COMPANION GUIDE

Distance Learning Modules

UDL & AT

OPEN ACCESS

ACCESSIBLE CURRICULUM for ALL

Welcome to
UDL & AT Immersion

MODULE ONE

"Don't fear failure. Be afraid of not having the chance. You have the chance!"

-Sally (Cars 3)

Pre-Session: Module 1

Introductions

Norms

Outcomes

Learning Path

Surveys

Grounding

Prior to entering the live session, take some time to prepare for the module and the learning ahead.

INTRODUCTIONS

Who is in the room?

Create an Introduction slide of yourself; add pictures that represent you and answer the following questions:

1. Why are you here?
2. Share your favorite social media platform (ie Twitter, Instagram) so we can tag or follow you!

Open the link to the "Who is in the Room" template in the chat.

NORMS

Review our norms.

- Commit to staying present in this virtual setting.
- Ask questions to move your learning forward.
- Share something **and** take away something new.
- Mute yourself unless sharing with the whole group.
- Mind your video.

We'll come back to these as we start our session, but think about what these mean for you and your learning. What else do you need?

OUTCOMES

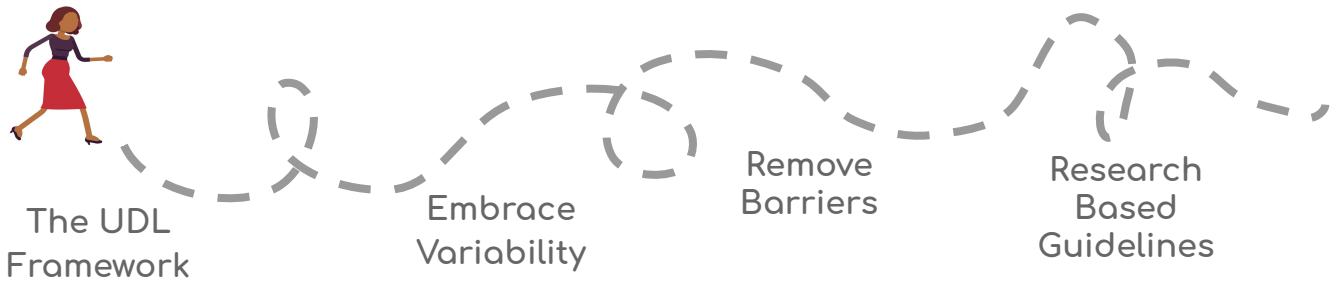
What is it we hope you will know and be able to do after this UDL/AT Immersion?

- Understand that UDL often requires us to shift conventional thinking about instruction - to remove barriers, consider learning variability and eliminate the myth of the average student.
- Reflect on how UDL creates opportunities for intentional instructional design that accounts for the wide swath of student backgrounds and learning needs.
- Understand the UDL framework and how the parts of it interrelate.
- Understand when it might be necessary for a more individualized approach to identify specific strategies and tools.
- Build foundational key beliefs about supporting learners with assistive technology.
- Understand the requirements for providing assistive technology, and the purpose for developing and supporting their role in the AT Considertion process.
- Understand where barriers in the classroom are found, and possible strategies and resources to eliminate them.
- Be able to effectively participate in the AT Consideration Process for students you serve.

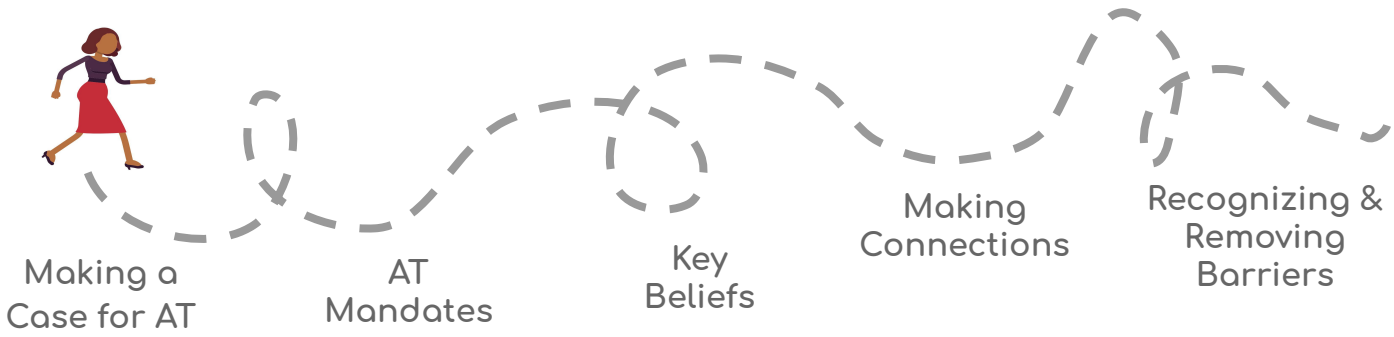
LEARNING PATH

Take a look at the path we will be on as we start to think about digital tools and assistive technologies through a UDL lens.

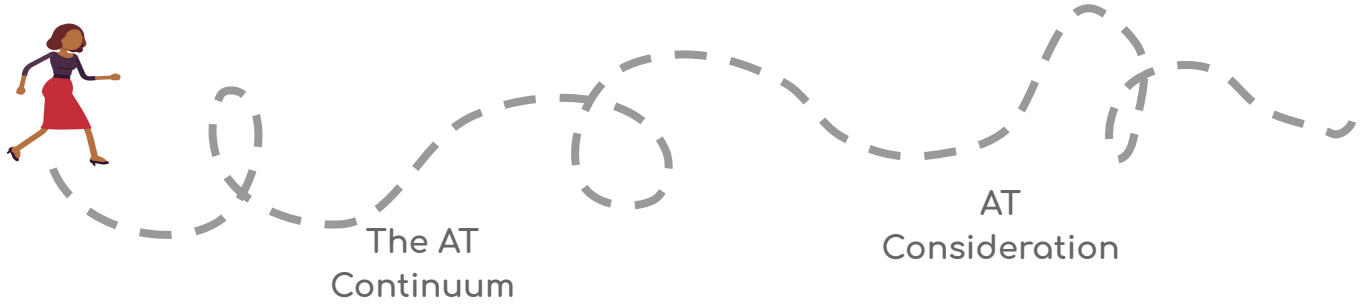
Module 1 - Introduction to UDL



Module 2 - Making a Case for AT



Module 3 - AT Consideration



Reflect on Outcomes & Learning Path

Take a moment to identify what is familiar and what may be new about these concepts we'll be exploring together:

Something familiar.... *Something new...*

What are you MOST looking forward to exploring in order to better support your learners?

Set an Intention

As you think about starting this learning path into UDL and AT, create an intention for yourself. Setting an intention primes our brain and helps us ready ourselves, creating a greater focus for new learning.

How would you like to show up for this training (e.g. take away all distractions; engage with new colleagues; be open to asking questions, etc.). What do you need to get the most out of this opportunity?

SURVEYS

We are going to be collecting some data and feedback as we move together through this project.

You'll find the surveys on the Course page in our Open Access website.

Navigate to
www.openaccess-ca.org

Under the "Professional Learning" tab, click on the drop down "Professional Learning AT Path" or click on "Accessible Curriculum for All (AT)". Choose "UDL & AT Immersion".

Use the password **allmeansall** and you're in the course!

Before we start the session, go to Surveys, find your cohort and complete the first two surveys on the list:

Make sure you complete these two surveys before we begin the live session!

GROUNDING

We'll start each module with a grounding, something to help anchor us in the subject of our learning.

How do you define UDL just starting out this work? What did you tell your co-workers, friends or family members when they asked you what you were doing today and you had to explain the topic of this training you are attending? This is often referred to as an "elevator speech" - what you would say to a person unfamiliar with the framework if you just have just a few minutes to convey what's really important.

You will have a couple of resources in order to accomplish this. On the following 4 pages (pages 9-12) are two print resources:

- The BIG IDEAS - Universal Design for Learning (an Open Access resource)
- What is UDL? - an infographic from Katie Novak

You can also take a few minutes to watch Katie Novak explain the framework. To watch the video, click here. **[you can also find this video on YouTube by searching for "what is UDL? - Katie Novak]**

After you finish your research, write YOUR definition on Page 13 of this guide.

Big Ideas Universal Design for Learning

Universal Design for Learning is a framework that embraces variability, removes barriers, and supports all students in becoming "expert learners" through specific strategies that are based on what we know about how we learn (the UDL Guidelines).

CAST describes UDL as "*a framework to improve and optimize teaching and learning for all people, based on scientific insights into how humans learn*"*. It is the framework and foundation for designing and delivering instruction that supports the variability of all learners, which makes it the best practice for teaching all students in an inclusive learning environment.

UDL believes that everyone is a variable learner and rejects the idea of an "average learner". "*Yet our educational system is designed around the idea that most people learn the same way and that a "fair" education is an identical one*"*.

Dive Deeper: Todd Rose explains this concept in the "Myth of Average"

UDL believes that barriers are in the environment and not the student. The learning context itself (e.g. the environment, the methods, the materials) effects whether an individual characteristic of a student becomes a barrier to learning, or not. Think of a student who is deaf. If a class is taught in spoken English only, this presents a barrier. If the same instruction is provided in sign language that barrier may be eliminated. The disability is **contextual**, and **not inherent** in a person. A major goal in implementing UDL is to remove barriers and design to the edges of your classroom

Dive Deeper: Watch master educator Shelley Moore explain these concepts in "the Bowling Analogy"

The GOAL of UDL is to create learners who are...

Purposeful & Motivated | Resourceful & Knowledgeable | Strategic & Goal Directed

UDL believes that all learners, to be successful, must learn and grow ***as learners,*** not just build content knowledge alone. Classrooms need to become hubs of expert learning, where teachers support students in mastering these outcomes by modeling and supporting skill building and internalization of these skills.

OPEN ACCESS

/Italic are direct quotes from **Universal Design for Learning: theory and practice.*

The UDL Guidelines...

udlguidelines.cast.org

Teachers are guided to provide students with...

Multiple Means of **Engagement** (The Affective Network)	Multiple Means of **Representation** (The Recognition Network)	Multiple Means of **Action & Expression** (The Strategic Network)

CAST created the UDL Guidelines as a scaffold for teachers to use as they build flexibility into the learning environment. These guidelines are based on three principles that directly relate to the learning networks of the brain.

