Audio Transcript:
Best Practices through Universal Design for Learning

Introduction

[Musical introduction with the titles “Learning,” “Teaching,” “Best Practices,” and “Universal Design for Learning.”]

[A montage of images showing speakers from the video, including professors teaching in the classroom; an international student in the Student Center; one student in a wheelchair in his dorm room, and another reading a Braille sign in the Library; the Director of the Assistive Technology Resource Center; two more students, graduate and undergraduate; and finally the video title, “Best Practices through Universal Design for Learning.”]

[The narrator, seated in front of the Colorado State University logo, begins the introduction.]

Hello, my name is Pat Burns. I am the Associate Vice President for Information and Instructional Technology at Colorado State University. I’m also a professor of mechanical engineering, and like you I’m concerned with improving the academic achievement and retention of our students.

[Scenes of students walking across campus.]

As we all know, students today arrive at the university with very different sets of skills, life experiences, abilities, and learning styles.

[An older student working at a computer in the Library.]

Some are non-traditional students with heavy extracurricular obligations.

[A large group of international students pose for a picture in front of Laurel Hall.]

Others come from abroad and speak English as a second language.

[Colin Heffern, a student featured in the video, approaches an accessible doorway in his wheelchair.]

A smaller but significant number have some form of disability.

The ACCESS Project is funded by the U.S. Department of Education, Office of Postsecondary Education. Grant #P333A050015.

[An online search is performed using the keywords “universal design.”]

How do we educate such a diverse population of students?

[The search result—an article titled “Universal Design for Learning (UDL): Reaching All, Teaching All”—is highlighted on screen.]

Fortunately, we can turn to a large body of literature about best practices for teaching and learning. One such practice, which I’d like to share with you today, is a concept known as “UDL” or universal design for learning.

[The four principal themes of this video are displayed as a title graphic. They are:

- Multiple Methods of Presentation
- Multiple Means of Engagement
- Multiple Modes of Expression
- Faculty-Student Interaction]

Principle 1: Multiple Methods of Presentation.

The narrator

The first principle of universal design for learning is the long-acknowledged” best practice” of presenting concepts and information in multiple ways.

[Erica Suchman, Associate Professor of Microbiology, Immunology, and Pathology. Erica stands at a lectern in a large lecture hall. In the background, results from a clicker survey are projected onto the screen.]

I believe that one of the goals of good teaching is to try and reach every student in the class, not just the “A” best students. And I think a lot of traditional lecture courses may be geared toward students who do well at listening to a lecture and then repeating that information on examinations, or using that information on examinations.

[Rich Feller, Professor of Education. Rich is speaking from his office. Books and journals line the shelves in the background.]

To me, teaching is all about communication and maximizing the students’ experience, so that anything new I can bring to the table might apply and stick to some of the things they already know. So, for me, I’m trying to get real clear on

The ACCESS Project is funded by the U.S. Department of Education, Office of Postsecondary Education. Grant #P333A050015.

how students process information and learn, and I know they learn in different ways.

[Erica Suchman.]

The thing I like about universal design for learning is that it maximizes student learning by increasing the numbers of ways that students get to see information, and I think that more students can be reached when you use many alternatives to traditional lecture.

[Erica calls out directions to the students…]

So, pull out our clickers...

[A college student approaches the door to his dorm room in his wheelchair.]

[The narrator.]

When we talk about student diversity, we also need to consider students with disabilities.

[Marla Roll, Director, Assistive Technology Resource Center. Marla is seated in front of assistive technology workstations in the Assistive Technology Resource Center.]

At CSU we have approximately 750 students who have identified themselves as having a disability. Of these, roughly 75 percent have a *learning* disability.

[Against a backdrop of fall foliage, students walk to their classes along campus sidewalks.]

The number of students with non-apparent disabilities may, in actuality, be higher because the students either may not understand their disability or may even be reluctant to come forward and ask for assistance.

[Students come and go through the entrance to the Library. Among them is a blind student using a white cane.]

Students with disabilities can be found in every discipline and every major.

[The narrator. Voice over a scene of Erica working with students in the classroom.]

The ACCESS Project is funded by the U.S. Department of Education, Office of Postsecondary Education. Grant #P333A050015.

Universal design principles help us reach and engage more students, both in and outside the classroom.

[Zooming in on a web page containing a live streaming video and PowerPoint slides from an online lecture.]

It's not surprising, therefore, that instructional technologies are another important element of UDL.

[Zooming in on the website for Computer Training and Support Services, Colorado State University's central source for technology training.]

And one issue of particular importance is the development of web materials that everyone can use.

