

Instructionally Relevant Alternate Assessments for Students with Significant Cognitive Disabilities

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Background

- History of AA-AAS as separate from instruction
 - Standardized, scripted performance tasks
 - Portfolios as evidence culled from instruction
 - Neither drives instruction

Topics in the Session

- Overview of the DLM system
- Sample Testlets
- Research in support of instructional relevance

Elements of the System

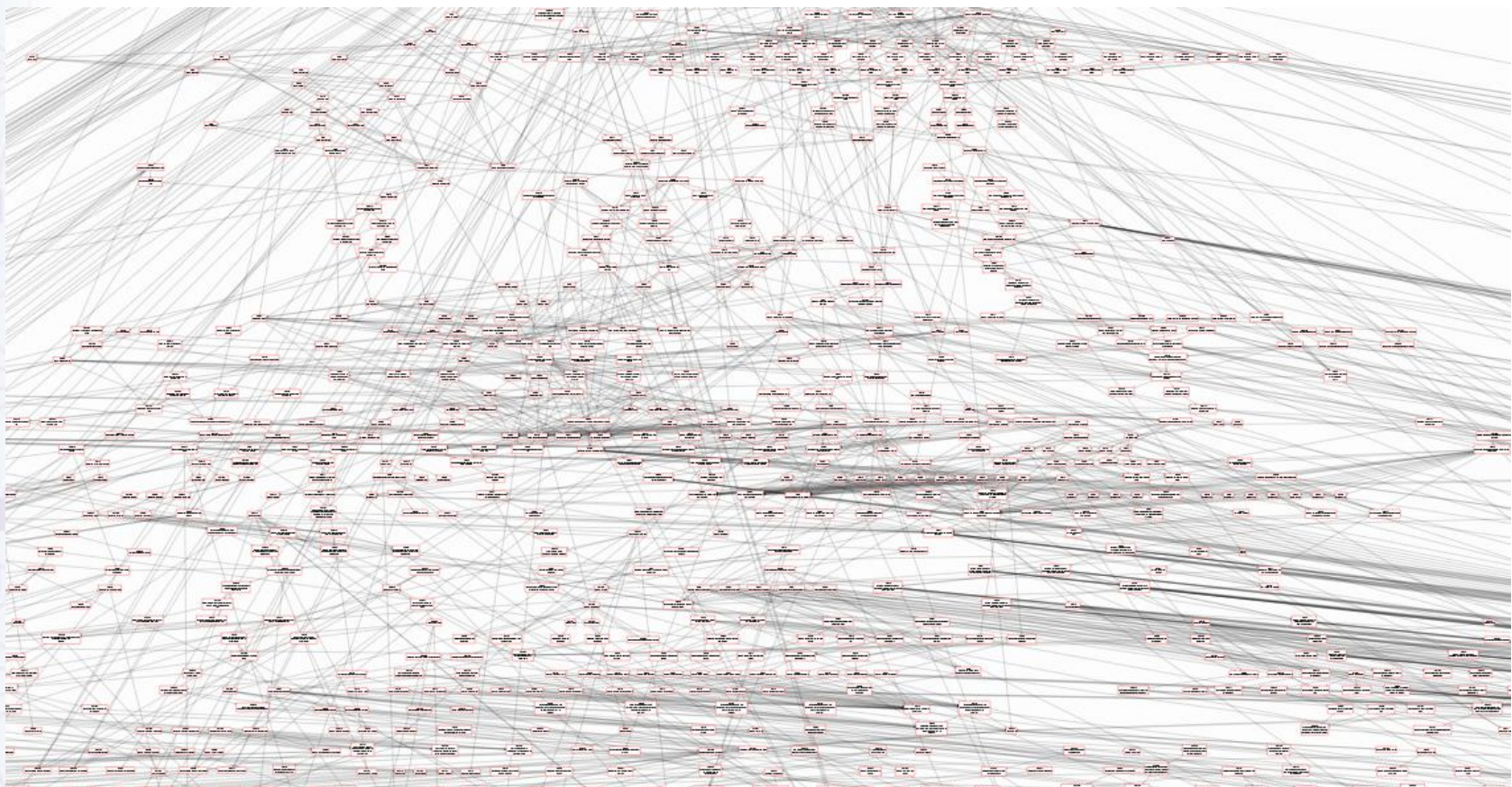
- Learning Map
 - Claims and Conceptual Areas
 - Essential Elements
- Assessment
 - Design and delivery
- Professional Development

