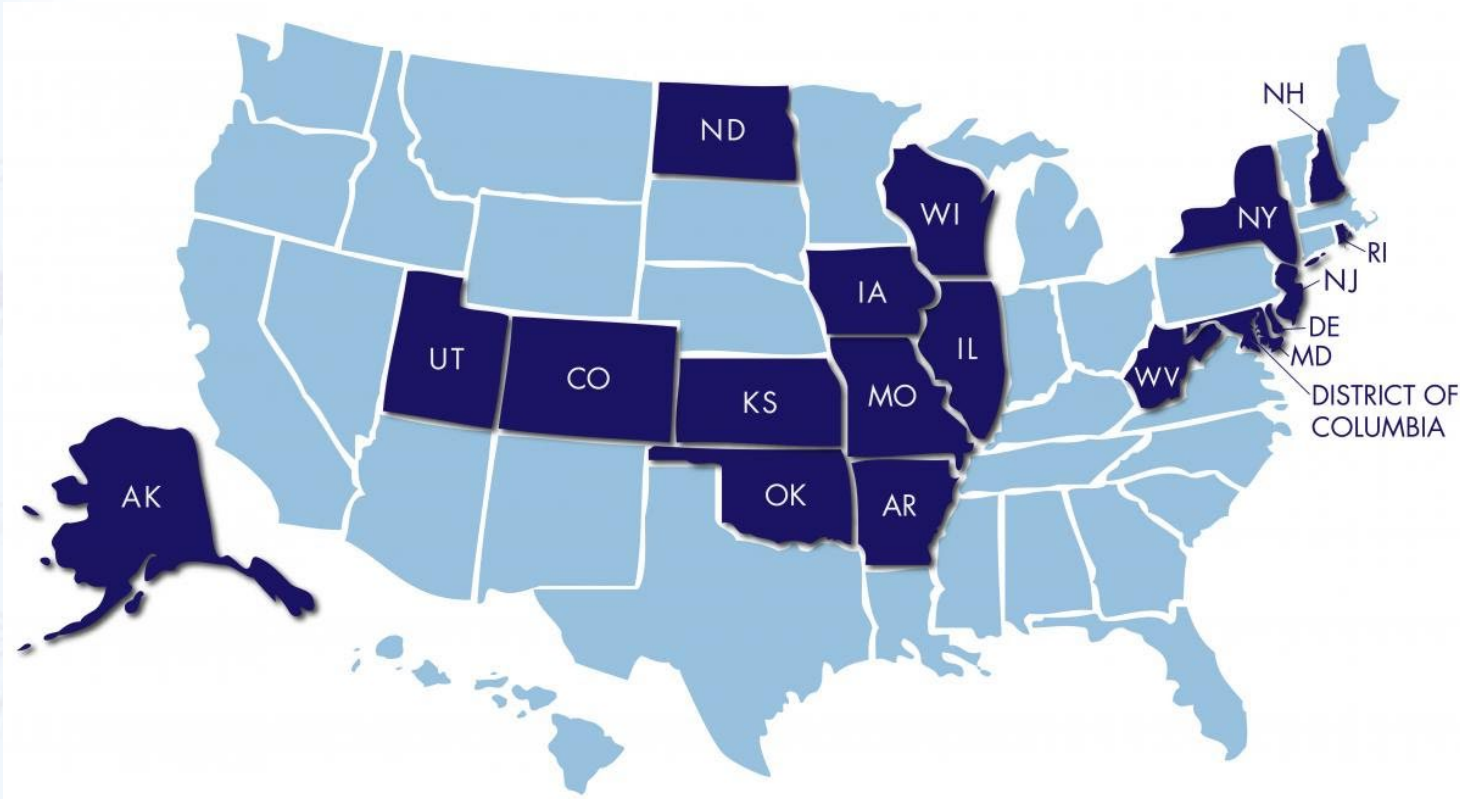


Dynamic Learning Maps[®] First Contact Survey and Its Uses

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The First
Contact Survey
is completed
annually for
>90,000
students across
19 states

