



BetterLesson Professional Learning Webinar

**Routines and Structures for
Student-Centered Math Instruction**



Ohio Educational Service Center

Date: June 10th, 2024

Lisa Fik/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.



Handout

**Follow along with the handout (audit).
Slides will be shared with the recording.**

Your Hosts



Annika Moore

Math Consultant
DEW



Lisa Fik

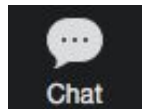
Instructional Coach
BetterLesson



Padraic O'Donnell

Instructional Coach
BetterLesson

Welcome!



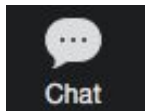
Reflect on a time when you or someone you know needed an adjustment in order to be successful.



What adjustments were made and what was the impact?

How did this feel?

Welcome!



Welcome!

Share in the chat:

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

Let's Check In!

Fist to Five: How familiar are you with UDL?



I've never heard of it or I've heard a little bit



I'm aware of it, but need more explanation



I know what the UDL principles are



I use UDL principles to plan lessons



I can teach UDL practices to others!

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

EXPLORE

BUILD

TRY, MEASURE, LEARN

The three UDL principles.

A lesson and audit for UDL principles.

A routine into your instruction.

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.

Define

UDL Principles

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

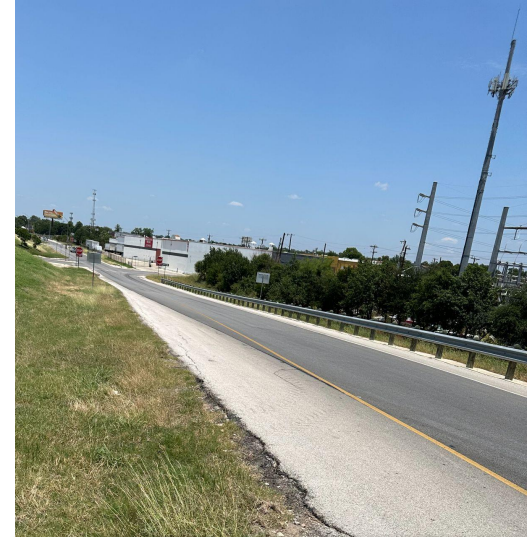
The UDL Expressway



**On Ramp:
Multiple Means of
Representation**



**Traffic Pattern:
Multiple Means of
Engagement**



**Off Ramp: Multiple
Means of Action
and Expression**

UDL Principles



Multiple
means of
Representation



Multiple
means of
Engagement



Multiple
means of
**Action &
Expression**

The **HOW** of
learning

**How do you present
information in
different ways?**

WHY of
learning

UDL Principles



Multiple
means of
Representation

The **WHAT**
of learning



Multiple
means of
Engagement

**How do you stimulate
interest and motivate
students?**



Multiple
means of
**Action &
Expression**

The **HOW** of
learning

UDL Principles



Multiple
means of
Representation

The **WHAT**
of learning



Multiple
means of
Engagement

The **WHY** of
learning



Multiple
means of
**Action &
Expression**

**How do you vary
methods for students
to respond?**

Multiple Means of Engagement



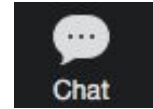
Capture student interest and motivation.



Sustain student effort and support persistence.



Teach and encourage self-regulation strategies.



What are some examples of these that are already part of your teaching practice?

Multiple Means of Representation



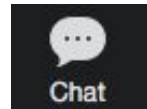
Provide options for how information is shared.



Support understanding of language and symbols.



Support student comprehension.



What are some examples of these that are already part of your teaching practice?

Multiple Means of Action and Expression



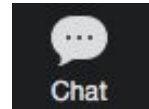
Make learning physically accessible.



Allow choice in how students communicate.



Provide options for executive functioning.



What are some examples of these that are already part of your teaching practice?

Questions When Considering Access

- **Which students** participate and in which **ways**?
- What are the **language demands** of participating in the work? (e.g., academic vocabulary, discourse practices)
- How can we support the **development of students' academic language**?
- How are **norms** (or interactions, lesson/task structures resources, etc.) **facilitated** to support participation?
- What **teacher moves** might expand **students' access** to meaningful participation (modeling ways to participate, accountability, etc.)



