Transcript: "AI in U.S. Higher Education: Transforming Student Success and Campus Operations

Jahan Culbreath:

Hello everyone and welcome. Thank you for joining us today. I'm Jahan Culbreath, Director of Federal Relations at the Council for Higher Education Accreditation. On behalf of CHEA, I'd like to welcome you to today's webinar, "AI in US Higher Education, Transforming Student Success and Campus Operations." While some of you may have participated in previous AI-related sessions hosted by CHEA, today's webinar builds on that foundation. We're taking a closer look at how AI is actively being used to support student success and transform institutional operations. Moving from high-level conversations to practical insight to help us guide this discussion, we're bringing in voices who work intersections of education, technology, and assessment. I'm especially pleased to introduce someone who brings both expertise and longstanding commitment to this space. Dr. Amy Daikins. Dr. Daikins is CEO of Weave and the host of "Accreditation Conversations" podcast that she also is a longtime AWS customer and a thought leader in accreditation and assessment. Amy will be introducing our guest today, Mary Strain. So now over to you, Amy.

Amy Dykens:

Thank you so much. Johan. Mary, as you know, and the AWS team are amazing. They have been spending the last year consulting with Weave on our AI strategy, and I have been incredibly impressed with the knowledge that she and her team are able to bring to Weave because she has the opportunity to speak with folks, educators, technology experts, and innovators from institutions and software companies all over the nation. So I know that all of you today will have the opportunity to listen and learn from all of those contributors to this conversation through Mary. And I cannot thank her enough for taking the time to share with CHEA, CHEA's members, as well as the other guests who might be on the call today. I know you'll learn as much from her as you can, and I hope that you take this opportunity to really take back this information to your own organizations and spark conversations about the exciting things and new technologies that are shaping our world. Over to you, Mary.

Mary Strain:

Thank you very much for having me today. I appreciate everyone support and the support of CHEA and Amy and the folks at Weave for inviting me today to talk to this group about what I'm seeing in the market around higher education and artificial intelligence, primarily focused on generative AI. So I'm going to share my screen and bring up a little deck to help guide the conversation. And if someone could let me know if, oops, that is happening. Terrific. Oops. So my name is Mary Strain. I'm the artificial intelligence and machine-learning specialist associated focused on higher education in the US for AWS. I have the opportunity to meet with your peers and colleagues all over the country and spend time with them talking about how they're thinking about generative AI on campuses and focus on operations and teaching and learning, and sort of think about strategy and what they should and shouldn't do.

And I do want to sort of highlight just to level set for the group here. When we talk about generative AI, we are talking about capabilities like many of you're aware of Chat GPT. This is a technology that's been around for a while, but really came into the market about two and a half years ago with the advent of Chat GPT. And what generative AI is, is taking vast quantities of data typically gleaned from the internet. And that data is connected through using deep learning and neural networks to be able to show context and to be able to allow individuals to have natural language conversations with huge amounts of data that again, typically gleaned from the internet. But I like to highlight when we think about generative AI,

what could possibly go wrong with a technology that's typically gleaned from the internet? So when we think about the kind of big issues that still face the use of generative AI everywhere, but particularly with higher education, we have to pay attention to things like inaccuracy.

So generative AI is extremely performant, but it can be wrong and it can be convincingly wrong. Generative AI reflects the bias of the training data that was exposed to that was created by us. So I like to think of it as reflecting the bias of our own thinking and learning over time. So we need to think about how we're going to mitigate for algorithmic bias in terms of how students, faculty members, and community members are consuming generative AI. Obviously, generative AI uses copyrighted material and individual proprietary material often to create all of this data and information that it's sharing. So how do we protect copyrighted information in IP at our institutions and our scholarship? And then certainly in the same way that generative AI is becoming incredibly performant, very, very good, it's because we often give it information. So how do we protect the security and privacy of that data, particularly around student data, faculty information, proprietary information, and ensure a proper attestation for any data that's used?

And the reason I call out these big challenges is that I think there's a two-pronged approach necessary to address them. One is a governance pattern that the universities will employ in terms of policy and governance of generative AI. And the other is a technical infrastructure. So having a technical infrastructure that helps you to reduce inaccuracies, to mitigate for algorithmic bias, to ensure proper attestation and to secure the security and privacy of your data. And I see these again as an existential potential threat to higher education because individuals come to universities for premium scholarship, for equitable access and for security. And so we really have to pay attention to all of these components when we're thinking about using generative AI on campuses. I want to highlight there was a trend about two years ago whether or not folks were ever going to use generative AI on campuses.

