

REFRAMING OUR THINKING AS SLPS:

THE LANGUAGE-LITERACY-DYSLEXIA CONNECTION

Therapro Webinar

February 28, 2023

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DISCLOSURES

Jeannene Ward-Lonergan - Nonfinancial: Jeannene Ward-Lonergan has authored articles and book chapters on this topic. She also co-authored the California Speech-Language-Hearing Association position paper on SLP roles and responsibilities with respect to literacy.

Robert Pieretti - Financial: Robert Pieretti has co-authored & receives royalties for books related to this topic. Nonfinancial: Robert co-authored the California Speech-Language-Hearing Association position paper on SLP roles and responsibilities with respect to literacy.

LEARNER OUTCOMES

Learner Outcome 1: Identify areas of language SLPs may address to support literacy development in students with language disorders and language-learning disabilities including dyslexia.

Learner Outcome 2: Discuss the SLP's role in literacy assessment in the public schools and how to link the assessment results of transdisciplinary team members in the assessment process.

Learner Outcome 3: Describe transdisciplinary treatment techniques, strategies, and approaches that may be used to support this population of students.

SLPs Support Literacy Development

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DECADES OF RESEARCH ON LITERACY AND LEARNING

“It is a little frustrating to think that after decades of amazing research and clinical practice, we are still trying to figure out the role of speech-language pathologists in literacy learning”.

“To answer the question, simply, is to say that the role speech- language pathologists should play in literacy learning is broad, collaborative, and dynamic.”

*The Role of Speech – Language Pathologists
in Literacy Learning*

Gerry Wallach, SIG 1, ASHA Perspectives, May 1998

WHAT DOES ASHA SAY?

SLPs support literacy development!!

“Roles and Responsibilities of Speech-Language Pathologists with Respect to Reading and Writing in Children and Adolescents”

ASHA (2001)

- Emphasized the important collaborative partnerships with parents, educators, and special educators in public schools
- Research supports the interrelationships across the language processes of listening, speaking, reading, and writing
- Prevention, identification, and treatment

SLPs SUPPORT LITERACY DEVELOPMENT

- Spoken language is the foundation for reading and writing
- Reciprocal relationship between spoken and written language
- Children with language delays frequently have reading/writing problems and vice versa
- Spoken language instruction can facilitate growth in writing and vice versa

WHERE ARE WE NOW?

- Confusion and inconsistency
- Time to embrace our role
- Seek support
- Utilize guidelines



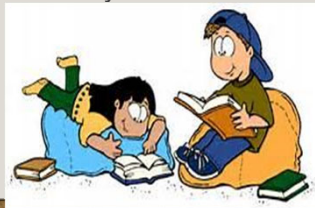
Different Types of Reading Disabilities

The “Simple View of Reading” (Modification of Catts, Adlof, & Weismer, 2006)

		Word Recognition	
		Poor	Good
Language Compreh.	Good	Dyslexia	Typical reading
	Poor	Mixed decoding/comprehension deficit	Specific comprehension deficit

WHAT IS DYSLEXIA?

“Dyslexia is a specific learning disability that is neurobiological in origin. It is characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities. These difficulties typically result from a deficit in the phonological component of language that is often unexpected in relation to other cognitive abilities and the provision of effective classroom instruction. Secondary consequences may include problems in reading comprehension and reduced reading experience that can impede growth of vocabulary and background knowledge.” (International Dyslexia Association, 2002)

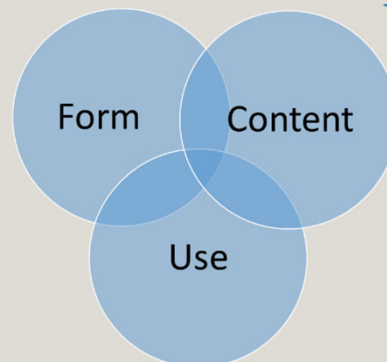


DYSLEXIA AS ONE TYPE OF SPECIFIC LEARNING DISABILITY

“Specific learning disability means a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that may have manifested itself in the imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations, including conditions such as perceptual disabilities, brain injury, minimal brain dysfunction, **dyslexia**, and developmental aphasia. The basic psychological processes include attention, visual processing, auditory processing, **phonological processing**, sensory-motor skills, cognitive abilities including association, conceptualization, and expression . . . Specific learning disabilities do not include learning problems that are primarily the result of visual, hearing, or motor disabilities, of intellectual disability, of emotional disturbance, or of environmental, cultural, or economic disadvantage.” (Title 5, *California Code of Regulations*, Section 3030(b)(10)(A))

WHAT IS LANGUAGE?

(Modification of Lahey, 1988)



LANGUAGE-LEARNING DISABILITY

- The American Speech-Language-Hearing Association has defined a “language disorder” as an impairment in the “comprehension and/or use of a spoken, written and/or other symbol systems”. The disorder may involve (1) the form of language (phonology, morphology, and syntax); (2) the content of language (semantics); and/or (3) the function of language in communication (pragmatics), in any combination (ASHA, 1993).
- Students who are identified as having both a language disorder and a specific learning disability may also be referred to as students with a language-learning disability.

MYTHS AND FACTS ABOUT DYSLEXIA

Dyslexia Myths (Wagner, 2017)

Dyslexia Myth #1

MYTH: Individuals with dyslexia make more reversal errors than younger readers who read with the same level of proficiency.

MYTHS AND FACTS ABOUT DYSLEXIA

Dyslexia Fact #1

FACT: Reversal errors are more noticeable in individuals with dyslexia because their age-matched peers make fewer reversal errors.



MYTHS AND FACTS ABOUT DYSLEXIA

Dyslexia Myth #2

MYTH: The reading problems that individuals with dyslexia have are caused by faulty eye movements.

MYTHS AND FACTS ABOUT DYSLEXIA

Dyslexia Fact #2

FACT: Faulty eye movements are not the cause of reading problems in individuals with dyslexia but are instead a by-product of it.



MYTHS AND FACTS ABOUT DYSLEXIA

Dyslexia Myth #3

MYTH: Dyslexia is due to a problem in vision.

MYTHS AND FACTS ABOUT DYSLEXIA

Dyslexia Fact #3

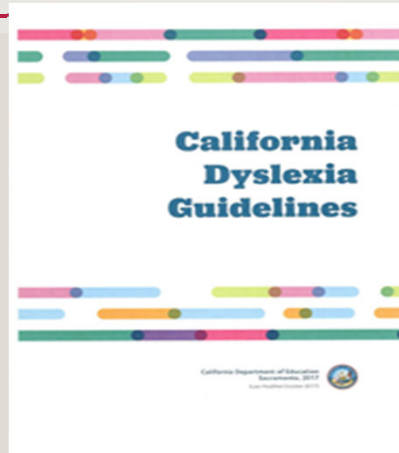
FACT: Dyslexia is due to a problem in language.



CHARACTERISTICS OF DYSLEXIA

- Students with dyslexia exhibit a deficit that primarily affects their ability to decode (i.e., translate graphemes into corresponding phonemes) and blend these sounds to form words (Paul, Norbury, & Gosse, 2018).
- Dyslexia involves a specific deficit in single-word decoding that is based on a weakness in the phonological aspect of language and has only a secondary impact on reading comprehension, which distinguishes it from other types of reading disabilities (Catts & Kamhi, 2005). Spelling is almost always affected as well.

CALIFORNIA DYSLEXIA GUIDELINES (2017; MODIFIED DEC. 2018)



CALIFORNIA DYSLEXIA GUIDELINES CONTRIBUTORS

Acknowledgments

The development of California's dyslexia guidelines involved the many people who participated in the Dyslexia Guidelines Work Group from 2016 to 2017. The California Department of Education extends its profound gratitude to the following individuals and the organizations they represented for their generous contributions of time and expertise in writing these guidelines.

Michele Andrus, Advisory Commission on Special Education
 Amy Balmanno, California Association of School Psychologists
 Joyce Childs, CARS - Organization for Special Educators
 Joe Comiskey, Special Education Administrators of County Offices
 Laura Anne Denton, Diagnostic Center, Northern California, California Department of Education
 Kathy Futterman, California State University, East Bay
 Victoria Graf, Loyola Marymount University
 Fumiko Hoeft, University of California, San Francisco, and the International Dyslexia Association
 Brian Inglesby, Special Education Local Plan Area Directors
 Virginia Kennedy, California State University, Northridge
 Roberta Kreitz, California Teachers Association
 Tobie Meyer, Decoding Dyslexia California
 Danielle Nahas, San Diego Unified School District, Bilingual Support Network
 Anjanette Pelletier, Association of California School Administrators
 Sally Shaywitz, Yale University
 Sarah Solari, California Commission on Teacher Credentialing
 Leah Sugarman, California Federation of Teachers
 Jan Tuber, Parents Helping Parents
 Richard Wagner, Florida State University
 Jeannene Ward-Loneragan, California Speech-Language-Hearing Association
 Nancy Cushen White, International Dyslexia Association
 Kristin Wright, State Board of Education

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NEUROSCIENCE OF DYSLEXIA (CALIFORNIA DYSLEXIA GUIDELINES)


This chapter covers the following topics:

- Information about dyslexia as a brain-based disorder
- The neural signatures of dyslexia
- A summary of findings of neurological research
- Online sources for more information

CHAPTER 2
The Neuroscience of Dyslexia

Dyslexia is a neurobiological disorder with brain patterns ("neural signatures") that reflect poor phonological and orthographic processing (Shaywitz et al. 1998); see chapter 3. These signatures include, but are not limited to, function and structure of the left-hemisphere language regions such as the left temporo-parietal region related to phonological processing, and the left occipito-temporal region related to orthographic processing (Linkersdörfer et al. 2012); see figure 2.1. Other brain measures that are important for communication across brain cells and regions—for example, amount of chemicals in certain parts of the brain and degree of synchronization of brain waves (neural oscillations), as well as small differences in the structure of a large number of risk genes for dyslexia (Plomin et al. 2016)—are also important differences that neuroscientists are finding in dyslexia.