We can't prevent all the challenges students will face, but we can help alleviate them by designing a learning environment that leaves no room for failure.

- Katie Novak



Explore

Experience a Strategy

Engagement	Representation	Action & Expression
<ul style="list-style-type: none"> ❑ Choice is given in the learning process ❑ Learning is authentic and relevant to their lives ❑ Learning is driven by student goals ❑ Varying levels of challenge are embedded in the learning ❑ Flexible grouping is used to support students' needs ❑ Learning is broken into manageable chunks 	<ul style="list-style-type: none"> ❑ Information is presented using a variety of modalities ❑ Students engage with accessible content and tools ❑ Multiple examples, ideas, and relationships are provided for content ❑ Prior knowledge is activated through a variety of methods ❑ Students self-assess the determine their own path for learning 	<ul style="list-style-type: none"> ❑ Students are given multiple ways to demonstrate their learning ❑ A variety of scaffolds and supports are used ❑ Assistive and adaptive technology is used to drive personalized learning ❑ Students monitor their own progress for their goals ❑ Formative feedback is provided regularly

Auditing a Lesson for UDL

Directions:

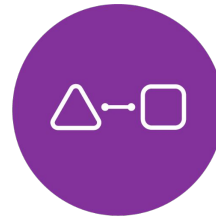
1. **Click** on the lesson **link** provided in the chat.
2. **Read** through the **Objective**.
3. **Choose** either the **Launch OR the Guided Practice** to skim.
4. **Use the audit checklist** on the next slide to identify UDL Principles.



EXPLORE

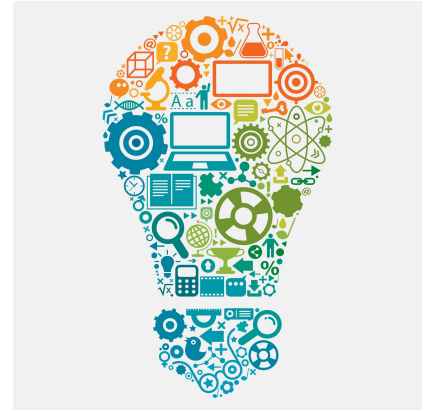


















REFLECT



CONNECT

How might you adjust the lesson to provide better access?



Engagement	Representation	Action & Expression
<ul style="list-style-type: none">  Choice is given in the learning process  Learning is authentic and relevant to their lives  Learning is driven by student goals  Varying levels of challenge are embedded in the learning  Flexible grouping is used to support students' needs  Learning is broken into manageable chunks 	<ul style="list-style-type: none">  Information is presented using a variety of modalities  Students engage with accessible content and tools  Multiple examples, ideas, and relationships are provided for content  Prior knowledge is activated through a variety of methods  Students self-assess the determine their own path for learning 	<ul style="list-style-type: none">  Students are given multiple ways to demonstrate their learning  A variety of scaffolds and supports are used  Assistive and adaptive technology is used to drive personalized learning  Students monitor their own progress for their goals  Formative feedback is provided regularly

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.

**Evaluate a Lesson
for UDL Principles**

BL Strategy

**Make Thinking
and Ideas Visible**

Anchor Charts

**Increase
Engagement and
Provide Access**

Manipulatives

(Source: Math
Learning Center)

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.

Questions When Considering Access

- **Which students** participate and in which **ways**?
- What are the **language demands** of participating in the work? (e.g., academic vocabulary, discourse practices)
- How can we support the **development of students' academic language**?
- How are **norms** (or interactions, lesson/task structures resources, etc.) **facilitated** to support participation?
- What **teacher moves** might expand **students' access** to meaningful participation (modeling ways to participate, accountability, etc.)?

Strategies that Provide Access

- Provide multiple access points
- Provide different pathways that students can choose from
- Make connections between student approaches
- Encourage the refinement of ideas rather than critiquing incorrect ideas
- Support the use of multiple language registers (restate ideas)
- Use a variety of strategies to encourage broad participation
- Use tasks with language and contexts connected to students' experiences
- Accelerate learning by providing just-in-time support

Reflect and Connect

Reflect on how the UDL Principles connect to access and engagement from our first session together.