And there's still a healthy debate about its impact on scholarship and teaching and learning, but I'm seeing some new trends emerge. One where AI is becoming institutionalized, so it's moving away from pockets of use cases or preventing the use of AI to institutionalization of AI across organizations. So when we think about higher education organizations, we need to be thinking about what is the infrastructure necessary both from a governance but also from a technical standpoint to support what's next. It's a fast, fast moving ecosystem, and the ability for institutions to be able to pivot and take advantage of new technologies as they become available is critical for both thoughtful investment and also the ability to serve students and your mission better over time as the capabilities become available. There's also an increasing demand for measurable ROI and business value. I can share that less than 30% of all AI POCs actually go into production or launch across the globe.

That includes commercial as well as education and public sector agencies. And that's a problem because we spent a lot of time and money not realizing real value from these projects. We experimented, we didn't have appropriate data, they weren't aligned to institutional mission and values. So there's an importance of having a very disciplined approach to use cases to ensure that there's a greater time to value, that we understand what the success metrics of any use case for artificial intelligence is on campus, and that we've defined that ahead of time to ensure that our investments have the intended consequences, both in terms of return on investment, but also the value we're trying to bring to the

institution and how we meet our mission. We hear a lot about 2025 being the age of agents. Agents are generative AI capabilities that allow you to have tasks executed on your behalf.

You might hear a lot and sort of on the commercial side of agents booking trips to Europe, finding flights, booking hotels, sending it all back to you, so you don't have to do any of that. Where we see some of this in higher education is around registration. So students providing information about their course schedule, their personal schedules, their majors, and then having the agents go out and execute registration on their behalf. We can see agents extracting information from multiple data silos to be able to answer things like emails to admissions offices or to create accreditation documents, which I know is what this group is very focused on. And then what we've really seen is that AI has exposed the need for appropriate data that a lot of data in higher education sits in data silos, it sits on file shares and Google drives all over the institution.

And that bringing that data together is where we're going to start to drive real value with artificial intelligence because artificial intelligence is able to look at massive quantities of data by bringing that data together, preparing it effectively, and have it available to artificial intelligence. It's important that we do that so that the upstream artificial intelligence applications are actually accurate, but also have a more holistic understanding of entities on campus like students or institutions, departments and programs, and provide that more holistic view. So modernizing your data foundation is really job zero when coming to becoming an AI-ready institution. So we talked a little bit about the role of governance and policy, and I want to share what I thought was an interesting framework, but this is actually from a Finnish institution and really just helping you think a little bit about the role and responsibilities of the campus in terms of managing and governing artificial intelligence.

At the top layer we talk about what is legal, what is hard law? What are the stakeholder pressures that you're facing, whether it's from your Board or from your community or from your students. And then looking at how we're managing things on the organizational layer. What is the strategic alignment for use cases and investments that people are making in artificial intelligence and how do we align that to our values? And then at the bottom layer is really more of a governance pattern around the data and how the applications are built and maintained. That includes ensure that they have transparency around system and designs appropriate data use, and so that you're only giving permission to access data to people who have the ability to look at that data, having accountability and compliance. And this is also underscored by AWS's own pillars of responsible AI. And so this is the way my colleagues and myself work with our customers, both in building technology but also in thinking about use cases.

And so thinking about how the potential use cases align with your values, ensuring privacy and security, ensuring fairness. And so that is an understanding of maybe having all students have access to the same capabilities, but also what is the potential downstream impact of artificial intelligence capabilities that get deployed? How is it impacting certain pockets of students and ensuring that it is fair, equitable, and advancing your mission, ensuring transparency and explainability so that individuals know when they're interacting with artificial intelligence accountability, which is ensuring that there's always a human in the loop, ensuring that processes and procedures are equitably and thoughtfully executed.

So what does it really mean at this point to think about the foundations of an AI-ready organization? We've often talked about use cases here and there and wanting to use AI, but as we enter into an era, we know AI is becoming institutionalized and it will really transform higher education. We need to think

about how we set up our organization to be able to adapt and to thoughtfully execute. The bottom layer here is around accessible and holistic data, AI governance and storage. We're talking about what tools that you put in place to build capabilities or what you will consume from your educational technology partners like Weave and others. And then how are you going to select the use cases that matter most and make the most sense, have the most impact in helping to meet your mission? So I want to talk about data a little bit.

When we think about foundation models like ChatGPT or Bedrock capabilities, Anthropic Claude or Stable Diffusion, there's hundreds and hundreds and hundreds of foundation models that are trained on this massive quantity of data. But how do we help that data, those foundation models to be more accurate so that they reflect your institution? If we want to build a chatbot on your institutional data-- institution and say, how do I apply to this institution? We don't want information about how to apply the University of Barcelona. So what we can do is add your data to the process to enhance the accuracy, to improve the voice, to improve the brand identity, and to improve the user experience by adding data to the process associated with using foundation models to have natural language conversations. And we can do that by simply uploading a corpus of information, whether it's course content or it's accreditation documents or it's CVs from faculty, and use that as the primary source in inquiry with generative AI.