"Each of the nine guidelines emphasizes areas of learner variability that could present barriers, or in a well-designed learning experience, present leverage points and opportunities to optimize engagement with learning".*

It is important not to regard UDL as a "checklist". In a UDL environment, teaching is an iterative design process, where we are constantly thinking about how and why we are designing and delivering instruction and reflecting on how students are learning. The checkpoints under each guideline provide concrete suggestions for how to address and plan for the systematic variability that exists within any given classroom. These checkpoints, or strategies are "*based on a multiyear review of thousands of research articles that identified specific experimentally validated instructional techniques, adaptations and interventions*"*.*

Dive Deeper: An interactive version (along with printable versions) of the UDL Guidelines can be found at http://udlguidelines.cast.org/. The research behind each checkpoint or strategy can also be found in the "research" link on each checkpoint.

"Everyone is a genius, but if you judge a fish on its ability to climb a tree, it will live its whole life believing that it is stupid."

-Albert Einstein

WHAT IS UDL?

UDL is Universal Design for Learning, an education framework based on decades of research in neuroscience and endorsed by the Every Student Succeeds Act. UDL is considered best practice for teaching all students in an inclusive learning environment.

The goal of UDL is to create learners who are

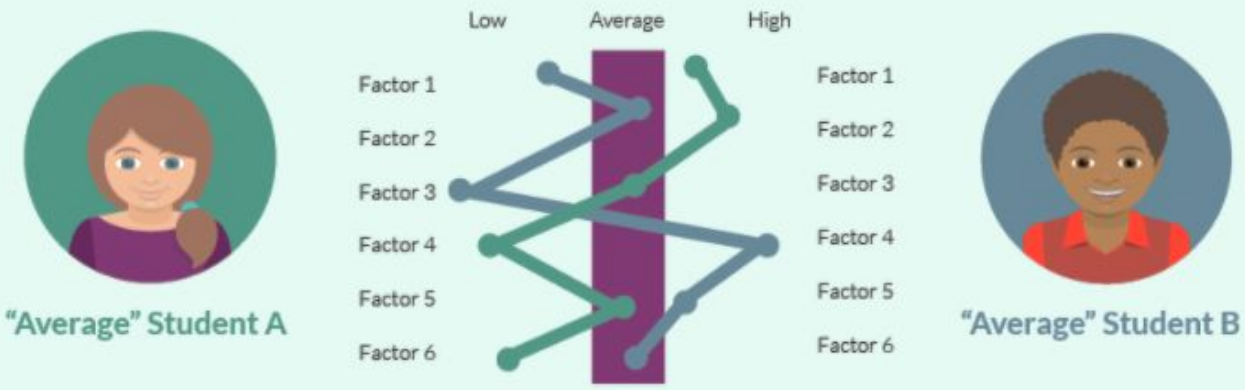
Purposeful & Motivated

Resourceful & Knowledgeable

Strategic & Goal-directed

in other words, **Expert Learners**

Start by embracing learner variability. There is no such thing as an "average" student. Every student has different strengths and weaknesses.



Todd Rose demonstrates student variability with the "Jaggedness Principle" in his book, "The End of Average"

With UDL, teachers transition their role to facilitator, removing barriers to learning by giving students options and choices that empower them to take control of their own learning and reach rigorous state-standards. To universally design lessons, teachers must provide:

graphic continued on next page

To open and print your own copy, click here!

Multiple means of
ENGAGEMENT

The "**why**" of learning

Multiple means of
REPRESENTATION

The "**what**" of learning

Multiple means of
ACTION & EXPRESSION

The "**how**" of learning

IMPLEMENTATION TIPS

Allow students to make choices so they remain invested and engaged

Explicitly tell students **why a lesson is relevant**

Offer students tips on **how to stay motivated**

Provide a **variety of resources** to prevent frustration

Encourage students to **assess their own learning** using checklists and rubrics

Provide **varying levels of challenge**

Offer opportunities for **consistent feedback** like self-reflection, peer review, and teacher feedback

Provide **visual, auditory, and digital materials** for each lesson

Provide scaffolds to support students with reading materials

Simplify **complicated instructions** and provide visuals to increase understanding

Offer visuals like charts, pictures, movies, audio clips, and resources students can touch and manipulate

Model comprehension strategies like note-taking, highlighting, monitoring, and asking questions

Help students see how the **information is transferable** to other classes and lessons

Allow students to use technology, resources, and tools to express knowledge, such as speech recognition software, dictionaries, graphic organizers, calculators, exemplars and so on

Give students a choice in how they express what they know or what they can do as evidence that can meet or exceed a standard

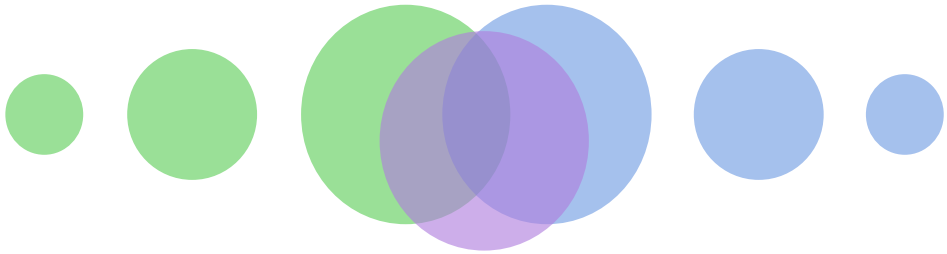
Provide feedback while students work

Have **students reflect on their own learning** and evaluate the choices they made to express knowledge

Provide tips on how to stay organized

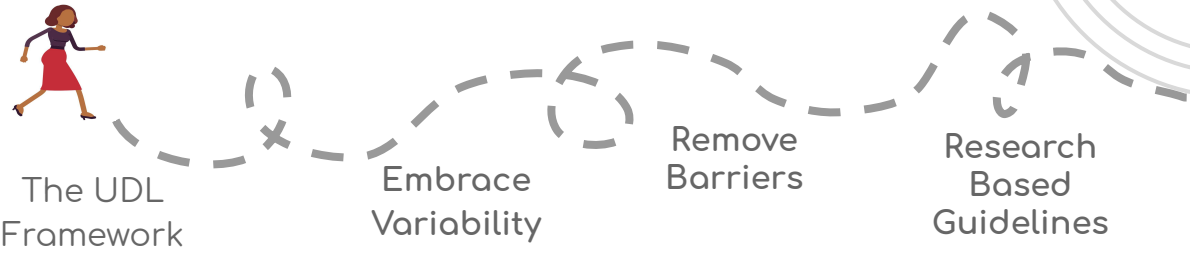
To learn more about Universal Design for Learning, check out UDL Now! by Dr. Katie Novak (available on Amazon and other book resellers) and explore the UDL Guidelines at udlguidelines.cast.org

Novak
EDUCATIONAL
CONSULTING



My UDL Definition

Learning Path for Module 1



What You'll Learn

You will learn what UDL is and is not. You will recognize it as a system change that embraces equity and inclusion (not just another initiative!). UDL requires us to shift conventional thinking about instruction - to remove barriers and embrace learning variability.

You will consider the variability within yourself and your learners, that there are no average learners and that teaching to the edges is needed to address all learners.

You will discover that barriers are found in the learning environment and not the students.

You will be introduced to the UDL guidelines, created by CAST, as a scaffold for teachers to use as they build flexibility into the learning environment.

You'll get better at:

- Reflecting on your own beliefs about teaching & learning and the systems that drive it.
- Understanding UDL as an instructional design framework that supports you in recognizing and anticipating a wide range of learner variability across the environment.
- Recognizing how UDL creates opportunities for intentional instructional design that supports eliminating barriers to student's learning.

Great job! You are now finished with the **pre-session** grounding activity.

Continue to use this ***Companion Guide*** while participating in the **LIVE** session.

Opening Routines

We're going to go through a series of opening routines designed to help us all connect with each other and mindfully center our thinking around today's learning. The way in which we open this immersive learning experience sets the tone for a positive day that is grounded in hope, vulnerability, and deep learning. As you move through the training, we encourage you to pay attention to how you feel and what you are thinking. Pay special attention to how this energy impacts how you learn today.

UDL Framework
(Live Session)

A place for general notes:

Static **Evaluates the curriculum** *Follows Script*	**Reactive** **Evaluates the student** *Cause/Effect*	**Proactive** **Evaluates environment & classroom culture** *Intentional*
Teaches lesson & follows unit as designed	Retrofits instruction by providing accommodations	Designs instruction prior to arrival of students
Focuses on the "average" student	Focuses on individual ability	Focuses on variability
Does not consider students in the margins	Modifies to individual margins	Plans for the margins
Conforms to "normal"	Tries to bring all students into "normal"	Values variety
Ignores barriers	Works around barriers	Removes barriers

Notes:

To achieve equity in education...

We must develop leaders who can...

Transform our institutions by eliminating inequitable practices and cultivate the unique gifts, talents, and interests of every child...

So that success and failure are no longer predictable by student identity - disability, racial, cultural, economic, or any other social factor.

