We Are The Ones
We Have Been
Waiting For:
Radiating The SLP Influence
Through Dynamic Assessment
and Narrative-Based Language
Intervention and Assessment

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Defining the Problem

How we define a problem usually determines how we analyze it. It
sends us in a particular direction.
And how we analyze a problem—the direction
we take—absolutely determines whether we find a solution and
what the quality of that solution is.

-Morgan D. Jones

Percentage at or above Proficient in NAEP for selected student groups in both grades in 2015

<table>
<thead>
<tr>
<th>Student Group</th>
<th>Grade 4</th>
<th>Grade 8</th>
</tr>
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<tbody>
<tr>
<td>White</td>
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<td>44</td>
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<tr>
<td>Black</td>
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<tr>
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<tr>
<td>American Indian/Alaska Native</td>
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<td>22</td>
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<tr>
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</tr>
<tr>
<td>Male</td>
<td>33</td>
<td>29</td>
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<tr>
<td>Female</td>
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<td>31</td>
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<tr>
<td>City</td>
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<td>Suburb</td>
<td>32</td>
<td>29</td>
</tr>
<tr>
<td>Town</td>
<td>36</td>
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</tr>
</tbody>
</table>

Disclosures

• Dr. Petersen has researched and is co-developer of the CUBED which is currently offered free of charge online.
• Dr. Petersen has researched and is co-developer of the PEARL which is sold by Language Dynamics Group LLC.
• Dr. Petersen is Vice President of Research for Language Dynamics Group LLC.
The Decoding Focus

“At the current rate of improvement, it will take 120 years for the Hispanic student population to catch up to their monolingual peers!”

The Decoding Focus

“...it feels very frustrating that we are not seeing the kind of change we want to see in improvements in reading achievement, and it’s hard to understand why that’s happening.” (Judy Wurtzel, 2006)

Seeing the Problem

- Only around 7%-10% of students are expected to have difficulty learning to decode.
- Culturally and linguistically diverse students do not have more difficulty learning to decode than other students.

Biemiller, 2003; Lindsay et al., 2003; Proctor et al., 2005; Nakamoto et al., 2007

Language

Decoding

Reading

PISA: “Reading literacy (hereafter referred to as reading) is an individual’s capacity to understand, use, reflect on, and engage with written texts, to achieve one’s goals, develop one’s knowledge and potential, and participate in society.”

Scarborough, 2001
Academic Language

- “It is now well accepted that the chief cause of the achievement gap between socioeconomic groups is a language gap.” – Hirsch, 2003
- “Academic language is the pivotal skill repertoire for closing the achievement gap and attention to it is nearly absent in primary grades.” – Snow & Uccelli, 2008

Reading Comprehension is Language Comprehension

Correlation (r = .73) between oral language comprehension and reading comprehension for all students.

Correlation (r = .74) between oral language comprehension and reading comprehension for Hispanic students.

Importance of Language

“Children’s oral language competence is strongly predictive of their facility in learning to read and write... listening and speaking vocabulary and even mastery of syntax set boundaries as to what children can read and understand no matter how well they can decode.

(CCSE; Appendix A, pg. 26)

The Dual Focus: Comprehension and Decoding

Insanity: Doing the same thing over and over again and expecting different results. – Albert Einstein
There is a river flowing very fast. It is so great and swift that there are those who will be afraid… The time of the lone wolf is over. Gather yourselves! We are the ones we’ve been waiting for.

How is Decoding Measured?
• Static Measures of:
  – Phonemic Awareness
  – Letter Naming
  – Letter Sounds
  – Nonsense Word Fluency

How is Comprehension Monitored?
Number of Words Retold in One Minute

How is Comprehension Monitored?
Reading Fluency

Reading Fluency is Not Comprehension

https://www.youtube.com/watch?v=m6tWmSckE40

https://www.youtube.com/watch?v=M2N5-IBk44c

Correlation (r = .19) between reading fluency and reading comprehension for second grade.

Correlation (r = .33) between reading fluency and reading comprehension for third grade.
Reading Fluency is Not Comprehension

How is Comprehension Monitored? Mazing

How is Comprehension Assessed With High Stakes Tests?
How is Comprehension Measured in the Real World?

Hermione rummaged for a moment and then extracted from the pile a large volume, bound in faded black leather. She looked a little nauseated and held it as gingerly as if it were something recently dead.

“This is the one that gives explicit instructions on how to make a Horcrux. *Secrets of the Darkest Art* — it’s a horrible book, really awful, full of evil magic. I wonder when Dumbledore removed it from the library... If he didn’t do it until he was headmaster, I bet Voldemort got all the instruction he needed from here.”

“A crystal blowing of sand touched the exposed portions of his face, bringing the scent of the pre-spice mass. ‘El Sayal, the rain of sand that brings the morning,’ he said.

He looked out across the gray light of the desert landscape, the landscape beyond pity, the sand that was form absorbed in itself. Dry lightning streaked a dark corner to the south – sign that a storm had built up its static charge there. The roll of thunder boomed long after.

‘The voice that beautifies the land,” Chani said. […] The troop’s watermaster began the morning chanty, adding to it now the call for the rite to initiate a sandrider…”

Frank Herbert

Under- and Over-Representation

- Nationwide dilemma
- Problem originates in general education

Artiles, Klingner, & Tate, 2006

MTSLS: What Do We Need?

