Universal Design for Learning: Best Practice in Inclusive Education

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Agenda

- Brief introduction to Universal Design for Learning (UDL)
- The role of UDL as the basis of comprehensive inclusive education
- Brain-based disabilities and UDL
- Accommodations and UDL

UDL and Inclusion

- Effective inclusive education is a comprehensive and multifaceted process
  - Physical inclusion - student spends time each day in the general education classroom, is physically present with non-disabled peers with limited performance expectations
  - Social inclusion - student is physically present in the classroom, with expectation for social with non-disabled peers, students often address IEP goals written by the special education teacher via 1:1 instruction from a special education paraprofessional
  - Curricular inclusion - all students have appropriate social, behavioral, and academic expectations, all students have curriculum-based goals, paraprofessionals support all students under the guidance of the general education teacher, co-teaching models can also be effective

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Common challenges

- Some students receive the majority of their instruction from paraprofessionals
- Grade level curriculum is too difficult for some students
- Grade level curriculum is too easy for some students
- Some students have behavior problems which disrupt their learning and potentially the learning of others
- Some students need to use many accommodations to access general education instruction, activities, and assessment
- Any given classroom may include students with a wide array of individual needs

The Need

Learning opportunities in the general education curriculum that are:

INCLUSIVE and EFFECTIVE

FOR ALL

Example Scenario

Middle School Social Studies Class

- 22 students in class
- 1 student with autism spectrum disorder
- 1 w/ FASD and 2 probable FAE
- 2 intellectually gifted
- 3 w/ learning disabilities in reading
- 2 w/ ADHD (and no IEP)
SS Unit- Ancient Rome

- Content knowledge
- Main ideas
- Important events, people, and places
- Reading - Vocabulary; Decoding and Comprehension
- Writing - Summary Paragraphs; Main Idea and Supporting Details
- Geography/Science

“Tools of the trade”

- Accommodations- modify tests and quizzes, add additional supports for reading and writing as needed, change timelines as needed, pull out as needed to give students necessary support

- Modifications- instructional input and student output
  - difficulty
  - amount
  - modality
  - format/materials

HELP!!!

There aren’t enough hours in the day to retro-fit the general education curriculum to meet the individual learning needs of all the learners in the classroom!!
Universal design- a phrase borrowed from architecture

- The term “universal design” means a concept or philosophy for designing and delivering products and services that are usable by people with the widest possible range of functional capabilities, which include products and services that are directly usable (without requiring assistive technologies) and products and services that are made usable with assistive technologies. (U.S.C. § 3002)

UD Origin and Definitions

“Consider the needs of the broadest possible range of users from the beginning.”

Architect, Ron Mace

UD Origin and Definitions

UD is a proactive approach to architectural design that provides for anticipated user differences rather than having to retrofit a building later.
One Simple UD Example

Automated Door
Can be used by:
- People carrying large items
- People in wheelchairs
- People with service animals
- Everyone!

Universal Design for Learning (UDL)

Definition:
UDL is an educational approach to teaching, learning, and assessment that allows us to respond effectively to individual learner differences.

Universal design for learning

Combines new insights from brain research about the nature of learner differences

... with a century of best practices in progressive education.
Brain research tells us

- Each child’s learning profile is as unique as his or her fingerprint.
- Successful students are able to master the content AND processes of academic learning activities.
- Students with special needs often struggle more with the cognitive processes needed to address curriculum content than with the content itself.
- Impaired executive function is present in many learners with disabilities.

Executive function

“...the ability to anticipate consequences, generate novel solutions, initiate appropriate actions or responses to situations, monitor the ongoing success or failure of one’s behavior, and modify performance based on unexpected changes.”

Pennington & Ozonoff, 1996

EF is a part of daily life

- Organization
- Making plans
- Neatness
- Getting things done!
- We all have EF strengths and strategies that we use to successfully navigate the world.
Impairment in EF is common

- Learning disabilities
- ADD
- ADHD
- FASD
- Autism spectrum disorder
- TBI

Executive functions

- Impulse control/inhibition
- Working memory
- Emotional control
- Sustained attention
- Task initiation
- Planning/prioritizing
- Organization

- Time management
- Goal-directed persistence
- Flexibility
- Metacognition

Executive Function Effect: Independent Studying, Homework & Long-Term Projects

What is required? **self-regulation, self-monitoring, cognitive flexibility**

What can go wrong? **Problems can arise in planning ahead, predicting outcome, and setting long term goals**

Organization
- Time management
- Acquiring materials & information
- Sequencing information
- Bringing task to completion
- Remembering to submit in a timely manner

Skills needed for completing independent projects in higher grades
Executive Function: Reading Comprehension

What is required? Numerous EF skills

What can go wrong? Problems can arise in:
- Monitoring performance to ensure tracking of the text correctly (especially if there are phonological or orthographic problems) and synthesizing content to in order to “build meaning” contained within the text.
- Shifting flexibly to draw inferences & conclusions, process redundant information, and interpreting words and language that are ambiguous.
- Prioritizing and reprioritizing to make the text useful the students particular purposes (e.g., what is the most important event in this book?)

