UNIVERSAL DESIGN FOR LEARNING

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OASIS
WHAT IS UDL OR UNIVERSAL DESIGN FOR LEARNING?
Definition of Universal Design for Learning as listed in the Higher Education Opportunity Act of 2008 states:

**UNIVERSAL DESIGN FOR LEARNING** is a scientifically valid framework for guiding educational practice that:

- Provides flexibility in the ways information is presented, in the ways students respond or demonstrate knowledge and skills, and in the ways students are engaged; and
- Reduces barriers in instruction, provides appropriate accommodations, supports, and challenges, and maintains high achievement expectations for all students, including students with disabilities and students who are limited English proficient.
UDL are internationally recognized practical teaching guidelines and curriculum designs that are based on scientific research.

- UDL has been around for over 25 years.
- It is used in schools grades K-12 as well as college.
- UDL relies on thoroughly knowing the concept you are going to teach and presenting it in different ways.
- Proactively plan your curriculum so all students can learn and succeed.
UDL is where the art and science of teaching are blended
WHY SHOULD WE UNDERSTAND AND USE UDL - THE PRINCIPLES OF UNIVERSAL DESIGN IN OUR CLASSROOMS?
There are a variety reasons...

More students are coming to college with documented disabilities.
And many of these students have an invisible disability.
Reading Disability Simulation

<table>
<thead>
<tr>
<th>When you see</th>
<th>Pronounce as</th>
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<td>q</td>
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<td>a, as in bat</td>
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<td>e as in pet</td>
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</tbody>
</table>

*Misunderstood Minds*  
[https://www.pbs.org/wgbh/misunderstoodminds/](https://www.pbs.org/wgbh/misunderstoodminds/)

**Passage:**

We pegin our qrib eq a faziliar blace, a poqy like yours enq zine.  
Iq conqains a hunqraq qrillion calls qheq work qogaqhyys py qasign.  
Enq wiqhin each one of qhese zany calls, each one qheq hes QNA,  
Qhe QNA coqe is axecqly qhe saze, a zess-broquceq rasuze.  
So qhe coqe in each call is iquanqical, a razarkaple puq veliq claiz.  
Qhis zeans qheq qhe calls are nearly alike, puq noq axecqly qhe saze.  
Qake, for insqence, qhe calls of qhe inqasqines; qheq qhey're viqal is cysqainly blain.  
Now qhink apouq qhe way you woulq qhink if qhose calls wyse qhe calls in your prain.
We begin our trip at a familiar place, a body like yours and mine. It contains a hundred trillion cells that work together by design. And within each one of these many cells, each one that has DNA, The DNA code is exactly the same, a mass-produced resume. So the code in each cell is identical, a remarkable but valid claim. This means that the cells are nearly alike, but not exactly the same. Take, for instance, the cells of the intestines; that they're vital is certainly plain. Now think about the way you would think if those cells were the cells in your brain.
ADHD & Autism Simulation

Reading with Distractions

- https://www.youtube.com/watch?v=SVwxb6gcpqo
- https://www.pbs.org/wgbh/misunderstoodminds/experiences/attexp1b.html
- https://www.youtube.com/watch?v=xfo1tZ95Ypk

Sensory Overload

- https://www.autismspeaks.org/blog/5-video-simulations-help-you-experience-sensory-overload
# International Students and Country of Origin

<table>
<thead>
<tr>
<th>Country</th>
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<tr>
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<td>El Salvador</td>
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<tr>
<td>Ghana</td>
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<tr>
<td>India</td>
<td>3</td>
</tr>
<tr>
<td>Italy</td>
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<tr>
<td>Jamaica</td>
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</tr>
<tr>
<td>Kenya</td>
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<tr>
<td>Madagascar</td>
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<tr>
<td>Netherlands</td>
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<td>New Zealand</td>
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<td>Seychelles</td>
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<td>Thailand</td>
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<td><strong>Total</strong></td>
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ESU Spring 2019 Military Enrollment

- Non-active duty (person is currently serving in the Reserve or National Guard): 4
- Veteran: 47
- Total: 51
WHAT ARE THE PRACTICAL USES OF UDL?
Universal Design for Learning ....

- Eliminates unnecessary barriers without eliminating the necessary challenges
- Provides students with a variety of resources which helps meet the needs of all learning styles
- It provides opportunities for passive and active learning which in turn will help students with comprehension, understanding and retention of content
How does it work?

- UDL supports the notion that there are three main areas of the brain that help students learn:
  - Engagement
  - Representation
  - Action & Expression

- If instructors can tap into all three neurological networks in one lesson, students will learn more.
# Universal Design for Learning Guidelines

## Provide Multiple Means of Engagement

*Purposeful, motivated learners*

- Provide options for self-regulation
  - Promote expectations and beliefs that optimize motivation
  - Facilitate personal coping skills and strategies
  - Develop self-assessment and reflection

- Provide options for sustaining effort and persistence
  - Heighten salience of goals and objectives
  - Vary demands and resources to optimize challenge
  - Foster collaboration and community
  - Increase mastery-oriented feedback

- Provide options for recruiting interest
  - Optimize individual choice and autonomy
  - Optimize relevance, values, and authenticity
  - Minimize threats and distractions

