SUMMARY REMARKS FROM VIRTUAL SUMMIT:
MAKING THE CASE FOR INCREMENTAL CREDENTIALING AND GRADUATE EDUCATION
Co-hosted by the Council of Graduate Schools and Credential As You Go
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[This transcript has been edited from the AI-developed transcript of the recording.]

Whether you call them non-degree credentials, microcredentials, or incremental credentials, there has been a proliferation of new credential types to serve learners, address employer demand, and complement degree programs. Navigating this fast-changing ecosystem can be a challenge. In this event, Credential As You Go and Council of Graduate Schools explored how the credential landscape is changing and the ways in which non-degree credentials can serve as pathways into careers and graduate degree programs for learners from diverse backgrounds.

Setting the Context

- Suzanne Ortega, President, Council of Graduate Schools; member of Credential As You Go National Advisory Board

Findings from Council of Graduate Schools 2023 Survey: *Impacts of Credentialing Change on Graduate Education*

- Matthew Linton, Senior Manager, Programs and Publications, Council of Graduate Schools

Credential As You Go's Incremental Credentialing Framework: How Does It Apply to Graduate Education?

- Nan Travers, Director of Center for Leadership in Credentialing Learning, SUNY Empire State University; co-lead, Credential As You Go

Panel: New Credentials on the Ground

- Moderator: Holly Zanville, Research Professor, George Washington University; Co-Lead, Credential As You Go; Lead of Learn & Work Ecosystem Library
- Graham L. Hammill, Vice Provost for Academic Affairs and Dean of the Graduate School, University at Buffalo
- Stephen E. Schmid, Strategic Program Development Consultant, Universities of Wisconsin
- Kristen Vanselow, Assistant Vice President, Innovative Education and Partnerships, Florida Gulf Coast University

Takeaways & Trends

- Julie Masterson, Associate Provost and Dean of the Graduate College, Missouri State University

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Matt Linton
Hello, everyone – welcome to today's summit. My name is Matthew Linton and I'm the Senior Manager for programs and publications at the Council of Graduate Schools (CGS). Before we get started, a reminder that the recording and presentation slides will be emailed to all registrants as well as posted on the CGS website and YouTube channel as well as at the Credential As You Go website and YouTube channel. I would like to introduce now Suzanne Ortega, president of CGS as well as a member of the Credential As You Go National Advisory Board to set the context for today's presentations.

Suzanne Ortega
Thanks so much, Matt. And thank you colleagues for joining this conversation. I am so pleased to have the opportunity to co-sponsor an event with our Credential As You go colleagues because today we will explore important and understudied issues on the topic of microcredentials in the graduate space. You'll get a preview of a forthcoming CGS publication on this topic, and we'll learn more about important initiatives at Credential As You Go. We hope collectively that today's seminar will help

all of us better understand this fast-moving area, and crystallize the key questions that researchers, practitioners, and policymakers must address in order to advance this practice.

So, why graduate microcredentials and why CGS interest in them? First, I think our interests in microcredentials began with our interest in the master's degree. For much of the past decade, virtually all the growth in graduate enrollment has been driven by growth in master's degrees. And the degrees themselves have long been sites of innovation—in formats, delivery modalities, and curriculum.

In fact, beginning in the early 2000s, graduate schools began implementing graduate certificates—at that time seen primarily as a complement to existing curricula degree curricula but also as short programs that allowed current employees to begin upskilling or reskilling. At my university then, the classic case was GIS. Lots of the folks in the at the state level and elsewhere needed to better understand these new schools.

More recently, growth in certificate programs has even more rapidly accelerated. We've seen year over year growth and the conferral of graduate certificates of around 20%. In this last year, we saw a bit of flattening by 1 or 2 but it still is an astonishing increase. I think that increase is partly due to the fact that graduate administrators and coordinators are really looking for more flexible ways and less expensive ways for students to enter graduate degrees and rewarding careers. And it's also borne of the real desire to respond to employer demands, particularly in those volatile, fast changing fields of healthcare, education, data science, and cybersecurity.

However, to date, much of the research on microcredentials remains focused on sub-baccalaureate or pre-baccalaureate and baccalaureate-level certifications and other credentials—and examines them primarily as fast track pathways to good careers for individuals who may have had their previous education disrupted or come from economically disadvantaged classes. But the microcredential space is so dynamic and diverse that those pathways at the undergraduate level are only part of what is happening.

So, to reiterate, microcredentials have real relevance to graduate education in three major ways. First, we believe that they create more pathways to graduate education degree programs which require a substantial commitment both in time and resources. Not every prospective student can undertake a full degree program. An incremental approach to credentialing allows students to take the amount of graduate education that works for them and their goals and the frankly, that they can afford. It also gives opportunities for a more customized approach to graduate education so that degrees, and those credentials can be tailored to a particular personal interests, career pathways, or workforce need.

The second reason microcredentials are relevant to graduate education is employer engagement. Graduate schools and graduate programs really recognize and are eager for opportunities to collaborate with employers, and microcredentialing is one arena to connect to and respond to employer demand for specific skills and the opportunities to work with employers on the development of curriculum for the employees they need. In fact, you'll find in the CGS report we will discuss several employer case studies.

The third reason is the cost of graduate education. One of the most pressing issues in higher education is cost. And microcredentials at least present one possible way to address cost by allowing students to pay incrementally for a degree through stackable certificates, or by allowing them to take lower costs standalone certificates or badges in skill areas they want.

But since this is such a new field, several questions remain — and we will discuss many of them today. I do want to start out by highlighting three. First, we are challenged by a lack of agreement on terminology and language. This means that the lack of precision in terms makes it very difficult to discuss and scientifically measure developments in the field. And that isn't all bad—innovation is messy. It's difficult to pin down but the very flexibility in this work presents opportunities to explore through rapid prototyping— one might call it, promising models of practice. It does, however, make assessing quality almost impossible. We just had a session at our annual CGS meeting on trying to assess the quality of these emerging credentials and real questions remain like, should we even use the same quality assessments from microcredentials as we do for degrees? Who should be involved in the assessments? Since many of these credentials were driven by workforce demand, is the quality of the credential best determined by content mastery or by career outcomes of credential holders?

Then comes the question of how we best gauge learner and indeed, employer demand. Is it true that if you build it, they will come? The new CGS report found that many transcripted post-baccalaureate certificate programs were smaller (fewer than

12 students)than expected. Yet, we often hear that this microcredential space is where the projected enrollment growth is likely to come. So how do we make sure that we're building programs that learners want? And that employers want?

