Universal Design for Learning

Instructor Training
What’s the problem?

1. Students have learning needs and preferences that vary greatly.
2. Often the curriculum and materials that are used create barriers to student access.

What’s the Solution?

Planning for variability by including flexible tools and options builds multiple points of access for all three of the networks in the brain.
Universal Design for Learning

**Recognition Networks**
The "what" of learning

- How we gather facts and categorize what we see, hear, and read. Identifying letters, words, or an author's style are recognition tasks.

**Strategic Networks**
The "how" of learning

- Planning and performing tasks. How we organize and express our ideas. Writing an essay or solving a math problem are strategic tasks.

**Affective Networks**
The "why" of learning

- How learners get engaged and stay motivated. How they are challenged, excited, or interested. These are affective dimensions.
How do we do that?

1. Set clear goals/lesson outcomes
2. Plan intentionally for learner variability
3. Use flexible methods and materials
4. Monitor progress regularly
1. Set Clear Lesson Goals

- Be very clear and precise about what learning you want to take place.
- Separate the goal from the means of accomplishing it (assessment).

Why? Including the “means” automatically creates barriers and limitations for some students. Dictating the ways that students are allowed to express their learning can limit the extent to which teachers can actually see and assess learning.

Example:

By the end of today you will have read a short story about a tiger and inserted several transitional phrases to mark the sequence of events in the story. You will then use the i-pads to document your changes made.
Key words (by, through, on, in)

Learning Outcome:
Students will be able to discuss themes in the novel Speak, assess their own knowledge and/or opinions on the matter, and talk with fellow students about those issues.

Assessment(s):
Students will discuss the themes mentioned in the Anticipation Guide. I will also have them write a two-paragraph summary of what was discussed and what their thoughts and feelings on the matter are.

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Students can create a summary from a passage by pulling out the main ideas.

What options do students have for achieving this goal?
2. Plan for learner variability

He has excellent drawing skills, good reading and writing skills. Vocabulary is above grade level. He has good math skills, but does not enjoy it very much. Has difficulty interacting in social situations and is often alone. Likes a similar, predictable routine every day. Has difficulty listening to and remembering complex instructions. Loves reading graphic novels. Wants to be a cartoon artist.

She has difficulty sitting still. Has difficulty reading on grade level, but has a very good auditory memory and verbal skills. Can verbally argue persuasively on any side of a debate. She has poor penmanship and has a hard time writing by hand, but knows how to type. Relies on classmates for help often, but rarely asks the teacher. Struggles to complete assignments with tight time requirements. Takes dance classes. Wants to be a lawyer.

He is a refugee, attended school before fleeing. ELL. He has been in the states for 2 years. He has good conversational skills, but still struggles with English academic vocabulary. Low reading comprehension. Grade level computational skills in math, but struggles with word problems. Good social skills, well liked by classmates, friendly. Has difficulty with spelling, which frustrates him during writing assignments. Often serious and is concerned with global political events. Wants to be a doctor.

She loves math and science, doing any hands on projects, but does not enjoy reading and has difficulty with comprehension. Is undocumented and worries about someone finding out. Has only one or two trusted friends. Misses several days of school a month and does not turn in missed work. Wants to be an environmental scientist.

He is athletic, seen as a leader in the class. He has hearing loss in one ear, which makes it difficult to hear in a noisy environment, or when videos are shown to the class. He has good reading comprehension, but struggles to organize his writing clearly. He has difficulty with abstract concepts and he is inconsistent with turning in homework, but works well in class. Plays sports after school. Doesn’t know what he wants to do yet.

Speaks English and Japanese fluently. Excellent reading, writing, and math skills. Works quickly and finishes assignments on time. Is responsible and mature for her age. Is a literal thinker, has difficulty with critical thinking skills. Uses a wheelchair but has hand mobility. Loves music and is learning to play the cello. Wants to be a teacher.
Design 101

Know your learners

- Intentional, proactive planning that recognizes every learner is unique and that meeting the needs of learners in the margins— from challenged to most advanced— will likely benefit everyone.
- Addressing learner strengths and weaknesses, considering variables such as perceptual ability, language ability, background knowledge, cognitive strategies, and motivation.
- Anticipate the need for options, methods, materials, and other resources including personnel— to provide adequate support and scaffolding.
- Maintains the rigor of the lesson— for all learners— by planning efforts (1) that embed necessary supports and (2) reduce unnecessary barriers.
3. Use Flexible Methods and Materials

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The “why” of learning
How learners get engaged and stay motivated. How they are challenged, excited, or interested. These are affective dimensions.

