



# BetterLesson Professional Learning Webinar

Differentiating for  
Student-Centered Mathematics



**Ohio Educational Service Center**

Date: June 17th, 2024

Padraic O'Donnell

## Ways to Engage with Us Today



**Chat Box**

**Share your thoughts!  
Make sure the chat box says Send to 'Everyone'.**



**Q & A**

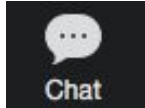
**Use the Q&A button to add your questions.**



**Links**

**Click on the links shared in the chat.  
Slides will be shared with the recording.**

# Welcome!



Welcome!

Share in the chat:

- Where are you joining us from today?
- What is your current role?

# Your Hosts



**Annika Moore**

Math Consultant  
DEW



**Lisa Fik**

BetterLesson  
Instructional Coach

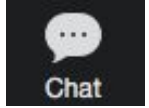


**Padraic O'Donnell**

BetterLesson  
Instructional Coach

# Let's Check In!

How well do you know your students?



I have a basic understanding of their needs.



I am aware of their academic needs.



I am aware of their social-emotional needs.



I am aware of both academic and SEL needs.



I check in with each student daily.

# Aligned & Tailored for Ohio ESC Partnership



## Aligned

Our partnership is specifically designed to amplify the impact of other state-wide infrastructure and initiatives.

Our coaches will be familiar with key efforts, including:

- Materials Matter
- HQIM-related work streams with EdReports & Instruction Partners
- Ohio Standards for Math Practice



## Tailored

Our team has worked with leadership from the ESC of Central Ohio, OESCA, and the Department of Education to tailor our workshop, coaching, and learning walk content to the unique needs of ESC Math Specialists

# Our Series: Differentiation in a Student-Centered Math Classroom



## Goal

Examine the importance of providing grade-level, high-quality instruction while being responsive to students' diverse backgrounds and experiences

DEFINE

Ways to better understand the needs and interests of my students.

EXPLORE

Strategies to effectively respond to student needs.

BUILD

Commit to a strategy to better know your students.

TRY, MEASURE, LEARN

# Our Webinar Series: Differentiation in a Student-Centered Math Classroom

- 1 Accessing and Engaging Student-Centered Mathematics
- 2 Routines and Structures for Student-Centered Math Instruction
- 3 Differentiating for Student-Centered Mathematics
- 4 Strategies for Differentiating Math Tasks



# Qualities of a Powerful Math Classroom



## The Content

Students have opportunities to experience coherent and meaningful disciplinary ideas.



## Cognitive Demand

Students engage in productive struggle, grappling with challenging problems.



## Equitable Access to Content

Classroom structures invite and support active engagement of all students.



## Agency, Authority, Identity

Students provided opportunities to contribute to discussions and build on others' ideas.



## Formative Assessment

Instruction “meets students where they are” and gives them opportunities to deepen understanding.

