

Eliciting Advanced Learning Evidence: A Dynamic Approach for Gifted English Learners



National Association for Gifted Children Annual Convention – 2023
Saturday, November 11, 2023 — 2:30 PM – 3:00 PM
Coronado J

Susan Dulong Langley, Del Siegle, and John Burrell
University of Connecticut

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REMINDER

NAGC is committed to providing a safe, productive, and welcoming environment for all meeting participants and NAGC staff. All attendees, exhibitors, sponsors, and volunteers at NAGC23 are expected to abide by the following Code of Conduct and uphold NAGC’s Standards of Conduct. NAGC prohibits discrimination or harassment of any kind.



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Agenda

- Project EAGLE
- A Dynamic Approach
- EL/ML & Cultural Considerations
- Prompts & Probes

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Project EAGLE



<https://identifygifted.education.uconn.edu/>

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Opportunities!

- Interested in doing acceleration better?
ncrge.uconn.edu/acceleration
- Identify more EL students with math talent
identifygifted.education.uconn.edu
- Validate the new Renzulli Executive Function Scale
- Parents – **s.uconn.edu/refs**
- Teachers – **s.uconn.edu/renzulliscale**



Parent Code



Teacher Code

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Underrepresentation of gifted ELs



Little attention to EL mathematical thinking

(Coronado & Lewis, 2017; De Araujo et al., 2016; Gubbins et al., 2020; Mun et al., 2020; Siegle, 2020)


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Phase 1

New England

Field Test Classrooms
EL Population



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This slide features a map of the United States with the New England region (Maine, New Hampshire, Vermont, Massachusetts, Connecticut, and Rhode Island) highlighted in teal. The text 'Phase 1' is at the top center, and 'New England' is to the right of the map. Below the map, it says 'Field Test Classrooms' and 'EL Population'. A QR code is located in the bottom left corner. A small number '8' is in the bottom right corner of the slide frame.

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Phase 2

Starting 2025

State Partners

AZ DOE
CO DOE
TX TAGT


Project EAGLE Partners



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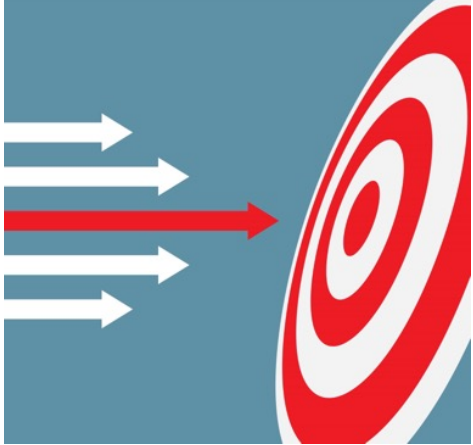
This slide features a map of the United States with three states highlighted in teal: Arizona (AZ DOE), Colorado (CO DOE), and Texas (TX TAGT). The text 'Phase 2' is at the top center, and 'Starting 2025' is to the left of the map. To the right of the map, it says 'State Partners'. A legend at the bottom right shows a teal square next to the text 'Project EAGLE Partners'. A QR code is located in the bottom left corner. A small number '9' is in the bottom left corner of the slide frame.

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Goals

- Create dynamic EL/ML ID
- Increase capacity for spotting EL/ML talent
- Increase EL/ML gifted referrals



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Recommendations

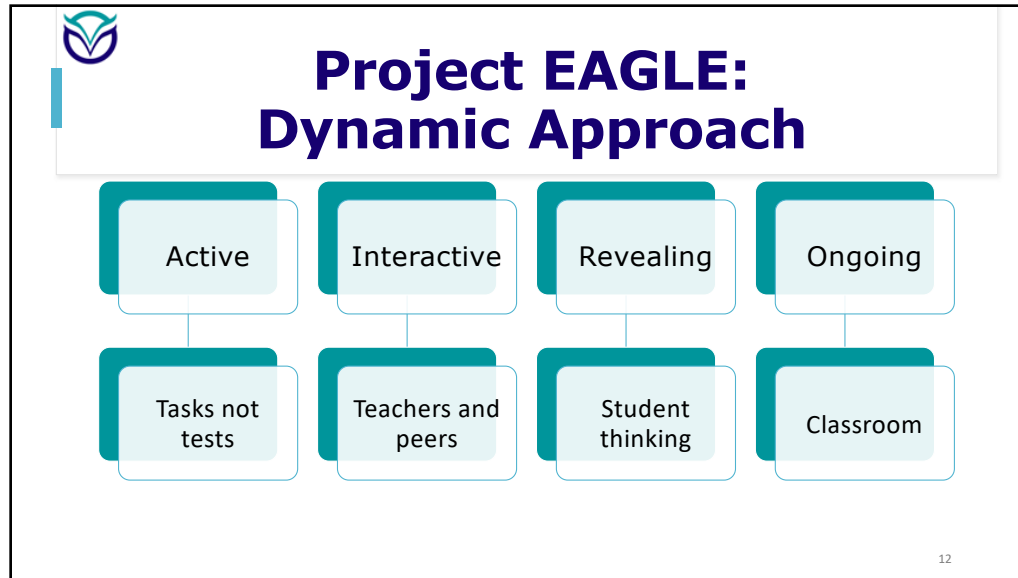
- Linguistic and cultural considerations
- Measures
 - Multiple
 - Beyond standardized
 - Strength-based
 - Dynamic