Survey Uses

- Original purposes (~2012): single census
 - Use information about the population to design the assessment system
 - Inform linkage level assignment for DLM assessments
 - Technical documentation
- Now used in ongoing administration and operational studies
 - Teachers review/update responses annually
 - States can access their own data
 - Analyses using census across all 19 states

First Contact Survey Items

- Includes questions related to the student's:
 - Disability category and placement
 - Sensory capabilities
 - Motor capabilities
 - Communication
 - Health issues
 - Computer usage
 - Language
 - Academics
 - Engagement during instruction

First Contact Survey Items

- Changes since 2013
 - Revised questions on sensory impairments
 - Updated examples of AAC devices
 - Collapsed health/behavior questions
 - Added science academic questions
 - Added EL questions (adapted from home language survey)

Example Questions: Expressive Communication

- Does the student use speech, sign, or alternative/augmentative communication to meet expressive communication needs?
- Highest level of student's expressive communication with speech
 - Regularly combines 3 or more spoken words, signs, or symbols according to grammatical rules to accomplish a variety of communicative purposes
 - Usually uses 2 spoken words, signs, or symbols at a time to meet a variety of more complex communicative purposes
 - Usually only uses 1 spoken word, sign, or symbol at a time to meet a limited number of simple communicative purposes

Example Questions: Expressive Communication

If the student does not use speech, sign language, or AAC, which of the following statements best describes the student's expressive communication?

- Uses conventional gestures
- Uses only unconventional vocalizations, unconventional gestures, and/or body movement to communicate intentionally
- Exhibits behaviors that may be reflexive and are not intentionally communicative but can be interpreted by others as communication

Example Questions: Receptive Communication

*Indicate how consistently the students uses each skill
(0%-20% of the time; 21%-50%; 51%-80%; More than 80%)*

- Can point to, look at, or touch things in the immediate vicinity when asked
- Can perform simple actions, movements or activities when asked
- Responds appropriately in any modality
- Responds appropriately in any modality to single words that are spoken or signed
- Responds appropriately in any modality to phrases and sentences that are spoken or signed
- Follows 2-step directions presented verbally or through sign

Example Academic Questions: Reading

Indicate how consistently the students uses each skill

(0%-20% of the time; 21%-50%; 51%-80%; More than 80%)

- Recognizes single symbols presented visually or tactually (e.g., letters, numerals, environmental signs such as restroom symbols, logos, trademarks, or business signs such as fast food restaurants)
- Understands purpose of print or Braille but not necessarily by manipulating a book (e.g., knows correct orientation, can find beginning of text, understands purpose of text in print or Braille, enjoys being read to)
- Matches sounds to symbols or signs to symbols (e.g., matches sounds to letters presented visually or tactually, matches spoken or signed words to written words)
- Reads words, phrases, or sentences in print or Braille when symbols are provided with the words

Example Academic Questions: Reading (cont.)

*Indicate how consistently the students uses each skill
(0%-20% of the time; 21%-50%; 51%-80%; More than 80%)*

