A Colorado professional learning series based on the book

Equipped for Reading Success

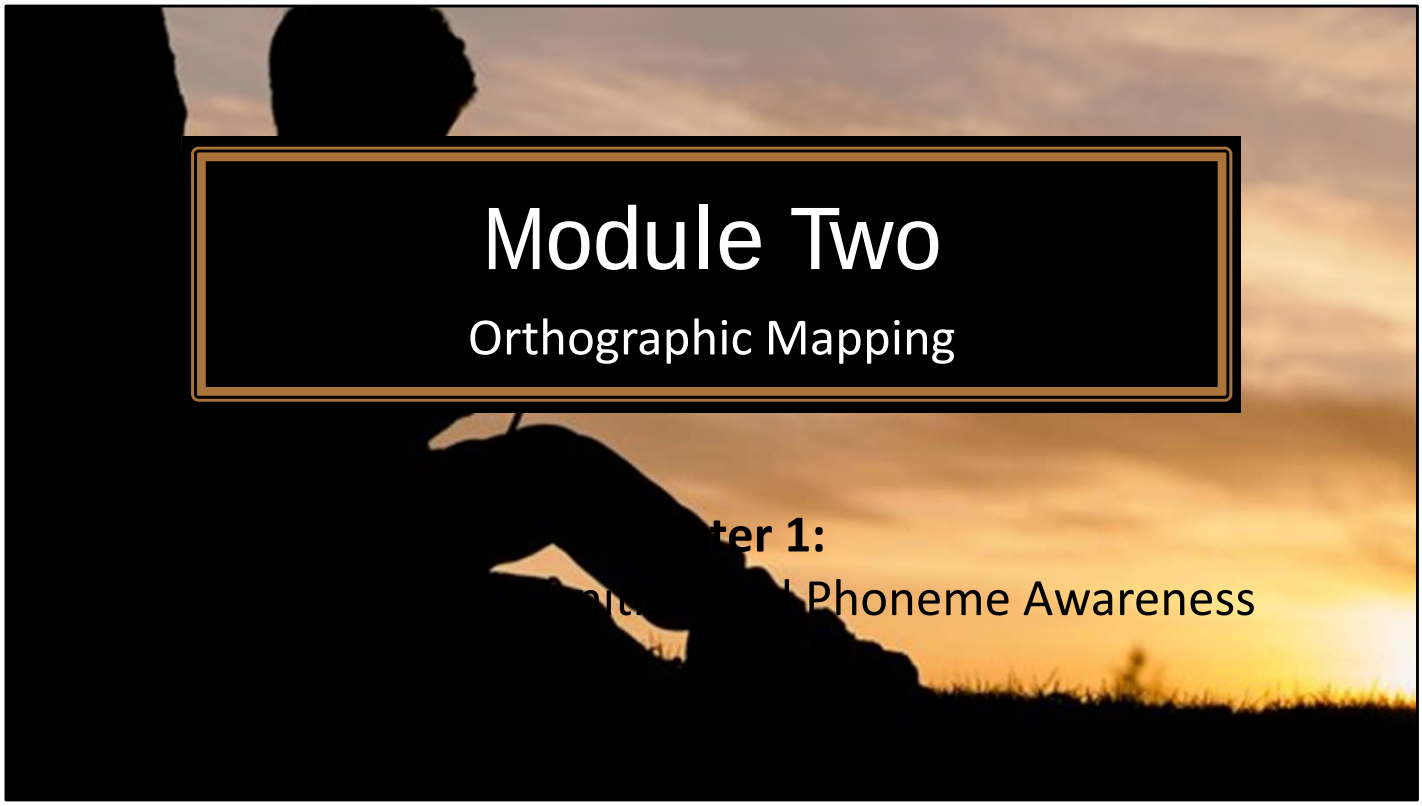
by David Kilpatrick, Ph.D.

COLORADO
Department of Education

Presented by Deb Hoesterey, Educational Consultant

Developed in collaboration with the Colorado Department of Education

Welcome back. We will continue our study of Dr. Kilpatrick's work.



