ICT Educator Webinar Series

Introduction to Competency-Based Education for ICT Educators and Administrators

November 6, 2020

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[00:00:00] Welcome

STEVE WRIGHT: Welcome, everybody today, to our ICT Educator Webinar Series. I'm Steve Wright. I'm the Statewide Director of the ICT sector team, which is part of the Workforce and Economic Development department of the California community college system. And these webinars are brought to you by our entire sector team, and they're produced by Nicole Sherman. Our guest speakers all volunteer their time for the sake of our students' success in our system.

I'd like to quickly remind you of an excellent ICT Winter Conference that's planned for January 7th and 8th virtually. It's put on by WASTC (Western Academy Support and Training Center). Karen Stanton and Richard Grotegut have been doing this for many years. Many of you go. It's a great two days of excellent training for faculty and updates on technology and educational practices. So, don't miss it!

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www.ictdmsector.org/educator-webinars

Also, on our website now, we have, I believe, over 40 recorded webinars. Here are some of the incredible people that we've had speak at different times, carefully selected experts with successful how-to techniques for you to use. Each webinar is also video recorded, edited, chapterized, transcribed, along with the PowerPoint presentations and relevant links for later viewing.

And 40% of our viewership is after this initial webinar right here, and with over 4,000 views to date, many of our faculty tell us that they use this for a classroom, for labor market research, for grant writing, and lots of other things, so we're really excited about continuing this.

- **November 13** – How to Build Digital Media Dual Enrollment Through College & Career Access Pathways Partnerships
- **November 20** – Programmable Infrastructure with Cisco DevNet Associate

And in the next couple weeks, we're going to have How to Build Digital Media Dual Enrollment. It's always interesting—partnerships with high schools are critical. And then we have an expert in the new DevNet Associate program with Cisco Academy, who will be speaking to us on November 20th, so we're looking forward to those.

[00:01:52] Today's Webinar Presenter

STEVE WRIGHT: Today is going to be interesting. What the heck is competency-based learning? I mean, I think I know, but how does it look if you implement it in the California community college system? So, I'm going to be taking notes on this one.

I'm going to introduce you to Mara Lockowandt. She's going to be talking to us now from her program management position with Jobs for the Future (JFF). And Mara, can you take it from here? You have an incredible background of utilizing things like this to help all kinds of students, and I want to hear how it works.

MARA LOCKOWANDT: Yeah, great. Thank you so much and thank you for having me on your webinar today. I'm really excited to be here and to share with you what we have been learning about competency-based education.

So, just so you all know, I'm part of a team at JFF that's been working on competency-based education, and we have been working with the Chancellor's Office and the Success Center on developing a blueprint to support community colleges interested in CBE, direct-assessment CBE in particular.

So, I'm going to be sharing a little bit about that with you all today and what we learned through that process, and want to hear more what you all are thinking about this and how you think this approach may or may not be useful for ICT programs in California. Thank you, Steve, for that introduction.

[00:03:19] Icebreaker

On a scale from 1 (I know nothing about CBE) to 10 (I could give this presentation), where are you?

MARA LOCKOWANDT: I wanted to, in addition to learning where everyone is from, which is great to have such a diversity of folks on the line, have this kind of fun icebreaker for you all. I just want to get a sense of where folks are coming from in terms of your existing knowledge on CBE. So, on a scale from 1 to 10, just put the number in the chat—would you say you are a 1 (you know

nothing, and you're here to learn), or are you a 10, and we could switch roles and you could give this presentation today? So, let's just hear where folks think they're at.

That's great! A bit of a spread...OK, some sevens and some eights... Lots of ones. OK, great! This is really helpful. I hope there will be something in this presentation for everyone today. We're definitely going to, given all the ones and twos and threes, spend some time talking about what is CBE, what do we mean by that, and we'll... Hang on, let me pull up my agenda, actually, so you can see.

[00:04:23] Agenda

- ❖ Why CBE Now in California?
- ❖ What is CBE?
- ❖ A CBE Blueprint for Colleges
- ❖ Opportunities for CBE for ICT Programs
- ❖ Looking Ahead

MARA LOCKOWANDT: We'll spend some time talking about what it is, why we're talking about CBE now and in California, and then go into a little bit about blueprints that I mentioned and the opportunities that I see from where I sit, and I want to hear from you all from where you sit in terms of developing CBE programs within your ICT programs, and a little bit of looking ahead at the end.

[00:04:51] Why CBE and Why Now?

A NEW EDUCATION AND WORKFORCE MODEL

- Meet students where they are

- *Vision for Success*

- Workforce demands

- A true engine of upward economic mobility

- Equity imperative

- Nimble and flexible programs

MARA LOCKOWANDT: Why CBE and why now? Well, based on the research we have to date, CBE is a promising approach to higher education that really meets students where they're at, which we hear is really core to the *Vision for Success.* It can also help accelerate students towards completion or transfer, which is, again, something that is really echoed in the *Vision for Success* goals.

It's designed to really be aligned to workforce demands and really truly provide economic opportunities for students and adults across the state. So, it could be a great way for regions to think about economic recovery right now.

There's a huge equity imperative right now embedded within the *Vision for Success* but also through the call-to-action from the Chancellor's Office, and we see a lot of institutions, which I'll talk about later in this presentation, who have adopted CBE exactly for the reason that it is a promising way to support more underrepresented groups in degree completion and transfer. So, there's such a large rationale for why institutions embark on offering competency-based ed programs.

They're also nimble and flexible programs, which we, especially right now in the pandemic, are seeing a large increase in institutions wanting to find ways to meet students where they're at, provide that flexibility. This is one way that institutions can consider doing that.

[00:06:24] What is Competency-Based Education?

CBE is designed to measure students' progress toward a credential in terms of learning attained, rather than time completed.

Time is the variable, learning is constant.

MARA LOCKOWANDT: So, what is competency-based education? So, this is the definition that is a little bit of a concise definition based upon C-BEN, which is a national network, a competency-based education network's definition of CBE.

And it is really, as it says here, designed to measure students' progress toward a credential in terms of learning attained, rather than time completed. Time is variable, and the learning is constant, which means that you might still have similar-sounding objectives for students in terms of degree completion, but the time that it takes for them to get there will vary depending on what's going on in the students' lives and if they're accelerating or on a slower path to completion.

That's a really, really concise definition here. The curriculum would be built around the competencies that are tied to a program, not to a course, and we'll talk a little bit more about that later, but there's not… You don't have credits for… You don't have courses, and you don't have credit hours, but you have programs that are aligned to competencies.

