# Dysgraphia: Beyond Typing and Templates

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# Today's Objectives

- What is Dysgraphia and how it impacts written language
- Explore the theoretical/cognitive basis of dysgraphia and examine some research
- Discuss subtypes and analyze assessment instruments
- Understand how the IEP and 504 processes for written language identification impact students and their rights via a case study
- Evaluate various writing interventions by subtypes of Dysgraphia
- Provide resources for further reading/watching/listening

### Professional & Personal Journey

- A public School Psychologist of 30 years
- A former co-chair of the ADHD Task Force for my District
- The grandmother of a neurodiverse 13-year-old

Developmental Dysgraphia, not acquired thru injury.

## What we knew early 4th Grade

- Gifted with ADHD (tested in first grade, no meds)
- Read fluently with expression, read fiction and non-fiction
- Understood what he read according to STAR testing at a 6-7<sup>th</sup> grade level
- Math was also 2 years above grade level (Beast Academy)
- Handwriting barely legible, hated to write sentences, everything was spelled phonetically.
- Loves chess and other strategic games (win or lose)
- IEP for ADHD, scribed in class as needed, project-based learning

## Dysgraphia Defined: Problems with written language

Signs and symptoms of dysgraphia can include messy handwriting, inconsistency in letter spacing and capitalization, pain or discomfort when writing, fine motor skill challenges, trouble with spelling, or trouble with composing written work. Often kids or adults with dysgraphia are able to express themselves when speaking, but can't seem get their thoughts onto paper.

# Cognitive Constructs

HOW CAN WE TALK ABOUT THE NEUROPSYCHOLOGY OF WRITTEN LANGUAGE DISORDERS?

## **Cognitive Constructs?**

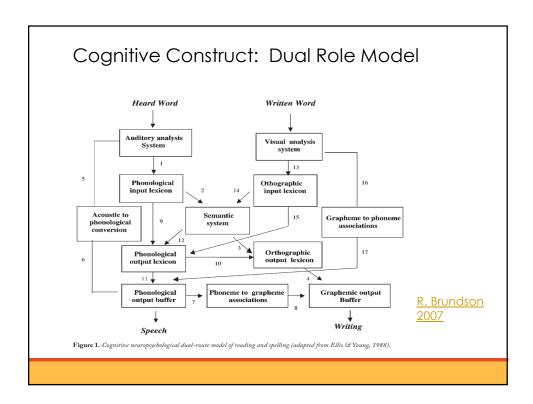
...we do not yet have a comprehensive theory of the processes implicated in development of writing skill, or the cognitive capacities required by these processes.

McCloskey, Rapp, 2017

## Cognitive Construct Slice that pie! Dysgraphia Subtypes



- Dyslexic, Spatial, Phonological, Lexical: www.structural-learning.com/post/dysgraphia
- Visual-spatial, Fine motor, Lexical: NCLD
- Dyslexic, Motor, Spatial, Phonological, Lexical:
   Occupationaltherapy.com
- Nope, not going there, too complex & don't forget ADHD: NIH 2020
- Dyslexic, Phonological Coding, Language: International Dyslexia Association



# Cognitive Construct

Just because you're great at **phonemes** doesn't mean you're great at **graphemes** 

THE ENGLISH LANGUAGE IS NOT VERY PHONETIC...

BUT HE'S STILL A FLUENT READER!

# Cognitive Construct 3 Subtype Model:

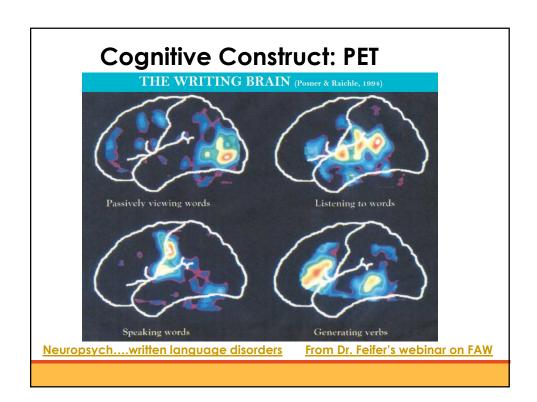
## Feifer Assessment of Writing (FAW)

- 1. Graphomotor,
- 2. Dyslexic,
- 3. Executive [Functioning]

Dysgraphia is what the test measures; You can have more than one subtype

Feifer describes the FAW (Video)

**NIH reviews the FAW** 



#### Cognitive Construct

Just because you're great at reading words doesn't mean you're great at retrieving and writing them.

HE CAN'T WRITE A COMPLEX SENTENCE...

BUT HE'S SUCH A FLUENT READER! AND HE CAN COMPREHEND IT TOO.

# How do we assess students like this?

HE CAN'T WRITE A COMPLEX SENTENCE...
BUT HE'S SUCH A FLUENT READER!