BRAIN PATTERNS THAT DYSLIC STUDENTS MAY SHOW



● **LEFT FRONTAL REGION:** Important for compensation

● **LEFT TEMPORO-PARIETAL REGION:** Important for phonological processing and grapheme-phoneme association

● **LEFT OCCIPITO-TEMPORAL REGION:** Important for orthographic processing

BRAIN PATTERNS THAT NON-DYSLIC STUDENTS MAY SHOW




Figure 2.1. Key brain structures that are often impacted in dyslexia. Developed by and used with permission from Fumiko Hoeft.

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CALIFORNIA DYSLEXIA GUIDELINES

This chapter covers the following topics:

- The need for early identification and intervention for students with dyslexia
- The importance of universal screening when students are in general education classrooms
- The use of a Multi-tiered System of Support and Response to Intervention and Instruction
- The essential components of reading, writing, and spoken language to be screened and comprehensively assessed
- Assessing English learners for dyslexia
- Collecting information about a family history of dyslexia
- Online sources for more information

CHAPTER 9

Screening and Assessment for Dyslexia

As of 2015, 41 percent of fourth-grade students in California were reading below basic achievement levels compared with 32 percent nationally, according to the National Assessment of Educational Progress (National Center for Education Statistics 2015). For the same year, 80 percent of fourth-grade students with disabilities in California were reading below basic achievement levels; nationally, that figure was 67 percent (National Center for Education Statistics 2015).

The reasons for this overall lack of proficiency in reading achievement are complex, with various contributing factors involved. One of the greatest contributing factors to lower achievement scores in reading is the lack of early and accurate identification of students with dyslexia. According to a study published in *The Journal of Pediatrics*, the achievement gap between students with dyslexia and typical readers is evident as early as first grade (Ferrer et al. 2015). Not only does this gap persist into adolescence, but the trajectories of the comparison data of the two populations never converge. The researchers noted that the differences between the two groups "are not so much a function of increasing disparities over time but instead because of differences already present in first grade between typical and dyslexic readers" (Ferrer et al. 2015). The study underscores the importance of early identification of students with dyslexia and concludes by saying that "Implementing effective reading programs as early as kindergarten or even preschool offers the potential to close the achievement gap" (Ferrer et al. 2015).

Dyslexia can have a range of severity and may look different at various stages of life and education. For this reason, some people are not identified as having dyslexia until they are teenagers or adults, and some are never identified. When screening for or attempting to identify individuals with dyslexia, it is important to look at multiple symptoms and indicators as opposed to only a single symptom or indicator. This is true for the following reasons:

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CHAPTER 11

Effective Approaches for Teaching Students with Dyslexia

California Education Code Section 56335(a) defines educational services for students with dyslexia as follows: "educational services" means an evidence-based, multisensory, direct, explicit, structured, and sequential approach to instructing pupils who have dyslexia. "In the context of educating students with dyslexia, each of these terms has a specific meaning, defined below, and together constitute approaches called "Structured Literacy."

Not all students who have dyslexia will require special education. The California Education Code definition of educational services for students with dyslexia, presented above, appears in California's statutes on special education—but it applies to educational services for all students who have dyslexia, whether in general education classrooms or in special education. The California statute also states, "If a pupil who exhibits the characteristics of dyslexia or another related reading dysfunction is not found to be eligible for special education and related services pursuant to subdivision (a), the pupil's instructional program shall be provided in the regular education program" (Education Code Section 56337.5).

Evidence-Based Instruction

Federal law provides a definition of "evidence-based" as "an activity, strategy, or intervention that—(i) demonstrates a statistically significant effect on improving student outcomes or other relevant outcomes based on—(I) strong evidence from at least one well-designed and well-implemented experimental study; (II) moderate evidence from at least one well-designed and well-implemented quasi-experimental study; or (III) promising evidence from at least one well-designed and well-implemented correlational study with statistical controls for selection bias; or (I)(i) demonstrates a rationale based on high-quality research findings or positive evaluation that such activity, strategy, or intervention is likely to improve student outcomes or other relevant outcomes; and (II) includes ongoing efforts to examine the effects of such activity, strategy, or intervention" (Title 20, United States Code, Section 7801(2)(A)).

This chapter covers the following topics:

- The importance of using evidence-based strategies
- The principles and content of Structured Literacy instruction
- The use of accommodations when educating students with dyslexia
- The use of progress monitoring data to inform the planning of subsequent instruction
- Online sources for more information

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The California Dyslexia Guidelines (2017) may be accessed on the website for the [California Department of Education](#) (go to www.cde.ca.gov and “Search” ‘Dyslexia Guidelines’) or through use of this [link](#)

Additional resource on dyslexia legislation:

Ward-Loneragan, J.M., & Duthie, J.K. (2018). The state of dyslexia: Recent legislation and guidelines for serving school-aged children and adolescents with dyslexia. *Language, Speech, and Hearing Services in Schools*, 49 (4), 810-816.
https://doi.org/10.1044/2018_LSHSS-DYSLC-18-0002

WHAT IS PHONOLOGICAL PROCESSING?

- Phonological processing refers to an individual's ability to process phonological material (e.g., the ability to perceive, integrate, store, retrieve, segment, and manipulate speech sounds).
- Phonological processing deficits impair an individual's ability to segment the written word into its underlying phonological components (Shaywitz, 1996).

THREE MAJOR TYPES OF PHONOLOGICAL PROCESSING RELATED TO LITERACY DEVELOPMENT

- Phonological Awareness
- Phonological Memory
- Rapid Naming

PHONOLOGICAL AWARENESS

- Phonological Awareness refers to an individual's awareness of and access to the sound structure of his/her oral language. It relates to the understanding that spoken language can be divided into smaller units (e.g., speech sounds and syllables) which can be identified and manipulated.



PHONOLOGICAL MEMORY

- Phonological memory refers to coding verbal information in working (short-term) memory for storage and subsequent retrieval.

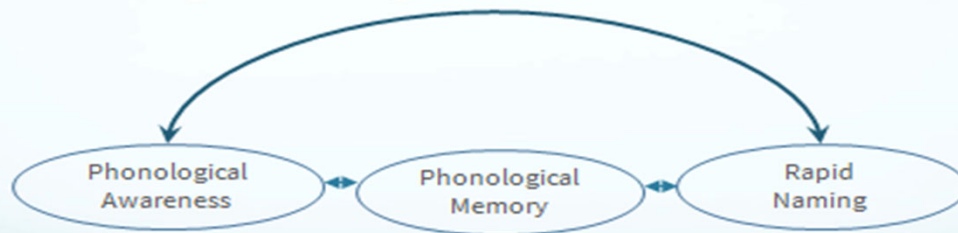


RAPID NAMING

- Rapid Naming refers to the ability to efficiently retrieve phonological information from permanent (long-term) memory (e.g., quickly naming digits, letters, objects, colors, etc.)



Model of Phonological Processing (Modification of Wagner, Torgesen, & Rashotte, 2013)



RELATIONSHIP BETWEEN AUDITORY PROCESSING AND PHONOLOGICAL PROCESSING

- Central auditory processes refer to the auditory system mechanisms and processes responsible for certain behavioral phenomena including sound localization and lateralization, auditory discrimination, auditory pattern recognition, temporal aspects of audition, and auditory performance with competing or degraded acoustic signals.
- Although individuals with dyslexia may perform poorly on auditory perceptual processing tests or even be diagnosed with an auditory processing disorder, SLPs still most importantly need to assess phonological processing abilities and treat the skills that are most strongly correlated and predictive of reading and spelling success (i.e., phonological awareness skills).



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LANGUAGE AND LITERACY ASSESSMENT ACROSS THE TRANSDISCIPLINARY IEP TEAM

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AS SLPs SWIM THROUGH THEIR DAILY ROUTINE.....



THE IDEA OF TAKING ON MORE, LIKE READING, AND WRITING CAN MAKE US WANT TO “COME UP FOR AIR!!!”



BUT I'M HERE TO TELL YOU...WE'RE ALREADY SUPPORTING LITERACY!!!!



WE JUST HAVE TO MAKE SURE WE HAVE OUR LANGUAGE AND LITERACY “LENS” ON.....HOW?

- Assessing with literacy in mind!!
- Discussing how our assessment results impact academics
- Writing goals to the common core standards:
 - *English Language Arts Standards » Reading: Literature » Grade 2: <https://learning.ccsso.org/common-core-state-standards-initiative> Ask and answer such questions as who, what, where, when, why, and how to demonstrate understanding of key details in a text.*
- Actively talking about how our goals will impact literacy
 - *Work on speech sound disorders supports the ability to decode words*
 - *Work on language supports the ability to comprehend what is read*
- Choosing targets strategically (e.g., classroom vocabulary)
- Collaborating with parents and teachers

READING PROBLEMS AND THE SLP: A TALE OF TWO PROFILES.....