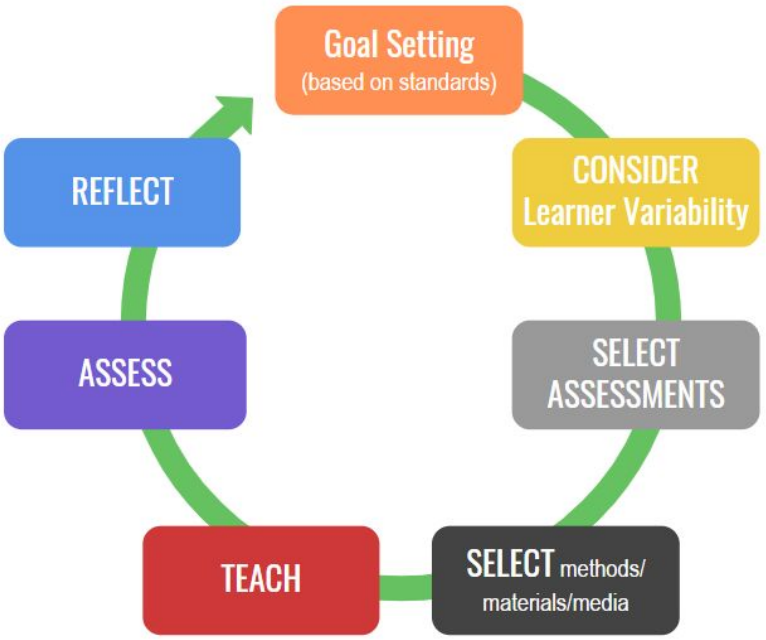
~National Equity Project

Notes:

A Blueprint for UDL

With access to the necessary resources and supports, the person putting this (UDL) framework and these research findings into action is the teacher. When teachers effectively implement UDL, their lesson and learning environment design choices awaken the affective, recognition, and strategic networks of students. This practice is carried out through a purposeful, iterative process very similar to the work of designers and engineers. In fact, after teachers have been implementing UDL for a while, they often talk about themselves as "learning engineers". They see themselves as a designer of solutions focused on overcoming barriers through a process of problem-solving and iterative design.

As highlighted in Basham and Marino (2013), engineering design is an important concept to the implementation of UDL. Teachers who adopt UDL generally take on the engineering habits of mind that include: systems thinking, creativity, optimism, and attention to ethical considerations (Basham & Marino, 2013). When applied together, these habits and UDL drive the design and implementation of curriculum/instructional goals, instructional planning, the use of instructional methods, strategies, and materials, and progress monitoring that support all students. To achieve this level of support, though, often requires both systems level and teacher level change to be effectively and sustainably implemented.

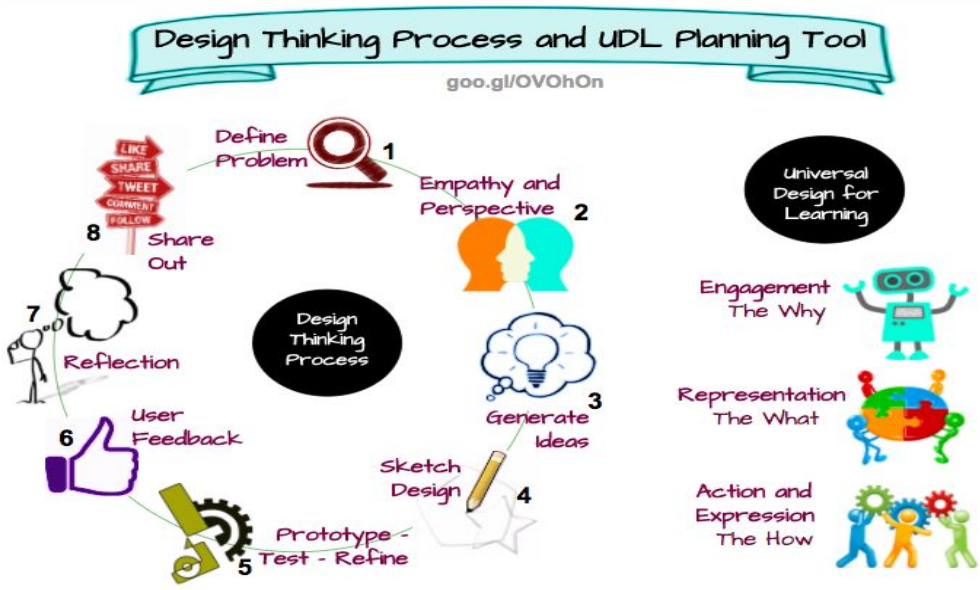


A Blueprint for UDL: Considering the Design of Implementation by L.L. Nelson and J.D.Basham is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License. Based on a work at http://udlirn.org

Design Thinking Process

Bray, B., Bray, B. B. B., & Bray, B. (2017, June 8). Design Thinking Process and UDL Planning Tool. Retrieved from https://barbarabray.net/2017/06/08/design-thinking-process-and-udl-planning-tool/.

In the initial phase of defining the problem, the teacher involves learners to generate possible authentic problems within their local community. The problem can be defined by the teacher to encourage learner interest. We connected the UDL principle Multiple Means of Engagement to this phase by providing options for recruiting learners' interest through optimizing relevance, value, and authenticity. To understand the problem, the teacher activates learners' background knowledge and invites them to highlight patterns and critical features around real world problems that impact them.



The UDL connection to Engagement to the second phase of *Empathy and Perspective Taking* made so much sense to us. The UDL connection involves learners having options for sustaining effort and persistence by fostering collaboration and community. This phase is where learners gain an understanding of the needs of specific people about a problem from their perspective. They may interview, do observations or survey them about the problem.

Some lessons can involve a specific problem identified by the teacher who first wants to encourage empathy.

The middle phases of the Design Thinking Process involve the iterative steps related to idea generation and prototype-test-refine as well as getting feedback from the users.

Representation or the What of Learning is a strong focus during the Idea Generation and Feedback from Users phases as the educator helps learners highlight patterns, critical features, and relationships of their discoveries. The Action and Expression or the How of Learning emerges most strongly during the Creating a Blueprint and Prototype-Test-Refine Phases as learners include their own personal touches and preferred means of expression.

The final phases of the Design Thinking Process involve reflection on the design and making experiences and then sharing out the results to a broader audience.

The UDL connection to Action and Expression is especially strong in the final phases of Reflection and Sharing Out. During the reflection phase, learners are given the option to express what they learned in a way that makes the most sense to them given the nature of the task; and their preferred means of expression. This is especially relevant given all that technology and online tools provide.

For example, students can write a blog, create a photo essay with a caption, record a podcast or video, do a hand-drawn or online sketch, create a comic. Learners, many being savvy at the use of social networks, can then choose how they want to share out their reflections. This serves several purposes related to Action and Expression: (1) it gives learners an authentic audience, and (2) it helps other makers learn from their personal experiences.

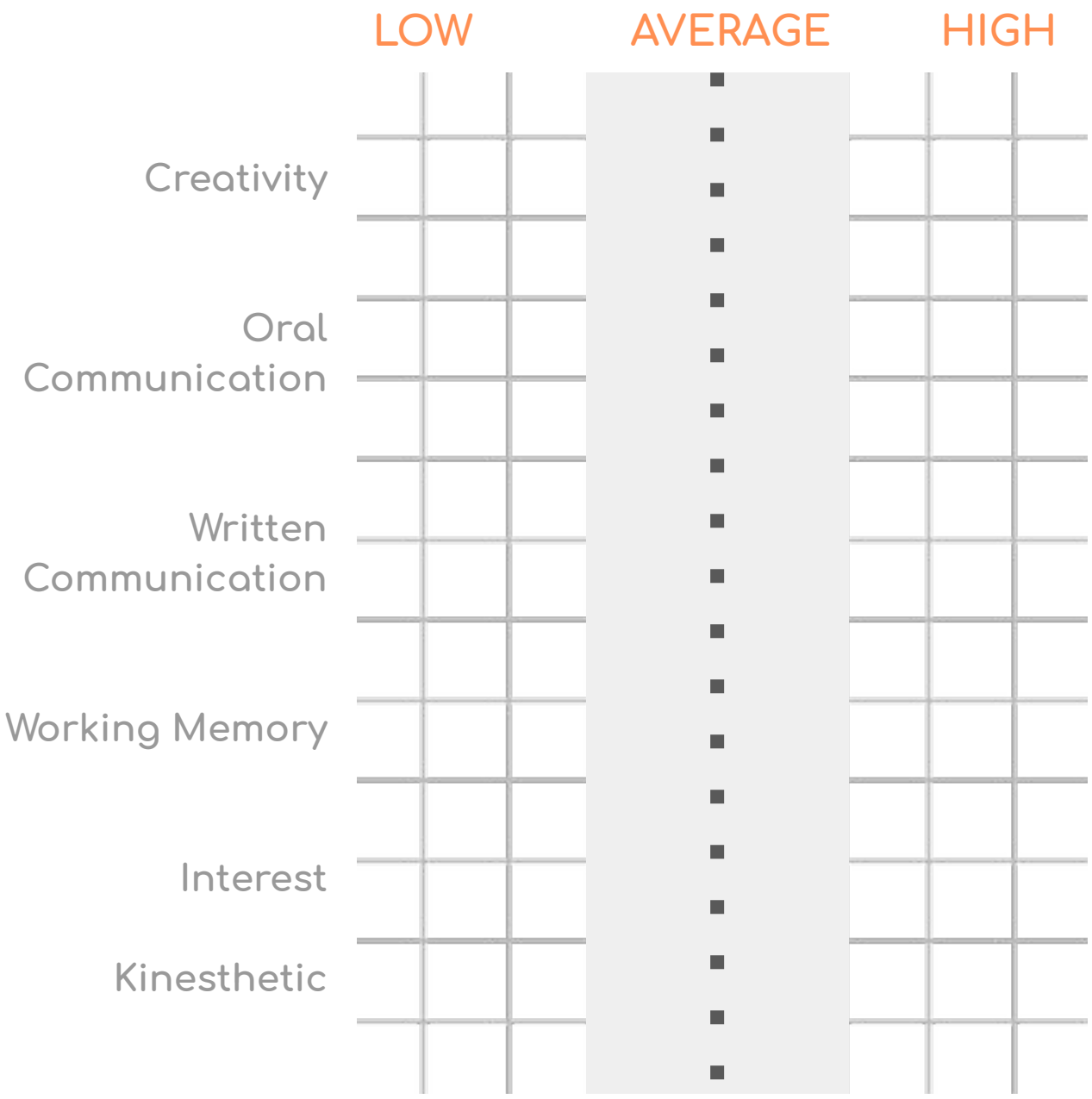
Embrace Variability

"Human variability is a strength to be leveraged, not a challenge to overcome."

~ Boser, Goodwin, Wayland

Notes:

What's Your JAGGED Profile?



Remove Barriers

Barriers to Learning

These are examples of barriers that we may see and hear in a classroom. These barriers were written as student barriers and not environmental. Barriers are in the environment and not the student, so the idea is to flip it and find solutions.