## Assessing Written Language

ORTHOGRAPHIC, DYSLEXIC, EXECUTIVE TESTS THAT FALL INTO THESE CATEGORIES

Assessing Written Language
Orthographic, Dyslexic, Executive
From the Feiffer Assessment of Writing

- **1. Dyspraxia**: A wide variety of motor skill deficits in which the voluntary execution of a skilled motor movement is impaired.
- Plan the execution of a motor response
- Guide motor movement
- Proprioceptive feedback
- Procedural Memory and Automaticity of Handwriting

## Assessing Written Language

Orthographic, Dyslexic, Executive

**The DeCoste Writing Protocol** - Handwriting vs. Keyboarding, plus other measures. Four Parts:

- #1&2 Comparing a student's handwriting and typing speed and accuracy for Alphabet, Best Sentence Copy, Dictated Sentence, Fast Sentence Copy, Composed Text
- #3 Spelling Skills
- #4 Extended Writing for AT evaluation
- Compared to grade level

#### Predictors of Dysgraphia: Developmental Test of Visual Motor Integration (VMI)

#### **Mayes 2017**

 ADHD and Autism: 92% had a weakness in graphomotor ability relative to other abilities

#### **Mayes 2018**

- Used VMI to define Dysgraphia
- IQ strongest correlation with Dysgraphia
- Medical Diagnosis of ADHD or Autism
  - ADHD (56%)
  - Autism (56%)
- If ADHD or Autism student also had the following learning disabilities:
  - LD Reading then 71% had dysgraphia
  - LD Math then 72% had dysgraphia

#### Special Issue on Developmental Dysgraphia

Cognitive Neuropsychology. May/Jun 2017, Vol. 34 Issue 3/4, (Prunty, 2017)

- Looking at kids with poor handwriting who do not have a cognitive delay
- 2 groups of kids with poor handwriting
  - With Developmental Coordination Disorder (DCD-motor control)
  - With NO DCD
- 3<sup>rd</sup> group Neurotypical (NT) -- no handwriting problem, no cognitive or fine motor problem
- Using a digitized tablet for kids to write ...

# ASSESSING HANDWRITING QUALITY WILL NOT TELL YOU WHAT IS GOING ON

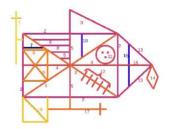
No difference between poor handwriting of the diagnosed Developmental Coordination Disability group and...

Just bad handwriting group with no DCD

# How is the VMI unlike writing?

- Untimed
- No erasing
- Not much to write
- It can't answer the questions:
  - What speed are you writing (fluency)
  - Does your erasing improve your product?
  - Does writing quality decline over time (fatigue)?
  - Can you think about WHICH words to write and write at the same time? (multi-task, working memory)

## Rey-Osterrieth complex figure



The classic task of copying the Rey–Osterreith figure, where its structure is poorly perceived and incorrectly reproduced, as well as difficulties in mastering temporal notions



# The Act of Copying an Entire Paragraph

- Handwriting and executive control Rosenblum 2018
- Groups identified by a computerized system that analyzed a copied paragraph for pressure, speed, size, rewrites
- Diagnoses of ADHD, Anxiety Autism excluded
- BRIEF scores ARE significantly different from control group. Not Clinically significant on the BRIEF.
- Highest correlation -- Working Memory
- Lack of Automaticity

#### **Summary: Handwriting Assessment:**

Using a VMI alone to establish if a student has a written language disorder is a very bad idea

Do not let an adequate VMI score stop you from looking deeper

#### **Summary: Handwriting Assessment**

#### Intervention? Remediation?

Although efforts to improve handwriting should continue in school, dysgraphia is a neurologically-based weakness that is resistant to remediation and is present at all ages.

(Mayes et al. 2017)

#### **Summary: Handwriting Assessment**

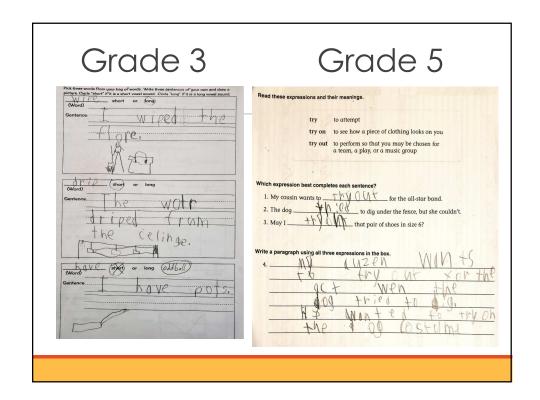
#### Intervention? Remediation?

[In Dysgraphia] writing never reaches automaticity. It becomes one more thing that the student must think about when getting ideas on paper.

Dr. Beth King video

# M's Orthographic Delays

- Had a summer of 1st grade working on Handwriting Without Tears. Yielded no improvement.
- Writes several letters as disconnected parts, poor spacing and slowly.
- VMI -- 90 SS. School did not offer OT (5<sup>th</sup>).
- Types at an average rate for his age (5<sup>th</sup>).
- Lacks automaticity despite intervention.
- Accommodation of typing in the 4<sup>th</sup> grade, or speech to text.



# Assessing Written Language Orthographic, Dyslexic, Executive

- Dysphonetic Dysgraphia: Problems due to phonological-based spelling issues
- Surface Dysgraphia Trouble writing phonetically irregular words with intact phonologically based non-word spelling
- Some of both

#### Assessing Written Language Orthographic, Dysphonetic-Dyslexic, Executive

- WJ IV Oral Language
  - Phonological awareness, blending, segmenting
  - Rapid naming
- CTOPP-2
  - Segmenting, blending nonsense words
- TAPS-4
  - Phonological Process Index
- WIAT Dyslexia Screener III, IV

