REFRAMING OUR THINKING AS SLPS:

THE LANGUAGE-LITERACY-DYSLEXIA CONNECTION

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Jeannene Ward-Lonergan is Co-Founder of the Language-Literacy Center (LLC) at the University of the Pacific. Dr. Ward-Lonergan has served as the Ambassador for the California Speech-Language-Hearing Association (CSHA) to the Decoding Dyslexia California (DDCA) group, and she was the CSHA Representative for the California Department of Education's (CDE) Dyslexia Guidelines Work Group. Dr. Ward-Lonergan has served as a member of CSHA's Literacy Task Force and is the first author of their recent position paper and resource guide titled, "Roles and Responsibilities of Speech-Language Pathologists with Respect to Literacy in Children and Adolescents in California." She has published research articles, book chapters, and presented numerous seminars and workshops in the areas of expository discourse (informational language) and supporting literacy through written language intervention in school-age children and adolescents. She has taught courses in language disorders, assessment procedures, multicultural populations, and research methods at the undergraduate and graduate levels, and she provides clinical supervision to students providing assessment and intervention services to youth with spoken and written language disorders.

DISCLOSURES

Dr. Pieretti is a frequent speaker on topics related to language and literacy and he has co-authored books on topics related to language and literacy. He does receive financial compensation in the form of book royalties. He receives occasional honoraria and travel reimbursement for presentations. He is receiving a complimentary conference registration for this presentation. He was a co-author of the California Speech-Language-Hearing Association (CSHA) Position Paper: Roles and Responsibilities of Speech-Language Pathologists with Respect to Literacy in Children and Adolescents in California.

DISCLOSURES

Dr. Ward-Lonergan is a frequent speaker on topics related to language and literacy and has provided volunteer service to several related workgroups and advisory boards. She has published peer-reviewed articles and book chapters related to language-learning disabilities and literacy. She receives occasional honoraria and travel reimbursement for presentations. She is receiving a complimentary conference registration for this presentation. She was a co-author of the California Speech-Language-Hearing Association (CSHA) Position Paper: Roles and Responsibilities of Speech-Language Pathologists with Respect to Literacy in Children and Adolescents in California.

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 SLPs 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

CALIFORNIA TAKES ACTION

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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

CSHA LITERACY TASK FORCE POSITION PAPER AND RESOURCE GUIDE

➢ Task force background

➢ *Roles and Responsibilities of Speech-Language Pathologists with Respect to Literacy in Children and Adolescents in CA* (Approved December 2016 and released to public April 2017) Link

CSHA POSITION PAPER & RESOURCE GUIDE

- ➢ Impact of Language-Learning Disabilities on Reading and Writing
- ➢ Early Predictors and Prevention of Literacy Problems
- ➢ Best Practices in Assessment of Language-Literacy Skills
- ➢ Best Practices in Intervention to Support Language-Literacy Skills in Children and Adolescents
- ➢ Primary Areas of Literacy
- ➢ EBP Intervention for Supporting Language-Literacy
- ➢ Appendices highlights:
  - ➢ Selected formal language-literacy diagnostic assessment tools
  - ➢ Selected informal, qualitative and non-standardized measures of literacy development
  - ➢ Sample guidelines for activities

UPDATED CALIFORNIA EDUCATIONAL CODE LANGUAGE AB486

The Omnibus Education Bill (AB486) that was signed on October 8, 2021 included updated language regarding our profession, defining a language disorder broadly.

Language disorder is defined as being characterized by inappropriate or inadequate acquisition, comprehension, or expression of language such that the pupil's language performance level is found to be significantly below the language performance level of his or her peers.

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)

Form   Content

Use
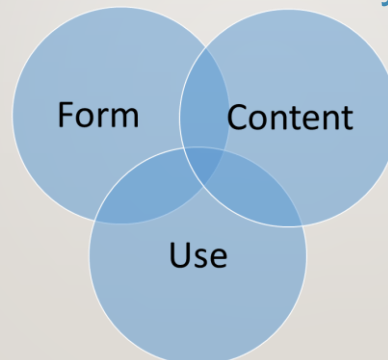
LANGUAGE-LEARNING DISABILITY

➤ 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.