- Profile A: Dyslexia (Decoding and its effect on comprehension. Phonologic core deficits.)
- Profile B: Generalized Reading Problem (Language Comprehension and, sometimes, decoding problems secondary to multiple systems of language in deficit.) Also called mixed decoding/comprehension deficit or specific comprehension deficit, depending on the areas of deficit.

THE SIMPLE VIEW OF READING.....

The Simple View of Reading (Gough & Tunmer, 1986; Hoover & Gough, 1990; Catts & Kamhi, 2005; Kamhi, Catts, & Adlof, 2012) provides a good model for differentiating typical readers from those with deficits leading to dyslexia or a more generalized reading problem. It suggests that reading comprehension is dependent upon both intact decoding and listening comprehension abilities.

The following table highlights readers by subtype according to the Simple View:

THE SIMPLE VIEW OF READING:

CSHA Position Paper and Resource Guide 2016

LLD Areas	Dyslexia	Mixed Decoding/ Comprehension Deficit	Specific Comprehension Deficit	Typical Reading
Language Comprehension	Good	Poor	Poor	Good
Word Recognition	Poor	Poor	Good	Good

PROFILE A: DYSLEXIA

- A specific Language Learning Disability (LLD). Deficits specific to the phonological core.
- Characterized by difficulties in accurate, fluent word recognition when decoding words and spelling difficulties
- Often associated with phonological awareness, phonological memory, and Rapid Automatic Naming (RAN) deficits.
- Single or Double Deficit Hypothesis (Wolf & Bowers, 1999) PA/RAN/PA + RAN

PROFILE A: DYSLEXIA

- Phonological awareness deficits lead to trouble with phonics (sound-symbol correspondence)
- This leads to decreased word attack, which leads to decreased reading fluency, which impacts reading comprehension.....

PROFILE A: DYSLEXIA

- Phonological memory deficits lead to trouble with phonics (sound-symbol correspondence)
- This leads to decreased word attack, which leads to decreased reading fluency, which impacts reading comprehension.....

PROFILE A: DYSLEXIA

- RAN deficits lead to trouble with retrieving oral labels for visual forms
- This leads to decreased word identification of orthographic patterns, which impacts reading fluency, which impacts reading comprehension.....

DYSLEXIA (PROFILE A) VS. GENERALIZED READING PROBLEM (PROFILE B)

- Dyslexia is a specific LLD
- The child with dyslexia has trouble almost exclusively with the written (or printed) word.
- The child with a decoding problem/reading fluency problem as part of a larger language learning disability has trouble with both the spoken and written word.
- Many in the field would consider this a more generalized or “garden variety” reading problem.....not as specific as dyslexia (Goldsworthy, 2003)

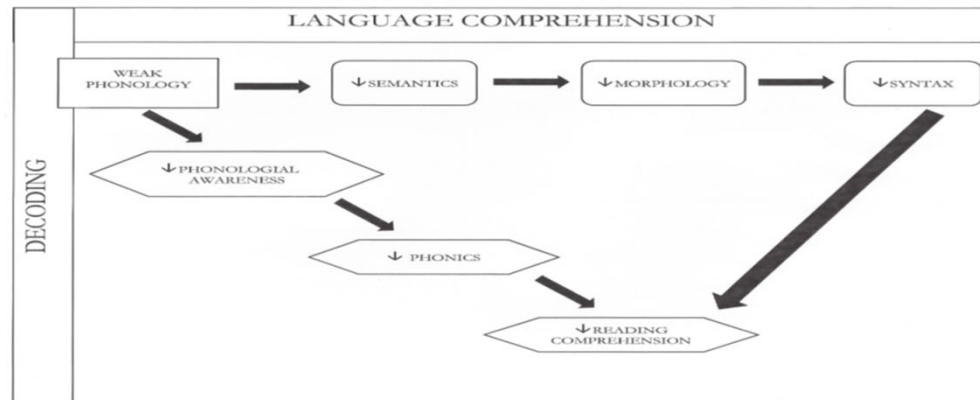
DEFINITION ADOPTED BY THE INTERNATIONAL DYSLEXIA ASSOCIATION (IDA) BOARD OF DIRECTORS NOV. 12, 2002.

Retrieved June 12, 2016 [at: https://dyslexiaida.org/definition-of-dyslexia/](https://dyslexiaida.org/definition-of-dyslexia/)

“Dyslexia is a specific learning disability that is neurobiological in origin. It is characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities. These difficulties typically result from a deficit in the phonological component of language that is often unexpected in relation to other cognitive abilities and the provision of effective classroom instruction. Secondary consequences may include problems in reading comprehension and reduced reading experience that can impede growth of vocabulary and background knowledge.”

TWO PATHS TO READING COMPREHENSION

(Courtesy of SPHP 222 students, Sacramento State)



COMPARING STUDENTS WITH DYSLEXIA, A SPECIFIC COMPREHENSION DEFICIT, AND A MIXED DECODING/COMPREHENSION DEFICIT

Pieretti, R. & Ward-Loneragan, J.M., 2016; CSHA Position Paper and Resource Guide, 2016

	Dyslexia (Profile A)	Specific Comprehension Deficit (Profile B)	Mixed Decoding/ Comprehension Deficit (Profile B)
Listening Comprehension	Average to above average	Below average	Below average
Reading Comprehension	Below average	Below average	Below average
Oral Language Skills	Average to above average	Below average in one or more sub-components of language	Below average in one or more sub-components of language
Decoding/Spelling	Below average	Average or above average	Below average
Reading nonsense words	Below average	Average or above average	Below average
Phonological Processing	Below average	Average or above average	Below average
Cognitive Ability	Average to above average	Average to below average	Average to below average

THE SLP HAS A LOT OF INFORMATION TO SHARE ABOUT BOTH PROFILES....

- Phonological awareness problems....
- Rapid naming problems...
- Language problems.....
- Hello SLP!!

SPEECH-LANGUAGE ASSESSMENT WITH LANGUAGE SKILLS IN MIND

Many SLPs typically assess with a primary language test, such as:

Clinical Evaluation of Language Fundamentals (CELF-5)
(Wiig, Semel, & Secord, 2013)

This test “is an individually administered clinical tool for the identification, diagnosis, and follow-up evaluation of language and communication disorders in students 5-21 years.”

CELF-5

Subtests commonly given:

- Sentence Comprehension
- Linguistic Concepts
- Word Structure
- Word Classes
- Following Directions
- Formulated Sentences
- Recalling Sentences

CELF-5

- Understanding Spoken Paragraphs
- Word Definitions
- Sentence Assembly
- Semantic Relationships

PAUSE.....AND THINK!

- What have we actually tested here?
- What information do we still need?

CELF-5 AND OTHER PRIMARY LANGUAGE TESTS

- This receptive and expressive language information is helpful, particularly if we anticipate a more generalized reading problem. It can also rule out oral language problems (which, for example, may help rule out a Dyslexic profile).
- But....It is not enough.....

ASSESSING FOR LANGUAGE AND LITERACY

CSHA Position Paper and Resource Guide 2016

It is often recommended that SLPs administer at least:

- One comprehensive language test (if appropriate) that assesses a wide range of receptive and expressive language skills
- One or more specific ability/specialty language tests (if appropriate) that assesses one or two specific aspects of language
- Informal measures as part of a comprehensive language-literacy assessment
- Remember, we are ONE member of a powerful team of professionals who are working collaboratively. Together, not individually, we are responsible for the assessment of literacy skills.
- Each member of the **interdisciplinary** assessment team will be bringing other essential information to the table that will help define the reading problem or language-learning disability, if it exists. The division of labor may vary, so collaboration is key!

ASSESSING FOR LANGUAGE AND LITERACY

The California Speech-Language Hearing Association Position Paper and Resource Guide (2016) (*Roles and Responsibilities of Speech-Language Pathologists with Respect to Literacy in Children and Adolescents in California*) contains appendices with a variety of diagnostic and assessment tools and other measures of literacy development in the following areas:

- Phonological Awareness
- Rapid Naming
- Phonics
- Fluency
- Vocabulary
- Comprehension
- Spelling
- Written Expression
- Reading Ability

ASSESSING FOR LANGUAGE AND LITERACY

Keeping the following areas in mind can help the team plan for effective assessment:

- Receptive and Expressive Language Skills
- Phonological Processing
- Reading Ability (Decoding and Comprehension)
- Written Expression (Writing and Spelling)

ASSESSMENT WITH PHONOLOGICAL PROCESSING IN MIND

- Phonology is traditionally the MOST under-assessed system of language....yet it is often the “root” of the problem!
- How can we do “get to the root?”



ASSESSMENT WITH PHONOLOGICAL PROCESSING IN MIND

One option: Give the *Comprehensive Test of Phonological Processing-2 (CTOPP-2)* (Wagner, Torgesen, Rashotte, & Pearson, 2013)...Ages 4-24.....or strike a deal with the psychologist on the team! Take turns and share in interpretation!