# Knowing Your Students

# UDL Principles



Multiple means of  
**Representation**

The **WHAT**  
of learning



Multiple means of  
**Engagement**

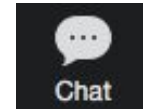
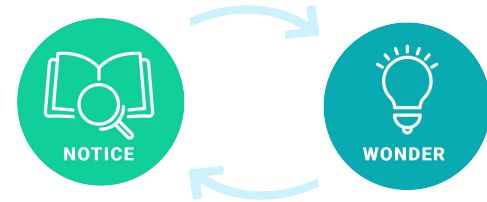
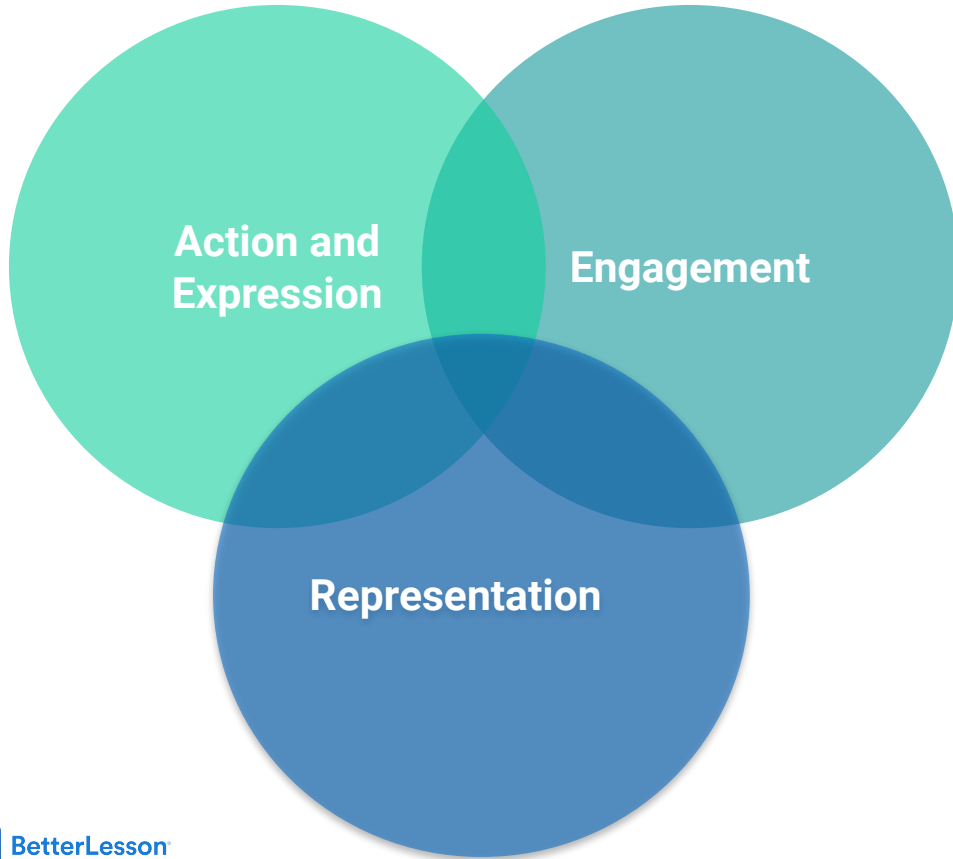
The **WHY** of  
learning



Multiple means of  
**Action & Expression**

The **HOW** of  
learning

# Where does differentiation fit?



# Differentiation is...

The efforts of teachers to **respond to variance among learners** in the classroom. Teachers can differentiate at least **four classroom elements** based on student readiness, interest, or learning profile:

- Content
- Process
- Products
- Learning Environment

Summarize this quote and drop it in the chat



“The science says learning for understanding happens when we integrate new knowledge with our existing knowledge. So, the more the teacher knows about a student's schema, the more she then can start to engage that student by making ‘cognitive hooks’ between the learner's context, interests, cultural knowledge, and the new content in the curriculum.”