⚠ WARNING

Vision problems do not cause dyslexia.

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.
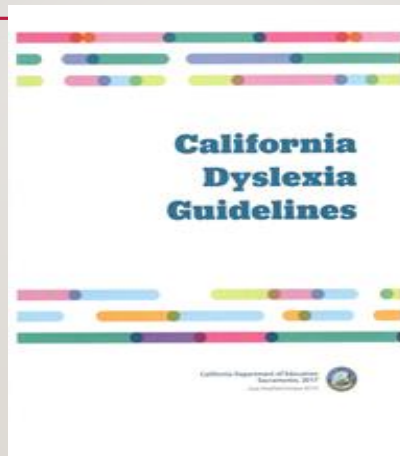
ASSEMBLY BILL NO. 1369 (AB 1369) LEGISLATION

➤ Authored by Assemblyman Jim Frazier and sponsored by Decoding Dyslexia California

➤ Approved and signed into law by Governor Jerry Brown on October 8, 2015

➤ Effective January 1, 2016, "phonological processing" was included in the description of basic psychological processes in *Section 3030 of Title 5 of the California Code of Regulations* for a "specific learning disability" (*Section 56334* added to *California's Education Code*)

➤ State Superintendent of Public Instruction was required to develop Dyslexia Program Guidelines for the 2017-2018 academic year (*Section 56335* added to *California's Education Code*)

CALIFORNIA DYSLEXIA GUIDELINES WORK GROUP

➤ Dyslexia Guidelines Work Group - approximately 22 members representing a wide range of stakeholders provided input in a series of seven meetings from April 2016 through March 2017

➤ Purpose of work group was to assist the California Department of Education (CDE) in developing program guidelines for dyslexia to be used to assist regular and special education teachers and parents to identify and assess pupils with dyslexia and to plan, provide, evaluate, and improve educational services to pupils with dyslexia (AB 1369; EC 56335(a)).

➤ California Dyslexia Guidelines written in response to the passage of AB 1369, Chapter 647, Statutes of 2015 and posted online by the CDE in August 2017

➤ Although the Dyslexia Guidelines are not legally binding on local education agencies, the goal of the document is to provide practical information and resources for supporting students who may have dyslexia

CALIFORNIA DYSLEXIA GUIDELINES (2017; MODIFIED DEC. 2018)

CALIFORNIA DYSLEXIA GUIDELINES CONTRIBUTORS

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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 oscillation), 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 DYSLEXIC STUDENTS MAY SHOW

BRAIN PATTERNS THAT NON-DYSLEXIC 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

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 (ii)(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[21][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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CALIFORNIA DYSLEXIA GUIDELINES

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-Lonergan, 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)

Phonological Awareness ↔ Phonological Memory ↔ Rapid Naming
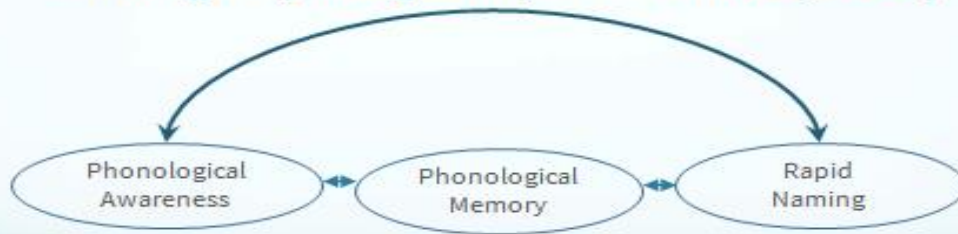
RELATIONSHIP BETWEEN AUDITORY PROCESSING AND PHONOLOGICAL PROCESSING