CTOPP-2

Four Composite Scores:

- Phonological Awareness
 - Phonological Memory
 - Rapid Symbolic Naming
 - Alternate Phonological Awareness
- OR
- Rapid Non-Symbolic Naming

CTOPP-2

Some subtests and sample items:

1. Elision: "Say toothbrush without saying tooth."
2. Blending Words: "What words do these sounds make?" ham-er n-o
3. Phoneme Isolation: "What is the first sound in the word *fan*?"
4. Memory for Digits: 2-9 #s

CTOPP-2

5. Nonword Repetition: sart; lis-e-shrul
6. Rapid Digit Naming
7. Rapid Letter Naming

Sample supplemental subtests:

1. Blending Nonwords: lan-der; z-l-g-o-p-l
2. Segmenting Nonwords: ip: /l/ /p/

ASSESSMENT WITH READING ABILITY IN MIND

Consulting with Education Specialists about their academic achievement assessment results is essential. The following tests, or other similar tests, are commonly administered:

- *Woodcock-Johnson (WJIV) Tests of Achievement* (Schrack, McGrew, & Mather, 2014)
- *Woodcock-Johnson (WJIV) Tests of Oral Language* (Schrack, Mather, & McGrew, 2014):
- Wechsler Individual Achievement Test (WIAT-4) (Wechsler, 2020)

Careful examination of specific subtest results can help the IEP team define the reading problem in terms of the simple view of reading.

WJIV

- The *WJIV Tests of Achievement* is a norm-referenced measure of academic achievement in the areas of reading fluency, reading comprehension, written language, and mathematics.
- The *WJIV Tests of Oral Language* is a norm-referenced measure of oral language in the areas of listening comprehension, oral expression, phonetic coding, speed of lexical access, vocabulary, and auditory memory.
- While many of the subtests, including those related to spelling and writing, are relevant, the subtests selected for this presentation were chosen because they measure skills that relate to a student's ability to understand spoken and printed language and to decode words.

WJIV

Selected subtests in detail:

1. Letter-Word Identification: Measures the ability to identify letters and words, a reading and writing ability. (Decoding)
2. Word Attack: Measures the ability to apply phonic and structural analysis skills in order to read unfamiliar printed words, a reading/writing ability. (Decoding)
3. Passage Comprehension: Reading comprehension
4. Oral Comprehension: Listening Comprehension (Often below average for generalized, BUT average to above average for dyslexic students)

WJIV: LETTER WORD IDENTIFICATION

The student is asked to identify written letters and words:

- “Point to the ‘A’”
- “What is the name of these letters?:” R, F, P, J
- “Point to the word ‘car’”
- “What is this word?:” “the”
- Lists of words in sets to read. From simple to more complex: at, cup, have, become, imagine, ferocious, aggrandizement

WJIV: WORD ATTACK

The student is required to decode phonically regular nonsense words:

- “I want you to read some words that are not real words and tell me how they would sound:”

wab ib zoop wugs
 mip bine artible saist
 instestationing sylibemeter armophodelictedness

WJIV: PASSAGE COMPREHENSION

The student is required to apply a variety of vocabulary and comprehension skills in order to supply a missing word in a passage through the use of syntactic and semantic cues:

- “Point to the picture (3 shown) these words tell about.” *yellow bird*
- “Read this to yourself and tell me one word that goes in the blank space:”
- She loves to play the _____. (*drum* based on picture prompt)
- I went to the dentist. He pulled out my _____. (*tooth*—no picture prompt)

WJIV: ORAL COMPREHENSION

The student is asked to complete an oral cloze procedure (Simple analogies to complex passages) requiring listening, reasoning, and vocabulary abilities.

"Finish what I say. Use only one word:"

- "Candy tastes _____. " (*good, sweet*)
- "A bird flies, a fish _____. " (*swims*)
- "Cereal is for breakfast; a sandwich is for _____. " (*lunch, dinner, a snack, supper*)
- "Observation of behavior when errors are made can lead to hypotheses regarding learning characteristics. Some people become so frustrated that their emotions cause them to quit. The rigid persist with a strategy that has _____. " (*failed*)

SOME SCHOOL DISTRICTS USE THE *WIAT-4*

Wechsler Individual Achievement Test (WIAT-4) (Wechsler, 2020)

WIAT-4

Selected subtests in detail:

1. Word Reading: Measures the speed and accuracy of single word reading. (Decoding)
2. Pseudoword Decoding: Measures the speed and accuracy of decoding skills. (Decoding)
3. Reading Comprehension: Measures literal and inferential reading comprehension skills using a variety of passages and questions types that resemble those used in school settings.
4. Listening Comprehension: Measures listening comprehension at the level of the word, sentence, and discourse

SOME EDUCATION SPECIALISTS MAY NOT GIVE ORAL COMPREHENSION/LISTENING COMPREHENSION SUBTESTS.

What are other good measures of oral comprehension????

- CELF-5 Understanding Spoken Paragraphs
- Test of Narrative Language-2: Narrative Comprehension (Gillam & Pearson, 2017)
- ?
- ?
- ?

ASSESSING WITH READING AND WRITTEN EXPRESSION IN MIND

- Informal observation of oral language and speech (Narrative? Sound errors? Pronunciation problems with multisyllabic words? Grammar and syntax problems? Word finding problems?)
- Reading a grade appropriate passage (Labored decoding? Reduced reading comprehension?)
- A classroom writing sample (Spelling errors? Grammar errors?)
- Review other subtest scores from the *WJIV/WIAT-IV* (Spelling, etc.)

SUMMARY OF THE AREAS FREQUENTLY DISCUSSED BY IEP TEAM MEMBERS WITH EXAMPLES PIERETTI, R. & WARD-LONERGAN, J.M., 2016; CSHA POSITION PAPER AND RESOURCE GUIDE, 2016				
	Dyslexia (Profile A)	Specific Comprehension Deficit (Profile B)	Mixed Decoding/ Comprehension Deficit (Profile B)	Examples of Key Measures
Listening Comprehension	Average to above average	Below average	Below average	Language Testing; <i>WJIV Oral Comprehension</i> ; <i>WIAT-IV Listening Comprehension</i> ; Other measures, both formal and informal
Reading Comprehension	Below average	Below average	Below average	<i>WJIV Passage Comprehension</i> ; <i>WIAT- IV Reading Comprehension</i> ; Other achievement measures, both formal and informal
Oral Language Skills	Average to above average	Below average in one or more sub-components of language	Below average in one or more sub-components of language	Formal and informal language testing
Decoding/Spelling	Below average	Average or above average	Below average	<i>WJIV Letter-Word ID and Spelling</i> ; <i>WIAT-IV Word Reading and Spelling</i> , or other achievement measures, both formal and informal, including classroom reading fluency and writing samples
Reading nonsense words	Below average	Average or above average	Below average	<i>WJIV Word Attack</i> ; <i>WIAT-IV Pseudoword Decoding</i> ; Other achievement measures, both formal and informal
Phonological Processing	Below average	Average or above average	Below average	CTOPP-2 or other measures of phonological processing that include phonological awareness and rapid automatic naming
Cognitive Ability	Average to above average	Average to below average	Average to below average	Psychologist testing

THE AREAS IN THE PREVIOUS TABLE CONTAIN THE INFORMATION NECESSARY TO DEFINE A READING PROBLEM ACCORDING TO THE SIMPLE VIEW OF READING:

LLD Areas	Dyslexia (Profile A)	Mixed Decoding/ Comprehension Deficit (Profile B)	Specific Comprehension Deficit (Profile B)	Typical Reading
Language Comprehension	Good	Poor	Poor	Good
Word Recognition	Poor	Poor	Good	Good

MOCK IEP ACTIVITY.....

- Let's form IEP teams at your tables.....
- Your Goal: Given some data, design a team plan for student success

CASE STUDY I “FRANCO”

*Test Administered: *Clinical Evaluation of Language Fundamentals (CELF-5)* (Wig, Semel, & Secord, 2013).

	Standard Score	Percentile	Score Description
Core Language Score	123	94	“Above Average Range of Language Functioning”
Receptive Language Index	141	99.7	“Above Average Range of Language Functioning”
Expressive Language Index	124	95	“Above Average Range of Language Functioning”
Language Content Index	135	99	“Above Average Range of Language Functioning”
Language Structure Index	123	94	“Above Average Range of Language Functioning”

* Test Administered: *Comprehensive Test of Phonological Processing-2 (CTOPP2)* (Wagner, Torgesen, Rashotte, & Pearson, 2013).

Composites			Standard Score	Percentile	Score Description
Phonological Awareness			88	21	Below Average
Phonological Memory			88	21	Below Average
Rapid Symbolic Naming			67	1	Very Poor
Alternate Phonological Awareness			88	21	Below Average

CASE STUDY I: FRANCO

Observation of Reading and Language Abilities:

When Franco spoke, he used complex grammar and vocabulary. When he read, however, he appeared to struggle. For example, when he read a story to the clinician from his school textbook, his reading was observed to be labored. When he was asked to read silently, he was observed to mouth each word separately. When presented with four comprehension questions based on the passage he read, his response latency averaged approximately 30 seconds or greater, and he only answered one question correctly.

CASE STUDY I: FRANCO

- What type of reading problem is indicated—Profile A or Profile B? If A, is it single or double deficit?
- Where does it fit on the SimpleView of Reading Table?
- List specific evidence from the SLP testing to support your decision—cover both CELF-5 Results and PA/RAN Testing Results:
- What might the psychologist's ability scores look like?
- What do you predict the Educational Specialist will find on the following subtests of the WJIV?