1. ASSESSMENT

Valid, reliable, easy to use, assessment tools with equivalent forms for frequent sampling of students’ language skills and measuring growth over time.

- Universal Screening
- Intervention Planning
- Progress Monitoring

2. INTERVENTION

An effective, language curriculum that is easy to use and sufficiently flexible to address the language needs of diverse children.

- Whole class
- More intense arrangements

Four Essential Elements of Multi-Tiered Systems of Support

- Language. Decoding. Reading.
  1. Screening
  2. Progress Monitoring
  3. Data-based Decisions
  4. Tiered Intervention

Norm-Referenced Assessments
Norm-Referenced Tests

Advantages
- Objective
- Compare Scores
- Efficient
- Widely Recognized
- Require Limited Clinical Experience
- Eligibility

Disadvantages
- No Individualization
- Static
- Unnatural/Not Representative of Real Life
- Isolated Skills Assessed
- Biased Against CLD Populations

Reliability

You get the same results from the same person when you give them the test several times.

People agree on how to score the test.

The manual is clear on how to administer the test.

Standard Error of Measurement (SEM)

The range of scores you would likely get if you took a test several times.

Confidence Intervals = how accurate your score probably is.

On a test with 100 questions, I could have 95% confidence that you will score somewhere between 6 and 100.

With more information (the test’s reliability, the mean and standard deviation of the normative sample, your score) I can calculate the SEM. This gets my estimate a little more accurate.

E.g. you score 75 (on a test with a mean of 100 and an SD of 15), and the test has reliability of .70, I can estimate with 95% confidence (the confidence interval) that your "true" score would be somewhere between 71.76 and 93.24. (McCue & Swisher, 1984).

The Consequences of Poor Reliability

CELF example
- Child 8:0
- Core Language Score 80
- 90% confidence interval = true score between 75-85.
- True score falls between normal limits to moderately impaired.

The Normal Curve

- Most people are going to score in the normal range.
- Language ability follows a normal distribution.
- How far from the mean is still OK?
  - Could you fail a test and still be normal?
  - Where are the norms coming from?
  - What might influence interpretation of norm-referenced scores?

Spaulding, Plante, & Farinella (2006)

- Kids must score at the low end of a normal distribution to qualify for services in schools
- Tests for identifying language impairment should provide data of high sensitivity and specificity
  - Sensitivity: percentage of children with language impairment who are diagnosed as impaired
  - Specificity: percentage of children with typical language skills who are diagnosed as typical
Sensitivity and Specificity

<table>
<thead>
<tr>
<th>Disease</th>
<th>Disease</th>
<th>Total</th>
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<tbody>
<tr>
<td>Test +</td>
<td>25</td>
<td>2</td>
</tr>
<tr>
<td>Test -</td>
<td>5</td>
<td>68</td>
</tr>
<tr>
<td>Total</td>
<td>30</td>
<td>70</td>
</tr>
</tbody>
</table>

Sensitivity = 25/30 83%
Specificity = 68/70 97%

Spaulding, Plante, & Farinella (2006)

- **The Results:**
  - Mean group differences from data in test manuals:
  - Kids who have language impairments often receive scores close to the mean.
  - Cutoff scores often identify typically developing children as having an impairment.

- 43 published norm-referenced Tests
  - First: Mean group differences between language impaired and typically developing groups?

Spaulding, Plante, & Farinella (2006)

- **The Results:**
  - 9/43 tests sensitivity and specificity
  - A “roughly equal chance of being correctly or incorrectly identified” (p. 69)

“This lack of reporting is a serious flaw as it does not allow for the impact of potential classification errors by the reference standard to be considered in evaluating the validity of findings.”

Therefore, evidence regarding the diagnostic accuracy of currently available language assessments is lacking due to an overall trend with poor methodological quality.” - Denman et al., 2017
Diagnosis

• Many tests can’t discriminate between a person with a disability and one who does not have a disability.
• Relying on one tool is dangerous.

Dynamic Assessment

Here is Edward Bear, coming downstairs now, bump, bump, bump, on back of his head, behind Christopher Robin. It is, as far as he knows, the only way of coming downstairs, but sometimes he feels that there really is another way, if only he could stop bumping a moment and think of it.

Static Screener: Alaska Salmon

• Silver (Coho)
• Red (Sockeye)
• Chinook (King)
• Humpy (Pink)
Dynamic Assessment

- Dynamic assessment measures a child’s ability to learn and respond to instruction.
  - Test-Teach-Retest
  - Graduated Prompting
  - Modifiability

Theoretical Background: Vygotsky

Through others, we become ourselves.
(Lev Vygotsky)
Theoretical Background: Feuerstein

- Feuerstein’s Mediated Learning Experiences (Feuerstein, 1979).
- Focuses on the child’s behavior during the teaching phase. Modifiability
- Cognitive strategies: “…feelings of competence, psychological differentiation and individuation, sharing behavior, goal-seeking/planning/achieving behavior, competence/newtly/complexity, self-change, optimistic choice of alternatives, feeling of belonging.”

