

Dyslexia

What it is &
What kind of instruction will help

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Presentation to IDA-Georgia – February 24, 2021

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Overview

- What is **dyslexia**?
 - What is reading?
 - What are the component skills of reading comprehension?
 - How does dyslexia fit into this model?
- What kind of **instruction** will help?
 - What is structured literacy?

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What is it?

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What is reading?

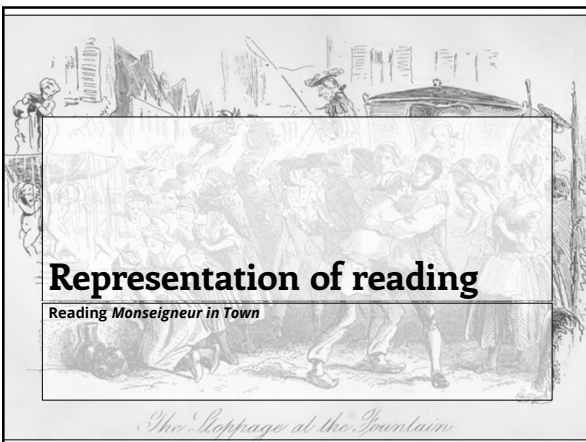
Or, rather, what is reading comprehension?

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Representation of reading

Reading *Monseigneur in Town*



A Tale of Two Cities by Charles Dickens¹

Monseigneur, singularian of the august lords in power at the Kōrt, held his fārtmārtly rīsep̄sən in his grand hotel in Paris. Monseigneur was in his inner room, his sēnt̄fuz̄n of sēnt̄fuz̄niz, the Holiest of Holiests to the klæwd of wə-sip̄əz in the swit of rooms without. Monseigneur was about to take his t̄faklit.

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¹ lightly edited by Devin Kearns

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Comprehension Question

- What was Monseigneur eating?

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Reading *Monseigneur in Town*

- Do this reading assignment,
 - in the same way you would for a test like the GRE.
 - as though you were a student in a classroom at your school.
- To complete this assignment,
 - read the two paragraphs.
 - answer the five questions.

A Tale of Two Cities by Charles Dickens
Book 2 - Chapter 7 *Monseigneur in Town*
edited by Devin Kearns

Monseigneur, singular of the singular lords in power at the time, held his famous reception in his grand hall in Paris. Monseigneur was in his inner room, his vest of ermine, the House of Lords on the street of ermine in the room of ermine. Monseigneur was seated to read his paper. Monseigneur could receive a great many things with it, and was by some few ladies made up to be rather rapidly receiving. From his morning's paper would not so much as get into the room of Monseigneur, without the aid of a gentleman sitting near his side the Cook.

Yes. It took a gentleman near, all of the gentleman's robes with golden buttons, and the tail of them made to go with fewer than ten or twelve gold watches in his pocket, besides of the noble and great facts set by Monseigneur to make the fishy fish to Monseigneur's lips. A singular lord earned the fishy get into the sword of a sword, and then the fishy with the little instrument he bore for that function, a sword, passed the sword of a sword, a gentleman of the house of the sword, passed the sword of a sword. It was needed for Monseigneur to disprove with a sword of these swords on the fishy and hold his high there under the sword of Monseigneur. They would have been the fishy open his sword of his fishy had been sword of sword on by only sword of sword, he would have died of sword.

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Where did Monseigneur take his chocolate?

The sanctuary (of sanctuaries; in his inner room)

Why did Monseigneur need the four lackeys "ablaze with gorgeous decoration"?

To conduct the happy chocolate to his lips (to feed him chocolate)

What is the symbolic function of the lackeys?

To demonstrate Monseigneur's wealth and power

What does the escutcheon represent?

(a) his honor

How would you describe the tone of the passage?

(b) sardonic

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Reflection on your reading

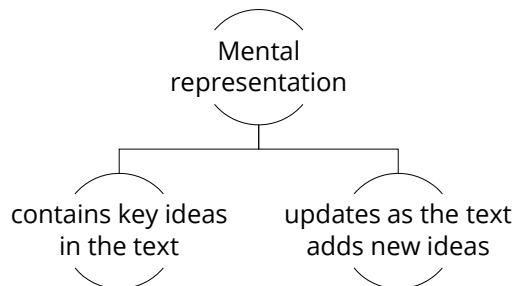
Skills you used

Emotional reactions you had

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How do you comprehend?
You construct the *situation model*



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Peter Rabbit by Beatrix Potter

Once upon a time there were four little Rabbits, and their names were Flopsy, Mopsy, Cotton-tail, and Peter. They lived with their Mother in a sand-bank, underneath the root of a very big fir-tree.