And that data then is primary and the generative AI adds background knowledge to be able to have a natural language conversation. What I should mention is at least with Amazon Bedrock, all of that data is totally secure, stays in your virtual private environment, and none of it ever leaves to train foundation models. But what's really interesting to me, and we think about foundation models is the ability to look at just huge, huge quantities of data. So this is typically how we might see data. We might have dashboards on campus or we would get data about financial information or student progress testing reports. And so this is how we're consuming it and sort of a static view. But underneath all of this is typically static tables and rows of information in a database. But what I find really exciting is this is how artificial intelligence can see data.

And so this is a knowledge graph that was created by the University of Delaware, and what it does is allow the artificial intelligence to create relationship across huge amounts of data. So in this case, it's 10 years of recorded lecture content of Psychology 100, but we could think about this across the institution as faculty member CVs or looking at course content or looking at an LMS platform, student information system looking at security incidences on campus or the pathway for an individual student across your campus. So again, we're looking at data in ways that shows relationship. And then on top of this, we could ask natural language questions of this very complex and intricate relationship database that gives us new insights because we're looking more holistically at larger quantities of data that individuals could never comprehend. When we think about the models and tools associated with an AI-ready organization, I did want to just highlight Amazon Bedrock's approach to generative AI. Amazon came to market with Bedrock about two years ago really with the goal of addressing some of the biggest challenges associated with artificial intelligence. And I just want to highlight this not just to promote Amazon, but to talk about the market for foundation models. These huge foundation models like ChatGPT, or Anthropic others, there are about 131 models coming to market every single month. And so AWS came to market with this idea that we wanted to provide you options and choices to select those foundation models so that you're able to select models that meet your needs and that are fit for purpose. So we're seeing foundation models that are domain specific. We're seeing foundation models

that are of varying size, varying sort of specialty, whether it's video or it's bioinformatics or American history.

We're also seeing foundation models that are much, much smaller. And that's important because when we think about all of the exciting use cases, we have to consider cost. So using very large foundation models is very performant, but the cost is huge. And over time we think about equitable access to these capabilities. It's simply not sustainable. So the ability to select a smaller foundation model to meet those needs is critically important. Also, the model customization using your data retrieval augmented generation, which is the process I described where we primary your first party content and use foundation models to bring in natural language conversation using agents. And then of course our default security posture that no data ever leaves your virtual private environment and is never ever used to train foundation models regardless. And now I think what I'm going to talk about, what's probably the most exciting part of this is your applications and enterprise use cases that I'm seeing across the country that really are showing huge impact across institutions.

I see these use cases falling into three buckets focused on teaching and learning what my favorite portion, which is administration and operations. So focusing on ways to support operations across campuses as well as libraries and research. And the middle area, I like to sometimes call boring AI, but it's where we're seeing some of the biggest impact. I like to think about artificial intelligences doing things that you don't want to do anymore. It's not for higher level, high-level student engagement, interpersonal conversation, but it is great for data entry and assessment and summarization capabilities or executing tasks on your behalf that are far less important to your role at the institution. A couple of great use cases is from the University of Delaware. I showed you the knowledge graph that they built to create this virtual tutor. They use these 300,000 recorded lecture content to have students create their own learning objects, but also to have faculty use those knowledge graphs and create curated sort of a walled garden of their own scholarship and have a lot more ownership and response and capability around curating the course content and their own scholarship.

We have a student advising assistant at the University of British Columbia where a student comes in and an advisor will get a one-page summary of exactly where that student is and in their journey across multiple data sources so that the conversation they have with them can be very deep and thoughtful rather than looking information up. We have a great financial aid project at Highline Colleges, which is a community colleges system in the northwest where we allow students to more quickly update documents associated with their financial aid packages. It drastically reduced the manual burden on the financial aid staff. They're not having to look at every single document. We use artificial intelligence to check for document validity. And then we created a package-tracking system like an Amazon package

So they had a sense of agency over what is typically a very opaque and complex process, and it reduced number of calls to the office by 75%. We worked with our Cloud innovation center at Arizona State University in partnership with Ohio State to create a PDF accessibility tool. This is an open source capability available right now that uses artificial intelligence to translate PDF documents so that they are compliant with new WCAG standards, which all institutions need to be compliant with by April of 2026. And it reduced the cost from over $4 per page to less than 10 cents a page. And so that's a really great solution that's available right now, transcript processing. So Illinois Tech uses artificial intelligence to ingest 60,000 international academic transcripts, normalize them to Illinois Institute of Technologies template, and then to start the assessment of articulation for that process. And we heard from their CIO

last week at one of our events that they actually reduced the process from several weeks to less than a day to letting these international students know what course equivalents that they were able to offer.