## Assessing Written Language

Orthographic, Dyslexic, Executive

#### Pearson Dyslexia Toolkit

SCREEN	ASSESS	INTERVENE	MONITOR		
Shaywitz DyslexiaScreen™	Kaufman Test of Educational Achievement™, Third Edition (KTEA™-3) Comprehensive Form	Intervention Guide for LD (Learning Disability) Subtypes			
aimswebPlus® Process Assessment of the Learner, Second Edition®: Diagnostics for Reading and Writing (PAL®-II Reading and Writing)		Process Assessment of the Learner (PAL™) reading and writing lessons	aimswebPlus		
Kaufman Test of Educational Achievement™, Third Edition (KTEA™-3) Brief Form	Wechsler Individual Achievement Test*, Third Edition (WIAT*-III)	KTEA-3 teaching objectives and intervention statements WIAT-III intervention goal statements	Growth Scale Value (GSV) Scores		
Oyslexia index scores from the CTEA-3 and WIAT®-III Woodcock Reading Mastery Tests™, Third Edition (WRMT™-III) SPELL-Links Writing SPELL-Links Class links for Classrooms™		to Reading & Writing SPELL-Links Class links			

OK School Psychological Association A. Kimbell, PhD 2019

# Assessing Written Language Orthographic, Surface Dyslexic, Executive

**OWLS II** 

KTEA III

TILLS

WIAT 5 (not 4): write phonetically irregular words (in person)

TOWL 4: write words, reg and irregular (elementary level)

Woodcock-J Tests of Ach: write words

For the rest, you must **READ** irregular words, not spell them.

# Assessing Written Language Orthographic, Surface Dyslexic, Executive

Surface Dyslexia Surface Dysgraphia
BUT...
Surface Dysgraphia Surface Dyslexia

# Reading (lexia) is Recognizing, but Writing (graphia) is Retrieval

# Assessing Written Language Orthographic, Dyslexic, Executive

Surface Dysgraphia for M:

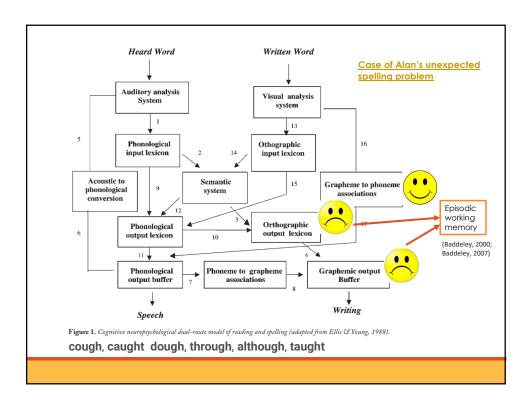
- Reads "cough, dough, though, through drought, taught" fluently and knows what they mean, without context.
- Writes farm car send trap correctly
- Misspells phonetically irregular words

#### M's SURFACE DYSGRAPHIA

 Misspells phonetically irregular words that he can read

> riting wrighting

"After I write a word, I look at it. I can tell it's misspelled. So I erase it and try again, and it looks wrong, so I try again. I spell by brute force."



#### NOW WE KNOW THAT M HAS:

- a lack of automaticity in writing
- surface dysgraphia without dyslexia
- a weak grapheme output buffer (retrieving and holding onto letters)

...HE ALSO HAS ADHD

# Assessing Written Language Orthographic, Dyslexic, Executive

- Retrieving words from your own thoughts
- Writing and thinking at the same time
- Holding multiple things in memory long enough to get them on paper
- Arranging thoughts in a logical, sequential way

**Feifer Assessment of Writing** 

# Assessing Written Language Orthographic, Dyslexic, Executive

- Retrieving words (elaborating, using advanced vocabulary)
- Writing and listening/thinking at the same time (notetaking)
- Holding multiple things in memory long enough to get them on paper (summarizing, reading multiple paragraphs then answering questions)
- Arranging thoughts in a logical, sequential way (putting main ideas and details in the right place)

Most of the above is also true of a **language-based learning disability**. Higher level oral language testing may catch these students.

# Assessing Written Language Orthographic, Dyslexic, Executive

\* Poor idea generation
\* Poor independence

\* Lose track of thoughts
\* Difficulty finishing
\* Sentences disjointed

Inhibiting

\* Impulsive/Distractible

Shifting

\* Perseverations
\* "Stuck" on topic

Poor Word Retrieval

\* Limited word choice
\* Simplistic sentences

# Assessing Written Language Orthographic, Dyslexic, Executive

#### STUDY:

- Students with and without dysgraphia (handwriting quality) were given the BRIEF.
- Kids with diagnosed Au, ADHD, & other diagnoses excluded.
- · Age/gender match to controls.
- BRIEF score correctly sorted students in Dysgraphia & No Dysgraphia groups 98.4% of the time.
- Strongest difference was in BRIEF working memory.