THE LEARNING MAP

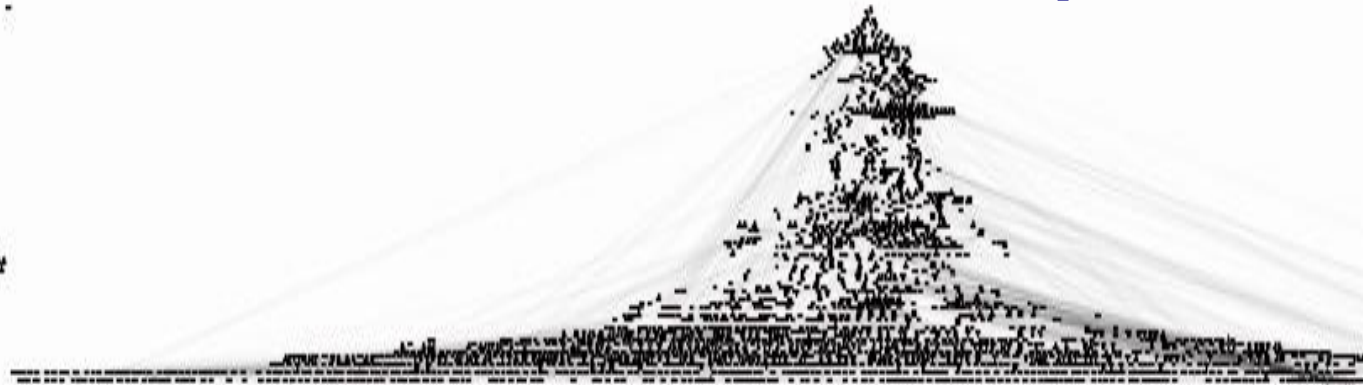
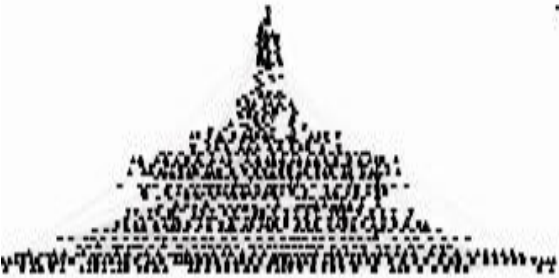


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A Portion of the Math Map



Quick Facts about the Map



- ELA
 - 141 foundational nodes
 - 1,645 ELA nodes
 - 538 Essential Elements
 - 3,982 edges/connections
- Mathematics
 - 141 foundational nodes
 - 2,312 mathematics nodes
 - 172 Essential Elements
 - 4,838 edges/connections

Learning Map

Claims

Conceptual
Areas

Essential
Elements

(and other nodes)