The student doesn't understand the purpose of the lesson

- *This is written as a barrier in the student. It needs to be rewritten as a barrier in the lesson. For example, "The purpose or essential question of the lesson is not clearly stated and referred to throughout the lesson".*
- ***Solutions:*** 1. Ensure the goal is clear. 2. Write goal on board for all to see. 3. Discuss the goal with students.

Hearing impairment

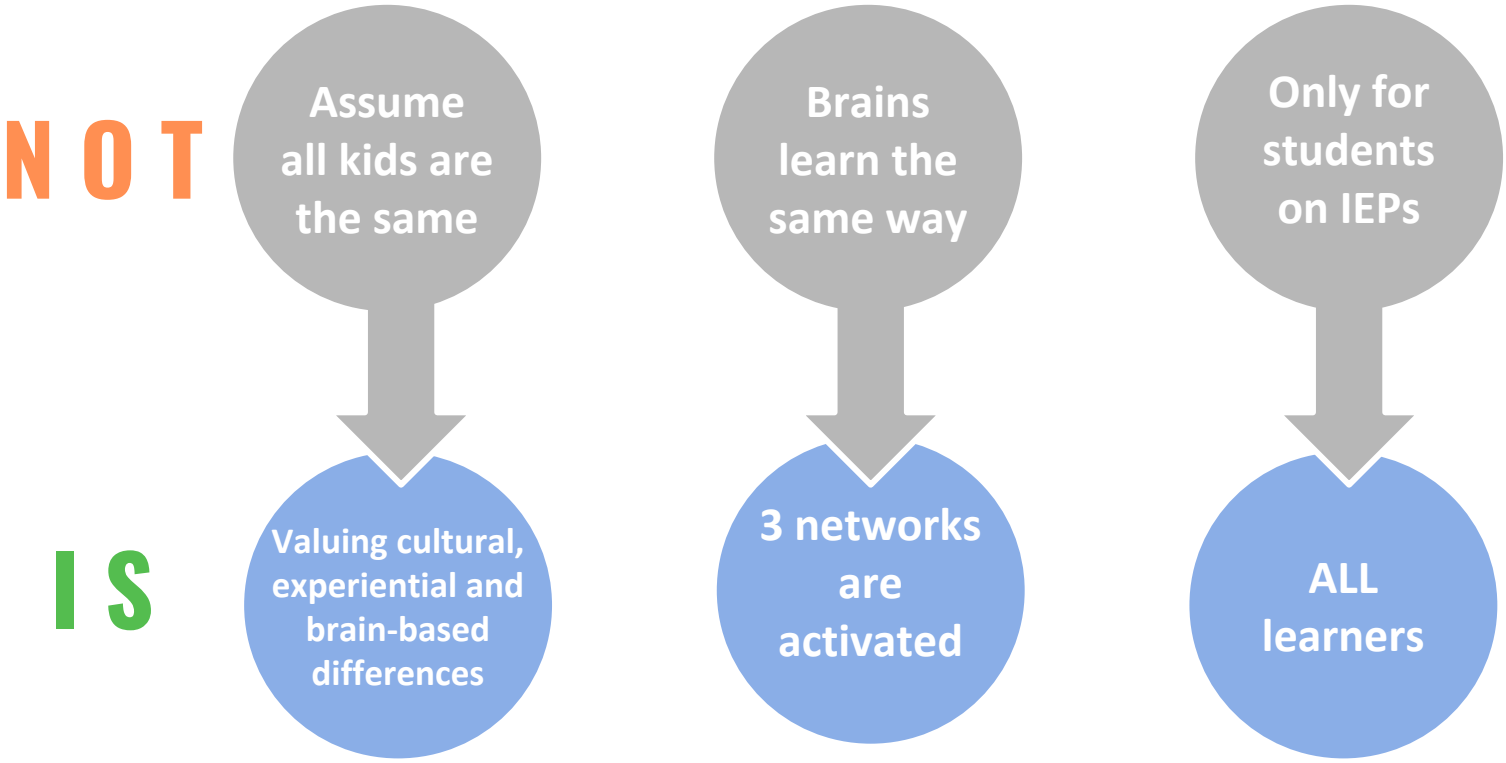
- *This is written as a barrier in the student, with the issue being placed on the student. It needs to be rewritten with a focus on the lesson. For example, "The content in this lesson is only presented in lecture or audio form with no other options for perception.*
- ***Solutions:*** 1. Ensure the material is available in paper and electronic version. 2. Material can be used as manipulatives. 3. Closed caption is on during the video.

Inability to decode text

- *This barrier is written as a barrier in the student; the student is not able to decode text. It needs to be rewritten with a focus on the barrier in the environment. For example, "The lesson requires reading of a text."*
- ***Solutions:*** 1. Offer the same text at different reading levels. 2. Allow students to choose the topic. 3. Have the text read aloud.

My example:

Research Based Guidelines



A place for general notes:

UDL & the Learning Brain

In the past decade, there have been unprecedented ways to examine the living brain and to better understand what happens during learning. Universal Design for Learning (UDL) was inspired by such advances in cognitive neuroscience research and offers a framework that integrates what we know about the learning brain to inform the design of environments that support all learners.

First, let's talk about the geography of the brain. Generally, incoming sensory information, such as what we see and hear, is received in the back of the brain, including the occipital and temporal lobes of the brain (Recognition networks), processed and relayed for meaning in the center of the brain (Affective networks), and is organized in the frontal lobes for response or action (Strategic networks). While there is no linear progression for this process, this model for thinking about three broad learning networks can be helpful when we design learning experiences.

The UDL Guidelines and associated checkpoints align to this neurological organization and help educators address the predictable variability in learning that we know will be present in any environment. UDL recognizes variability in:

- Engagement (the **why** of learning, which aligns with affective networks): interest, effort and persistence, and self regulation
- Representation (the **what** of learning, which aligns with recognition networks): perception, language and symbols, and comprehension
- Action & Expression (the **how** of learning, which aligns with strategic networks): physical action, expression and communication, and executive function

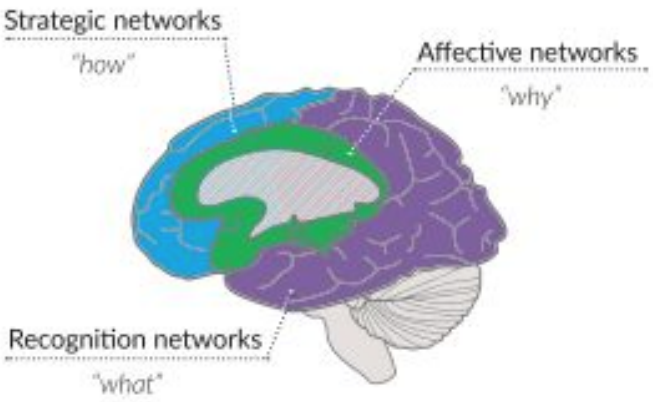
Knowing key facts about the brain can help inform learning design for the variability of learners.

There is no average brain.

Variability is the dominant feature of the nervous system. Like fingerprints, no two brains are alike. Each brain is a complex, interconnected web that is sculpted and influenced by genetics and interactions with the environment.

Variability can be overwhelming for educators who are planning for dozens of learners each day. Luckily, learner variability is predictable, and can be organized across three brain networks targeted by the UDL framework: affective, recognition, and strategic.

The concept of neuro-variability is important for educators, because it reminds us that learners do not have an isolated learning "style", but instead rely on many parts of the brain working together to function within a given context. There is no single way a brain will perceive, engage with, or execute a task. Variability is not just an important consideration for thinking about differences between students, but also within students in different contexts.



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When we design learning environments proactively for variability, we anticipate and value the incredible strengths and diversity of our learners.

The brain has incredible plasticity.

Each brain is made up of billions of interconnected neurons that wire together to form unique pathways. We are born with a foundation of brain structures. Over time, these structures change based on our experiences and interactions with our environment.

When we learn, some connections become stronger and faster. As Hebb's Law (1949) states, "neurons that fire together wire together." Connections that are not used are weakened and pruned away. In other words, "use it or lose it."

Understanding the plasticity of the brain is important for educators, because it helps us recognize that learning is a constant growth process constructed over time. Proactive design of flexible pathways toward learning goals supports learners by building on the strengths and connections that are already established. Frequent, formative feedback and opportunities for active learning create and strengthen the connections within our learning brains. Our brains are not fixed, but grow and change with use.

What you know really matters.

Previous experiences drive our interest and engagement, perception and attention, and goals and actions. The nervous system constantly makes predictions and anticipates how we will fare in a particular environment or towards a particular goal. For example, if a learner is asked to do a math problem, read aloud, or respond to a prompt, the brain will recall prior experiences in that context. That recall drives perception, action, and engagement. Based on previous experiences, the brain decides which goals are valuable — or not valuable — to pursue.

Acknowledging the variability in learner background knowledge and experience is important for educators, because each learner brings a unique blend of experiences and expectations to each learning event. When we design for variability using the UDL framework, clarifying the goals and integrating flexibility in engagement, representation, and action and expression, we acknowledge that learners do not learn in one linear pathway. This approach fosters learning environments that value the uniqueness of our learners and the variability each brings. This empowers learners to maximize their strengths, focus on areas of challenge, and drive their own learning processes. Ultimately, UDL helps foster expert learners who are purposeful and motivated, strategic and goal-directed, and resourceful and knowledgeable.

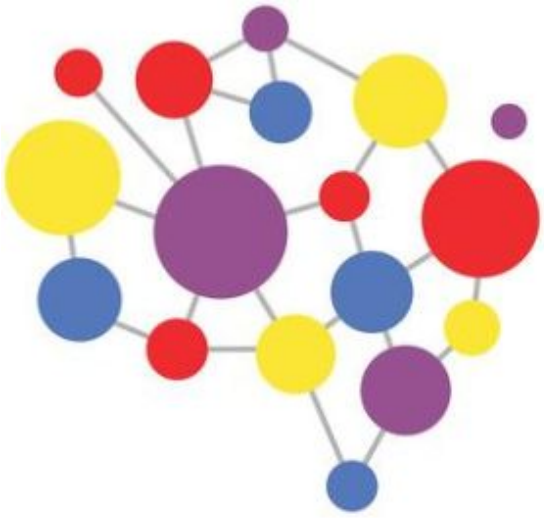
Goals drive the nervous system.

