

Comprehensive Assessment: Using Research to Inform Practice

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Comprehensive Assessment in Context

- School Services
 - Eligibility under IDEA
 - State regulations
 - Medicaid
- Clinical Services
 - Eligibility under insurance
 - Fee for service (self pay)

Assessment Terms

- Non-discriminatory assessment
- Culturally responsive assessment
- Culturally competent assessment
- Consider the importance for:
 - Racial and ethnic groups
 - Socio-economic status

Culture and Language Load Research Shows . . .

- Culture and Language can impact a score by up to 35 pts. Rhodes, R., Ochoa, S., and Ortiz, S., (2005)
- Assessing Culturally and Linguistically Diverse Students: A Practical Guide, Guilford Press
- Matrix of culture and language loads <http://facpub.stjohns.edu/~flanagad/cross-battery/downloads/C-LTC%20and%20C-LIM%20-%20Complete%20Packet.doc>

Impact of Dialect, Culture and SES

- Is it a true measure of ability and achievement?
- Consider impact of
 - Language load
 - Cultural load
- What about the culture of poverty?
- Executive functioning differences
- Learning to “do school” – self regulation, self control, temporal concepts, vocabulary, etc

T or F: Due to the tremendous linguistic and cultural diversity in the world, every assessment tool is culturally or linguistically biased.

Culture and Language Load

Will you get a true measure of ability and achievement?

Consider and address in reports as appropriate:

- Impact of Cultural Load
 - Prior knowledge
 - Temporal concepts
 - Common customs
 - Pragmatic norms
- Impact of Language Load
 - Unfamiliar vocabulary
 - Register differences
 - Passive or complex construction

**Early Language Experiences:
Quantitative and Qualitative Differences (Hart and Risley, 1995)**

	Words heard/hour	Words heard/4 yrs	Affirmatives/hour	Prohibitions/hour
Professional Family	2,153	45 million	32	5
Working Class	1,251	26 million	12	7
Welfare	616	13 million	5	11

Research on Assessment

Issues with Standardized Test Data

- Teams cannot address difference vs. disorder
- There is a high chance of over/under identification
- Documentation of educational impact and need for specialized instruction is missing
- Eligibility decisions are not in compliance and less defensible

Federal Regulations 34 CFR §300.304

- “Not use any single measure or assessment is used as the sole criterion for determining whether a child is a child with a disability”
- “Use technically sound instruments...”
- “Assessment and other evaluation tools...are selected and administered as not to be discriminatory on a racial or cultural basis”

Spaulding, T., Plante, E., Farinella, K. (2006) ***Eligibility Criteria for Language Impairment -Is the Low End of Normal Always Appropriate?***, *Language, Speech, and Hearing Services in Schools* Vol.37 61-72

“The practice of applying an arbitrary low cut-off score for diagnosing language impairments is frequently unsupported by the evidence that is available ...in test manuals.”

Expectations in the Literature

Sensitivity ≥ 80%	Specificity ≥80%	Sensitivity and Specificity
Correct identification as impaired	Correct identification as typical	Mathematical calculation of the tests ability to correctly identify students as impaired or typical (researchers may use the term ‘normal’)

“Perhaps the most discouraging finding of this study was the lack of correlation between frequency of test use and test accuracy...assuming the ideal goal for diagnosis is 100% correct classification of children, accuracy levels should correlate with frequency of test use.”

Betz, Eickhoff, & Sullivan, 2013

What About Newer Tests

- Some publishers do not provide sensitivity and specificity data – keep asking for it!
- Examine administration manual and ask critical questions about what is included

For Example: OWLS-2 There is no explicit mention of sensitivity and specificity. Students with a receptive language impairment obtained a mean standard score of 86.9 on listening comprehension composite and those with an expressive language impairment scored a mean standard score or 83.4 on the oral expression composite. What does this say about the tests sensitivity?

Comprehensive Assessment Reference

- Provides information and references
- Specific data for 13 tests
- Information from publisher and research may conflict
- Designed to assist SLPs in discussing need for additional data sources

What Score Should Raise Concern ?

- Adopt evidence-based cutoff scores derived for each particular test
- At least 1.5 SD below the mean*
- Consider all factors
- Culture and language
- Testing Conditions / Context
- Scoring parameters
- Test form graphics can be misleading

*Dollaghan, Gray, Maillart et al., Leonard et al.