➤ 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!!!"
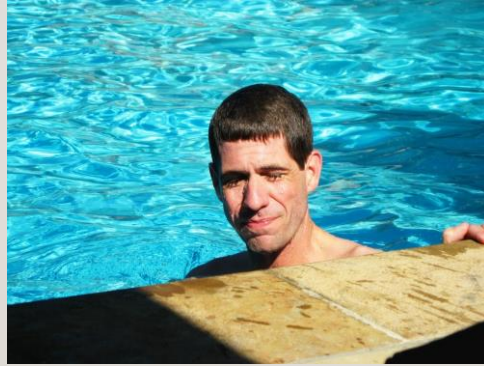
BUT I'M HERE TO TELL YOU…WE'RE ALREADY SUPPORTING LITERACY!!!!!

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: CCSS.ELA-Literacy.RL.2.1*

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)

- ➢ ASHA (2016) reminds us that language-based learning disability (LLD) is an even better title than dyslexia because of the relationship between spoken and written language.
- ➢ 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 ADOPED BY THE INTERNATIONAL DYSLEXIA ASSOCIATION (IDA) BOARD OF DIRECTORS NOV. 12, 2002.

Retrieved June 12, 2016 at: 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)
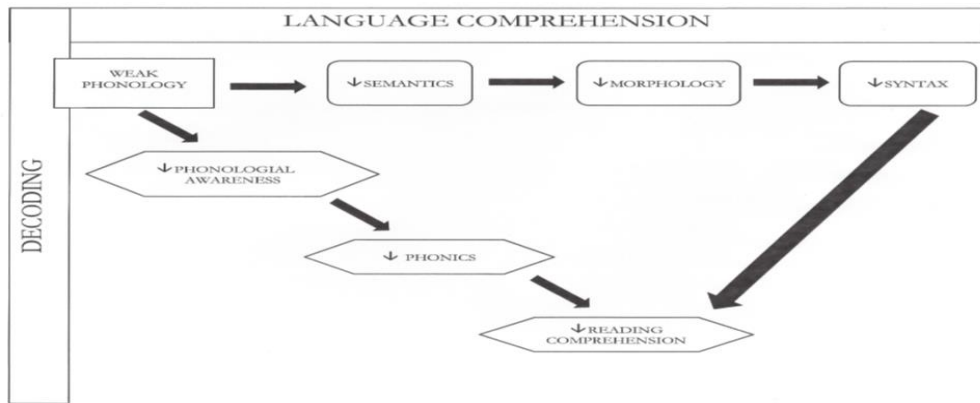
COMPARING STUDENTS WITH DYSLEXIA, A SPECIFIC COMPREHENSION DEFICIT, AND A MIXED DECODING/COMPREHENSION DEFICIT
Pieretti, R. & Ward-Lonergan, J.M., 2016; CSHA Position Paper and Resource Guide, 2016

	Dyslexia (Profile A)	Specific Comprehension Deficit (Profile B)	Mixed Decoding/ Comprehension Deficit (Profile B)
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 <u>AND</u> 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 <u>AND</u> 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 <u>AND</u> 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?"

PHONOLOGICAL PROCESSING UMBRELLA
COURTESY OF SERENA BALDRY, B.S.

Language–Based Reading Difficulties
Phonological Processing

Phonological Awareness

Words are made of sounds

Difficulties with rhymes

Doesn't play with words "mamby–pamby–lamby"

Doesn't play with sounds "mee mo moo"

Problems with rhythm.

Word Retrieval

Linking sounds to labels

Difficulties retrieving words:

Um, um, you know...

Filler words: "Stuff, thing"

Poor memory for names.

Phonological Coding in Memory

Serial order of sounds

Short term memory

Can't hold on to labels.

Auditory code "glue" doesn't stick.

Difficulty remembering instructions.

Verbal Output

Coordinating Verbal Output

Combines sound patterns.

"escavator" for "elevator"

Mis–pronunciations

Short sentences

Grammar errors

Difficulty with sequencing.