A third set of questions relate to the policies we can put in place to make sure that programs that struggle will be changed, or sunsetted, though there is an uncertainty and you're going to hear more about this.

This is a really exciting time in the microcredentials field. I'm excited for the presentations today that will delve more deeply into this world. And we look forward to your questions and comments, and moving our work together.

Matt, I'm going to turn it back to you.

Matt
Thanks, Suzanne. I'm excited today to present findings from a forthcoming report CGS is putting out on microcredentials in the master's degree, to understand the national landscape to support learners in the workforce. Before we get started, I'd like to thank my co-authors on this report—Enyu Zhou, Jeff Allum and Madeline Rowe. This was a true team effort. None of this would have been possible without their valuable contributions. I would also like to thank Sarah Breyfogle for her work making this report look beautiful with her layout skills. And I'd also like to thank ETS for supporting the project's research as well as a 2023 convening on the project. And finally, I'd like to thank the Nondegree Credentials Research Network for their support, as well as providing a forum to showcase initial data from this project.

So with that, the work I'm sharing comes from an 18-month project started in 2022 and sponsored by ETS, to examine the relationship between emerging post baccalaureate microcredentials and the master's degree. Suzanne provided in her introduction why we are interested in this topic. I would add that we knew some of our member institutions were beginning to stack microcredentials and master's degrees—we wanted to explore that further. We had also started to hear some of these framed as alternative credentials, and that some of the language around these emerging nondegree credentials was really displaying them against degrees. We wanted to examine more closely whether or not that was actually the case.

So we began our project by conducting six focus groups in October 2022. That included groups of graduate deans, higher education administrators, continuing education and extension professionals, national employer groups, and workforce experts. During these focus groups, we came upon one of the major challenges for this project and one Suzanne mentioned—the lack of or inconsistent definitions of terms. Credential As You Go and its companion initiative, the Learn & Work Ecosystem Library, are addressing this with the development of a dictionary on incremental credentialing in case of former and a Glossary of Terms for the learn-and-work ecosystem in the latter.

Participants in our focus groups were particularly vexed by the word *microcredential*, which for some denoted a specific type of credential offered at their institution, but more commonly was used as a blanket term to cover many different credential types. That blanket did not always cover the same credentials at each institution, which was a challenge in putting out a national survey. So taking note of this issue, we went to our advisory committee and they advised us to focus on credit-bearing transcriptable graduate certificates in our survey. So all the survey data you see today will focus on transcriptable credit-bearing graduate certificates.

With this in mind, we fielded three surveys in early 2023, to (1) graduate Deans, (2) graduate program directors, and (3) the employer roundtable. We were also fortunate to partner with the National Association of Colleges and Employers to include new questions about graduate certificates in their Recruiting Benchmark Survey, which went out late spring 2023. Then to inform a series of five case studies you'll find in the report, as well as the follow-up on some of the questions that emerged during the focus groups and the surveys, we conducted more than 20 Zoom interviews with various stakeholders. All that coalesced in a project convening held in June 2023 that had over 30 attendees from diverse stakeholder groups. That convening is what led to the major themes, ideas, and findings published in this forthcoming report.

In the survey design, we were animated by four core research questions:

- What role do graduate badges and certificates play in initial hiring decisions of employers?
- What role do graduate certificates play in reskilling and upskilling the current workforce?
- If master's degrees remain an employer preference for job entry or promotion, what skill set does the degree signal but shorter-term credentials don't provide?
- What vehicles exist or can be developed that ensure quality and relevance of post baccalaureate certificates and degrees to future workforce needs?

Your research questions focused on three interrelated themes—the relationship between nondegree credentials and degrees; the intersection of nondegree credentials in the workforce; and determining the quality of these nondegree credentials, both from a university and employer perspective.

A brief comment on survey methodology. The graduate survey was in the field in January / February of 2023. We received 211 responses out of 463 survey institutions. We followed that up with a program director survey in March 2023. This went into more detail about how these programs were developed and administered. There were 298 responses to that survey.

There's a lot of data in the report, but in the interest of time, today we're going to focus on the five key findings outlined in the forthcoming report. There's great material in the case studies as well as other data findings that will be relevant, and we'll circulate that report to all registrants for today's webinar.

The five key findings are:

- Post-baccalaureate certificates are best understood as part of a larger ecosystem that includes graduate degrees instead of as an alternative to degrees.
- Many programs are new and have small enrollments.
- Departments and programs remain the drivers of program creation.
- For assessing microcredentials, quality remains question— particularly balancing quality with speed.
- Stacking certificates is still in the development phase at many institutions.

I'm going to delve more deeply into each one of these five points.

Finding #1: post baccalaureate certificates being best understood as part of a larger ecosystem that includes graduate degrees. We asked graduate deans how likely it is that certificates will replace the graduate degree as a certificate of choice for employers — 62.3% said probably will not ,15% said they definitely will not., e, 0% said definitely will. So there's a widespread belief among the dean community that they do not believe the certificates will replace degrees as the credential of choice for employers, and this is a recognition that degrees are still very valuable credentials and employers value them and know what they are. However, this does not mean the certificates and other microcredentials do not have important roles to play in supporting learners and employers as you can see by the testimonials. Certificates and other microcredentials are valuable in specific skill or competency acquisition. Degrees also may provide other skills and competencies like critical thinking communication, and independence that may be harder to measure and may take a longer time to develop. Note the testimonial that says: "A graduate certificate to me signals the student has gained a new skill or understanding of a specific subject or topic at a deeper level than undergraduate. A master's degree implies increased knowledge of a topic or subject, but also includes further development of skills like critical thinking, problem solving, etc."

We followed up the surveys with interviews and picked up some interesting patterns of ways that master's degrees and certain certificates work in concert or complement one another in ways that went beyond stacking. I'm going to touch on three of the most popular ways we heard the most often that these two types of credentials were working together.