Module Two

Orthographic Mapping

ter 1:

Phoneme Awareness

Goals for Module 2

- Recognize and understand the key characteristics of good readers
- Understand the importance of the development of word recognition skills in reading comprehension
- Distinguish between the terms *word identification* and *word recognition*
- Understand the mental process of *orthographic mapping* of words
- Define the term *sight vocabulary*
- Understand the *Simple View of Reading* and identify skills within each domain
- Identify and explain the four types of reading difficulties

Read the learning goals for Module 2

Learning From Good Readers

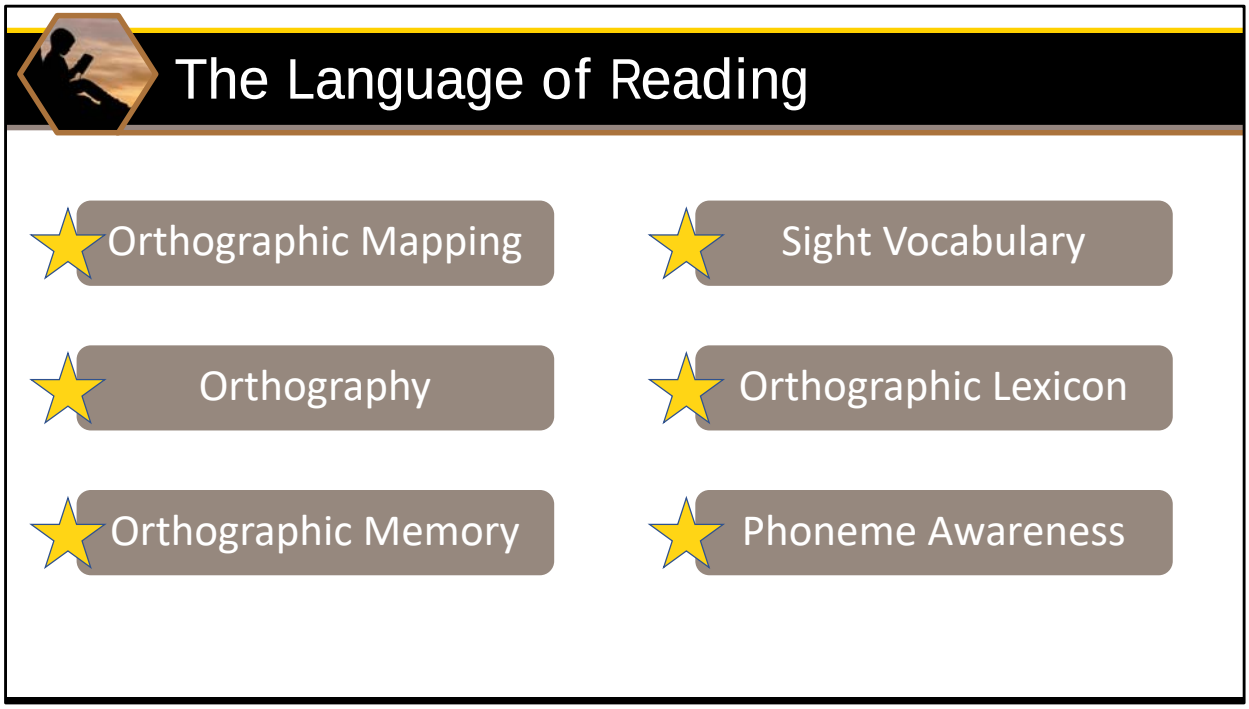
Key Characteristics of Good Readers

- Word recognition in 1/20th of a second
- Read 150-250 words per minute
- Immediately recognize tens of thousands of words
- Learn new words very quickly
- Don't forget the words they learn

- A common belief about reading is "As long as the student gets the meaning, that's all that matters".
- Most children who have difficulty understanding text do so because of poor word recognition skills.
- Then readers resort to compensating. With each year, the vocabulary load increases and compensating becomes increasingly more difficult.
- Students lose motivation, and because of reading difficulties, all subjects suffer.
- Reading comprehension is indeed our goal, but the most direct route to good reading comprehension is to make the word recognition process automatic so it frees up a reader's cognitive desk space and they can focus their attention on meaning.
- And in fact, meaning –focused reading approaches **do not help overcome poor word recognition skills and research supports that.**

- <u>Key Characteristics of Good Readers</u>
- Good readers only require input for 1/20th of a second to recognize a word, and it does not require context. Remember using context to help decode a word only works 25% of the time.
- When reading non-technical material, the average skilled readers can read rather quickly, around 150 – 250 words per minute.
- Depending on the size of the reader's speaking vocabulary and reading background, the number of words that good readers can instantly recognize is between 30 and 70 thousand words or more.