English Language Arts

Major Claims

Conceptual Areas

Students can comprehend text in increasingly complex ways

Determining critical elements of text

Constructing understandings of text

Integrating ideas and information from text

Students can produce writing for a range of purposes and audiences

Using writing to communicate

Integrating ideas and Information in writing

Students can communicate for a range of purposes and audiences

Using language to communicate with others

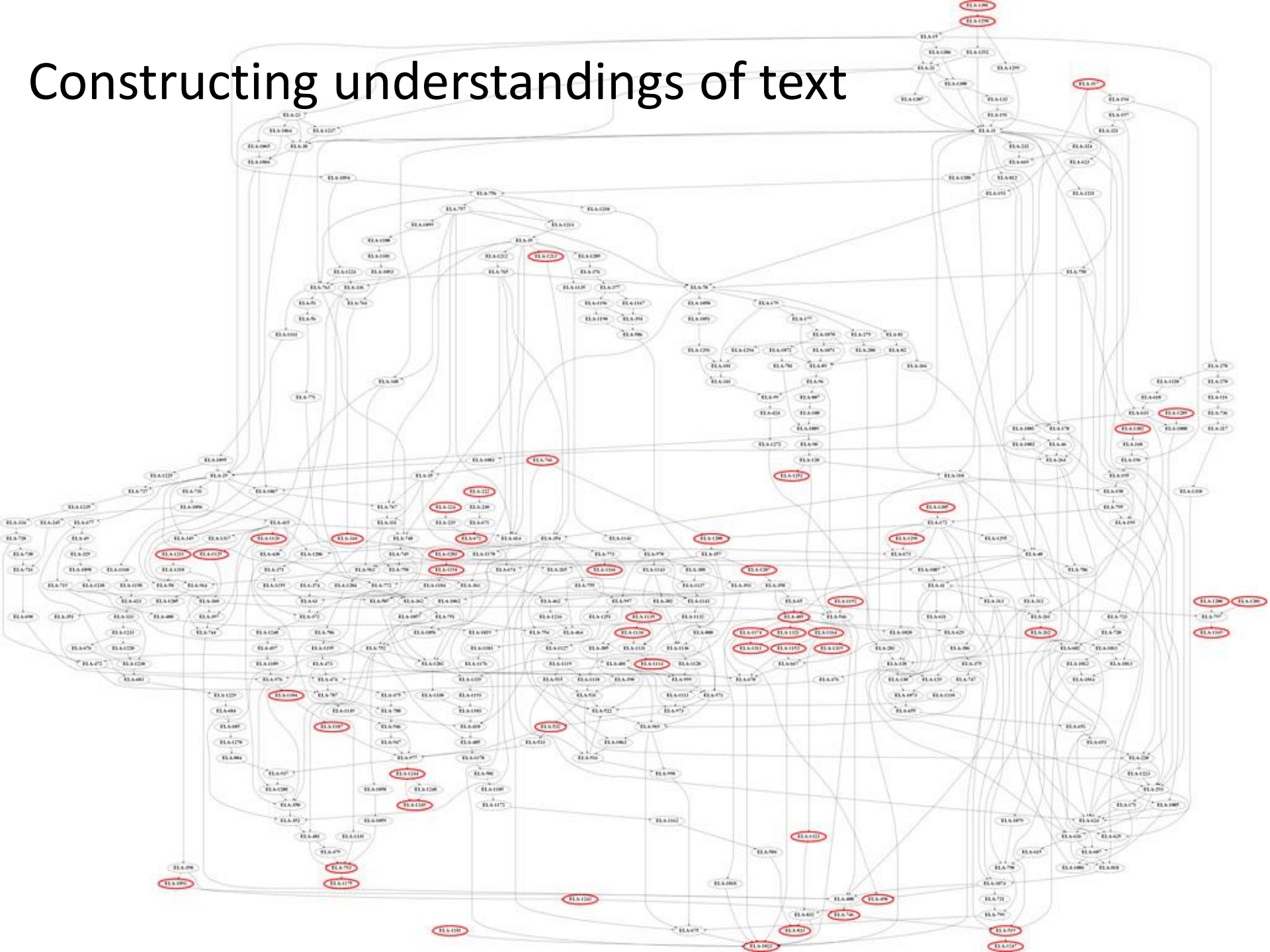
Clarifying and contributing to discussion

Students can investigate topics and present information

Using sources and information

Collaborating and presenting ideas

Constructing understandings of text



WHAT ARE ESSENTIAL ELEMENTS?



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Definition

The DLM Essential Elements (EEs) are specific statements of the content and skills that are linked to the Common Core State Standards (CCSS) grade level-specific expectations for students with significant cognitive disabilities.

DLM Essential Elements

- Reduced depth, breadth, complexity
- Provide appropriate level of rigor and challenge
- Focus on the skills (with multiple means of demonstration)
- Are a starting point for defining achievement standards
- Are not functional or pre-K skills or instructional descriptions

Example for English Language Arts

Common Core State Standard

- RL.6.2 Determine a theme or central idea of a text and how it is conveyed through particular details; provide a summary of the text distinct from personal opinions or judgments.

Essential Element

- EE.RL.6.2 Determine the theme or central idea of a familiar story and identify details that relate to it.

Example for Mathematics

Common Core State Standard

- 4.MD.5. Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement:
 - An angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. An angle that turns through $\frac{1}{360}$ of a circle is called a “one-degree angle,” and can be used to measure angles.
 - An angle that turns through n one-degree angles is said to have an angle measure of n degrees.