Betz, Eickhoff, & Sullivan, 2013

- “The disproportionate use of vocabulary measures compared to morphosyntactic measures suggests that the content of the most frequently used standardized tests is not necessarily supported by the existing research literature.”
- “research to date does not show vocabulary to be more impaired than other language domains.”

Vocabulary

- Spaulding, Hosmer, and Schechtman (2013): Typical vs. SLI performance on Vocabulary Measures
- McCabe & Champion, 2010 on African American children (typically developing) from low income households

Hoffman, Loeb, Brandel, & Gilliam (2011) *Concurrent and Construct Validity of Oral Language Measures with School-Age Children with Specific Language Impairment*, Language Speech and Hearing Services in Schools, p1597-1608

Comprehensive Assessment

- Determine language difference vs disability
- Describe functional skills in meaningful contexts
- Documents
 - Significant discrepancy
 - Educational impact of speech or language impairment
 - Need for specially designed instruction
- Informs the team’s decision regarding eligibility
- Support the development of appropriate goals

4 Part Model for Assessment

<p><i>Academic Activities:</i></p> <ul style="list-style-type: none"> • Artifact analysis • Curriculum-based assessment • Observations in school (natural) settings • Educational records 	<p><i>Speech-Language Probes:</i></p> <ul style="list-style-type: none"> • Case history • Interviews • Language/Narrative samples • Stimulability • Dynamic assessment <p>Play-based assessment</p>
<p><i>Contextualized Tests:</i></p> <ul style="list-style-type: none"> • Norm-referenced measures of academic achievement • Curriculum benchmarks 	<p><i>Decontextualized Tests:</i></p> <ul style="list-style-type: none"> • Norm-referenced speech-language tests (parsed skills: articulation, semantics, syntax, morphology, fluency, etc.)

Which areas do you commonly examine when conducting an assessment?

Decontextualized Tests

General Issues with Tests

- There is a high chance of over/under identification
- Skills are measured out of context
- Diagnostic accuracy may be unknown

Issues with Standardized Test Data

- SLPs cannot address difference vs. disorder
- There is a high chance of over/under identification
- Documentation of educational impact and need for specialized instruction is missing
- Eligibility decisions are not in compliance or defensible when based only on tests results

Reporting Confidence Intervals

- “Reporting confidence intervals around a students score is particularly important in cases where the score may be used to make classification or placement decisions” (CELF-5 manual p. 147)
- Report Confidence Intervals
- There is a 95% chance that the student’s true performance on the [test name] falls somewhere between [#] and [#].

“No single measure or assessment is used as the sole criterion” 34 CFR §300.304

Decontextualized Tests

- Choose assessments carefully
- Use administration manual to guide the:
 - Administration
 - Scoring
 - Analysis and Interpretation
- Report confidence intervals
- Gather data from other areas

Academic Activities

- Options for examining this area include:
 1. Observations in school settings
 2. Artifact Analysis
- Opportunity to gain information about:
 - Knowledge and skills (strengths and weakness)
 - Teacher expectations and behaviors
 - Learning environment
 - Strategies attempted and results
 - Use and Impact of dialect

Sample Forms

- Virginia SLP Guidelines Observation Form (p.108)
- Functional Communication Assessment Summary (p. 106)
- Adapted Observation and additional checklists have additional areas of consideration to meet needs when evaluating student with more complex needs.

Observation

- Obtain parental consent (as required)
- Should be summarized in an evaluation report
- Areas to consider:
 - Setting
 - Physical Environment
 - Auditory Environment / Sensory environment
 - Social context
 - Language demands of activity*
 - Motor skills and response demands of activity*
 - Provision of and Response to Instructional Strategies*

Tier 2 Vocabulary

- Are used during classroom discussions
- Are critical to understanding academic texts
- Require deliberate effort to learn when not present in home language environment
- Likely to appear in written texts than in speech
- Are rarely scaffolded by authors or teachers (contrast to tier 3 words)

Artifact Analysis

- Reviewing student work as part of an evaluation
- May be done by others or by the SLP
- May be part of an existing process (Student Assistance, RtI, etc.)
- Should examine areas of concern, patterns, and needed actions
- Should be documented as part of the evaluation.