Which strategies support multiple means of Engagement? Representation? Action/Expression?



Q & A

What questions do you have about our conversation today?





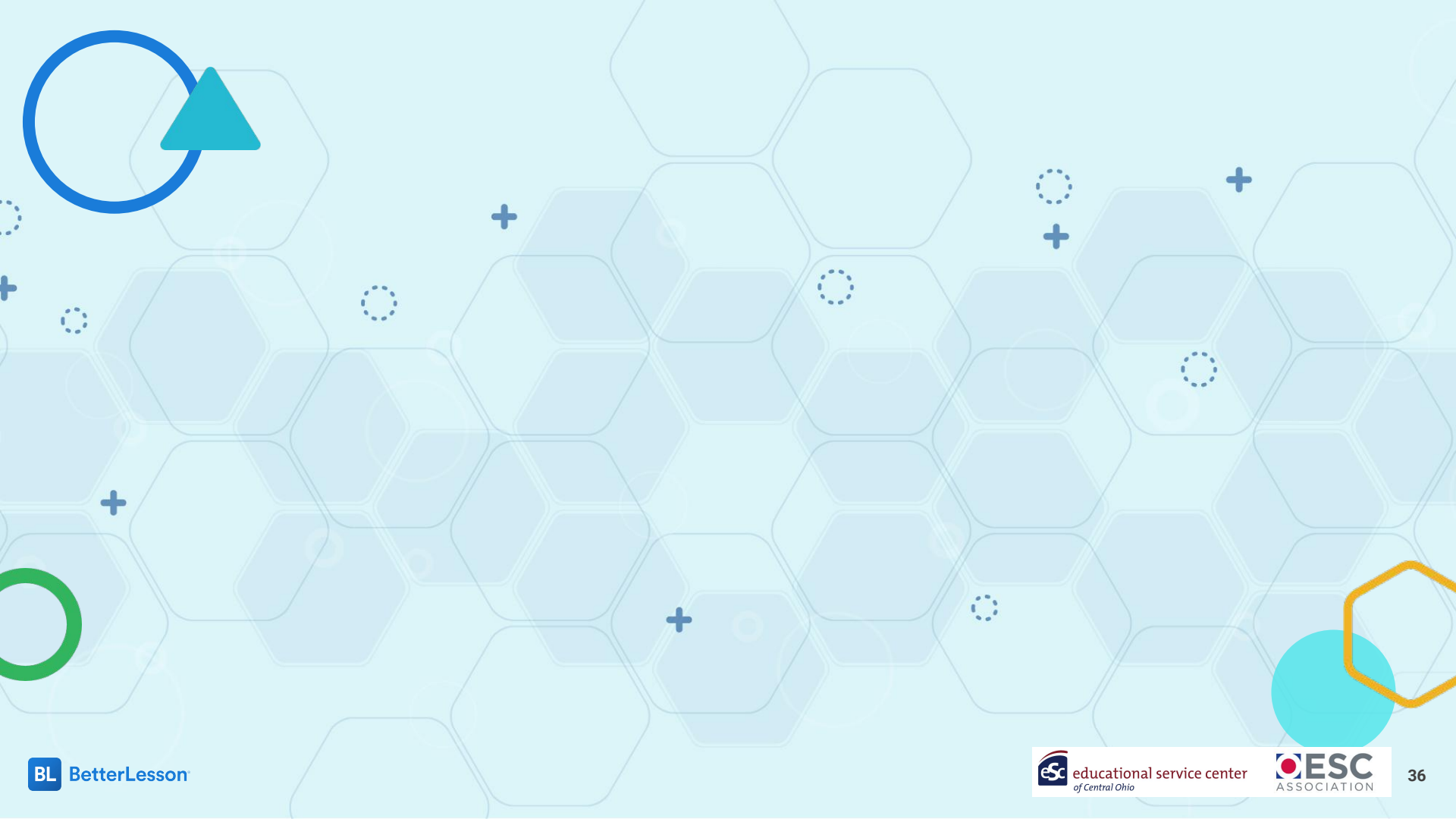
We value your feedback!