Handwriting and executive control Rosenblum 2018

# Assessing Written Language Orthographic, Dyslexic, Executive

- BRIEF working memory
  - Handwriting and executive control Rosenblum 2018
- The Comprehensive Assessment Battery for Children – Working Memory (CABC-WM)
- Phonological Working Memory, Visuospatial Working Memory, Binding tasks (nothing written)
- WJ IV Tests of Achievement (nothing over a sentence)

,

# Assessing Written Language Try Parts of These:

TOMAL: Test of Memory and Learning

PAL II: Process Assessment of the Learner: Read-Write revised WRMAL 2: Wide Ranch Assessment of Memory & Learning KTEA: 3 Kaufman Test of Achievement: Complementary Tests

W-J 2: Woodcock Johnson: Retrieval Fluency

Slingerland Tests #2, 5

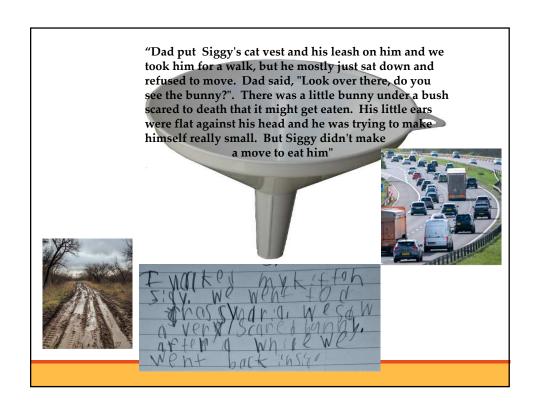
NEPSY: Memory and Learning Clusters

Subtests: The *most* Retrieval, the *most* writing, with the *least* Recognition; and are Timed,

# Assessing Written Language Orthographic, Dyslexic, Executive

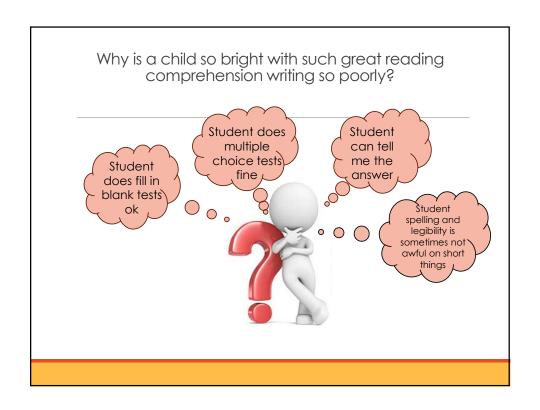
Each section makes beautiful music but what's missing?

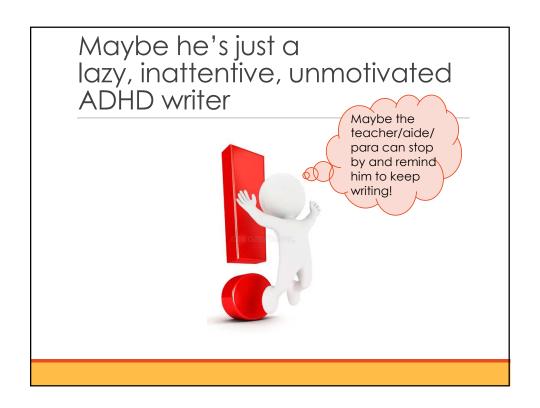


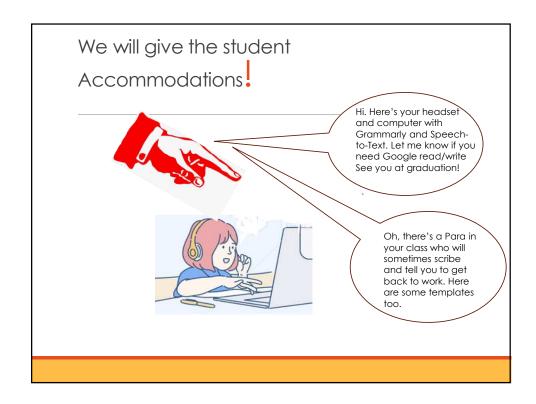


Now we know that M lacks automaticity of writing, has Surface Dysgraphia without Dyslexia, and has Executive Dysgraphia

BUT THAT'S NOT WHAT THE TEACHERS SEE







# Who is going to help the student to:

- Find the right tools: speech to text apps, typing programs, and learn how to use them?
- Understand accommodations and practice asking for them?
- Learn to take notes in a modified way or find ways to enhance memory for new concepts?
- Make a simple sentence into a complex one?
- Find strong words that are hard to retrieve from memory that student uses in his oral expression?
- Use thinking maps and other templates and planners?
- Figure out how to modify a required project so it fulfills the goals?
- Figure out where to start and know what "finished" is?

## Chalkbeat Colorado August 31, 2023

These Latina moms in Boulder are concerned about equity in advanced courses. The district says it's listening and responding.

"Some moms say they've been told by teachers or school administrators that their children with Autism or ADHD who need support, can't receive assistance in advanced classes....they have been told they could get private tutoring outside school, or keep their children in general ed classes."

#### 2007

IDEIA- kids with disabilities get access to accelerated GT services

#### Who is going to help M?

- In high school 50-60 percent of the day is spent writing
- Writing crosses all subject areas
- Even math and science requires written explanations

OCR Dec. 2007

# **Assess Cognitive**

- GAI General Ability Index, which excludes the Processing Speed and Working Memory Indices from overall score
- **WMI** Is it a relative or absolute weakness?
- PSI is timed pencil work. Relative or absolute weakness?

# Popular, Comprehensive Tests of Written Language

TOWL, WIAT4, CMAS, FAW

COMPREHENSIVE & STAND ALONE

#### Tests of Written Language

**TOWL Test of Written Language** 

- Contrived Writing: writing individual sentences.
  - •Vocabulary: measures skill in writing sentences with specific words.
  - •Spelling: measures skill in writing dictated sentences.
  - •Punctuation: scored from same dictated sentences. Also scored for capitalization.
  - •Logical Sentences: edit illogical sentences.
  - •Sentence Combining: combine sentences in the best way.
- **Spontaneous Writing:** Write a story about a picture.