Students are often able to access the learning resources, including assistance from any instructional staff, support staff, directly aligned with those competencies, and there are some interesting ways that it shifts the faculty role in supporting learners through this model, and we'll talk about that and what we're seeing in the research and what institutions are reporting in terms of the ways in which faculty and staff will shift in order to accommodate this model.

Also, I will say we're going to have some time for interaction throughout this presentation and also a Q&A at the end, so please, if you have questions that may arise, put them in the chat, and we will get to them.

[00:08:34] Focus on Mastery of Competencies

Credit Hour Model...

based on seat time originally designed to determine faculty pensions and not as a measure of learning.

Credit Hour is current basis for awarding financial aid, faculty workload & degree completion.

"Cracking the Credit Hour" by Amy Laitinen

Competency Based Education... moves beyond seat-time focusing on mastery of learning exercises, through activities and experiences that align with clearly defined programmatic outcomes.

Hours will vary, but the learning is fixed.

Fully online modules.

Flexible academic calendar term options.

MARA LOCKOWANDT: So, I wanted to just take a minute to kind of dig a little deeper into the definition. So, right now, our systems are built on the credit-hour model, which is based on speak time, so students sit in a course for a semester a designated amount of time, and the credit hour is really used as a basis for awarding financial aid, determining faculty workload, and degree completion requirements.

In competency-based education, it's focused on the mastery of learning, demonstrated through activities that are aligned to the programmatic outcomes. So, hours may vary. It does say here fully online modules—that's the way in which the Chancellor's Office is pursuing their CBE collaborative. Not all CBE programs across the country are fully online, but that is what they're kind of... That's the route that they're advocating institutions take right now, given our current situation. Competency-based ed also has often a more flexible academic calendar, and that has a lot of implications for various institutional operations, and we'll get into that a little bit.

Yeah, great question here: *If it's not based on credit hour, how are students demonstrating mastery?* There are still assessments. So, there are different types of performative assessments students do to demonstrate their mastery of those competencies, and they must complete all of

the competencies to earn their degree, and we'll talk a little bit more about that structure, but that's a really good question.

[00:10:15] CBE Is and Is Not

CBE is...	CBE is not...
Time is variable with program offered in a flexible, self-paced approach	Learner works at **course-set pace** with pre-determined schedule of assignments, activities, etc. with true beginning and end dates
Learning is fixed requiring demonstration of mastery of each competency	**Learning varies** with passing course grade (i.e., A, B, C, D)
Determined by rigorous summative authentic assessment focused on application of KSA's	Student **evaluation** varies based on accumulation of activities, exams, projects, discussion, attendance, etc.
Student **learning supported** by faculty throughout learning journey	**Independent study** (i.e., students learn on their own and then take final exam)
Completion of program is based on **mastery** of intentionally designed scaffold of all competencies	Achievement of credential is based on **passing grades and credit-hours** (i.e., 60 credit hours=AA/AS)

MARA LOCKOWANDT: So, a little bit more… I know we have a lot of people who have said one and two, so I'm just taking my time to go through these slides a little bit, and I hope it's helpful. We can always circle back to these slides if I'm moving too quickly.

So, what CBE is and CBE is not—again, it's a little bit of a reformatting of what was on the other side. But just to state again, the time is variable, self-paced. It's not the course set pace like in our typical credit-hour calendars.

The learning is fixed, so it does require that demonstration of mastery as opposed to, in kind of our traditional… Or many of our traditional courses, students can pass with an A, B, C, D. When students need to demonstrate mastery, there's a pretty high level of proficiency required in order to qualify for demonstration of mastery, and faculty set that bar. So, that's something you would determine as the faculty at your institution what that bar is, but it tends to be pretty high.

So, CBE is determined by a rigorous summative, authentic assessment as opposed to student evaluations that vary based on an accumulation of activities, attendance, exams, and projects.

Students supported very intensely by faculty and support staff throughout their learning journey in CBE. It is not the equivalent to an independent study, where students are kind of left more on their own to self-pace. There's an intense amount of support in CBE programs.

And the completion of programs is based on mastery of the scaffolded competencies as opposed to passing grades and credit hours required for a degree.

So, I'm going to carry on.

[00:12:18] 2019 State of the Field Report

2019 State of the Field:
Postsecondary CBE
in the US

In 2019, American Institutes for Research surveyed colleges and universities across the United States to better understand their interest in and adoption of competency-based education (CBE).[1] This survey – the second in a series of three – indicates that CBE is experiencing slow but steady growth nationally, and institutions remain optimistic about future growth despite reporting persistent barriers to adoption.

Of the 602 institutions that responded …

Have full CBE programs	11%
Are in the process of adopting	51%
Are interested in adopting	23%
Have no interest	15%

Institutions with full CBE programs reported a total of:

492 Undergraduate programs

96 Graduate programs

This represents an increase: last year, institutions reported 427 undergraduate programs and 85 graduate programs.

Equity: How do students in CBE programs compare to students in traditional programs?

CBE student populations similar to those in traditional programs in terms of race/ethnicity and Pell status, but CBE programs had larger shares of students with prior credit and adult students.

In the last academic year …

53% had fewer than 50 students enrolled

12% had more than 1000 students enrolled

The Most Common Undergraduate Disciplines
1. Nursing/Health Professions
2. Computer and Information Science
3. Business Administration

To capture the diversity of CBE programs, we defined these as entire programs of study typified by at least one of the following: learning is measured in competencies; students advance between courses or complete the program based on mastering all required competencies; or courses or programs offer students flexible pacing.

This survey builds on 2016 and 2017 Deconstructing CBE reports, based on research conducted by Eduventures® Research.

MARA LOCKOWANDT: There's a lot of fantastic resources out there. There's one—AIR does an annual State of the Field CBE, and this is some images from their infographic from 2019. They surveyed… There was over 600 institutions that responded to this survey, so it's a great report that is linked to at the end of this PowerPoint that gives you a sense of where institutions are across the country in terms of offering CBE.

There were, in 2019, 64 institutions in the country that reported operating 588 CBE programs, so that's a huge increase from 2018, and 76% of the institutions indicate that they are going to continue expanding. So, this is a really rapidly accelerating area for higher ed and just points to the value of taking part in webinars like this to learn more and understand what's happening and how to stay competitive in this field.