Essential Element

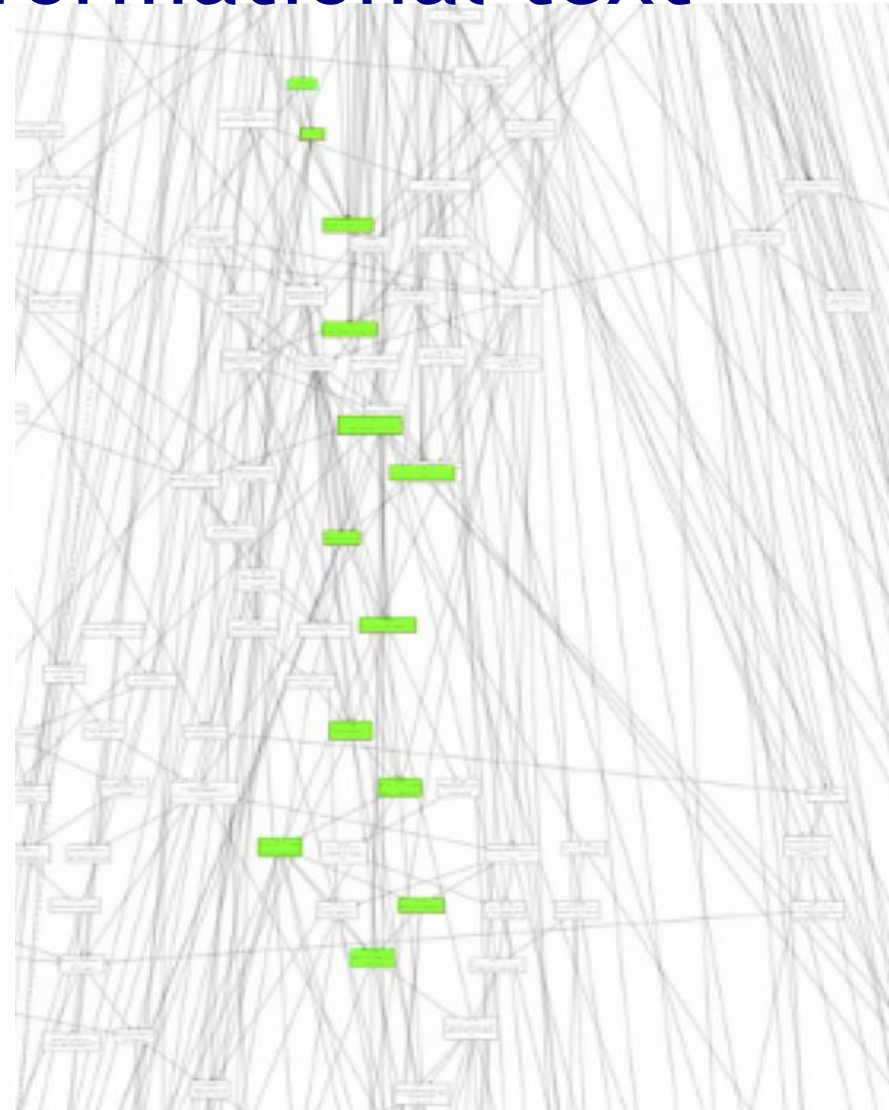
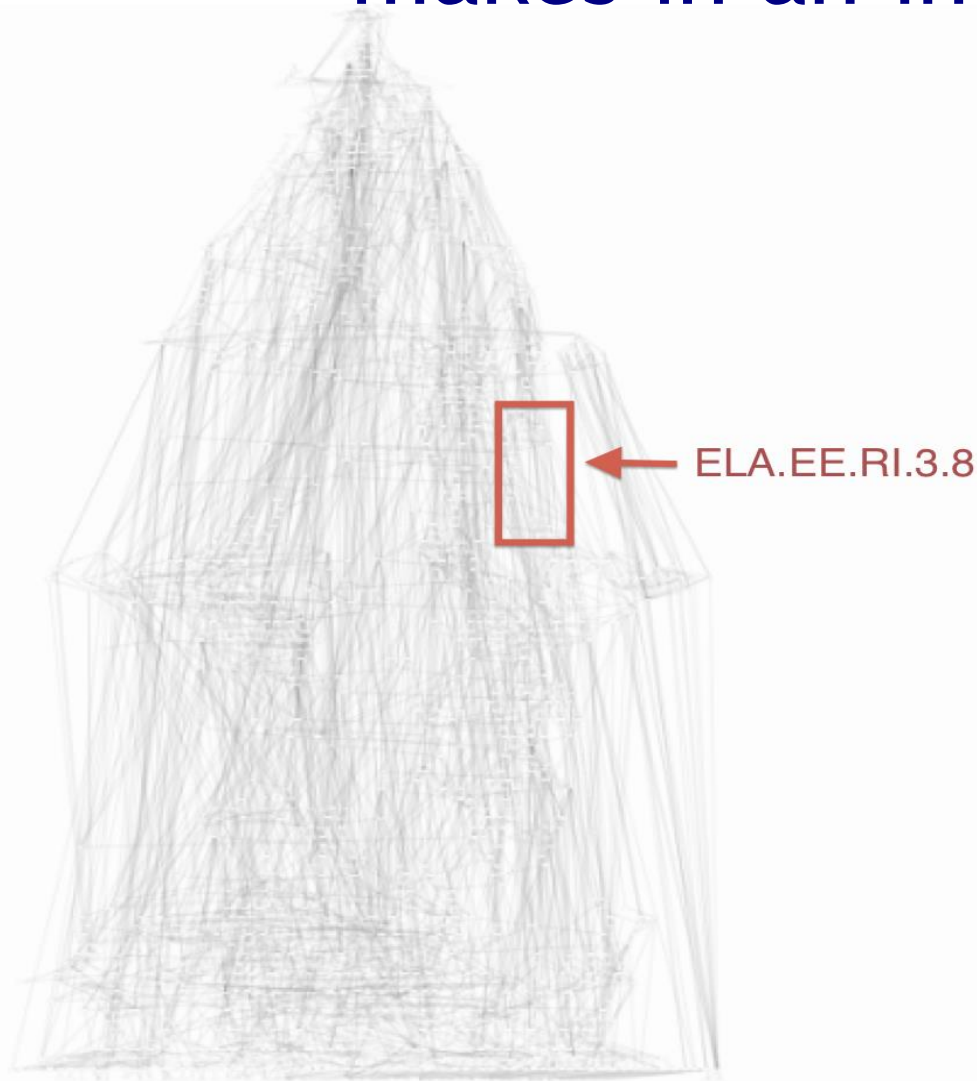
- EE.4.MD.5. Recognize angles in geometric shapes