Again, enhancing their enrollment, speeding up the process. We're doing fundraising with the UCLA School of Management where we send personalized outreach to alumni that had great impact on the amount of money that was raised simply by having hyper-personalized AI-generated outreach. This is a simple process that we built out allowing, creating scope of work based on current documents available. So accelerating the purchasing timeline. Again, this is an open source availability that you can pick up right now. I did want to talk a little bit about the data preparation piece of this, which is often a blocker, but we're doing a lot of work with generative AI to help prepare data. So in using generative AI to have natural language conversations with databases like SQL, using generative AI to generate data analytics using generative AI to do data mapping. So if you have some data on premise and you want to move it into the Cloud, we can send an agent in extract the data model and help to map that data much more quickly to a Cloud or from database to database.

Really important for generative AI applications. We had an institution that built a chatbot that had a couple of campuses, a few campuses called a semester a semester, a couple other campuses called a semester a term, and then the chat bot failed because the data hadn't been mapped appropriately. Generative AI for relationship discovery, which is that knowledge graph that I shared, showing insights and relationships and connections across data that we're simply not able to see as human beings, and also generative AI to help extract data from metadata, from documents, videos, whatever you have lying around your institution that you can extract the metadata from and use it to create new content. We have one institution that's using old video data to help create mini courses, so they're not generating those from scratch. They're using a lot of the existing course content. Certainly we have educational technology partners like Weave that have simplified and supercharged your accreditation process by providing an opportunity to upload documents and have it write the accreditation papers for you for your review.

So I just want to sort of end here by saying often we think of artificial intelligence as a robot overlord, but we're not seeing that. I'm really seeing use cases that support student engagement or faculty engagement and opaque and arcane processes across campus, access to information in ways that students are typically able to consume it in real time with tutor bots and not having to go to office hours or wait until the bursar office is open to ask questions. Lots of personalization around learning styles around interest opportunities, cultural context, course pathway, recommendations that really personalize the experience for students. And then of course agency where students seeing students have, because they have access to the information, because they have control and visibility into these processes, that there's a sense of agency over how they can be more successful at these institutions. So I'm going to stop sharing, and I think we're going to have a minute for some time for questions and answers, and I thank you for your time.

Jahan Culbreath:

Yeah, Mary, thank you. We want to open it up right now for q and a. So please put your questions in there and Mary's going to start answering your questions as they come in. One question that we do have, Mary, is "How can an institution create a particular model to assist them in the sense of how does one get started?" How did Dell State get started in creating that database forum?

Mary Strain:

Yeah, I think part of it, I did read the q and a, I can't speak any faster, I can't speak slower. I'm from Philadelphia. For me, I get nervous, so I apologize, but I think a lot of institutions start saying, how can I use AI? And that's the wrong question. The question is, what are you trying to achieve as an organization? Do you want to X factor your research? Do we have to do an accreditation process at our engineering school? How do we improve enrollment? So you start from those problems and work backwards saying, okay, what are the processes? What are we trying to do already? And where are we encountering blockers in achieving those mission goals? And when you identify those blockers, invariably there's an opportunity to start thinking about can AI help here? So I think about in the process of financial aid, one institution we're working with has a Title IV, you know, you have to pay back your student loans if you drop out of school. It's an entirely manual process. Not only is it cumbersome and can be done by AI in terms of just the calculations and the rules and regulations associated with it, we can create an interface that allows students to ask the question, "How much will I owe if I drop out?" before having to have that more difficult conversation with a professor or university administrator. So putting that power and that information back in the hands of students is really powerful. And I know you and I talked about my favorite use case, which I forgot to put in the deck, which is at the University of Pittsburgh. So even something like athletics. And so the University of Pittsburgh needed some quarterbacks, and so that was their problem. And so they were going to go to the transfer portal.

We worked with them, and typically the athletic director said, there's tens of thousands of students in the transfer portal. We can't look at them all. So we would look at a few institutions that are a lot like Pitt, and we would focus on those students. But using generative AI, they created a rubric that was, these are the athletic capabilities we're looking for, and these are the academic capabilities that we're looking for. And they ran that against the portal and came back with 101 page summaries of athletes that they could actually look at and consume that were already aligned to these rubrics. But the most important thing for me was they were looking at students from junior colleges and students from institutions was simply not on their radar. So for me, it just was a massive equity issue to be able to offer that capability and to use the data and the capabilities of generative AI to be able to provide a much more expansive understanding of what would be a good candidate at that school. And we could think about that for scholarships, for admission in any kind of assessment.

Jahan Culbreath:

Did, and I'll stick with the University of Pittsburgh, did the University of Pittsburgh, they start thinking about what can we do? How can AI help? Did they reach out to you guys to say, "Hey, this is what we're trying to do. Can you help us?"

Mary Strain:

Yeah, they actually did. So we have an existing relationship and said, "Hey." And I think that's another great point is if there's something you're trying to do, likely there's a technology solution to help approach it. And then we work with you to ensure that it meets your governance patterns, your mission, your goal, and to think through what the potential impact would be. So certainly reach out, ask your partners, your educational technology partners as well as your Cloud partners, certainly hopefully AWS, and we would be happy to come and just talk to you about what are you trying to achieve and how do we work backwards to find the use cases that make the most sense. Often I think people start with a use

case, like a student chat bot or a front-facing capability when in fact it's the internal process improvements around finance, admissions, procurement, where we can see huge, huge gains. And those individuals are not underworked in any institution. So it's an opportunity to really help them focus on the problems and challenges that need their high- level attention.