As I said, there are some indications here on what types of programs institutions are offering, with computer and information sciences being one of the most popular. So, a lot of folks find an easier or more seamless transition from traditional programs into offering CBE for computer and IT programs.
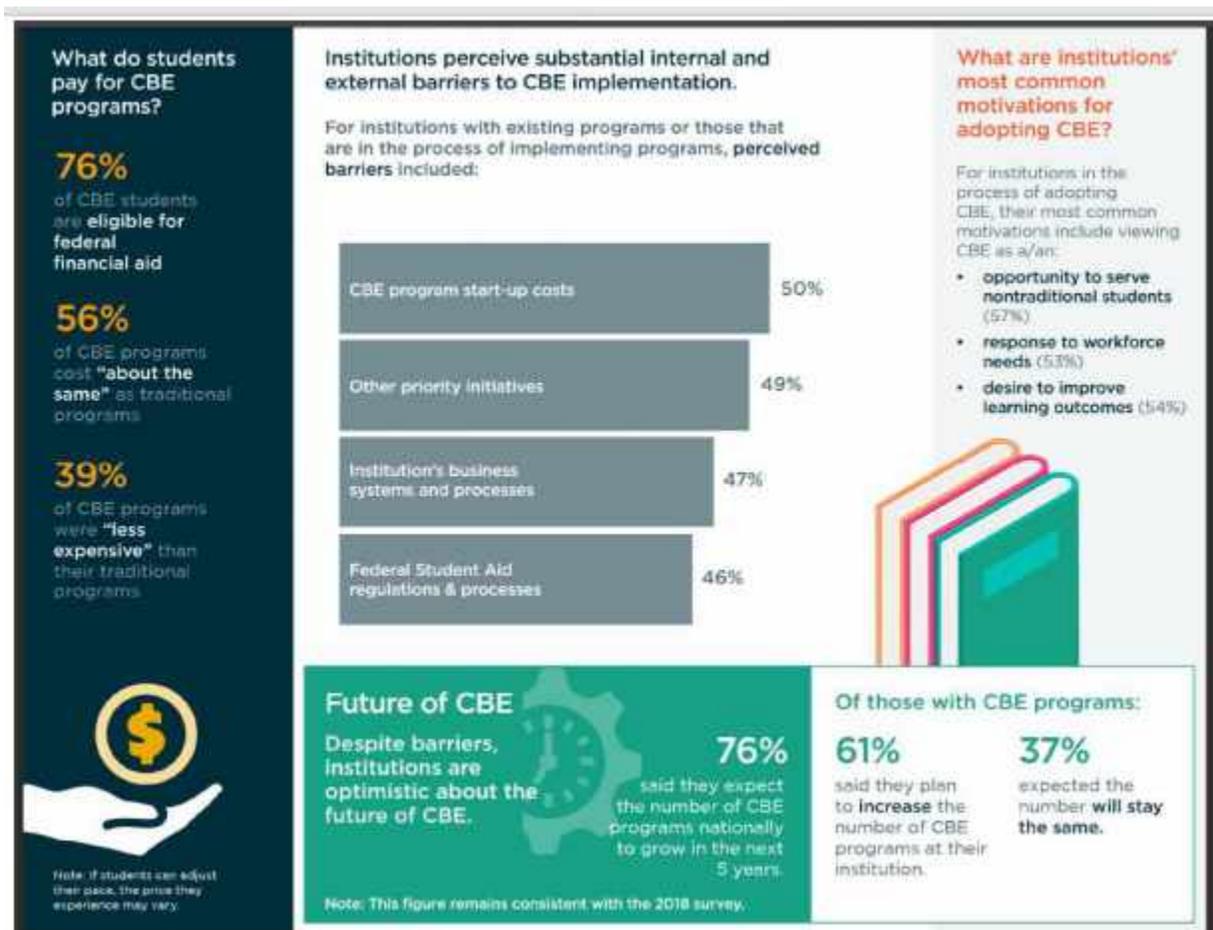
You'll see as well, I think, on this slide, yeah, there's lots of great information here. I won't dwell on it too long, but as you can see here, on the right side, *why are institutions offering it?* 57% said

that they were opportunities to serve nontraditional students as the reasons and motivations for providing CBE programs.

And then there are a lot of barriers to CBE, some of which are outlined in this report, and we'll talk a little bit about them more later. There are startup costs. There are competing priorities, as we all know about. But those barriers are ultimately deemed to be… Institutions deem to kind of take on those barriers in order to implement it for the perceived benefits.

[00:14:52] Noncredit Certificates vs. Direct Assessment CBE Degrees

	Noncredit	Direct Assessment CBE
Designed for the traditional academic term?	**No** Traditional academic terms are not followed	**No** Credit-hour equivalences are established
Do students have autonomy over their progress?	**Yes** Students can proceed at their own pace toward mastery	**Yes** Students can proceed at their own pace toward mastery
How is learning evaluated?	**Competency-based mastery** Tied to courses	**Competency-based mastery** Tied to programs
Is an ACCJC substantive change approval required?	**No**	**Yes** U.S. Secretary of Ed approval of 1st program required
Eligible for financial aid?	**No** *Ability to Benefit (ATB) provisions and criteria for federal financial aid	**Yes** U.S. Secretary of Ed compliance (34 CFR 668.10)
Funding Model for Apportionment	**Positive Attendance**	**TBD**

MARA LOCKOWANDT: So, two things that we often hear about CBE, which make a lot of sense, is that noncredit is already doing CBE, and what's the difference between credit for prior learning and competency-based education? These terms get used a lot because they're both strategies to accelerate degree completion and transfer for students.

So, I'm just going to take a minute to share this information that the Chancellor's Office provided on noncredit versus direct-assessment CBE in their very first CBE webinar that they offered, I think back in June. So, this, I think, is just a nice kind of simple way to outline that noncredit has a lot of overlap with CBE, but there are some important differences—things like how

the learning is evaluated within noncredit type of courses wherein CBE is tied to that program level. You don't really have courses the way that you do on the credit-hour model.

If your institution is considering a direct-assessment CBE program, you will need to… Part of the process is to apply for approval from your regional accreditor and the U.S. Department of Education, so it is part of the substantial change approval process that you'll need to go through.

But students are eligible for financial aid through direct assessment programs, which is great. And the Chancellor's Office is still working out the funding model for apportionment, so TBD on that.