## Tests of Written Language

**TOWL Test of Written Language** 

Composite	Composite Index	Percentile	Descriptive Tern	
Contrived Writing (Vocabulary, Spelling, Punctuation, Logical Sentences & Sentence Combining)	135	99	Very Superior	
Spontaneous Writing [Contextual Conventions & Story Composition]	93	32	Average	
Overall Writing (Vocabulary, Spelling, Punctuation, Logical Sentences, Sentence Combining, Contentual Conversations & Story Combining)	124	95	Superior	

#### **Individual Subtest Scores**

Subtest	Scaled Score	Percentile	Descriptive Term
Vocabulary	18	99	Very Superior
Spelling	13	84	Average
Punctuation	12	75	Average
Logical Sentences	17	99	Above Average

#### Tests of Written Language

Doe vs Cape Elizabeth School District

First Circuit Court of Appeals ultimately found that a student's grades and overall school performance can be one factor considered in determining eligibility under the IDEA, the court also made it clear that the grades or school performance considered must be narrowed to those components related to the student's suspected academic or **functional deficiencies**.

# Tests of Written Language All have similar weaknesses

OWLS || Combine grammar with paragraph writing

KTEA III Provide cues such as pictures for

TILLS paragraph writing

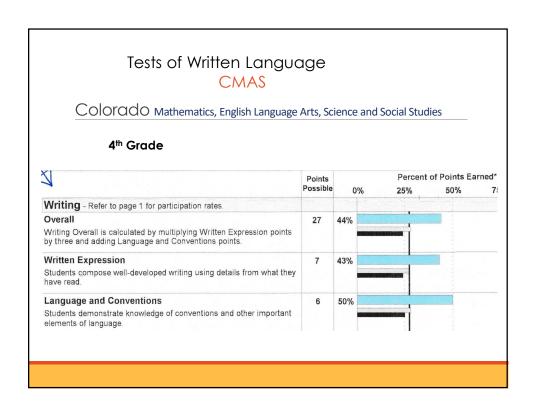
Include lots of fill in the blanks and multiple choices, recognize,

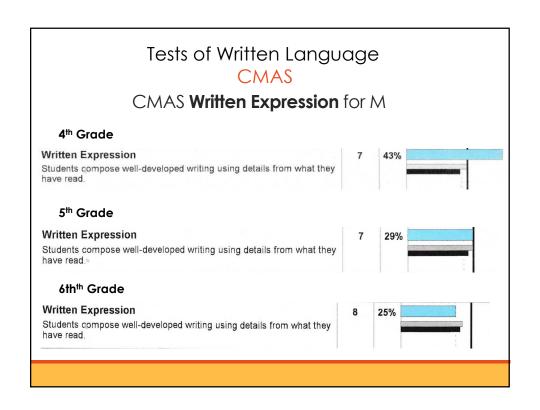
TOWL no retrieval

Few items in spelling, no timed writing fluency. Easy for MS

willing liberity. Easy for Mis

**CMAS** does separate out writing a paragraph





#### Tests of Written Language

#### Feifer Assessment of Writing

#### Description of Indices

- Graphomotor Index: Trace partial letters, like coding but colors to letters, copy letters, words, sentences in defined spaces.
- **Dyslexic Index**: Choose correctly spelled word with picture cue, Written Spelling test.
- •Executive Index: Write one sentence using a prompt when given a choice of words to use and you have to use two, Sequence random cards to create a paragraph, Name four items in a category, Think of a category that three words belong to, Write a detailed paragraph on a specific topic in 5 minutes.
- Compositional Writing Index (supplemental): Copy Editing, Story Mapping, and expository writing
   Video summary of the FAW

  Sample FAW score

Sample FAW scores and Report

Feifer Ppt to CASP

Subtest	Raw score	Standard score	Index standard score	Percentile rank
Alphabet Tracing Fluency (ATF)	21	105		63
Motor Sequencing (MS)	20	+ 95		37
Copying Speed (CS)	17	+ 95		37
Motor Planning (MP)	7	+ 75		5
Graphomot	or Index (GI)	= 370	90	25
Homophone Spelling (HS)	31	86		18
Isolated Spelling (IS)	53	+ 104		61
ABC	cic Index (DI)	= 190	94	34
Executive Working Memory (EWM)	2	64		1
Sentence Scaffolding (SS)	9	+ 86		18
Retrieval Fluency (RF)	28	+ 102		55
Expository Writing (EW)	6	+ 78		7
Executi	ve Index (EI)	= 330	76	5
GI + DI + EI = FAW To	tal Index (TI)	= 890	83	13
Supplemental Index				
Expository Writing (EW)	6	78		7
Copy Editing (CE) optional	32	+ 106		66
Story Mapping (SM) optional	7	+ 74		4
Compositional V	Vriting Index (CWI)	= 258	82	12

#### Tests of Written Language Feifer Assessment of Writing

	200 9 200 0 20	nal Writing Ind	dex	
Index	Standard score	Absolute difference	Significance level	Base rate
Graphomotor Index (GI)	90	8	.01	≤1%
Dyslexic Index (DI)	94	12	.01	≤1%
Executive Index (EI)	76	6	.01	≤1%
Total Index (TI)	83	1	ns	>15%

*Note.* "---"indicates that the value could not be calculated due to missing data. Discrepancies in bold are statistically significant at p < .05

El interpretation

Sample's overall Executive Index (EI) standard score was 76, which was in the Moderately Below Average range of functioning and in the 5th percentile compared to her same-grade peers. This score suggests that her executive skills were an absolute weakness.

