

ELIZABETH PARTOYAN: I am Elizabeth Partoyan and I am one of the—I am a representative of the Council of Chief State School Officers. I work on our Next Generation Learners Initiative there. The Council is delighted to be part of this and be a sponsor for this program so thank you for having us. I have the honor today to introduce our next guest speaker who is on the screen above me. He is not with us today in person but you will hear from him his excuse for why. We will see if it is legit or not. Dr. David Rose is here with us by video today. He was one of the cofounders of CAST, the Center for Applied Special Technology, in 1984. So he has been working on this for quite some time. CAST has been around for that time. Currently he is the chief scientist for learning and cognition at CAST. The focus of his work is on developmental neuropsychology. He is a lecturer at the Harvard Graduate School of Education among many other roles. He serves as a National Presenter and a Policy Advisor on issues related to principles of Universal Design for learning. I am going to ask his colleague, David Gordon, The Director of Communications for CAST to say a couple of words about the video and about David. So thank you very much.

DAVID GORDON: Thank you, and we are just delighted to be here and CAST is thrilled to be co-sponsor of this fantastic event today. And David's very sorry not to be here. He had some major surgery yesterday. He is doing very well but you know when they say come in on the fifteenth, sometimes you just have to say okay. He was planning to be here in person, is really sorry not to be. But we went ahead knowing that he wouldn't be here today, we went ahead and captured him on camera and so he will make a few remarks. Really David's presentation today is meant to give an overview of the Universal Design for Learning framework. He has been a principal architect of that framework. There are on the table outside a set of UDL guidelines, a one pager that you can pick up and have a look. It's pretty detailed but David refers to that in the film here.

I just wanted to say what an extraordinary event this is, too, and point out by way of introduction just a couple of things that I have heard today that mesh very well with what David will talk about and indeed what CAST's work has been all about for the last 25 years. Dan mentioned something that said that, you know, this is not about technology it is about attitudes. And Judy said the key question, Judy Heumann said the key question is what is effective pedagogy? And Cheryl, in her—in describing the least dangerous assumptions talked about the need to essentially, and I am paraphrasing a little here, but to put the burden on the curriculum rather than on the individual. I think these statements all mirror in many ways the “aha” moments that certainly my colleagues at CAST have had over the last 25 years.

CAST was developed in—was founded in 1984 to find ways of helping students with disabilities adapt to the curriculum. And it was a given at that time that the curriculum was fixed and that individual learners were expected to find a way to shoehorn themselves into the fixed curriculum. But there was a great realization that took place in the early 90's and that is that the curriculum itself had the disabilities, not the individuals. That the curriculum was inadequate for meeting its challenge of serving all

learners. I think that is very much why we are here today: to figure out how it is that we can create and promote and support curricula that are flexible enough to meet the needs of all learners.

So now we recognize that diversity is a given, that curriculum must be flexible, that it has the burden of adapting to the needs of students, and that the importance of universal design for learning is that we design from the very outset a curriculum that assumes tremendous diversity. This is not diversity just in terms of students with and without disabilities. Neuroscience and cognitive neuroscience in the last fifteen years has demonstrated beyond a doubt that the way individuals learn is as unique to us as our DNA, as our fingerprints, and that the mythical average student just simply does not exist. So Universal Design for learning is not just about including students with disabilities but it is about expanding and exploding opportunities for all learners. For those whose differences are hidden, whose differences are not identified as such but may exist and may account for their having struggles to learn.

UDL is also for gifted and talented, so-called gifted and talented students who are also marginalized outside of that average and David will talk a bit about that. So what Dan said about attitude I think just hit the message perfectly today: that we need to first look—first look at the curriculum design and how we can make it flexible to serve diverse learners. And in doing so, we will find benefits for everyone. So, I will let David Rose, who is much better at this and knows much more about it share some about that now in this video.

DR. DAVID ROSE: Good morning everyone, I am delighted to be here in this distant way. As Patti may have told you I had surgery yesterday, if everything is on schedule, so hopefully I am feeling really badly right now but will feel great in a very short time. But I am very sorry I could not be with you and yet I wanted to at least contribute to today's activities.

