



Instructionally Useful Assessments for Students with Significant Cognitive Disabilities: Implications from DLM Instructionally Embedded Assessments

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Introduction

- Access to timely instructional data is critical for meeting all students' needs
- Interim assessments can be used to measure student progress and inform instructional decision making
- However, the marketplace currently lacks alternate interim assessments (Boyer & Landl, 2021)

Boyer, M., & Landl, E. (2021, April). *Interim assessment practices for students with disabilities* (NCEO Brief #22). Minneapolis, MN: University of Minnesota, National Center on Educational Outcomes and National Center for the Improvement of Educational Assessment.



Instructionally Embedded Assessments

- Well-established for students with significant cognitive disabilities (Browder et al., 2021)
- Designed to be instructionally relevant and aligned with existing standards
- Lessons learned can be applied when developing and implementing interim and other assessments intended to inform student learning

Browder, D.M., Lazarus, S.S., & Thurlow, M.L. (2021, May). *Alternate interim assessments for students with the most significant cognitive disabilities* (NCEO Brief #23). National Center on Educational Outcomes.

Dynamic Learning Maps® Instructionally Embedded Alternate Assessments

- Designed for students in grades 3-8 and high school with the most significant cognitive disabilities
- Evaluates skill mastery for alternate academic content standards
- Prioritizes flexibility, accessibility, and student outcomes
- Operational since 2014-2015
 - Used for state accountability in 6 states
 - Available for optional use in 15 additional states

Dynamic Learning Maps® Instructionally Embedded Alternate Assessments

- Spring and Fall testing windows (~15 weeks)
- Teachers select content standards from the test blueprint within constraints
- Each standard available at five complexity levels, based on underlying learning map of cognitive skill development
- Results inform instruction and produce year-end summative performance results

Score Reports and Online Interface Supporting Intended Uses

- Individual student score reports and online interface developed through a series of educator focus groups and cadres
- Several resources are available to aid score interpretation and use
- Mini-maps show how knowledge, skills and understandings progress towards each standard


Score Report and Mini-Map

REPORT DATE:
SUBJECT: Mathematics
GRADE: 5

NAME: Student DLM
DISTRICT: DLM District
SCHOOL: DLM School

Individual Student End-of-Year Report
Learning Profile


Example



DISTRICT ID: DLM District
STATE: DLM State

Student's performance in 5th grade mathematics Essential Elements is summarized below. This information is based on all of the DLM tests Student took during Spring 20XX. Student was assessed on 7 out of 8 Essential Elements and 5 out of 6 Areas expected in 5th grade.

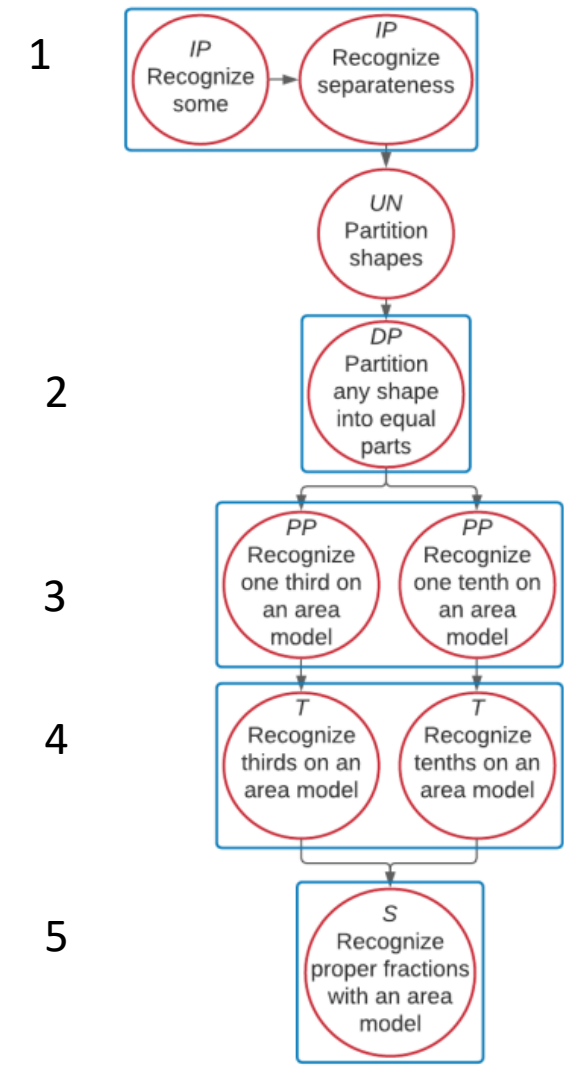
Demonstrating mastery of a Level during the assessment assumes mastery of all prior Levels in the Essential Element. This table describes what skills your child demonstrated in the assessment, and how those skills compare to grade level expectations.