**CWI** Interpretation

Sample's overall Compositional Writing Index (CWI) standard score was 82, which was in the Below Average range of functioning and in the 12th percentile compared to her same-grade peers. This score suggests that her compositional writing skills were an absolute weakness.

## Accommodations

- Scribe, Speech to text, Grammarly
- Due on following Monday instead of Friday
- Break apart the task and give intermediate deadlines.
   Midweek check on progress and on planner.
- Use templates specific to writing assignment.
- Fill-in-the-blank note-taking. Fill-in planner. Teach and check usage.
- When content important, alternative ways to demonstrate knowledge.

# Dysgraphia Interventions: Research

There are no studies with a control group or matched subjects that compare two writing programs

..."the fact remains that there is a general lack of methodologically sound research into reading programs for those with dyslexia. In July 2010, the U.S. Department of Education reported that it had not been able to identify a single method or approach for dyslexia or learning disabilities that is supported by strong research. See more detail at the" What Works Clearing House.

#### Dysgraphia Interventions

Quote from Denver Academic Tutor

"It's a bit like the Wild West for writing in Colorado"

"Frankly, writing has only recently begun to be carefully monitored by schools and ... taught district wide, ... every teacher has their own interpretation of what needs to happen and I've seen a lot! Oh brother, I've seen a lot!"

A Denver academic tutor

#### Classroom Curricula

- Six Traits of Writing: This approach focuses on six traits of effective writing ideas, organization, voice, word choice, sentence fluency, and conventions. Teachers guide students through each trait to help them develop their writing skills, including paragraph
- Step Up to Writing: This program often uses color-coded strategies to help students understand the different parts of a paragraph and how to structure their writing logically.
   Writer's Workshop: Writer's Workshop is a student-centered approach where students
- engage in the entire writing process, from brainstorming ideas to revising and publishing.
- It emphasizes individualized instruction and peer feedback.

  Write from the Beginning and Beyond: This program emphasizes writing across different genres and provides structured steps for teaching paragraph and essay writing.

  Lucy Calkins Units of Study: Developed by Lucy Calkins, this approach provides a
- framework for teaching writing through mini-lessons, conferencing, and guided practice.

  Empowering Writers: This program uses a step-by-step approach to teach writing skills, including paragraph construction, by breaking down the process into manageable tasks.
- Write Source: This program offers comprehensive writing resources for students and teachers, including guidelines for paragraph writing and essay development.
- Handwriting Without Tears: While primarily focused on handwriting, this program often
- includes components to teach early writing skills, which can include paragraph formation.

  Expository Reading and Writing Curriculum (ERWC): Used mainly in high schools, this program is designed to prepare students for college-level reading and writing by focusing on expository and argumentative writing.

# Dysgraphia Interventions

Structured Literacy vs Balanced Literacy (dyslexia)

#### Structured Literacy

Systematic, Diagnostic Cumulative

Explicit: Phonology Morphology

Syntax, Grammar, Semantics

#### **Balanced Literacy**

Text-based activities

Shared and guided reading

Use pictures and context to

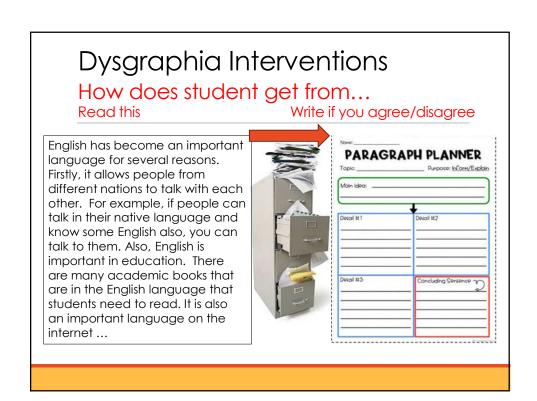
guess words

Less focus on decodina

Thrive Ed Services

Balanced Literacy is inadequate for struggling readers and writers!

Students need a Structured Approach to writing



Small group, 1:1 interventions. Popular in Homeschooling

•EIW: Essentials in Writing

•IEW: Institute for Essentials in

Writing

WriteShop for Middle in High School

# Dysgraphia Interventions <a href="EIW: Essentials in Writing">EIW: Essentials in Writing</a>

- Each step is modeled with a separate video lesson
- Each composition begins with a graphic organizer to help students get their thoughts on paper visually without having to write any sentences
- Each composition is broken down into 5 steps (5 separate lessons) brainstorm, organize, draft, revise, final draft
- Paragraphs start with the details/facts of the composition. Student tries to include details from their writing plans. The intro and conclusion are written last.
- Starts with sentence structure before going into paragraphs

# Dysgraphia Interventions IEW Institute for Excellence in Writing Sample Unit of instruction Pick 3 most important words from each sentence Kry Wird Outline History of Wild Cats Cats in ancient Egypt were venerated for killing rodents and venomous snakes. [23] The need to keep rodents from consumiting or contaminating grain crops stored for later human consumption may be the original reason that cats were domesticated. The spread of cats throughout much of the world is thought to have originated in Egypt. Scientists do not agree on whether cats were domesticated in Ancient Egypt or introduced there after domestication. Phoenician traders brought them to Europe for control of rat populations, and monks brought them further into Asia. Roman armies also contributed to the spreading of cats and eventually brought them to Britain. [24] Since then, cats continued to be introduced to new countries, often by sailors or settlers. Cats are thought to have been introduced to Australia in either the 1600s by Dutch shipwrecks, or the late 1700s by English settlers. [16][25] These domesticated cats began to form feral populations after their offspring began living away from human contact.

