

# Instructionally Relevant Large Scale Writing Assessments for Students with Significant Cognitive Disabilities

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## Assessing Writing

The Dynamic Learning Maps™ (DLM) Alternate Assessment is a multi-state consortium assessment system. All students who take DLM assessments are assessed in writing.

DLM writing assessments were developed using two general principles:

- Maximize student independence while writing.
- Assess writing in a way that is appropriate for all DLM students.

Writing is assessed with testlets, which are available for students who are both emergent and conventional writers.

- Emergent writing describes the marks, scribbles, and random selection of letters seen in beginning writers. Emergent writing assessments focus on assessing students' understanding of writing as a form of communication and the ability to write about information. Emergent writing testlets focus on important precursor skills on the way toward conventional writing.
- Conventional writing includes methods of writing that use orthography (letters, words) in ways that are meaningful to others. Key conceptual components of conventional writing include: understanding that words are comprised of letters, that words have meanings, and that words can be put together to communicate.

Writing testlets are teacher-administered. The test administrator engages in a writing activity with a student outside the KITE system and then enters observations and ratings of the student's writing processes and products into KITE.



The student can use whatever writing tool he or she uses during regular instruction, provided that it includes access to all 26 letters of the alphabet. These tools can include: pencil, pen, marker, whiteboard, keyboard, tablet keyboard, alternate keyboard, keyboard with word prediction software, alphabet flipbooks, and eye-gaze displays of letters.

When the testlet refers to "writing" or "the student wrote" in an answer option, observations can be of any method the student uses for writing.

## Using Evidence to Design Accessible Writing Assessments

### Methods

Three methods of data collection were used.

#### 1. Writing Surveys

Teachers completed surveys about their test administration experiences during two separate large-scale, multi-state field tests. Participants were 108 educators in grades 4, 8, and 11 in one field test, and 197 educators in grades 3–12 during a subsequent field test.

#### 2. Writing Test Administration Observation

Onsite observations of 26 individual writing testlets at three schools during field test events.

#### 3. Cognitive Labs

Teacher cognitive labs were conducted in Spring 2015 with six teachers in two schools. Teachers completed think-aloud procedures while preparing for and administering teacher-administered writing testlets. Post-hoc interviews were used to gather responses to open-ended questions.

The goal of these three data collection processes was to use results in aiding in the design of accessible writing assessments and to answer the following three research questions:

1. Do the DLM writing assessments support student independence during test administration?
2. Are the DLM writing assessments accessible for all students?
3. Are the items included in the writing assessments reflective of instructionally relevant tasks?

### Results

#### Research Q1—Writing Test Administration Observations

Observations of completion and level of student engagement provided some evidence of student independence. While writing tasks are all teacher-administered, tasks are completed independently by the student.

Student Completion Rate			Student Engagement		
	n	%	Level	n	%
Yes	23	88	High	17	65
No	1	4	Medium	4	15
Unknown	2	8	Low	1	4
			Missing	4	15

#### Research Q2—Writing Surveys

The question of accessibility is answered in part by the flexibility of testlet design to meet a student's testing needs (e.g., use of keyboard or pen/pencil) and educator evaluation of the testing experience.

Match between Answer Options and Student Response, with the Prompt "The student's response was one of the answer choices on..."

	All of the Items	Some of the Items	None of the Items
Winter FT	30%	43%	18%
Spring FT	23%	58%	17%

Types of Writing Tools Used in Regular Instruction for Respondent's Students

	Pen/Pencil	Keyboard	Eye-Gaze	Alphabet Flip-Chart	Word Prediction	Alt Keyboard	None of the Options
Winter FT	54%	16%	4%	0%	3%	1%	10%
Spring FT	56%	17%	3%	5%	3%	0%	12%