		Estimated Mastery Level				
						
Area	Essential Element	1	2	3	4 (Target)	5
M.C1.1	M.EE.5.NF.2	Recognize separateness; recognize some	Partition shapes into equal parts	Recognize one third and one tenth as represented by an area model	Recognize thirds and tenths as represented by area models	Recognize a proper fraction as represented by an area model
M.C1.2	M.EE.5.NBT.3	Recognize separateness; recognize a set	Compare two quantities (sets) using models	Compare two numbers up to 10 using symbols	Compare two numbers up to 100 using symbols	Compare numbers up to 1,000; order two-digit numerals
M.C1.2	M.EE.5.NBT.4	Recognize the number of objects in a set	Recognize a unit; recognize tens and ones; compose and decompose numbers	Know place value and relate it to rounding	Round numbers up to 100 to the nearest ten	Round numbers up to 1,000 to the nearest hundred
M.C1.3	M.EE.5.NBT.5	Recognize separateness, set, and subset	Explain, represent, and solve repeated addition	Demonstrate the concept of multiplication	Multiply numbers up to 12 by numbers 1 to 5	Understand the relationship between multiplication and division

Levels mastered this year
 No evidence of mastery on this Essential Element
 Essential Element not tested

This report is intended to serve as one source of evidence in an instructional planning process. Results are based only on item responses from the end of year spring assessment. Because your child may demonstrate knowledge and skills differently across settings, the estimated mastery results shown here may not fully represent what your child knows and can do. For more information, including resources, please visit <https://dynamiclearningmaps.org/states>.

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Feedback on Instructionally Embedded Assessments

- Spring 2022 DLM teacher survey ($N=3,431$)
 - Item block on instructionally embedded assessments
 - Overall perceptions
 - How they are implemented with respect to instruction
 - Use of results
- Teacher focus groups
 - 11 semi-structured focus group interviews in Fall 2021
 - 30 teachers from six states

Themes Based on Feedback

- Instructional Utility
 - Flexible administration
 - Instructional uses
- Score Reports and Online Interface Supporting Intended Uses
- Resources and Training
- State and Local Guidance

Flexible Administration for Instructional Utility

- Many different approaches to selecting content, complexity, and timing of assessments
- Teachers value individualized assessment to meet students' needs

Flexible Administration for Instructional Utility

I like being able to do it at different times throughout the year using it at the beginning and end of year. . . So just a constant check on exactly where they're at is important to me and I guess I like that.

It's really nice that I get to pick to kind of tailor to the student . . . They're totally different students, and they have different levels of where they're at. It's really nice that I can pick what meets his needs and what meets his ability level so I can target those in the assessments.

That flexibility to teach where the kid is at, not where the whole world wants him to be and help him get there in a logical way is what really works for me.

Instructional Uses

- Top uses of instructionally embedded assessment results from 2022 DLM Teacher Survey:
 - Identify individual student strengths and weaknesses (63%)
 - Inform preparation of IEPs (51%)
 - Evaluate student progress (47%)
 - Discuss results with parents (41%)
- Teachers reported not using results for ~6% of students

Instructional Uses

- During focus groups, teachers reported using instructionally embedded results to:
 - Plan instruction throughout the year
 - Monitor students' learning progress over time
 - Demonstrate progress and achievement to parents

Instructional Uses

I like how it focuses on what's next. . . And that you can look at, okay, so they've got this one, so now I need to be able to work up to this one.

[It] gives you a logical ladder with lesson planning kind of canned for you already. Here's where he is. Here's what we're working on. Here's what we've mastered. Here's what we're doing next.