Subtest	Score (Average, Above Average, Below Average, etc.)
Letter-Word ID	
Word Attack	
Passage Comprehension	
Oral Comprehension	

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CASE STUDY 2 “JULIE”

- **Test Administered:** *Clinical Evaluation of Language Fundamentals (CELF-5)* (Wiig, Semel, & Secord, 2013).

	Standard Score	Percentile	Score Description
Core Language Score	71	3	“Low/Moderate Range of Language Functioning”
Receptive Language Index	72	3	“Low/Moderate Range of Language Functioning”
Expressive Language Index	72	3	“Low/Moderate Range of Language Functioning”
Language Content Index	72	3	“Low/Moderate Range of Language Functioning”
Language Structure Index	71	3	“Low/Moderate Range of Language Functioning”

- **Test Administered:** *Comprehensive Test of Phonological Processing-2 (CTOPP2)* [Wagner, Torgesen, Rashotte, & Pearson, (2013). Austin:

Composites	Standard Score	Percentile	Score Description
Phonological Awareness	88	21	Below Average
Phonological Memory	88	21	Below Average
Rapid Symbolic Naming	67	1	Very Poor
Alternate Phonological Awareness	88	21	Below Average

CASE STUDY 2: JULIE

Observation of Reading and Language Abilities:

When Julie spoke, she used simple grammar and vocabulary. When she read, she appeared to struggle. For example, when she read a story to the clinician from her school textbook, her reading was observed to be labored. When she was asked to read silently, she was observed to mouth each word separately. When presented with four comprehension questions based on the passage she read, her response latency averaged approximately 30 seconds or greater, and she only answered one question correctly.

CASE STUDY 2: JULIE

- What type of reading problem is indicated—Profile A or Profile B? If A, is it single or double deficit?
- Where does it fit on the Simple View of Reading Table?
- List specific evidence from the SLP testing to support your decision—cover both CELF-5 Results and PA/RAN Testing Results:
- What might the psychologist's ability scores look like?
- What do you predict the Educational Specialist will find on the following subtests of the WJIV?

Subtest	Score (Average, Above Average, Below Average, etc.)
Letter-Word ID	
Word Attack	
Passage Comprehension	
Oral Comprehension	

CASE STUDY 3 “JONELLE”

• **Test Administered:** *Clinical Evaluation of Language Fundamentals (CELF-5)* (Wiig, Semel, & Secord, 2013).

	Standard Score	Percentile	Score Description
Core Language Score	72	3	“Low/Moderate Range of Language Functioning”
Receptive Language Index	72	3	“Low/Moderate Range of Language Functioning”
Expressive Language Index	72	3	“Low/Moderate Range of Language Functioning”
Language Content Index	72	3	“Low/Moderate Range of Language Functioning”
Language Structure Index	71	3	“Low/Moderate Range of Language Functioning”

- **Test Administered:** *Comprehensive Test of Phonological Processing-2 (CTOPP2)* [Wagner, Torgesen, Rashotte, & Pearson. (2013). Austin: Pro-Ed.]

Composites			Standard Score	Percentile	Score Description
Phonological Awareness			100	50	Average
Phonological Memory			101	53	Average
Rapid Symbolic Naming			101	53	Average
Alternate Phonological Awareness			101	53	Average

CASE STUDY 3: JONELLE

Observation of Reading and Language Abilities:

When Jonelle spoke, she used simple grammar and vocabulary. When she read, she did not appear to struggle. For example, when she read a story to the clinician from her school textbook, her reading was observed to be fluent. When she was asked to read silently, she did so. When presented with four comprehension questions based on the passage she read, her response latency averaged approximately 30 seconds or greater, and she only answered one question correctly.

CASE STUDY 3: JONELLE

- What type of reading problem is indicated—Profile A or Profile B? If A, is it single or double deficit?
- Where does it fit on the Simple View of Reading Table?
- List specific evidence from the SLP testing to support your decision—cover both CELF-5 Results and PA/RAN Testing Results:
- What might the psychologist's ability scores look like?
- What do you predict the Educational Specialist will find on the following subtests of the WJIV?

Subtest	Score (Average, Above Average, Below Average, etc.)
Letter-Word ID	
Word Attack	
Passage Comprehension	
Oral Comprehension	

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CASE STUDY #4

Observation of Reading and Language Abilities:

When Sam spoke, he used complex grammar and vocabulary. When he read, he read fluently. When he was asked to read silently, he appeared to read without difficulty. When presented with four comprehension questions based on the passage he read, he answered all of them correctly.

LANGUAGE: THE KEYS TO THE KINGDOM OF READING.....

- Adding a few elements to your battery and/or helping interpret the findings of other team members with your unique “language lens” is invaluable when defining the existence of and type of reading problem
- This benefits students, families, teachers, and special educators
- Appropriate assessment is just as important as direct intervention!!!!



SO WHO DOES WHAT IN THE SCHOOLS???

- Dyslexia: Assessment (Entire team. SLP findings are KEY!!!)
- Dyslexia: Intervention (Often Education Specialist, sometimes SLP)
- Generalized reading problem: Assessment (Entire team. SLP findings are KEY!!)
- Generalized reading problem: Intervention (Often both Education Specialist and SLP.....and sometimes SDC Teacher)

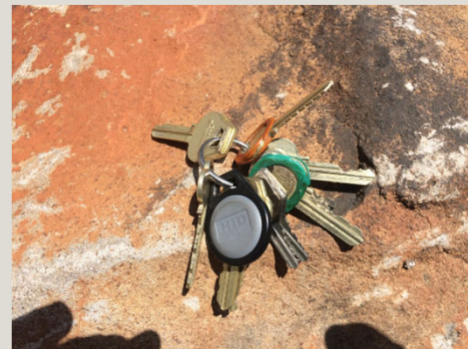
ASSESSMENT: IT ALL COMES DOWN TO COLLABORATION.....



	Phonological Processing (PA + RAN)	Phonological Awareness	Phonics	Vocab	Reading Fluency	Text Comprehension	Written Expression	Ability
Teacher		X	X	X	X	X	X	
Education Specialist			X	X	X	X	X	
SLP	X	X		X	X	X	X	
Psychologist	X	X						X

IN SUM.....

- What are the keys to language and literacy?.....the keys are the systems of language!!!!
- The SLP is a key team player in student success!!



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LANGUAGE AND LITERACY INTERVENTION: A TRANSDISCIPLINARY APPROACH

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INTERVENTION: IT STILL ALL COMES DOWN TO COLLABORATION.....



	Phonological Awareness	Phonics	Vocab	Reading Fluency	Text Comprehension
Teacher		X	X	X	X
Education Specialist		X	X	X	X
SLP	X	X	X	X	X

ROLE OF THE SLP: LANGUAGE AND LITERACY

- SLP training leads to heightened awareness of social and cultural issues and linguistic differences
- SLPs are among the professionals on inter-disciplinary special education teams whose expertise is in the area of language development and literacy
- SLPs are well-equipped to support literacy development through both direct therapeutic intervention to students with language disorders and through collaboration and consultation with general and special education teachers, families, and other professionals (ASHA, 2001; Ehren, 2006).

SCIENTIFICALLY-PROVEN ELEMENTS OF READING PROGRAMS

Shaywitz (2004): Essential, scientifically-proven elements of reading programs for children at-risk for reading difficulties

- Practice applying phonics in reading and writing
- Reading fluency training
- Systematic and direct instruction in Phonemic Awareness
- Enriched language experiences (such as oral narratives or expository scaffolding)
- Systematic and direct instruction in phonics

STRUCTURED LITERACY APPROACHES

California Education Code Section 56335(a) defines ‘educational services’ for students with dyslexia as follows: “‘educational services’ means an evidence-based, multisensory, direct, explicit, structured, and sequential approach to instructing pupils who have dyslexia.”

Each of these terms together constitute approaches called “Structured Literacy” (*California Dyslexia Guidelines*, 2017).

STRUCTURED LITERACY COMPONENTS AND CONTENT

Components

- Multisensory: approaches incorporate two or more modalities simultaneously
- Direct and Explicit: all concepts are directly and explicitly taught to students with continuous student-teacher interaction
- Structured: step-by-step procedures are used for introducing, reviewing, and practicing concepts with the goal of independent functional use
- Sequential and Cumulative: presentation of concepts and skills follows the logical order of the structure of language; begins with teaching more basic language concepts and progresses systematically to more difficult and complex concepts; new concepts are related to previously taught concepts, skills, and information

Content

The structure of **language** at all levels: phonology, orthography, morphology, syntax, semantics, and pragmatics/discourse.

Structured Literacy Components and Content (*California Dyslexia Guidelines*, 2017; International Dyslexia Association, 2016)

LANGUAGE INTERVENTION TO SUPPORT LITERACY SKILLS

Language-Literacy Intervention

- Dyslexia
- Specific Comprehension Deficit
- Mixed Decoding/Comprehension Deficit

Decoding/Word Recognition Goal Areas

(Particularly Beneficial for Dyslexia and Mixed Decoding/Comprehension Deficit Profiles)

Phonology

- Print awareness
- Phonological awareness
- Sound/symbol correspondence
- Sight word recognition
- Phonetic decoding/word attack

(Ward-Lonergan, 2014; CSHA Position Paper and Resource Guide, 2016)

PRINT AWARENESS

Early book sharing experiences are critical to the development of emergent literacy skills (Paul, Norbury, & Gosse, 2018). Children learn which way a book opens, which page to look at first, and that the page must be turned to get to the next part of a story. They learn that the print is consistent in telling the reader to say the same thing for each page each time it is read.