Essential to any learning experience is a clear goal. A clear goal enables the nervous system to direct energy purposefully to build relevance, perceive information, and act strategically. Ultimately, educators and learners need to be aware of the intended learning goals so that they can begin to build connections, connect to background knowledge, and practice for expertise.

Recognizing that our brains are goal-driven is important for educators, because if we don't make learning goals explicit to our learners, they have no way of knowing what the target is, how to reach it, or when they've achieved it. Think about a GPS or navigation app. Without a destination, a GPS is simply a map with infinite possibilities and no directions. Once we input a destination, we can then decide whether we want a route without tolls, one that meanders through the countryside, or one that is the fastest or shortest distance. With a clear, explicit learning goal, learners are empowered to choose their best pathway to achieve that goal.

Our brains always have a goal, whether it's to avoid a task, sneak a cookie from the jar, or complete a task with the least amount of effort. The more explicit we are with our learners about the goals and incorporate their own goals, the more meaningful the learning experience will be, the more purposeful the options available will be, and the less likely our brains will focus on competing goals.

Understanding these key facts about the learning brain not only helps educators in designing challenging, high quality learning opportunities, but they're also incredibly important for our learners to understand, as well. The more we understand about our own learning and how it happens, the further we advance toward the ultimate goal: becoming expert learners.



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Notes:

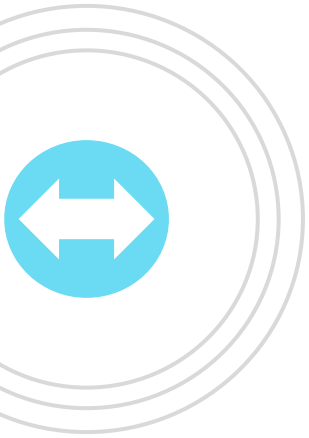
	Provide multiple means of **Engagement**	Provide multiple means of **Representation**	Provide multiple means of **Action & Expression**
	Affective Networks The "WHY" of learning 	Recognition Networks The "WHAT" of learning 	Strategic Networks The "HOW" of learning 
Access	Provide options for **Recruiting Interest** (7) • Optimize individual choice and autonomy (7.1) › • Optimize relevance, value, and authenticity (7.2) › • Minimize threats and distractions (7.3) ›	Provide options for **Perception** (1) • Offer ways of customizing the display of information (1.1) › • Offer alternatives for auditory information (1.2) › • Offer alternatives for visual information (1.3) ›	Provide options for **Physical Action** (4) • Vary the methods for response and navigation (4.1) › • Optimize access to tools and assistive technologies (4.2) ›
Build	Provide options for **Sustaining Effort & Persistence** (8) • Heighten salience of goals and objectives (8.1) › • Vary demands and resources to optimize challenge (8.2) › • Foster collaboration and community (8.3) › • Increase mastery-oriented feedback (8.4) ›	Provide options for **Language & Symbols** (2) • Clarify vocabulary and symbols (2.1) › • Clarify syntax and structure (2.2) › • Support decoding of text, mathematical notation, and symbols (2.3) › • Promote understanding across languages (2.4) › • Illustrate through multiple media (2.5) ›	Provide options for **Expression & Communication** (5) • Use multiple media for communication (5.1) › • Use multiple tools for construction and composition (5.2) › • Build fluencies with graduated levels of support for practice and performance (5.3) ›
Internalize	Provide options for **Self Regulation** (9) • Promote expectations and beliefs that optimize motivation (9.1) › • Facilitate personal coping skills and strategies (9.2) › • Develop self-assessment and reflection (9.3) ›	Provide options for **Comprehension** (3) • Activate or supply background knowledge (3.1) › • Highlight patterns, critical features, big ideas, and relationships (3.2) › • Guide information processing and visualization (3.3) › • Maximize transfer and generalization (3.4) ›	Provide options for **Executive Functions** (6) • Guide appropriate goal-setting (6.1) › • Support planning and strategy development (6.2) › • Facilitate managing information and resources (6.3) › • Enhance capacity for monitoring progress (6.4) ›
Goal	**Expert Learners** who are...		
	Purposeful & Motivated	**Resourceful & Knowledgeable**	**Strategic & Goal-Directed**

Post-Session

Extend

Feedback

EXTEND



We have ONE activity for you to do before you leave this module to extend your learning on your own:

Spend a few minutes thinking about the students in your current (or most recent) classroom. ***Who are you designing for?*** Use as many adjectives as you can to describe demographics, characteristics, strengths, challenges. etc. Then think about how you will start to address this variability as you start to plan next week.

My classroom includes students who...

FEEDBACK

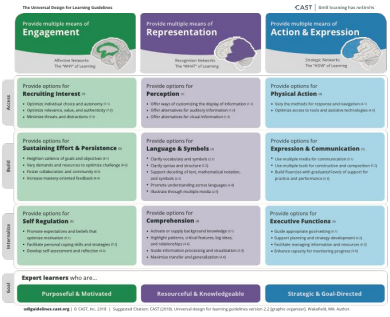
Return to the Surveys on the Open Access course page and complete "End of Module 1 Feedback" to help us plan for our next session!

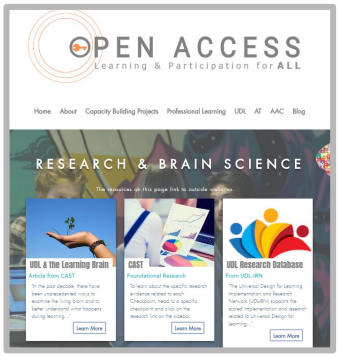
Explore on your own

Come back, when you have time, before the next module and explore two ADDITIONAL resources we have linked on this page.

CAST's interactive version of the UDL Guidelines (udlguidelines.cast.org)

Our Open Access Website (openaccess-ca.org and go to the UDL tab) and check out these two spaces:





Bookmark or share this!

MODULE TWO

"UDL is simply a more efficient and effective way to plan ACCESSIBILITY for ALL from the beginning"

–Universal Design for Transisiong,

Thoma, Bartholomew, & Scott

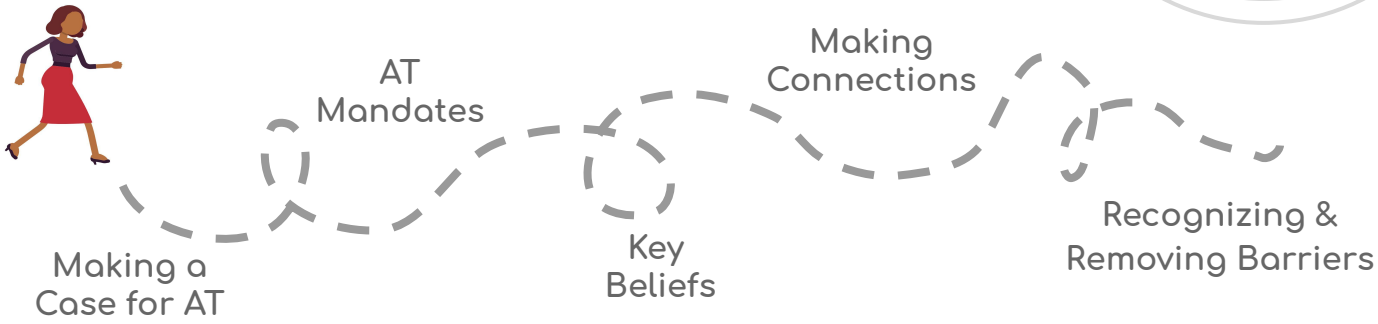
Pre-Session: Module 2

Learning Path

Grounding

Prior to entering the live session, take some time to prepare for the module and the learning ahead.

Learning Path for Module 2



What You'll Learn

UDL and AT are perfect partners. When UDL is in place, a student with a disability may find that the barriers he experienced in previous settings are removed, negating the need to identify and use additional tools or supports.

There are several different laws that mandate our provision of services around AT that need to be considered in building and implementing a model for service delivery.

It is important for educators to have a shared understanding related to the variety of technologies used in educational settings and their purpose in the classroom by teachers and students.

By recognizing barriers we can begin to eliminate them and plan lessons and activities to support the development of expert learners.

You'll get better at:

- Expanding the options that I provide to students as I explore designing instruction through a UDL lens.
- Considering when it might be appropriate to move into a more individualized approach to identifying specific tools and supports.
- Understanding the basic legal requirements for considering and providing assistive technology.
- Being aware of the variety of tools and strategies that support designing a UDL classroom.
- Exploring my own barriers with technology and understanding where barriers in my classroom are found.

Reflect on Learning Path

Take a moment to identify what is familiar and what may be new about these concepts we'll be exploring together:

Something familiar.... *Something new...*

What are you MOST looking forward to exploring in order to better support your learners?

GROUNDING

Watch the 2 videos and read the article on the following page in order to gain a better understanding of how AT can impact a student's access to learning and how UDL and Assistive Technology (AT) are different, yet connected.

Excerpts from:

Assistive Technology & Universal Design for Learning: Two Sides of the Same Coin

Listen to this article instead!

Over the past decade, evolving technologies have revolutionized the way we do business, communicate, make war, farm, and provide medical treatment. New technologies are also transforming education, and in no domain more dramatically or successfully than in the education of students with disabilities.

Some individuals may see AT and UDL as identical, or conversely, antithetical. We believe that neither view is accurate but instead that AT and UDL, while different, are completely complementary—much like two sides of the same coin. We believe that advances in one approach prompt advances in the other and that this reciprocity will evolve in ways that will maximize their mutual benefits, making it essential that both approaches are pursued vigorously and distinctively. Through a better understanding and melding of AT and UDL, we believe that the lives of individuals with disabilities will ultimately be improved.

Integration of Assistive Technology and Universal Design for Learning in the Classroom. Consider the problem for a student with a reading disability of mastering a history concept. Most history curricula pose significant barriers to such a student, especially the predominance of text. Most of the content is presented in text, and most of the assessment requires writing.

This problem, too, can be viewed and solved in two different ways. Taking an AT perspective, the problem can be considered an individual problem—it is clearly the individual student's reading disability that interferes with his or her ability to master the history content and demonstrate knowledge.

This view fosters solutions that address the individual's weaknesses—remedial reading classes, special tutoring, and AT, for example. Of these, AT is particularly valuable because it provides independent means for the student to overcome his or her limitations by, for example using a spellchecker or audio version of the history book.