Using a 4 Step Process

1. Describe
2. Evaluate
3. Interpret
4. Identify actions for improvement

Contextualized Tests

- Aligned with curriculum and instruction presented to student
- This includes state and local assessments
 - High stakes tests such as the PSSA
 - Curriculum based assessments
 - Benchmark tests
 - Curriculum screenings as used in MTSS or RtI programs
- Who shares this information with the team/SLP?
- What information is included in evaluation reports?
- How is this data used when answering questions about the need for services?
 - Eligibility under IDEA
 - Related Services
 - Clinical Services

SLP Probes

Includes a variety of processes:

- Therapy Data
- Language sample analysis
 - Conversation
 - Narrative (story)
 - Macrostructure (Story Grammar and Episodic Complexity)
 - Microstructure
 - Expository
- Interviews and Case history
- Dynamic assessment data

SLP Probe Data

- Considers culture and language
- Explores prompting and scaffolding of supports
- Examines growth in context
- Provides information on strengths and weaknesses

Therapy Data

- How much faster a student is responding to cues compared to last month
- The number of greetings to others
- The increasing length of sentences
- The decreased length of crying behavior when transitioning to new activity
- Improvement in articulation skills

Case History and Interviews

- May inform discussion on impairment and educational impact
- Assists with determination of difference vs disorder
- May explore discrete skills or feelings/perceptions
- Provides historical context
- Online sample forms www.doe.virginia.gov *Speech-Language Pathology Services in Schools: Guidelines for Best Practice (p. 108-119)*

Narrative Sample Analysis

Narratives may be analyzed by:

- Macrostructure
 - Story Grammar
 - Episodic Complexity
- Microstructure
 - Cohesion (lexical level)
 - Sentence Structure/Complexity (utterance level)
 - Lexical Diversity/Complexity

Dynamic Assessment

Methods Include:

1. Graduated Prompting
2. Testing Limits
3. Test-Teach-Retest

Use with any type of task to examine potential for learning / growth

Dynamic Assessment

- Statistically better than testing for distinguishing *difference* from *disorder*
- *Sensitivity and specificity has been documented up to 100%*
- May be used as part of the evaluation to gather relevant data

SLP Probes and Dynamic Assessment

Dialogic Reading

- Children who have been read to dialogically are substantially ahead of children who have been read to traditionally on tests of language development.
- Children can jump ahead by several months in just a few weeks of dialogic reading.
- readingrockets.org
- What Works Clearinghouse

PEER Sequence

This is a short interaction between a child and the adult. The adult:

- P**rompts the child to say something about the book,
- E**valuates the child's response,
- E**xpands the child's response by rephrasing and adding information to it, and
- R**epeats the prompt to make sure the child has learned from the expansion.

CROWD Prompts

There are five types of prompts that are used in dialogic reading to begin PEER sequences.

1. Completion
2. Recall
3. Open-ended
4. Wh-
5. Distance

Sample Analysis: More Than Just MLU

Macrostructure:

A Brief Review of Story Grammar and Episodic Complexity

What is a Story?

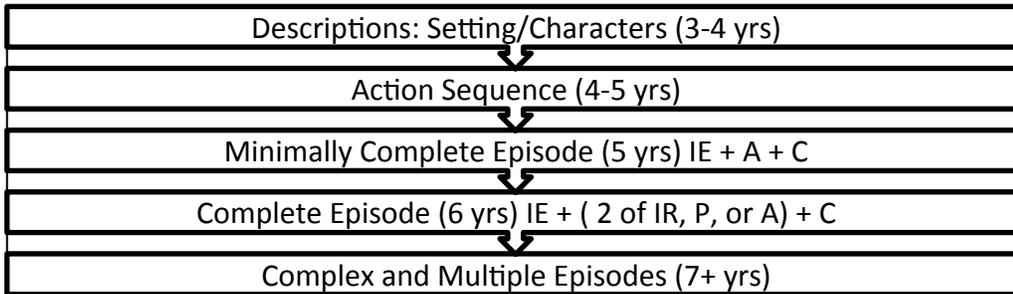
Story = Setting + Episodic Structure

Types of Stories (Genre):