## Provide Multiple Means of Representation

*Resourceful, knowledgeable learners*

- Provide options for comprehension
  - Activate or supply background knowledge
  - Highlight patterns, critical features, big ideas, and relationships
  - Guide information processing, visualization, and manipulation
  - Maximize transfer and generalization

- Provide options for language, mathematical expressions, and symbols
  - Clarify vocabulary and symbols
  - Clarify syntax and structure
  - Support decoding of text, mathematical notation, and symbols
  - Promote understanding across languages
  - Illustrate through multiple media

- Provide options for perception
  - Offer ways of customizing the display of information
  - Offer alternatives for auditory information
  - Offer alternatives for visual information

## Provide Multiple Means of Action & Expression

*Strategic, goal-directed learners*

- Provide options for executive functions
  - Guide appropriate goal-setting
  - Support planning and strategy development
  - Enhance capacity for monitoring progress

- Provide options for expression and communication
  - Use multiple media for communication
  - Use multiple tools for construction and composition
  - Build fluencies with graduated levels of support for practice and performance

- Provide options for physical action
  - Vary the methods for response and navigation
  - Optimize access to tools and assistive technologies
Area One - Engagement

The Why of Learning

- Provide options to recruit student interest
- Provide options to help students sustain effort & persistence
- Makes curriculum relevant by connecting it to the audience
- Provides options to improve student self-regulation
- Without engagement students choose not to learn.
Barriers to Engagement

Two significant barriers to engagement:

- Students don’t think the curriculum is interesting or relevant to them so they don’t care to learn
- Students lack perseverance or coping skills and they cannot persist when learning gets challenging.

If either of these barriers is present in your learning environment, students will not believe that learning your curriculum matters and they will choose not to learn.
Examples-
How do you engage your students?

Practical suggestions for the college professor

- Intentionally connect your curriculum to the audience
- Explicitly explain at the beginning of each lesson why this lesson is relevant to them and remind them of this throughout the lesson.
- Use your personality by example to give your students the tools to stay motivated.
- Vary demands & resources to optimize challenge
- Foster collaboration & communication
■ Increase mastery oriented communication throughout assignments and activities. Don’t just give feedback on final assessments

■ **Provide a variety of assignment options.** Options empower students to direct their own learning. This activates their affective brain networks

■ Encourage students to assess their own learning by using checklists & rubrics

■ Give students scaffolds to help facilitate personal coping skills and strategies

■ Adopt practices that reflect high values with respect to diversity and inclusiveness

■ Ensure that facilities, activities, materials and equipment are accessible to all students
Area two Representation

The What of Learning

- Traditionally, most instructors teach by lecturing and reading
- If we teach in only one way and don’t provide students with options, some students will not learn
What are the barriers to our traditional teaching methods?

- Lecture format
- Reading Text
Barriers to traditional teaching methods

Lecture format

- Hearing impairment
- Attention issues
- Poor memory
- Lack of background knowledge
- Compromised linguistic and cognitive abilities,
- Unfamiliar vocabulary
- English is not first language

Highly demanding on concentration & executive abilities
Barriers to Reading text

- Poor vision
- Compromised decoding skills & reading comprehension skills
- Slow reading rate
- Complex and unfamiliar vocabulary
Examples
Multiple Representations of Content

Practical suggestions for the college professor

- Use a combination of ways to teach content: lectures, collaborative learning, hands on activities, internet based communications, field work, etc.
- Provide digital copies and hard copies of all class materials so students can access both and personalize them
- Offer visuals: charts, movies, pictures and audio clips to support content
- Clarify sophisticated vocabulary and symbols
- Highlight patterns and big ideas during lectures
- Videotape lectures and provide students unlimited access to review
- Share student notes to all class members. The diversity of styles are more universally designed than the lecture itself.
- Caption all types of media
- Use sign language interpreter or live captioning
- Choose text that provide visuals and audio for students to manipulate and to accompany their readings
- Give two book options – one highly literate, authoritative and scholarly and the other highly visual with many drawings, graphics, maps and diagrams.
- Provide work exemplars, explicit directions and scaffold to help students persist independently
- Use discussion groups as a complement and alternative to other media giving students options to participate, including face to face and on line
Area Three  Action & Expression
The How of Learning

- How do you assess student learning?
- How do you support student learning?
There are two traditional methods to assess student learning

1. Written expression
2. Objective paper/pencil tests
The purpose of assessments is to

■ Determine if students can effectively apply what they have learned and

■ Determine if the knowledge is usable
Barriers to traditional assessments

Written response test
- Poor motor skills
- Poor spelling and/or grammar
- Don’t communicate well in writing

Objective paper/pencil test
- Test anxiety
- Weak working memory
- Weak test taking skills
Examples
Action & expression

Practical suggestions for the college professor

- Vary method for assessment responses – encourage composing those responses with different types of media and technology.
- Allow students to complete assignments using different tools (paper/video/audio recording, images, sound, and the web).
- Build scaffolding into assignments.
- Provide feedback while working through projects.
- Provide work exemplars.
- Permit and encourage students to work collaboratively.
- Support planning and strategy development with checklists, tips and rubrics.
- It is essential to provide multiple means for students to demonstrate and express what they know.
“IF THEY CAN’T LEARN THE WAY WE TEACH, WE TEACH THE WAY THEY LEARN.”

DR. O. IVAR LOVAAS
Resources


