Universal Design for Learning

Ensuring Access and Participation for All Children
How can you hold thirty hands when you only have two?
What is Universal Design for Learning (UDL)?

Universal design for learning is the design of environments, materials, instructional methods, content, outcomes, and assessment procedures which are usable for all students to the greatest extent possible, without the need for adaptation or specialized design.

With UDL, every student is an individual with unique interests, needs and abilities.
Terms You May Hear About

- Universal Design for Instruction
- Universal Instructional Design
- Universal Design for Education
What is Universal Design for Learning?

- Provides alternatives for all learners
- Maintains high standards for all learners
- Allows access and learning goals to be achieved
- Accommodates for differences in abilities to see, hear, speak, move, read, write, understand English, attend, organize, engage, and remember
- Creates flexible curricular materials and activities
- Builds upon three principles
Origins of Universal Design

UD originated in the field of architecture to create structures that were designed from the beginning to accommodate the widest range of users: eliminating barriers for all users, including those with disabilities

– Ron Mace

– North Carolina State University
Consider this...

Curb Cut
- Wheelchairs
- Strollers
- Skateboards
- Walkers with & without canes

Television Captioning
- Individuals who are deaf
- Exercisers
- Diners
- Couples & Sleep
- Language Skills
- Cost $

(Rose & Meyer, 2002)
We have made the buildings more accessible, but the curriculum is still not accessible for all students...

The notion of Universal Design for Learning was born...
Ensuring Access to the General Curriculum

- Incorporate the principles of Universal Design for Learning (UDL)
- Engage in authentic assessment
- Focus on the Big Ideas
- Rethink the role of the Individualized Education Plan
- Ask a different question about how to meet diverse learning needs
What are Big Ideas?

Big Ideas are:

- “Highly selected concepts, principles, rules, strategies, or heuristics that facilitate the most efficient and broadest acquisition of knowledge” (Kame‘enui, Carnine, Disxon, Simmons, & Coyne, 2002, p.9)

- 25 ideas that are represented across all four areas of Ohio’s Early Learning Content Standards (ELCS)
Why Focus on Big Ideas?

- Keeps attention on essential skill categories
- Is a practical way of addressing a large body of knowledge/content
- Allows for the targeting of observable skills
- Allows for measuring children’s progress over time
Asking a Different Question

How can an activity or learning materials address the needs of diverse learners?

Vs.

How does the activity need to be modified for a particular child?
Learning and the Brain

Current Brain Research…

- Recognition Network
- Strategic Network
- Affective Network
Learning and the Brain

Recognition Network:

- Recognizing
- Identifying
- Interpreting
- Sound, light, taste, smell, touch

Classroom examples: identifying letters, formulas, maps, ideas, cause and effect relationships, etc…
Learning and the Brain

Strategic Networks:
- Planning
- Executing
- Monitoring actions and skills

Classroom examples: doing a project, composing an essay, taking a test, etc…
Learning and the Brain

Affective Network:
- Engagement
- Motivation
- Developing preferences
- Establishing priorities and interests

Classroom Examples: essential to wanting to learn
Let’s Test Your Brain’s Networks
Learning Theory

Lev Vygotsky: Russian psychologist

- 3 prerequisites for learning: (parallels 3 brain networks)
  - One must recognize patterns in information
  - One must have strategies for acting
  - One must be engaged

- Zone of Proximal Development
Elements of Universal Design for Learning

Multiple Means of:

- Representation
- Engagement
- Expression

Jackson, Pretti-Fronczak, & Shuck, 2005
Elements of UDL

**Multiple Means of Representation:**

- Refers to the use of a variety of materials, visuals, environments and technological devices that allow all students, regardless of their ability, to understand and master the learning process and reach intended outcomes.