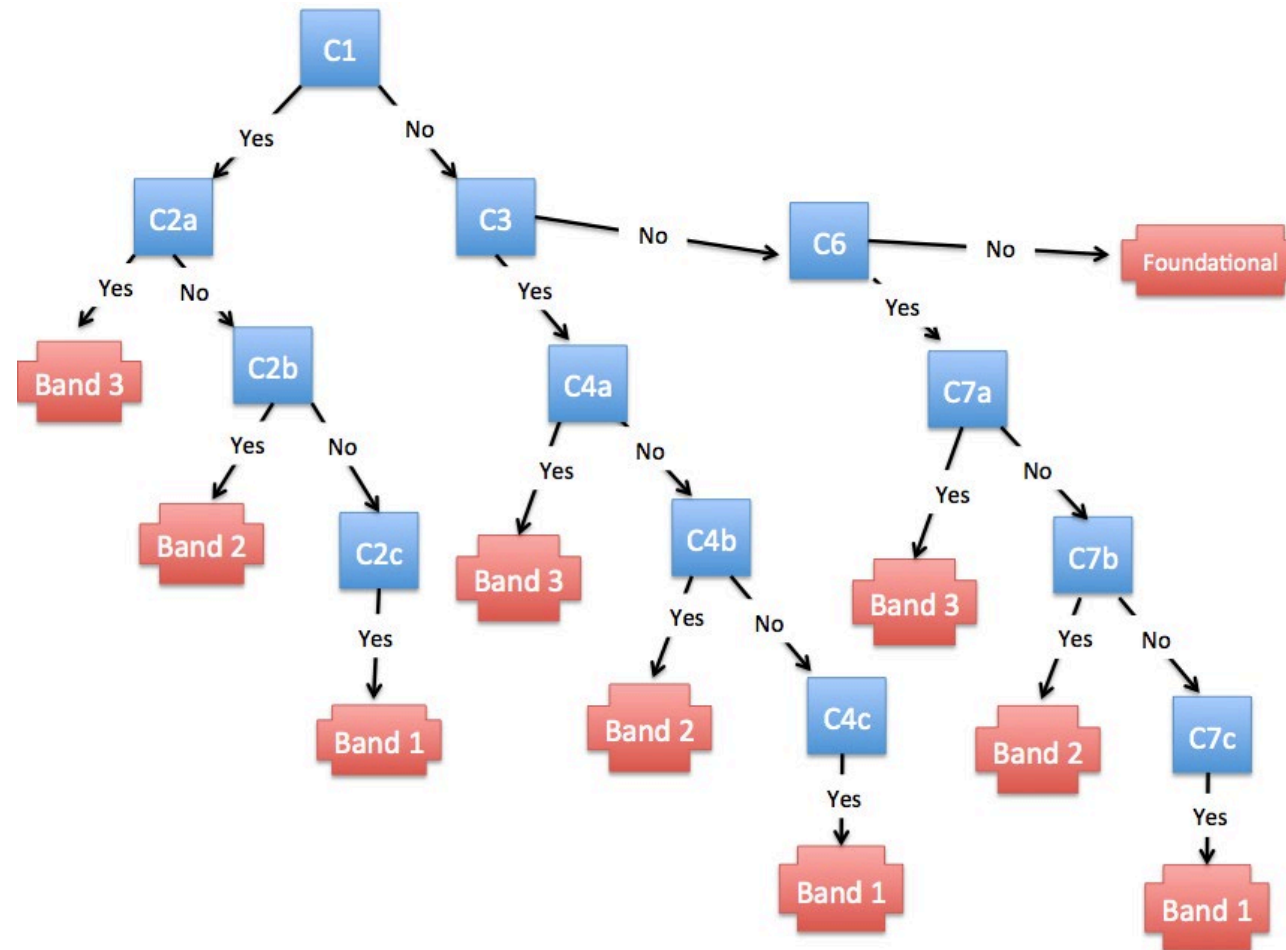
- Identifies individual words without symbol support (e.g., recognizes words in print or Braille; can choose correct word using eye gaze)
- Reads text presented in print or Braille without symbol support but **WITHOUT** comprehension
- Reads text presented in print or Braille without symbol support and **WITH** comprehension (e.g., locates answers in text, reads and answers questions, retells after reading, completes maze task)
- Explains or elaborates on text read in print or Braille

