



# RESEARCH SYNOPSIS

## Supporting Pursuit of Postsecondary Opportunities: Instructionally Embedded Model

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### KEY POINTS

- » Students who meet the DLM alternate achievement standards possess academic skills necessary to pursue postsecondary education and competitive integrated employment.
- » Because the achievement standards are vertically aligned, students meeting standards in early grades may apply skills in more complex ways by the time they finish high school.

### DLM ALTERNATE ACHIEVEMENT STANDARDS

Content standards outline what students are expected to learn in each grade, while achievement standards indicate the amount of academic knowledge a student demonstrates on an assessment. The DLM alternate assessment system has four achievement levels:

- » Emerging
- » Approaching the Target
- » At Target
- » Advanced

Students who achieve at each level typically have mastered certain knowledge, skills, and understandings. Those skills are described by grade- and content-specific performance level descriptors (PLDs).

A student meets the standard if they achieve “At Target” or higher.

### POSTSECONDARY OPPORTUNITIES

Historically, employment opportunities for individuals with significant cognitive disabilities have been limited. Opportunities for competitive integrated employment are expected to increase because of the 2014 Workforce Innovation and Opportunity Act (WIOA). Competitive integrated employment includes opportunities for full-time or part-time work with wages and benefits similar to those earned by individuals without disabilities, with customizations and support as needed. WIOA also supports students seeking postsecondary education.

### BACKGROUND

Individuals with significant cognitive disabilities may pursue a wide range of opportunities after high school, including postsecondary education, employment, and community involvement. Expectations are increasing for individuals with significant cognitive disabilities to pursue competitive integrated employment (e.g. Workforce Innovation and Opportunity Act, 2014). Like all students, those with significant cognitive disabilities need to learn academic skills they will need after high school.

Students with significant cognitive disabilities who take the Dynamic Learning Maps<sup>®</sup> (DLM<sup>®</sup>) alternate assessments demonstrate what they know and can do based on alternate academic content standards that align to content standards in general education but are at reduced depth, breadth, and complexity. The DLM system supports students in achieving high academic expectations so they are prepared to pursue postsecondary opportunities.

### PURPOSE OF STUDY

DLM staff conducted a study to collect evidence on the alignment of the DLM alternate achievement standards and how the academic expectations in the achievement standards relate to the academic skills needed to pursue postsecondary education or employment.

This evidence fulfills the following U.S. Department of Education requirement for statewide assessment systems: *The alternate academic achievement standards are aligned to ensure that a student who meets the alternate academic achievement standards is on track to pursue postsecondary education or competitive integrated employment* (Critical Element 6.3; Office of Elementary and Secondary Education, 2018).

The evidence in this study is in two parts: **alignment** of the achievement standards, and evidence that a student who meets the standards would be **on track to pursue** postsecondary opportunities.

### RESULTS: ALIGNMENT

Evidence of content alignment originates in the content structures. In English language arts and mathematics, the research-based learning map models reflect a vertical progression of academic skills. The content standards in English language arts, mathematics, and science become increasingly complex across grades. Empirical evidence supports the progression of linkage levels (assessment targets at varying complexity levels within each content standard). External alignment studies confirmed acceptable alignment between system components in all subjects.

Evidence of vertical articulation of the achievement standards originates in the standard-setting process. Standard-setting panelists recommended the cut points between the four achievement levels using example profiles of student performance. Panelists also used the example profiles to create lists of skills that a student might typically demonstrate at each performance level. DLM staff used panelist-developed lists and other materials to create grade- and content-specific PLDs. The PLDs describe skills typically mastered by students who achieve at each level, not the full range of skills a student might have in the subject.

## WHAT DOES IT MEAN TO BE ON TRACK TO PURSUE POSTSECONDARY OPPORTUNITIES?

- » Like academic education for all students, academics for students with significant cognitive disabilities builds across grades. People use academic skills at various levels of complexity, depending on what is needed for a job or postsecondary education. Therefore, academic skills associated with achieving “At Target” in lower grades indicate where students apply the least complex version of the skill.
- » Given the vertical alignment of DLM content and achievement standards, students are expected to continue their learning in subsequent grades and be ready for more-complex applications of the academic skills by the time they transition into postsecondary education and employment.