A UDL perspective, on the other hand, sees the problem as an environmental problem— the history curriculum's over reliance on printed text raises barriers to engagement and mastery for many students. This view fosters solutions targeting limitations in the curriculum rather than limitations in the student.

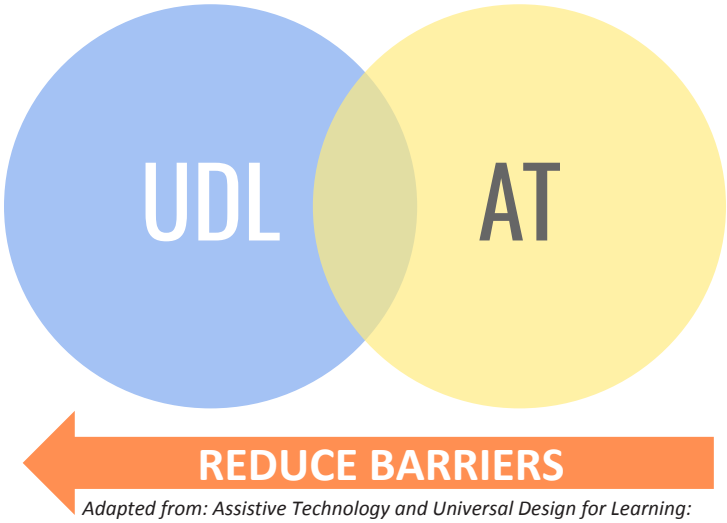
Imagine a multimedia curriculum that provides digital, universally designed media that offer diverse options for viewing and manipulating content and expressing knowledge. Within such a flexible curriculum fewer students face barriers; digital text can speak aloud to reduce decoding barriers for students with dyslexia; digital images or video provide an alternative representation that reduces barriers in comprehension for students with language-based disabilities while providing descriptions and captions for students who are blind or deaf; and keyboard alternatives may reduce barriers in navigation and control for students with physical disabilities.

These UDL solutions have the advantage of enhancing learning for many different kinds of students (Rose & Meyer, 2002).

In reality, both kinds of solutions are needed (Hitchcock & Stahl, 2003). In an educational setting, the disadvantage of exclusively using AT is that it is not integrated with the learning goals of a given lesson. If that is the case, AT may not be helpful, or may even interfere, from an educational standpoint.

At the same time, a purely UDL solution has the disadvantage that some built-in accommodations, particularly for students with low-incidence disabilities, are cumbersome, inefficient, or prohibitively expensive when included as an element of the basic curriculum.

Rose, David & Hasselbring, Ted & Stahl, Skip & Zabala, Joy. (2005). Assistive Technology and Universal Design for Learning: Two Sides of the Same Coin Two Roles for Technology: Assistive Technology and Universal Design for Learning.



Adapted from: Assistive Technology and Universal Design for Learning: Two Sides of the Same Coin. Rose, Hasselbring, Stahl, and Zabala (2005)

Reflect on both UDL & AT and how they compliment each other. Did anything from the video or article resonate with you? Try to imagine what it looks like when both UDL & AT are implemented together. Can you think of an example when this has occurred during your lessons, either by accident or design?

My Notes:

Great job! You are now finished with the **pre-session** grounding activity.

Continue to use this ***Companion Guide*** while participating in the **LIVE** session.

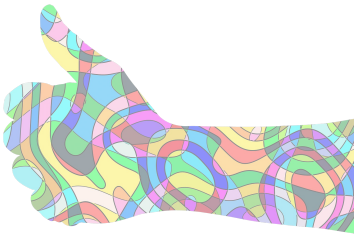
Making a Case for AT

(Live Session)

My Notes:

AT Mandates
(Live Session)

8



Assistive Technology Mandates

My Notes:

1.

2.

3.

4.

5.

6.

7.

8.

9.

10.

11.

12.

Key Beliefs
(Live Session)



When I hear "assistive technology" I feel:	I have questions or concerns about...

AT can make it possible for students with disabilities to increase participation in and achieve desired outcomes at school, at home, and in the community.

1	2
3	4
What else do YOU believe?	

5 Common Myths About AT

1.

2.

3.

4.

5.

Notes:

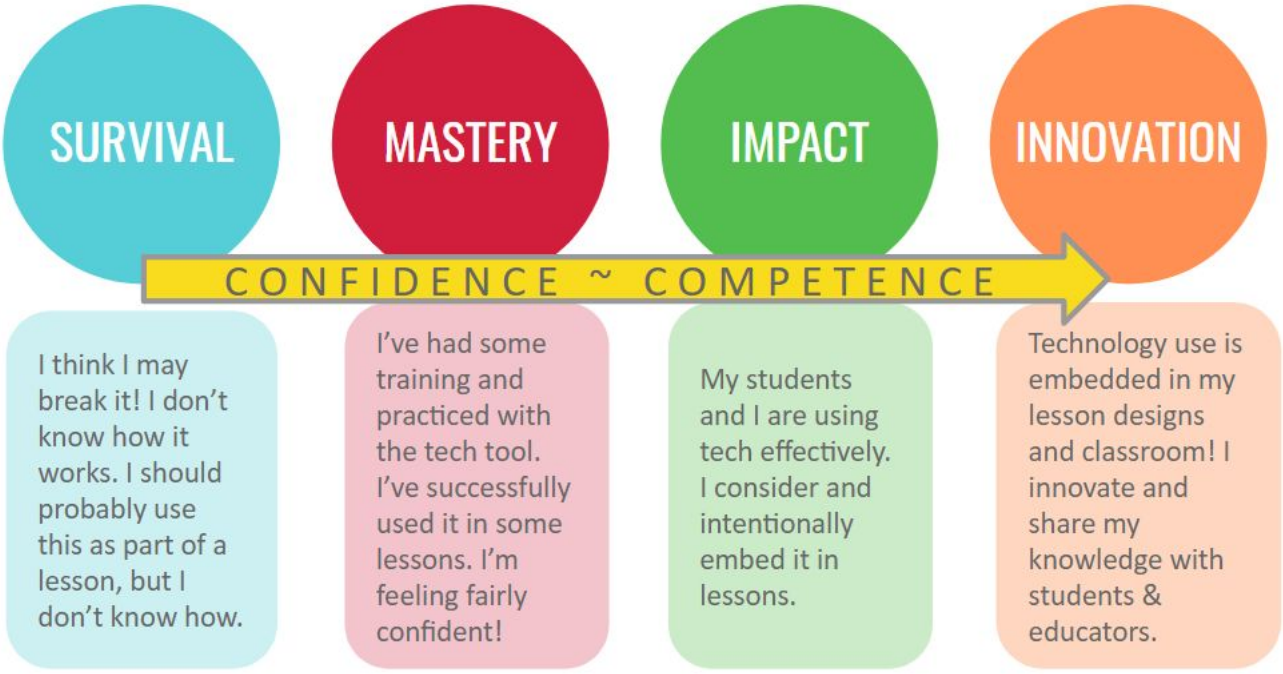
Making Connections
(Live Session)

What technology do my students and I have access to in my setting?	What do we DO with it?	Are we using it proficiently?
What technology have you utilized that helps to support the UDL principles?		

Recognizing & Removing Barriers (Live Session)

The Teacher Confidence Model

Adapted from Mandinach & Cline (1992)



Notes:

Draw and/or write. Express yourself!

Past feelings about technology:

Current feelings about technology:

Where do I fit on the Teacher Confidence Model?:

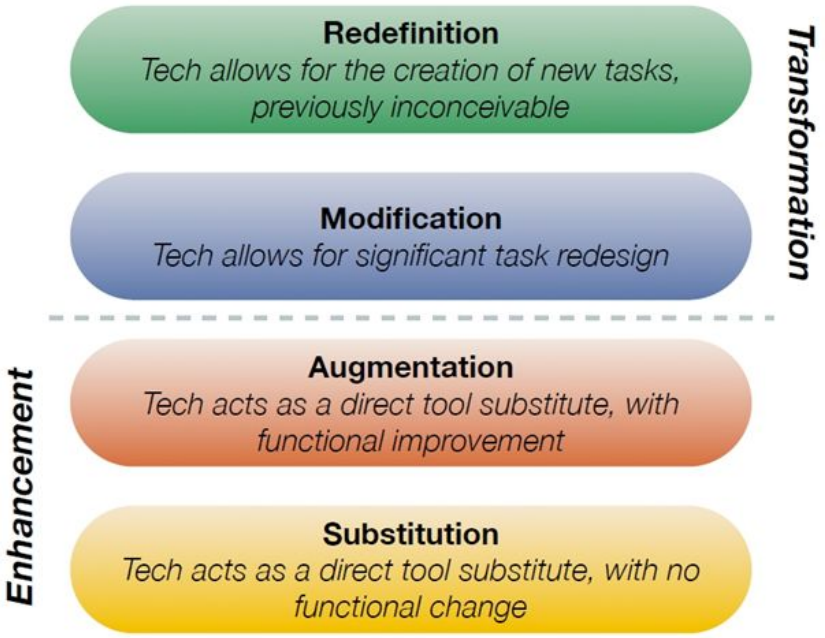
Listen to this article

SAMR and Teacher Confidence: A confluence of models

Posted by Will Kimbley on February 20, 2015
Technology Information Center for Administrative Leadership, Santa Cruz County Office of Education
http://www.portical.org/blog/samr-and-teacher-confidence-a-confluence-of-models/3138.htm

As someone who works to assist educators with the integration of technology into instruction, I work with a wide variety of experience levels and skill sets. At times it is a challenge to meet all their needs. Nevertheless, just as in any K-12 classroom, you accept people where you find them and seek to help them move forward. But how can we best do that?

Research has given us a couple of models that can serve as a lens to examine this and assist us in formulating strategies. The first, and probably wider known is the SAMR model from Dr. Ruben Puentedura.



SAMR model

At its base level, technology is used as a Substitute. If you put a worksheet on an iPad, you have a very expensive worksheet. My own edtech journey included a time when I was really proud that I had figured out how to scan student worksheets and turn them into fillable PDFs that they could fill out on their laptops. Fortunately, it didn't take me long to figure out that was a waste of good technology, not to mention bad pedagogy.