- Accounts / Recounts (spontaneous or elicited)
- Event-casts (description of on-going events)
- Scripts (describe typical scenario)
- Fictional Narratives (made up stories)

Parts of a Story and Types of Episodes (See Activity Packet)

Typical Sequence of Development



Scoring

1. Review the story and identify each story grammar element
2. Determine the episodic complexity.

Metacognitive Verbs and Internal States

One option for analysis when examining microstructure

Metacognitive Verbs

Students must be able to conceptualize the event even though it cannot be seen

This skill is required for:

- Higher level discourse
- Complex episodic structure
- Behavior regulation
- Story Grammar: Plan and Internal Response
- Episodic Complexity: Complete and Complex Episodic structure requires these components
- Behavior and Emotional Regulation

Metacognitive Verbs and Internal States
 MCV – Metacognitive Verbs
 Decide, Imagine, Realize, Discover, Intend,
 Reflect
 Additional Terms

- Verbs of Cognition
- Landscape of Consciousness
- Theory of Mind

<p>Internal States Angry, Happy, Confused</p> <ul style="list-style-type: none"> • Internal state is a “feeling” • Use of internal state language indicates social understanding • Associated with behavior and self-control • Autobiographical narratives can target “internal states”
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Examining the Article
 Narrative Writing in Children and Adolescents; Examining the Literate Lexicon (Sun & Nippold, 2012) LSHSS V 43, p 2-13

**Review the narrative task. Why did they focus on funny, sad and scary events?
 Excerpt from TABLE 3.**

Benefits of a Specific Prompt

- Provides insight into the student’s use of internal states and metacognitive verbs
- Allows for comparison over time
- Allows for development of a local reference database
- Highlights macrostructure difficulties when students leave out parts of a story despite the scaffolds provided

Dynamic Assessment

Dynamic Assessment

These methods can help identify learning potential and eliminate bias for students with cultural and linguistic differences or socio-economic risk factors.

Virginia Department of Education, 2013

Is there a danger in reporting a single score without dynamic assessment data?

Dynamic Assessment

Methods Include:

1. Graduated Prompting
2. Testing Limits
3. Test-Teach-Retest

Use with any type of task to examine potential for learning / growth

Test-teach-retest

- Formal Systems
 - Dynamic Assessment and Intervention Kit
 - PEARL Decoding and Comprehension
 - Other purchased tools
- Informal Systems
 - School Age Language Measures (SLAM)
 - Story Champs
 - Test-teach-retest using decontextualized assessment as the first “test”.

Dynamic Assessment Considers

- Mediated Learning Strategies
- Modifiability / Responsiveness
 - Prompts
 - Errors
 - Confidence
 - Rate
- Effort (child and adult)
- Rating Responsiveness

Semantic Knowledge

- Static Assessment
 - Vocabulary tests measure *exposure to words*
 - Highly effected by SES and mother's education
- Dynamic Assessment
 - Measures *ability to learn new words*
 - Differentiates WNL from SLI
 - Fast Mapping (Dollaghan, 1987)

What can you learn from this?

- Personal Efficacy Behaviors
- Self talk, perseverance, etc
- Attention
- Imitation
- Problem Solving
- Memory
- Emotional state

Dynamic Assessment

- Uses “mediated learning” experiences to examine
 - Effort (Professional and student)
 - Effectiveness of Strategies
 - Student Modifiability
- May be done using a variety of materials
- May target any type of skill
- When using norm referenced tests scores from the second administration shouldn't be reported, however the information can be vital to the team.

Fast Mapping

- Measures the ability to learn novel words from exposure rather than vocabulary tests that differentiate socio-economic classes
- Exposure to NOVEL words in context
- Assess receptive and expressive skills

Let's Practice Fast Mapping

Presentation of item and novel word

- Did incidental learning occur?
- Receptive language
- Expressive language
- Are prompts are required?
- What techniques assist the student in learning new words?