Operationalizing the Behavior

- Attention
- Response to prompts
- Awareness of errors
- Disruptive behavior
- Transfer of strategies within/between tasks
- Level of frustration (Peña, 2000; Peña et al., 2007; Peña et al., 2014; Petersen et al., 2017)

Dynamic Assessment Research

- Peña, E., & Iglesias, A. (1992) — dynamic assessment was effective in classifying 92% of the language-disordered cases

Dynamic Assessment: Solving the Catch 22

Early identification and prevention of reading difficulty is key.

We need to identify reading difficulty before reading problems emerge.

How can we identify reading difficulty before a student is even reading?

Participants

- 600 kindergarteners
- 379 remaining at end fifth grade
- ~10% classified as having a reading disorder
  - 56.1% were Hispanic (of any race)
  - 35.1% were Caucasian
  - Of the Hispanic subgroup, 77% were classified as L1 Spanish-speaking, English-Language Learners
Predictor Measures

• Beginning of kindergarten (n = 600)
  — administered a dynamic assessment of decoding.
  — administered DIBELS Next Letter Naming Fluency (LNF) and First Sound Fluency (FSF) static assessments.

Criterion Measure

• At the end of second to fifth grades (n = 379)
  — administered the Oral Reading Fluency subtest of the DIBELS Next assessment.

The Two Primary Purposes of the PEARL
1. Accurately predict future decoding and comprehension difficulty
2. Reduce cultural and linguistic bias of the information.

PEARL Decoding Subtest Research

**Script**

<table>
<thead>
<tr>
<th>1-a-d</th>
<th>n-a-d</th>
<th>2-a-d</th>
<th>k-a-d</th>
</tr>
</thead>
<tbody>
<tr>
<td>tad</td>
<td>nad</td>
<td>zad</td>
<td>kad</td>
</tr>
</tbody>
</table>

**Scoring**

- Correct: 12 Correct Words = 9
- Incorrect: 3

Examples:

- **t-a-d**
  - tad
- **n-a-d**
  - nad
- **z-a-d**
  - zad
- **k-a-d**
  - kad
PEARL Language Subtest Research
Purpose

Examine and cross-validate how well an English dynamic assessment of language identifies children with and without language disorder.
Research Question

• What is the classification accuracy of Petersen et al. (2017) English dynamic assessment of language using the modifiability (final examiner judgement) and posttest scores when administered to an independent, larger sample of school-age students with and without language impairment?

Establishing Language Disorder

• 1.5 SDs below the mean in both languages (if bilingual) on an English and Spanish norm-referenced language test.
• Parent and/or teacher concerns for development in both languages.
• An active IEP for language that was established through an ASHA certified, bilingual speech-language pathologist.
• Frog Where Are You? Language Samples
• Nonword Repetition Task

Method

• 110 diverse students in kindergarten through sixth grade participated.

<table>
<thead>
<tr>
<th>Grade Level</th>
<th># of Participants</th>
<th>Male</th>
<th>Female</th>
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<tbody>
<tr>
<td>K</td>
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<td>52</td>
<td>14</td>
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<td>1</td>
<td>21</td>
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<td>2</td>
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<td></td>
</tr>
<tr>
<td>6</td>
<td>11</td>
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</table>

<table>
<thead>
<tr>
<th>Language Classification</th>
<th>English Only</th>
<th>Other</th>
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<tbody>
<tr>
<td>Language Dominance*</td>
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<td></td>
</tr>
<tr>
<td>Typical</td>
<td>87 (87%)</td>
<td>7</td>
</tr>
<tr>
<td>Language Impairment</td>
<td>13 (23%)</td>
<td>9</td>
</tr>
</tbody>
</table>

Method

• Administered a dynamic assessment in English and sometimes Spanish.
• Examiners were blinded to language ability.
• English and Spanish dynamic assessments were counterbalanced.
Results

Conclusions

• An abbreviated dynamic assessment that takes approximately 10 minutes to administer can accurately identify diverse children with and without language impairment.

• Posttest and modifiability scores combined had high classification accuracy. These findings provide cross-validating evidence for procedures used in Petersen et al. (2017).

• Future research will explore the validity of dynamic assessment in English and Spanish with a larger sample size consistent with psychometric standards (e.g., 100 students per age/grade).
Spanish Dynamic Assessment of Language.

Mariah Forbush Romero; Alison Long; Anahi DelRobles; Estefani Parra

- No narrative dynamic assessment for use with monolingual Spanish speakers.
- The Spanish-speaking population is increasing worldwide and across the U.S.

**Purpose**
- The current study is designed to
  - examine the classification accuracy of a Spanish narrative dynamic assessment administered to monolingual Spanish-speaking Guatemalan students
  - to cross-validate that dynamic assessment with an independent sample of monolingual Spanish-speaking students from Mexico
  - to cross-validate that dynamic assessment with an independent sample of bilingual English/Spanish-speaking typically developing students from the U.S.

**Research Questions**
1. a) How much variance ($R^2$) do Spanish dynamic assessment modifiability variables, when added to the posttest dynamic assessment variable, account for language ability in Guatemalan, monolingual Spanish-speaking school-age students? b) Do dynamic assessment gain scores and the teaching phase duration account for variance over and above the dynamic assessment alone?
2. What is the optimal sensitivity and specificity of the Spanish dynamic assessment for monolingual Spanish-speaking students from Guatemala with and without language impairment?
3. What clinically interpretable cut points provide the highest sensitivity and specificity?