- This principle ensures questions, expectations, and learning opportunities are provided in various formats and at different levels of complexity, addressing a range of ability levels and visual, auditory, and kinesthetic needs.
Multiple Means of Representation Unpacked

- Complexity of actions, directions, expectations, materials, processes, steps, supports and/or tasks
  - Easier to more difficult
  - Single to multiple components
  - Earlier to later developmental skills
  - Familiar to novel
  - Supported to independent
Multiple Means of Representation

Infant-Toddler

- Caregivers provide toys/materials that combine different and multiple sensory features, for example:
  - colorful toys/materials that make sounds
  - toys/materials with interesting shapes and textures
  - toys/materials that move, and
  - toys/materials that can be held, shaken, and mouthed.
- Caregivers communicate with children in many different ways including:
  - talking
  - singing songs
  - reading books
  - showing pictures,
  - playing music
  - dancing
  - sharing toys and materials
  - playing finger games, and
  - using gestures.

Preschool

- Teachers use different and multiple formats to provide important information. For example, teachers inform children about the daily schedule by:
  - presenting the schedule verbally and visually
  - discussing the schedule in groups or one-on-one
  - posting the schedule on the wall in a series of simple icons and/or photographs
  - writing the schedule out with simple words
  - making the schedule available on rings of cards or with Velcro pictures to provide visual reminders of the daily routine
  - recording the schedule on a cassette tape that is available in the listening center, and
  - preparing the schedule for children to use on a computer
Unpacking MMR Continued

- Form
  - Auditory
  - Kinesthetic
  - Tactile
  - Visual

Jackson, Pretti-Fronczak, & Shuck, 2005
Elements of UDL Continued

**Multiple means of Engagement:**

- Refers to the use of a variety of activities for students to participate and be actively involved in the learning process.

- This principle ensures various opportunities are presented for arousing children’s attention, curiosity, and motivation, addressing a wide range of interests, preferences, and personal styles. Engagement is then maintained by providing various levels of scaffolding, repetition, and appropriate challenges to ensure successful learning.
Multiple Means of Engagement Unpacked

- Child/Student choice
- Format for instruction
- Group size
- Type of group

Jackson, Pretti-Fronczak, & Shuck, 2005

SPED 63958 Early Childhood Methods, Sarah Jackson
Multiple Means of Engagement

Infant Toddlers
- Caregivers ensure that multiple and varied learning opportunities, daily activities, and toys/materials are available so children can select what appeals to them. For example:
  - Some activities and toys/materials are very simple, straightforward and foster independent play while others require adult support and organization. For example, a child may be able to explore a mirror mounted in an easily held rattle frame, but may need support to explore a pop-up book.
  - Some activities and toys/materials are familiar and predictable, such as an easily activated light-up music box, but others may be new and surprising, such as a jack-in-the-box.
  - Some toys/materials are soft and cuddly, and others invite active, boisterous play.
  - Some toys/materials have bright and colorful patterns, while others are uniform or plain.

Preschool
- Teachers provide multiple and varied ways for children to direct their play and be involved in routine and planned activities. For example:
  - Materials for an art project are designed and selected to inspire creativity. Rather than just copying an adult's model, children may cut or tear, color or paint, glue or tape, build a model, and create alone or work with a peer.
  - The dramatic play area is stocked with an array of creative, open-ended materials such as scarves, writing supplies, and containers of odds and ends that encourage children to participate in personally meaningful ways. They may choose to act out roles and scenarios that are either fantasy- or reality-based, that represent their own or other cultures, and that are simple and customary or complex and imaginative.
Elements of UDL Continued

**Multiple means of Expression:**
- Refers to the use of a variety of methods the instructor uses to allow students to express what they are able to do and demonstrate their knowledge in achieving the target outcome.
- This principle ensures children have a variety of formats for responding, using resources, toys, and materials demonstrating what they know and expressing ideas, feelings, and preferences and addressing individual strengths, preferences, and abilities.
Multiple Means of Expression Unpacked

- Verbal
- Non-verbal

Jackson, Pretti-Fronczak, & Shuck, 2005
Multiple Means of Expression

Infant Toddlers
• Toys and materials can be used in **different and multiple** ways, allowing children to interact with them in ways best suited for them. For example:
• Toys/materials may have large handles, buttons, or controls that are easily activated by movement or voice.
• Different types of blocks are provided that can be used for building, stacking, linking, making patterns, banging, holding, or mouthing.
• Caregivers encourage children to communicate through their use of toys/materials as well as with facial expression, gestures, pictures, signs, **and** speech.