[Marla Roll.]

One thing we can all do, that would make a huge difference at CSU, is to take more care in the way we develop our web pages.

[Close-up views of several CSU web pages, including Web Central, a set of resources for web developers and administrators; CSU Web Accessibility Standards; and a page of web design tips, subtitled "techniques to ensure compatibility with new technologies and accessibility for all users."]

By adhering to well-established guidelines for web accessibility, our web content becomes easier for everyone to access.

[Close-up of fingers sweeping lightly over the raised bumps of a refreshable Braille display.]

Information can be easily translated into a variety of formats.

[Student in wheelchair uses sip-and-puff technology to control his computer. Next, a modern computer lab is filled with students.]

Students with disabilities benefit, but so do users of older technology and those using the latest portable devices.

[The Narrator. Voice over a scene in one of the Library's Assistive Technology Rooms, where a student uses a screen reader to access an online course. Computer reads from web page]

The ACCESS Project is funded by the U.S. Department of Education, Office of Postsecondary Education. Grant #P333A050015.

With the ever increasing role of technology in education, it is imperative that our instructional materials be accessible to all. As a public institution, we're obligated to do this by law, but it's also just the right thing to do!

Principle 2: Multiple Means of Engagement.

[The narrator.]

Another hallmark of universal design for learning is its emphasis on engaging students through multiple learning modalities.

[Rich Feller.]

So, I try to plan before class and say, how do I break this class into sections?

[Rich in the classroom interacting with students and demonstrating a principle using an elastic band as a visual aid. Student stretch their own bands in response.]

I can give some information, I want to practice some information, I want to draw something, I want to see a visual cue, I want somebody to stand up and teach somebody else, I want them to draw a picture of what we've just covered. It's about me planning ahead enough to accommodate the different ways people learn, because if I only teach the way I learn, I'm going to miss too many people.

[Narrator. Voice over scene of Erica working with students in the classroom.]

UDL also promotes "active learning."

[Erica Suchman.]

In my class I do a lot of active learning... I really like more of an interaction and less of just me talking, but with a group this large, if I ask them questions and I ask them to raise their hands, no one wants to do it...because no one wants to be the person who's wrong with their hand up.

[Close up of student's hands using the controls of the clicker, followed by a shot of the clicker question results. Boxes numbered 2 to 151 light up as students click in their answers.]

The ACCESS Project is funded by the U.S. Department of Education, Office of Postsecondary Education.
Grant #P333A050015.

So, the thing I like about the clickers is that I get students to answer questions, which gives me immediate feedback about where their level of understanding is, and then I know if I need to talk about a topic again.

[The narrator.]

One of the most effective ways to engage students is by sharing *our* enthusiasm for the topic we're asking *them* to learn.

[Angela Squires, Graduate Student in Civil Engineering. Angela is seated outside the Lory Student Center.]

I think that when professors are excited about the material, it just kind of spreads to the students and they get excited about it, and especially when the professor shows how the material really applies to real world situations.

Principle 3: Multiple modes of expression.

The narrator

Closely tied to the principle of providing multiple opportunities for student engagement is the idea that students should be given, whenever possible, additional ways to express their comprehension and mastery of a topic.

[Rich Feller.]

I've come to learn that students learn best in 3 ways, and I call it the 3 P's: through *projects, performances,* and some kind of *presentations*...

[Rich works individually with students in the classroom.]

And I try to get away from lecturing and dumping information to them, and give short lectures, asking them to come together and co-teach each other, to practice something, to draw me a picture of what I just taught, to find another way that taps into the many ways we process information.

[Erica Suchman.]

They like the fact that there are opportunities to show what they know outside of traditional examinations, that they can do group examinations, that they can do

The ACCESS Project is funded by the U.S. Department of Education, Office of Postsecondary Education. Grant #P333A050015.

problem solving, and that they can show their knowledge in alternative methods to traditional examinations.

[Rich Feller.]

So much of our learning is recall—I give it to you, you give it back to me—but it's not very deep, and that's why I've got to find ways for you to present it or somehow build a project around it or perform it in some way, because then it's a much deeper learning. I know you've worn it and it's going to stay with you much longer. When that happens, I mean, students light up, and that's the reward I get in teaching.

The importance of faculty-student interaction.

[The narrator. An instructor helps students who are using laptops in the classroom. Next, an accessibility specialist works with a student at a computer.]

How we interact with our students, both in and outside the classroom, can profoundly affect student performance and retention.

[Manjukumar Harthikote Matha, Graduate Student in Electrical Engineering. Manju is seated at a table in the dining area of the Lory Student Center.]