- The average child enters first grade able to read between 50-500 words. By 2nd Grade, average readers only require between one - six exposures to a new word before it becomes permanently stored for immediate retrieval. It is a lot of growth in a limited time span.
- Once good readers learn words, they don't forget them. If they do happen to forget, it is often due to the fact that the words were learned through compensatory strategies and were not efficiently stored, thereby causing difficulty with retrieval.



- We have several terms that we will be revisiting throughout the webinar series.

- The first one , *orthographic mapping* refers to the mental process we use to efficiently store words for instant, effortless retrieval.

- *Orthography* comes from the Greek word *orthos* meaning straight or correct and *graphos,* meaning writing. This refers to the correct way to write words.

- This requires that we develop a memory for the precise letter order of words, or *orthographic memory*. There are two levels to orthographic memory:
- The first level is to use our *orthographic memories* to recognize words we read, and to not confuse them with similar looking words. Ex: sent – set, send
- The second, more difficult level allows us to correctly spell words. Many adult readers can recognize the words *tongue* or *bouquet* or *license*, but have a much more difficult time spelling those same words.
- *Sight vocabulary* – Many teachers refer to irregularly spelled words, high frequency words or familiar or known words as sight words.. These are actually 3 different concepts and deserve 3 different terms. Using the same term for 3 different concepts can be confusing.
- *Orthographic mapping* is the process we sue to develop our sight vocabularies, also referred to as the *orthographic lexicon*. It is the pool of words that we can immediately recognize, regardless of whether they are phonically regular or irregular. Many teacher refer to “sight words” as irregularly spelled word that cannot be phonically decoded, and that children have to memorize, so this is a slightly different definition.

- Students who are good orthographic mappers have large sight vocabularies and are fluent readers. Conversely, students who have limited sight vocabularies and are dysfluent are poor orthographic mappers. The process of orthographic mapping is a critical one to understand and should affect the way we teach reading. It will be studied in further detail in Chapter 4.

- Our last term, *phoneme awareness*, is a critical mental process needed for word reading. This refers to the ability to notice that spoken words can be broken into smaller, individual sounds called *phonemes.*

Word Identification vs Word Recognition

Are they the same thing?

Word Identification

- A broad term that means a student correctly reads a word
- Includes phonic decoding, guessing and word recognition

Word Recognition

- Retrieval of a familiar word from memory
- Based on whether a word is in a reader's sight vocabulary
- It is effortless and instant

These two terms are similar, but have distinct differences. Are word identification and word recognition the same?

X Identifying unfamiliar words, or word identification requires thought and effort while word recognition is instant and effortless.

X Word recognition draws from a student's sight vocabulary.
And remember, our definition of sight vocabulary does not mean irregular words or words that are high frequency, that need to be memorized, but "the pool of words that a person can identify immediately and effortlessly, without having to sound them out, or use context clues."

Because words can be recognized effortlessly, it allows students to put their focus on comprehension.

If a word is mapped to permanent memory, it is familiar and easily recognizable. X

If a word is not mapped, it needs to be identified in some other way. X

Kilpatrick believes that none of the classic reading approaches such as phonics, whole word, or whole language have done an adequate job with word recognition.