DLM[®] COMPLEXITY BANDS

Complexity Bands

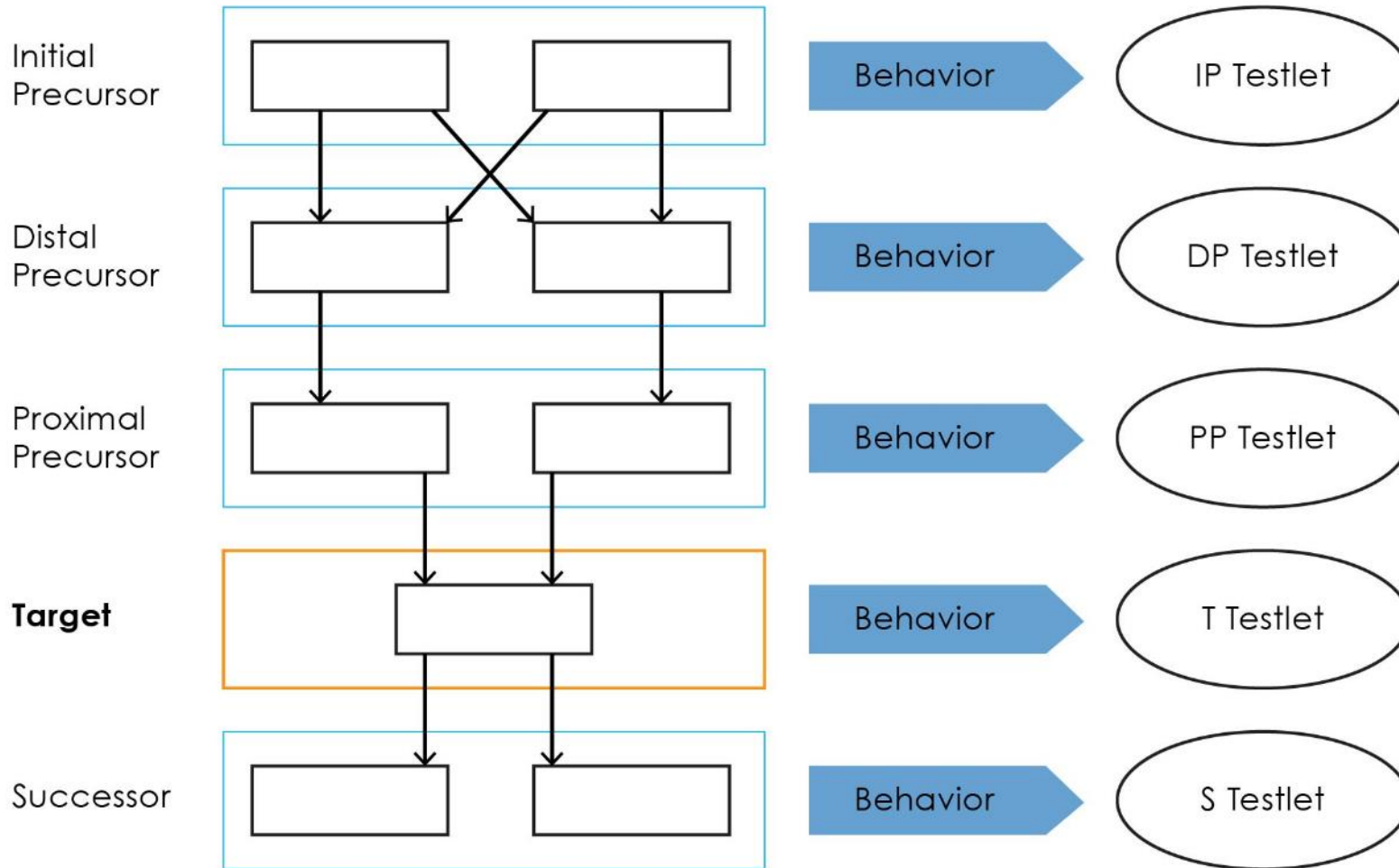
- Goal is to present a testlet that is matched to a student's knowledge, skills, and understandings
 - For embedded: recommended linkage level
 - For year-end: linkage level of first testlet (i.e., initialization)
- Use academic and expressive communication items
- Bands calculated for reading, writing, math, science, and expressive communication