**Participants**

<table>
<thead>
<tr>
<th>Sample</th>
<th>Language Ability</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
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<td>LD</td>
<td>2</td>
<td>2</td>
<td>4</td>
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<tr>
<td></td>
<td>TD</td>
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<td>24</td>
</tr>
<tr>
<td>Mexico</td>
<td>LD</td>
<td>4</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>TD</td>
<td>9</td>
<td>6</td>
<td>15</td>
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<tr>
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<td>0</td>
<td>0</td>
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<tr>
<td></td>
<td>TD</td>
<td>9</td>
<td>11</td>
<td>20</td>
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<tr>
<td>Combined</td>
<td>LD</td>
<td>6</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
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<td>TD</td>
<td>34</td>
<td>25</td>
<td>59</td>
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<table>
<thead>
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<th>6-8th</th>
<th>9-10th</th>
<th>11-12th</th>
<th>Total</th>
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<tbody>
<tr>
<td>Guatemala</td>
<td>3</td>
<td>6</td>
<td>8</td>
<td>9</td>
<td>2</td>
<td>28</td>
</tr>
<tr>
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<tr>
<td>Combined</td>
<td>16</td>
<td>31</td>
<td>10</td>
<td>9</td>
<td>2</td>
<td>68</td>
</tr>
</tbody>
</table>
Establishing Language Disorder

- First, a special educator had to confirm that the student had a language disorder.
- Second, a student had to be receiving language services.
- Third, a student had to score at least 1 standard deviation below the mean on at least two indicators:
  - a norm-referenced test in Spanish (e.g., CELF-4: Spanish)
  - a language sample from the NLM Listening
  - a non-word repetition task
  - or two of four measures [mean length of utterance (MLU), total number of words (TNW), or number of different words (NDW)] from a language sample using the wordless picture book *Frog, Where Are You?* (Mercer Meyer, 1969).

Establishing Typical Language

- First, a special educator had to confirm that the student did not have a language disorder.
- Second, a student could not be receiving language services.
- Third, a student could not score more than 1 standard deviation below the mean on
  - a norm-referenced test in Spanish (e.g., CELF-4: Spanish)
  - a language sample from the NLM Listening
  - a non-word repetition task
  - or any of the four measures [mean length of utterance (MLU), total number of words (TNW), or number of different words (NDW)] from a language sample using the wordless picture book *Frog, Where Are You?* (Mercer Meyer, 1969).

**DYMOND Spanish**

**Results: Guatemala**

<table>
<thead>
<tr>
<th>Criterion Measure</th>
<th>Model</th>
<th>Step</th>
<th>Predictor</th>
<th>R²</th>
<th>ΔR²</th>
<th>Sens.</th>
<th>Spec.</th>
<th>AUC</th>
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<tr>
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<td>Posttest</td>
<td>.47</td>
<td>.75</td>
<td>.87</td>
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<tr>
<td></td>
<td></td>
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<td>Mod Judge</td>
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**Results: Mexico Cross-Validation**

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<th>Step</th>
<th>Predictor</th>
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<th>ΔR²</th>
<th>Sens.</th>
<th>Spec.</th>
<th>AUC</th>
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</thead>
<tbody>
<tr>
<td>Language Ability</td>
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<td>3</td>
<td>Posttest</td>
<td>.38</td>
<td></td>
<td>.93</td>
<td>.60</td>
<td>.80</td>
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<tr>
<td></td>
<td></td>
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<td>Mod Total</td>
<td>.74</td>
<td>.35</td>
<td>.93/</td>
<td>.80/</td>
<td>.96</td>
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<table>
<thead>
<tr>
<th>Criterion Measure</th>
<th>Model</th>
<th>Step</th>
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<th>R²</th>
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<tr>
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<td>.80</td>
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<td></td>
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<tr>
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<td></td>
<td>3</td>
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<td>.74</td>
<td>.35</td>
<td>.93/</td>
<td>.80/</td>
<td>.96</td>
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**Results: U.S Cross-Validation and All Participants**

<table>
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<th>Criterion Measure</th>
<th>Model</th>
<th>Step</th>
<th>Predictor</th>
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<th>Sens.</th>
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<td>.35</td>
<td>.90</td>
<td>.60</td>
<td>.79</td>
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<td></td>
<td>2</td>
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<td>.89</td>
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**Inter-Rater Reliability**

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<th>DA Mod 3 Diag</th>
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<td>81%</td>
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**Four Essential Elements of Multi-Tiered Systems of Support for Language. Decoding. Reading.**

1. Screening
2. Progress Monitoring
3. Data-based Decisions
4. Tiered Intervention

**Claiming the Job: Progress Monitoring**

- “There is an urgent need for a simple, quick, standardized measure of language that can be administered repeatedly...in a manner akin to the continuous ‘dibbling’ that is used to monitor progress in code learning.”

- “It behooves the profession and research community to claim the job of developing a set of very brief, standardized benchmark measures of vocabulary, grammar, and narrative...”