Three Types of Word Identification

1

Word recognition

instant recognition of familiar words

2

Phonic decoding

sounding out an unfamiliar word

3

Guessing

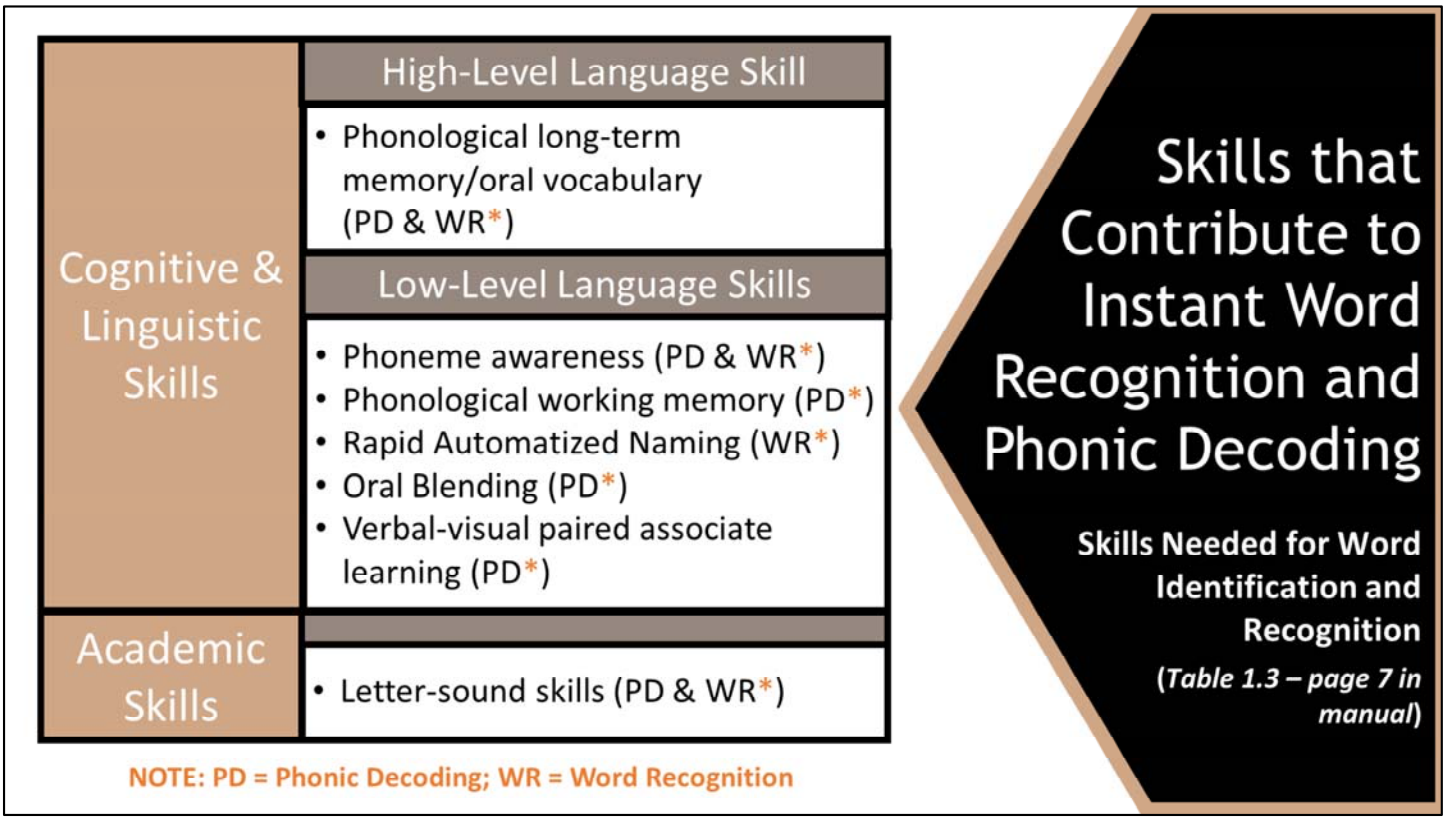
use of contextual, linguistic, or picture cues to read an unfamiliar word

There are 3 types of word identification:

1) **Word recognition** which is instant recognition of familiar words
2) **Phonic decoding** which is the process of combining letter-sound knowledge and oral blending to sound out unfamiliar words.

3) The last type is **guessing**, and uses contextual, linguistic or picture cues to read unfamiliar words.