NCRGE—Mun et al., 2020

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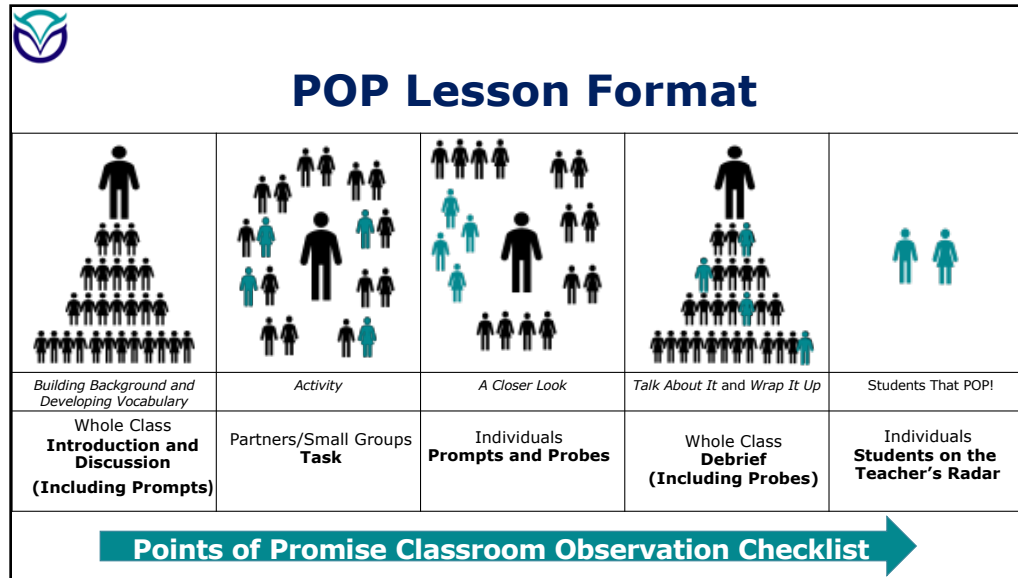
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EL/ML supports

- EL accommodations
- Cultural considerations

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Language

What is needed?	What can I do?	How might this look in a lesson?
Building background	Determine what information is needed and discuss	Show and discuss how lesson items work (e.g., balance scales).
Student's language level	Consult student records and EL/ML specialists	Simpler sentence structures when speaking; avoid/reduce figurative speech (metaphor/similar, idioms).
Language support	Sentence starters or frames	<ul style="list-style-type: none"> ○ I notice/wonder _____. ○ The rule is _____. ○ It is important because _____. ○ An example is ____ because _____.
Visuals and manipulatives	Provide pictures, videos, or actual items	Show pictures or videos of items referenced in lessons (e.g., show and discuss machines before demonstrating an input/output machine).
Real-world examples	Connect or adapt the lesson to students' lives	Ask students about machines they have seen and how they work.
Vocabulary support	Word wall vocabulary with images	Introduce, discuss, and post word wall cards with definitions and images/ examples of relevant terms (e.g., rule).
Processing time	Build in wait time, allow peer-peer practice, let students draw/write before responding	Allow students to turn and talk with a partner to hear and practice responses.
Modalities of expression	Offer a range of options for answering questions	Include opportunities to speak, write, draw, or model with choices as often as possible.

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Culture

What is needed?	What can I do?	How might this look in a lesson?
Consider students' cultures	Check lesson context that may/may not be ubiquitously known	Use soccer rather than basketball for math tasks.
Honor prior experience (Funds of Knowledge)	Tap into a student's experiences	Relate a fraction task to recipes from students' cuisine or calculate percentages from data relevant to students' lived experiences.
Respect communication preferences	Check comfort with asking/answering questions.	Provide multiple pathways for individual versus collaborative work and answering to honor students' preferences
Be mindful of body language and gestures	Check thumbs up, pointing, eye contact, etc.	Do not use thumbs up as a gesture of understanding/agreement if their culture finds it offensive.

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



Points of Promise

Classroom Observation Checklist

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Why Points of Promise?


