

Untangling Reading Comprehension: Diagnosing and Articulating Comprehension Difficulties

Katherine Stahl
April 21, 2016
Spring Meeting
Ohio School Psychologist Association

Name Game: Who are they? How are they present in your school? Put your answers on paper with your school team name at top. Prizes awarded.



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Getting Acquainted: Who are you?

- School Psychologist
- Classroom Teacher
- Literacy Interventionist
- Literacy Coach
- Principal/Asst. Principal
- Special Educator
- ENL/ELL Teacher
- Speech/Language Therapist
- District Administrator
- Other

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Getting Acquainted: Who am I?

- Taught in public schools for 27 years
- Literacy Program Director at NYU
- Teach Literacy Courses
- Literacy Clinic Chief Cook and Bottle Washer
- Member of RTI-TAC Consortium
- Member of NYS ELA Content Advisory Panel
- Author
- School Consultant
- Specialties are comprehension prek-2 & struggling readers



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Learning Objectives

- Identify text, context and student factors that contribute to comprehension proficiency
- Identify diagnostic tools for evaluating the dimensions of comprehension strengths and weaknesses
- Identify strengths and weaknesses of popular progress monitoring tools
- Identify the characteristics and components of effective comprehension protocols

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RTI/MTSS Requires Working Together

- ❖ We share power as change agents in schools.
- ❖ You are in unique role to gauge existing quality of school assessment practices and initiate improvements.
- ❖ In many ways, you serve as resident assessment monitor and advisor for the school.

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What Comprehension is Not

- Filling in a word in a cloze task
- Selecting the correct choice as part of a maze task
- The number of words that a reader uses to retell a portion of an oral reading fluency task
- Words Correct per Minute
- A Lexile estimate
- A number on a state ELA test
- Determined by an item analysis on an ELA test

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We Want a Silver Bullet Assessment Tool

- Unlike foundational skills, there is no single test that can provide a snapshot of a reader's comprehension
- Reading comprehension is a "paradigm for cognition." (Kintsch, 1998)
- Multiple artifacts must be collected to identify the multidimensional, invisible aspects of comprehension.
- We can only gauge comprehension indirectly using artifacts that are:
 - Spoken
 - Written
 - Produced

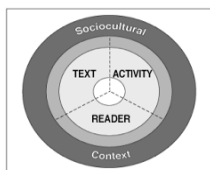
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What is Comprehension?

The process of simultaneously extracting and constructing meaning through interaction and involvement with written language.

Rand Reading Study Group (2002);
Snow (2003)



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Continuum: Constrained to Unconstrained Abilities (Paris, 2005)



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Why is this important?

- Constrained abilities are fairly linear and with instruction children develop mastery within a few years. They are easy to assess.
- Unconstrained abilities are multidimensional, incremental, context dependent and develop across a lifetime.

Paris, S. (2005). Reinterpreting the development of reading skills. *Reading Research Quarterly*, 40, 184-202.

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Why is this important?

- Context, purpose, genre and content (*context and text factors*) influence comprehension.
- Thresholds in decoding, fluency, vocabulary, prior knowledge, metacognition, working memory, and self-regulation (*reader pressure points*) are necessary to comprehend a specific text.
- All of these factors act together in nonlinear, dynamic ways in response to specific texts and tasks to yield comprehension that falls within a wide range of understanding.

COMPREHENSION IS NEVER ALL OR NOTHING!!!

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AHA and ?

(1 minute)

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Difficulties in Assessing Comprehension
(Snow, 2003, pp. 193-195)

- To capture the “developmental nature of comprehension;”
- To focus on “comprehension for engagement, for aesthetic response, for purposes of critiquing an argument or disagreeing with a position;”
- To identify why comprehension breaks down, separating “comprehension processes (inferencing, integrating new with existent knowledge) from lack of vocabulary, of domain-specific knowledge, of word reading ability, or of other reader capacities involved in comprehension;”
- To determine teachers’ instructional emphases and effectiveness;
- To be psychometrically reliable and valid.