We often heard this in terms of career pathway defining or relating degree to career in a more concrete or tangible way. So the first way is that certificates are seen as a way that allow learners to customize their master's degree to fit a specific career pathway. And a lot of times, this was to bring in skills from another discipline(s) to signal interest in a specific career pathway or career trajectory. I've termed this in some other places as *interdisciplinary light* because it allows for skills from other disciplines to migrate from one discipline to another without forcing a fundamental revaluation of curriculum within a master's program. An interesting example was from an institution that had a jointly administered graduate certificate in data analytics, that was jointly administered between a chemistry and a biology department. This program was in an industry-rich area. We had assumed this was going to be a way for master's graduates from that program to signal to industry that they had data analytic skills to go along with their chemistry and biology knowledge. When we talked with the program director, we actually found something quite different, which was that these students were using this certificate to signal to academia. Many of these students were applying to PhD programs and they found that PhD programs really valued the data analytic skills that the students were bringing. So this was a way of signaling to PhD programs in academia that they had these other skills beyond what they were learning in their master's program. I think it's also important to mention that while a lot of these programs are designed to speak to industry, they may also have broad applicability in academia too, as academic programs become more interdisciplinary.

A second way is to update master's degrees that a master's holder may have had for some time. Certificates and other microcredentials can allow master's degree holders to gain new skills and competencies without going back for full degree programs. We heard this was particularly important for certain technology fields where there was a lot of rapid change. We also heard about it in teaching fields where new competencies and knowledge should be rewarded by promotion or pay raises.

The third way we oftentimes heard certificates and master's programs working together was actually the opposite of the first option, which is broadening career pathways and signaling a desire to have more career options for a master's degree program. We found it was also using a certificate program to acquire a particularly desirable skill or set of skills that had broad applicability to several careers—again, oftentimes data science or data analytics. One interesting case we heard was a Women's Study certificate that was oftentimes taken by humanities master's students. Students were taking that certificate because they found it had a broad range of applicability not only for students that wanted to go from the master's program to a Ph. D program, signaling they could potentially teach or TA in courses or in departments beyond their home department (for example an interdisciplinary Women's Studies department), but also because there was interest in that certificate by employers looking in Title IX compliance, and so seen as a potential pathway into Title IX administration at universities or in corporate America.

Finding #2: Many programs are new and have small enrollments. In our focus groups, and I've seen a little bit in the chat already, we oftentimes heard nondegree credentials framed as major enrollment drivers, that they are going to be substantially growing and broadening enrollment. But we did not find that as much in the research. We found a median program size in our program level survey was 12. There were some large programs as well. But this also means that there are a lot of programs that have fewer than 12 enrollees for the spring 2023 semester—a lot of these programs are small. So we were surprised by this finding. In our interviews, we followed up with program directors about why this might be the case. We found that there may be a lot of good reasons why programs have small enrollments. These may be circumstantial reasons, but oftentimes they are by design.

The first and most common reason why these programs may have low enrollments is that the programs were constructed in the last year or year and a half. Program directors expected enrollments to grow as the program became better established, as graduates started to get into the workforce, and advertising communicated the value of those programs.

We also heard in the case studies that certificate programs sometimes grow out of an employer partnership, and that employer partnership will sometimes restrict who is able to participate in a certificate program to the cohort of employees that are eligible. In that case, the certificate program is small by design—and oftentimes employers value that small intimate kind of community setting in those sorts of certificate programs.

The third reason we heard a program might be small is that a certificate program may be totally embedded or partially embedded in either one or multiple master's programs—and those programs may then be the only places where you can draw enrollment from for those certificates. This is a similar case to the employer situation. You're dealing with a restricted enrollment pool, and have a limited community for the certificate.

Another situation we heard about was that program directors didn't know why their program didn't have the enrollment they were anticipating, but they were hoping it was going to grow, and had started to undertake steps such as new marketing or other strategies to try to grow enrollment.

It's important to mention in this context about enrollment is that since many of these programs are designed to meet specific employer needs, it may be important to make sure these programs can be pivoted quickly, and also potentially sunset if they are no longer meeting that employer or workforce need. Having clear and concise sunsetting as well as curriculum change, development of programs, and better policies are all important for employer-focused certificates.

Finding #3: departments and programs remain the drivers of program creation. We often stress the difference in framing nondegree programs in comparison to degree programs, when we heard in the research a lot of commonalities between these emerging credentials and degree programs. One area was program development and administration. We asked graduate deans which units on your campus are responsible for developing and administering transcripted credit-bearing postgraduate certificates? The most popular choices were academic departments or programs and academic colleges, which is what we would expect from degree programs as well. This was backed up with what we heard in focus groups and interviews.

We heard a lot about the importance of faculty champions for a program's success—that the major individuals that would be driving the creation of these programs (faculty invested in program success) also admit their success comes from support from administration as well.

This was not the only place where commonality between degree and nondegree programs existed. Several values and principles emerged that can guide the kind of successful and ethical development and administration of these programs. These are the seven points that that rose the top:

- student centeredness
- collaboration
- responsiveness to industry, workforce, and learner demand
- flexibility
- clear, transparent policies
- high quality
- promoting access, equitable access to meaningful work.

It jumped out to me how much these principles and values also hold for degree programs—and are good guidance for program creation. This is an important reminder that what is new may not be as new as we think, and that sometimes received wisdom and knowledge can be valuable even when operating in these new modalities.

Finding #4: assessing microcredential quality. The dean survey found that certificate programs are often being reviewed only every more than three years, and 27% are not being regularly reviewed at all. This begs a number of questions. One is whether or not in some cases, the excitement of launching these programs has outpaced the creation of policies to review and assess them. Also interesting is how much is portable from degree assessment to these sorts of new non degree programs, or whether some release of new / original thinking is going to be required in thinking about program review and quality assurance for certificates and other microcredential programs? Another interesting point is what are the core data points being used to evaluate curriculum and the quality of certificates?

You'll see that the top choices are things that we hear about for degree evaluation: Student Learning, Outcomes Assessment, size of enrollment, faculty qualification, completion rates—and further down the list, we get to career outcomes and employer satisfaction. It's important when we're thinking about these emerging credentials as being guided by workforce need and employer demand, to wonder if we need to have employers and career outcomes higher up on our list —to make sure they're really leading the way as we think about these programs being of high quality.

It's not all bad news when it comes to certificate quality. One thing that emerged in the NACE survey was that employers view college and university certificates as being of particularly high quality compared to their competitors—with 75% of employers responding that college and university certificates were seen as high or very high quality, compared to only 13.2% for online providers. That's important to know that employers view college and university certificates as being valuable, and universities having a lot of credibility among employers as credential providers. This may be an important point of entry —or useful point of entry —for graduate schools looking to work more closely with employers —that employers do value what you do and value the quality of the product being put out.