Research shows that children who are read to as preschoolers typically have an easier time in learning to read than those who are not (Goldfield & Snow, 1984), especially if these experiences involve an opportunity to engage in extended discourse about the book (Trivette, Dunst, and Gorman, 2010).

PRINT AWARENESS

- Have child look for name tag in room
- Provide magnetic, felt, or tactile letters for child to manipulate and identify
- Label supplies and have child “read” labels
- Use signs such as “STOP” during therapy activities
- Make a “book” with words of daily song/story (e.g., *Brown Bear, Brown Bear*) and have child follow along by singing/reading while SLP points out the words
- Provide blank paper “books” for child to write and draw in
- Point out book cover and when pages are being turned during book sharing activities

Facilitating Print Awareness (Modification of Watson, Layton, Pierce, and Abraham, 1994)

PHONOLOGICAL AWARENESS

Liberman et al. conducted numerous studies with Kindergarten children that have demonstrated that the ability to segment words into phonemes is the single most powerful predictor of future reading and spelling success.

Many preschoolers and Kindergarteners can detect syllables well, but often have difficulty detecting onset and rime and have even greater difficulty with phonemes. By the end of first grade, typically developing children can usually detect all three (i.e., syllables, onset and rime, and phonemes).

PHONOLOGICAL AWARENESS

Hierarchical Program Levels

- Sentences
- Words
- Syllables
- Onset/Rime
- Phonemes

(Merritt and Culatta, 1998)

DEVELOPMENTAL PROGRESSION OF PHONOLOGICAL AWARENESS SKILLS

- Sound play
- Rhyming
- Sound isolation
- Word-to-word matching
- Phoneme segmentation
- Phoneme counting
- Phoneme deletion
- Phoneme blending

(Merritt and Culatta, 1998)

PHONOLOGICAL AWARENESS TREATMENT STRATEGIES

Phase I: Phonological Awareness Above the Level of the Phoneme

- Rhyming activities (e.g., nursery rhymes, riddles, name games, rhyme generation for objects/pictures)
- Categorization activities (e.g., “odd one out”-which word doesn’t rhyme?, rhyming dominoes)
- Segmentation activities (e.g., sentences to phrases, phrases to words, words to syllables, and syllable tapping and deletion tasks)
- Identification activities (e.g., listen for syllables in words-which word is longer?, syllable tapping)

(Adapted from Merritt & Culatta, 1998)

PHONOLOGICAL AWARENESS TREATMENT STRATEGIES

Phase II: Isolating the Phoneme (**Main goal of Phonological Awareness Training)

- Use same types of treatment tasks listed above for Segmentation, Categorization, and Identification BUT shift to gaining awareness of the phoneme as an isolable unit.
- Descriptive labels for sounds can also be taught.
- Segmentation activities (e.g., isolating onset/rime, initial/final phoneme, or sound deletion tasks)
- Categorization activities (e.g., identifying which word doesn't begin or end with a particular phoneme, sound collages)
- Identification activities (e.g., asking questions such as "Is /n/ in 'went'?" How about in "wet"?, guessing games for items beginning with a particular sound)

PHONOLOGICAL AWARENESS TREATMENT STRATEGIES

Phase III: Representing the Internal Structure of Words and Syllables

- Say It and Move It: Use words that contain 2-3 phonemes. Use a rectangle that is divided into sections corresponding to the number of phonemes in a target word (Elkonin boxes). Place a tile or token in each section as the child says each sound moving from left to right, with child eventually moving through process independently.
- Advanced Say It and Move It: Use two different colored tiles – one for vowels and one for consonants. Advance to letter tiles over time with child selecting appropriate letter that corresponds with each sound.
- Use previous activities from Phase I and II for review.

SOUND/SYMBOL CORRESPONDENCE

Students need both phonological awareness AND phonics to be successful readers; neither of these alone is sufficient (Byrne & Fielding-Barnsley, 1991).

Phoneme-grapheme association (encoding) and grapheme-phoneme association (decoding) require mapping of phonemes to their spellings and mapping of spellings (graphemes) to their pronunciations (*California Dyslexia Guidelines*, 2017).

EXAMPLES OF SOUND/SYMBOL CORRESPONDENCE INTERVENTION

- [Link to The Letter Factory Video](#) (Leapfrog, 2003)
- Road to the Code (Blachman, Ball, Black, and Tangel, 2000)
- Explode the Code (Hall, 2015)

SIGHT WORDS



EXAMPLES OF SIGHT WORDS FROM THE DOLCH WORD LISTS

(WWW.DOLCHSIGHTWORDS.ORG)

Dolch Sight Words

Pre-Primer Level: a, can, go, jump, play, said, the, you

Primer Level: all, be, eat, like, please, soon, that, want

First Grade Level: after, again, from, know, once, round, thank, when

Second Grade Level: always, does, goes, many, off, right, their, which

Third Grade Level: about, done, grow, laugh, myself, never, seven, today

EXAMPLES OF HIGH-FREQUENCY, PRIORITY SIGHT WORDS FOR BEGINNING READERS

and	go	it	see	yes
an	had	look	she	you
are	have	me	that	
all	he	not	the	
be	here	of	they	
but	his	on	this	
by	how	one	to	
can	I	or	very	
do	if	our	was	
for	in	play	will	
from	is	said	with	

(Pauley & Winter, 2003)

PHONETIC DECODING/WORD ATTACK



SUGGESTED DECODING/PHONOLOGICAL AWARENESS HIERARCHY FOR SINGLE SYLLABLE WORDS

- VC and CVC words with continuous sounds (“am”, “sun”)
- CVCC words with continuous sounds (“runs”, “lamp”)
- CVC words with stop sounds (“pot”, “cap”)
- CVCC words with stop sounds (“cast”, “band”)
- CCVC words with continuous sounds (“slap”, “frog”)
- CCVC words where one of initial consonants is a stop sound (“crib”, “stop”)
- CCVCC words (“brand”, “clump”)
- CCCVC and CCCVCC words (“split”, “sprint”)



(Modification of Carnine, Silbert, Kameenui, & Tarver, 2010)

WORD FAMILIES

- “Timed” reading and sorting activities: Modified from the RAVE-0 program (Wolf, 2011; Wolf & Miller, 1997; Wolf, Miller, & Donnelly, 2000)
- Focus on the 37 most frequently used rime families: e.g. -ack, -ail, -ain, but use those that show up in classroom curriculum. (Brett, 2017)
- Comprehensive and common phonogram lists from The Reading Teacher’s Book of Lists (Fry & Kress, 2006)
- Encourages word recognition
- Begin with 5 selected families from the classroom. Do onset and Rime. Journal—one family per page.
- Decode each page during a timed activity X 2.....Read your journal lists and “beat your time”
- Sort 3X5 cards printed with words from the lists into respective “word family” piles and “beat your time”
- Add 5 more families to the mix.

WORD-IDENTIFICATION PROGRAM/WORD WHEEL



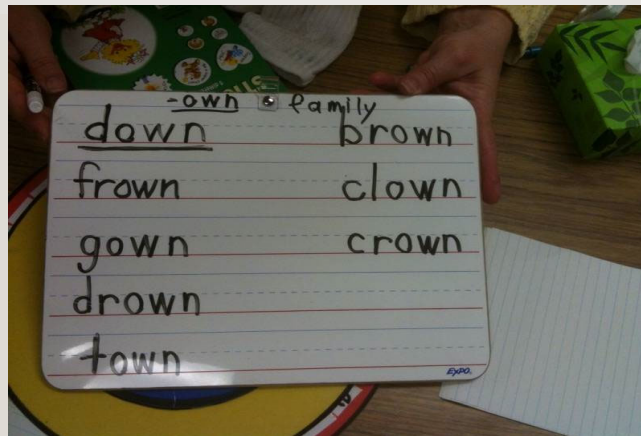
SIX SELECTED RIMES/WORD FAMILIES



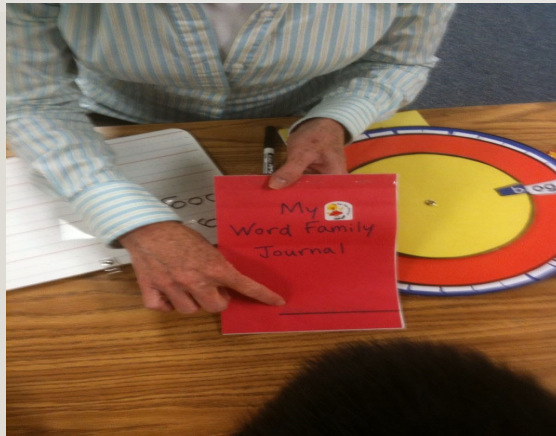
COMBINED WITH POSSIBLE ONSETS (CONSONANT AND CONSONANT-BLENDS)



THE “REAL” WORDS ARE WRITTEN ON A WHITEBOARD



EACH STUDENT MAINTAINS A JOURNAL



EXTENSION ACTIVITIES

- Decoding strings of learned words to imitate text—*sick top sap*
- Decoding “Weird Words” made up of previously mastered rime families—*ickopap*
- Looking for and highlighting rime families embedded in text