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List the comprehension tests that you use or trust- rate your trust on a scale of 1-5

(5 minutes)

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List the comprehension tests that you use or trust- rate your trust on a scale of 1-5

- Woodcock-Johnson
- GORT
- STAR
- FastBridge--Adaptive
- DAZE-Maze
- NWEA-MAP
- R-CBM



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Other Assessments Commonly Used by Teachers as Screening Tools

- Benchmark Kits (Fountas & Pinnell or Developmental Reading Assessment)
- Informal Reading Inventories
- State ELA



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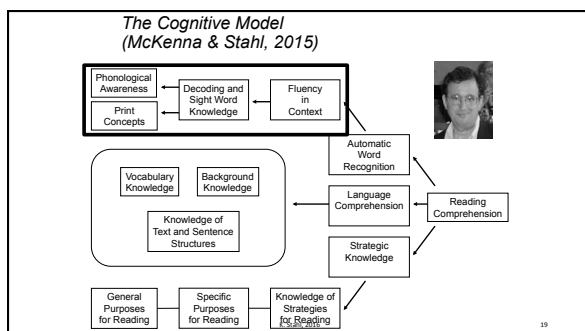
Functions of Assessments

- Screening--Thermometer
- Diagnostic---Often the missing piece
 - What do I teach to make an impact?
 - What is my target?
 - Selectivity: At both student level and test level
- Progress Monitoring-
 - Is what I am doing working?



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Diagnosing to inform comprehension instruction is not going to be clean

- There is not a single assessment task that can be used as a diagnostic to inform instruction.
- A suite of assessment tools is needed to get the big picture.
- Another deliberate alternative is to select one or two components of comprehension, focus on the diagnosis and intervention of those and ignore the others (with deliberation, not ignorance)
- You need a reading expert or a speech-language expert.
- Earlier is better than later –age 4 and 5 is not too soon!

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Considerations in Selecting Diagnostic Tools

- Development (prek-2/3; 3-6; 6 and beyond)
- First language
- Response format: spoken, written
- Listening comprehension and reading comprehension
- Narrative and Expository
- Conscious administration choice regarding oral and silent reading

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What assessments give you these options?

- There isn't one single test that will provide a comprehensive view of comprehension competencies.
- Choose a few tests that can serve multiple functions.
- That does not mean that you can use a grade level ORF retelling in one minute (or more) to draw any kind of valid conclusion about a child's comprehension.
- You need a suite of assessment tasks that address the pressure points.

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Essentials

Verbal

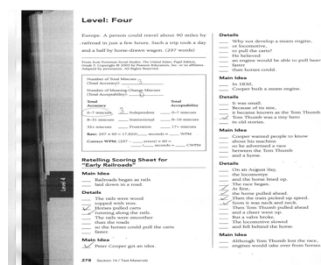
Retelling with individual text scoring guide (idea units or specific story grammar elements/key ideas)

Questions, Cued Recall—with text-based questions (literal & inferential)

Written Responses to Text (beginning grade 3)

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Less Commonly Used Comprehension Assessment Tools

- Think-aloud tasks
- Strategy Interviews

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Gauging Vocabulary Knowledge

- ❖ Peabody Picture Vocabulary Test-4 (PPVT4; Dunn & Dunn, 2007)
- ❖ Expressive Vocabulary Test 2 (Williams, 2007)
- Common Formative Measures (McKenna & Stahl, 2015; Stahl & Garcia, 2015)
- Disciplinary Unit Vocabulary (McKenna & Stahl, 2015; Stahl & Bravo, 2010)
- English Learner Considerations
- Isolated Vocabulary Programs
- Basal tests



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Process Writing

- Periodic Common Prompts with Established Rubrics for:
- Narrative
- Exposition
- Argumentation
- (Grade level, may be embedded within disciplinary units)



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Motivation

- Garfield Elementary Reading Attitude Survey (McKenna & Stahl, 2015)