## FURTHER INFORMATION

- » Karvonen, M., Burnes, J. J., Clark, A. K., & Kavitsky, L. (2020). *Aligned academic achievement standards to support pursuit of postsecondary opportunities: Instructionally embedded model* (Technical Report No. 20-02). University of Kansas; Accessible Teaching, Learning, and Assessment Systems. <https://tinyurl.com/dlm-pso-ie>
- » Office of Elementary and Secondary Education. (2018). *A state’s guide to the U.S. Department of Education’s assessment peer review process*. U.S. Department of Education. <https://www2.ed.gov/admins/lead/account/saa/assessmentpeerreview.pdf>
- » Workforce Innovation and Opportunity Act of 2014, Pub. L. 113-128, 128 Stat. 1425 (2014). <https://www.govinfo.gov/content/pkg/PLAW-113publ128/pdf/PLAW-113publ128.pdf>

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## RESULTS: ON TRACK TO PURSUE POSTSECONDARY OPPORTUNITIES

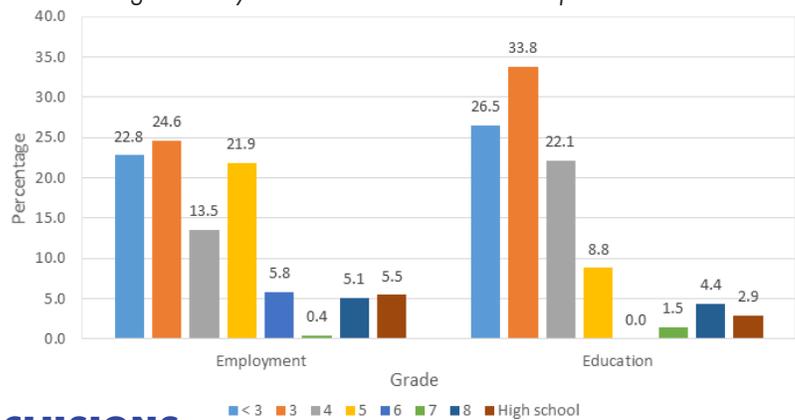
Data from panels offer evidence that a student meeting the DLM achievement standards is prepared to pursue postsecondary opportunities. The first panel identified a list of possible postsecondary education and employment opportunities for students with significant cognitive disabilities, such as veterinary assistant or receptionist. This included opportunities currently available as well as aspirational opportunities. The panel then identified the academic skills, including those within soft skills (like social skills or critical thinking), needed to fulfill the responsibilities required by those opportunities (see example below). Content experts refined the skills to produce 50 skills in English language arts, 41 skills in mathematics, and 53 skills in science.

Opportunity: Veterinary Assistant	
Responsibilities	Skills
Clean room, cages, and equipment. Perform clerical tasks. Feed animals and monitor whether they are eating. Bathe pets.	Know how to determine if [cage, equipment] is clean. Record amount of food eaten. - Record data in an existing chart (e.g., numerical data)*. Know which food goes for which animal. - Classify items by common attributes*. - Identify when animals need food and shelter* Check water temperature. - Read scale on a thermometer to measure temperature*. Know how to wet, soap, rinse, and dry. Determine the appropriate cycle for cleaning various animals*.

Note: Asterisks indicate academic skills.

A second panel rated the skills in each subject against the “At Target” PLD for each grade. Panelists identified the lowest grade where a student meeting the achievement standard could consistently demonstrate the given skill (which demonstrates when students can use the least complex version of the skill). Ratings for academic skills were grouped by subject across grades, by association to employment or education opportunities, and by association to soft skills.

Distribution of Academic Skills Across the Lowest Grades in Which a Student Achieving At Target Is Likely to Demonstrate the Least Complex Version



## CONCLUSIONS

Students with significant cognitive disabilities who meet DLM alternate achievement standards have a range of academic skills needed to fulfill the responsibilities of various postsecondary opportunities. Many academic skills are first associated with “At Target” performance in early grades which allows students to develop more-complex versions of skills before finishing high school, as shown below:

Grade	Skill	Use in Postsecondary Opportunities
4	Add and subtract multidigit numbers without regrouping.	Check inventory, stock items.
7	Apply the properties of addition or multiplication to solve problems.	Calculate perimeter of garden to determine how much fence is needed.
10	Represent and solve real-world problems.	Determine profit on sold merchandise and calculate how much more inventory can be ordered.

Academic skills are important for a range of postsecondary opportunities. Students who achieve “At Target” are ready academically to pursue those opportunities. However, postsecondary success is not guaranteed. There are other factors essential to achieving postsecondary success including family support, transition support, community contexts, and self-determination skills. Future studies could explore these factors by monitoring students transitioning to postsecondary opportunities.