As a foreign student I really needed…I really required some time before I could get interactive with the professor. Sometimes I was reluctant because I thought I would sound stupid by asking a very basic question… So, it really took some time for me to interact with the professor during the class hours asking him the question about the material which I'm not following.

[Erica Suchman.]

It's more of a personal experience for the students if they feel like the faculty knows who they are and cares how they do. I get a lot of evaluation comments about the fact that they feel like I care what their performance is. It's not that I'm going to make them do well if they're not doing well, but I do care how they're doing and about helping them to do their best in the class.

[The narrator.]

Another way we make students feel welcome and valued is by being empathetic and accommodating.

The ACCESS Project is funded by the U.S. Department of Education, Office of Postsecondary Education. Grant #P333A050015.

[A scene of Rich Feller teaching in the classroom is replaced by the cover page of a course syllabus.]

Our commitment to providing students what they need to succeed can be expressed both in writing on the syllabus and verbally in class.

[Lindsay Pergande, Undergraduate in Family and Consumer Sciences. Lindsay sits on the second floor of the Lory Student Center.]

It's really helpful when professors are understanding of a situation—a disability situation—and allow the students to take the exams in an alternative setting, and to have sufficient time to take their exams.

[Close up of a student using assistive technology for a high contrast, high magnification display of text.]

[The narrator.]

The "inclusive pedagogy" advocated by universal design for learning can help obviate the need for special accommodations, but it is not a panacea.

[A series of web pages are shown, one for each of the offices mentioned, plus the Center for Community Partnerships (CCP).]

Fortunately, Colorado State University has several offices that provide specialized assistance to students and faculty,
such as the Office of Resources for Disabled Students, the Assistive Technology Resource Center, the Academic Advancement Center, the Learning Assistance Center, and others.

[Scenes of the following: a sign language interpreter at work in the classroom; a woman with a headset using Dragon Naturally Speaking; a close up of homework assignments printed in Braille, text, and tactile graphics; students being coached by tutors; and a young woman controlling an assistive technology application by voice command.]

These offices assist students with sign language interpretation, assistive computer technology, conversion of textbooks to alternative formats, coaching and study skills, screening and diagnostic services, and more.

[Lindsay Pergande.]

The assistive technology is just wonderful here at CSU because I'm able to get through so much of my texts…

The ACCESS Project is funded by the U.S. Department of Education, Office of Postsecondary Education.
Grant #P333A050015.

[Close up of text-to-speech software with highlighting support.]

…so much of the material that I need to understand. It's just so helpful!

[Colin Roger Heffern, Undergraduate in Pre-Landscape Architecture. Colin speaks from his dorm room. Around his head are the devices he uses to control his wheelchair, open automated doors, operate his computer, and send and receive calls on his cell phone.]

You know, I go to class the same as everyone else. Last semester I had a girl from Resources for Disabled Students that helped take notes for me. She'd just meet me in class every day and take notes. Um, this semester I'm doing it a little different. I'm actually having kids in each class take notes for me.

Basically, during the day I use my computer quite a bit. I speak to the programs instead of type it in, but for typing I just say what I want to type and it types that.

[Colin speaks to the computer and a window for Internet Explorer appears.]

Wake up. Start Internet Explorer...

[Marla Roll.]

By anticipating diversity in the classroom and designing instructional materials to be usable by everyone,

[The computer speaks text from a web page. Erica speaks to students in the classroom.]

instructors can help reduce the need for many individual accommodations. Universal design for learning helps us create more inclusive learning environments in which *all students* benefit.

Conclusion

[Against the backdrop of the CSU Administration building, all four themes of the video are shown—

- Multiple Methods of Presentation
- Multiple Means of Engagement
- Multiple Modes of Expression

The ACCESS Project is funded by the U.S. Department of Education, Office of Postsecondary Education.
Grant #P333A050015.

- Faculty-Student Interaction

—with checkmarks indicating that each one has been discussed.]

[Zooming titles appear echoing each point made by the speaker.]

[The narrator.]

What all of these practices have in common is they reach and engage the maximum number of learners. They assume that students possess different skills, experiences, and learning styles. They emphasize flexible and customizable curricula. And they use multiple modes of presenting content, engaging students, and assessing their comprehension.

[Close up.]

So, what is universal design for learning? In many respects, *it's just good teaching!*

Speaker credits - audio narrative

[Rich Feller.]

If I teach the way I best learn, I'm going to miss a lot of students, so I've got to accommodate those who learn differently than I do. So, I try to plan before class and say, how do I break this class into sections? I can give some information, I want to practice some information, I want to draw something, I want to see a visual cue...