[00:16:30] Credit for Prior Learning vs. Direct Assessment CBE

	Credit for Prior Learning	Direct Assessment CBE
Program Integration	Pre-program certification of PL to satisfy program requirements	Certification of current learning within the program
Achieving Mastery	Pre-program experiences outside of program influence	Facilitated by faculty and program content
Evaluation by Examination	Credit by examination for assessment of prior learning with variable levels of performance	Examination of competency mastery requiring a high-level of performance (80% or higher)

MARA LOCKOWANDT: And then what is what credit for prior learning versus then what is what credit for prior learning versus CBE. So, credit for prior learning is broken down here into program integration. So, credit for prior learning is a pre-program certification to satisfy program requirements, so you can come in with certain credits that are applicable towards your degree or credential. In direct assessment CBE, all of the certification of learning happens within the program, so it's not that you're taking a test prior to enrolling in the program, but you could accelerate more quickly through the program if you have certain skills or knowledges when coming in.

But in terms of achieving mastery, again, the pre-program experiences in CPL happen outside of the program influence. It happens before you enter the program. In CBE, it's all facilitated by the faculty and the staff that are supporting the program.

And then evaluations… Credit for prior learning is often some kind of credit by exam or portfolio, some type of assessment of that learning. And in CBE, it's the examination of those competencies. And here, like I said, many institutions look for something like 80% of mastery of a competency to count as a mastery.

So, that's a little bit of the differentiation there. Again, we can spend some more time talking about this at the end with your questions.

[00:17:56] Reflection

How does competency-based education (CBE) align with current pedagogical approaches to teaching and learning at your college? How might it differ?

MARA LOCKOWANDT: I did want to get a little bit of a pulse check on how folks are hearing all of this. So, I have this question for us in the chat to consider. Based on this brief presentation, what's kind of standing out around CBE that aligns with the way in which you're currently doing your IT programs on campuses? And how do you see that it might be different? I'll give folks a minute to think about this.

Great, some great comments coming in. Elaine, I just want to… You have a great comment here around students doing it at their own pace and not dependent on the instructor. I just want to clarify it's not the same as… I don't know if this is what you were getting at, but it is different than independent study when students kind of progress at their own pace. The student learning journey is very much guided by the instructor, by the faculty. It just looks a little bit different because you don't have a class that all shows up at the same time that you're teaching to. It's much more of a personalized kind of a coaching experience but very much guided by an instructor.

Yeah, Allison, great question. Yeah, faculty members interacting with up to forty students on forty different tasks… Yes, that's a good question. I mean, it depends on how you set up your program design, but hypothetically, yes, you might have a lot of students at different paces, moving along at different paces, which is why the faculty role often looks a little bit different in CBE, where, depending on how often students are accessing the curriculum, you might have fewer students than you currently have, but you're supporting more intensely. Or you might have a larger number of students that are checking in a little bit more, on a more spread-out pace.

Yeah, folks are raising some really good questions here. I'm going to… I don't know if my upcoming section is going to answer all of them, so I think we're going to need to come back to some of this.

Yeah, I'm just seeing this last question here—*for CBE programs, are there time limits set for students to complete courses?* Yeah, that's also something that the institution can set up whether or not what type of time limit you're going to put on students to complete competencies and how many times they could repeat a competency. Those are all things that institutions take different approaches on. Most institutions do set a limit, though, because if you just let students go, it's very easy to not complete.

Yeah, great question around grades and transcripts. And yes, most institutions, what they do is they have a dual transcript, where you would have a CBE transcript and a traditional transcript where the competencies are mapped to your kind of credit-hour courses.

And that's—yeah, go ahead, Steve.

STEVE WRIGHT: I'm seeing a theme here, and it seems to be that there's a question of *how customizable is the CBE?* Is this intended to be something that's highly customized by a student or college? Or is it kind of a standardized approach to the levels—or scaffolding, I think you called it—of the key skills?

MARA LOCKOWANDT: Yeah, there's a great deal of flexibility in how institutions actually go about offering this, and I think there was a question here around hybrid models. That's also something

that a lot of institutions are… I think it's becoming more popular where students might take some traditional courses and pass some CBE competencies to fulfill a degree requirement.

So, a lot of what I'm presenting today is kind of overview and kind of generalities. If you look at that State of the Field report, you'll see institutions are trying really different methods, and part of that is just based on your local needs, what's happening in the region, what are the assets at your institution that you want to integrate in some way.

Yeah, great question, Gina, around how it matches up with industry certifications. That's something I'm interested, too, as well, in hearing from this group, and I wonder if that's why computer and information systems is one of the most popular CBE types of programs institutions offer, because there's already that kind of alignment there.

So, I'm going to move on a little bit, just for the interest of time, but we will have some more time for questions, and I'll try to scroll back through this list as we go. I wanted to share a little bit just what some resources are available for you all as you're thinking about CBE and if it's a good fit for your institution and your program.

[00:23:02] A CBE Blueprint for Colleges

DEVELOPING THE BLUEPRINT

The Process

- Interviewed experts

- Literature scan

- Faculty leadership sessions

- Review with policy and program professionals

The Team

- JFF

- California Community Colleges Chancellor's Office Staff

- California Community Colleges Curriculum Committee (5C)

- Foundation for California Community Colleges Policy Center Staff

- Laurie Dodge, Vice Chancellor of Institutional Assessment and Planning, Brandman University (CBE expert)

- Eddie Comeaux, Associate Professor of Higher Education, UCR (Culturally Sensitive Pedagogy and Equity Expert)

MARA LOCKOWANDT: So, this is around the CBE blueprint for colleges, and this was a document that JFF developed in collaboration with the California community colleges Chancelor's Office staff, the 5C, and the Foundation for California Community Colleges Policy Center staff. We also worked with some subject matter experts, primarily Laurie Dodge, who is a VC at Brandman University, which is one of the few institutions in the whole country that actually offers direct assessment CBE, which I should have clarified earlier.

There is a big difference between direct assessment and other forms of CBE. There are actually a few different models. Direct assessment is the one that I'm primarily talking about today

in all of these slides because it's the one that the Chancellor's Office is using for their CBE collaborative. So, some of the slides are tailored towards that because that's the opportunity that exists right now for colleges to join.

We also worked with Eddie Comeaux, who is one of the Associate Professors at UC Riverside, and he helped really ensure that the blueprint and the policy regulations that came out of this group really had a strong equity focus and lens.

That's how this blueprint was kind of developed, and then what is the blueprint?

[00:24:31] A Blueprint for Community College Leaders

MARA LOCKOWANDT: It is seven phases that we've broken out that leaders of community colleges can consider when initiating discussions around CBE and if it's a good fit for your institutions, all the way through launch and continuous program improvement through action research.

So, there's these seven phases here, and the blueprint kind of goes through each phase and outlines some action steps that are related to each and the stakeholders that you might want to involve in each level of planning and decision making.