Very Happy



A Little Happy



A Little Upset



Very Upset

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ATTITUDE



Survey of Adolescent Reading Attitude: Grades 6-8 (McKenna et al., 2012; McKenna & Stahl, 2015)

- Recreational reading in print setting
- Recreational reading in digital settings
- Academic reading in print settings
- Academic reading in digital settings

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Considerations in the assessment of novice readers

- The CCSS has increased the emphasis of comprehension in the primary grades.
- Today the youngest students are exposed to texts that vary greatly in difficulty, topics, and genre.
- As a result, comprehension difficulties are being exposed much earlier than they were in the past.

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Considerations in the comprehension assessment of novice readers

- When concerned about possibility of reading comprehension "issue," non-reading comprehension assessments must be administered.
- MSV does serve as valuable comprehension indicator in first grade.
- Low level stories (leveled text, little books) often do not have complete story grammar.
- Lexiles are not precise/reliable until around the end of second grade (450L-600L).
- Benchmarks kits are not all created equal and have varying degrees of technical adequacy and psychometric integrity (see Stahl & Garcia, in press).

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Prek-Grade 2 (Non-reading measures)

- Utilization of video narratives with scripted questions (Kendeou et al., 2005; Kendeou, Bohn-Gettler, White & van den Broek, 2008; Kendeou, van den Broek, White & Lynch, 2007; Lynch et al., 2008; van den Broek et al., 2005; van den Broek et al., 2009)
- Sulzby Scale (Sulzby, 1985; McKenna & Stahl, 2015; Stahl & Garcia, 2015)
- Narrative Wordless Picture Book Assessment (Paris & Paris, 2003; van Kraayenoord & Paris, 1996; see also McKenna & Stahl, 2016; Silva & Cain, 2015; Strasser & del Rio, 2013; Stahl & Garcia, 2015; Tompkins, Guo, & Justice, 2013)
- Packages are not available. Schools would need to create 3-4 standardized forms.

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Assessing Novice Readers (Gr. 1-3)

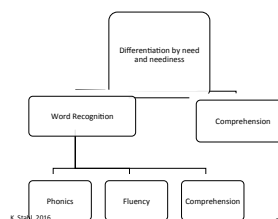
- MSV of oral running record of instructional level text
- Developmental Reading Assessment 2 (DRA 2; Beaver, 2005)
- On the horizon: PARCC has stated that it is developing formative assessments for K-2, but information is currently unavailable.

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How are we Identifying and Grouping for Intervention of Older Students?

- Use triangulation of ELA, CBM ORF, WTW Elementary Spelling Inventory and IRI (retelling and questions/Lexile correlated) to identify needs and the neediest.



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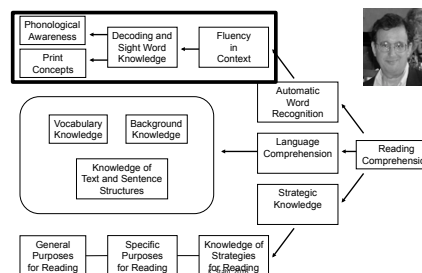
Diagnostic Tools in the Intermediate Grades

- Informal Reading Inventories (QRI 6-Leslie & Caldwell, 2016; Basic Reading Inventory-Johns, 2012)
- Common formative assessments
 - An assessment process that is tied to a curriculum unit of instruction, small scale (less than a class period) and short cycle.
- Writing in response to text
- Strategy interviews
- Think-alouds

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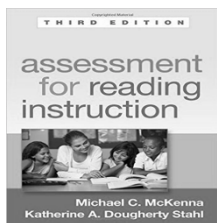
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The Cognitive Model (McKenna & Stahl, 2015)

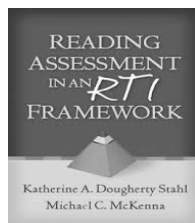


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For more information:

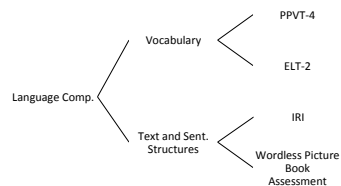


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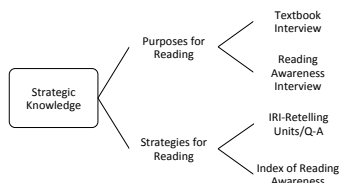
Assessing for Tier 3 & Spec. Ed.