Writing a paper with a word processor can be seen as Augmentation. Students can change font sizes, use spell check, and even email their work. Modification comes in when online collaborative word processors such as Google Docs or Microsoft OneDrive are utilized. Students can communicate and collaborate in the same document in real time on separate devices transforming the task significantly.

Listen to this article

If you consider adding in something like Skype or Google Hangout, students can connect with classrooms literally around the world to collaborate on a document. Add in Google Translate and even the language barrier is not insurmountable and you can start talking about true Redefinition—a task that would be impossible without the technology.

Moving classroom technology use up through the levels of this model is an important task for technology leaders. Not every task needs to be at the top of the model, but why does so much technology use tend to be mere Substitution or, at best, Augmentation? For example, two of the most common tools I see are interactive whiteboards and document cameras. Schools spend quite a bit of money on document cameras that are used to show a teacher filling out a worksheet or solving a math problem on paper. Interactive whiteboards costing thousands of dollars are often used no differently than a regular whiteboard, and never touched by students. Why are many teachers stuck in substitution mode?

Teacher confidence comes into play

I believe much of the reason has to do with a teacher's confidence in using technology. Mark Anderson developed a flowchart examining teacher confidence based on the work of Dr. Ellen Mandinach and Dr. Hugh Cline.

You can see that at the base level, teachers are in Survival mode, often afraid of breaking technology. As someone who was around when personal home computers were first introduced. I quite understand this fear. I remember when putting in your floppy disks in the wrong order could mess you up for hours. Part of my job is to give them some training and practice and let them see that today's Web 2.0 technologies are not as fragile thus instilling confidence and moving up into the next stage of Mastery.

Where teachers begin to have Impact is when *students* also are using technology. To quote Alan November, "The person doing the work is doing the learning."

When technology is teacher-centric, students are left out of the experience. It is also worth mentioning that the Impact stage says "using tech effectively." How effective is it to only use an iPad to practice math facts, or a laptop only to take a reading quiz? Innovation comes into play when technology becomes second nature. It's no longer a question of how to fit technology into a unit. Effective technology use is a matter of course in everyday lesson design.

What I noticed when looking at these two models is a confluence where one helps explain the other. In many cases, especially early on in technology integration, technology is used as a substitute because teachers are in Survival mode and seek the comfort of a familiar environment. It is after they have received some training and feel a sense of Mastery that they can begin to move into Augmentation and beyond.

Building confidence

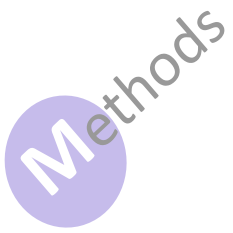
Our role as leaders is to help build teacher confidence with the use of technology so that they can move beyond mere Substitution. We can do this in a number of ways.

- Provide them with working, effective tools.
- Provide enough tech support; teachers don't have time to troubleshoot on their own.
- Provide sufficient devices so students can use them reasonably. You don't need to have 1:1, but one iPad in a classroom is not technology integration.
- Ensure that there is adequate infrastructure for reliable and readily available internet access. If teachers know the tools, infrastructure, and support are reliable, it builds their confidence. When it is not, quite the opposite is true.
- Bring in quality professional development—hands-on, ongoing, not just sit and get.
- Offer release time to observe exemplary classrooms and to collaborate with one another.

Lastly, give them permission to try, and permission to fail. Technology integration can be messy and fraught with failure. Just like learning to walk, falls and missteps should be expected. Support your teachers, build their confidence, so they can effectively use these essential tools for teaching and learning. Keep in mind they are teaching students who grew up with, and will go into, a world full of technology. Don't let the classroom be a technology free zone.

Possible Barriers...

- not standards-based
- not clear
- not relevant
- no information on how to meet the goal
- teacher has not reviewed potential barriers in the goal



- only one way offered for students to learn the content
- no opportunity to build on the learner's background knowledge
- limited ways for learners to explore the knowledge and skills under study

- limited flexibility and options in the materials students can use to learn content and master skills

- the assessment is not aligned to the goal
- have limited opportunities to express what they've learned
- have not used BOTH formative and summative assessments

Notes:

Post-Session

Extend

Feedback

EXTEND

After you watch...

Reflect on the idea in the video regarding "layering a tool on top of a digital document or image." Think about the original resources that you use. Are they digital? Do you have experience "layering" a tool or adding functionality to the original resource to make it more accessible to a wide variety of learners? Have you thought you might like to dive deeper into ways to do this?

FEEDBACK

Return to the Surveys on the Open Access course page and complete the

"End of Module 2 Feedback."

MODULE THREE

"For people without disabilities, technology makes things easier. For people with disabilities, technology makes things possible".

–IBM *Training Manual, 1991*

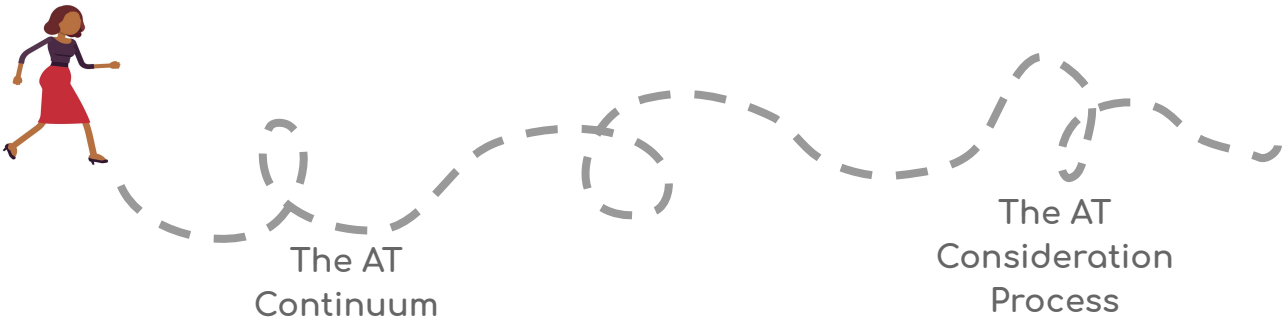
Pre-Session: Module 3

Learning Path

Grounding

Prior to entering the live session, take some time to prepare for the module and the learning ahead.

Learning Path for Module 3



What You'll Learn

The AT Continuum can refer to levels of tools (no/low, mid or high tech), strategies (adult directed, adult facilitated, student owned), and supports (training, direct instruction, consult and collaboration).

AT Consideration is a team-based approach for decision-making around assistive technology needs. It is a required component of the IEP for every student with a disability.

You'll get better at:

- Becoming more familiar with different levels of tools, strategies and services to consider in best supporting your students, and how to "release" responsibility to ensure students develop independence and autonomy.
- Understanding the AT Consideration process and how to incorporate it into IEP planning and development.
- Leveraging resources and tools to help implement a consistent and compliant process, and considering an appropriate range of strategies and tools.

Reflect on Learning Path

Take a moment to identify what is familiar and what may be new about these concepts we'll be exploring together:

Something familiar.... *Something new...*

What are you MOST looking forward to exploring in order to better support your learners?

GROUNDING

Read, or listen to, the article on page 69. Use the following prompts to take notes and record your thoughts. We will be sharing out during during the live session.

What does my (SELPA, County Office or District) service delivery model for assistive technology currently look like?

My questions, thoughts or ideas around "shifting" and my roles or responsibilities in the model...

Listen to this excerpt

Excerpts from:

Leading the Way To Excellence in AT Services, A Guide for School Administrators. By Gayl Bowser and Penny R. Reed pages 3-5, 12

Key Excerpts Around Understanding Assistive Technology

More than one federal law addresses the requirement that school districts provide assistive technology to students who need it to benefit from and have equal access to their educational programs. Most students with disabilities receive their AT under the mandates in IDEA. However, other students may receive similar AT devices and services under the requirements of Section 504 of the Rehabilitation Act (Section 504) or the Americans with Disabilities Act (ADA).

School districts have been required since 1990 to provide both AT devices and services. IDEA requires that the devices and services be available to every student with a disability if that student needs AT in order to receive a free appropriate public education (FAPE). Education agencies are required to provide AT to students with disabilities to ensure that they have access to their educational programs. This access can mean access to special instruction, access to the general curriculum, or access to extracurricular activities.

IDEA also addresses the use of school-purchased AT at home. When students with disabilities have educational goals that require them to use specific skills at home, the IEP team may decide that the AT is also needed in order to do the homework. The use of an augmentative communication device may also require home use.

When AT is needed, it becomes part of FAPE for the student. The AT devices that are necessary to ensure FAPE must be provided at no cost to the parents, and the parents cannot be charged for normal use and wear and tear. Conversely, IDEA also states that the provision of AT devices and services is limited to those situations in which they are required in order for a student with disabilities to receive FAPE.

Not all students with disabilities need specially designed instruction. Students with disabilities who do not require specially designed instruction are not eligible for special education services under IDEA and will not have IEPs. These students may still need AT in order to access or participate in their education and may receive it under the provisions of Section 504 of the Rehabilitation Act or the Americans with Disabilities Act (Title II). Section 504 is a civil rights law that guarantees that no student with a disability will "be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance. Education agencies that receive federal funds must provide accommodations to students with disabilities if needed so that they will receive an education equal to that of their peers. One or more of those accommodations may be AT.

The Americans with Disabilities Act (ADA) of 1990 is also a civil rights law that prohibits discrimination on the basis of disability. Students with disabilities are covered by Title II and Section 504 regardless of their eligibility for special education and related services under the IDEA.

There are differences between the IDEA and the Title II regulations. Title II regulations require that public schools provide appropriate "auxiliary aids and services" when necessary to afford an "equal opportunity" to participate in and benefit from the district's services, programs, and activities. Assistive technology may be part of those "auxiliary aides." Title II specifically requires that a student with disabilities have the opportunity to be as effective at communicating as a student without disabilities. This is a more stringent requirement than IDEA and may require further action.

Since AT was first mandated in 1990, school districts and other education agencies across the United States have developed a variety of styles of delivering AT services. These vary from an "expert model," where members of an AT team are the only ones in the agency empowered to make recommendations about the selection, acquisition, and use of AT, to "capacity building models," where the members of the AT team spend their time training and supporting members of the IEP teams and student service teams so that they can effectively perform as independently as possible.