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. <u>Nonword Repetition:</u> sart; lis-e-shrul

6. <u>Rapid Digit Naming</u>

7. <u>Rapid Letter Naming</u>

Sample supplemental subtests:

1. <u>Blending Nonwords</u>: lan-der; z-I-g-o-p-l

2. <u>Segmenting Nonwords</u>: ip: /I/ /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* (Schrank, McGrew, & Mather, 2014)

➤ *Woodcock-Johnson (WJIV) Tests of Oral Language (*Schrank, Mather, & McGrew, 2014):

➤ Wechsler Individual Achievement Test (WIAT) (Wechsler, 2009)

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
intestationing	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. <u>Word Reading</u>: Measures the speed and accuracy of single word reading. (Decoding)

2. <u>Pseudoword Decoding</u>: Measures the speed and accuracy of decoding skills. (Decoding)

3. <u>Reading Comprehension</u>: Measures literal and inferential reading comprehension skills using a variety of passages and questions types that resemble those used in school settings.

4. <u>Listening Comprehension:</u> Measures listening   comprehension at the level of the word, sentence, and discourse

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

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

➤ *CELF-5* <u>Understanding Spoken Paragraphs</u>

➤ *Test of Narrative Language-2*: <u>Narrative Comprehension</u> (Gillam & Pearson, 2017)

➤ <u>?</u>

➤ <u>?</u>

➤ <u>?</u>

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/WIATIII* (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; *WJIV* Oral Comprehension; *WIAT-III* Listening Comprehension; Other measures, both formal and informal
Reading Comprehension	Below average	Below average	Below average	*WJIV* Passage Comprehension; *WIAT-III* Reading Comprehension; 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	*WJIV* Letter-Word ID and Spelling; *WIAT-III* Word Reading and Spelling, 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	*WJIV* Word Attack; *WIAT-III* Pseudoword Decoding; 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

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CASE STUDY #4 "SAM"

➢ **Test Administered**: *Clinical Evaluation of Language Fundamentals* (*CELF-5*) (Wiig, 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"**

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**

3/13/2022

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

CALIFORNIA DEPARTMENT OF EDUCATION DYSLEXIA GUIDELINES

California Dyslexia Guidelines (2017).

California Education Code Section 5635(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."

Together, these elements constitute approaches that are sometimes referred to as "structured literacy" approaches.

Structured literacy approaches are also beneficial to students who are struggling readers or have other types of language-learning disabilities.

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

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).

ROLE OF THE SLP:
LANGUAGE AND LITERACY

SLPs receive specific training that prepares them to be supportive team members in not only the identification, assessment, and intervention of students with reading disabilities, but also in the prevention of reading disabilities.

➢ Early intervention programs

➢ Community outreach

➢ Clinics & Hospitals

➢ Local Public Agencies

THE SAC STATE LITERACY CONNECTION

Hyperlink to a website **dedicated to parent-friendly literacy enhancement:**

SACRAMENTO STATE

Literacy Connection

A WEBSITE DEDICATED TO
LITERACY ENHANCEMENT

➢ Reading to Children questions in 11 languages

➢ Techniques to elicit language growth at home in several languages

➢ Community links and resources regarding language and literacy

➢ Red flags indicating language/literacy assessment

SACRAMENTO STATE

Literacy Connection

READING TO CHILDREN (GOLDSWORTHY, PIERETTI, STUDENTS, AND COMMUNITY (2012)

Sample Questions for Before Reading:

BEFORE reading a book, look at the pages and pictures and talk…..Ask/Instruct/Help using any that apply:

a. How do you hold a book? Show me.
b. Point to the cover, the back of the book (spine), and the author's name.
c. What's the title of the book?
d. Who's the author/writer of the book?
e. What do you think the book is going to be about?
f. Point to the 1st page of the book.
g. Point to the 1st word of the book.
h. Will you turn the pages for me when we read?
i. Do you have a (dog, cat, anything from the story)/ Have you seen a (dog, cat, anything from the story)?
j. Have you seen anything like this before

READING TO CHILDREN (GOLDSWORTHY, PIERETTI, STUDENTS, AND COMMUNITY (2012)

Sample Questions for During Reading:

DURING reading, pause to ask questions…… Ask/Instruct/Help using any that apply:

a. Where should I read next? (have the child tell you to turn the page)
b. Where is the page number?
c. Can you follow what I am reading with your finger?
d. Where is the first letter in this line/word?
e. Where is the story happening?
f. When is the story happening?
g. What/who does this remind you of?
h. Why did the character do that?
i. What do you think is going to happen next?
j. Have you seen anything like this before?
k. How does this character feel?
l. Have you ever felt that way before?