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Assessing for Tier 3 & Spec. Ed.



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Progress Monitoring Tools in K-2

- Running record text levels are essential: allows for observing word recognition and comprehension (MSV) of increasingly difficult texts.
- Beginning mid-first grade ORF in conjunction with prosodic rating, would allow for repeatedly administering multiple parallel versions across short periods of time.

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ORF Issues

- There is a correlation and predictive relationship between ORF CBM and comprehension (Carlson, Geinsinger, & Jonson, 2014; Deno & Marston, 2006; <https://dibels.uoregon.edu>; Fuchs, Fuchs, Hosp, & Jenkins, 2001; Kim, Petscher, Schatschneider, & Foorman, 2010; Riedel, 2007; Schilling, Carlisle, Scott, & Zeng, 2007).
- For older students, comprehension of complex texts is more reliant on non-decoding pressure points: Background knowledge, vocabulary, purpose for reading, self-regulation (Paris, Carpenter, Paris, & Hamilton, 2008; Paris & Luo, 2008 Schilling et al., 2007; Shinn, 1988; Shinn et al., 1992).
- Only a viable PM option in Gr 2-3, before achieving fluency plateau (van den Broek, 2012).

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ORF Issues

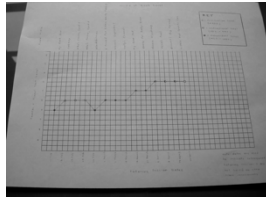
- False negatives for comprehension: 32% of second graders and 37% of third graders identified as low-risk were not achieving 50th percentile on standardized test (Shilling et al., 2007).
- Consequential validity: teaching for speed at expense of comprehension (Kuhn et al., 2010; Valencia et al., 2010).
- In order to comprehend complex texts, readers need to adjust speed according to purposes and text demands (Hudson, Pullen, Lane, & Torgeson, 2009).
- In a medical model, it is the equivalent of monitoring for the known medicinal side effects.

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Progress Monitoring in Grades 4-6

- CBM Maze
- Monthly adaptive tests
- Written Response to Text
 - Keep reading context constant
 - Keep text structure constant
 - Keep time constant (8-10 minutes)
 - Quantitative: Word Count
 - Qualitative: Rubric



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Let's Take a Break-Turn in Game Sheets



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Name Game: Who are they? How are they present in your school? Put your answers on paper with your school team name at top. Prizes awarded.



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Comprehension Intervention Protocols

- Diagnostics are needed to inform instruction.
- Instructional interventions should be research-validated programs or practices.
- If research-based programs are selected, the providers need to be familiar with the original research that the program is based on.
- Success of programs must be monitored ANNUALLY—how are the students' program scores related to:
 - Academic success in classroom settings?
 - High stakes tests?
 - Increased student performance?
 - Annual school risk-level evaluations?

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Consult Research Clearinghouses

- What Works Clearinghouse
<http://ies.ed.gov/ncee/wwc/>
- Best Evidence Encyclopedia
<http://www.bestevidence.org/>

However, you must be critical consumers and assume responsibility for looking more deeply into the research than placing blind belief in consumer report websites.



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Scientifically-Validated Research-Tested or Research-Proven

- One or more studies have tested the impact of a particular instructional technique or protocol.
- The studies may have been quantitative, qualitative or action research.
- We can't make assumptions that one kind of research is necessarily better than the other.
- We need to evaluate the rigor of each study individually.
- We need to be cautious not to overgeneralize outcomes.