Preschool
• Children are encouraged to express their understanding in **many** different ways. For example, children learning nursery rhymes may:
• recite or sing the rhymes individually or in small groups,
• act them out in the dramatic play area or with puppets,
• create a visual representation in the art area,
• review the rhymes in the listening center, and record themselves saying the rhymes or creating their own rhymes,
• use the overhead projector to create and display their work, **and**
• use the Smart Board to visit an interactive website to share with their peers.
UDL can be achieved without the presence of expensive technology.
Making Accommodations

◊ Make accommodations when necessary
  – Accommodations level the play field for all learners
  ◇ Provide equal access without substantial alterations
Accommodations

- Pace (extended wait or performance time)
- Presentation of information (verbal, visual, tactile)
- How directions are provided (written, visual cues)
- Environmental arrangement (placement of objects, distraction reductions)
- Type of materials (size of print, alternative communication devices)
- Social supports (peer tutoring, cooperative learning)
- Reinforcement (intrinsic, extrinsic, verbal, choice)
- Self management (picture schedule)
- Testing considerations (type of questions, environment, length of time)
Universal Design for Learning

- Modifications
- Individual Accommodations
- General Curriculum
- Accommodations
UDL and the Environment

- Flexible
- Generated with goals in mind
- Provides access
Why use UDL?

Using the principles of UDL allows educators to create experiences and educational opportunities where all students can reach target outcomes. Instruction in the class is more effective by allowing students to have a variety of ways to be involved in the learning process and show, through a variety of methods their knowledge about the target outcome(s).

SPED 63958 Early Childhood Methods, Sarah Jackson
When UDL is used......

“The more ways I find to use UDL in the classroom, the more often I see my students’ individual needs being addressed.”

“UDL helped to organize my instruction and environment. We were all on the same page working together to support common goals. We were not just doing something to do it or have it in the classroom.”
What UDL Will Not Do

Eliminate the need for special education programming for children with disabilities entirely
Critical Consumers of Research

UDL is not an evidence based practice, but shows promise in creating successful learning environments for all children.
Dunst’s working definition of evidenced based practice:

“Practice that are informed by research, in which the characteristics and consequences of environmental variables are empirically established and the relationship directly informs what a practitioner can do to produce a desired outcome”.

SPED 63958 Early Childhood Methods,
Sarah Jackson
Evidenced Based Practice

• Who?
  – Who did the research?

• What?
  – What types of studies were done? Small scale?
  – What type of reliability and validity studies were completed?
Evidenced Based Practice

- Where?
  - Speaks to demographics. Small scale study completed in Nebraska vs. large scale study that looks at populations from urban, suburban, and rural settings of culturally diverse backgrounds.
Evidenced based practice

• When?
  – When was the study completed? Is it up to date? Should further research be done in order to support findings?
Check In

- Red: I am still unclear on how the principles of UDL to support young children

- Yellow: I understand the principles of UDL, but need further understanding of how to apply in an educational setting

- Green: I understand how to apply the principles of UDL
UDL Activity

1. Read the Exchange article
2. As a team, determine the criteria you are going to use to evaluate the materials for the principals of UDL.
3. Examine the toy using the determined criteria
4. Identify the skills and concepts that children develop as they interact with the toy or object
5. What adaptations need to be in place to meet UDL criteria, if possible.
6. Create a handout displaying criteria, skills, and adaptation suggestions for each toy.
Resources

The definition/principles/history of Universal Design:
www.design.ncsu.edu/cud/univ_design/princ_overview.htm

A guide to assisting families in creating play environments for children:
http://letsplay.buffalo.edu/products/index.htm

National Center for Accessing the General Curriculum: www.cast.org/ncac

Access to the general curriculum: www.ideapRACTICES.org

Books:
Citations


Preparing for July 19

- Print off PPT, Part 1
- Print of Inventory of Practices
- Look over syllabus to see if you have any questions
- Continue to work on your UDL handout