Now my dears," said old Mrs. Rabbit one morning, "you may go into the fields or down the lane, but don't go into Mr. McGregor's garden: your Father had an accident there; he was put in a pie by Mrs. McGregor."

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Constructing the situation model

- Three steps
 - Process the **surface structure**
 - Assemble the **textbase**
 - Extract the **situation**

How might this work for *Peter Rabbit*?



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Process the Surface Structure

Once upon a time there were four little rabbits, and their names were Flopsy, Mopsy, Cotton-tail and Peter.

prepositional phrase

nouns

noun phrase

being verb

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Process the Surface Structure

Once upon a time there were four little Rabbits, and their names were Flopsy, Mopsy, Cotton-tail, and Peter.

once upon a time
prepositional phrase

names
Flopsy Peter
Mopsy Cotton-tail

noun phrase
four little rabbits

were
being verb

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Process the Surface Structure

Once upon a time there were four little Rabbits, and their names were Flopsy, Mopsy, Cotton-tail, and Peter.

once upon a time

names
Flopsy Peter
Mopsy Cotton-tail

were
four little rabbits

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Assemble the Textbase

Once upon a time there were four little Rabbits, and their names were Flopsy, Mopsy, Cotton-tail, and Peter.

once upon a time

names
Flopsy Peter
Mopsy Cotton-tail

were
four little rabbits

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Assemble the Textbase

Once upon a time there were four little Rabbits, and their names were Flopsy, Mopsy, Cotton-tail, and Peter.

once upon a time

names
Flopsy Peter
Mopsy Cotton-tail

were
four little rabbits

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Assemble the Textbase

Once upon a time there were four little Rabbits, and their names were Flopsy, Mopsy, Cotton-tail, and Peter.

**identify key
inter
concepts**

animals talk ← fairytale
once upon a time
rabbits → children
names
Flopsy Mopsy Cotton-tail Peter
four bunnies

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Constructing the Situation Model

Once upon a time there were four little Rabbits, and their names were Flopsy, Mopsy, Cotton-tail, and Peter.

This is a fairytale about 4 bunnies.

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Reading Comprehension means constructing the **situation model**

but it can be very difficult for some students....

Why?

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Why might it be hard to construct the situation model?

- Difficulty
 - processing the **surface structure**
 - assembling the **textbase**
 - constructing the **situation model**

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What component skills are needed to construct the situation model?

- Two broad categories that fit the simple view of reading...