“

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

Thank you!













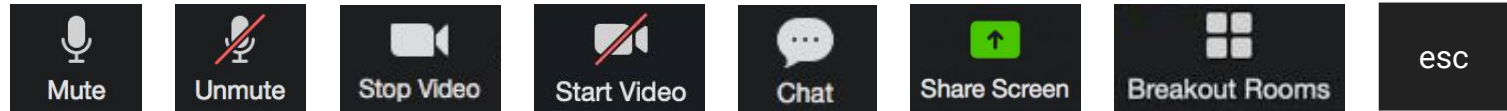




Graphics & Callouts

Style Guides - Zoom Icons

Please do not change the size or scale the image. Copy+paste any icons that you need and use them as they appear here.



Style Guides - Numbers

Please do not change the size or scale of the image. Copy+paste any icons that you need and use them as they appear here.



1 2 3 4 5

Style Guides - Alpha

Please do not change the size or scale the image. Copy+paste any icons that you need and use them as they appear here.



A B C D E

Attention Callouts - Markers

To call attention to information, use outlined box, rounded box, or arrow in your presentation.

Call out copy here

Call out copy here

Call out

Call out

Call out copy here

EXAMPLE:

BL BetterLesson

Flexible Math: Introduction to Student-Centered Mathematics Practices

Partner name
Date, time

Key Links & Resources

- Join the session using the Zoom link
- Check in for the session in the BetterLesson Lab
- Find the slides for this session
- Your BetterLesson Coach for this session is name, email

Agenda

In this session we will define "student-centered math" and explore approaches to creating student-centered learning experiences in both in-person and virtual settings.

Time	Focus	Resources
20 minutes	Welcome, Introductions & Agreements	<ul style="list-style-type: none">• BetterLesson Check In • Find fun, math-y prompts at:<ul style="list-style-type: none">◦ Which One Doesn't Belong