One of the recent things that's important in Universal Design for Learning is the publication of guidelines based on the principles that many of you in the audience are already familiar with. Guidelines that flesh out what does this mean, how do we do this in practice? Those guidelines were informed by looking at the cognitive neuroscience of how learning works. We take the three principles and we explode them out to look at what are the kinds of difficulties individuals have with each of those three principles and taking the power and flexibility of new media how do we create media that are strong enough and supportive enough to handle all of those differences.

So let me talk a little bit about the guidelines as a framework for redesigning the curriculum. Again, I want to emphasize that the intent is to design a curriculum that works for all students. That when we think of an inclusion classroom we are not designing a classroom for students with disabilities or for students who are gifted and talented but how do we design a curriculum which pays attention to all of the ways in which kids differ so every child is learning at the top of their potential.

To flesh out the guidelines I would like to show a few excerpts from a film that we're just producing now and I hope that will give you an idea of what the guidelines look like.

Now if you will excuse me for just a moment I need to change my suit.

The UDL guidelines at heart are meant to address a very significant problem in American education which is that we've had a very fixed and narrow curriculum designed for some students but not all students. And we then have labeled or described the students for whom it does not work as having disabilities or having weaknesses or struggling learners or something. When we began our work, we like most people were focused on learners who were doing poorly who looked like they had disabilities. Over time we began to change our focus because we could see when we were in classrooms that the classrooms were in fact disabling. That is to say that they were not designed properly to ensure that every child would succeed. We began more and more to see that the curriculum itself was disabled. The work of the Universal Design for Learning Guidelines is to reduce the disabilities in the curriculum itself so that more students succeed, more students have optimum challenges and come out as expert learners in the end.

Universal Design for Learning Guidelines are an attempt to refocus our energy and our smartness on the fact that it is better to think of our curricula and our learning environments as having the disabilities. They have been designed for students that are too narrow, that they are not in fact effective for the kinds of students we really have. So at CAST we now think of curricula and schools and learning environments as having their own disabilities. The point of the Universal Design for Learning Guidelines is to redress, to try to reduce those disabilities and by doing so fewer kids will be called disabled and more students will be successful.

The three principles of Universal Design for Learning come from careful analysis of what learning really is. And particularly the research that has been done by thousands of other researchers in cognitive science, cognitive neuroscience, neuropsychology which have carefully looked at what comprises learning, how does learning really work and what are its differences among individual learners? From that work we've abstracted out three simple principles that are involved in any learning situation. How does the learner pick up information? How do they express and act on that information? And how are they engaged by the learning situation? Those three things are very much the way in which people who look at the nervous system say "those are its three main components." But educators, psychologists typically have described the ways in which learning and cognition happen using those three things. Information, ability to make sense of it, ability to express and act on the world effectively and the ability to be properly motivated to take action to reach your goals and to achieve results that you care about. Those three things are common to psychology, education, and neuroscience.

It seems to me that the goal of education is not to provide information to students or even to teach them specific skills. What we need at the end of their schooling is

learners who are expert learners. They're the best learner for the kind of learner they are that they could possibly be. Like the guidelines, we think of that as having three things. Expert learners are very knowledgeable, they know a lot. And by knowing a lot you know what's novel and what's old and everybody knows it, so part of being an expert learner is that you know a lot and we want students to know a lot.

Secondly, congruent with the second principle, they know a lot of things they can do. How to take information and to transform it into something that they can express, now they can act effectively on the world. So expert learners have strong goals and strategies for acting and being effective in the world. They are not passive. Importantly though, expert learners are driven by wanting to learn more. What distinguishes an expert learner in any field isn't just that they know a lot and they know how to do a lot it is that they seem incredibly interest focused and highly motivated to learn even more. So we want in students now are students who have all three of those things. Yes, they are very knowledgeable. Yes, they know how to take information and act effectively but they also can't wait for another opportunity to learn even more. That's the kind of learners we need for the future.

PATTI RALABATE: Let's thank David Gordon, Elizabeth, and David Rose. Quick summary for those of you who need that and like that, like me. Universal Design for Learning involves three basic principles. Multiple means of representation. Multiple means of expression. Multiple means of engagement for all students. Keep those points in mind as you address some of the other questions that we are going to be dealing with this afternoon.