Executive Function: Written Expression

What is required? Allocating and managing cognitive and attentional resources so the student can focus on the meaning of the text:

What can go wrong? Problems can arise in:
- Planning and defining the first step (note: this causes problems with initiation of the activity).
- Flexible thinking is needed to evaluate, rephrase or paraphrase information on the assigned topic.
- Organizing and prioritizing a broad range of subskills including drafting a complete thought to communicate to an absent audience, spatial organization of writing on the page, using accurate syntax, organizing arguments to persuade, using the traditional structure of an essay (intro, body and conclusion).

What can impaired EF look like?
- Poor academic performance
- Discrepancy between ability and performance
- Lack of task completion
- Inability to multi-task
- Disorganization
- Constantly asking questions
- Refusal behavior
- Daydreaming
- Not following directions, always “in trouble”
- Trouble turning in homework
- Chronic tardiness
Task Completion: Process

- Goal Setting
- Planning & Prioritizing
- Organizing
- Initiating
- Attention, Persistence, & Flexibility
- Self-Monitoring & Checking

When do we see EF difficulties?
- During difficult or novel situations
- When students have strong feelings about something
- When students are asked to compromise or be flexible
- During physical and cognitive transitions
- When students attempt a complex, multi-step task
- When students are under stress (for any number of reasons)
- During fast-paced activities
- When things change unexpectedly

Accommodations and modifications
- Changes to the physical or social environment
- Changes to the cues that are provided to initiate and complete tasks in the manner desired by the teacher
- Changes to the nature of the task
Changes to the teaching/learning environment

- Classroom routines and procedures
- Classroom organization
- Seating options
- Modeling of product and process
- Manipulatives/hands-on supports
- Scaffolded instruction

Changes to the ways prompts and cues are provided

- Visuals, visuals, visuals!
- Schedules, systems, checklists, rubrics, graphic organizers
- Build in cues for self-monitoring

Changing the nature of the task

- Make the task shorter
- Make the steps explicit
- Mini-deadlines
- Offer bonus points for handing in homework and assignments on time instead of taking points away
- Offer feedback and opportunities to revise writing assignments before grading them
- Offer students choices for ways to demonstrate content knowledge
- Offer credit for all efforts to correct work
- Offer opportunities to retake failed tests
- Offer multiple ways to participate in classroom activities, not just oral expression
- Deduct no more than 5-10% of total points for minor detail errors
Back to our Social Studies Class

So what would happen if we used common classroom accommodations and modifications in a proactive manner instead of retrofitting?

How might we approach this task?

Neuroscience to the Classroom

UDL is built on three research-based principles:

- **Provide multiple means of representation** to give learners various ways of acquiring information and knowledge
- **Provide multiple means of expression** to provide learners alternatives for demonstrating what they know
- **Provide multiple means of engagement** to tap into learners’ interests, challenge them appropriately, and motivate them to learn

(Basham, Edyburn, Lowery, & Wissick, 2007)
Multiple Representations of Information
Examples
• Offer text-to-speech, video, audio, and other multimedia; integrate assistive technologies into learning environment
• Provide vocabulary support and background knowledge
• Highlight critical features & main ideas

Multiple Means of Action and Expression
Examples
• Let students show what they know with voice recording, graphic displays, performance, etc.
• Provide models of expert performance
• Offer executive-function supports such as graphic organizers, outlines, etc.

Multiple Means of Engagement
Examples
• Vary levels of challenge and support to prevent frustration or boredom
• Tie work to real-world examples
• Where possible, give choices
• Teach self-assessment and reflection
UDL creates environments where

- All students are active participants in classroom activities
- All students experience educational success
- All students are gaining skills and knowledge
- All students feel comfortable and are engaged in the learning process

Working together with UDL

- Accommodations
- Modifications
- Motivation
- Individualized needs
- Behavior management
- Life skills

Roles and Responsibilities

- General education teacher
  - Curriculum area expert
  - Share content knowledge and “big ideas”
  - Unit planning with special education teacher
  - Goals
  - Learning activities
  - Materials
  - Assessments
  - Use accommodations proactively
  - Provide all materials to be modified IN ADVANCE

- Special education teacher
  - Intervention expert
  - Share knowledge about brain-based and other disabilities
  - Share knowledge on accommodations
  - Modify materials as needed
  - Obtain specialized technology as needed
  - Consider co-teaching model
  - Provide materials and plans to paraprofessional
Comments and Questions