READING TO CHILDREN

Sample Questions for After Reading:

After reading, review the book by talking about the book…… Ask/Instruct/Help using any that apply:

     a. Who was the story about?

     b. Where did the story happen?

     c. When did the story happen?

     d. What happened in the story?

     e. What happened after that?

     f. What else happened?

     g. How did the story end?

     h. Did the character lean anything?

     i. Did the character make good choices?

     j. What did you learn from the story (was there a moral)

     k. What was your favorite part/page?

     l. Which picture did you like best? Which picture did you NOT like the best? Why?

     m. What would you have done if you were in the story?

TREATMENT:
WHERE DO I FIND THE RESOURCES I NEED?

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 resources in the following areas:

➢ Reading

➢ Decoding

➢ Vocabulary Knowledge

➢ Fluency

➢ Comprehension

➢ Spelling

➢ Written Expression

➢ Phonological Awareness

LANGUAGE-LITERACY CENTER (LLC) UNIVERSITY OF THE PACIFIC

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Department of Speech-Language Pathology

Link to Webpage

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 Areas

➢ Phonology
➢ Morphology/Syntax
➢ Semantics
➢ Pragmatics
➢ Discourse

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

LANGUAGE INTERVENTION TO SUPPORT LITERACY SKILLS

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)

EXPLICIT 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 form 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.

ONE EXAMPLE OF EXPLICIT, SYSTEMATIC, AND DIRECT PHONOLOGICAL AWARENESS INSTRUCTION

➤ Phonological awareness activities at word, syllable, sound levels

➤ 36 activities/story

➤ 10 stimulus items/activity

➤ 5 stimulus items/activity

Goldsworthy and Goldsworthy/Pieretti Sourcebooks for Phonological Awareness I (2012), II (2012), III (2012), AND IV (2013)

GOLDSWORTHY, C.L., & PIERETTI, R.A. (2013). *SOURCEBOOK OF PHONOLOGICAL AWARENESS ACTIVITIES*

➢ Bennie's Pennies
➢ Bunny Cakes
➢ Chicken Soup with Rice
➢ Chrysanthemum
➢ From Head to Toe
➢ Home for a Bunny
➢ Liang and the Magic Paintbrush
➢ Mice Squeak We Speak
➢ Miss Bindergarten Goes to Kindergarten
➢ The Garden
➢ 3 Little Pigs
➢ Tortillas and Lullabies
➢ *Volume IV: Curriculum Relevant Literature.* Clifton Park: Delmar, Cengage Learning.

SAMPLE WORD LEVEL ACTIVITIES

• "How many words do you hear?" little pig (2)

• "Tell me which word is missing?" huff, tomorrow, apple'/huff, apple (tomorrow)

• "Supply missing word." He huffed and he _____ (puffed)

• "Rearrange these words." little up got pig (little pig got up)

SAMPLE SYLLABLE LEVEL ACTIVITIES

- Delete syllables: "Say 'chimney' without 'chim.'" (knee)
- Adding syllables: "Add '-ing' to the end of 'gather.'" (gathering)
- Substituting syllables: "Say 'chimney.' Instead of 'chim' say 'chin.'" (chinny)

SAMPLE SOUND/PHONEME LEVEL ACTIVITIES

- Guess which word doesn't rhyme with the other 3: bricks, sticks, ticks, chimney (chimney)
- Blending sounds: pl + ease; br + icks
- Substituting initial sound: "Say 'puffed.'
- Instead of /p/ say /h/." (huffed)
- Say the word backwards: nice (sign)
- Switch 1st phonemes: momma pig (pomma mig)