#### Research Q3—Writing Surveys

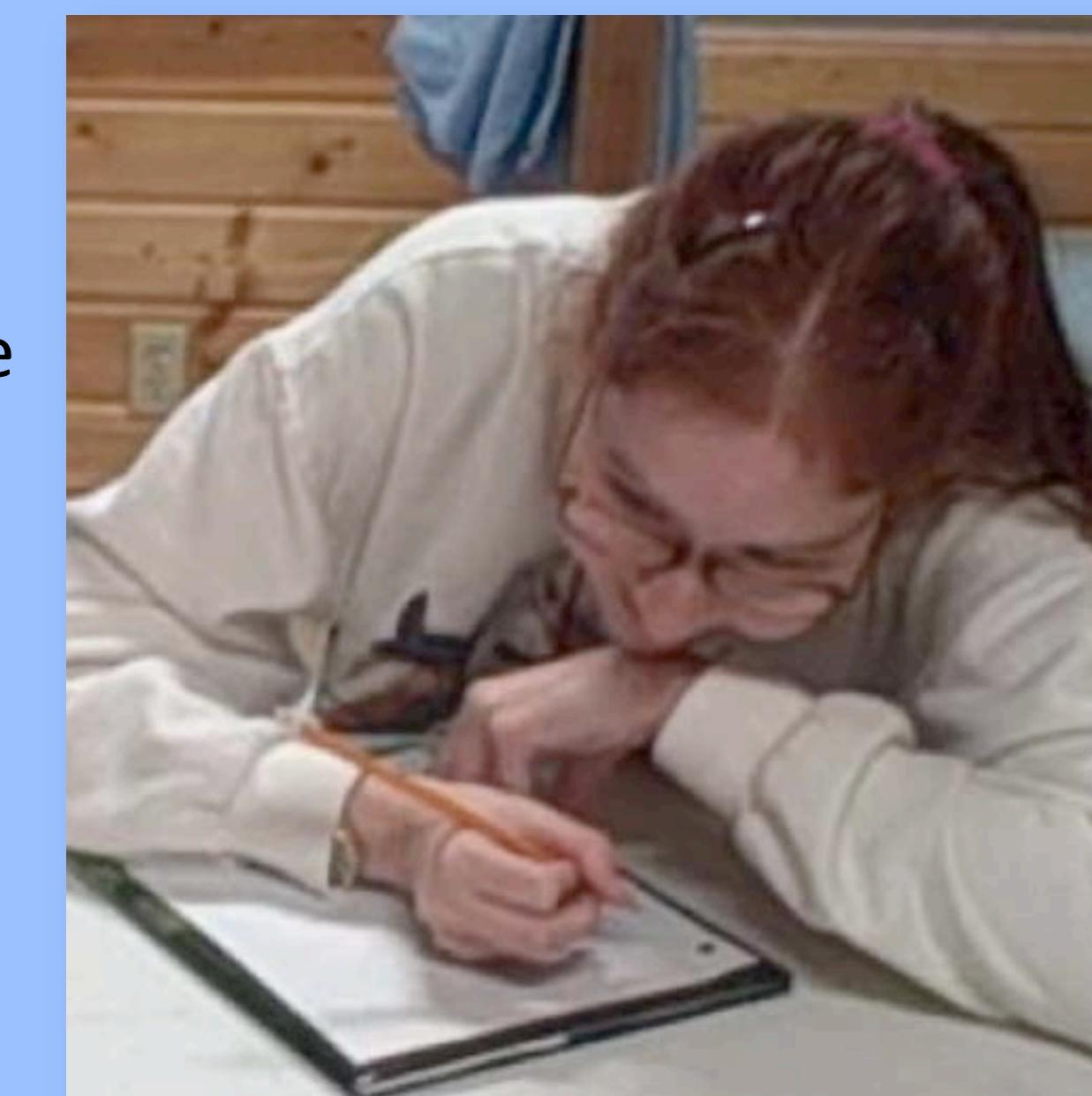
This research question is partially answered by the match between skills assessed in a testlet and a student's regular writing instruction as measured by educator report.

Match Between Regular Instruction in Writing and Skills Assessed in Testlet

	No regular instruction	Instruction did not match	Instruction Matched ≥ 1 Skill(s)
Winter FT	16%	17%	48%
Spring FT	15%	32%	47%

## Implications for Instruction

- An important consideration in making the content of writing testlets accessible for all students is to continue to work to support test administrators' ability to deliver writing testlets in an authentic fashion.
- Students can write when given appropriate tools with which to write.
- It is beneficial for regular instruction to include a focus on writing skills.
- During Writing Test Administration Observations, DLM observers typically reported high student engagement during the testing session. Shared writing strategies, including asking questions to engage students and encouragement of engagement and interaction, may be important in maintaining this high level of engagement.



## Future Research

- The data collected through multiple methods provided useful information for revising the writing testlets. Completing additional observations will likely aid in continuing to improve the accessibility of the writing testlets.
- Further test administrator cognitive labs can provide further information about the experiences of test administrators, as well as of students.
- Planned psychometric analyses of student data on the writing testlets will be used in the next generation of writing assessments developed by the DLM Alternate Assessment System.

## References

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