concept that was articulated just a little bit sooner was Dan Hall's Career Pathways concept that emerged out of Tech Prep. And, in fact, there's a National Career Pathways Network. In preparing to do this research, did any of you take a look at that? Did it in any way frame the issues that you were looking at? And secondly, were any of your sites connected to the National Career Pathways Network?

Corinne Alfeld: Yes. We did, our group, in addition to the author of Programs of Study paper that Jim alluded to at the beginning of this presentation, looked at all of the precursors and what we all looked at before we went out and including Career Pathways. And I think all of my sites started calling their Pathways "Career Pathways," and still do and some still call them "Tech Prep" even. The Programs of Study language is new, but the concept is not necessarily new.

Kirsten Sundell: I'd agree with that too. Most of our schools don't know that Program of Study language. They refer to Pathways.

Cathy Hammond: And ours is Career Clusters, just because of the language of the legislation.

Jim Stone: Just two quick observations. One is, when we started this series of projects, we did do the literature review, if you will, and so we looked at research that was available on the elements of the programs of studies. So we looked at dual credit, dual enrollment. We looked at research, such as it was, on articulation. We looked at the research on Tech Prep and so forth. And that's in that first Lewis and Kosine paper.

The question of connecting to schools in that network, for example, we did not specifically do that; however, I know in the original search for sites we used any and all possibilities to see whether or not--and again, each of the studies, in their own way, had specific criteria. So the first cut is, give us sort the universe of possibles and then give us those that meet the criteria we need to ask the questions and the way we need to ask the questions, and then which ones wish to play with us. And when you get to that level, the universe becomes often somewhat smaller.

So the short answer is, yes, from that kind in there. Other questions from the audience, while I try to wake my phone up? Here it is. Okay. Here we go here. This isn't really the same question. The academic teachers involved in this, can you talk a little bit about how they're involved, to what extent? Were they drug kicking and screaming? Did they really want to be a part of it? Was there some additional preparation? Are they being asked to do things differently if they're in, for example, one of the academy models? Does the science teacher have to adapt the lesson plans to pull in the health examples--I'm oversimplifying--or the math teacher for that matter. What are you seeing on the academic side of this equation?

Kirsten Sundell: Well I would say a great example is one of our multi-academy-type schools where the principal said to me that in his school, the CTE instructors and directors got the curriculum, not the academic instructor. This is a project-based learning school. And the school itself is organized--it was constructed around PBL concepts, and so you have in each cluster the school of, say, IT or health, or engineering, and then there are academic teachers who are based in that part of the school who support it. And it's the CTE instructors who say, "Okay. Here are the

projects we're learning on," and then the academic folks come in and help to support that. And everything is taught to those concepts and to these organizing school-wide projects that they do. So it's CTE that's driving the curriculum, with academic coming up to support it.

Jim Stone: So are the academic teachers actually modifying the delivery of the math, the science, and the social studies?

Kirsten Sundell: They do. They do. And this is the school where the principal has made it a real highlight of his administration to find the funds and the time to support the teachers in actually coming together to work on these projects together and do that kind of curriculum integration work.

Jim Stone: Have you seen how they've reacted? I mean can you comment on it. I mean are they doing it willingly?

Kirsten Sundell: They love it. They love it. And it's actually a very exciting thing to see in the school. They tend to organize around--I mean they do projects in every class specific to particular tasks and skills that they're learning. But they have school-wide projects that they do, like an annual event. And one good example might be like the solar car event that they did. They had like an astronomy projects that the whole school galvanized around. So the physical education type students would be doing astronaut training. You know, the engineering students would be developing some software program to analyze star charts or what have you. The culinary students would cater it. The marketing students would advertise it. I mean they all come together and do it, and then the academics are also infused in that too. They love it. It's exciting.

Jim Stone: That's that training, they put them in those things and spin them around.

Kirsten Sundell: And spin them around until they throw up, yeah. I didn't actually see them.

Corinne Alfeld: I have a different perspective. I actually visited eight sites before we narrowed it down to three. And across my eight sites, I would say that this is the piece of Programs of Study, as I understand it, that was the least feasible to implement. Before I talked about the tech center physical separation, but also I mean there are different philosophies. Academic teachers have a different way of thinking about education, and it was really difficult for the teachers in CTE that I talked to get the academic teachers to play. There were some, you know, informal relations, but really it was hard.