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)

EXAMPLE OF EXPLICIT, SYSTEMATIC, AND DIRECT SOUND/SYMBOL CORRESPONDENCE INTERVENTION

EXAMPLE OF EXPLICIT, SYSTEMATIC, AND DIRECT SOUND/SYMBOL CORRESPONDENCE INTERVENTION

Goldsworthy and Goldsworthy/Pieretti Sourcebooks for Phonological Awareness I (2012), II (2012), III (2012), AND IV (2013)

SAMPLE PHONOLOGICAL AWARENESS INTO PRINT ACTIVITIES

Substituting initial sound/letter in words.

NOTE: Use lined paper or copy the sheet of lined paper at end of this chapter.

Stimulus items:

1.1. yum/tum

Task a. Say "'yum.' Instead of /y/ say /t/. What's your new word?"(tum).

"Write/copy 'yum' and 'tum.'"

Task b. Say "Circle the letters that make the words different." ([y], [t])

Task c. Ask "What sounds do these letters make?" (/y/, /t/)

SAMPLE PHONOLOGICAL AWARENESS INTO PRINT ACTIVITIES

Switching first sound and letter in words (ADVANCED)

NOTE: Use lined paper or copy the sheet of lined paper at end of this chapter.

Stimulus items:

little pig

Task a. Say "'little,' say 'pig.' What sound do you hear in the beginning of 'little?'" (/l/). "What sound do you hear in the beginning of 'pig?'" (/p/)

"Switch the first sounds in those words." (pittle lig) "Now we'll change the letters. Write/copy 'little pig' and 'pittle lig.'"

Task b. Say "Circle the beginning letters that change the words. ([l] [p])

Task c. Ask "What sounds do those letters make?" (/l/ /p/)

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 ("a<u>m</u>", "<u>sun</u>")

➢ CVCC words with continuous sounds ("<u>runs</u>", "<u>lamp</u>")

➢ CVC words with stop sounds ("<u>pot</u>", "<u>cap</u>")

➢ CVCC words with stop sounds ("<u>cast</u>", "<u>band</u>")

➢ CCVC words with continuous sounds ("<u>slap</u>", "<u>frog</u>")

➢ CCVC words where one of initial consonants is a stop sound ("<u>crib</u>", "s<u>top</u>")

➢ CCVCC words ("<u>brand</u>", "<u>clump</u>")

➢ CCCVC and CCCVCC words ("<u>split</u>", "<u>sprint</u>")

(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.
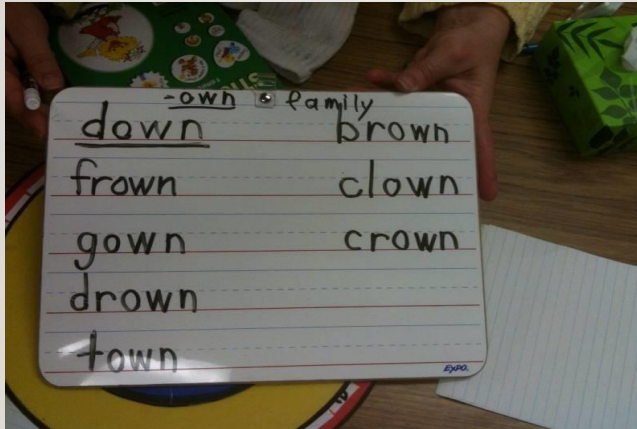
WORD-IDENTIFICATION PROGRAM/WORD WHEEL