Communication Decision Tree



Testlets at Linkage Levels

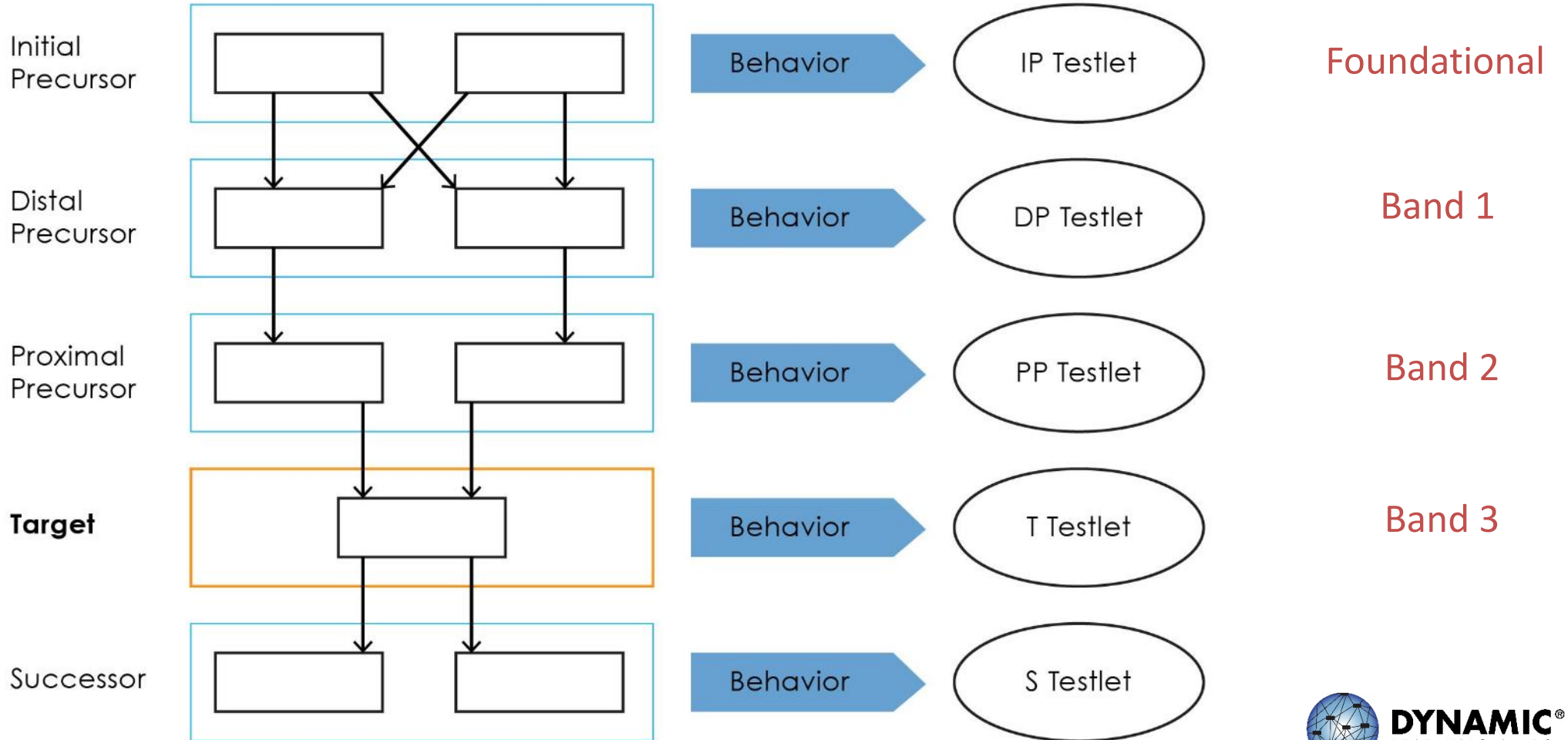
Connect the map----- to the items developed