In one school the academic teachers were trying very, very hard to do this, to get onboard with it. But one English teacher said, "You know, I have students from eight different Programs of Study in my English class. How am I supposed to incorporate Marketing and Health and Engineering and Construction all into my English class. I don't know how I can do that." And so I think there's a lot of struggle that happens, even when they are committed, but if they get to that level first.

Cathy Hammond: The dream in South Carolina is to have what Kirsten described; is that your career clusters and all your core academics would relate to your major, or at least your cluster. And what we're finding is the same thing is that Corinne--it's

very sporadic. The schools that have done smaller learning communities, and they've been able to cluster clusters. And so they actually have academic and CTE faculty together on a wing, and that's where the integration is taking place. But even there they struggle because there's no planning time. But they're actually trying to work it there. So it's actually there's two models coming together.

Jim Stone: I think that's an interesting observation. And two things. One is the small learning community, which is kind of like the Career Academy, similar but different, and so on. But it's groups of teachers who work together anyway, and so you've got the academy. But also, you added the piece about the leadership sort of saying, "We're going to do this," and figured out how to make it happen. So it seems as though if we want this to happen, there are two elements there, because it's not reasonable to expect an English teacher to deal with sort of eight different majors, one could argue, and try to build all of that in. As much as we like to think we do differentiated instruction, the mechanics of it are sometimes difficult. And you sense some pushback because this is so difficult.

Corinne Alfeld: Well it wasn't a pushback. I mean it was like different planets in some cases, and so I mean it wasn't even like they had anything to pushback on because weren't thinking about it. Yeah. But I do think that leadership issue is really important, particularly for providing the common planning time and providing that big picture of this is why it's important to do this and this what we could be doing and have all the teachers buy into that, so the leaders of this could.

Jim Stone: Yeah. In a somewhat related question, let me find it here. I think it's related. It actually kind of goes back to the dual credit, dual enrollment. And Cathy, you alluded to this. I can't find it here, but I think what it said was it had to do with the credit. And there are different ways, at least I've observed, because this has been around a while, in some cases they sort of archive the credit, and the student has to go to the college and take 15 more credits or some number, and then they bring it on. In other cases, they actually, at the same time, have to enroll in the college. Kirsten, were they doing in your sites? Is there one way or are you seeing different ways? And can you comment on the differences if they are?

Kirsten Sundell: There are some differences in the one site, students can, you know, they can get the credit as long as they earn an A or a B in their class, and it's available to them essentially right away. It's not like held in escrow and they have to wait. They pay a small fee. But then as I mentioned at the other site, you know, they have these opportunities to learn credit, and they essentially dried up because they did not have money to pay for them.

Corinne Alfeld: Well the colleges in my study have all stepped forward and covered part of the cost of having kids in dual enrollment in many different ways, getting outside grants or having line items specifically put towards those dual enrollment programs. But the thing about credit is that unless--I found that unless it's transcribed right away onto the college system, data system, it's more often than not lost. And unless the student lobbies when they get to the college, "I've already taken this course and here is the credit," it's just a data mess. I mean the information gets lost somewhere, and sometimes the students don't even remember. Or, you know, they're taking courses over again that they could have gotten credit for and been at an advanced level.

So in the places where the dual credit is transcribed right away, the students are considered part of the college data system. And other than that, I haven't seen it work really well. In fact, there were some places that talked about how they didn't know how to do it, how do you put that into your college system, and a lot of them are using banner. And one way I've heard around it recently is to consider the high school student a transfer student, and if you do a transfer flag, that helps with the data.

Kirsten Sundell: Interesting.

Jim Stone: We need to record you for posterity and Homeland Security. Did I mention that?

Questioner: A couple of quick questions. The lady on the end, I apologize, I didn't get your name. The small fee that you had mentioned about dual credit, can I ask what that amount is and how --

Kirsten Sundell: I couldn't tell you the exact amount.

Questioner: \$10, \$20 per credit?

Kirsten Sundell: At this point, our kids are still only tenth graders, so we have not seen any of them--all we know is what the school tells us about what opportunities are available at the time. My partner has more involvement, Marisa Castellano, who is not here, has more involvement of that piece, that postsecondary piece. So I can ask her if she recalls, and I can e-mail that.

Jim Stone: At a different site, in a different study, it was \$10.

Kirsten Sundell: It's not very much.

Jim Stone: A nominal fee, just paper processing.

Questioner: We only have four community colleges in the entire state, but in southern Nevada, we are the fifth largest community college in the United States. I think we have the fifth largest school district as well, so we're handling a lot of people. And a couple of the institutions at the community college charge \$10 as well. I was curious. We recently dropped ours, so when you brought that up I was curious.