HOW DO ESSENTIAL ELEMENTS RELATE TO THE MAP?



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Identify two related points the author makes in an informational text



DLM ASSESSMENTS



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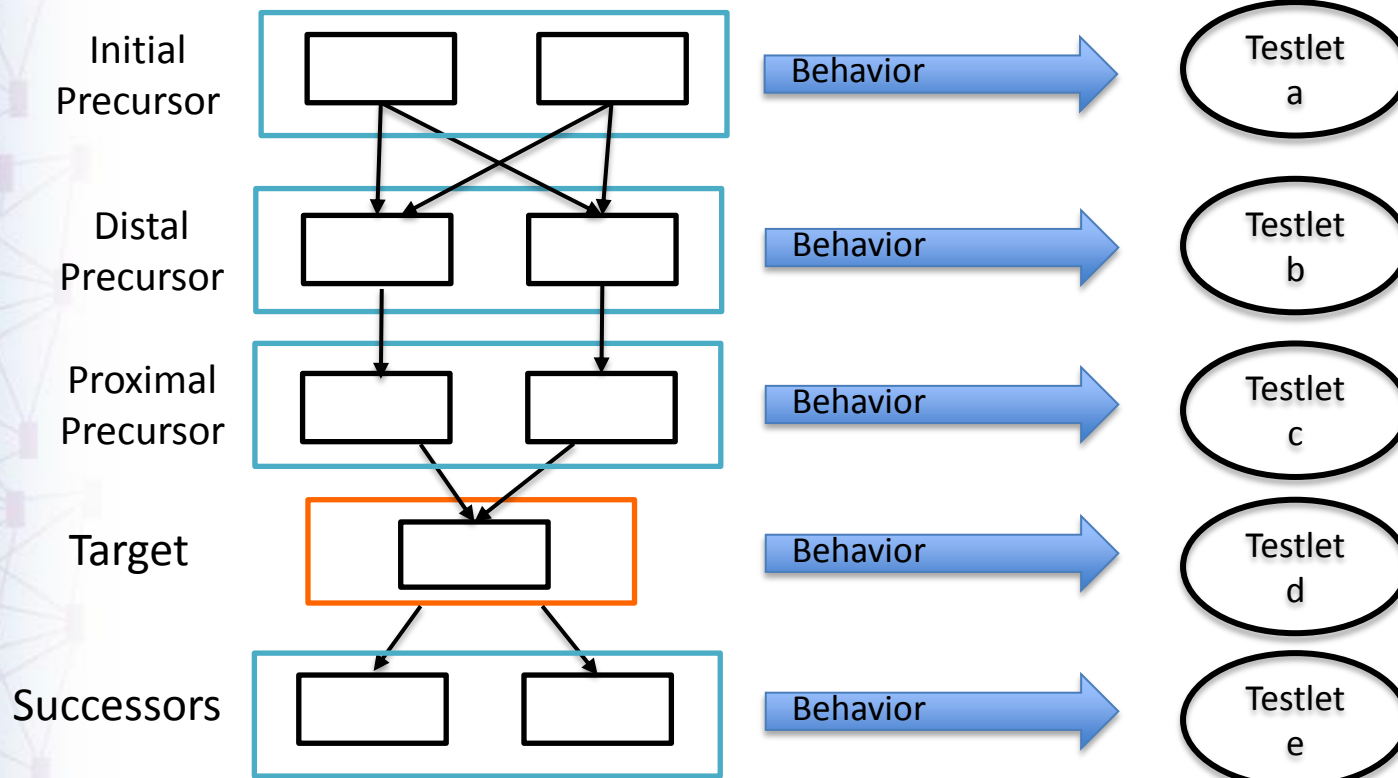
Design of Instructionally Embedded Assessment

- Instructionally relevant testlets
 - ELA, math, soon science
- 3 - 5 linkage levels per EE
- Item types
- Accessibility by design
- Delivery

Testlets in Linkage Levels

Connect the map...