So, the first phase is really those initial six months, where you're building your local infrastructure for innovation. Then there's an opportunity to select the program, and I'll share a little bit around what some of the details of that looks like. Then designing the program—that's where a lot of the decisions come in around faculty model, academic calendar, what are the actual competencies, the curriculum, the assessments, what does that all look like.

You'll need to obtain your regional accreditation and federal program approval, usually during the design phase of the program and into the operational model, which is where you're going to need to set up your learning management system or integrate it, think about your financial aid system.

And then, of course, launching the program, marketing, onboarding, any of the PD that might be associated with that. And then your ongoing data collection and continuous program improvement.

So, the blueprint is still pretty high level, but it does give you some great action steps associated with each of these phases in order to help create that work plan that you're going to need for your institution to build a program.

[00:26:14] Ready to Get Started?

[00:26:14] Phase 1: Establish Local Infrastructure for Innovation

MARA LOCKOWANDT: I just pulled out a few examples in this presentation today, so you can kind of get a sense, for those of you who might be interested in joining the CBE collaborative that the Chancellor's Office has initiated, or if you're just interested in learning more.

In the first phase, it's really about getting those stakeholders together in your region, at your institution. You're going to want to establish some kind of committee charter. You're going to want to start to gather and review your demographics and your impact data to see—and this is all building to a determination on which program you're going to offer through the CBE model.

So, we have some guiding questions here to consider as this group forms. How does it fit with your mission of your institution? What would CBE look like at your institution? Like I said, there are different types of models. Are there other regulatory requirements?

The Chancellor's Office next week, I think, the Board of Governors is going for their second read on the policy regulations for CBE, but that's system level. I anticipate there's going to be some district-level policies and regulations you might want to consider, and that might need to be modified in order to accommodate to CBE.

There are different business models out there, and there are actually great resources—again, C-BEN, who I mentioned earlier, has a really great resource on the different business models that you might consider. And then, again, what data are you going to use to measure student success? The way in which students progress through a CBE program looks different than your traditional programs, so what do you actually want to be looking at? And how are you going to set up a system to do that?

So, these are some things that you might want to consider within the first phase.

[00:28:09] Phase 2: Select a Program

PHASE 2: Select a Program

- Survey students in high-interest program areas
- Connect with partners that will be key to understanding and aligning to labor market needs (Center of Excellence, local workforce boards, employer, etc.)
- Review labor market information
- Convene industry-led advisory board
- Selected credit-bearing certificates and/or degrees

Guiding Questions

- What is the employment outlook for IT and IT-related occupations in our region?
- What are the wages of the target occupations for CBE program? Will graduates be well positioned to earn at or above the region's living wage?
- Where do we have partners and capacity to mobilize around a new CBE program?
- Does this program solve a gap or "problem" for employers in your region?

MARA LOCKOWANDT: Within the second phase, like I said, this is when you get to select a program, and you're going to want to potentially survey students in the program area, see if you're getting responses that indicate they would be interested in this type of program approach.

You're going to want to be connecting with partners to understand and align to your labor market needs, so maybe working with your Center of Excellence, local workforce boards. You're going to want to understand what's the employment outlook for different IT or IT-related professions, so you can really match your program to those, ensuring that your graduates are going to be earning a living wage for your region.

What kind of partners and capacity do you have to mobilize around a new CBE program? Who? Faculty, deans, business leaders? And what kind of gap or problem might this program offer for your region?

Oftentimes, institutions convene industry-led advisory boards to support this and/or utilize existing ones. I know, for a lot of the California colleges, you already have industry advisory boards for your programs, so connecting them to this effort and then really selecting what the credit-bearing certificate or degree will be. So, it's all related to selecting program.

[00:29:33] Phase 3: Design a Program

PHASE 3: Design a Program

*Select activity examples

- Onboard all stakeholders
- Plan PD for faculty and administrators
- Develop curricula, assessments, and learning resources
- Determine faculty/staff model
- Determine work-based learning opportunities
- Crosswalk competencies to credit-hours
- Design wraparound services and supports

Guiding Questions

- What type of supports will faculty, support staff and administrators need to offer a high-quality CBE program?
- How have levels of achievement for each competency been identified appropriately for the credential being earned?
- What are the learning analytics you want to collect and analyze?

MARA LOCKOWANDT: And then you get to design the program, and there's a lot of steps here. I just pulled out a few, but this is going to be where you really want to start to onboard all of the faculty/support staff to this program, make your plan for PD. You're going to be developing your curricula, your assessments, the learning resources, deciding what that faculty staff model is going to look like, linking up with your work-based learning options, doing your credit walk, your crosswalk competencies to credit hours. That's important because, for right now, that's still the way that you're going to need to access federal financial aid.

So, the U.S. Department of Education is coming out with new regulations related to direct assessment CBE, but essentially, you're going to need on the back end that credit crosswalk. You're

also going to need that for the dual transcripts and other things, and it might be the way apportionment is ultimately set up, too. We'll see, but that's going to need to happen. And of course, all your wraparound services.

So, again, I know a lot here, and I'm kind of breezing through this really quickly. You can see more in the blueprint itself. I just wanted to give you a sense of kind of how it's organized and the types of things, if you're an individual who is thinking about it for your institution, the kinds of things that you might want to start thinking about based on the research and the conversations that we've had with the team.

[00:31:03] Backward Design

STAGES	KEY QUESTIONS
Stage 1: Identify Desired Results	What should students know, understand, and be able to do? What is the ultimate transfer we seek as a result of this unit?
Stage 2: Determine AssessmentEvidence	How will we know if learners have achieved the desired results? What will we accept evidence of learners understanding and their ability to transfer their learning?
Stage 3: Plan Learning Experiencesand Instruction	What activities, sequence, and resources are best suited to support learners as they come to understand and apply ideas and processes?

MARA LOCKOWANDT: I put in a few slides here that are just really about the way in which faculty often go about designing the program. Laurie Dodge, who was one of the subject matter experts involved in this, co-authored a book called *A Leader's Guide to Competency-Based Education*. And for those of you who are leaders at your institution thinking about this, I do really recommend it. She lays out this method 'backward design' as a way for faculty, and there are lots of steps there how faculty can think about this, which is around designing your assessments and then the support materials for students to achieve their competencies.

[00:31:45] Faculty and Staff Roles in CBE Programs

MARA LOCKOWANDT: And again, I know I'm going quickly through this, and this is probably going to be really tiny on your screen. But one thing I mentioned in this phase is really that determining the faculty and staff roles. Oftentimes, institutions will start off offering a direct assessment CBE program in a really similar model to what you all have now in your traditional models. But as your program scales and as they grow, sometimes those roles evolve because, exactly as one person in the chat was saying, what if you've got forty students or a hundred students who are all at different places as they're progressing?