#5 Finding: stacking certificates is still in the development phase at many institutions. According to the program director's survey, only about 50% of certificates are stackable, and about 50% of certificates are also not leading to simplify the admissions pathways to related degree programs. We had heard a lot about stacking as a major value of these certificates. But we found that still 50% are not being stacked.

When we went into the interview portion to ask program directors why that might be the case, we got some useful information about good reasons you may not want to be stacking your certificate. One reflected some of the previous findings—that some certificates are already embedded into degree programs, and intended to only be taken in conjunction with a degree program, usually a master's degree.

A second point was that there were a lot of folks concerned about making sure that each part of the stack of certificates had value on its own to the learner. There's a recognition that not all learners are going to want to stack a certificate. So you have to make sure that each component of the stack can stand alone and be of value to the learner on its own.

A third complication around stacking has to do with stacking sequencing. Sequencing stacks can be challenging since that's oftentimes the appointed access. For students, you want to create a lot of access points into your stack. At the same time, you want to make sure that stack sequencing makes sense for all learners at whatever access point they're choosing because you want to set the learner up for success; don't want learners to come into a stack at a point that they're not going to be able to succeed; and also don't want to create (particularly for advanced learners) a situation where they may take a stack, take one certificate and a stack, and then have to take two or three other certificates that are not a value to them simply to complete the degree. So, you want to try to make sure that the entire stack has value. This requires a lot of coordination—and may also require other policies such as recognition of prior learning policies to be in place. All this can be a complicated process. And that can take some time, which may also be one of the reasons why stacking is still something in process and a lot of institution did not find totally fine.

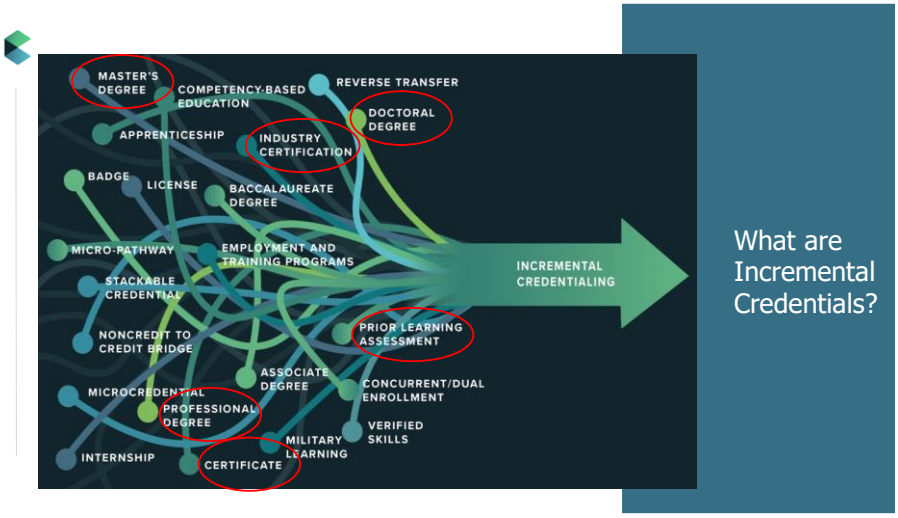
There's much more in this report I didn't have a chance to get to today— please keep a lookout for this report in the coming weeks. We'll be sending a link to all registrants for the summit with the report—it will be free so you will have access to it by email.

I'm excited now to pass the baton on to Nan Travers from Credential As You Go to present some of the fantastic work that they're doing.

Nan Travers
Thank you, Matt. I appreciate the opportunity to share with you the Incremental Credentialing Framework and how it can be used at the graduate level. I also want to encourage those of you participating today to use the Chat to share how you're using incremental credentials at your institution—we'd really like to see the different ways that this is happening.

The Credential As You Go initiative uses the term *incremental credentials* to refer to all types of credentials that formally document learning. That includes credentials like certificates, badges, microcredentials, and also degrees. And we're also seeing apprenticeships and other kinds of credentials in this space. Incremental credentials capture learning acquired along the learning pathway, and formally recognize and connect that learning to a larger context of work and school. They can be noncredit or credit bearing, can be at the undergraduate and graduate level in higher education, and can be at any level within industry. They also can be all different sizes. We see degrees as incremental as well—master's going to PhD is an incremental step.

In this presentation, I'll focus on the graduate level. This graphic depicts many paths of incremental credentialing. I added red circles to indicate areas that we are already seeing this happening at the graduate level. For example some countries extend apprenticeships to the graduate level.



When we think about incremental credentialing, we're really thinking about how to purposefully capture what people know and can do along the way to ensure formal recognition of that learning.

The Incremental Credentialing Framework was developed during Phase one (5 years ago) of Credential As You Go. That phase was funded by Lumina Foundation. We've since obtained additional funding from the US Department of Education in the IES division and Walmart.

During that first phase, we conducted a landscape analysis across 41 states to examine the patterns in credentialing. From that we developed the Framework, and tested and revised it. We have six approaches in the Framework—they're commonly used together, can be used across both the noncredit and credit space, and as I've said, with graduate programs. Embedded within all six approaches is also looking at how to incorporate prior learning assessment, and to be thinking about auto

awarding, which is something that is just starting to grow in recognition in terms of how to make sure people are awarded these credentials. I'm just going to go through the six very quickly.

The "learn as you go" approach is focused on skill development. Some of the areas that we see at the graduate level includes key skills that are needed to be successful such as in reading, writing, and doing research as well as other areas. We're also seeing that some graduate programs offer a graduate school type of preparation course, which could result in a badge, a microcredential, or some other kind of credential.

"Specialize as you go" is focused on specializations. There are already many graduate programs offering things like Certificates of Advanced Studies, which is one type of incremental credential. Some institutions are creating microcredentials in cognitive areas or specialization areas.

"Stack as you go" is an area that we do hear a lot about, as you heard in Matt's report. The concept is that all credentials lead to either another credential or directly into professions. The thing about stacking is that it's purposeful and clearly articulated, so that learners really know how one credential leads to the next and how it also maps into different fields. Some examples start with a microcredential that leads to a certificate that can lead to a degree. Some institutions map these points to careers and position types. And some are discussing how to create an "all but dissertation" (ABD) for those students who have not completed the dissertation to give them formal recognition for what they already know, and to encourage them to continue and finish the dissertation.

"Transfer as you go" focuses on how to articulate credentialing pathways across institutions. Some institutions are developing credentials that meet both bachelor's and master's programs. There are many examples of four plus two programs and masters-to-doctorate programs. Another possibility is to develop partnerships across institutions to offer students at one institution specializations from another institution—without having to build out additional resources at the first institution. This would be like cross registration, but at a graduate level.