LINKS TO ONLINE LITERACY RESOURCES

- [Reading intervention materials](#) from www.readingresource.net (Steve Griffin)
- [PBS Kids](#)
- [PBS Learning Media](#)
- [Starfall](#)
- [Epic Books](#)
- [Storyline Online With Parent and Teacher lesson plans](#)
- [Everyday Speech](#) (Social-Emotional Learning Platform)
- [Ultimate SLP](#)

Decoding/Word Recognition Goal Areas

(Particularly Beneficial for Dyslexia and Mixed Decoding/Comprehension Profiles)

Morphology

- Improve use of syllabication rules for decoding multisyllabic words
- Improve comprehension and production of root words, prefixes, and suffixes (morphological awareness)

(Ward-Lonergan, 2014; CSHA Position Paper and Resource Guide, 2016)

THE SIX TYPES OF SYLLABLES

- Closed (VC) – A closed syllable has only one vowel and ends in a consonant. The vowel is usually short: *ad, lish, ject*.
- Silent-e (VCe) – A silent-e syllable has one vowel followed by a consonant followed by an e. The e is silent and makes the preceding vowel long: *plete, mune, stroke, ope, mate*.
- Open (CV) – An open syllable ends in one vowel. The vowel is usually long: *pi, glo, stri, u, re*.
- r-Controlled (Vr) – An r-controlled syllable has a vowel followed by an r, which modifies the vowel sound: *car, mer, fir, cor, tur*.
- Consonant –le (Cle) – A consonant –le syllable is a final syllable in which the e is silent; thus, it sounds like a consonant –schwa l: *ta-ble, jun-gle, sim-ple, bu-gle*.
- Double-Vowel (VV) – A double-vowel syllable has two vowels that together make one sound. This sound has to be learned, as it often takes on a sound different from either single vowel: *boat, haul, joy, pout*

THE FIVE SYLLABICATION RULES

- VC/CV When two or more consonants stand between two vowels, divide between the consonants, keeping blends or digraphs together: *pup-pet, hun-dred, sup-pose, fan-tas-tic*
- V/CV When a single consonant is surrounded by two vowels, the most common division is before the consonant, making the vowel in the first syllable long: *hu-man, lo-cate, pi-lot, e-ven*
- VC/V If the V/CV Syllabication Rule doesn't make a recognizable word, divide after the consonant and give the vowel its short sound: *rap-id, sol-id, cab-in, stud-y*
- /Cle Divide before the consonant –le. Count back three letters from the end of the word and divide: *star-tle, sta-ble, am-ble, ea-gle*
- V/V Only a few words divide between the vowels: *di-et, flu-id, qui-et, i-o-dine*
(Johnson & Bayrd, 2010)

Reading Comprehension Goal Areas

(Particularly Beneficial for Specific Comprehension Deficit and Mixed Decoding/Comprehension Deficit Profiles)

Morphology

- Improve comprehension and production of root words, prefixes, and suffixes (morphological awareness)
- Improve comprehension and production of compound/complex sentences
- Improve comprehension and use of advanced syntactic forms

(Ward-Lonergan, 2014; CSHA Position Paper and Resource Guide, 2016)

THE FOUR TYPES OF SENTENCES IN THE ENGLISH LANGUAGE

- Simple (an independent clause*) e.g., “The dog barks.”
- Compound (two or more independent clauses joined by a coordinating conjunction or a semicolon) e.g., “The dog barks, and the cat purrs.”
- Complex (an independent clause and one or more dependent* clauses) e.g., “When the dog barked, the cat was scared.”
- Compound/Complex (two or more independent clauses and at least one dependent clause) e.g., “When the dog barked, the cat was scared, so she ran away.”

*Independent Clause – contains a subject and a verb and can stand alone

*Dependent Clause – contains a subject and a verb, begins with a subordinating conjunction, and cannot stand alone

EXAMPLES OF LOW-FREQUENCY, ADVANCED SYNTACTIC FORMS

SYNTACTIC FORM	EXAMPLE
Later developing conjunctions	Otherwise, instead, after all, though, anyway, finally, when, because
Adverbial sentence connectives	Nevertheless, however furthermore, therefore, for example, in addition
Noun phrase elaboration with: Past participles Present participles	a tree called the elm a machine controlling his mind
Infinitives Appositives Relative clauses	a good way to dance Mr. Smith, the teacher a woman who lives next door
Verb phrase elaboration with: Multiple auxiliaries Perfect aspect Passive voice	We could have changed it. We had been playing all day. The building was designed by a famous architect.
Adverbial use: With adjectives Adverbial phrases	extremely big, probably light awfully slowly, very carefully

(Modification of Nippold 1998; Scott and Stokes, 1995)

Reading Comprehension Goal Areas (Particularly Beneficial for Specific Comprehension Deficit and Mixed Decoding/Comprehension Deficit Profiles)

Semantics

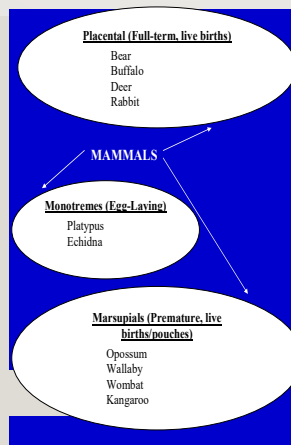
- Improve literate/content-area vocabulary
- Improve comprehension and production of multiple meaning words
- Improve use of a context clues strategy
- Improve paraphrasing of main idea and important details
- Improve comprehension and production of figurative language

(Ward-Lonergan, 2014; CSHA Position Paper and Resource Guide, 2016)

SEMANTIC FEATURE ANALYSIS

<u>Curriculum Terms</u>	<u>Semantic Features</u>				
	<u>Soft Wood</u>	<u>Hard Wood</u>	<u>Cold Climate</u>	<u>Temperate Climate</u>	<u>Hot Climate</u>
<i>Cedar</i>	+	-	+	-	-
<i>Mahogany</i>	-	+	-	+	-
<i>Maple</i>	-	+	+	-	-
<i>Oak</i>	-	+	-	+	-
<i>Pine</i>	+	-	+	-	-
<i>Redwood</i>	+	-	+	-	-
<i>Teak</i>	-	+	-	-	+
<i>Walnut</i>	-	+	-	+	-

SEMANTIC WEB: BIOLOGY UNIT ON MAMMALS



MULTIPLE MEANING WORDS

Target Word: “duck”

Context: “During the trial, the defendant tried to duck the issue.”

- Definitions:**
- 1) a bird that swims
 - 2) to lower the head or body suddenly
 - 3) to avoid or evade
 - 4) a durable closely woven cotton fabric

Target Word: “pass”

Context: “Most of the members of Congress did not want to pass a law that would prohibit the sale of tobacco.”

- Definitions:**
- 1) _____
 - 2) _____
 - 3) _____
 - 4) _____

MULTIPLE MEANING WORDS

- Find 2-3 multiple meanings for 4 selected vocabulary words from weekly curriculum selections being presented in class.
- Teach these through worksheets on which you and the student have selected and pasted pictures of the multiple meanings on one side and definitions on other.
- The student can draw lines between the core word and their various definitions, being explicitly drawn back to the meaning of the word that is being used in the weekly curriculum selection.

PRE- AND POST-TEST MEASURE SAMPLE SENTENCES

Appositive

e.g., "This is where the new cars are hubis, or assembled."

Cause/Effect

e.g., "If you have a smu, then you know another good reason why people need animals."

Example

e.g., "A material, such as kptas, that reduces friction is called a lubricant."

Grouping

e.g., "Cars, cellms, trucks, and trains provide transportation on land."

(Ward-Lonergan, Liles, & Owen, 1996)

CONTEXT CLUES STRATEGY: CLUE

- **C**onsider the meaning while reading
- **L**ook for and circle clue words
- **U**se clue words to determine meaning of new word
- **E**xplain the meaning of new word

(Ward-Lonergan, 2006; Ward-Lonergan, Liles, and Owen, 1996)

RAP STRATEGY

Read a paragraph

Ask questions about the main idea and details

Put main ideas and details in their own words

(Modification of Schumaker, Deshler, & Denton, 1984; Katim & Harris, 1997)



FIGURATIVE LANGUAGE

Metaphor – an implied comparison between two dissimilar things

e.g., “That politician is a real weasel.”

e.g., “Her mother is a whirlwind.”

Simile – an explicit comparison using “like” or “as”

e.g., “Susan’s eyes were as blue as the ocean.”

e.g., “The athlete runs like a cheetah.”

Idiom – an expression that is unique to a particular language or group of people and cannot be interpreted literally

e.g., “He’s driving me up the wall.”

e.g., “Jared spilled the beans.”

Proverb – a popular saying or statement designed to teach a lesson or give advice

e.g., “The early bird catches the worm.”

e.g., “Don’t count your chickens before they hatch.”

Reading Comprehension Goal Areas

(Particularly Beneficial for Specific Comprehension Deficit and Mixed Decoding/Comprehension Deficit Profiles)

Pragmatics/Discourse

- Improve comprehension and production of narrative discourse
- Improve comprehension and production of expository discourse
- Improve comprehension and production of persuasive discourse

(Ward-Lonergan, 2014; CSHA Position Paper and Resource Guide, 2016)

NARRATIVE

Narrative skills are often overlooked

Focus on “systems of language” can obscure this vital skill—an oral language ability that precedes later reading and writing—think about the components required to tell an “oral narrative”

Important for elementary school students, adolescents, young adults—and adults!