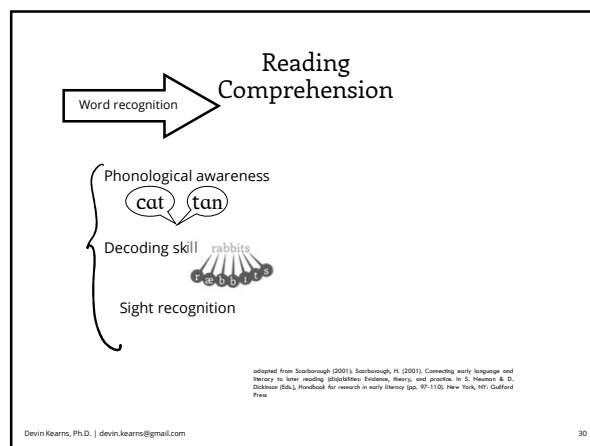
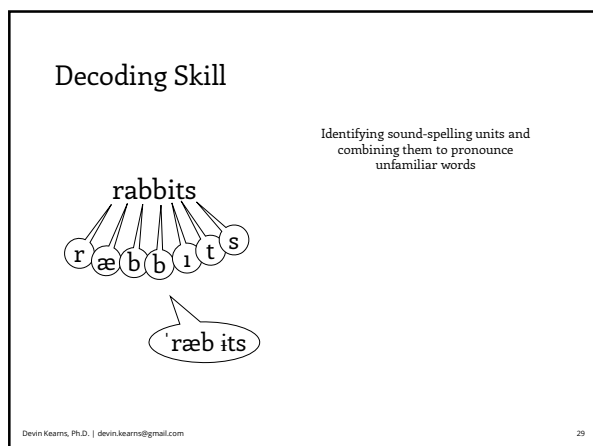
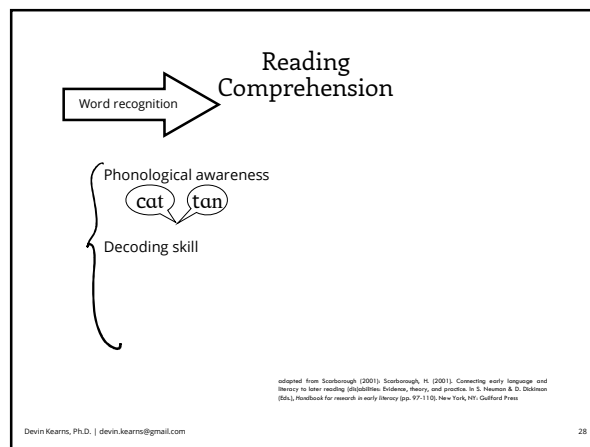
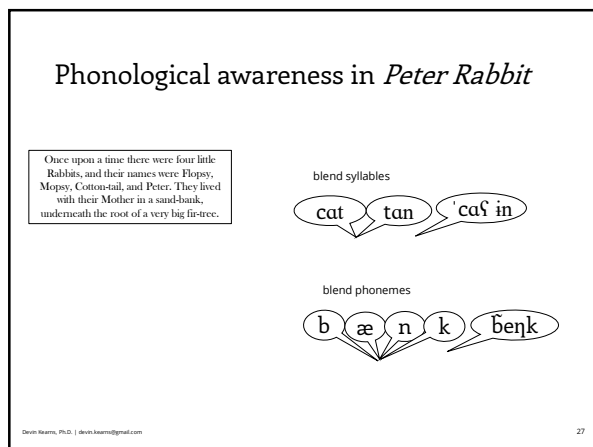
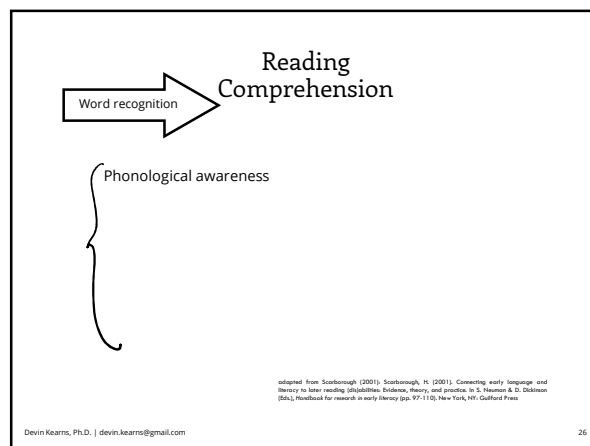
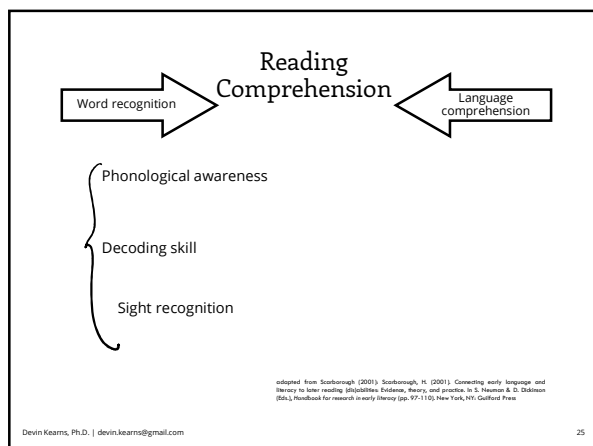
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The Simple View of Reading

Word recognition → Language comprehension

Hoover & Gough, 1990

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Sight recognition

Immediate recognition of previously encountered words

Once upon a time there were four little Rabbits, and their names were Flopsy, Mopsy, Cotton-tail, and Peter. They lived **with** their Mother in a sand-bank, underneath the root of a very big fir-tree.