**Narrative Language**

Considered a bridge between oral language and written language

- Personally-relevant
- Culturally-relevant
- Academically-relevant

**Story Grammar**

- Story Grammar:
  - Setting
  - Initiating Event (e.g., Problem)
  - Internal Response (Feeling)
  - Plan/Attempt (Goal Directed Action)
  - Consequence
  - Resolution (Ending)
  - Reaction (End Feeling)

- Minimally Complete Episode
  - Initiating Event
  - Attempt
  - Consequence

- Stein & Glenn (1979) story grammar is reinforced and tested in schools
The storyteller must create a context for the listener almost exclusively through the use of sophisticated, complex language.

Literate Language

- Similar to written language
  - Adverbs (e.g., quickly)
  - Temporal subordination (e.g., When he was walking...)
  - Elaborated noun phrases (e.g., The huge dog that was scary)
  - Mental & linguistic verbs (e.g., decided, considered)
  - Conjunctions (e.g., and, but, because)
  - Dialogue (e.g., He said, “I need a band-aid!”)

Language Complexity (Literate, Academic Language)

- Measures socially and academically important outcomes
- Alternate forms
- Strong validity
- Strong reliability
- Standardized administration and scoring procedures
- Time efficient and easy to use
- Sensitive to growth

CUBED Overview

- Dynamic Decoding Measures (DDM)
  Grades: Kindergarten to 3rd Grade
- Narrative Language Measures: Listening (NLM: Listening)
  Grades: Preschool to 3rd Grade
- Narrative Language Measures: Reading (NLM: Reading)
  Grades: 1st Grade to 3rd Grade
One day, Brenda was in school. She was playing with 111 blocks on the floor. Brenda wanted to be a doctor that wanted to play with her. When she wasn’t looking, the boy took a block. Brenda was angry. She was mad because the boy wasn’t acting nice. But she didn’t cry. Brenda was mad to get helps. She calmly talked to her teacher. Then Brenda walked up to her teacher. She said, “Can you help me get my blocks?” Brenda’s teacher said, “I’ll talk with your friend. I’ll talk to show so that you both can play.” After Brenda got back down, she was very happy because they had a good idea. They carefully fabricated a big, expensive tower. It took a very long time to design and build together.
Administration and Scoring Training Videos are available at LanguageDynamicsGroup.com under CUBED Video Demonstrations.

1. Screening
2. Progress Monitoring
3. Data-based Decisions
4. Tiered Intervention

Accessing CUBED Insight
- www.Insight.LanguageDynamicsGroup.com
- Enter User Name (e.g., demouser1@demo.com)
- Enter Password (e.g., Password1!)
Four Essential Elements of Multi-Tiered Systems of Support for Language. Decoding, Reading.

1. Screening
2. Progress Monitoring
3. Data-based Decisions
4. Tiered Intervention

MTSLS: What Do We Need?

1. ASSESSMENT
Valid, reliable, easy to use, assessment tools with equivalent forms for frequent sampling of students’ language skills and measuring growth over time.
- Universal Screening
- Intervention Planning
- Progress Monitoring

2. INTERVENTION
An effective, language curriculum that is easy to use and sufficiently flexible to address the language needs of diverse children.
- Whole class
- More intense arrangements

Key Shifts in Academic Expectations
1. Regular practice with complex texts and their academic language.
2. Reading, writing, and speaking grounded in evidence from texts, both literary and informational.
3. Building knowledge through content-rich nonfiction.

https://www.youtube.com/watch?v=yLEMb_R235o
Our Narrative Intervention Research

Key Features
- Carefully structured stories
- Engaging visual materials
- Explicit teaching procedures
- Manualized
- Flexible

http://www.languagedynamicsgroup.com/digital-presentation/
Characteristics of Effective Instruction

Based on the effective teaching literature and principles of instruction

Multiple exemplar training
Active responding games
Peer tutoring
Prompt fading procedures
Corrections
Explicit, flexible, and individual targets
2. Identify the targets (using assessment data)

- **Story Structure**: Basic, Enhanced, Enhanced PLUS, Advanced
- **Genre and Task Targets**: Retell, Personal, Fictional, Informational, Story and Info Writing
- **Three Linguistic Targets**: Causal Connections, Temporal Connections, and Modifiers
- **Four types of Vocabulary Targets**: Classic Explicit, Blitz Explicit, Blitz Contextual, New Terms

3. Identify a specific Master Lesson Plan (and an Add On) that addresses the target(s) of interest.

- 57 MLPs
- 8 Add Ons

4. Identify the story

- 10 levels
- 24 stories

---

**STORY 4: SIBLINGS**

Last night, Hannah was walking down to the basement to play with her new doll. When she came down the stairs, she saw her sister playing with her doll. Hannah was mad because she wanted to play with it. Hannah asked her sister to let her play. Then her sister cheerfully said, “That’s great. Let’s play together.” They played together with the doll because Hanna’s sister shared with her.

**LEVEL A**

<table>
<thead>
<tr>
<th>Story Structure TARGETS</th>
<th>Linguistic TARGETS</th>
<th>Vocabulary TARGETS</th>
</tr>
</thead>
<tbody>
<tr>
<td>character problem feeling action ending</td>
<td>because then when</td>
<td>wandering descend request allow cheerfully</td>
</tr>
</tbody>
</table>

---

**STORY 4: SIBLINGS**

Last night, Hannah was walking down to the basement to get a beautiful new doll that she loved to play with. But, when she came down the stairs, Hannah’s big sister was playing with her doll. Hannah was mad because she wanted to play with her doll. Hannah decided to play with her sister. She said to her sister, “Can I play with you because I want to play with my doll.” Then her sister cheerfully said, “Yes, let’s play together.” Then she sat down to play and Hannah’s sister gave her the doll. After they nicely played with the doll, Hannah was happy because they had fun together.