SIX SELECTED RIMES/WORD FAMILIES
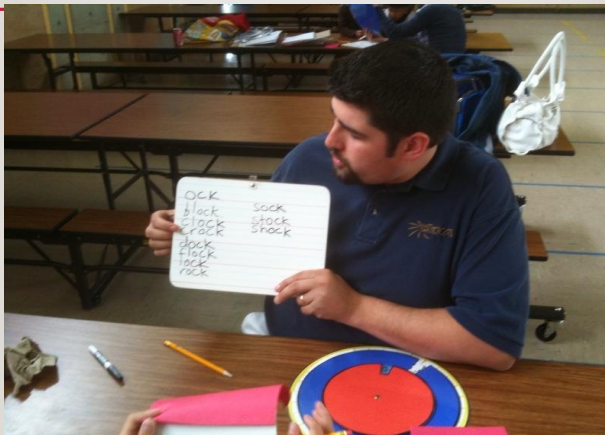
COMBINED WITH POSSIBLE ONSETS
(CONSONANT AND CONSONANT-BLENDS)

THE "REAL" WORDS ARE WRITTEN ON A WHITEBOARD

EACH STUDENT MAINTAINS A JOURNAL
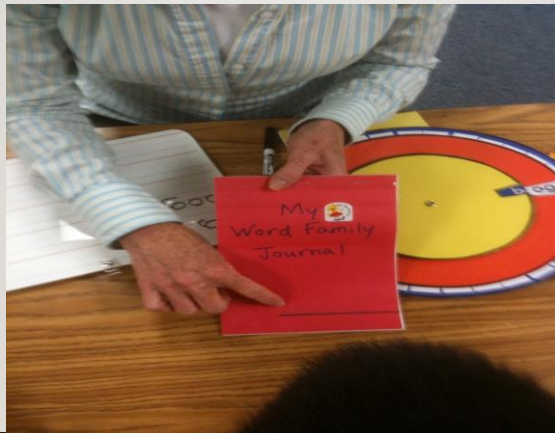
EXTENSION ACTIVITIES

➢ 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

LANGUAGE INTERVENTION TO SUPPORT LITERACY SKILLS

Morphology/Syntax

➢ Improve use of syllabication rules for decoding multisyllabic words

➢ 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

➢ Improve ability to proofread and edit written work

(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* (VC*e*) – 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 (V*r*) – An *r*-controlled syllable has a vowel followed by an *r*, which modifies the vowel sound: *car, mer, fir, cor, tur*.

➢ Consonant –*le* (C*le*) – 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*

3/13/2022

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*

➢ /C*le* 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)

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)

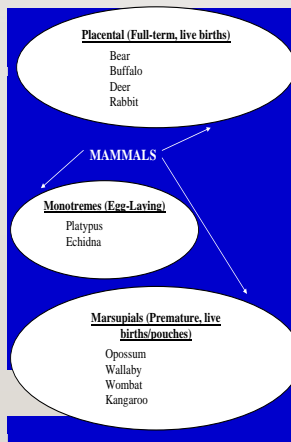## LANGUAGE INTERVENTION TO SUPPORT LITERACY SKILLS

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

Semantic Features				
Soft Wood	**Hard Wood**	**Cold Climate**	**Temperate Climate**	**Hot Climate**
Curriculum Terms				
Cedar +	-	+	-	-
Mahogany -	+	-	+	-
Maple -	+	+	-	-
Oak -	+	-	+	-
Pine +	-	+	-	-
Redwood +	-	+	-	-
Teak -	+	-	-	+
Walnut -	+	-	+	-

SEMANTIC WEB: BIOLOGY UNIT ON MAMMALS

Placental (Full-term, live births)
Bear
Buffalo
Deer
Rabbit

MAMMALS

Monotremes (Egg-Laying)
Platypus
Echidna

Marsupials (Premature, live births/pouches)
Opossum
Wallaby
Wombat
Kangaroo

MULTIPLE MEANING WORDS

Target Word: "duck"
Context: "During the trial, the defendant tried to <u>duck</u> the   issue."
Definitions: 1) <u>a bird that swims</u>
2) <u>to lower the head or body suddenly</u>
3) <u>to avoid or evade</u>
4) <u>a durable closely woven cotton fabric</u>
Target Word: "pass"
Context: "Most of the members of Congress did not want to <u>pass</u> a law that would prohibit the sale of tobacco."
Definitions: 1) _____
2) _____
3) _____
4) _____
5) _____

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

<u>Appositive</u>

e.g., "This is where the new cars are <u>hubis</u>, or assembled."