Testlets at Linkage Levels

Connect the map----- to the items developed

Complexity Band



Evaluation of Complexity Band Algorithms

- Fixed-form pilot
 - All students in a grade band were administered the same set of testlets for a single Essential Element
 - Expected pattern of results (item difficulty and performance, within and across linkage levels)
- Assignment based on a combination of academic AND expressive communication yielded a slightly more conservative assignment than just academic

RESEARCH USING FIRST CONTACT SURVEY

Census Summary Report

- 81% of students were characterized as having an intellectual disability, autism, or multiple disabilities.
- 68% of students were taught primarily in classrooms separate from their grade-level peers.
- 76% of students used expressive speech to communicate.
- 96% of the students accessed a computer using conventional means or an assistive device.
- Almost 60% of all students across grade levels read at or below a first grade level.
- In ELA, students tended to be more successful in more basic skills, such as recognizing single symbols presented visually or tactually. Students struggled with more complicated skills and needed further explanation or elaboration of text that is in print or braille.
- In mathematics, students tended to be more successful in more basic skills, such as matching patterns, sorting by common properties, and counting more than two objects. Students struggled more as the skills became more complex, such as in multiplying or dividing using numerals.

Communication

Do students with significant cognitive disabilities who use aided AAC and/or sign as an alternative to speech differ in their motor, sensory, language, and literacy abilities from their peer who use speech to communicate?

- Absence of speech increased the likelihood of placement in a more restrictive setting
 - Limits interaction with peers without disabilities
- Students who use aided AAC as a speech alternative are more likely to have co-occurring motor and sensory impairments
- More students who use speech read with comprehension (36%) and individual words (62%) than those who use AAC as an alternative to speech (3% and 12%, respectively).

Students with SCD and Hearing Loss

- **What are the sensory, motor, language, and literacy profiles of students with SCD-HL?**
- **Are there differences in the sensory, motor, language, and literacy profiles of students with SCD based on the presence of a known hearing loss?**
 - Rate of prevalence in this study: 4.3%
 - Approximately half of the students with SCD-HL did not access any amplification or hearing technology
 - Students who communicate using sign have significantly more 2 and 3 sign combinations compared to students w/o known hearing loss

Students with SCD who are ELs

What are the characteristics of students with significant cognitive disabilities who are English Learners (ELs), and how do they differ from students with significant cognitive disabilities who are not identified as ELs?

- Compared non-ELs, likely ELs, and ELs
- Small but statistically significant group differences in academic and expressive-communication complexity levels, mean receptive-communication scores, instructional setting, and overall performance differences
 - Likely-ELs were different from the other two groups