- Zaretta Hammond

# Define

## Types of Differentiation

# Differentiation



## Differentiate by Content

What you present to your students



## Differentiate by Process

How students make sense of information

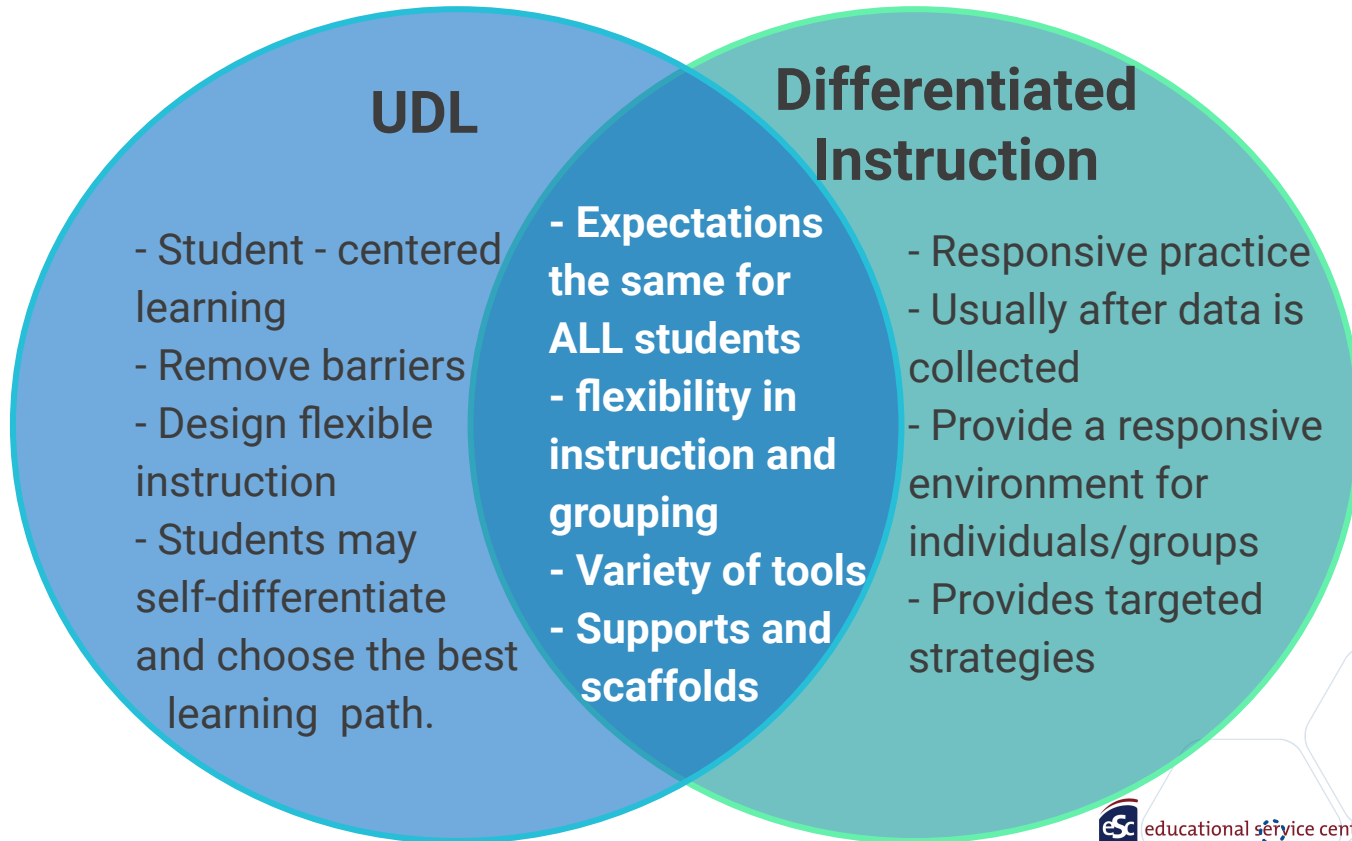


## Differentiate by Product

How students show what they've learned



# UDL vs. Differentiated Instruction



# Layered Systems

TAKE ACTION

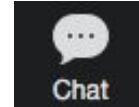
Differentiated Supports

DIAGNOSE

Formative Assessment and Feedback

UNDERSTAND

Strategic Planning



*What is 1 example of one of these systems in your classroom?*

# Layered Systems

TAKE ACTION

Differentiated Supports

DIAGNOSE

Formative Assessment and Feedback

UNDERSTAND

Strategic Planning

# Keys to Differentiation



Know your students



Collect data to identify specific needs



Ensure that there is access before differentiating



# Explore

## Experience a Strategy

# How to Get to Know Your Students

- Activate Prior Knowledge
- Pre-assessments to Identify Strengths and Gaps
- Student Interest Surveys
- KWL Charts
- Concept Web or Graffiti Walk
- Implement Culturally Responsive Practices