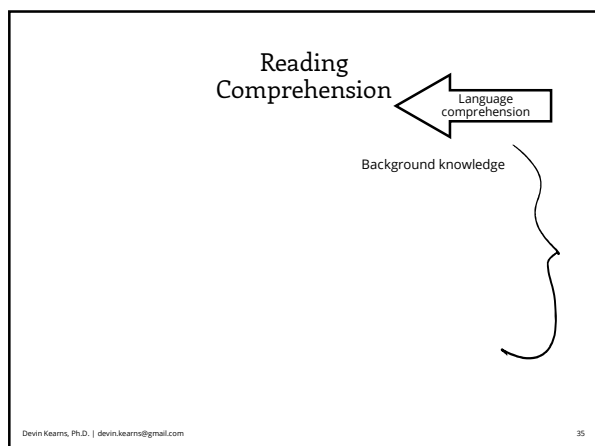
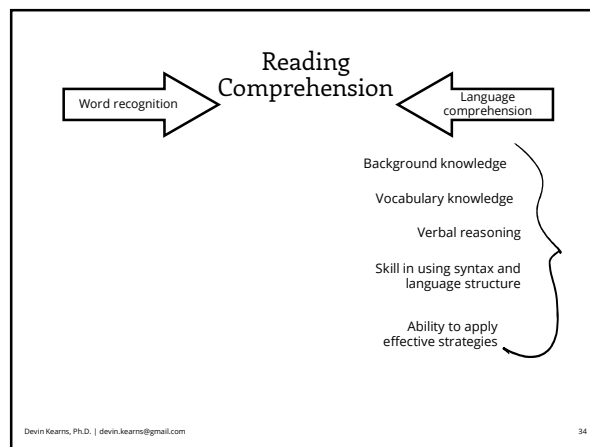
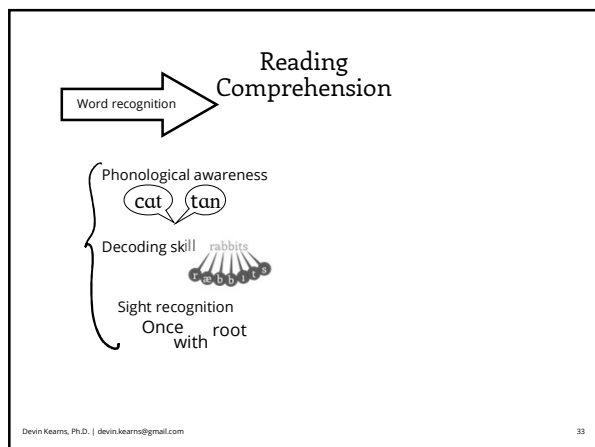
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Background knowledge

What you know about a text before starting to read it

Once upon a time there were four little Rabbits, and their names were Flopsy, Mopsy, Cotton-tail, and Peter. They lived with their Mother in a sand-bank, underneath the root of a very big fir-tree.

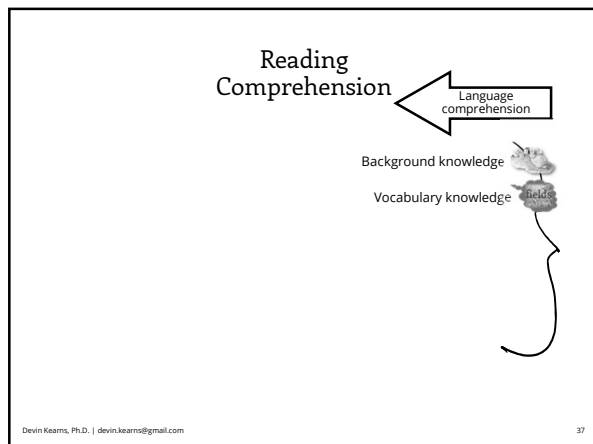
Now my dears," said old Mrs. Rabbit one morning, "you may go into the fields or down the lane, but don't go into Mr. McGregor's garden: your Father had an accident there; he was put in a pie by Mrs. McGregor."

rabbits live in burrows



rabbits are edible

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Vocabulary knowledge

Knowledge of specific word meanings and ability to figure out others

fields

a large plot where crops grow

specific definition

context

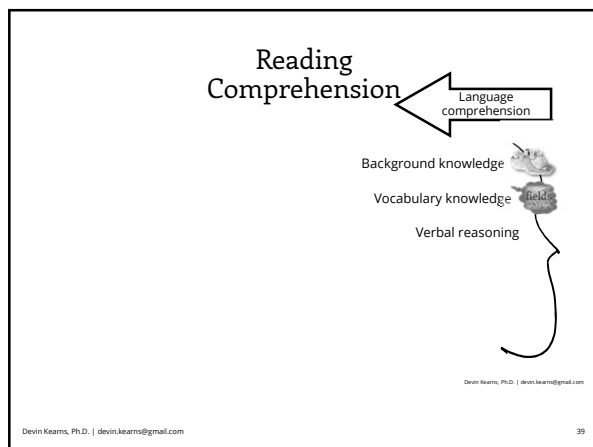
not the same as a garden

Once upon a time there were four little Rabbits, and their names were Flopsy, Mopsy, Cotton-tail, and Peter. They lived with their Mother in a sand-bank, underneath the root of a very big fir-tree.

