Universal Design for Learning:
A framework for good teaching, a model for student success

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Objectives

- What is UDL?
- Who benefits from it?
- How can it be implemented?

BIG Question #1

Who are your students?
Student diversity

- Ethnicity & Culture
- ESL/Native language
- Nontraditional
- Gender
- Learning Styles
- Disabilities

Ethnicity & Culture*

<table>
<thead>
<tr>
<th></th>
<th>CSU Students</th>
<th>CSU Faculty</th>
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<tbody>
<tr>
<td>Minority</td>
<td>13.6%</td>
<td>12.8%</td>
</tr>
<tr>
<td>International</td>
<td>3.5%</td>
<td>4.7%</td>
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Potential barriers to comprehension
- For both students and instructors
- Affects written and verbal communication
What is your *good name*, sir?

A. **Full name**
B. **Last name**
C. **Nickname or pet name**

I say there are 100 *Krore* stars in the sky. You say the stars number 10,000 *Lakh*.

Do we agree?
**Nontraditional Students**

- Highly motivated & Achievement oriented
  - Finances and family are two of the biggest concerns
  - Strong consumer orientation
  - Need flexible schedules
- Integrate learning with life and work experiences
  - Want applicability to the real world
  - Prefer more active approaches to learning
- Relatively independent
  - Lack of a cohort, “student life” experience

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**Men & Women**

- [Graph showing male and female numbers by degree level]

*CSU Facts at a Glance, 2009-2010*

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**Learning Styles**

1. Visual
   - Visual-Linguistic (reading and writing)
   - Visual-Spatial (graphs and pictures)
2. Auditory (listening)
3. Kinesthetic (touching and moving)
Both short-term and long-term, apparent and non-apparent
- Mobility Impairments
- Blindness/Visual Impairments
- Deafness/Hearing Impairments
- Learning Disabilities
- Attention Deficit Disorder (ADD/ADHD)
- Autistic Spectrum Disabilities
- Traumatic Brain Injury (TBI)
- Post Traumatic Stress Disorder (PTSD)

National statistics:
- 11.3% of undergraduates report some type of disability*

Colorado State University
- 8%-11% (ACCESS research, 2007-10)
- Non-apparent disabilities are by far the largest proportion and growing
- Only a small percentage seeks accommodations


Universal Design for Learning

Universal Design for Learning is a set of principles and techniques for teaching, creating inclusive classroom instruction, technology, and accessible course materials.
History of UDL

- **Universal Design (UD)**
  - Accommodate the widest spectrum of users without the need for subsequent adaptation
  - Public buildings, city streets, television, kitchen utensils...

- **Universal Design for Learning (UDL)**
  - Inclusive pedagogy
  - Applies to both teaching and technology

UDL and Teaching

1. Represent information and concepts in multiple ways (and in a variety of formats).
2. Students are given multiple ways to express their comprehension and mastery of a topic.
3. Students engage with new ideas and information in multiple ways.

Representation
Representation

- Ideas and information are represented in multiple ways and in a variety of formats
  - Lectures
  - Group activities
  - Hands-on exercises
  - Text + Graphics, Audio, Video
  - Usable electronic formats (e.g., Word, PDF, HTML)

UDL and Technology

- Educational Videos
- Course Materials
- Lecture Presentation Systems
- Course Management Systems

What makes a document Universally Designed?

- Searchability
- Copy and Paste
- Bookmarks or an Interactive TOC
- Text to Speech capability
- Accessibility
**A Tale of Two PDFs**

- **Scanned PDFs**
  - Scanned PDF
  - Scanned PDF with OCR and Tags

**Scanned PDFs**

- Scanned PDF
- Scanned PDF with OCR
- OCR and Tags

**UDL Tech Tutorials**

- Microsoft Word
  - Styles and Headings
  - Images
- PowerPoint
- Adobe PDF
- HTML
- E-Text

[http://accessproject.colostate.edu](http://accessproject.colostate.edu)
Students express comprehension and mastery in multiple ways:
- Oral presentation
- Written essays
- Projects/Portfolios/Journals
- Performance
- Multimedia (text/graphics/audio/video)

Colin from our video:
- Student with Quadriplegia
- Undergraduate in Landscape Architecture

Assignment: Create a 3D model:
- Physical model
- Computerized model
Engagement

Help students “engage” in multiple ways
- Express your own enthusiasm!
- Challenge students with meaningful, real-world assignments
- Give prompt and instructive feedback on assignments
- Classroom response systems (clickers)
- Make yourself available to students during office hours in flexible formats

Engagement

Professor from India has students video tape Q&A during office hours
Individual questions answered for everyone in the course
- Video
- Written explanation
What’s so special about UDL?

UDL Framework

Engage

Represent

BIG Question #2

Who are your students?

What are our institution’s goals?
CSU’s Strategic Goals

- **Goal 5**: Access, Diversity, and Internationalization
- **Goal 6**: Undergraduate Curriculum and Advising
  - 6.2: Enhance programmatic accessibility for students with physical, learning and other disabilities
- **Goal 7**: Active and Experiential Learning Opportunities
- **Goal 10**: Student Engagement Outcomes (curricular and co-curricular)

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CSU’s Strategic Goals

- **Goal 9**: Learning Outcomes
  - critical thinking
  - writing
- **Goal 8**: Retention and Graduation
  - CSU’s first-year retention rate: 82%
  - 6-year graduate rate: 63%

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BIG Question #3

- Who are your students?
- What are CSU’s Goals?
- What’s your Instructional Philosophy?
Instructional Philosophy

- How do you conceptualize knowledge?
  - What is your role in the transmission of knowledge?
  - What constitutes student learning?
  - What learning objectives have you set for them, and how do you know when they've been achieved?

Recommended Video

http://www.cornell.edu/video/?VideoID=225

Published Resources

Thank you!

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