NARRATIVE

A variety of programs exist.....or you can create your own.

Examples:

[The Story Grammar Marker Kit.](#) (Moreau, M.R. & Fidrych, H., 1994).

Goldsworthy, C.L. with Lambert, K.R. (2010). Linking the strands of language and literacy: A resource Manual. San Diego: Plural Publishing.

STORY GRAMMAR OUTLINE: *THE WRECK OF THE TITANIC SUMMARY*

Setting:

- The Titanic, the biggest passenger ship in the world in 1910
- Set sail from England to New York in April, 1912
- Late one night

Initiating Event:

- Men steering the *Titanic* saw an iceberg straight ahead of them

Internal Response:

- They were very frightened

Attempt:

- They tried to steer away, but it was too late

Direct Consequence:

- The *Titanic* scraped its side on an iceberg
- Iceberg tore a long gash in the *Titanic*

Reaction :

- People thought ship would not sink because of watertight compartments

STORY GRAMMAR OUTLINE: THE WRECK OF THE TITANIC SUMMARY

Initiating Event:

- Soon afterwards, people realized that the ship was sinking

Internal Response:

- Extreme sense of panic and horror experienced

Attempt:

- People tried to lower lifeboats to save passengers

Direct Consequence:

- Difficult to lower lifeboats because ship was tipped to one side
- Not enough lifeboats for everyone
- More than 1,000 people died including the designer of the ship

Reaction:

- Tremendous shock, grief, and mourning experienced worldwide

STORY COMPREHENSION/COMPOSITION STRATEGY: "THE 5 W'S"

Who: Roger Federer

Where: Basel, Switzerland

When: 08/08/81-present

What: Turned pro in 1998

Won 20 Grand Slam singles titles for men

Ranked #1 in the world five times at year-end by ATP

Often regarded as one of the greatest tennis player of all time

Why/

How: Practice, hard work

Determination and focus

Dedication and commitment to career

STORYBOARD: CREATE YOUR OWN MAP

Generic icon introduction

Someone (Character)

- Somewhere (Setting)
- Wanted
- First
- But
- Next
- But
- Next
- But
- Next
- Solution
- Feelings



****Hint:** There should be some connection between “Wanted” and “Solution” and “Feelings”

STORYBOARD: IS IT ALWAYS A BOARD???

NO!

- Storyboards
- Story-Grammar-Marker icons on a string/yarn
- Individual Paper Elements on floor

STORYBOARD SEQUENCE

- After having been read the story, the group orally labels each pictured generic icon when prompted by teacher: *Every story is about someone or a character. Who is the someone in this story?"*
- Retell as a group, taking turns, with specific pictured icons to place on the board when handed them
- Retell as a group, taking turns, selecting correct pictured icon from an array of three
- SIMPLE retell individually, pointing to each icon on the board, receive help and feedback from group, if needed
- Fade specific icons to generic icons to no icons
- Type it up while students recites story to you!!!! Their own summary!

NARRATIVE VS. EXPOSITORY

Narrative (Stories)	Expository (Explanations)
Based on common events from real life	Often about unknown topics
Familiarity makes prediction easier	New information makes prediction harder
Familiarity makes inferences easier	New information makes inferences harder
Key vocabulary often known	Key vocabulary is often new
Simple vocabulary	Multisyllabic vocabulary, roots + affixes
Cause and effect known	Cause and effect not known
Concrete, real concepts	Abstract concepts
People oriented	Thing or subject oriented
Dialogue makes text less concrete	Facts make text more concept dense
Stories can have personal meaning	Explanations have impersonal meaning
May give insight for own life/interest	May have no relation to own life/interest
Purpose is to entertain or share experiences	Purpose is to explain or persuade
Chronological Structure	Structure varies: definition/example; cause and effect; sequence of steps; main idea/details/ examples/generalization
	Complex concepts
	Presentation varies; few recognizable types

Source: Fry, E. & Kress, J. (2006). *The Reading Teacher's Book of Lists*. Fifth Edition.
San Francisco: Jossey-Bass

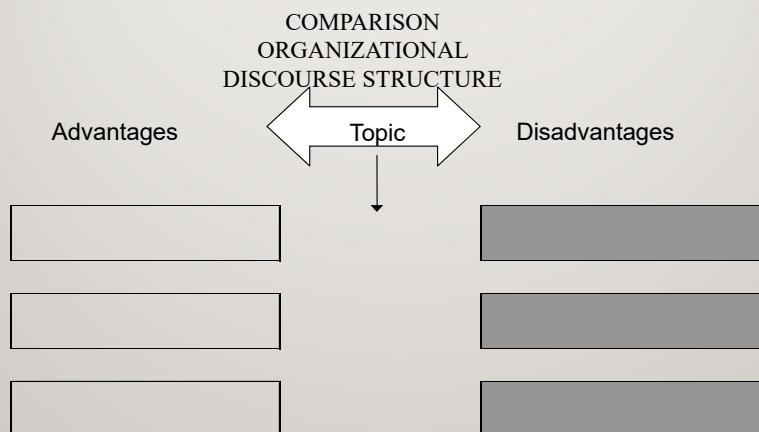
TYPES OF EXPOSITORY DISCOURSE

- Causation (Explanation, Cause/Effect)
- Collection/Description
- Comparison
- Enumeration (Definition-Example)
- Problem/Solution
- Procedural (Temporal Sequence)

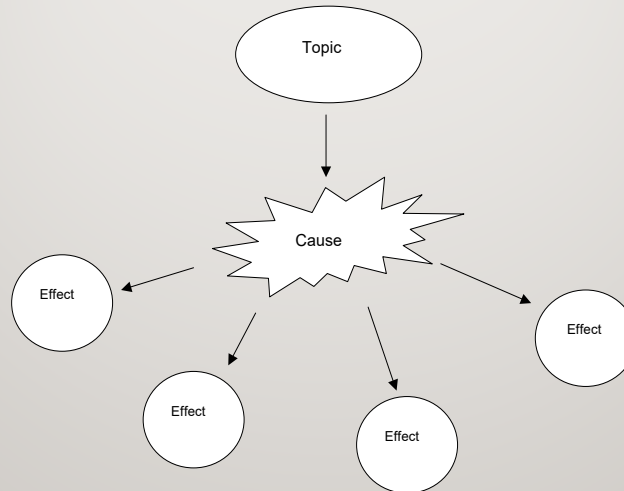
Sources: Adapted from Irwin & Baker (1989); Meyer & Freedle (1984); and Westby (1991)

GRAPHIC ORGANIZERS OF VARIOUS TYPES OF EXPOSITORY DISCOURSE

Graphic Organizers of Various Types of Expository Discourse



CAUSATION ORGANIZATIONAL DISCOURSE STRUCTURE



SAMPLE KEY COHESIVE SIGNAL WORDS/PHRASES FOR EXPOSITORY DISCOURSE STRUCTURES

- **Causation** (as a result, because, thus, consequently, so, therefore, for this reason, if, then, reason, affected, influenced, resulted in, since, hence, cause, effect)
- **Collection/Description** (defined as, called, labeled, refers to, is someone who, is something that, means, can be interpreted as, describes)
- **Comparison** (in contrast, nevertheless, on the other hand, on the contrary, by comparison, whereas, similarly, same, different, but, yet, although, in spite of)
- **Enumeration** (for example, such as, that is, namely, to illustrate, for instance, another, an example of, next, finally)
- **Problem/Solution** (one problem, the problem is, the issues are, a solution(s) is (are))
- **Procedural** (next, first, second, then, finally, before, earlier, later, after, following, then, meanwhile, soon, until, since, beginning, during, still, eventually)

Sources: Adapted from Meyer & Freedle, 1984; Halliday & Hasan, 1976; Irwin & Baker, 1989; Westby, 1991).

SQ3R STRATEGY

- Survey
- Question
- Read
- Recite
- Revue

(Just & Carpenter, 1987)

GRAPHIC ORGANIZERS AS A FORM OF STORYBOARD

Graphic Organizers As a Form of Storyboard:

definition/example; cause and effect;
sequence of steps; main idea/details/
examples/generalization

Graphic Organizer Maker

[Tech for Learning](#) (2021)



PERSUASIVE DISCOURSE TREATMENT ACTIVITIES

- Ambiguous Advertisements (e.g., locate ambiguous slogans from magazine ads, develop slogan for a new product, produce commercial for product)
- Debates (e.g., choose topics of interest to students such as, "Should 16 be the legal driving age?")
- Persuasive Writing Tasks (e.g., sample letter to school administrator to consider changing a school policy)

WRAPPING UP INTERVENTION: A FEW FINAL THOUGHTS.....



WHAT ABOUT STUDENTS WHO DON'T QUALIFY?

- Multi Tiered Systems of Support
- Response to Instruction and Intervention
- Universal Design for Learning
- Differentiated Instruction

- What is our role?



LET'S START IMPLEMENTING THESE TECHNIQUES!

- Think of either an individual student, a pair of students, or a small group of students on your caseload who would likely benefit from some written language intervention.
- Briefly jot down some of the difficulties that you have noticed with respect to his/her literacy skills.
- List up to 3 treatment goals that you believe would be the most critical for this/these student(s) this year.
- List at least one treatment activity/technique that you could use to address each of these goals.

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THANK YOU FOR ATTENDING!
IF YOU HAVE ADDITIONAL QUESTIONS, PLEASE
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