My second question is, we are attempting to crack down on a huge disparity, that I'm sure others may share the same, between dual credit classes, what they're receiving as college credit, and in some cases paying their \$10 fee, and when they transfer, the integrity of that class at the high school, which theoretically or ideally would be identical to the articulating class, that disparity is there, and I have a feeling that it may be growing as a result of the recent mandated Perkins with academic integration.

What are you doing to ensure the integrity of the match for those articulated classes, or what would you suggest? Is it through joint technical skills committees, and if so, how often do you check those articulation agreements to ensure the integrity of the match? Am I clear?

Jim Stone: Yes. There's actually an online question very similar, asking about the involvement of the business community and the postsecondary and the creation of and updating of these articulation agreements. I think that's a similar kind of question. So it's the question of sort of the rigor of those courses that are being offered for dual credit and how do they monitor that. How do they ensure that that class taught here is the equivalent of the one on campus?

Corinne Alfeld: I found that the CTE courses that have the advisory committees that meet very often, meeting once a quarter usually, are keeping very up to date, and the postsecondary and secondary levels are really talking to each other about really specific skill levels that the students need to have to earn that credit. There's mentoring involved of the fact if it's a high school faculty member teaching the college level course, there's mentoring involved. So the CTE part is, I think, pretty tight in the sites that I have been in. But the remediation rates in math and literacy, are still lagging behind so.

Kirsten Sundell: I would agree with everything Corinne just said. I'm thinking of a specific example in one of our schools. The culinary program has spent a great deal of time with some of the faculty in that particular program, and they meet three to four times a year, if not more often, with their joint technical skills committees. And so the local hospitality and restaurant association is involved, the local community college and other institutions that have culinary programs at the postsecondary. And this particular teacher described those relationships as friendships. You know, they're extremely close. They work very closely together to make sure that their standards are in alignment with what's happening at postsecondary. And what this teacher said was in many cases what they are doing at the high school is far superior to what is happening at the local community college. So there's more than a sense of competition between the two. They feel they offer just as good, if not better, an experience for their culinary student as what they might get at the local community college.

Jim Stone: But it does highlight a challenge, something that as we move forward with this notion, what are the mechanisms? Another thing I failed to point out, and I apologize, is part of our work--part of our purpose of the National Center itself is the work we do eventually rolls up as reports to Congress, on the assumption that, you know, the research that we're doing can help inform the next legislation. And so as we learn more about how Programs of Study function, part of what we're also identifying are the kind of issues and challenges that might be addressed in the next legislation. And I've heard this question before, this sort of differential rigor, if you will, and the extent to which you can actually do this, and so the student then moves to the community college and is actually ready to move to the next level of learning that, indeed, equivalent.

Cathy Hammond: Well South Carolina is actually working on that statewide. The part of the EEDA legislation said that higher Ed. has to now work on education agreements and there need to be standard across the state. On that they will be--articulation the same on courses between high school to two year, and two year to four year. So we'll see how it goes, but that's the outcome expected.

Jim Stone: We have questions.

Questioner: An additional question in this area. Are you finding at some of your sites that your secondary teachers have to have a masters? You're all shaking your head.

Jim Stone: Let the record show. Yes, we're nodding and not asleep.

Corinne Alfeld: Actually not in all cases. If the CTE teacher has a certain number of years in industry, that will be--

Kirsten Sundell: Alternative.

Corinne Alfeld: Yeah, That will be alternatively accepted.

Jim Stone: We have just a few minutes left, and another question poured into my cell phone, and it's kind of interesting, because it's a question that's been bubbling around here the last couple of days. And Programs of Study within Perkins is part of it, but it's not all of it. And there is a question about the impact of Programs of Study on career and tech Ed., while career and tech ed is doing Programs of Study, there is presumably also career-technical education independent of Programs of Study, and are we seeing that this is sort of taking over all of it? Is there still sort of the traditional career tech Ed. either at the secondary or post secondary level that's not connected to a Program of Study? Is there a trend that you're seeing?

Corinne Alfeld: I'm a little biased right now because my life is Programs of Study.

Jim Stone: Corinne, let me tell you, if your life is Programs of Study we have to talk. There's more. There's theaters. There's music.

Corinne Alfeld: I know. I mean in the conversations that I've had, both with the sites that I've been visiting and with OVAE and the National Research Center, it seems like Program of Study is something very promising that people are excited about, and that might be the way that CTE is going, but I can't say for sure.