- Present information and content in different ways
- Differentiate the ways that students can express what they know
- Stimulate interest and motivation for learning

Principle #1: Provide Multiple Means of Representation
Principle #2: Provide Multiple Means of Action and Expression
Principle #3: Provide Multiple Means of Engagement
The Universal Design for Learning Guidelines

Provide multiple means of Engagement
Affective Networks: The "WHY" of Learning
- Provide options for Recruiting Interest
  - Optimize individual choice and autonomy (T.1)
  - Optimize relevance, value, and authenticity (T.2)
  - Minimize threats and distractions (T.3)
- Provide options for Sustaining Effort & Persistence
  - Heighten salience of goals and objectives (S.1)
  - Vary demands and resources to optimize challenge (S.2)
  - Increase mastery-oriented feedback (S.3)
- Provide options for Self Regulation
  - Promote expectations and beliefs that optimize motivation (S.1)
  - Facilitate personal coping skills and strategies (S.2)
  - Develop self-assessment and reflection (S.3)

Provide multiple means of Representation
Recognition Networks: The "WHAT" of Learning
- Provide options for Perception
  - Offer ways of customizing the display of information (P.1)
  - Offer alternatives for auditory information (P.2)
  - Offer alternatives for visual information (P.3)
- Provide options for Language & Symbols
  - Clarify vocabulary and symbols (L.1)
  - Clarify syntax and structure (L.2)
  - Support decoding, meaning, mathematical notation, and symbols (L.3)
  - Promote understanding across languages (L.4)
  - Illustrate through multiple media (L.5)

Provide multiple means of Action & Expression
Strategic Networks: The "HOW" of Learning
- Provide options for Physical Action
  - Vary the methods for response and navigation (A.1)
  - Optimize access to tools and assistive technologies (A.2)
- Provide options for Executive Functions
  - Guide appropriate goal-setting (E.1)
  - Support planning and strategy development (E.2)
  - Facilitate managing information and resources (E.3)
  - Enhance capacity for monitoring progress (E.4)
- Provide options for Comprehension
  - Activate or supply background knowledge (C.1)
  - Highlight patterns, critical features, big ideas, and relationships (C.2)
  - Guide information processing and visualization (C.3)
  - Maximize transfer and generalization (C.4)

CAST until learning has no limits

Expert learners who are...
- Purposeful & Motivated
- Resourceful & Knowledgeable
- Strategic & Goal-Directed
How does technology fit in?

Tools can provide flexibility in representation, expression, and engagement. They can be built into software, or

Common examples:

**Closed captions** provide another access point of representation. These can be helpful for students who are hard of hearing, students learning English, and anyone learning to read.

**Speech to Text software** provide alternatives for expression. Google, Dragon, Evernote, etc.

**Text to Speech software**
Screen reading apps, built in accessibility function on many devices.
Flexible Program Examples

GetEpic - reading program, has options for students to have words read to them.

NearPod - allows students to express through writing and drawing.

VoiceThread and Canvas - Students can discuss through audio, video, or written comments

Display and Accessibility settings - text size, background color, text color
4. Monitor Progress Regularly

UDL does not mean not assessing progress!

Separating the assessment from the lesson objective only helps teachers clarify exactly what the objective is without mandating a single way to show learning.

Assessments and progress monitoring should follow the same accessibility principles as the rest of the materials. Frequent assessment is vital to student growth and teacher confidence that growth is occurring.
Lesson Plan Summary

We are grading 2 things:

1. **Goals** - Does it include means of assessment or not?
2. **How many checkpoints (bullets) they include in their summary** - 9 for full points.

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<td>Summary of how UDL principles were used in planning. How many of the checkpoints were taken into consideration and applied during the lesson? Are the strategies and technology used to provide options for all students?</td>
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<td>Summary describes in detail how the lesson and assessment provide flexibility and options by referencing at least 9 checkpoints, 3 from each guideline, e.g., means of engagement, representation, and action/expression.</td>
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<td>Summary describes how the lesson and assessment provide at least 2 means of engagement, representation, and action/expression to improve learning for all students. Summary includes an explicit statement of how the technology is used to provide flexibility and options according to the UDL principles or checkpoints.</td>
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<td>Summary describes in detail how the lesson and assessment provide means of engagement, representation, and action/expression. 1 or more aspects are missing. Summary includes an explicit statement of how the technology is used to provide flexibility and options according to the UDL principles or checkpoints.</td>
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UDL vs. Differentiation and Accommodations

Whatever plan you make to include options for all students should help students in any category.

Often, it feels like we include options/accommodations for students who need them and it helps the rest of the students.

Explain to students why we are asking for the UDL Summary and Adaptations for Diverse learners (rubric requirements for McKay school). But they should already have addressed the adaptations in the UDL summary, so they can reiterate what they already have in place for the 3 populations.