**LEVEL B**

<table>
<thead>
<tr>
<th>Story Structure TARGETS</th>
<th>Linguistic TARGETS</th>
<th>Vocabulary TARGETS</th>
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<tr>
<td>character setting problem feeling action ending</td>
<td>because then when that</td>
<td>wandering descend request allow cheerfully unsatisfied sibling</td>
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</table>
STORY 13: BRYNN'S MELTED MESS

Last week, Brynn was getting a chocolate candy bar at the store because she helped clean the house. After Brynn got her candy bar, it melted in the car. She felt disappointed because her candy bar was melted. Brynn said to her mom, “Can I have another candy bar please?” Then Brynn’s mom bought her another one. She quickly gulped down her yummy candy bar. She ate it fast. It was delectable.

Vocabulary words
Targets
Definitions

disappointed (not what you wanted)
gulped (quickly; ate it fast)
delicious (yummy)

Vocabulary words from context
Modifiers

delicious (tasty)
gulped (quickly)

STORY 13: BRYNN'S MELTED MESS

Last week, Brynn was getting a huge, chocolate candy bar at the store because she helped clean the messy, dirty house. Brynn’s big candy bar slowly melted in the car because it was so hot. She felt extremely disappointed because her yummy candy bar was ruined. Then Brynn decided to ask her mom for help. Brynn calmly said to her mom, “Can I get another candy bar because mine is melted?” Then Brynn’s mom kindly bought her another one because she was feeling kind. Brynn had learned her lesson. She quickly gulped down her candy bar so that it didn’t melt. Brynn was totally thrilled because it was absolutely delicious.

Modifiers

Causal Connections

STORY 13: BRYNN'S MELTED MESS

On a very hot day last week, Brynn was buying a chocolate candy bar at the store because she cleaned her messy room that was unkept. After Brynn got her candy bar, she got in the car to go home, but the car was sweltering, and her candy bar liquefied. Brynn felt disappointed because her candy bar was melted and gooey. Then Brynn decided to ask her mom for help. She nicely said to her mom, “Can I get a new candy bar please?” Brynn’s mom responded, “OK, let’s go get you one.” Then Brynn’s mom bought another candy bar. Brynn had learned her lesson, so she ate it right up. When she quickly ate her candy bar, she was thrilled because it wasn’t melted.

Vocabulary words
Targets
Definitions

unkept
sweltering
liquefied
melted

Vocabulary words from context
Modifiers

unkept
sweltering
liquefied
melted

Causal Connections

Modifiers
A goal for George

George is a first grader with LI. Haida is his home language.
George’s narrative skills: Retell SG = 18; LC = 2; VC = 1.

Given a model story with contextual support for three unknown words and a reminder to listen for new words, George will define two of the three words correctly and clearly on two consecutive biweekly probes, measured using a vocabulary scoring rubric.

Another Vocabulary Goal

Given an advanced organizer and a reminder to use less common words, NAME will write a story of at least 30 words with two less common words in five minutes, on two consecutive biweekly opportunities, measured using permanent products and frequency counts.

Narrative Outcomes

Inferential Vocabulary

VOCABULARY QUESTIONS (VQ)

Q1. If the answer is similar to the phrase test, tell, "What does ______ mean?"
Q2. Does hilarious mean funny or dangerous?
Q3. Greg's friend was a hilarious boy. He made Greg laugh. What does hilarious mean?
Q4. Greg's friend distracts him. It was hard. What does distract mean?
Q5. Greg's friend was punished. He had to stay inside for recess. What does punish mean?
Q6. Does punish mean to get hurt or to be in trouble?
Q7. Does distract mean to bother or to help?

PRE TEL POST TEL

tx group mean
ctl group mean

d = 1.54

COMPREHENSION SCORE (score) 7 5 3 1 0

PRE VOC POST VOC

tx group mean
ctl group mean

d = 1.18

Writing

Help skill center

writing

people work improvement

communication discipline

ideas constructive community

process community people improve

serve ideas constructs

art process ideas development

genre serve ideas people

live-long communicate

university
A goal for Trevor

Trevor is a third grader with Down Syndrome. He has had 24 Story Champs sessions focusing on oral language.

Trevor’s latest progress monitoring scores are: Retell SG = 24; LC = 4; CQ = 10; VC = 4; Writing SG = 4; LC = 0.

Given an opportunity to write a fictional story and time to plan using pictures, Trevor will write a story that includes a character, problem, action, and consequence on two consecutive weekly opportunities, measured using writing scoring rubric.

Another Writing Goal

Given a prompt to write a personal story, NAME will write a personal story with two complete episodes, four subordinate clauses, and four modifiers on two consecutive weekly opportunities, measured using a writing scoring rubric and frequency counts.