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Scientifically-Validated Research-Tested or Research-Proven

Duke & Martin (2011) recommend asking the following questions:

- What did the research test?
- Was it compared to something else? What else?
- Sample?
- Outcome measures?
- Degree of impact or Effect Size?
- Number and quality of studies?
- Publication history-blind, peer-reviewed journals

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Research-Based or Evidence-Based

- Not tested in a research study, but designed to be consistent with research findings

Duke & Martin (2011) recommend asking the following questions:

- What research is the protocol based on?
- What is the quality of that research?
- How similar is the protocol's application to the research?

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Categorize These Popular Practices

	Read 180
	Core/Basal Readers
	Reading Recovery
	Wilson Reading System
LLI	Self-regulated Strategy Development
PALS	KWL
Beck/McKeown Text Talk Read Aloud	Directed-Reading Thinking Activity
Reciprocal Teaching	World of Words
Fluency-oriented Reading Instruction	*Something You Like
PAVED for Success	

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Scientifically-Validated Research-validated	Research-based Evidence-based	Journal Article or Book

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Add Your Own Favorites

Scientifically-validated	Evidence-based Research-based	Description
Reading Recovery	Core/Basal Reading Series	Reading/Writing WS
Self-regulated Strategy Instruction	LLI	KWL
FORI		
DRTA		
Reciprocal Teaching		
Text Talk		
PAVED & WOW		
Read 180		
Wilson (phonics only)		

Intervention Practices and Programs

Programs

Typically, commercial products that are designed to be implemented according to a set script or protocol.

Standard: Wilson RS; Read 180

Problem Solving: Reading Recovery

Practices

Instructional routines, heuristics, protocols or techniques that were developed and tested by researchers (or not) in order to accomplish particular learning objectives.

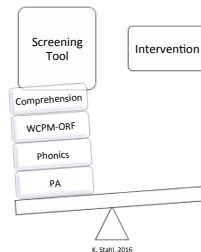
Standard: Reciprocal Teaching

Problem Solving: FORI (Classwide. Dev.)

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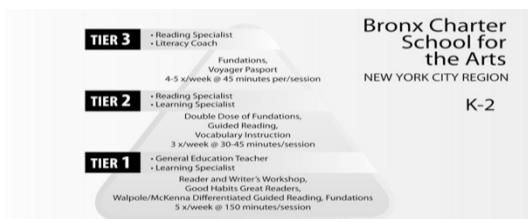
Matching Decisions and Resources



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Explicitly Specify Tiered Interventions for ELA



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What are your go-to intervention recommendations for comprehension difficulties?

For emergent readers?

For novice readers?

For intermediate readers?

For adolescents?

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The Elephant in Most Rooms

Read 180

- There is research validation for its effectiveness.
- Implementation Fidelity: 90 minutes
 - 20 minutes whole group instruction
 - 3 X 20 minute small group instruction (1=teacher group)
 - 10 minutes-closure

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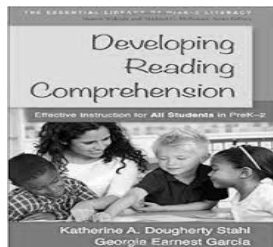
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Providing Comprehension Intervention for Emergent Readers and Novice Readers

- Recruit the assistance of the speech and language therapist
- Challenge is finding a knowledgeable provider and school having the resources to use this rare jewel in prek-K
- Who? Paired teacher classrooms, speech-language therapist, trained volunteers, school reading specialist, ESL teacher
- When and where:
 - Classroom integration in high-risk settings
 - 15-minute station
 - 15-minute pull-out

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Early Intervention Guidelines

- 1-1 is best, group should not exceed 3
- Interventions with younger kids (K-1) yield larger outcomes than interventions with older students (Wanzek & Vaughn, 2010)
- Incorporate retelling and cued recall (Goldman et al., 1999; Morrow, 1984, 1985; Swanson et al., 2011).
- Include multiple readings of the same text (Demarais et al., 2013; Swanson et al., 2011).
- Attend to needs of ELs sooner rather than later in collaboration with EL teacher (Linan-Thompson et al., 2003)

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Early intervention is not a lifetime cure for factors that contribute to most reading difficulties---it is a only first step.