Jim Stone: Kirsten, in the sites you in, maybe another way to think at it is--well, and yours may not--you may not be able to see this different, but is there career and tech ed that's functioning outside of the Program of Study, and what's going on there?

Kirsten Sundell: It's a tough philosophical question. Well I mean we're in these wall-to-wall academies. So it's all Programs of Study all the time. But one of our priorities in doing this work was to differentiate what was going on in our academies from what was happening in what we call the "default home high school experience." So as part of our work we go into our control and comparison schools. And we've been very concerned all along, you know, to make sure that what's happening in those schools is not also a Program of Study or else we're in trouble. And for the most part--I mean obviously the people in the schools are aware of Perkins and what's apparently what's coming in the legislation. And, yes, there is, you know, the postsecondary component going on in those schools, but there is far less integration of, you know, CTE with the academic rigor and those postsecondary opportunities. They're there, sometimes to a greater and lesser extent. But it's just not the same as what's going on in the academies at all.

We have a mixed bag I think too. Some of the schools there's just CTE as usual, and there are the career clusters, and the rest of the schools are doing that. And then some it's combination. So not everyone is on board for Programs of Study. The language actually we found across schools is real interesting. We couldn't use the same language at every school, so we said we make sure we know what we're talking about there, what they're telling us.

Jim Stone: Other questions from our assembled multitudes here at the hotel? Well-- yes, sir. Please introduce yourself and who actually pays your weekly/monthly salary.

Greg Henschel: I'm Greg Henschel with the Department of Education.

Jim Stone: Okay. We just want the record to be clear. This is a Department of Education person now asking a question.

Greg Henschel: When we talk about project-based learning, we're talking about sincere change in pedagogy. And I'm wondering if Programs of Study, in general, can be seen as inherently changing the pedagogy in some way or whether it's possible to sort of, in what you've seen, stay in the old mode?

Jim Stone: Maybe somebody else could paraphrase that, because one of the issues around Tech Prep, and again, we're always sort of looking backwards to sort of think about how we do it better this time, was that in many cases was to sort of reassembling the boxes that are were already then and just, you know, putting a label on it and moving on. What has been, in your judgment, at least what you've observed, sort of the real impact of Programs of Study? Has it caused teachers to change how they teach and maybe even to an extent what they teach, or are we just sort of assembling boxes that are already in existence?

Corinne Alfeld: I think that it's more on the side of reassembling boxes. I mean it's definitely different. There's definitely the template where the courses are laid out, what students will be taking, a Program of Study, it's really focused around that whole pathway and all the different options that students have. But I think that's really what it is, and as far as the people who are implemented it at the local level--I mean in some cases they are doing really innovative things like project-based learning. But I really wouldn't say that Programs of Study itself is pushing in that direction or really fostering that. It would be nice but, again, that takes a lot of resources.

Jim Stone: For the online group, we're seeing heads not shake up and down but left to right, which suggests that they're not seeing much real change in the context of the questions asked.

Cathy Hammond: No. There's very few in terms of South Carolina sites, very little change. There are some, but I think it would be teachers and programs that were already changing, that had initiative on their own and not based on the legislation.

Jim Stone: Indeed, the legislation really is, to some extent some could argue, about better alignment of the boxes to make the transition from high school to postsecondary more clear.

Corinne Alfeld: Or get rid of the boxes and merge those out.

Jim Stone: It's now time--My phone tells me. I want to thank all of you who came today and thank all of our online listeners. And, again, I want to thank ACTE for providing the support, the time, and the assistance in setting this up and making it happen. Programs of Study is a major innovation within career and technical education. It builds on past things to be sure, as with found when we went out and we began looking for sites to do research. It's likely to be a major part of career and tech Ed. as we move ahead.

Our purpose is to try to better understand as scientist, if you will, social scientists, not only does it matter but how it matters, and what pieces of it seem to be the most important. And we will continue to report out what we do on at least an annual basis. This may become an annual event here at this conference. We will also be presenting at the ACTE meeting in Las Vegas, I believe, coming up here. So as we continue to learn, we will continue to share this with you. And we invite you to--if you have questions that you were too shy to ask here, you're welcome to send them to us online. And for those who are online and sent questions that we didn't get to, we will try to craft responses and post those along with in, which will be posted as a webcast for those who were not able to join us today either online or in person.

So, again, thanks to my panelists. They do all the work. I just get to do this kind of stuff, which is really cool, and thanks to all of you.

Thank you.