Jahan Culbreath:

Great. Great. We've got some questions rolling in now, so I'm just going to go over to that. So what are affective filters?

Mary Strain:

Affective filters are typically what sort of a perception that an individual doesn't understand you and they prevent or not would not any kind of a sense that I, I'm sorry, this is not helpful. My example is I never went to the bursar in college. I always owed them money and I was afraid to go in there. I didn't want to have that conversation. Or your professor doesn't, you don't speak English as a first language. You're a professor. You're afraid to talk to them. You are the first generation going to college at an institution where you feel unwelcome or you might not have a sense of security and reaching out for help and assistance. So those affective filters are the perception of distance between an individual and a learner. It's also the number one predictor of academic challenges for students is simply the inability or to ask questions and reach out because of those perceived qualities of the individual you need to talk to.

Jahan Culbreath:

Okay. And this person is asking, how can we try one project that could have the greatest impact with the least amount of data security risk? And then they go on to say, this is the main blocker for us.

Mary Strain:

Sure. Well, number one, that's where I think there's a combination of technology and input from the institution. When we think about the data, again, at least with AWS, no data leaves your environment. AWS doesn't have access to it. These foundations models don't have access to it. You manage and maintain it. So that is that default posture. And I think it's just important to let people know that if you are working on an enterprise level with organizations like AWS, that you have that security. Commercial applications that people have on their phone, especially if they're free, that is not the case. So we do not want institutions thinking about building an enterprise application on something on your phone that would be using that data. So that's first.

But I also think it is about taking a look at the business processes that exist right now. And I do this all the time. I did it earlier this week. What is it you want to stop doing to ask your admissions office? Ask your registrar's office, ask the transcript office, ask the financial aid office, what is it you need that you want to stop doing? And that's typically a really great place for artificial intelligence. It's typically around paperwork. It's things that are not just challenging and difficult for staff, but they prevent students from having great access and prevent that speed of process. So I think about the transcript processing. I think about financial aid, I think about registration. I think about housing, I think about investigations for security on campuses. So it's not always in the teaching and learning space. The highest, fastest return on investment is in those spaces and operations that can have the greatest impact. And because they're not student facing often you can test it out and see how it goes, but those are places I would look.

Jahan Culbreath:

Yeah, that's interesting. I've had conversations with folks on campus and a registrar once said to me, how can I find a faster and effective and efficient operation in evaluating transcripts? Because in a small institution and they're doing everything by hand.

Mary Strain:

And you know what I found at a bigger institution where we're working on the same thing, when we started to look at the data, it was really inconsistent because one day that decision was made by one person and the next day it's made by another. And so there really wasn't a lot of consistency around what course equivalents were. And so using artificial intelligence can provide not the answer. I'm not suggesting it makes the decision, but it can say, "Hey, in this example, we can give a confidence score. 85% of the time we've said yes, or 99% of the time we've said yes or 10% of the time." So that gives faculty and administrators an opportunity to use that as a second set of eyes.

Jahan Culbreath:

Right, of course, in an assessment, how can campuses streamline things, make it more effective and efficient for them too?

Mary Strain:

Yeah, for sure.

Jahan Culbreath:

So some other questions. Can you share any details regarding the cost of Amazon Bedrock products or similar custom models?

Mary Strain:

So all of that is available actually transparently on our website. And the way we think about costing out generative AI capabilities is about data into the foundation model, of course, in your environment and out. So that's called a token, and a token is equivalent to a word or a phrase. And so it really is a utility-based pricing model with Amazon. So the larger the quantities of data, the more frequently the questions are asked, the cost goes up. But at this point, if you look on the website we're talking about, I think it's .004 dollars per token. So chatbots and things like that are sometimes a little more expensive to set up because people have to worry about getting the data organized and there's people investment, but the running of them tends to be relatively inexpensive.

Jahan Culbreath:

And then people can build their own? Build to kind of suit a little bit on that?

Mary Strain:

Yeah, and I think that's another question. And we think about Weave and others that are on the call, institutions can build their own capabilities. I think increasingly the utility of artificial intelligence will replace a lot of SaaS applications. But a lot of your educational technology partners, your LMS partners, your SIS partners, folks like Weave are bringing to market really incredible capabilities. So you really want to talk to your technology providers to see A: What are they doing? What is your roadmap? What should you invest in? What do you want to purchase? What are you capable of building? What aren't

you capable of building? And so I think having a conversation with your EdTech partners is critical at this juncture, and I would impress upon everyone to please ask them for their roadmaps, ask them what they intend to build and do, and most importantly, ask them to be transparent about the foundation models and the security architecture underneath the capabilities they're bringing to market.