<u>Cause/Effect</u>

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

<u>Example</u>

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

<u>Grouping</u>

 e.g., "Cars, <u>cellms</u>, 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."

LANGUAGE INTERVENTION TO SUPPORT LITERACY SKILLS

Pragmatics/Discourse

➤ Improve comprehension and production of narrative discourse

➤ Improve comprehension and production of expository discourse

➤ Improve comprehension and production of persuasive discourse

➤ Improve ability to write well organized, cohesive paragraphs

(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)
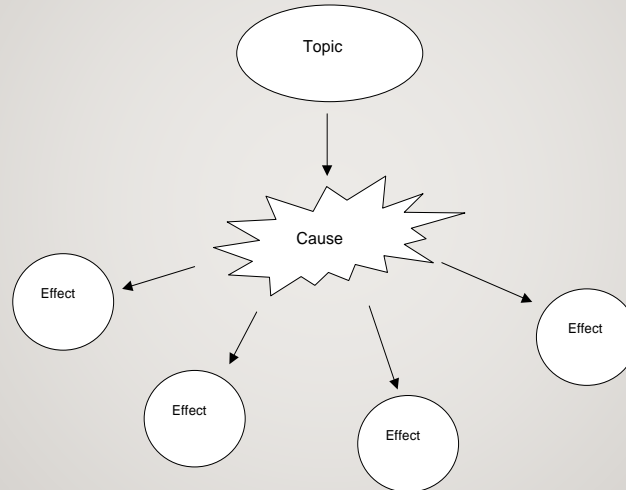
➢ Problem/Solution

➢ 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

COMPARISON
ORGANIZATIONAL
DISCOURSE STRUCTURE

Advantages   ⬅ Topic ➡   Disadvantages
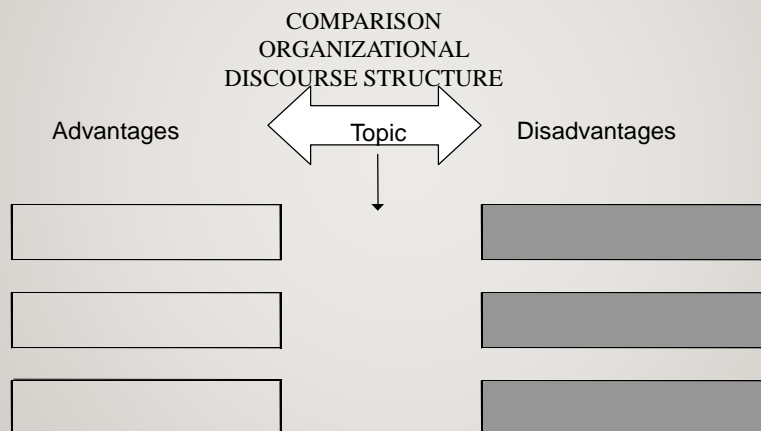
CAUSATION ORGANIZATIONAL DISCOURSE STRUCTURE

```
        ┌─────────┐
        │  Topic  │
        └────┬────┘
             │
             ▼
          ✴ Cause ✴
      ┌──────┼──────┐
      ▼      ▼  ▼   ▼
 (Effect)           (Effect)
    (Effect)  (Effect)
```

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

- <u>S</u>urvey

- <u>Q</u>uestion

- <u>R</u>ead

- <u>R</u>ecite

- <u>R</u>eview

(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
<u>Tech for Learning</u> (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)

PARAGRAPH WRITING

Basic Paragraph Structure – 3 Main Components:

➢ Topic Sentence (Introduction)

➢ Detail Sentences (Body)

➢ Clincher Sentence (Conclusion)

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?

ASHA GRANT VIDEO/LANGUAGE & LITERACY

Link to the Video

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 EMAIL US:
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