Combining Narratives and Dynamic Assessment

School-age Language Measure Cards (SLAM)

- Developed by Cate Crowley, Ph.D, CCC-SLP
- Use for story generation and retells
 - Baseball (Secondary)
 - Lost Cellphone (Secondary)
 - Bunny (Pre-K and Elementary)
 - Dog Comes Home (Pre-K and Elementary)

- Visit www.leadersproject.org or
- www.doe.virginia.gov search (SLP)

Narrative Analysis for Picture Prompted Stories

- Free online form
- Designed for use with SLAM cards and other stimuli
- Document context and supports required
- www.doe.virginia.gov search “SLP”

Narrative Analysis for Picture Prompted Stories

- Record narratives
- Conduct basic analysis
- Macrostructure analysis
 - Setting
 - Episodic complexity
- Microstructure analysis
 - Lexical diversity (vocabulary and MCV)
 - Cohesion (pronominal and conjunctive)
 - Clausal structure and clausal density

Post Story Questions

- Questions provided to probe additional areas
- There is no single correct answer
- Consider culture and experiences of the student
- Consider the rationale provided and examine flexibility in thinking

DA with Narratives

Consider using School-age Language Assessment Measure (SLAM) cards for dynamic assessment

1. Have student order cards and tell the story (test)
2. Provide mediated learning for areas that are weak (teach)
3. Have student order second set of cards and tell the story (re-test)

<p>DA Narrative Teach Phase</p> <ul style="list-style-type: none"> • Identify areas for Mediated Learning • Provide explicit instruction and teach strategies • Use of visual supports • Icons to represent story grammar elements • Use of descriptive language • Use of metacognitive verbs and internal states 	<p>DA Narrative Retest phase</p> <ul style="list-style-type: none"> • Retest using second set of cards • Assess student modifiability or responsiveness <ul style="list-style-type: none"> ○ Errors ○ Prompts ○ Confidence ○ Disruptions ○ Rate
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<p>Before Assessing Students</p> <ul style="list-style-type: none"> • Use with typically developing students to get a sense of what is “WNL” • Language • Order of images • Cultural expectations • Become familiar with the pictures and suggested order • Consider areas examined by additional questions 	<p>While using SLAM Cards</p> <ul style="list-style-type: none"> • Record stories for later transcription and analysis • Consider alternate story order • Examine rationale • Examine flexibility in thinking • Additional questions • Record for later transcription and analysis • Insight into cultural and linguistic differences
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Analysis and Documentation

Report Sections

1. Assessment Data
 1. Standardized/norm referenced
 2. Contextualized Assessments
 3. Academic Activities
 4. SLP Probes
2. Analysis/Interpretations
3. Recommendations
- ★ Reporting scores is NEVER enough

Analysis

- Consider data from all 4 areas
- Examine outliers
- Are differences in performance an artifact of:
 - Cultural or linguistic bias
 - Diagnostic Accuracy issues with tools used
 - Limited experience with tasks
 - Instructional approaches
- Does the data provide accurate reflection of the student’s true ability?

Documentation

- Include data in report
- Consider including:
 - ✓ Summary of task (i.e., what, where, ...)
 - ✓ Summary of data (i.e., features present, % correct, missing components, ...)
 - ✓ Comparison data (typical expectation or examples)
 - ✓ Summary of strengths and weakness

Materials Used

- Describe materials used
- Provide citations when appropriate to address:
 - Diagnostic accuracy
 - Research on usage

- Administration manual
- Regulations and state/professional guidance

Dynamic assessment data

- Dynamic assessment data is a valid source of data in IDEA
 - Evaluation and Eligibility
 - What about state regulations
- Written reports should contain data from these activities

Dynamic Assessment

- Document type of dynamic assessment, materials used, and mediated learning sessions
- Provide citations if appropriate
 - Gutiérrez-Clellen & Peña 2001
 - Grigorenko 2010
 - Horton Ikard 2010
- Describe strategies and student performance and modifiability

Federal Regulations 34 CFR §300.304

- “Not use any single measure or assessment is used as the sole criterion for determining whether a child is a child with a disability”
- “Use technically sound instruments...”
- “Assessment and other evaluation tools...are selected and administered as not to be discriminatory on a racial or cultural basis”

<p>Quote the Manual</p> <p><i>“Following guidance in the test manual, Tom’s scores were not calculated for 3 reasons:</i></p> <ol style="list-style-type: none"> 1) <i>subjects with mental disabilities were excluded from the norming sample,</i> 2) <i>Tom is 16 years old and the test is normed for students ages 5-12,</i> 3) <i>the administration was non-standard and used additional prompts “</i> 	<p>Cite Research for Support</p> <ul style="list-style-type: none"> • <i>“Individuals with cognitive function below the low-average range cannot be reliably compared with same age peers (Loftus West, K & Guenette, L.A. (2007).”</i> • <i>“The evidence based systematic review by Fey et al. (2011) failed to support the premise that targeting auditory perceptual skills leads to improvement in language ability.”</i>
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In Review