Jahan Culbreath:

Okay. Next question is with the overwhelming amount of tools on the market, once you figure your goal out, of course, do you have any advice on how focus on appropriate tools to find that best fit?

Mary Strain:

Yeah, I mean, I think you want to work with people that you have. I also think that there's a component of this where you have to work with your data. So you want to be thinking about who holds your data, who has access to that data, and those tend to be the partners where you're going to find the best fit because you're not moving data from one SaaS application to another, or you're not moving data outside of your own environment at all. So who has the data that you want to work with and what are they doing already with capabilities? I would avoid point solutions necessarily for coming very small things that people might buy because interesting or their personal capabilities. The market is moving so very fast that you wouldn't want to be locked into having technical debt associated with artificial intelligence that's going to be lacked. We saw yesterday huge announcements, even the foundation model world, including ChatGPT being available on AWS. So those capabilities are going to continue to evolve and iterate. So you want to have a very, very flexible infrastructure that allows you to move in and out of capabilities as fast as possible. So I think about flexibility, I think about not being locked in. I think about transparency, and then think about where your data is sitting

Jahan Culbreath:

Nice. While the lion's share of higher education is focusing on leveraging AI to improve teaching and learning and appropriately. So I'm wondering if I can clarify a bit, or if you excuse me, you can clarify a bit on one of the slides where the institution is leveraging to improve accreditation management and how are they using it in this area. But then he goes on and he says, we have created an on-demand accreditation partner to provide our accreditation staff additional support in this area. So he's curious how others might be using it.

Mary Strain:

Yeah, Weave obviously is one of the capabilities that we partner with, and they're a customer of AWS and a partner of ours. So they certainly have more insight here. But I think, again, when we talk about accreditation documents, one of the typical questions is how many of your faculty have terminal degrees? And simply, again, using generative AI and artificial intelligence to just ask that question and get the answer accurately across the data stores is the kind of thing that I think can transform that. So I just use that as an example. Use that as a way to start thinking about how we can look at programs, how we can look at departments and how we can look at institutions by just having that natural language question of the vast quantity of data. But what that also means is that your data needs to be accessible.

So if your data, you can ask that question, but it has to point to a data source that has the information. So if you have your HR system with all the faculty information separate from their CVs that tells you that they have a terminal degree separate from the course catalog content, then that's where I think we start getting into trouble and having complexity with generating the kind of accreditation information that's

necessary that requires this cross-pollination of information. So number one, get the data together in a data lake, a data warehouse, a data ocean, a pond. I'm not sure what they're calling it anymore, but bring it all together because I think that is the transformational capability of artificial intelligence. If you are able to bring that data together, make it available, you're able just to get brand new insights and much faster responses.

Jahan Culbreath:

Yeah. I know Amy's on the line. Amy, did you want to chime in a little bit on that too or...? Give her a couple seconds...

Amy Dykens:

Absolutely. Thank you very much for giving me the opportunity to speak to that. I'll start my video. Yeah, it's incredibly important that all of us are thinking about these things. And as Mary said, what I've noticed just in the year that we've been working on this is how fast things move. And being able to work with a partner like AWS who has the pulse of what's happening and what's coming, and those kinds of things has been incredibly helpful. I liked your example, Mary, though like on campus itself, things that you have available to you already, not necessarily as a part of the Weave solution, that can be helpful. Go in there and experiment. Don't be afraid of it. That's the thing I see folks be afraid of trying it out. So you have a standard that you're trying to address that you're not sure if you're ready for.

For example, I'm not prepared. I might be prepared. Who knows? What is my evidence? These are things that Weave is going to be able to assist you with, but you can already do some of these things by playing with things like don't be creating your own tables anymore. I've almost abandoned Excel entirely. So using tools, whatever your...pick your poison ChatGPT, Gemini, Claude, trying these things out and uploading information and seeing what happens with it. Just go in and engage with it is what I would say to folks who are asking, how can I use this to help? But I love the idea of somebody else saying too, that there's a lot of different flavors of these tools is what we're learning as well. So generative AI has gotten a lot of pr, but seeing things like we have transformed internally using other tools, our entire support team. So being able to utilize AI to support thousands of programs with a much smaller team, keeping them from being overwhelmed when they are simple things that AI could do or answer for somebody is incredibly powerful. So be thinking about that for your internal processes in teams as well. And so it's kind of a two-pronged approach. I hope that's helpful.

Jahan Culbreath:

Yeah, yeah. Thank you. We've got another accreditation question. So tell me more about the use of gen AI for accreditation documents. Is this in the context of collecting data from across multiple sources or writing the accreditation documents that will be submitted to agency? If the latter, how do you protect confidentiality info about the students and the university

Mary Strain:

Start. And then I'd like Amy to sort of finish that just by saying it's both, right? It is collecting the data and it's also writing the documentation, but doing so with a human in the loop, obviously to review it. So I do want to highlight that in terms of the security and safety, again, it depends on your partner with AWS. That data never leaves your environment, so no sensitive information is ever included unless you intend to include it in your documentation. So again, we have no access to that information, nor does the foundation models at all. But Amy, I'll just let you finish that.