/riteShop ss://writeshop.com/writeshop-i-i- view/ it 2: Informative Writing 8 Explaining a Process	RAINSTORMING & ORGANIZING  BRAINSTORMING & ORGANIZING  Narrow a topic from general to specific  Use brainstorming worksheets and graphic organizers  Use mindmaps and charts to plan and organize information  Answer who, what, when, where, why, and how?  Interview a subject about a personal experience  Make an outline	grades 7-11*	grades 8-12
s://writeshop.com/writeshop-i-ii-rview/ it 2: Informative Writing 8 Explaining a Process	Narrow a topic from general to specific Use brainstorming worksheets and graphic organizers Use mindmaps and charts to plan and organize information Answer who, what, where, whry, and how? Interview a subject about a personal experience	√ ✓ ✓	
s://writeshop.com/writeshop-i-ii-rview/ it 2: Informative Writing 8 Explaining a Process	Use brainstorming worksheets and graphic organizers Use mindmaps and charts to plan and organize information Answer who, what, when, where, why, and how? Interview a subject about a personal experience	√ ✓ ✓	
it 2: Informative Writing 8 Explaining a Process	Use mindmaps and charts to plan and organize information  Answer who, what, when, where, why, and how?  Interview a subject about a personal experience	4	<b>*</b>
it 2: Informative Writing  8 Explaining a Process	Answer who, what, when, where, why, and how? Interview a subject about a personal experience	1	· ·
8 Explaining a Process	Interview a subject about a personal experience		
8 Explaining a Process	TO A DESCRIPTION OF THE PROPERTY OF THE PROPER		
	Make all Outline		1
		_	
	STRUCTURE		
Writing a Factual	Write strong topic and closing sentences	1	✓
Paragraph	Write complex sentences	<b>✓</b>	<b>✓</b>
10 Writing a Concise	Write a well-developed paragraph	✓	<b>V</b>
Biography	Use transition words	1	<b>✓</b>
11 Introducing Journalism	Write a summary statement for a news article	✓	
11 milioddonig sodinaisin	Write a thesis statement		<b>✓</b>
it 3: Narrative Writing	Write 3- to 5-paragraph essays		✓
<u> </u>	Use parallelism		1
Writing a Narrative of an Emotional Event	COMPOSITION WRITING		
Writing a Narrative of _ 1 2	Write original descriptive narratives and compositions	1	1
13 Another Person's	Start sentences in different ways and vary sentence length	1	<b>✓</b>
Experience	Use concrete, descriptive vocabulary	✓	<b>✓</b>
	Write concisely	1	1
14 First-Person Point of View	Write in active voice and avoid "be" verbs	1	1
15 First-Person Point of View	Use tense correctly	1	1
15 First-Person Point or View	Choose a point of view	1	V
16 Third-Person Point of View	Develop voice and show emotion	1	<b>✓</b>
	Use figures of speech	1	

#### Not sequential or cumulative

- From Talking to Writing 2<sup>nd</sup> edition, Haynes & Jennings (Landmark School)
- The Writing Revolution: A Guide to Advancing Thinking Through Writing in All Subjects and Grades, Hochman & Wexler
- **Touch-Type Read and Spell**
- wvced.com

#### Dysgraphia Interventions Not sequential or cumulative

Research Based Strategies: not a program <a href="Graham & Perrin 2007">Graham & Perrin 2007</a>

Writing Strategies

Summarization

Collaborative Writing

Specific product Goals

Word processing

Sentence Combining

**Below**. **32** (modest effect) Prewriting, Inquiry activities, Process writing approach (think, research, drafts, revise, edit, feedback), study models of good writing,

#### Not sequential or cumulative

Strategies for Writing from Academic Therapists

- Don't start with a blank page. Put the prompt on each page.
- Instead of working off the prompt, start with asking questions.
- Start by asking the student questions on the topic and write down what the student says.
- Include questions that reference the student's life.
- Just get a brain dump and organize later.
- Don't worry about full sentences. Fragments are fine. Later for spelling and mechanics
- Graphic organizers with sentence stems and/or questions.
- Build the introduction and the conclusion after you have the body.
- Find or draw a picture to spark thinking. Caption the pics.

**Learn Smarter Podcast** 

## Dysgraphia Interventions Not sequential or cumulative

From the Landmark School

- Start with sentences and build more complex ones
- Create titles for short paragraphs
- Create talking bubbles for comics
- Put "brain dumps" into subject groups

Video:Overcoming
Dysgraphia and Writing
Challenges

## Letter to the Teacher

- If there is an IEP or 504, mention it
- Give enough specificity that teachers know strengths and challenges
- Lots of practical suggestions for classroom instruction
- Something also for the SPED teacher
- Emphasizing home-school communication without being too demanding
- Include parent contact info