The Skills Needed for Word Recognition and Phonic Decoding



- XXX Students need a combination of cognitive, linguistic and academic skills to be able to read words.
- These will be addressed at various points throughout the manual.
- *X Table 1.3* shows us which skills are primarily needed for phonic decoding and word recognition.
- X Our goal here is to understand that ***word recognition and phonic decoding plus*** the higher level language skills necessary for that, makes up the ***phonological long term memory*** (also known as *phonological lexicon*) which leads to the ***development of strong oral and written sight vocabularies.
- ***Lower level linguistic skills*** that need to be developed in order for this to happen are:
- ***X Phoneme awareness*** , is being aware of the individual speech sounds within a word.
- ***X Phonological working memory***, is a short term, temporary processing of sounds.
- ***X Rapid automatized naming*****,** also know as ***RAN*** is the ability to rapidly name basic, automatic information, such as numbers, letters, colors or objects.
- ***X Oral Blending***, which is the process of taking individual parts of a word and blending them to make a word., is required for many of Kilpatrick's **One Minute Activities** and is also required for successful phonic decoding.
- ***X Verbal –visual paired associate learning*** *is also* known as PAL. It is is the skill of being able to associate two items with each other, like a sound to a letter. When one item is present , it instantly activates a memory or association with the other item.
- X Our academic skill is identified as Letter-sound skills.
- A number of these skills, Kilpatrick believes, have not received much attention in the process of teaching reading, but clearly help determine which students develop normal reading skills and which do not.

The Simple View of Reading

WR x LC = RC

Gough and Tunmer, 1986

The *Original* Simple View of Reading

An equation for Reading Comprehension
Formula first introduced by Gough & Tunmer in 1986

"The ability to understand written language and to derive meaning from individual and related sentences."

D x LC = RC

Decoding (D)
Word Recognition

×

Linguistic Comprehension (LC)

=

Reading Comprehension (RC)

Gough and Tunmer, 1986

The *Original* Simple View of Reading

Decoding (D) Word Recognition	×	Linguistic Comprehension (LC)	=	Reading Comprehension (RC)
0	x	1	=	0
1	x	0	=	0

THERE MUST BE PROFICIENCY IN BOTH DOMAINS!

Gough and Tunmer, 1986

Basic Component Skills

READING COMPREHENSION is based on:

Language/Listening Comprehension is based on:	Word Level Reading is based on:
• **Vocabulary** • **Grammar** • *Inferencing* • *Background Knowledge* • *Attention & Executive Functioning* • *Working Memory*	• **Letter-sound skills** • **Phonological blending** • *Phonemic awareness* • *Print Exposure* • *Phonological Long-Term Memory* • *Semantic Long-Term Memory*

Cipher Skills

TABLE 1.4 The Simple View of Reading p. 8 in manual

- Gough states that reading comprehension is the PRODUCT of language comprehension and word-level reading skills.
- Students will struggle with reading if they are poor in language comprehension or word identification or both.
- XTable 1.4 breaks down the language comprehension and word-level reading further into their component skills. There have been components added to the language comprehension domain since Gough and Tunmer's original model.
- In addition to Xvocabulary and grammar, Xinferencing, Xbackground knowledge, Xattention and Xworking memory have been added. (Animated)
- XInferencing entails "filling in the blanks" of what something means without directly saying it.
- The Word Level Reading domain includes what Kilpatrick refers to as "cipher skills" or Xletter sound skills and Xblending. Other factors that influence decoding or word-level reading, are Xphonemic awareness, X print exposure,
- X phonological long term memory, and Xsemantic long term memory.

The *Expanded* Simple View of Reading

The Simple View of Reading has been expanded and changed based on current research.

Word-Level Reading
Originally "Decoding"

×

Oral Language Comprehension
Originally "Linguistic Comprehension"

=

Reading Comprehension

The model can and should guide ELA curricular decisions to maximize our general education efforts. The Expanded Simple View is also useful for designing effective interventions for at-risk or struggling readers, including individuals with educational disabilities.

Based upon Gough and Tunmer (1986): Hoover and Gough (1990); and Juel, Griffith, and Gough (1986).

New research that came after Gough and Tunmer's Simple View caused researchers to make some modifications to the original model and to come up with what we refer to as the "expanded" Simple View of Reading .
The components are similar, but the wording has been changed and more subcomponents have been added that contribute to each domain and thus a reader's ability to comprehend.
Let's look at the expanded version:
It states Word Level Reading, X originally called decoding X times Xoral language comprehension also know as linguistic comprehension, Xequals reading comprehension. The extension comes with the additional sub-components that we just reviewed in the previous slide.
X The model can and should guide ELA curricular decisions to maximize our general education efforts. The Expanded Simple View is also essential for designing effective interventions for at risk or struggling readers, including individuals with educational disabilities."