Amy Dykens:

Yeah, well, and I think too, you're starting to think about confidentiality, privacy policies and conversations that we've had have been related to things like, this is only your information where the model can be trained in such a way that it isn't going and looking at the entire lake and pulling information about somebody else's institution into your report. It's all based on the evidence that you're uploading. So if you are uploading information that had student level data in it, probably your accreditor doesn't want you to do that anyway. So don't do it to begin with, but being able to scrub something you want to upload as evidence to begin with and say, remove that again, those are things that I've noticed that AI tools are able to assist with tremendously. Like you said, Mary, think about things that would be tedious that you don't want to do, but I mean, again, someday robots will run the world or whatever. That is not what we're all going for. We want to free humans up from doing tedious things and really focus on student success on the mission of your university. Those kind of things that are incredibly important for a human to be a part of and free up our human capacity with this augmented intelligence is how I like to think of it.

Jahan Culbreath:

So Amy, you're saying don't get caught up in the "I, Robot" movies type thing?

Mary Strain:

Yeah.

Jahan Culbreath:

Alright. We've got a bunch of more questions. I'm going to try to roll through these. Why are some educators not happy with students using AI in the classroom, but allow them to use dictionaries?

Mary Strain:

Yeah, I mean, we certainly are hearing a lot from faculty, and I think it's a really important part of the conversation and students, and I think it's an opportunity to have, again, higher order conversations in the classroom. The toothpaste is out of the tube, the students are using it. So then what does that mean for the time that we spend in the classroom? How can we advance that? I had a great faculty member at one of the California State University systems talk about how I used to have students create a product in its marketing class and create a fake product marketing plan that's done by, most of it's done by AI with students' prompts. There's still original ideas and we create marketing ideas. But now, instead of just doing that in the one semester, they do that and then they go out and speak to industry experts and pitch their ideas and get feedback and iterate.

So from his perspective, that class is far more rigorous, far more rich, far more engaging because some of the rudimentary work of just building out PowerPoints and logos and things like that is taken care of with AI. Obviously, the students still have to, even that stuff that's generated has to be fixed, adjusted, create brand associated with it. But that was a move that allowed them to do much more sophisticated work in that course. And so others have students bring in an AI-generated essay and critique it. And so there's a lot to be done, I think, in terms of helping young learners become good stewards of the technology rather than just saying, don't use it or do use it, but how do we become stewards of it as a society? I think that's critically important. And thinking about when it's appropriate, when it's not appropriate, how it should be used.

Interesting to me, I talked to a group of students at a university and they said, we don't want the university to use it at all in any creative arts. We don't want it for branding. So it just, I think we're at an inflection point, but it's going to require a shift in the pedagogy. I think people have to understand that we need to see it as an assistant to learning, certainly not the end all and be all. And I really, really don't want students thinking it's the answer because it isn't. Right? So that critical thinking and discernment is key.

Jahan Culbreath:

Yeah. There's several questions coming up that have to do with security. I know you guys chatted about it. So is your recommendation, Mary, that institutions just take a look at some of the platforms and avenues that they're using to make sure that they are secure?

Mary Strain:

Yeah, absolutely. And again, there's technical ways for your data to be entirely secured. I can speak to AWS, our default parts are there, but I would certainly make that a critical part of any procurement in lots of institutions are re-looking at contracts to ensure that there's transparency around the use of AI to ensure data protection. It should be an absolute default posture for any institution working with artificial intelligence that none of the data ever leaves, none of the data is ever used.

Jahan Culbreath:

So the thing is to just ask the question.

Mary Strain:

Yeah, engage your ed tech partners for sure.

Jahan Culbreath:

Okay. Will you be talking about solutions for AI use for student work and judging academic integrity for credited assignments? Excuse me.

Mary Strain:

Yeah, I mean, I think there's a lot of debate about that, and so I can only speak to personal experience, but to my point earlier, the artificial intelligence is not perfect. So when you start using it to assess whether or not a student used AI, it can be inaccurate and that leads to significant risks. And I think there was an example, a professor sort of dinged some students for using AI for a response to an assessment, and then they ran his dissertation through AI. And it also said it was generated by AI, but certainly hadn't been, it was much too old. So I think they, they're full of challenges there. I think the better option is to understand how it can be used for good, how students can use it as a great tutor of support, as an augmentation, as an assistant, and then make the classes more conversational, more project-based, maybe move away from being a professor to more of an assessor of learning over time in multiple modalities. And I know that's not easy for academics, but I think it's an important shift in how people are accessing information.