	Dear Teacher, I hope this letter helps you understand our child,, who is in your class faces some challenges due to Dysgraphia, ADHD, and a Written Language Disorder. Here are some areas where he may struggle:
	Coming up with ideas for writing: sometimes finds it difficult to think of what to write about.
	Recalling words: He may have trouble remembering and using high-quality words and phrases that match his strong oral vocabulary and reading comprehension.
	Organizing his writing: Putting the main ideas and details in the right place can be challenging for him.
	Spelling irregular words: might have difficulty with spelling words that are not phonetically regular- not reading them
	All of these challenges are part of the writing process, which can be particularly tough for someone with ADHD, and executive
	functioning problems. It can make writing and note-taking, which require both listening and writing, a frustrating task. As a result, you
	may notice moments of inattention and incomplete work.  However, tends to do better with certain types of tasks, such as answering questions orally, taking multiple-choice quizzes, or
щ.	completing fill-in-the-blank quizzes. These formats help with word retrieval and make it more about recognizing the right answer rather
$\overline{\mathbf{a}}$	than recalling it from memory.  To support in your class, here are some accommodations and
⋜	interventions that have been helpful:
5	Communication: Please let, the SPED teacher, and us, his parents, know if he's falling behind on classwork or if he hasn't
SAMPLE	turned in an assignment.
S	Technology: can use his school computer to type and utilize Grammarly for writing assistance.
	Special Paper: When handwriting is required, using lined or specially designed paper with boundaries can help him organize his
	writing.  Oral Assignments: Consider allowing him to complete some assignments orally or through recording.
	Reduced Copying: Minimize the amount of copying required for assignments.
	Note-Taking Support: Provide a notetaker, scribe, or copies of notes. Alternatively, scaffold note-taking with fill-in-the-blank notes.
	Reminders: Gentle reminders to stay focused on his work can be helpful.
	Word and Composition Support: Aid his word retrieval and composition organization with sentence stems, word banks, and questions, with the use of Thinking Maps, Templates, or outlines.
	It's important to note that 's difficulty doesn't seem to extend to numbers or remembering what he has read. His challenges
	are specifically related to remembering how words are spelled and organizing written language.
	Thank you for taking the time to read this letter. If you have any questions or need further information, please contact

### Assistive Technology

**<u>Read&Write for Google Chrome</u>**: Reads to you and predicts next word.

<u>Inspiration Maps App</u> Diagrams transform to outlines and back again. Built-in templates or create your own. Add hyperlinks, audio. Integrates with Dragonspeak.

**Grammarly** Does not work in Google Slides or MS Ppt. Yes Canva.

OrbitNote: Convert pdf to documents you can type on and put in Google Drive. Have it read to you. Put in drawings...

<u>QuillBot</u>: Synonyms for any number of words in your sentence - casual to professional. Shorten or lengthen sentences. Al and Plagiarism check.

<u>Hemmingway</u>: Will show you your weak phrases and words. Free version shows. Al (paid) version will correct.

<u>Word Tune:</u> Generative AI: Choose sentences from several suggestions. Works in Chrome.

https://grammarist.com/category/writing-tools/

## Assistive Technology

#### Math Apps

**MOD MATH:** For iPad

<u>Kami</u>: A suite of many apps, including math, pdf, etc.

GeoGebra: Tools and resources

<u>Efofex:</u> Can be used on SAT. Not for Elementary. Chemistry & Physics, too

<u>Kiwiwrite</u>: Elementary including equations, simple calculator

<u>Kiddom</u>: App works with Illustrative Math, Open Up Math, Open Sci education, Core knowledge, Odell Education

## Assistive Technology

(Likely out date in 6 months)

- Al part of all apps
- Plagiarism checks outdated
- Otter ai
- Glean
- My Homework -- Planner pulls from Schoology, Google classroom

**Smart Kids with LD** 

# Assistive Technology

What will be the right help?

- Audio to text (transcribe)
- Transcript pairs with slides
- Create searchable pdf of text
- Create an outline of text
- Summarize text
- Pick out keywords
- Create Practice tests from materials
- Al answers questions you have about text

**Smart Kids with LD** 

# Take-aways: General

- Dysgraphia is NOT just bad handwriting!
- Accommodations are not enough for most students who struggle with Dysgraphia. They need a structured, intensive sequential intervention guided by special education.
- Any intervention must be individualized to the student and their unique pattern of gifts and challenges.
- Using technology helps free many students to tap into their higher-level thinking. It's not cheating.

# Take-aways: Assessment

- A decent VMI does not rule out Dysgraphia or a written language disorder. Multiple-choice and short-answer assessments are also insufficient.
- If you screen/assess with fill-in-the-blank or use picture cues, you are
  providing accommodations for students with working memory and
  organization problems. You may not see the severity of their issues.
- If a subtest has no time limit, you are not calculating how painfully long it takes a child to come up with a response.
- Tasks performed well in isolation may be performed poorly when combined with others due to EF weaknesses
- If you combine a score for paragraph writing with grammar (generally a fill in blank or single sentence) to get an overall writing score, you will raise the composite score and obscure weaknesses

## **Additional Resources**

in Ppt & Here's More

- <u>Dysgraphia Life</u>: Good info, great webinars
- Learn Smarter Podcast: Writing
- Support Dysgraphia in the classroom: Keep scrolling to see it all. Not all are right for every student or classroom.

# Thanks for attending

More questions?

Got any advice for *my* dysgraphia journey?

Contact me: Sheila Lepkin

<<u>srlepkin@gmail.com</u>>

Questions about Selective Mutism? I'm the Colorado Coordinator for the Selective Mutism Association.