Foster and spot mathematical talent

- Research-based
- Advisory board
- Any indication of behavior is acknowledged
- Behaviors "POP" out












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Project EAGLE Points of Promise

"I am thinking mathematically when..."

-  1. I enjoy working on math and continuing to try to find the answer even when the problems are difficult.
-  2. I connect what I am learning to what I have learned before in math.
-  3. I relate the math we are learning to everyday life outside of math class.
-  4. I try different strategies to solve math problems.
-  5. I use logical reasoning to make sense of math problems and determine what to do next.
-  6. I think of new ways to solve math problems and new problems to solve.
-  7. I recognize patterns in math and use them to organize information.
-  8. I understand and use relationships between numbers to order, compare, and estimate.
-  9. I can figure out how shapes fit together in different ways.




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Project EAGLE's Two-Step Dynamic Approach


IN
OUT



Prompt
(Urge)




Probe
(Delve)




Adapted from Source: Tzuril (2017) 21

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From the teacher to the student

IN



**Prompt
(Urge)**


- **I** – Inspire
- **N** – Nudge
 - Intention
 - Action
 - Interpretation

Adapted from Lobato et al. (2005) and Tzuriel (2017)

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Prompt learner participation



**Prompt
(Urge)**

- Understand student (dis)engagement
- Encourage
- Clarify purpose
- Model for or partner with the student
- Allow individual or collaborative work
- Provide choices
 - Writing
 - Drawing
 - Modeling
 - Demonstrating

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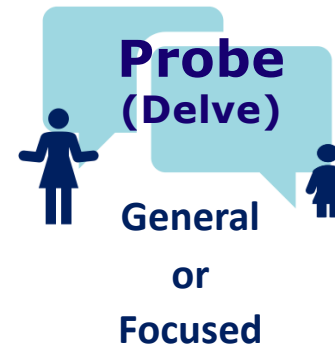
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Between Teacher and Student

OUT

Help students share **OUT** their thinking

1. **O** – Orient
2. **U** – Understand
3. **T** – Transfer



Adapted from Lobato et al., 2005

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Probing to draw out students thinking via...


- Images
- Ideas
- Strategies
- Conjectures
- Conceptions
- Ways of viewing mathematical situations



Adapted from Lobato et al., 2005

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Beyond Factual Questions

- Flexible thinking
- Open-ended
- Higher-level thinking

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As you observe students working, look for the following behaviors. You may use the sample "Ask a student" questions or others of your own to look more closely at student thinking. Note any students who demonstrate the behaviors in the boxes to the right.

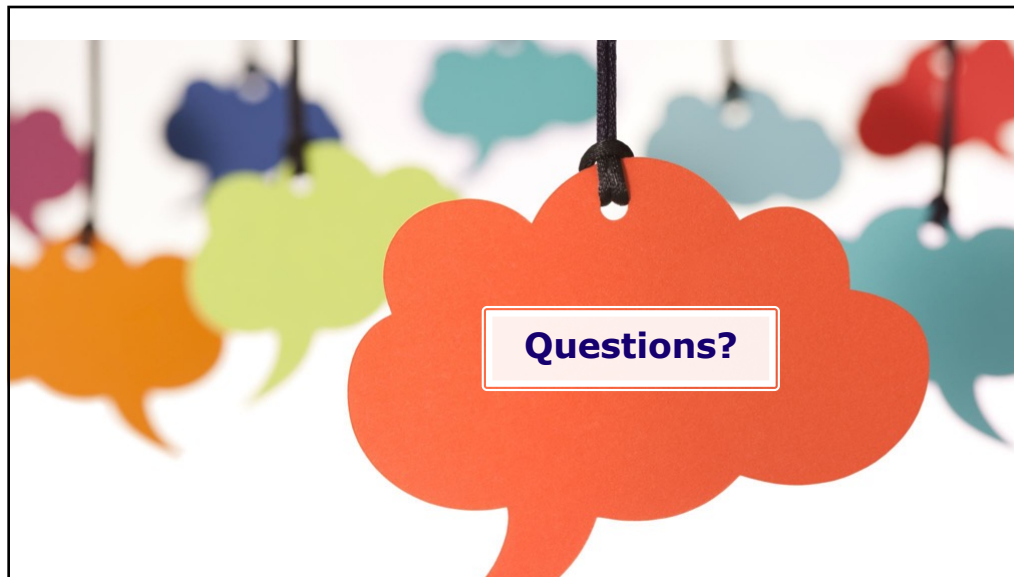
Sub-behavior	Ask a student...	Students Who Demonstrate POP
1. Is motivated and persists in solving complex math problems.		
Persistence of effort Student sees value in making mistakes Makes meaningful, sustained progress on a challenging task Is curious, intrigued by or interested in math	<ul style="list-style-type: none"> • <i>Would another number work for this input rule? Why or why not?</i> • <i>If their rule is not the same as the Machine Operator or their rule is wrong, do they keep trying?</i> 	
2. Learns new concepts in mathematics easily.		
Sees connections between new material and past material Connects ideas to other broader concepts Makes relationships between different mathematical ideas	<ul style="list-style-type: none"> • <i>Does the In and Out Machine connect to any previous concepts we have learned?</i> • <i>Can you explain how this works?</i> • <i>Does your rule work for every number? Why or why not?</i> 	
3. Applies mathematical concepts to real-world situations		
Identifies real-world problems where a math model might be useful Connects mathematical concepts to personally meaningful experiences Recognizes patterns in real-world phenomena or experiences		
4. Shows flexibility in using a variety of thinking or problem-solving strategies.		
Changes strategies to a more efficient approach, as needed Utilizes relational thinking Restructures a problem to a more workable form (e.g., modeling a problem)	<ul style="list-style-type: none"> • <i>Why did you choose these numbers?</i> • <i>How did you compute the value of the output?</i> 	