Attention Callouts - Icons



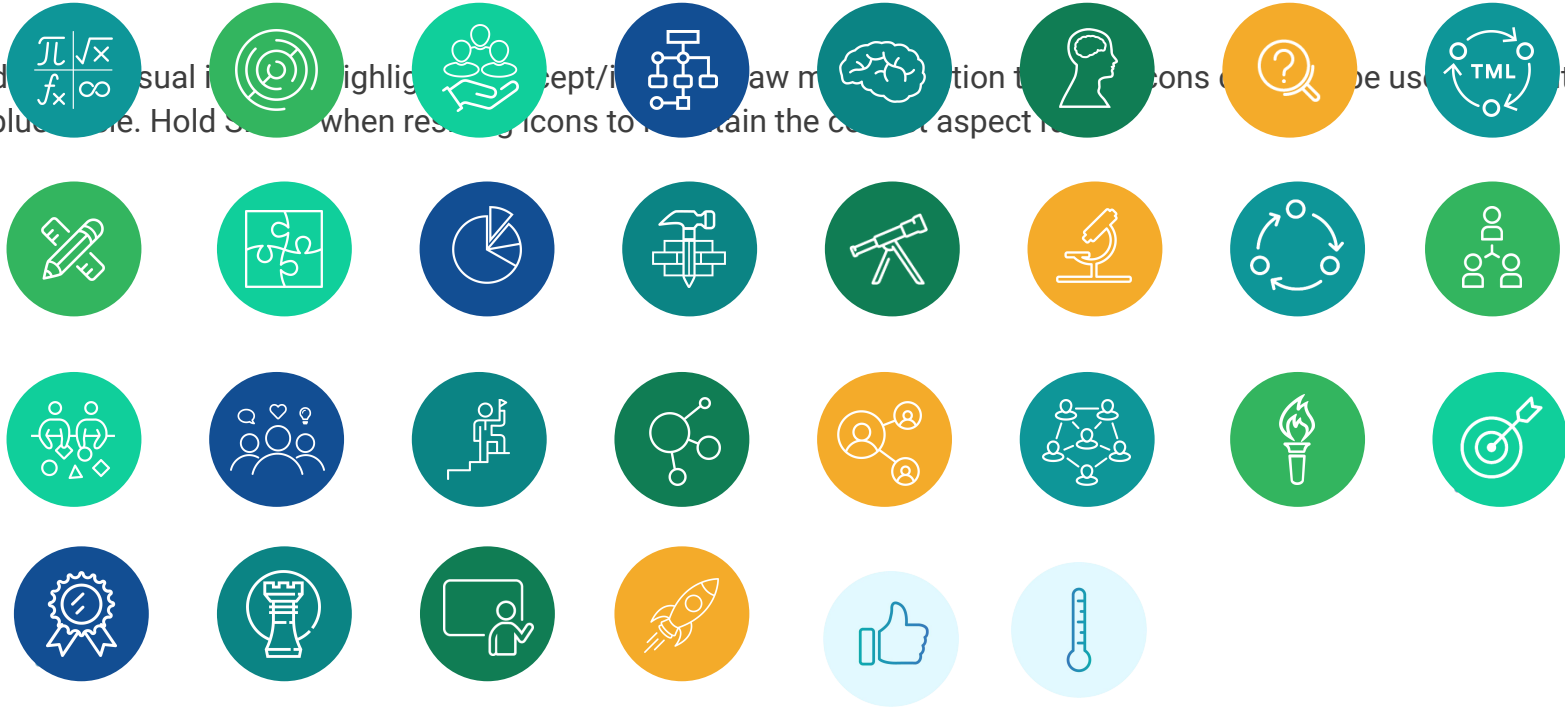
Icons

Used to visually highlight concepts, draw attention to icons, and be used with the blue circle. Hold Shift when resizing icons to maintain the correct aspect ratio.

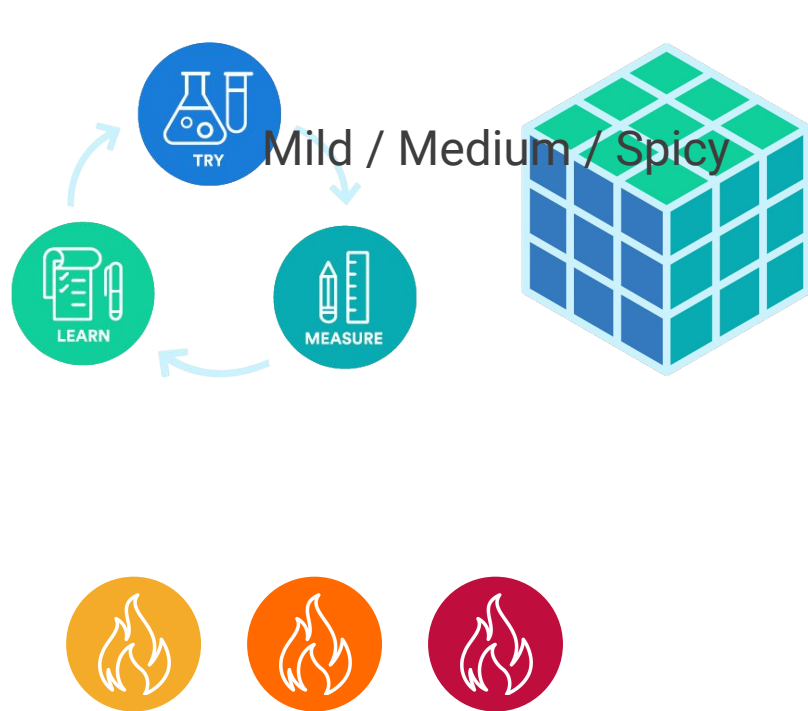


Icons

Used to highlight a concept/idea or a new method of instruction to be used. Hold Shift when resizing icons to maintain the correct aspect ratio.



Additional Graphics



Additional Graphics



READ



REFLECT



CONNECT



EXPLORE



REFLECT



CONNECT

Teacher / Students

Teacher

Student/students