"Partner as you go" works with different industry certifications to either evaluate and provide credits for their certifications, or to provide the certifications within the curriculum. There are many examples of advanced industry certifications at a graduate level. For example, SHRM's course, *Employee Relations Managing Employees in a Dynamic Work Environment,* has been evaluated by the American Council on Education for two credits at the graduate level. At Keene State, the students in the master's in Safety and Occupational Health Applied Sciences gained Certified Safety Professional Status recognized by the Board of Certified Safety Professionals. We're seeing a lot of different ways of integrating and connecting academic and workplace learning. And as I've already mentioned, some countries are offering apprenticeships at the graduate level in conjunction with industry partners.

"Retro award as you go" is the sixth approach on the Framework. According to the Council of Graduates School study on PhD completion, only about 56% of doctoral students complete. That means the remaining doctoral students have learning but are not being recognized formally. Many will claim ABD status but this is not a formal credential. So one question is, what if it became one? Also as already mentioned, there are some institutions that are thinking about going back and finding students that are part way through a program and doing some credentialing around what learning they have already acquired. There are some institutions evaluating prior learning for graduate level credit, and some developing smaller credentials to capture that prior learning that can stack into a certificate or degree. All past students, regardless of their status, who have successfully completed their statistics and research courses, for example, could be considered for awarding a credential in analytical approaches, which then could then stack into other credentials and is also valuable on its own. This retro award is being combined with the stacking idea, making sure that past learning is brought forward.

This is a very quick overview of the Framework. We encourage you to go to <www credentialasyougo.org> to learn more about the Framework. Also, we've been publishing various reports and tools and resources at our website that you might find interesting. Now I'm going to turn this over to my colleague, Holly Zanville, one of the co-leads of Credential As You Go.

Holly Zanville
Thank you, Nan. We have collected the type of examples we're hearing about in incremental credentialing at the graduate level— you heard many of these in what Matt and Nan presented and will hear more details in our panel:

- Noncredit microcredentials
- Embedding industry certifications into degree and certificate programs
- Adding skills badges to degree programs
- Offering incremental credentials of various types at the graduate level that may be unrelated to degree completion (stand-alone)
- Developing modules or units (course sequences) of important specializations which can be taken individually or applied toward a master's degree
- Prior learning assessment at the graduate level
- College-wide graduate level policy changes (e.g., counting microcredentials toward degree program credits)

I'm really pleased to introduce three panelists who will share developments on the ground at their institutions—Graham Hamill from the graduate school at University of Buffalo; Stephen Schmid from the University of Wisconsin, where he works with both the University of Wisconsin Milwaukee and the University of Wisconsin System; and Kristen Vanselow from Florida Gulf Coast University. All these institutions are participating with the Credential As You Go initiative. There are three questions we'd like to focus on:

- What is happening around incremental credentialing at your institution?
- What do you have on the drawing board or in the planning stages?
- What are the top two or three challenges and successes that you're seeing with incremental credentialing?

Graham Hammill
Thanks, Holly. And thanks, everybody. I'm really appreciative to be part of this. It's a great opportunity to learn a lot about the innovative space of microcredentials.

I think it'd be helpful, first, to provide a little bit of context. The University at Buffalo has been offering credit and noncredit microcredentials since 2018—so little more than five years. When we framed our initiatives, we wanted to make sure we were aligned with our institutional values, and put a significant amount of priority on the academic quality of microcredentials, really framing the initiative as one that tried to align professional competencies across all disciplines with academic enhancements. That led us to embed our microcredentialing initiative almost entirely in already existing curriculum governance structures, and then enterprise-wide systems. So, curriculum governance structures, all the way to central approval processes for microcredentials, and enterprise-wide systems like our student information systems. Although non-matriculating students can take microcredentials, what we've seen is that the bulk of enrollment is among students already pursuing degree programs. I think this context is going to be important for everything I'm about to say.

Currently we offer 49 graduate level microcredentials— 25 are for credit and 24 are noncredit. So, split almost 50/50. The microcredentials range across 10 of our 12 schools. There are also microcredentials being offered in a couple of other areas like Student Life and the Libraries.
In terms of what's happening on our campus, we're continuing to develop new microcredentials. On average, we develop and offer about 10 new microcredentials per year. We're seeing high enrollment in microcredentials, and this is high enrollment among already existing students. These are not new students coming to the institution, by and large, but already existing students in degree programs.

With this high enrollment in our microcredentials, we really want to understand the attraction among our students. So in addition to developing microcredentials, we're also collecting data from students through surveys to better understand student interest in this kind of credentialing.

We're seeing interesting trends among the faculty development of microcredentials, and I'll highlight some that stand out to us. One is significant growth in the development of microcredentials that focus on community engagement. Our Medical School, for example, has developed a noncredit microcredential called "Diabetes Mentoring." This is student-led and doctor/patient-supported program where students acquire a working knowledge of diabetes and diabetes management and treatment, with special emphasis placed on assisting those in underserved populations.

Another example is our School of Dental Medicine. The school developed a credit-bearing microcredential called "Competencies in Dental Public Health," which provides students the opportunity to participate in community-based services and research with health-providing organizations across Western New York (an example would be Indian Health Services).

A third example, to give something that's not from the Health Sciences, comes from our College of Arts and Sciences. They have developed a grant writing and fundraising microcredential, which is credit bearing. In this microcredential, students write and submit grants for local nonprofits— in the arts or in other areas.

So we've seen growth in the faculty development of microcredentials that focus on student engagement and learning that comes from student engagement.

We're also seeing growth in microcredentials that certify DEI competencies. Of the 49 microcredentials we currently offer at the graduate level, 10 specifically address intercultural and global competencies, and a critical understanding of DEI. These are very specific to disciplines. There are some in STEM fields like engineering, some in health sciences, and some fields that are neither of those.

In terms of what we have on the drawing board, we are continuing to develop new microcredentials and continuing to work on growing our portfolio of professional development microcredentials for graduate students. Some are in discipline-specific areas such as Pharmacy, Medicine, and other disciplines. Some are general and serve graduate students across all degree programs. For example, two new microcredentials are associated with the Three Minute Thesis training that students can participate in to engage in the Three Minute Thesis process. As Nan mentioned, some graduate schools are offering microcredentials that prepare incoming graduate students for future success. And we've just developed a graduate microcredential that does exactly that.