If we can identify what part or parts of the Simple View a child is lacking, we can tailor their instruction and intervention to focus on those parts.

Language Comprehension - Inferencing

First grade passage:

Jane was invited to Jack's birthday. She wondered if he would like a kite.

She went to her room and shook her piggy bank. It made no sound.

(Oakhill and Graham, 1988)

What concepts would have to be inferred?

- Jane will be buying a gift. How do we know that?
- She was invited to Jack's birthday party.
- The challenge is Jane doesn't have any money. How do we know that?
- She shook her piggy bank and no sound was made.

One of the important subcomponents of Language Comprehension is inferencing.
Let's look at this first grade passage.
It says " Jane was invited to Jack's birthday.
She wondered if he would like a kite.
She went to her room and shook her piggy bank.
It made no sound.

Think about what concepts would have to be inferred. Let's look:

In addition to inferencing, attention is another critical subcomponent. Lapses in attention affect comprehension. If there is a part of the story or directions given that a student doesn't hear because of a lapse in attention, he or she will have difficulty understanding.

Word Level Reading

Cipher – a type of code.

Cipher skills – the abilities that are needed to deal with the code of written English.

- letter-sound skills
- phoneme awareness

Word specific knowledge refers to a reader's pool of knowledge about specific words.

Fluency – all the subcomponents of word recognition are in place:

- phonemic awareness
- automatic letter–sound skills
- a large group of words showing word-specific knowledge

3 + 1

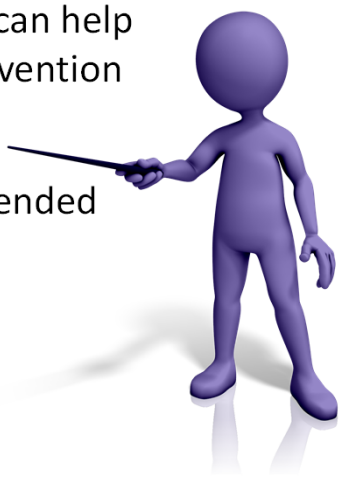
The ~~Four~~ Types of Reading Difficulty

We will get to the four types, but first, I want to share some changes in terminology within the state of Colorado…

Changing the Language . . .

The Simple View of Reading

- ✓ Explains the skills needed to be a proficient reader and can help with effective reading instruction, assessment and intervention for struggling readers.
- ✓ Gives us a framework with which to understand the Extended Simple View of Reading.



The Simple View of Reading explains the basic skills needed to become a proficient reader, and as such, can help plan effective reading instruction , assessment and intervention for struggling readers.
It gives us a framework with which to understand the Extended Simple View of Reading. With the updates, comes some changes in common terminology. And for this professional learning series the following changes in terminology will be used:

Decoding is now referred to as word-level reading

Linguistic comprehension is called oral language comprehension.

Dyslexia has been changed to a broader category, namely a word level reading difficulty.

And hyperlexia, will be henceforth called a Specific Comprehension Difficulty.

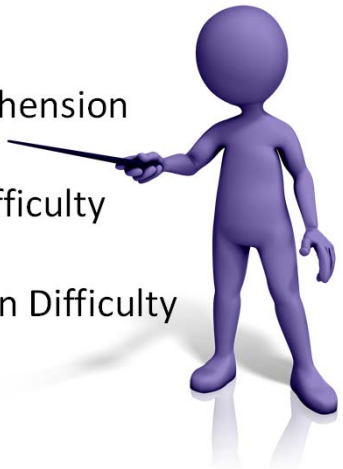
The Simple View Framework has also been validated with special populations including those students who are English Learners, and individuals with disabilities.

This includes students with learning disabilities, intellectual disabilities, speech or language impairments and those with autism spectrum disorders.

Changing the Language . . .

Changes in terminology:

Decoding	→	Word-level Reading
Linguistic Comprehension	→	Oral Language Comprehension
Dyslexia	→	Word Level Reading Difficulty
Hyperlexia	→	Specific Comprehension Difficulty



The Simple View of Reading explains the basic skills needed to become a proficient reader, and as such, can help plan effective reading instruction , assessment and intervention for struggling readers.
It gives us a framework with which to understand the Extended Simple View of Reading. With the updates, comes some changes in common terminology. And for this professional learning series the following changes in terminology will be used:

Decoding is now referred to as word-level reading

Linguistic comprehension is called oral language comprehension.