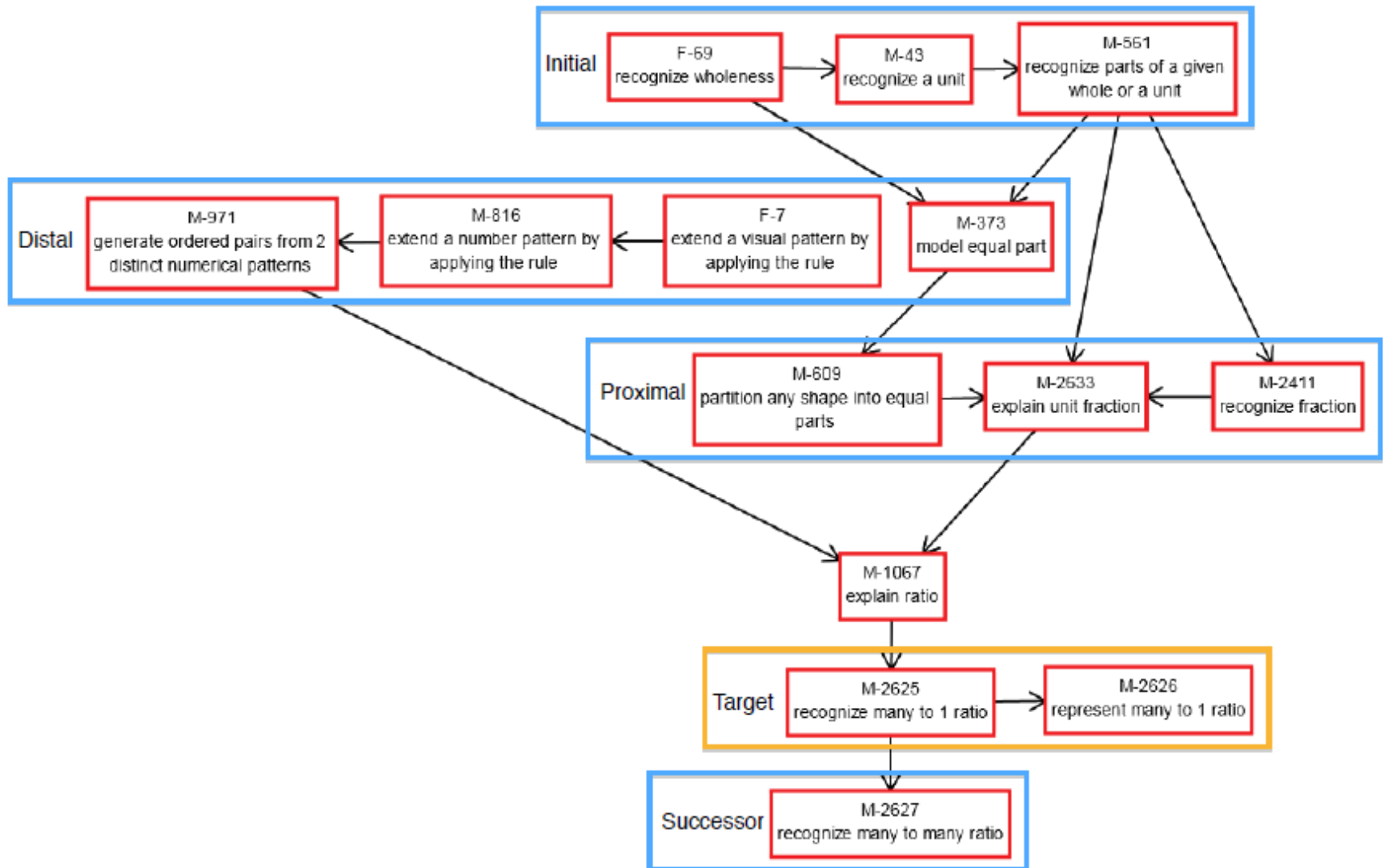
...to the items developed.



Linkage Levels - a Definition

- Linkage levels contain one or more nodes that precede (or follow) an identified EE. Links both identify important “waypoints” en route to an EE and specify where a student is in relationship to the grade-level target.

M.EE.6.RP.1: Demonstrate a simple ratio relationship.