Jahan Culbreath:

Yeah. Okay. How should institutions think about the utilization of AI for transcript evaluation services if the institution's accreditation agency has standards related to the experience and the qualifications of transcript evaluators?

Mary Strain:

Absolutely. And so again, this is a second set of eyes. That's the way I like to think of it. This is not about using AI to make a transcript decision. The use case we described in the University of Illinois was really just about adjusting the form factor of international transcripts, translation, translating to U.S. equivalent grades, making them normalized so they could be evaluated. And we talk about evaluating for articulation. My hope is that we would be able to use the data available to make a recommendation or to show a confidence score for each articulation so that it enhances the human's ability to make that decision. As I mentioned, the wildly different decisions that we see across institutions that I've worked with on this process is really disheartening. Some students are really getting the benefit of an easier evaluator than others, and I know there are standards associated with that, but the data can give you that norming mechanism across an institution that I think could be incredibly powerful as an assistant or as a second set of eyes, not as the decision.

Jahan Culbreath:

Right, right. Okay. With so many programs becoming available monthly, is there a specific AI program that you would recommend when working with students on financial aid or advising?

Mary Strain:

Yeah, I don't really have recommendations. I know the products that we've built, and so I think it is up to the institution to do their due diligence to select appropriate partners. We have a lot of educational technology companies that are in this space. I also think that there are some component things that the institution may want to handle on their own. You have all the data about a student, maybe the student advising solution is something that you want to build because you have the capacity to build it within your institution, or you have the right partner to help you do that. And because you have all the data, and not all of your ed tech companies have all the data, and nor should they. So that might be something to think about around advising. But when it comes to things like financial aid, do you have lots of the ERP systems, et cetera, that are putting in capabilities that are really performant.

Jahan Culbreath:

Okay. Can you talk more about how professors are using AI to curate their materials and recorded lectures?

Mary Strain:

Yeah. So the University of Delaware is a great example for that. So recording the lecture content and then adding a taxonomy from your syllabus or from a set of standards or learning objectives on top of that recorded content allows you not to capture just the planned curriculum, but to capture the top curriculum, which I think is super interesting to think about the value of what happens in the classroom and the conversation that's happening. And then using something like a knowledge graph, you can help look across these topics and see where you might want to update or enhance or refine your course to meet new capabilities or reflect new scholarship. And so that's the work that's happening at the University of Delaware. What I showed you was everything. But a professor gets a much smaller version of that where they're able do more curation. And I think that's an exciting opportunity to reframe the

way professors are thinking about course content and how they're enhancing it and changing it over time and capturing all of the excellent work that they do.

Jahan Culbreath:

Yeah. We're going to take a couple more questions and then we're going to get to where people can submit some information for us. Do you work in the U.S. only or do you have international university affiliations?

Mary Strain:

We have universities all over the world. I was just speaking with our colleagues at the U.K. I'm speaking to our colleagues in Brazil tomorrow. So we have institutions all over the world that are using artificial intelligence, and some of them even more enhanced and sophisticated. We have, I forget the name of it, but one of our Brazilian institutions is doing a huge amount of work on sort of micro learning and micro course availability, tutor bots, chat bots, very exciting projects. Some work around document processing in the U.K. that I'm aware of. Certainly our Australian institutions do a lot with accreditation as well.

Jahan Culbreath:

Okay. Have you worked with any higher institutions in their student advising and planning?

Mary Strain:

Yeah, so the example from the University of British Columbia is one of the student advising projects that we've worked on. We're working with that knowledge graph. Again, looking at the student journey on campus, not just their course content, but their co-curricular activities, their internships, and adding a taxonomy of skills and competencies on that. So the students seeing the skills and competencies that they develop at their time at the institution. We're working with one other institution that's now connecting that to career data. So what could we do to show student a pathway to a particular career or what competencies might they need to develop? And one of the things I like about the career work is that when we generated these summaries and recommendations for students for careers based on where they are at the institution, it was recommending careers that the career advisors didn't know existed. Right? Because the AI just has more information. So again, is a great example of augmenting human capabilities.

Jahan Culbreath:

So last question, and there's a lot more questions, and folks, I really apologize, we're just running out of time, but from my observations so far, most institutions that have invested in AI applications are large universities with large budgets. What advice, if any, do you have for smaller institutions who are interested in leveraging AI capabilities, but see its implementation as cost prohibitive?

Mary Strain:

Yeah, and I think that if the ability to build something, open source is huge, and we have these Cloud innovation centers. Our AI Cloud innovation center is at the Arizona State University. We have an open website that has open source code for things like the PDF translation, for the scope builder, for tutor bots and chat bots. So if you have some capability within the institution, even students using that open source code, you can build out capabilities for the institution right now using that availability. So I do think that there are a lot of things that you can build and deploy on your own that are not terribly

complex, but they could be really impactful. And I wouldn't underestimate your students' ability to help you do that.