Dyslexia has been changed to a broader category, namely a word level reading difficulty.

And hyperlexia, will be henceforth called a Specific Comprehension Difficulty.

The Simple View Framework has also been validated with special populations including those students who are English Learners, and individuals with disabilities.

This includes students with learning disabilities, intellectual disabilities, speech or language impairments and those with autism spectrum disorders.

~~Four~~ Types of Reading Difficulty

3 + 1

- *Word Level Reading Difficulty,*
  which includes Dyslexia
- *Specific Comprehension Difficulty,*
  which includes Hyperlexia
- Mixed/Combined type
- Compensator type

The manual Identifies four types of reading difficulties:
Word Level Reading Difficulty which includes dyslexia
Specific Comprehension Difficulty which includes the term hyperlexia
Mixed/Combined type ,
Compensator type which stands apart from the others in terms of the amount of research support it has. This type has not been examined to a great degree in the research literature, however many listeners will recognize this problem in students they have worked with.

Let's look at each type individually:

Word Level Reading Difficulty Including Dyslexia

- Dyslexia is the most common type of Word-level Reading Difficulty.
- Is based on a phonological-core deficit.
- Students with word-level reading difficulties usually have deficiencies in one or more of the following:
  - phoneme awareness
  - rapid automatized naming
  - phonological working memory
  - phonological blending
  - phonic decoding

Dyslexia, a type of word level reading difficulty, is defined as "poor word-level reading skills despite adequate effort, learning opportunities and normal language skills."

When describing difficulties with word-level reading in the presence of adequate language comprehension, Gough and Tunmer (1986) used the term dyslexia.

Currently dyslexia is a term that is used in different ways by different stakeholders. '…to avoid confusion when describing this type of reading difficulty within the Simple View framework, the term word-level reading difficulty will be used.' (CDE, 2018)

.The Simple View of Reading provides us a framework for understanding reading difficulties because reading comprehension can be affected by word reading difficulties, language difficulties or both.

The first type of reading difficulty is a word-level reading difficulty called dyslexia

Dyslexia is the most common type of Word Level Reading Difficulty. An explanation for the change in terminology is quoted on the right side of your screen.

This type of reading difficulty is based on a **phonological core deficit** that affects the subprocesses of reading.

Contrary to popular belief, dyslexics do not see things backward or have visual distortions.

Deficiencies are primarily phonological in nature, NOT visual.

Remember, reading is primarily a linguistic process.

Phonological deficits can include problems with **phoneme awareness**, **rapid automatized naming**, **phonological working memory**, **phonological blending**, and **phonic decoding.**

Students with dyslexia usually have no difficulty understanding spoken language.

They struggle due to poor decoding, or word level reading, which affects their ability to

comprehend because they cannot get text off the page.

Kilpatrick summarizes the way researchers define dyslexia :
Dyslexia, a type of word level reading difficulty ,is defined as " poor word-level reading skills despite adequate effort, learning opportunities and normal language skills,", so the term **Word Level Reading Difficulty is more precise in describing** the underlying deficit.

Specific Comprehension Difficulty

Including Hyperlexia

- A condition in which students can read words proficiently, but they don't comprehend
- Often referred to as "word callers"
- A receptive language difficulty that affects reading
- Need to remediate language problems
- Emphasize reading comprehension strategies

Gough and colleagues indicate that the type of pattern associated with good word-level reading accompanied by below average language comprehension is called *hyperlexia. Hyperlexia* would be illustrated by individuals who are skilled at reading the words, but struggle to understand the meaning regardless of whether they read the text, or it is read aloud to them. Like *dyslexia, hyperlexia* is a term that is used in different ways by different stakeholders and does not have a simple, agreed upon usage. For clarity …the **term specific comprehension difficulty will be used in place of *hyperlexia."*** *(CDE, 2018)*

The next type of reading difficulty is a **specific comprehension difficulty** which includes hyperlexia within the overarching category. This is characterized by students being able to read grade-level marerial with ease, but cannot fully comprehend what they have read.
They are often called word callers
The real problem is a receptive language difficulty that affects reading comprehension.
The language problems need to be remediated in addition to using comprehension strategies

A mistaken notion has circulated among educators that "word callers" are a direct result of teaching phonics and not emphasizing meaning in reading instruction.