# KWL

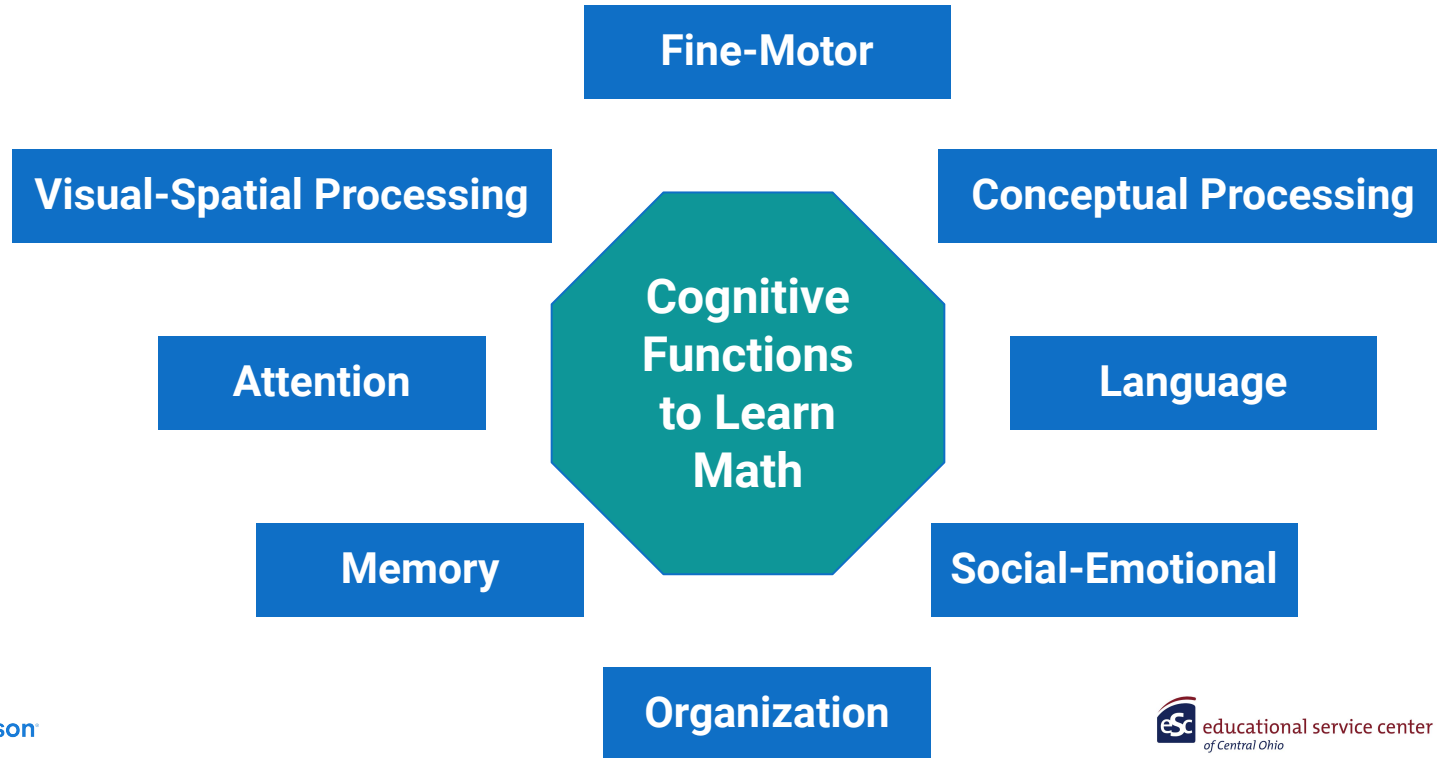
## Ohio Algebra 1 Standard:

A.CED.2 Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.

★ Modeling Standard

<b>K:</b> What do you <b>know</b> about equations?	<b>W:</b> What do you <b>want to know</b> about equations?

# Cognitive Functions Reflection





# Debrief

Choose one of the strategies to review, KWL or Cognitive Functions Reflection.

How might the strategy help you better understand the needs of your students?



# Build

How can we make this work actionable?

# Let's Explore: Strategy Choice Board

Choose any of the sections below and explore the related BL resources & strategies.



**Building  
Background  
Knowledge**  
**BL Strategy**



**Math  
Autobiographies**  
**BL Strategy**



**Counter  
Narratives**  
**BL Strategy**



**Cultural  
Responsiveness  
of a Math  
Lesson**  
**BL Strategy**

# Proactive Pre-Mortem



When making changes, it's important to consider obstacles before they happen. Then we can proactively address them!

- Think about a change to your practice or a strategy that you would like to implement.
- What obstacles might you face after making those changes?
- How might you address those obstacles?

## Q & A

**What questions do you have about our conversation today?**





**We value your feedback!**

“

**Your input is important to us, please take a moment to complete our survey using the link in the chat.**

# Thank you!