So, the research indicates that faculty and staff roles tend to shift as institutions start to scale programs, and this is just a snapshot of the roles that faculty, nonfaculty, or both play at the institutions that participated in that State of the Field.

So, you'll see faculty are still primarily providing instruction and evaluating the assessments, but when it comes to advising students, mentoring students, there's other staff that might be involved in those activities, too—the support staff. Again, just things to consider. There are different faculty models out there. The research tends to show that faculty really, once

programs get off the ground and rolling, faculty often like it because they can spend more time directly with students and less time with some of the administrative pieces that folks currently have on their plate. You all will have to tell me how you think about it.

[00:33:28] What We Are Learning

- ❖ Implementation requires a whole college approach
- ❖ Collaboration is key at all stages
- ❖ There are equity considerations for all CBE program models
- ❖ Programs require tight alignment to labor market needs
- ❖ Local alignment and adaption are key

MARA LOCKOWANDT: And this is a little bit of what we learned through the process and what we are learning around CBE based on the research and things that we're hearing from the field. Really, there's a lot that's required to implement a program. There are big startup costs associated with it, even if we're just talking financial but also just the capacity and time of people, because it requires, like I said, technology integration, financial aid, academic calendar, lots of different things coming into play.

Collaboration is really key with all the various partners at your institution and in your region. There are equity considerations for the different models that you may pursue. Different types of academic calendars have implications on financial aid disbursement, different ways in which you're going to set up your student supports. You're going to also want to consider the student populations that you want to reach and what's going to work best for them.

Programs really need to have tight labor market alignment, which is where I think the ICT programs have great potential, because you all tend to have strong partnerships anyway—at least based on the conversations with Steve and what I've seen. And local alignment and adaptation are key, which is what you were saying, Steve. Yeah, there's a lot of scope to really customize this for your institution.

Where do you think there may be momentum at your institution to offer a direct assessment CBE program? What resources would you need to learn more and assess if CBE is right for your institution?

MARA LOCKOWANDT: So, again, I'm going to pause for a moment. We are getting near the time when I want to turn it over to some more questions, But just like upon reflection…

Yeah, great, Shawn, I see your question coming in. I'm going to pause for a minute for folks to share more questions, where you think there might be momentum for this or not, and/or what resources do you think could be helpful as you think about this and as you try to assess whether or not CBE is right for your institution. What are the other types of things you would want to know or want to have access to?

I'm going to give folks a minute to put in the chat, and I will also review the questions in the chat to try to get to some of them now as we go through. There are a lot of really good questions here. Some of these questions I'm seeing are there's no one answer to it because it is something that you can decide.

So, Trevor, I see that question from you from a little bit earlier around a fixed duration for the class. *Is there a fixed duration for the classes?* And the answer is it depends. So, some institutions offer CBE on a subscription model, so learners might pay for or sign up for six months. They might pay tuition. They might sign up for six months' duration. They can complete a package of competencies in those six months and progress however quickly they want, and at the end of the six months, they might extend their subscription and do the next set of competencies.

The competencies are often bundled, so students might need to complete a certain bundle before moving on to the next bundle, but you can also set up a system where there's no end to when students can… No end date—it's just they can't progress until they finish that bundle to move on to the next one.

So, there are different ways that you can set it up, and there are various implications for how you might want to do it. A lot of the big institutions in this country, like Western Governors, big CBE provider, Capella, use the subscription models, but those are private institutions.

STEVE WRIGHT: I can't help asking, though... I mean, the economies of scale on this baffle me. I can see where it's very effective on an individual kind of basis, but is this taught in a classroom environment, and then people are followed up on individually? I mean, are there ways to get scale on this so that it's... It sounds like a pretty labor-intensive kind of thing.

MARA LOCKOWANDT: Yeah, based on what we see, there are significant startup costs to getting it done, but actually the economies of scale work out after about five years of implementation. So, there's not a lot of that lecture-based teaching happening. The students are progressing through learning materials that are packaged in such a way, like videos, resources that they go in and access, like you would go into Coursera and access it, and then they have their faculty to kind of touch base with them and check in on their learning. That's the way we see it in a lot of different models.

So, I don't know if that answers your whole question, Steve, but it does take a while for it to balance out, but eventually, over time, institutions can reduce their costs for program delivery through this model, but it takes a couple years to get there.

STEVE WRIGHT: It's almost like a whole mind change in how you go ahead and approach a cohort of students that they may not all finish at the same time, and yet they have certain prescribed skills that we're talking about in the scaffolding, and it's a whole lot more flexibility for the student. The question is will the faculty be running in circles or not?

MARA LOCKOWANDT: Yeah, yeah. Yeah, there's definitely more work that happens on the operations side to get this going in order for it to be a smooth experience for learners. There are so many good questions here!

Yeah, so Trevor, another good question around the differentiation between direct assessment versus other CBE. There are other ways of offering CBE, some of which I talked about

in the noncredit space. Noncredit in California, there are already CBE programs happening where students kind of progress at their own pace. They are, though, aligned to… They're often aligned to still on semesters or credit hours in terms of calculating students' progress or faculty apportionment, and that makes them more traditional CBE programs. Most of the institutions that were in that State of the Field report are offering CBE for credit in a similar capacity, where it's still within a semester, but students can kind of progress at their own pace. Direct assessment really loads that out in the sense that there are really different academic calendar models associated with that, and you're not on a semester system or anything like that.

AUDIENCE MEMBER: It seems like where CBE lends itself for at least some disciplines to more digital content and delivery. So, I guess what I'm saying is, it looks like one of the core requirements would be to have a lot of instructional design or instructional designers in order to design the courses for this competency-based delivery model.

MARA LOCKOWANDT: Yes.

AUDIENCE MEMBER: So, is there something within CBE that talks about… You know, we have technology infrastructure that's required. We have these other curriculum aspects that are required, but it really seems like, to really make this go, you have to have a high level of instructional design competency for the various platforms you're going to use. It seems like… You know, you said it takes five years to recoup your ROI on your initial investment. It would also seem that this is kind of like an intensive design environment for CBE.