Now my dears," said old Mrs. Rabbit one morning, "you may go into the fields or down the lane, but don't go into Mr. McGregor's garden: your Father had an accident there; he was put in a pie by Mrs. McGregor."

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Verbal reasoning

Thinking skills that can be used to construct the situation model

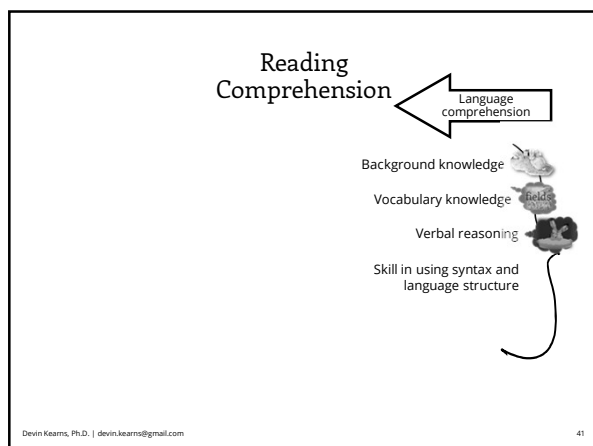
Four bunnies live with their Mother under a fir-tree

The bunnies' Mother told them to go to the fields or lane NOT the garden

Why wouldn't she let them go to the garden?

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Skill in using syntax and language structure

Implicit knowledge of grammatical structure within and across sentences

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Skill in using syntax and language structure: Anaphora



their Mother

Old Mrs. Rabbit

They lived with their Mother in a sand-bank, underneath the root of a very big fir-tree.

"Now my dears," said Old Mrs. Rabbit one morning, "you may go into the fields or down the lane, but don't go into Mr. McGregor's garden: your Father had an accident there; he was put in a pie by Mrs. McGregor."

"Now run along, and don't get into mischief. I am going out."

Then Old Mrs. Rabbit took a basket and her umbrella, and went through the wood to the baker's. She bought a loaf of brown bread and five currant buns.

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Reading Comprehension

Language comprehension

Background knowledge

Vocabulary knowledge

Verbal reasoning


Skill in using syntax and language structure

Ability to apply effective strategies

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Ability to use reading strategies, tools for unlocking text



Uh oh! I don't get it. I need help!

What tool will help me unlock this?



Summarizing

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Reading Comprehension

Language comprehension

Background knowledge

Vocabulary knowledge

Verbal reasoning

Skill in using syntax and language structure

Ability to apply effective strategies

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Reading Comprehension

Word recognition

Language comprehension

Phonological awareness

cat (tæn)

Decoding skill

rabbit

Sight recognition

Once with root

Background knowledge

Vocabulary knowledge

Verbal reasoning

Skill in using syntax and language structure

Ability to apply effective strategies

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Reading Comprehension

Word recognition

Language comprehension

Phonological awareness

Decoding skill

Sight recognition

fluency

Background knowledge

Vocabulary knowledge

Verbal reasoning

Skill in using syntax and language structure

Ability to apply effective strategies

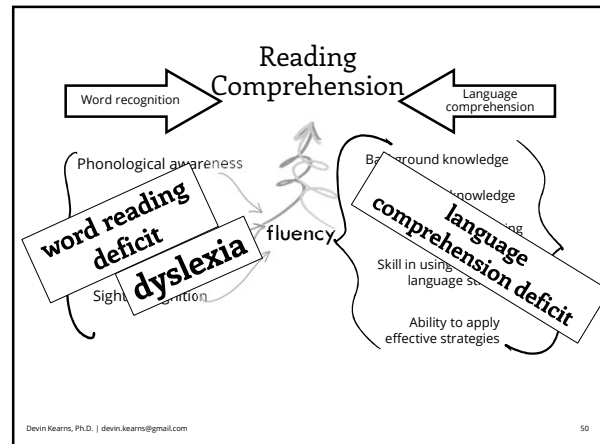
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How does dyslexia fit into the simple view of reading?

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Dyslexia prevents reading comprehension

Remember *Monseigneur in Town*?

Monseigneur, singularian of the august lords in power at the Kōit, held his fatnartly riseɸən in his grand hotel in Paris. Monseigneur was in his inner room, his seɸtɸuɜ:ɪ of seɸtɸuɜ:ɪz, the Holiest of Holiests to the crowd of wɜ:ɸɪpə:z in the swit of rooms without. Monseigneur was about to take his ɸaklit.