We are also developing a toolkit of assessment instruments to better understand ROI from the perspective of institutional effectiveness and from the perspective of the value of microcredentials to students. We are interested in longitudinal measurements to understand the value of microcredentials for students over time and for the institution over time. To develop this assessment toolkit, we are working in partnership with our Graduate School of Education. In that project, we're working on students surveys and developing other data points we would want to collect.

Finally, on the drawing board, we have received funding from the SUNY system to create several new microcredentials that are developed in strong collaboration with industry partnerships. One focuses specifically on institutional research officers. We are working with institutional research officers across higher education institutions in New York to develop microcredentials that provide professional training in IR-related areas. We're also working in partnership with a local entrepreneurship organization that's called TechBuffalo, and with a local bank to develop a microcredential for learners interested in developing entrepreneurial skills.

Here are our top three successes and challenges. First, successes. When we began this initiative in 2018, we focused on undergraduate students and graduate students, but we did not anticipate the amount of interest we would see among graduate and professional students. As it ends up, graduate and professional students make up the bulk of enrollment in microcredential development at the University at Buffalo. I think that's a real success and a little bit of a surprise for us.

The second success is faculty interest. We were unsure how faculty would respond to this microcredentialing initiative. I would say I am delighted by the number of faculty who have or are developing microcredentials, and the range of faculty across disciplinary expertise who have been interested in and have participated in this initiative. In our model, the microcredentialing portfolio is almost entirely faculty driven, in terms of developing microcredentials and also in terms of approving microcredentials. We've seen significant curricular innovation. And in a lot of ways, I see microcredentialing as a kind of sandbox area for low stakes curricular development and innovation among the faculty that can then be imported into degree programs. We've also seen a number of faculty build microcredentials into grant proposals, where the microcredential is the basis of a grant, for example, scaling experiential learning through incremental certification, but also building microcredentials into grants where the microcredential elevates and certifies the training experiences that graduate students go through as they participate in the research on the grant.

We have seen real success in that every one of our microcredentials is also awarded a digital badge. The evidence of achieving the learning outcomes present in the digital badge can be shared broadly across various platforms. We've seen real success with this digital badge component, and seen high rates of claiming the digital badges. This makes me think there really is an

opportunity to rethink the transcript and move more towards a Comprehensive Learner Record. I know a couple of people in the Chat were mentioning that —I fully agree there's an opportunity here.

In terms of challenges: It has been a challenge for us to facilitate meaningful partnerships with industry and employers. This is an ongoing challenge. And this is a general challenge when it comes to curriculum development. With microcredentialing, we are partnering with our campus entrepreneurial center to offer workshops to help faculty bring workforce development concerns into the development of microcredentialing. But I think there's more we could do here.

Matt mentioned this from the survey about stackable credentials— we too have had no real scalable success with stackable degrees. Non-matriculating students who are interested in microcredentials, we found are not really interested in attaining the degree and do not tend to see microcredentialing as a pathway to that degree. And I should say, that's not been our focus. But we haven't seen real success there. But what we are seeing in terms of stackable degrees is faculty thinking about making a master's degree stackable has led to curricular improvement. For degree-seeking students, that has led to degree revisions that have made the master's degrees better, I think. But it does not lead to new pathways into and through the degrees. Now I'm going to offer a caveat that students are claiming more than one microcredential, so there is evidence that students really like the customizability of learning, but the various microcredentials are not necessarily not stackable into a particular degree. Matt mentioned too that microcredentials have the opportunity to provide students with competencies and to signal competencies that they may not want to get while pursuing another degree. think there's something going on there too with microcredentialing.

Our biggest challenge is measuring and communicating the value of the microcredential—what is the return on investment for students? Does participation in a microcredential impact career readiness? Does it lead to improved career outcomes? Or is it the case that students who pursue microcredentials in our model tend to be more motivated, have better career outcomes for other reasons? For the institution, do microcredentials improve student learning and the effectiveness of teaching? Does they lead to curricular innovation? I think there are early signs that this may be the case, but we really don't know the answer to that. And then for employers, is there a market value to microcredentials? That's a question we're very interested in getting the answer to. And we simply don't know. So with that, I'll conclude and turn it back over to you, Holly.

Holly
Thanks so much, Graham. Stephen let's turn now to what's happening in Wisconsin.

Stephen Schmid
Thank you and thank you everyone for inviting UW Milwaukee and the Universities of Wisconsin today. I serve in the Provost Office at UW Milwaukee as well as with the University of Wisconsin System in the academic affairs office. I've had the pleasure of working in the Provost's Office for several years with my colleagues, Laura Pedrick and Phyllis King. They are the real masterminds behind UW Milwaukee's microcredential initiative. Unfortunately, they couldn't make it today.

Our journey started in microcredentialing in fall of 2021, so not near as far back as University of Buffalo. I want to focus on our process. Milwaukee has a lot of experience in the online space with a robust online program. We're also heavily invested in competency-based education. So, microcredential certificates are not new territory but an extension of and embellishment of much of our past work.

In fall of 2021, we looked at SUNY's work in the microcredential space to get an understanding of guiding principles that fit design principles. These were guideposts for us as we pursued many of the principles we've talked about today but also fashioned our policies and our practices, in particular quality, in developing microcredentials for market needs, looking at how microcredentials would dovetail into our industry partnerships. We have several portable microcredentials as well as stackable microcredentials.

Our process has developed some robust microcredential policy. This is part of our shared governance process and academic policy approval process. We have set up academic affairs web pages to provide access to our institutional policies, as well as a faculty toolkit (https://uwm.edu/academicaffairs/current_projects/microcredentials/). The faculty toolkit does not focus as much on what Graham mentioned about the University of Buffalo's assessment toolkit, but it provides a toolkit for faculty thinking about and developing microcredentials within their academic programs.

A lot of our policy is focused on the short form, 6-12 credits. We have both graduate and undergraduate; have certain limits on transferability that are a result of the nature of our microcredentials and institutional policy; try to reduce the

administrative burden of microcredentials; and focus on competencies. We want to make sure that when we think about these microcredentials, they have Career Ready competencies built into them, and they are understood and quite explicit. These are all part of the process.

As we were building this policy, we worked through the shared governance process, getting a lot of buy in. We also developed as Graham mentioned, a badging platform building off of the Canvas Learning Management System. Using Canvas badges, individual students who complete their microcredential can apply to receive a badge. Digitally embedded into that badge is information about the competencies of the microcredential, the program it was in, etc.