Structure of a Testlet

- Begins with engagement activity
 - Motivate students
 - Activate prior knowledge
 - Prepare for the cognitive process required in the items
- ELA: Text presented twice; questions embedded and at conclusion on 2nd read
- Math: series of questions or problems related to single topic

Item Types

- Single-select multiple choice
- Multi-select multiple choice
- Technology enhanced:
 - Sorting
 - Matching
- Teacher observation*
- Extended performance event*

Assessment Delivery

- Special user interface
- Dynamic routing
- Customization through Personal Needs and Preferences profile and First Contact

KU – Management and Reporting System

educator.cete.us/AART/studentRecords.htm

Adobe Connect Login- EP TDE- QA PMP Certifi...on Handbook Project Man...ent Program BenchPrep G...AP Courses KU Human R... - Welcome LeanDog Videos

Welcome Special Education Sensory Capabilities Motor Capabilities Computer Access **Communication** Academic Attention Complete

Expressive Communication

Submit Survey

Previous Next

Does the student use speech to meet expressive communication needs?

Yes

No

Previous Next

KU – Management and Reporting System

educator.cete.us/AART/studentRecords.htm

Adobe Connect Login- EP TDE- QA PMP Certifi...on Handbook Project Man...ent Program BenchPrep G...AP Courses KU Human R... - Welcome LeanDog Videos

Kristin Skeet

Summary **Display Enhancements** Language & Braille Audio & Environment Support

Display Enhancements
Kristin Skeet - Grade Not Available Save

Magnification

Activate by Default

2x

Overlay Color

Activate by Default

Invert Color Choice

Activate by Default

Masking

Activate by Default

Answer Masking

Custom Masking

Contrast Color

Activate by Default

<input type="text" value="ABC"/>	<input type="text" value="ABC"/>	<input type="text" value="ABC"/>
<input type="text" value="ABC"/>	<input type="text" value="ABC"/>	<input type="text" value="ABC"/>
<input type="text" value="ABC"/>	<input type="text" value="ABC"/>	<input type="text" value="ABC"/>

Background Color Hex

SUPPORTING EDUCATORS IN USING THE DLM™ SYSTEM



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The DLM™ System of Professional Development

- Modules in multiple formats
 - <http://dynamiclearningmaps.org/unc/facilitated/index.html>
- Virtual Community of Practice
 - <http://dlmpd.com/clds>

SAMPLE ITEMS



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Initial Precursor (7th grade)

Educator Directions:

Present the seven cups to the student in a way that captures the student's attention. For example:

- Draw the student's attention to the presence of the cups.
- Talk about how cups are used for drinking juice, water, etc.

Once the student has attended to the cups, stack five cups together and leave two cups separated. Indicate to the student that the stacked cups are in a group and the other cups are separate.

On the next screens, you will ask the student some questions about the cups.

EE: Solve multiplication problems with products to 100.

Node: Recognize set/ recognize separate

Educator Directions:

SHOW: the stacked cups.

SAY: “Here are some cups.”

SHOW: the separate cups.

SAY: “Here are some more cups.”

SHOW: the stacked cups and the separate cups.

SAY: “Show me the group of cups.”

Record student response:

- Indicates the group of stacked cups
- Indicates the separate cups
- Indicates one cup or all of the cups
- Attends to other stimuli
- No response

Initial Precursor (4th grade RI)

Educator Directions:

SHOW: one of the familiar, identical objects. Then give the student a moment to explore the object.

SHOW: the other familiar, identical object. Then give the student a moment to explore the object.

SHOW: a new or different object that was not used in the previous item.

Record student response:

- Attends longer to the new or different object
- Attends equally to all of the objects
- Attends only to familiar objects
- Attends to other stimuli
- No response

EE: Identify one or more reasons supporting a specific point in an informational text.

Node: Recognize different

Target (5th grade RI)

Why do trees need water?

to grow

to move

to stretch

EE & Node: Identify the relationship between a specific point and supporting reasons in an informational text

Target (HS)

Jay counts \$1.00. Jay then counts \$0.25. What is the total amount Jay counts?

\$0.75

\$1.25

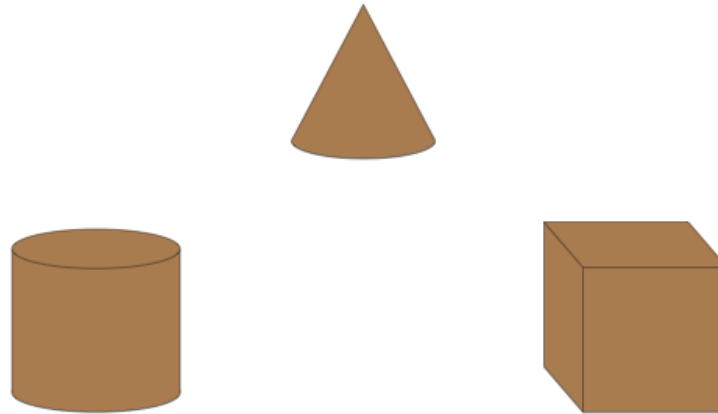
\$1.75

EE: Solve real world problems involving addition and subtraction of decimals and whole numbers, using models when needed.