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Dyslexia prevents reading comprehension

Remember *Monseigneur in Town*?

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Dyslexia prevents reading comprehension

You **can't recognize words**

You

- *can't even identify* the surface structure
- *can't begin to understand* sentences in the textbase
- *can't even consider* selecting the key ideas to construct the situation model

seɸtɸuɜ:ɪz
riseɸən
fatnartly
wɜ:ɸɪpə:z

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So what can we do about it?

(besides not reading *Monseigneur in Town*)

Provide instruction using a structured literacy approach

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What kind of instruction will help?

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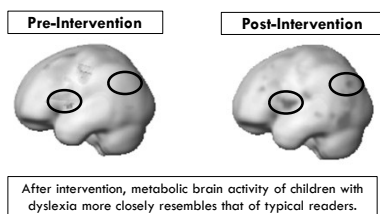
Structured literacy *Explicit Systematic Phonics Instruction*

- Phonological awareness
- Learning sound-spellings
- Decoding words using phonics
- Recognition of high-frequency words (especially words that are more difficult to decode)

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Intervention results in brain change



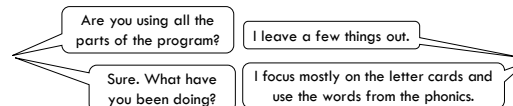
Adapted from presentations by Trynka Kaufman & Joanna Christodoulou

Temple et al. (2003) PHAS

Use a program

Creative Reading Solutions
Different approach, better results

- CRS Features
- 40 sound-spelling cards
 - 20 phonological awareness game routines
 - reading words with specific procedures
 - spelling-and-decoding routines
 - decodable books
 - 26 letter cards



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Note: This is an imaginary program.

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Use a program...

~~*Creative Reading Solutions*~~
Different approach, better results

- CRS Features
- [redacted] words
 - 26 letter cards

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Is this using a program? Um...NO

Letters and Words by Mr. D

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Practice phonological awareness

Ability to Detect and Manipulate Sound Units of various Sizes

Phonemic Awareness

Devin Kearns (2016)

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Use Strategies like Segmenting and Blending

Segmenting Language

- The word is cat. What word?
 - Cat.
- Say the sounds in cat.
 - (Then, put up fingers)
 - /k/ ... /a/ ... /t/.
- Good. What word?
 - (Sweep hand across)
 - Cat.

Blending Language

- "Listen. I'll say the sounds. You say the word."
 - /d/ ... /o/ ... /g/
 - (Put up fingers for sounds)
- What word?
 - (Sweep hand across)
 - Dog.

Devin Kearns (2016)

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Teach grapheme-phoneme correspondences

- Letter-sound correspondences
- Sound-symbol correspondences
- Sound-spellings

ch = /ch/

M

/m/

Introduce Grapheme-Phoneme Correspondences

Here is today's sound-spelling. The sound is /f/. The spelling is *f*.

The clue card helps remember the sound-spelling. What is the picture?

In the flower, you see the spelling *f* for /f/. What is the clue? What is the sound? What is the spelling?

/f/.

F.

A flower.

Flower. /f/. F.

Ff

Now you'll read some words that have the sound-spelling *f* says /f/.

Decode words using a *blending* strategy

Ms. Ish
3rd/4th Grade Special Education

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Implement a Multi-Tier System of Support (MTSS)

Tier	Focus of the Tier
1	<ul style="list-style-type: none"> universal screening for all students to identify disability risk grade-level curriculum for all students differentiation of grade-level curriculum for all students
2	<ul style="list-style-type: none"> foundational instruction for students at-risk progress monitoring at intervals to check progress
3	<ul style="list-style-type: none"> foundational instruction at the student's instructional level individualization using data-based individualization frequent progress monitoring diagnostic assessment to design adaptations to instruction

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Make instructional decisions using progress monitoring data

Amount of Improvement	Possible Decision
Excellent growth—student is nearly at or above grade-level benchmark	Participation in Tier 1 only
Good growth—student is below benchmark but shows progress toward it	Participation in Tier 1 with additional PM every 2-4 weeks
Some growth—student shows progress but is not closing the gap with the benchmark	An additional round of participation in Tier 2—but not more than that
Limited growth—student shows almost no change from beginning of Tier 2	Participation in Tier 3

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Thank you very much!

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