Dynamic Assessment

Diagnostic accuracy of dynamic assessment it documented in the literature

Methods Include:

1. Graduated Prompting
2. Testing Limits
3. Test-Teach-Retest

Use with any type of task to examine potential for learning / growth

Use to Assess

- Emotional and executive functioning
- Language
- Vocabulary
- MCV and internal states
- Narrative analysis
 - Macrostructure
 - Microstructure
- Prediction, inferencing, theory of mind
- Gain cultural insight

Comprehensive Data and Decision Making

- Eligibility for special education and related services is an important decision that **MUST** be based on data.
- Important concepts to consider
 - Civil Rights
 - Federal and State Regulations
 - State Performance Plan / Annual Performance Report
 - Coordinated Early Intervening Services (CEIS)
 - Disproportionality
 - Parental Consent Requirements

Comprehensive Assessment Should

- Limit reliance on standardized/norm referenced tests
- Include techniques that assist in determining difference from disorder such as:
 - Artifact Analysis
 - Observation
 - SLP probes (e.g., dynamic assessment, language sampling, narrative assessment)
- Address impact of:
 - Culture and language load
 - Language variation

Staying Informed

- Peer Reviewed Publications
- ASHA Journals for SLPs
- Subscribe to the TOC
- Association Presentations
- Talking EBP – free 2 page newsletter provides an overview of relevant research from www.doe.virginia.gov

Using Research to Inform Practice

Answer at least 2 of the questions below:

1. What additions or changes to your assessment practices will you make?
2. What conversations will you have with others?
3. What articles will you access?
4. What resources will you access?

Resources and References

- Betz, Eickhoff, & Sullivan (2013) *Factors Influencing the Selection of Standardized Tests for the Diagnosis of Specific Language Impairment*, LSHSS 44, 133-146
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- Virginia Department of Education (2007) FOR CULTURAL COMPETENCE: Knowledge, Skills, and Dispositions Needed to Embrace Diversity. Richmond, VA: Author

Language & Narrative Resources

- Narrative Assessment: 3 online modules www.doe.virginia.gov (search Speech-language impairment)
- Language Sampling with Adolescents, Marilyn Nippold, Plural Publishing, 2010
- Guide to Narrative Language: Procedures for Assessment, Hughes, McGillvray, & Schmiddek 1997
- Owens (2012) SUGAR (Sampling Utterances & Grammatical Analysis Revisted): A Sweet Taste. ASHA Convention Presentation
- Heilmann, J., Miller, J., Nockerts, A., Dunaway, C. (2010) *Properties of the Narrative Scoring Scheme Using Narrative Retells in Young School-Age Children*, *AJSLP*, 19, 156-166
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- Ward-Lonergan, J. & Duthie, J. (2012) *Expository Discourse Intervention for adolescents with Language Disorders*, *Perspectives*, 44-56
- Price, J. R. & Jackson, S. C. (2015). Procedures for Obtaining and Analyzing Writing Samples of School Age Children and Adolescents *Lang Speech Hear Serv Sch*, 46(4), 277-293. doi: 10.1044/2015_LSHSS-14-0057
- Online Modules www.doe.virginia.gov search SLP then visit “professional development for SLPs”

Dynamic Assessment Resources

- Gutiérrez-Clellen, V. Peña, E. (2001) Dynamic Assessment of Diverse Children: A Tutorial, *Language, Speech, and Hearing Services in Schools* Vol.32 212-224
- Dynamic Assessment and Intervention, Miller, Gilliam, & Pena, Pro-Ed
- Language Dynamics <http://www.languagedynamicsgroup.com> Test of Narrative Retell (free download) Assessment of Language Using Dynamic Assessment Mapping in Normal and Language-Impaired Children
- Dollaghan, C. A. (1987). Fast Mapping in Normal and Language-Impaired Children. *J Speech Hear Disord*, 52(3), 218-222. doi: 10.1044/jshd.5203.218.