MARA LOCKOWANDT: Yeah, yeah, that's great. So, really good question. What we often see is, in that phase 3, design the program, faculty will bring in instructional designers to help with some of the pieces that I think you're talking about exactly. It's going to require a decision around what learning management system you're using. I think Canvas is an option, but some institutions have opted for different management systems because of the ways that they can interact with students and create assessments. So, you could work with an instructional designer to support that piece. I think that's probably best practice right now. We see that a lot happening.

[00:42:31] Resources

MARA LOCKOWANDT: So, I do want to just alert people to some resources that exist as you're thinking about this. As I said, computer and information systems is one of the top CBE programs being offered, and there are some resources and models out there that you all could look to, to think about and get ideas around CBE programs at your institution.

[00:43:00] ACM & CCECC Competency Model for IT

Guidelines for BA programs in IT following a competency-model.

IT COMPETENCIES = (KNOWLEDGE + SKILLS + DISPOSITIONS) IN CONTEXT

SKILLS
- Capabilities and strategies for higher-order thinking
- Interactions with others and world around

KNOWLEDGE
- Mastery of content knowledge
- Transfer of learning

DISPOSITIONS
- Personal qualities (socio-emotional skills behaviors, attitudes) associated with success in college and career

PROFESSIONAL CONTEXT
- Workplace-bound
- Employer involvement
- Expert mentorship
- Authentic problems
- Relevant IT aspects of work
- Collaborative
- Project-based
- Diverse teams
- Reflective practice
- Professional tools

MARA LOCKOWANDT: This first one I'm sure many of you know about—the ACM competency model for IT. There's an associates and BA program outlined in their report, curricular report, and it uses… Let me get to the next slide.

ITE-CSP Domain: Cybersecurity Principles	
Scope	**Competencies**
1. A computing-based discipline involving technology, people, information, and processes to enable assured operations.	A. Evaluate the purpose and function of cybersecurity technology identifying the tools and systems that reduce the risk of data breaches while enabling vital organization practices. (*Cybersecurity functions*)
2. A focus on implementation, operation, analysis, and testing of the security of computing technologies	
3. Recognition of the interdisciplinary nature of the application of cybersecurity including aspects of law, policy, human factors, ethics, and risk management in the context of adversaries.	B. Implement systems, apply tools, and use concepts to minimize the risk to an organization's cyberspace to address cybersecurity threats. (*Tools and threats*)
4. The practice of assuring information and managing risks related to the use, processing, storage, and transmission of information or data and the systems and processes used for those purposes.	C. Use a risk management approach for responding to and recovering from a cyber-attack on system that contains high value information and assets such as an email system. (*Response and risks*)
5. Measures that protect and defend information and information systems by ensuring their availability, integrity, authentication, confidentiality, and non-repudiation.	D. Develop policies and procedures needed to respond and remediate a cyber-attack on a credit card system and describe plan to restore functionality to the infrastructure. (*Policies and procedures*)

Subdomains

ITE-CSP-01	Perspectives and impact [L1]	ITE-CSP-08	Usable security [L1]
ITE-CSP-02	Policy goals and mechanisms [L1]	ITE-CSP-09	Cryptography overview [L1]
ITE-CSP-03	Security services, mechanisms, and countermeasures [L2]	ITE-CSP-10	Malware fundamentals [L1]
ITE-CSP-04	Cyber-attacks and detection [L2]	ITE-CSP-11	Mitigation and recovery [L1]
ITE-CSP-05	High assurance systems [L2]	ITE-CSP-12	Personal information [L1]
ITE-CSP-06	Vulnerabilities, threats, and risk [L2]	ITE-CSP-13	Operational issues [L2]
ITE-CSP-07	Anonymity systems [L1]	ITE-CSP-14	Reporting requirements [L1]

In this example of cybersecurity, it starts to call out competencies that you could use as one of the resources to consider when you're designing a program. And I know, for those of you following the Model IT Curriculum, it has some of those attributes already.

An ability to demonstrate core IT competency in client computing and user support				
	Learning Outcome	Emerging	Developed	Highly Developed
1	Carry out trouble-shooting strategies for resolving an identified end-user IT problem.	Lists appropriate methods or techniques to identify and resolve end-user IT problems.	Investigates a given problem using appropriate methods or techniques, including communication and technical strategies.	Analyzes an end-user IT problem to successful resolution.
2	Differentiate among various operating systems.	Describes a few commonly used operating systems.	Summarizes several operating systems and differentiates among those systems.	Compares several operating systems on the basis of computing platforms and usability.
3	Explain the process of authentication and authorization between end-user devices and computing network resources.	Identifies the processes of authentication and authorization across network resources.	Summarizes the processes of user authentication and authorization across networks resources.	Compares several implementations of user authentication and authorization across network resources.

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And this is… Let's see—this example is from the associates core IT learning outcomes with the three tiers. So, the competency would be an ability to demonstrate core IT competency in client computing and user support, and there are different learning outcomes here. You could use this to start to build your competencies in a program.

[00:44:01] Examples from the Field

EXAMPLES FROM THE FIELD

BRANDMAN UNIVERSITY

B.S. in Information Technology
1. General Education (13 Competencies)
2. Information Technology (IT) Core (18 Competencies)
3. Emphasis Areas: Data Science; Information Technology Generalist (8 Competencies)

MARA LOCKOWANDT: There are institutions that are doing some interesting work. Brandman, where Laurie Dodge is Vice Chancellor, that I mentioned earlier, they have a B.S. in Information Technology. So, again, for folks who are looking at different models, this one is in California, and for their B.S., they have thirteen competencies in General Education, eighteen competencies in IT, and then different emphasis areas.

BRANDMAN UNIVERSITY

B.S. in Information Technology

Information Technology (IT) Core (18 Competencies)

1. *Information Technology Foundations*
   1. Computer Systems Architecture
   2. 408 Database
   3. Fundamentals of IT
   4. Networking
   5. Security
2. *Information Technology Management*
3. *Information Technology Operations*
4. *Software Development*

I just pulled out one example, so you could all kind of see, but they have these four subdomains, which are the bolded categories, and then under Information Technology Foundations, they've got these five competencies. Here I put the titles, but if you go into their catalog, they have the descriptions of those competencies, but you can see how they are starting to structure it.

EXAMPLES FROM THE FIELD

SINCLAIR COMMUNITY COLLEGE

- Developed CBE program in IT
- Used itWORKS.OHIO technical content standards as a starting point in identifying
- Developed a Stakeholder Collaborative to bring employers (exec. and line managers) and industry representatives together with college and program representatives
- Ongoing input from the group helps ensure programs and courses have clear, job-relevant competencies, which can be continually updated as academic and industry standards evolve
- Host reverse job fairs with employers; 40% of students who attend are back at work within three weeks of the fair

Sinclair is another example, from Dayton, Ohio, just to call out different ways in which the faculty there used content standards in order to start to build out their competencies. They're a great example because they also developed that stakeholder collaborative with employers, so there are some interesting lessons to be learned there around the ways in which they engaged industry in order to design those competencies.