Generating buy-in for this process in a shared governance environment, the question becomes, is anybody going to be interested? One way to sell this is to ask students if they're interested in microcredentials, and how likely they are to participate in them, take them, or pursue them. Many of our graduate students thought they would be 'moderately' or 'extremely likely' to take a microcredential; and many thought they would find these microcredentials very beneficial. When asked whether they thought future undergraduate or graduate students would find these appealing, a lot of them said they thought the microcredentials would be very appealing.

At least internally, our sense is students want to see these opportunities—they want to pursue them. So we're building those out as we go.

What do we have on the drawing board? As I said, we just started this process in the fall of 2021, the policy was approved a little less than a year ago, in spring of 2023. Right now in the pipeline, we have about 24 microcredentials going through the academic shared governance process. Some of these microcredentials are community focused—anti-racist education, DEI education, peace education. Some are more business focused or can apply to the business community. Then some are much more specific to particular industries, such as healthcare and social work education. About 40% of the those in the pipeline now are specifically for graduate programs. We expect another dozen or so in the next year that will be implemented for fall of 2025.

Also on the drawing board is the Career Pathways Initiative at Milwaukee. This is an effort to take what we know about students' interests in short-form learning and their desires and abilities to blend both formal and informal learning. We're looking at our partnerships and what industry partners in our community are expecting from us. And we're thinking about how education, and learning in general, is changing throughout the individual learner's career trajectory. Our Career Pathways Initiative focuses on three areas.

The School of Continuing Education through noncredit microcredentials has multiple strategic partnerships already in place. This short-form learning of microcredentials is of great interest to our industry partners, as well as other higher education partners. The microcredentials are a fundamental piece of that. I'll highlight one of our industry partnerships and microcredentials.

In the Career Pathways Initiative, we have an organization that was stood up several years ago called HERA (Higher Education Regional Alliance). This is a collaboration of 17 southeastern Wisconsin public and private two- and four-year colleges and universities, also including a network of community and economic development partners. HERA's main goals are to get students to complete college and get academic credentials, innovations and curriculum, as well as expanding the connection to talent bridges with employers. HERA works with all 17 institutions and has developed a website (https://herawisconsin.org/microcredentials/) which includes their microcredentialing catalog. The IHE are able to load up their microcredentials and provide information about those microcredentials. Milwaukee has populated this website with many of its noncredit microcredentials, and plans are to populate it with credit-bearing microcredentials as those are developed. Many of the microcredentials are looking at skill sets, knowledge acquisition, and high demand employee employer areas.

HERA also has a collaborative between UW Milwaukee, the Northwestern Mutual Data Science Institute, Milwaukee School of Engineering, and Waukesha County Technical College. They are developing a collaborative AI module that will be a microcredential available through this website, as well as through these accredited institutions. Milwaukee does plan on providing credit as prior learning credit for many of these noncredit microcredentials as they grow and develop.

The Wisconsin System is looking at microcredentials to pursue as an initiative. We develop an online growth strategic plan as a systemwide initiative last year and this is slowly being implemented this year. Microcredentialing is seen as an opportunity

for UW institutions to connect with employers throughout the state. Several different initiatives are ongoing in this area. We have an individual who is working with workforce relations/workforce partners to develop a needs assessment to determine what kind of microcredentials and certificates are of greatest need to them, as well as collaborating on some grants where we're building out certificates and credentials for workforce development.

Many of the challenges and needs that we've been seeing are in the Chat, and Graham mentioned as well. One from a system perspective is that we have microcredential-like certificates. Right now we have more than 850 certificates throughout the 13 universities of the UW system. It's hard to understand or hard to know where all these certificates land. Are they all fundamentally connected into a degree program, and you have to be enrolled in that program? Are they ones that you must be enrolled in some degree program at a UW institution in order to take the certificate? We hope to market these certificates and ultimately microcredentials online. So, one of our challenges is simply to understand and to have the data for all these different certificates and how they're being used throughout the UW system.

One of the opportunities we see is that once we have this understanding, we'll be able to serve our workforce needs much better throughout the state, and generate employer awareness about what types of microcredentials and certificates that are available. I should mention that right now, UW Milwaukee is the only UW institution that has shared governance academic policies in place for microcredentials. We expect that will change in the next semester or two as more institutions build out their microcredential offerings.

The last challenge I will mention are the many questions from our campuses about microcredentials and the viability on return on investment.

Holly
Thanks so much, Stephen. Kristen, let's turn to your university now.

Kristen Vanselow
Hello, from sunny southwest Florida. I have the pleasure of overseeing our microcredentials and digital badges at our university. For context, FGCU is part of the State University System of Florida, governed by the Board of Governors of Florida, and we are 26 years new. So, while we are extremely proud of our innovation, we have been very surprised by some of the traditions that we have held close and dear to us as a newer institution. We have just over 16,000 students enrolled in our institution this academic year with 64 undergraduate programs, 26 master's programs, and seven doctoral programs.

We really dove deep into this work beginning in 2019, with our first microcredentials offered in 2020. The first and most important thing we did was define microcredentials for FGCU as the mastery of specific competencies and skills. They are defined alongside employers and community partners. And the digital badges are the emblem of that credential that can be shared broadly and widely once earned by a learner.

We use the Canvas Learning Management System and Canvas credentials to administer our digital badges. That metadata is critical and part of our conversations across higher education when it comes to looking at student's learning records as well. It gives a more transparent view of competencies, skills, and activities that the students mastered in order to earn this credential.

We term our model, "the power of And." Our message to students is: "Explore The Power of "AND" with FGCU Digital Badges and microcredential programs. You have the opportunity to gain marketable skills, bridge knowledge gaps, and increase your career readiness in response to ever-changing workforce needs."

The power of microcredentials exist outside of our curriculum, whether they're designed for graduate students versus members of the community or undergraduate students.

An example is an industry-specific version of a microcredential where we really engage with employers in the region to determine what are the competencies and skills needed, that are aligned with areas of curricular expertise at FGCU. When someone from the community enrolls, whether degree seeking or for something in a broader scale, they'll enroll at FGCU to complete a course or series of courses. Once they meet a qualifier that's defined and decided between our faculty along with employer partners, then students have the opportunity at the graduate level to go on for the microcredential curriculum and to earn a digital badge. So they first completed a course which maintains academic integrity and is something that is assessed by our faculty. Then we bring the employers and our partners into the process. So microcredential content is created hand in

hand with our community or industry partner. In this example, we're talking about Instructional Technology. Our employer partners are the school superintendents and their staff at the five regional school districts in our area. What will occur is that the student will be given the opportunity to really apply if the skills and the competencies they learned through our curriculum, and create an assessment or project or presentation that we then engage the employers in assessing alongside our faculty. What has been extremely successful for each of our credentials in the microcredential world is that our employers are so involved with us that they have always guaranteed an interview or a promotional opportunity to the students who go through these programs.