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Sub-behavior	Ask a student...	Students Who Demonstrate POP
5. Makes inferences based on logical reasoning.		
Draws logical conclusions from key ideas Generalizes based on specific examples Can think a few steps ahead	<ul style="list-style-type: none"> How do you know you have found all the rules for a set of data? What do these examples have in common? Could the rule have been determined with fewer input guesses? 	
6. Demonstrates original ways of approaching math problems.		
Generates unique questions or problems to solve Devises a novel approach or strategy for solving a problem	<ul style="list-style-type: none"> What would happen to the output values if I changed the rule? 	
7. Organizes information in a variety of ways to discover mathematical patterns		
Draws inferences from recognizing patterns Recognizes and uses patterns to solve problems Groups multiple pieces of information together	<ul style="list-style-type: none"> Why did you choose these numbers? Why did you organize the information the way you did? 	
8. Demonstrates a strong number sense		
Demonstrates understanding of and can represent place value Uses mental computations easily Uses appropriate numerical operations intuitively Compares and orders large numbers or fractions easily	<ul style="list-style-type: none"> If the rule was (add/subtract 0), could it have been (subtract/add 0)? Why or why not? If the rule was (multiply/divide) by 1, could it have been (multiply/divide) by 1? Why or why not? Could you use a different method here? Why or why not? How did you compute the input from the output? Why do you think you are getting these results? 	
9. Displays spatial abilities		
Mentally manipulates an object without physically touching it Solves problems using spatial representations Composes an object from component parts		

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Project EAGLE Webpage
identifygifted.education.uconn.edu/

Contact
projecteagle@uconn.edu

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Interested in sharing what your district does for subject-specific acceleration?

- The National Center for Research on Gifted Education is conducting a research study to document and disseminate information on how school districts implement subject acceleration. We would like to conduct online interviews (~ 1 hour) with knowledgeable administrators from **school districts** who have systematic procedures in place for subject acceleration. **Scan the QR code** or contact Catherine Little at catherine.little@uconn.edu to learn more.



UConn IRB Protocol X23-0288 Approved October 30, 2023

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Seeking schools interested in doing acceleration better?

NCRGE is seeking schools serving grades 2-5 interested in ***FREE PROFESSIONAL LEARNING OPPORTUNITIES*** and ***assistance in making acceleration decisions.***



ncrge.uconn.edu/acceleration

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You can assist in the creation of the new
Renzulli Executive Functioning Scale

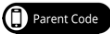
Grade 4-8 students will assess their...

1. ability to start tasks (e.g., I like starting new things),
2. ability to stay on task (e.g., I finish what I start)
3. organization (e.g., My desk is cleaned and organized)
4. awareness of strengths and weaknesses (e.g., I know what I can do well)
5. self-advocacy (e.g., I am not afraid to stand up for myself)
6. ability to collaborate (e.g., I work well with others)
7. awareness of ability to manage emotions (e.g., I can calm myself down when I am upset.)


Parents – **s.uconn.edu/refs**

Teachers – **s.uconn.edu/renzulliscale**



Parent Code



Teacher Code

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A promotional graphic for a free webinar. It features a portrait of Dr. Joy Lawson Davis on the left. The background is dark blue with a pattern of white dots on the left and a white diagonal shape. The text is in white and yellow.

Free Webinar **Nov. 18**

Are We There Yet? Chasing the Elusive Goal of Equity in Gifted Education

Dr. Joy Lawson Davis

Register at gifted.uconn.edu/events

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A promotional graphic for the Wallace Research Symposium on Talent Development. It features a dark blue background with a pattern of white dots at the top and bottom, and a yellow abstract line graphic on the right. The text is in white and yellow.

gifted.uconn.edu/wallace

Join us May 19-21, 2024

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