Node: Solve word problems involving addition with rational numbers

Proximal Precursor (HS)

Deb finds a cylinder. Which shape is a cylinder?



EE: Use properties of geometric shapes to describe real-life objects.

Node: Recognize cylinders

INSTRUCTIONAL RELEVANCE



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Instructionally Relevant Testlets

- Model good instructional activities
- Teachers should want to use them even if no formal assessment were going on
- Major difference between instructionally relevant assessment and normal instructional activities should be the systematic collection and computer-assisted analysis of data

Principles of Good Instruction

- Engaging the student
- Providing context
- Making connections



Features That Support Relevance

- Testlet structure
 - Including engagement
- Appropriate content choices
 - Initial content selection based on First Contact survey
 - Teacher selection of content through instructional support interface

Instructional Support Interface

1. Student roster in Educator Portal
2. Teacher selects EE for a student*
3. Teacher selects level within the EE*
4. Routed to information about that EE

*System recommends, teacher chooses

Instructional Support Interface

The screenshot displays the 'Instructional Support Interface' with the following elements:

- Top Bar:** 'Kite Logo' on the left, 'Sign Out' and 'Logged in as Awesome, User' on the right.
- Primary Navigation:** A horizontal menu with buttons for 'Home', 'Test Management' (highlighted), 'Test Builder', 'Professional Development', 'Reports', and 'Configuration'.
- Section Header:** 'Instructional Tools' with the subtitle 'Plan instruction and assessment, review student profile and assessment history'.
- Secondary Navigation:** A horizontal menu with buttons for 'Test Management', 'Instructional Tools' (highlighted), 'Ticketing', 'Future Label 1', and 'Future Label 2'.
- Form Fields:** A row of buttons for 'Roster', 'DLM' (highlighted), 'Linkage Level', and 'Confirmation'. Below this is a text input field for 'Selected Student Last Name, First Name' and 'Grade: N', and another for 'Educator Last Name, First Name'. To the right are 'Back' and 'Next' buttons.
- Selection Options:** Four dropdown menus: 'Select Content Area', 'Select Claim', 'Select Conceptual Area', and 'Select EE'.

A red circle highlights the 'DLM' button and the 'Selected Student' and 'Educator' input fields. A red arrow points from this circle to the text '4 steps'.

4 steps

RESEARCH & DEVELOPMENT IN SUPPORT OF INSTRUCTIONAL RELEVANCE



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Evidence

During test development

1. Internal review of testlets
2. External review of testlets

Research

1. Early evidence: entry to the map
2. Teacher surveys
3. Future research plans

First Math Testlet

Teacher evaluation of testlet difficulty for the student

	Fdn.	1	2	3
Too Easy	8%	19%	15%	28%
About Right	40%	52%	58%	60%
Too Hard	52%	29%	27%	12%

Last Math Testlet

Teacher evaluation of testlet difficulty for the student

	Fdn.	1	2	3
Too Easy	4%	6%	17%	17%
About Right	31%	44%	55%	60%
Too Hard	65%	50%	28%	23%

First ELA Testlet

Teacher evaluation of testlet difficulty for the student

	Fdn.	1	2	3
Too Easy	6%	13%	15%	22%
About Right	35%	50%	68%	69%
Too Hard	59%	37%	17%	9%

Last ELA Testlet

Teacher evaluation of testlet difficulty for the student

	Fdn.	1	2	3
Too Easy	4%	3%	5%	16%
About Right	29%	41%	65%	71%
Too Hard	67%	56%	30%	13%

Pilot Comments Related to Instructional Relevance

- The student is able to listen to stories and point to pictures.
- Good questions based on the student levels.
- This test is a good representation of the core curriculum in this grade level and will show a reasonable level of my student abilities.
- I really like that the assessment provides the curriculum for assessing what we do now.

Field Test 1 Comments Related to Instructional Relevance

- Pictures used in ELA tests need to be bigger to better engage the student.
- This test was very informative and captured my students attention. He enjoyed the real life pictures with the text. Overall great interaction with the student!

Future Research Directions on IR

- Teacher surveys
- Test administration observation studies
- Instructional consequences studies

THANK YOU!

For more information, please contact:

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or

Go to: www.dynamiclearningmaps.org

For Professional Development, contact:

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