A second example is also in the field of education, where we offer a noncredit microcredential through our continuing education lens. We are offering postbaccalaureate level curriculum for an endorsement that is required within the state of Florida for K 12 teachers. We have individuals able to enroll in a noncredit course at FGCU. That allows us to shift the cost that would be passed along to the user in order to earn their professional development certificate. But if they meet that credential very much the same way in the credit-based curricula model, we allow them the opportunity to also earn a digital badge where they've actually applied what they've learned. And they've done that in a real-world environment within the school district.

We have also looked at how we could connect with a series of courses in Nursing and Nurse Education. We have combined three graduate level courses that are offered as part of a certificate and ultimately a degree in Nurse Educator, and MSN program at our institution. Upon completion of the three courses, the essentials of a Nurse Educator badge is something our students are eligible to earn. That allows them to immediately serve as a clinical coordinator or adjunct faculty member or take on other roles of importance to both the health system and the institution.

Another example is how this can stack into a degree at FGCU. When the Nurse Educator microcredential (3 courses) are completed by our students, they're eligible for a post-baccalaureate certificate, that then stack into the 38-credit hour content associated with our MSN and Nurse Educator program. This is stackability from a microcredential, as Nan and others have spoken about—the microcredential into the certificate into the MS degree program.

A last example is from our School of Entrepreneurship. We offer an entrepreneurial mindset digital badge. But we also have 12 credits in a post-baccalaureate certificate program, that should a student want to continue on for the MS degree, those all will stack with them towards that next credential.

We are specifically and intentionally aligning the noncredit content we're offering at the post-baccalaureate level to our curriculum so that we have that opportunity to use credit for prior learning. Should students want to stack later from a noncredit into a credit-bearing credential at our institution, we have that pathway. And it's clearly defined from day one for our learners in the community.

Here are links to policy we've developed at the institution, for both credit for prior learning and micro-credentials and digital badges, as well as our website.

Holly
Thank you so much, Kristen. I'm really pleased to introduce Julie Masterson from Missouri State University, to respond to some of what she heard and share developments at her campus.

Julie Masterson
MSU has been offering graduate certificates since 2000. That's 24 years if you want to do the quick math, and we have close to 200 certificates on our books.

Many of the issues that were brought up today, as illustrated by Suzanne, Matt, Holly, Nan and everyone on this panel makes it clear that microcredentials have so much potential at our institutions. Faculty are still at various points in their perspectives on microcredentials, yet they are the driving forces as the CGW survey informs us.

The comments and examples from Graham, Stephen and Kristen give me hope. There are tremendous benefits to microcredentials. They can be nimble and sensitive mechanisms to respond to emerging workforce demands.

My institution sounds a lot like what Kristin was talking about. Our state needed additional teachers who were experts in teaching math. We happen to have a Graduate Certificate - Elementary Specialist in Mathematics, so individuals could slip

right into that and we had tremendous participation in that program. At the same time, our state also needed teachers with advanced literacy training. We did not have a graduate certificate in that, but fortunately, we did have an Individualized Graduate Certificate. So if you remember nothing else that I say, please remember this,: if you have a mechanism in place to "individualized something" that's generic, as these emerging needs and opportunities arise, you can use that mechanism to meet them. To make this work, you need something like an individualized certificate, then you need a director of that individualized certificate who's willing to experiment and is able to go very quickly into an opportunity. It's a low-risk strategy.

I can't remember who said this—but certificates also can be a great way to test proof of concept for new academic programs, some sort of individualized structure allows you to test the idea, then when you submit the program for approval at your university level, state etc., you have data that show sufficient student interest and even outcomes of students who have gone through that particular curriculum. Certificates also offer a way to ensure that there are cheerleader advocates for components of interdisciplinary degrees. Matt referred to this as pathway signaling or interdisciplinarity—interdisciplinarity sounds great. But when you just cluster courses together, without a faculty advocate or an advisor in those areas, for the students, sometimes that student can get lost and not get the direction she needs.

Suzanne mentioned something incredibly important to me, the provision of access to graduate education. Provisions to graduate education have been really useful and crucial at MSU. We have used microcredentialing for students who may not have the necessary graduate or undergraduate GPA to start their next degree. But maybe that was 20 years ago when they were in school—they're a different person now. Maybe they didn't even know that that undergraduate degree GPA would make a difference later, they got what they needed to get to graduate, play sports, whatever. But now the bar is higher, and they really have the potential to do the graduate work — they just need to prove it. They may like being in a graduate certificate much more than wandering around as some sort of post baccalaureate or nondegree -seeking student.

I've highlighted the many positive aspects about microcredentials. However, the important question that Suzanne raised about quality is the piece we really need to address. Matt mentioned that NACE 2023 data indicate that microcredentials offered by higher education are viewed as having the highest quality. We want to make sure that what we're offering maintains the standards that are associated with our higher education institutions.

Typical assessment measures, such as enrollment and completion, are not going to be what we use to determine quality for microcredentials. What I think we heard from our panelists today indicates that folks are taking this seriously and already building new approaches so that's good news. Employer satisfaction and student career outcomes may mean success in pursuing further graduate study. As we've talked about earlier, maybe just getting into a PhD. Program, whatever those outcomes are, we need mechanisms to be able to track that.

Finally, I will speak about the gainful employment requirements. This will be a burden and tremendous responsibility on us. As we go forward offering these microcredentials, I would encourage you to work very closely with your legal counsel office at your university, because those are the folks who are going to be telling you how not only graduate deans, but other offices will need to comply with this new or this resurrected regulation.

Apologies this has been so quick—we all tried to cover a lot of ground in a short period of time.

Matt
Thank you Julie and thank you to all on today's program! Our next steps will be to add the recording for today's session at the CGS and Credential As You Go websites and YouTube channels and to make an edited transcript available.

Be looking for the CGS research report coming out soon.

Our two co-sponsoring organizations will be pulling together a report on major issues raised today and sharing that with the field widely as well.

Thank you again for attending today.