[00:45:25] Upcoming Opportunities

- CCC CBE Interest form – DUE TODAY
- Join us at the CBExchange Nov 10-13th
  - Chancellor's Office and 5C representatives presenting 11/12 at 11 am on *Design with Equity for CBE*
- Connect with JFF to learn more about TA supports

MARA LOCKOWANDT: I know I'm whizzing through this because we're almost at time, and I did want to let folks know… As I mentioned earlier, today is actually the last day the deadline was extended to sign up for the Chancellor's Office interest form to join the CBE collaborative. This is not committing you to anything. I think it's just saying, "I'm interested—tell me more," and they

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will send you the application to join that collaborative. There's a lot of things on the Vision Resource Center, too, related to this opportunity and CBE in general. Some folks already checked out, but I encourage you to join the CBE community there and stay up to date on those resources.

There's also a big conference happening next week called the CBExchange, which is run by C-BEN, the big national organization on CBE, and JFF—you can see me there. You can see some friends from JFF and also the Chancellor's Office staff and 5C representatives, presenting on the 12th at 11 AM, a special session on *Design with Equity for CBE*, and that session is free, as well as a lot of the other general sessions.

So, if folks want to check it out, they have a ton of stuff going on, and I think there's a fee if you want to join some of the additional breakouts, but the Chancellor's Office and this *Design with Equity* session, I think, is part of the free registration, so check it out.

Also, of course, if you're interested, you can always reach out to me. I should have put my email here. You can also follow up with me or Steve, and we'll send some resources out after this webinar. Also, if you want to connect on additional questions, feel free to reach out.

STEVE WRIGHT: You know, it's strange to me that it should seem so mind boggling to understand the concept that really is probably, I think, simple. I mean, I think you said at the beginning it's just not time sensitive, and it sounds like a proceed-at-your-own-pace kind of thing. It could be structured or custom and a lot of other things, too. Why do you think the Chancellor's Office likes this? What problem are they trying to solve by encouraging us to do this?

MARA LOCKOWANDT: Yeah, I mean, from what they've shared… They've done a series of three webinars right now on CBE, the Chancellor's Office, all of which are available on the Vision Resource Center if folks want to check it out.

And what we've heard is that it's… I don't think the intention is for institutions to shift all the way to CBE, but it's an option, and it could be an option for institutions in order to reach certain adult populations, to support, like I said, accelerated degree completion and transfers, and it could be a way to achieve equity goals that the system has set. I think part of the CBE collaborative is it's

very much designed to be a learning group, pure learning, so I think that the Chancellor's Office is looking to test whether or not that hypothesis is correct with this opportunity, but it would align with what the national data is pointing to in terms of CBE as being an effective for meeting equity goals. But it does require, as a lot of you are putting in the chat, real careful consideration of things like financial aid and whatnot in order to make sure that that is happening, and that you're not exacerbating inequities.

STEVE WRIGHT: Well, I think it's fascinating. We only have a couple minutes left. If you want to try to handle any of these questions in here, that's up to you, but I think we got a lot of wonderful information today. I'm certainly challenged by what you're saying here.

And for those of you that are out there that are in IT or related disciplines here in the community college system, if it's in your plan to go ahead with something like this, please look to the ICT Sector Team to partner with you in any way that we can to help you move along the path and share your best practices or convene another meeting like this, where we explore what maybe several different colleges are doing. I'm not sure exactly what the Chancellor's Office is doing in that way, so I don't want to step on their activities, but if it turns out that's a need to be filled, we would be happy to do that.

Yeah, David Gatewood, are you alive?

DAVID GATEWOOD: I am.

STEVE WRIGHT: You want to give us your comments and feedback on how you see this happening? Because I know you've got a lot of responsibilities where you are, so let it rip!

DAVID GATEWOOD: Yeah, I'm David Gatewood, Dean of Economic and Workforce Development up at Shasta College. Some of our people, Mara, I think have been working with JFF and with you and with the state chancellor. So, yes, we are very, very interested, have many of the same observations, Steve, that you do. I mean, it just seems intuitive that if someone knows something and we need to help them demonstrate that knowledge so that the state can recognize it in some form of a transcript, which we're working out those details, we need to do that. It will move people

quicker, faster, better to career opportunities, to upskill, to upscale, to move on, to move up, to move in, to move back home. I mean, all those things, so we're pretty excited about it.

Often, as in these cases, the biggest problem is us. Students want it, individuals want it, and employers need it, and the challenge is, as Mara has outlined and you have outlined, it's how do we do it and do it with integrity, make sure that faculty are at the center of the assessment, that we're making sure that we continue to be in compliance with faculty needs and the state's needs?

So, yes, thank you so much for this, Mara. We're going to stay in touch and keep working on this initiative until we get it right. So, thank you.

MARA LOCKOWANDT: Well, these questions are really great. I think we'll review with Steve and Nicole after this webinar and try to follow up with folks or point you to some resources, like I said. Please take advantage of some of these opportunities to express your interest and/or learn more. Next week, you can join us at the CBExchange. Please say hi to me if you see me there in the virtual world. And yeah, there's also a request to share out the chat—great request here. Yeah, lots of good questions and things coming through here. So, Steve, I'll turn it over to you to wrap this up.

STEVE WRIGHT: Sure. I think that's pretty much it. And thank you, everybody, for the comments. And Mara, we're so happy to partner with JFF in doing something like this. There's a lot of advantages to working with an outside organization that can see things clearly. Sometimes when we do them ourselves, we get tripped up on who is running this or who has got this school or that school, so it's nice to have your impartial outside perspective. Thank you very much for today's presentation.

So, everybody, it should be up before next Friday, usually about midweek, so we'll have the edited version as well as the slides and the transcript, so you can refer to these materials. And you said there's a call coming up right next, or today, right, Mara? Another one that if anybody wants to jump on that...

MARA LOCKOWANDT: The interest form is today, yeah, and the webinar is next week, Tuesday through Thursday, I believe. So, lots of really good sessions happening there if people want to learn more. Great network of folks, too, all those institutions from across the country doing stuff.

STEVE WRIGHT: Well, thank you very much. Once again, everybody, thank you for joining us. We'll see you again next week. And thank you, Mara. Bye-bye.