Unfortunately, IEP teams often have a difficult time effectively considering a student's need for AT unless they have had sufficient training to understand AT and what it does. A survey of educators about their understanding of AT found that respondents who had 40 or more hours of training about AT felt that it was essential to students' daily routine and felt comfortable in identifying and using AT to ensure educational access. Respondents without training felt that AT was not important to students' daily activities and stated that they were not confident in identifying and using AT. In that same study, nearly 90% of respondents stated that their preservice preparation programs did not adequately emphasize AT use.

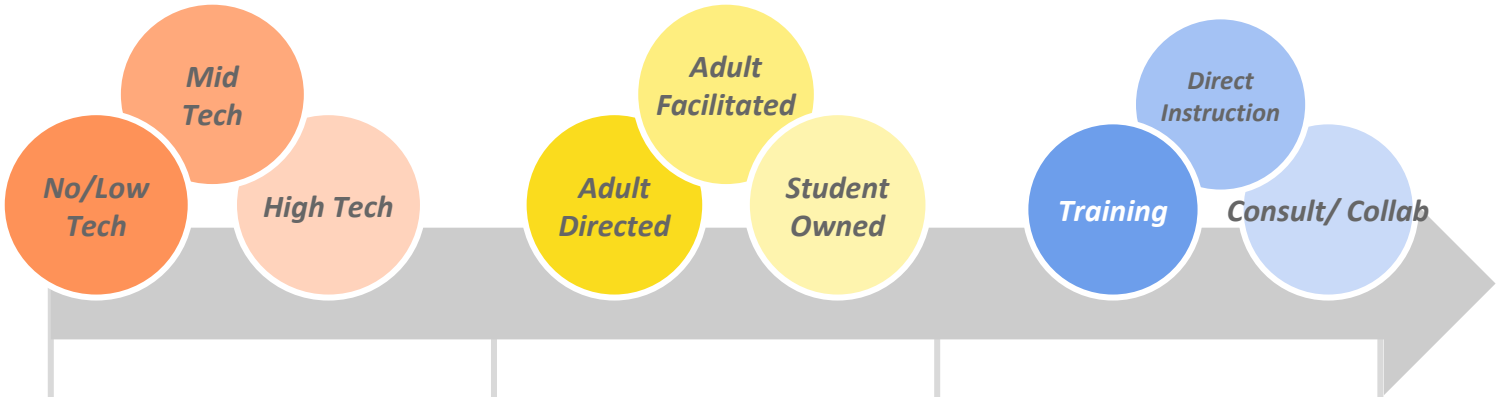
Great job! You are now finished with the **pre-session** grounding activity.

Continue to use this ***Companion Guide*** while participating in the **LIVE** session.

The AT Continuum
(Live Session)

11

Tools, strategies, and services to support student access and participation



AT Consideration

Do I think about and consider my students needs for AT regularly? How do we talk about or determine AT training & service at IEP meetings? Who provides the service?

Notes for collaborative discussion:

Final Reflection

What is one ***LITTLE THING*** you can do tomorrow?	What is one ***KEY MOVE*** you can make to change a current practice?	What is one ***BIG PLAY*** you want to aim for over the next year?

Post-Session

Extend

Feedback

Surveys

EXTEND

Reflecting on Digital and AT Tools

Complete the short form to reflect on your confidence with specific tools.

EXTEND

It's time to practice "AT Consideration" for one of your students...

1. Think about a student that may be experiencing a barrier to the curriculum or a particular activity.
2. Use AT Consideration walkthrough on the Open Access website (you'll find the note taking guide there as well).

Fill out the AT Consideration Notetaking form and save it. We'll be sharing out during the next live module.

FEEDBACK

Return to the Surveys on the Open Access course page and complete "*End of Module 3 Feedback*" to help us plan for our next immersion!

SURVEYS

Have has your mindset shifted?

Take the "Beliefs and Attitudes About UDL - Post" survey to help us find out.

UDL *Terminology*

Average Learner	In reality, the average learner is a myth and does not really exist. Remember, variability is the norm, rather than the exception. While a mean (average) can be calculated on a population's performance, it does not define the variability of the learners or support the design of environments. The design of environment supports the outcomes of the environment.
Barrier	Barriers to learning emerge when the design of a learning environment fails to meet the variability of the learners. Many barriers are consistent over time and can be anticipated and overcome in the design phase. Some barriers are more momentary and emerge based on an interaction or situation. A simple example is to ask a learner who has difficulty with handwriting or spelling to hand-write a paper. A one-size-fits-all learning environment unintentionally gives rise to multiple barriers. A key to success, is to design environments that proactively overcome anticipated barriers and to support the design of flexible environments.
Design Thinking	Design thinking is a five-step approach to solving problems through design. Educators can follow the five steps by understanding learner variability (1. Empathize), identifying barriers in learning environments that may support failure or support undesired outcomes (2. Define), come up with ideas and solutions for overcoming barriers (3. Ideate), develop a means or plan to implement (4. Prototype), and gather data on the effectiveness of the design (5. Test).
Expert Learner	Expert learners are those who know how to learn, who want to learn, and who are prepared for the changing demands and skills of the future. UDL helps make learning more personalized and supports purposeful, motivated, resourceful, knowledgeable, strategic and goal-directed expert learners.
Learner	UDL is focused on the design of all learning environments, including but not limited to K-12 school environments, university learning environments, and both formal and informal learning experiences because of this, not all individuals are actually students, so we focus on the learners of the environments and experiences. So, in UDL, all students are better characterized as "learners" and our designs are centered on these learners.
Learner Variability	Neuroscience continues to find that variability is the norm rather than the exception. Actually no two brains are the same. UDL supports educators in understanding the variability present in their learning environments. The framework then helps educators consider how to design flexible environments that support engagement, comprehension, and demonstration of understanding.
Learning Environment	(sometimes called Learning Experience) Learning environment refers not only to physical and digital settings in which learning takes place but also to any interaction learners have with the content, their learning materials, tools, peers, teachers, and so forth. These interactions can be physical or cognitive. Well-designed learning environments are flexible and meet the needs of all learners.
UDL Guidelines	The UDL guidelines provide a frame for understanding the types of variability that might be present in any environment. The current version of the guidelines also present example practices for how to support the various forms of learner variability in the environment The newest guidelines are located at: http://udlguidelines.cast.org/

AT Terminology

AAC	AAC refers to using a form of communication to supplement or replace spoken and/or written words. AAC may include using signs/gestures, pictures, or an electronic device to help a person share his or her thoughts.
Accommodations	Accommodations allow the student to complete the same assignment or activity as other students, but with a change in timing, formatting, setting, scheduling, or presentation.
Adaptive Tech	A type of AT which includes customized systems to help students move, communicate, and control their environments.
Alternative Access	Alternative access tools allow students to control their computers and devices.. Examples include alternative keyboards, adapted mouse, switches, pointing devices, and on-screen keyboards.
Consideration of AT	Required as part of the annual IEP process under IDEA. It's a meaningful conversation and team-based process to decide if a student needs AT or service in order to meet educational goals.
Digital Skill Building	Developing the skills necessary to utilize the tools needed to access and interact with curriculum content and activities as well as be able to demonstrate understanding in a variety of ways.
Digital Text	Any text that can be retrieved and read by a computer or other electronic device.
Digital Speech	Digitized speech is recorded natural human speech which can be played back.
Extension (browser)	An application or tool that functions within a web browser. They typically offer additional features or capabilities and extend functionality.
Fidgets	A sensory object or toy that people can use to keep their hands busy and help them pay attention.
Modifications	Modification adjust an assignment, test or activity which alters what is taught and what students are expected to learn, like reading a shorter passage or an alternative assessment.
Screen Reader	An application which uses synthesized speech to speak text and graphics aloud. It's often used by those with a print disability such as blindness and low vision.
Synthesized Speech	Also known as computerized speech and is generated by a computer simulated voice. This is commonly used in text-to-speech (TTS) programs and AAC devices.
Text-to-Speech (TTS)	TTS applications speak digital text aloud. This can include web pages, documents, PDF files, and emails. Originally developed for those with blindness and low-vision, it is also a support for student with learning disability affecting reading such as dyslexia.
Voice Recognition	Applications which allow the speaker to use their voice to create digital text wherever there is a text field. Examples include document, browsers, menu navigation, email, phone commands.
Word Prediction	Applications with allow the user to select words from a prediction window which when chosen, are inserted into the text. This tool can support written productivity for students with learning disabilities and motor impairments.

Distance Learning *Terminology*

Asynchronous Learning	When learners participate in an online learning course at different times. This might also be called eLearning or web-based training (WBT). Asynchronous learning allows learners to go through a course at their own pace and schedule.
Blended Learning	An instructional approach that includes a combination of online and in-person learning activities. For example, students complete online self-paced assignments and then meet on-site or online for additional learning activities.
Computer-Based Training(CBT)	A computer based instructional course, that does not involve a physically present instructor or facilitator. Also referred to as online learning or Web-Based Training (WBT).
Distance Education or Distance Learning	Learning that occurs when students and teachers are in different geographical locations and instruction occurs on an electronic device, computer or mobile phone/device. Learning can occur in an asynchronous environment or a synchronous environment.
Distance Learning Plans	Unique education plans for distance learning specifically designed to address a student's IEP goals and learning style in the virtual classroom.
eLearning	Short for electron learning. An umbrella term that includes all types of training, education and instruction that occurs on a digital platform, like a computer or mobile device.
Online Learning	Umbrella term that includes any type of learning that is accomplished on a computer and that usually occurs over the internet.
Self-Paced Learning	Instruction that allows an individual to control the pace of the coursework. It refers to learning that is asynchronous.
Synchronous Learning	When learners engage in an online course of instruction at the same time as the instructor but in different locations.
Video Conferencing	The use of video technology to create a virtual meeting between two or more learners in different environments that occurs and takes place over the internet. Participants can see and hear other participants using this technology.
Virtual Classroom	A digital classroom environment in which learning takes place over the internet rather than on a physical school site or physical classroom.
Web-Based Training(WBT)	Digital instruction and teaching. Learning instruction is offered through the internet.

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