STORY 13: Brynn's Melted Mess

Last week, Brynn was getting a chocolate candy bar at the store because she helped clean the house. Brynn's candy bar melted in the car because it was so hot. She felt disappointed because her candy bar was ruined. Then Brynn decided to ask her mom for help. Brynn said to her mom, "Can I please get another candy bar because mine is all melted?" Then Brynn's mom bought her another candy bar because she was feeling kind. Brynn had learned her lesson. She quickly gulped down her candy bar so that it didn't melt. Brynn was thrilled because her candy bar was delicious.
STORY 13: Brynn’s Melted Mess

Last week, Brynn was getting a huge, chocolate candy bar at the store because she decided to clean the messy, dirty house. After Brynn got her big candy bar, it slowly melted in the sweltering car. She felt extremely disappointed because her delicious candy bar was gooey. Then Brynn decided to ask her mom for help. Brynn calmly said to her mom, “Can I get another candy bar please?” Then Brynn’s mom kindly responded by buying her another one. Brynn had learned her lesson. She quickly ate her candy bar and it was absolutely tasty. She was totally thrilled.

Modifiers

Temporal & Causal Connections
A goal for Dalia

- Dalia is a preschooler with LI. She has been receiving Story Champs instruction for a few months focusing on story grammar.
- Dalia's latest progress monitoring retell scores are: SG = 10 (complete episode); LC = 0.

After listening to a brief story with three subordinate clauses, Dalia will retell the story using a clausal and a temporal subordinate clause on two consecutive weekly probes, measured using frequency counts.
Another Language Complexity Goal

After listening to a double episode story with three relative pronouns, NAME will retell the story using at least two elaborated noun phrases marked by who or that on two of three weekly opportunities, measured using frequency counts.

Why should we teach personal stories?

- 80% of stories are about personal experiences
- Reflects spontaneous language
- Socially important
- Immediately useful
- Natural reinforcement
A goal for Alex

- Alex is a fourth grader with Autism. He has never received narrative intervention.
- His SLP assessed his narrative skills. Retell total = 30; Personal total = 5.

Given an opportunity to tell personal stories during natural conversation, Alex will generate a personal story that includes a problem, action, and consequence/ending on 3 consecutive daily opportunities, measured using a narrative scoring rubric.

Another Personal Goal

Given an opportunity to tell a personal story during therapy sessions, NAME will generate a personal story and use two elaborated noun phrases on three consecutive weekly opportunities, measured using frequency data sheet.

Why should we teach fictional stories?

- Encourages ideation, creativity, and expression
- Academically important
- Purposes of stories

A goal for Jackie

- Jackie is in second grade. She has a TBI. She has received Story Champs instruction for SG, LC, VC in the context of retell and personal stories. She struggles to make up a new story.

Given an interesting picture, Jackie will generate a fictional story that includes a complete episode (problem, action, consequence/ending) and at least two subordinate clauses on two of three daily opportunities, measured using a narrative scoring rubric.
Another Fictional Example

Given 10 factual and inferential questions after listening to a fictional story, NAME will answer the questions with at least 80% accuracy on two consecutive biweekly probes, measured using teacher-made data sheet.

Habitats are very different depending on things like temperature, food, water, and sunlight.

Not all flora and fauna can live in every kind of habitat.

Some organisms, like cacti, thrive in hot, dry climates.

However, polar bears need to live in cold climates.

Over time, environments change and most organisms can adapt to the changes that happen slowly.
A goal for Xigrid

- Xigrid is a 5th grader. She is struggling to learn the science and social studies material in class. Write a goal to work on language in the context of information.

While listening to a grade level science or social studies passage, Xigrid will take notes on at least three pieces of information on four out of five daily opportunities, measured using frequency counts.

More Information Goals

After listening to a grade level science or social studies passage, Xigrid will retell at least three pieces of information on four out of five daily opportunities, measured using frequency counts.

After reading a book with science content, Xigrid will retell the information using a main idea and at least four key details on two out of three weekly probes, measured using an expository scoring rubric.

Effects of Narrative Intervention on Oral and Written Language: A Large Scale Randomized Control Trial

Douglas B. Petersen, PhD
University of Wyoming
Maureen Staskowski, PhD
Macomb County Intermediate School District
Trina D. Spencer, PhD
Northern Arizona University
Purpose

• The purpose of the current study was to extend the previous efficacy research by examining the effects of Story Champs implemented by end users in a multi-tiered arrangement on proximal and distal outcomes using a large scale randomized control trial.

Research Question

• To what extent does tiered narrative intervention improve the oral and written language skills of school-age students?
  – Narrative
    • Retell
    • Personal
    • Writing
  – Expository
    • Retell

Method

• Participants
  – 845 recruited
  – preschool student data reported in Tech Session 5610 Cimburek, Friday 8:00-8:30
  – 761 kindergarten and third grade students
  – Treatment Group = 375 kids
    • 337 kindergarteners
    • 38 third graders
  – Control Group = 386 kids
    – 349 kindergarteners
    – 37 third graders

Participant Descriptive Information

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<th>Ethnicity</th>
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<td>302 white</td>
<td>242 Free/Reduced Lunch</td>
<td>331 no Disability 24 LD 1 Other 15 Not Specified</td>
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<tr>
<td>Control Group</td>
<td>386</td>
<td>206 male</td>
<td>342 white</td>
<td>273 Free/Reduced Lunch</td>
<td>261 no Disability 19 LD 2 Other 13 Not Specified</td>
</tr>
</tbody>
</table>

Design

• Four school districts in the same geographic region
• 28 kindergarten classrooms and 4 third grade classrooms
• Randomly assigned to a treatment (Story Champs- MTSS) or control condition (“business as usual”).