Challenges for Instructional Utility

- Having too much flexibility and choice could be challenging with larger caseloads
- Additional work and time throughout the year compared to traditional summative assessments
- Balancing required testing with other student needs, especially for those who are medically fragile or have extensive care needs

Implication: Carefully consider the amount of flexibility needed to meet student and teacher needs without overburdening them

Online Assessment Interface

- Visual indicators
 - Blueprint requirements
 - Instructional plans
 - Assessments ready to administer
 - Mastery results

The screenshot displays the Online Assessment Interface for District 6 / School 11 / English Language Arts. The user is Tran, Anne, with State ID: 10000536. The interface includes a navigation menu (SETTINGS, MANAGE TESTS, REPORTS, HELP) and a 'Fall Window' status indicator. A progress bar shows various stages: Instruction in Progress, Testlet Assigned, Testing in Progress, Complete, Recommended Linkage Level, Mastery Demonstrated, Mastery Not Demonstrated, and Results Not Available. A large blue arrow points to a 'Complete' status icon.

Choose one EE in C1.2 (L, RL or RI).

Claim: ELA.C1 Students can comprehend text in increasingly complex ways.
Conceptual Area: ELA.C1.2 Construct Understandings of Text

Essential Element	Initial Precursor	Distal Precursor	Proximal Precursor	Target	Successor
ELA.EE.RL.9-10.1 Determine which citations demonstrate what the text says explicitly as well as inferences drawn from the text.	Identify concrete details in a familiar story	Answer questions by referring to a text Testlet Assigned 01/13	Cite textual evidence for explicit information in text	Discriminate between explicit and implicit citations	Determine a narrative's explicit meaning
ELA.EE.RL.9-10.2 Recount events related to the theme or central idea, including details about character and setting.	Identify the forward sequence in a familiar story	Identify main idea Instruction in Progress 01/13	Identify details related to the theme of a story	Recount events contributing to the theme using details	Recount main events related to the theme
ELA.EE.RL.9-10.4 Determine the meaning of words and phrases as they are used in a text, including idioms, analogies, and figures of speech.	Identify descriptive words	Identify the words or phrases to complete a literal sentence Complete: Mastered 01/17	Determine the meaning of idioms and figures of speech	Determine the meaning of words and phrases	Determine the meaning and impact of words and phrases

Score Reports and Online Interface Supporting Intended Uses

- ~86% of 2022 survey respondents agreed that:
 - the DLM instructionally embedded online interface helped them find the instructional level that was the best fit for each student
 - it was easy to create instructional plans in the online interface

Score Reports and Online Interface Supporting Intended Uses

“I like how that [the score report] has that progression [of skills]. Because then you can tell parents, they can do this, but now we’re working toward this.”

I love that I can just quickly go on there and when you first log in, you can see [testing] requirements met and I love that...that’s one of the things that I like. It’s just right there for you.

It’s much easier to see what the levels are, see the [content standards]...and pick what we – if we don’t think that the computer has picked appropriately or if it’s the first time, picking the [complexity] level where we think our students will be able to show mastery.

Challenges for Intended Uses

- Some teachers did not know they could access student results during the year in the online system

“I didn’t know that you could pull up reports because all the DLM training that is provided is how to give the test and what the test is about”

Implication: Provide adequate visibility of and training on using results to inform instruction

Resources and Training

- DLM provides required test administrator training and 51 optional professional development modules available on-demand
 - 89% of 2022 survey respondents agreed that test administrator training prepared them for administering the DLM assessment
 - Educators completing the optional modules provide consistently positive feedback regarding their importance and relevance

Resources and Training Challenges

- Participation in the optional professional development modules is limited
- Teachers desire additional training and resources specific to accessing and using results

Implication: Determine critical needs and resources that will support educator practice, recognizing they have limited time to access supplemental materials

State and Local Guidance

Teachers' experience is impacted by differences in state and local guidance

- Time to complete testing requirements
- Variation in local testing requirements
- Amount of support from school and district

Implication: Consider how state and local guidance may impact use of the assessment for intended purposes

Recommendations

1. Consider the amount of flexibility and individualization that is feasible for educators
2. Design score reports and assessment interfaces to meet educators' needs and adjust them over time



Recommendations, continued

3. Evaluate training and resources so that educators have access to critical knowledge for supporting instruction and assessment of students with significant cognitive disabilities
4. Evaluate the impact of state and local guidance, including unintended consequences





Thank you!

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