Instructional Setting

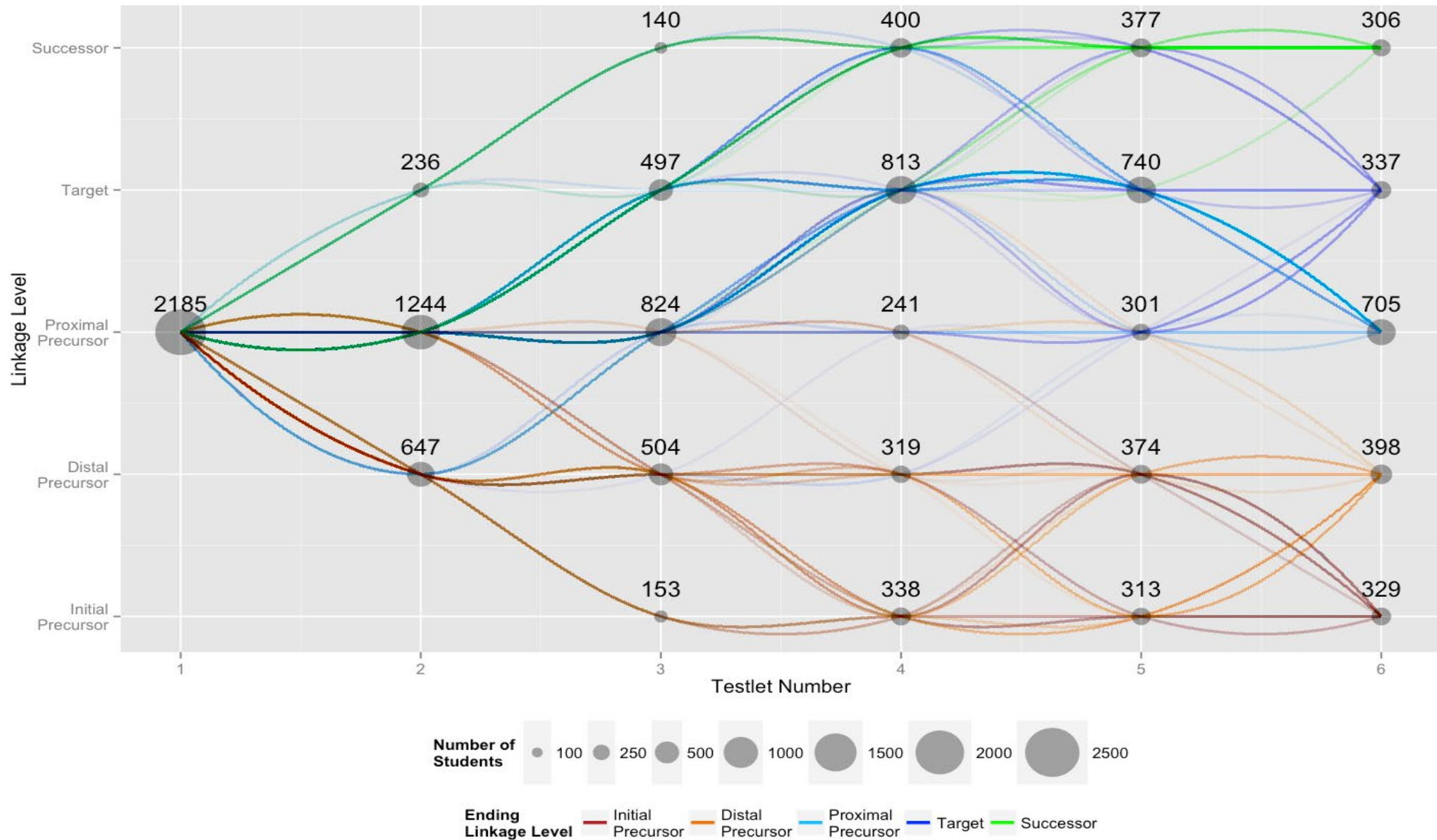
What is the impact of instructional setting on students' academic achievement?

- Results forthcoming (this fall)

Adaptation after Initialization

- **What percent of students adapt to a different linkage level between the first and second testlets administered?**
 - Less adaptation between first and second testlet among students who started at initial precursor level compared to students who started at higher linkage levels
- **Does the linkage level of the first testlet (determined by initialization) predict whether or not the second testlet adapts to a different linkage level after controlling for grade level?**
 - Students are less likely to adapt as grade level increases

Example adaptation paths for students assigned to complexity Band 2 (proximal precursor linkage level) in the grade 5 mathematics assessment.



Expressive Communication as a Covariate

- Significant predictor of performance in the DLM pilot administration (Clark et al., 2014)
- Proxy for disability severity when investigating whether students with significant cognitive disabilities who are Els use different accessibility supports or have different alternate assessment outcomes than their peers (Karvonen & Clark, 2019)
- Students who used speech expressively were more likely to write simple phrases, sentences, and paragraph length text than those who did not (Erickson & Geist, 2016)

Future Studies

- Updated census report describing students who take DLM assessments following state adjustments to meet 1% threshold
- Descriptive summary for how students who do not yet use symbolic communication participate in DLM assessments
- Explore operational topics (e.g., accessibility)

THANK YOU!

For more information, please visit
dynamiclearningmaps.org

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