Large Group (Tier 1) Procedures

• The classroom teacher followed the Story Champs large group procedures (Spencer & Petersen, 2012b; Spencer et al., 2014).
• The SLP modeled the first session, and then observed the teacher doing the second session.
• The SLP used a fidelity checklist when observing the teacher, and provided feedback.
• This Tier 1 instruction in the MTSS system was continued for 14 weeks.
Small Group (Tier 2)

- Students received additional Tier 2 small group narrative intervention in addition to the Tier 1 large group intervention if:
  - They did not meet benchmark expectations on the NLM Listening at pretest
  - AND after six to eight large group sessions (approximately one month of large group instruction) still did not meet benchmark expectations from two NLM Listening administrations
- 96 Students (12%)

Small Group (Tier 2)

- SLPs received an additional three hours of training on how to conduct small group intervention
  - Two times per week for 20 minutes
  - 12 to 14 small group and 12 to 14 large group intervention sessions
  - Monitored for progress once a week on the same day each week using the NLM: Listening

Narrative Retells

Based on the results of the significant interaction effect, simple main effects test (ANOVA) was conducted that allows for heterogeneity of slopes. The simple main effects test was significant, F (1, 750) = 67.59, p < .001, d = 0.60.

Personal Story Generations

ANOVA was conducted since the preliminary analyses were not significant. The ANOVA was significant, F (1, 316) = 8.43, mean squared error (MSE) = 73.05, p < .01, d = 0.30.

Expository Retells

Based on the results of the significant interaction effect, simple main effects test (ANOVA) was conducted that allows for heterogeneity of slopes. The simple main effects test was significant, F (1, 754) = 12.94, p < .001, d = 0.26.

Narrative Writing

Based on the results of the significant interaction effect, simple main effects test (ANOVA) was conducted that allows for heterogeneity of slopes. The simple main effects test was significant, F (1, 604) = 20.01, p < .001, d = 0.36.
DISCUSSION

• Oral narrative intervention was the independent variable and a large effect was expected on oral narrative measures (i.e., story retells and personal story generations), but there was also an impact on expository language and story writing.

• Why do we get effects on expository content?

• Story Champs teaches Metalinguistics
  — Retell task
  — Students learn to listen
  — Students learn to detect patterns
  — Learn complex language that is generally applicable

Dependent measures

• Distal Reading Comprehension Outcome
  — Scott Foresman Reading Street Common Core Unit
  Benchmark assessments were administered at pretest and posttest.

Independent Variable

• Story Champs Blitz
• Administered by the general education teachers and paraprofessionals
• 3 hours of training
• Collaboration with the speech-language pathologist.

Results: Reading comprehension

• ANCOVA was significant: $F (1, 39) = 4.49$, $MSE = 5.32$, $p < .04$.
• Treatment group mean was 35.17 (2.69)
• Control group mean was 33.00 (2.70)
• Cohen’s $d$ was large at .81.
DEPENDENT VARIABLES

- Gain scores measured across fall to winter semesters
  - CUBED Narrative Language Measure (NLM) for Listening
  - Measures of Academic Progress (MAP)

Treatment group

- Multi-tier System of Oral Language Support
- Began oral language instruction (Story Champs / Blitz) at tier 1 (large group)
- Received additional tier 2 (small group) instruction if below fall benchmark
- Received tier 3 (individual) intervention if progress not made
- Instruction: 3 sessions per week for 20 minutes
  - Displaced 1 hour a week of Scott Foresman reading instruction

Control group

- Students did not receive oral language instruction
- Provided with standard school district curriculum
  ✓ Scott Foresman Reading Street

GAIN SCORE COMPARISONS

- CUBED NLM Listening
  - Treatment Group n = 47, M=5.17 (SD 6.11)
  - Control Group n = 47, M = 0.29 (SD 6.7)
  - t = -3.68, (df =92), p < .001
  - Cohen's d = .76

- MAP Reading (distal measure)
  - Treatment Group n = 47, M=7.62 (SD 7.58)
  - Control Group n = 47, M= 3.62 (SD = 7.68)
  - t = -2.54, (df 92), p < .02
  - Cohen's d = .52

implications

- Given today's focus on third grade reading scores on high stakes tests, this finding is extremely powerful.
- In the move-on when reading movement, an oral language intervention such as Story Champs Blitz has great promise for promoting reading comprehension BEFORE students are held back.

The Big Picture

1. ASSESSMENT
   - Valid, reliable, easy to use, assessment tools with equivalent forms for frequent sampling of students' language skills and measuring growth over time.
     - Universal Screening
     - Intervention Planning
     - Progress Monitoring

2. INTERVENTION
   - An effective, language curriculum that is easy to use and sufficiently flexible to address the language needs of diverse children.
     - Whole class
     - More intense arrangements
What job can you claim?

- Training
- Fidelity
- Data based decisions
- What do you want to do to support MTLS?

Train

- Didactic training with slides
- Read the manual with the teacher
- Show some YouTube videos
- Encourage the teacher to watch one of your sessions or videos of your sessions
- Do not stop here!!!
- Coach

The Possible Reality

For more information, contact:

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LanguageDynamicsGroup.com