UDL in Higher Education

EM Dalton

Multiple Means of Representation

HOW THE INSTRUCTOR USES VARIED MATERIALS AND STRATEGIES TO REPRESENT INFORMATION AND CONCEPTS IN A WIDE VARIETY OF WAYS TO ADDRESS SYSTEMATIC VARIATION IN LEARNER RECOGNITION.
Multiple Means of Representation
the “WHAT” of learning

UDL Guidelines
• PERCEPTION
• LANGUAGE, MATHMATICAL
  EXPRESSIONS & SYMBOLS
• COMPREHENSION

Purpose: To increase RECOGNITION
UDL Guideline
Design options for varied perception

- Display of information
- Alternatives for auditory information
- Alternatives for visual information
Ideas for varying perception options

Vary ways to display information
Visual information: Size, contrast, color, layout, spacing, etc.
Auditory information: amplitude, speed, timing, cueing, etc.

Alternatives for auditory information
Text provided for spoken language (closed captions)
Use voice-to-text conversion (using voice recognition software like Dragon Dictate, etc.)
Visual symbols for EMPHASIS, sound alerts, etc.

Alternatives for visual information
Text or spoken equivalents for graphics/video/animation (captions)
Tactile supports for visuals
Use of physical objects or spatial models, etc.
UDL Guideline
Design options for *language, mathematical expressions & symbols*

- Vocabulary and symbols
- Syntax and structure
- Decoding, notation, symbols
- Understanding across languages
- Multiple media
Ideas for varying language & symbols options

Alternative access to key vocabulary & language

Pre-teach vocabulary & symbols

Highlight components of complex words - AGGRANDIZE

Embed vocabulary supports in text – hyperlinks, footnotes, definitions, etc.

Clarify language structure & rules

Make rules & relationships explicit

Clarify links between concepts

Use less complex vocabulary or language structures, etc.

Alternatives for text symbols & mathematical symbols

Text-to-speech programs for digital text

Use digital math notations (Math ML) with voicing

Use text alternatives (tapes, DVD, digital text) with human voicing, etc.

\[ x^2 + 4x + 4 = 0 \]
More of varying language & symbols options

Provides connections across different languages

Key information in dominant and second languages
Vocabulary definitions & pronunciations in both languages
Shared/related roots identified
Syntax/grammar links & differences identified

Use non-language alternatives for concepts
Present complementary representations (e.g. text with animation/graphics, etc.)
Link illustrations and verbal enhancements
Make text-to-chart or diagram links explicit

Piktochart
UDL Guideline
Design options to support comprehension

- Background knowledge
- Patterns, big ideas, relationships
- Information processing, visualization
- Transfer & generalization
Provide options for comprehension

Access background knowledge
- **Activate prior knowledge** with imagery & concepts
- Use **organizers** (KWL, concept maps, etc.)
- **pre-teach concepts**, "bridge" ideas with analogies & metaphors

Highlight essential information & “big ideas”
- Emphasize **key elements** (organizers, prompts & cues)
- Use **multiple examples** and non-examples
- Mask or reduce extraneous elements

Guide information selection & processing
- Use **interactive models**, explicit prompts and scaffolds
- Develop multiple points-of-entry & pathways for content
- **Chunk information** & release progressively

Support memory & knowledge transfer
- **Checklists**, sticky notes, electronic reminders, **mnemonic devices**
- Space out reviews, organizers for note-taking
- Connect new information & prior knowledge
- Embed **analogies & metaphors**
DECONSTRUCTING

Graduate Student - University Teaching

The Concept Map

Classification

Higher Level Thinking

Demonstrates Inter-connectedness

Build Learning Outcomes

Mini-Lesson

Course Outline

But not exactly linear

Complexity evolves over time

Teaching Philosophy Statement

Concept Map

Learning Objectives

Teaching Philosophy Statement

Course Outlines

Mini-Lesson

#STLHE2012
@gifulaforsythe
Rhode Island Modified UDL Educator Checklist – Version 1.3 (2011)

To analyze a lesson or unit for UDL features, use this checklist to identify what components are present (Y), not present (N), or not sure (?).

<table>
<thead>
<tr>
<th>UDL Checklist</th>
<th>Y</th>
<th>N</th>
<th>?</th>
<th>Comments</th>
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<tbody>
<tr>
<td><strong>1. Provide multiple means of representation</strong> (Knowledge Networks)</td>
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<td>1. Provide options for perception</td>
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<td>1.1 Vary ways to display information</td>
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<td>Visual information: size, contrast, color, layout, spacing, etc.</td>
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<td>1.2 Alternatives for auditory information</td>
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<tr>
<td>Text provided for spoken language, voice recognition-to-text, visual symbols for emphasis, sound alerts, etc.</td>
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<td>1.3 Alternatives for visual information</td>
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<td>2. Provide options for language and symbols</td>
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<td>2.1 Alternative access to key vocabulary &amp; language</td>
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<td>Pre-teach vocabulary &amp; symbols, highlight components of complex words, embed vocabulary supports in text, footnotes, abbreviations, definitions, etc.</td>
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Expanding Digital Access to Text

PEARL Scanner (camera)
OPENBOOK screen reading software
Apple Accessibility Features
PC Access Features

Quick access to common tools

- Start Magnifier
- Start On-Screen Keyboard
- Start Narrator
- Set up High Contrast

Not sure where to start? Get recommendations to make your computer easier to use

Explore all settings
When you select these settings, they will automatically start each time you sign in.

Use the computer without a display
THANK YOU!