Kilpatrick says the opposite is true: "Students taught with phonics in first and second grades have better reading comprehension at the end of second grade that students taught with meaning based approaches".

Phonics does not produce word callers.

Weak **language skills** result in specific comprehension difficulties such as hyperlexia.

It is sometimes found in kids with autism.
The term hyperlexia is used differently by different stakeholders and does not have a simple agreed upon usage. Thus the need for a term that is more specific and coincides with what research tells us, which is a **Specific Comprehension Difficulty**

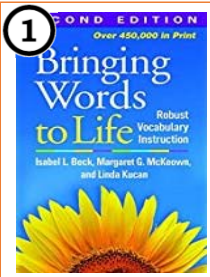
The CDE explanation for the term specific comprehension difficulty is quoted on the right side of your screen.

Colorado 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."

Adopted from the International Dyslexia Association

Resources for **Language** Development

1. 

Bringing Words to Life: Robust Vocabulary Instruction
Isabel Beck, Margaret McKeown & Linda Kucan (2013)

2. 

Developing Reading Comprehension
P.J. Clarke, E. Truelove, C. Hulme & M.J. Snowling (2014)

4. 

Understanding and Teaching Reading Comprehension:
A handbook
Oakhill, Cain, & Elbro (2014)

3. 

Developing Language and Literacy: Effective Interventions in the Early Years
J.M. Carroll, C. Boyer-Crane, C. Hulme & M.J. Snowling (2011)

These are excellent resources for teachers to help students with language development, all recommended by Kilpatrick.
The X first one is Isabel Beck's iconic X**Bringing Words to Life,: Robust Vocabulary Instruction.**
TheX 2nd book is X**Developing Reading Comprehension** which provides ideas about effective comprehension instruction
Number 3X is X**Developing Language and Literacy: Effective Interventions in the Early Years** and last,X but certainly not least is
XUnderstanding and Teaching Reading Comprehension : a handbook. Kilpatrick says if you only bought one of these books, this should be the one.

Mixed/Combined Type

- Students have difficulty with BOTH word-level reading and language comprehension.
- These students are usually the weakest readers.

The Simple View of Reading

The next reading difficulty type is the Mixed/Combined type.
These types of learners are weak in both domains of the Simple View, and thus have poor reading comprehension as well.
An important goal in dealing with Mixed/Combined type of reading difficulty is to strengthen word reading skills. We need to take away the cognitive load of using mental effort to figure out words.
If these students can develop automatic word recognition, that will free up their brains to focus on meaning.

Compensator Type

- Students' reading comprehension is substantially below their language comprehension.
- Weakness in word-level reading.
- They are often very bright and *compensate* for their poor word reading.
- Could have above average comprehension if word-level reading were improved.

The last type of reading difficulty discussed is the Compensator Type.
This type of reading difficulty does not always get the attention it deserves due to the fact that many of these students have average comprehension. They compensate with vocabulary and background knowledge for their lack of word-level reading skills.
So what we find with these students is:
Their reading comprehension is below their language comprehension
They are weak in word level reading skills
They compensate for their poor word reading.
They could be strong readers and comprehend well if word-level reading were improved.

Understanding Phonological Awareness

- Phonological Awareness vs Phoneme Awareness
- The difference between phonics and phoneme awareness
- What is a phoneme?
- Benefits of phoneme awareness instruction
- Who should receive phoneme instruction and when?

Module 3

In Module 3, we move on to Chapter 2 in the manual, which deals with many aspects of phonological awareness:
Understanding the difference between phonological awareness and phonemic awareness
Understanding how phonics differs from both.
The huge benefits of phoneme awareness instruction and practice.
And, who should receive phoneme instruction and when.

This material was developed under a grant from the Colorado Department of Education. The content does not necessarily represent the policy of the U.S. Department of Education, and you should not assume endorsement by the Federal Government.

Please visit the CDE Specific Learning Disability website for more information:

https://www.cde.state.co.us/cdesped/SD-SLD

COLORADO
Department of Education