

Universal Design for Learning

Multiple Intelligences The Four Learning Types

WE LEARN . . .

10% of what we read

20% of what we hear

30% of what we see

50% of what we both see and hear

70% of what is discussed with others

80% of what we experience personally

95% of what we TEACH to someone else

_ William Glasser

Education in the Digital Age

UDL: The “Intersection of Initiatives”

- The concept of UDL is the intersection where all our initiatives - integrated units, multi-sensory teaching, multiple intelligences, differentiated instruction, use of computers in schools, performance-based assessment, and others come together.

Donna Palley, Special Education Coordinator

Universal Design

- Originated in the field of architecture
 - Automatic doors
 - Wider doors
 - Curb cuts
 - Accessible sinks
 - Water feature
- Essential is that access features are built in and not added as an afterthought
- The design of instructional materials and activities that allow the learning goals to be achievable by children with broad differences in their abilities
 - To see, hear, speak, move, read, write, understand English, attend to information, organize, engage, and remember
- Achieved by means of a flexible curricular material
 - Alternatives are built into the design of materials, equipment, instruction, and activities
- Not added afterwards

Universal Design for Learning

- Essential Qualities of Universal Design for Learning
- Multiple means of representation
- Multiple means of expression
- Multiple means of engagement

Multiple means of Representation

- Information can be obtained in a variety of ways
 - Auditory, visual, motor
- Purpose is to reduce the perceptual/learning barriers and to adjust to the diverse ways in which students are able to recognize and understand information.
 - Print and digital format
 - Enlarged text
 - Computer can speak text

Brain Research

- Different areas of the brain are active when
 - Passively viewing words
 - Listening to words
 - Speaking words - (motor strip)
 - Generating verbs - (two areas of burn)
- When burning glucose we are learning
 - Naive situations and Novel situations will keep burning glucose - practice behavior is at a bored thought

Implications

- ADD level of unarousal
- ADD and ADHD really respond to novel experiences
- ADD - faster rate of speech engages the reading process
- Autistic kids - novelty would send them in the wrong direction

Reasons to Use Technology

- Utilizes multiple modalities
- Motivates reluctant writers
- Fosters organizational skills
- Reduces text generation
- Used as a group project (Cooperative Learning)
- Promotes oral communication
- Final product enhances self-esteem

Curriculum materials

- When available in multiple formats takes advantage of multiple modalities
 - Text
 - Graphics
 - Sound
 - Video

Multiple means of Expression

- Students can respond with their preferred means of output. Students could
 - write answer
 - Speak an answer
 - Design a graphic to answer a question
 - Utilize minimal motor abilities to make a multiple choice response
- Material accommodates different styles, preferences, strategic approaches and motor abilities of students

Multiple means of Engagement

- Interest in learning is matched with the mode of presentation and response so that students are motivated.
 - Obtain a graphic in the middle of a reading passage
 - Longer words quickly defined
- Materials have the ability to learn or remember the individual student's patterns and preferences and track their progress.

Computer-Based Study Strategies

- CBSS are a set of tools and techniques for being successful
- CBSS Outreach Project
<http://cbss.uoregon.edu>

Computer-Based Study Strategies

- What is Studying?
 - Independence
 - Accountability
 - Mastery
- What is Effective studying?
 - Active **MANIPULATION** of the material
 - Ability to **MONITOR** progress
 - Personally **RESPONSIBLE** and motivated

Assistive Technology Vs. Instructional Technology

Assistive - assists individuals to complete tasks. The student requires its use because it can't be accomplished any other way.

Instructional - assist students in acquiring information. Is used for a period of time to acquire or reinforce a certain skill.

Access, Participation, and Progress in the UDL Curriculum

Access

Keeping the plan in mind
Keeping it Challenging

Participation

Importance of Clear Goals
Using Varied Tools

Progress

Challenging Goals

UDL Curriculum

Goals
Materials

Methods
Assessment

Teaching Every Student in the Digital Age

<http://www.cast.org/teachingeverystudent/>

In Summary

Assistive Technology looks at the specific barriers a student may face in whatever environment they find themselves.

Universal Design looks to make the learning environment as flexible and accommodating as possible.

Both approaches strive to insure the access, participation and progress of students with disabilities and are most powerful when appropriately combined.

Flexible materials fulfill the promise of UDL in that they open doors and circumvent barriers for students with disabilities and also improve learning opportunities for all students.