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Research-validated Interventions for Emergent-Early Novice Readers

Dialogic Reading Intensive with Inference Training

(Demarais et al., 2013; Swanson et al., 2011; van Kleeck et al., 2006; Whitehurst et al., 1994; Zevenbergen & Whitehurst, 2003)

- 15 minutes, 2-4 days/week
- Incorporate multimedia

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Research-validated interventions for Emergent-Early Novice Readers

- Informational Content Intensive
- Content Units: 5-10-day disciplinary themes, 15 min./day
- Lists of Target Vocabulary
- Vocabulary Picture Cards
- Active forms of conceptual development (text reading, writing, hands-on, categorization, multimedia, conversation)
- Incorporation of phonological awareness
 - World of Words (WOW; Neuman, Newman & Dwyer, 2011; Newman & Wright, 2013)
 - PAVED for Success (Schwanenflugel et al., 2010; SERVE Center, 2010)

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Research-validated Interventions for Novice Readers---Early Intermediate Readers

- Reading Recovery (comprehensive reading)
- Theme Identification (Williams et al., 2002)
 - Introduction of universal themes
 - Read text together
 - Protocol of specific theme-based questions followed by transfer questions
- Compare-Contrast Text Structure Protocol (Williams, et al., 2009; see also Armbruster et al. 1987; Graham & Harris, 2005)
 - Reading texts and comparing two category members using key words
 - Writing compare-contrast summaries using paragraph frames

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More Strategy-driven Interventions (Gr. 2 and beyond)

Collaborative Strategic Reading

(Gr. 4-12, Gen. Ed, SLD, ELL)

CSR Learning Log		
Before reading Preview	During reading	After reading Wrap up
Knowledge: What do you know about the topic?	Checks: Make a list.	Questions and discussion
Prediction: What will you learn?	The gist: Write the gist for each section. <i>You may add more sections:</i> Paragraph 1: Paragraph 2: Paragraph 3:	Review: What did you learn?

(Adapted from *Promoting reading comprehension, content learning, and English acquisition through collaborative strategic reading (CSR)*, by Klingner, J. K. & Vaughn, S. 1999, p. 745)
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More Strategy-driven Interventions (Gr. 2 and beyond)

- Peer-Assisted Learning Strategies (Fuchs)
- Grades 2-6, but some research now extends beyond those grades
 - Partner Reading with a Retell
 - Paragraph Shrinking
 - Prediction Verification

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Interventions for Intermediate Through Adolescence

- Self-Regulated Strategy Development for Writing (Graham, Harris, & Mason, 2005; Harris, Graham & Mason, 2006; Lane et al., 2011)
 - 20 minutes 3X/week
 - Use of graphic organizers matched to text structure
 - Teaches students and instructional sequence to discuss, plan, monitor, evaluate and revise writing.

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Interventions for Intermediate Through Adolescence

- Questioning the Author (Beck & McKeown)
- Collaborative Reasoning (Anderson et al.)
 - General Ed and SLD
 - Discussion format to develop argumentation
 - <http://csr.education.illinois.edu/CR/papers.html>

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Future Directions

- Collaboration among the fields of reading, educational psychology, evaluation and assessment, speech and language therapy, and special education is needed to pool knowledge about measurement of comprehension processes.
- The development of school-friendly and trustworthy assessments must involve publishers and teachers.
- Computer technology is another promising area of future assessments.

Stahl & Garcia (in press)
Handbook of Reading Comprehension, 2nd Ed.

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Closing Thoughts

"Just as our Google maps allow us to use both a zoom and wide angle lens, and choose a photographic, political, or road portrait view, we need multiple tools to chart the journey of where children have been, where they are and how to help them arrive at their reading destination."

Stahl & Garcia (in press)
Handbook of Reading Comprehension, 2nd Ed.



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Questions?



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