[Erica Suchman.]

I try to present things in more than one way in most lectures. So, I do things like demonstrations, or active learning, where they will work on a problem about it, or a clicker question where they work on it, so that students get to see a problem from more than one perspective.

[Marla Roll.]

Our students benefit greatly from assistive technology. This technology allows them to do things such as have the computer read the text to them, perhaps

The ACCESS Project is funded by the U.S. Department of Education, Office of Postsecondary Education.
Grant #P333A050015.

convert text into Braille, or even using voice commands to control access of the computer.

Text of speaker credits

Richard Feller, PhD
Professor of Education

Awards:
* University Distinguished Teaching Scholar
* Best Teacher, CSU Alumni
* Outstanding Teacher, College of Applied Human Sciences
* QwestDex Excellence in Education Award

Erica Suchman, PhD
Associate Professor of Microbiology, Immunology and Pathology

Awards:
* Best Teacher, CSU
* CVMBS Innovative Instructional Methodology Award for Undergraduate Teaching
* N. Preston Davis Instructional Innovation
* Exceptional Achievement in Service Learning Instruction

Marla Roll, MS, OTR
Director, Assistive Technology Resource Center (ATRC)

The ATRC offers the following services:
* Assistive technology resources and information
* Adapted computing evaluations and training
* Assistive technology equipment loans
* Consultation on accessible web design
* Ergonomic & ADA considerations in computing environments

Rolling Credits.

Host

Patrick J. Burns, PhD
Vice President for Information and Instructional Technology
Colorado State University

CSU faculty and Staff (in order of appearance):

- Erica Suchman, PhD, Associate Professor of Microbiology, Immunology, and Pathology

The ACCESS Project is funded by the U.S. Department of Education, Office of Postsecondary Education.
Grant #P333A050015.

- Richard Feller, PhD, Professor of Education
- Marla Roll, Director of the Assistive Technology Resource Center

Featured Students (in order of appearance):

- Angela Squires, Graduate Student in Civil Engineering
- Manjukumar Harthikote Matha, Graduate Student in Electrical Engineering
- Lindsay Pergande, Undergraduate in Family and Consumer Sciences
- Colin Roger Heffern, Undergraduate in Pre-Landscape Architecture

Still Photography

- Bill Cotton, Director of Prepress Production and Principle Photographer, Communications and Creative Services
- Shawna Magtutu, Office of International Programs
- Patricia Nededog, Academic Advancement Center/TRiO Student Support Services
- Nathan Weston, Web Development Coordinator, College of Natural Sciences
- Craig Spooner, ACCESS Project

Video Production

Communications and Creative Services, Colorado State University
http://www.ccs.colostate.edu/

- Brian Morrato
- Ron Bend
- Joe Vasos

Closed Captioning

Automatic Sync Technologies, LLC
http://automaticsync.com/

Special thanks to:

Brianna Downey
Interpreter, Office of Resources for Disabled Students

Lindsey Wess
Manager, Electronic Information Center (EIC) and Assistive Technology, CSU Libraries

Nirmala Gyawali, PLUS Program Scholar from Nepal

The ACCESS Project team:

- Cathy Schelly
- Pat Burns

The ACCESS Project is funded by the U.S. Department of Education, Office of Postsecondary Education.
Grant #P333A050015.

- Marla Roll
- Patti Davies
- Cath Stager-Kilcommons
- Julia Noyes-Kothe
- Craig Spooner
- Andrea Caine, OT GRA
- Kim Davis, OT GRA
- Suzie Lovercheck, OT GRA
- Carrie Reavis, OT GRA

and the following CSU offices:

- Academic Advancement Center
- Academic Computing and Networking Services
- Assistive Technology Resource Center
- Colorado State University Libraries
- Department of Occupational Therapy
- Institute for Learning and Teaching
- Office of International Programs
- Office of Resources for Disabled Students

Video produced by

Craig Spooner, Coordinator of Professional Development
ACCESS Project

Contact information

The ACCESS Project (Access to Postsecondary Education through Universal Design for Learning)
Colorado State University
Funded by the U.S. Department of Education
Office of Postsecondary Education
Grant #P333A050015

http://accessproject.colostate.edu/
accessproject@colostate.edu
970-491-0784

ACCESS Project at CSU
Department of Occupational Therapy
Colorado State University
Fort Collins, CO 80523-1573

accessproject@colostate.edu
http://www.accessproject.colostate.edu/
Phone: 970-491-0784
Fax: 970-491-6290

This publication was developed with funding from the U.S. Department of Education, Office of Postsecondary Education (Grant # P333A050015).