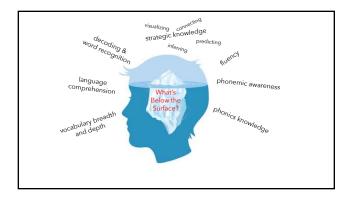
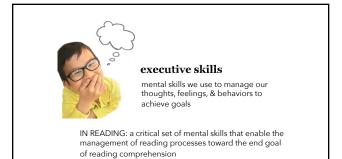


but, even with all those skills in place, reading comprehension STILL looks like this for some of our students...







Plan for the Workshop

What are executive skills?

Why are they important?

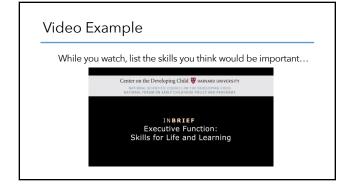
How can we teach them to support reading comprehension?

What are executive skills?

Coming to terms....

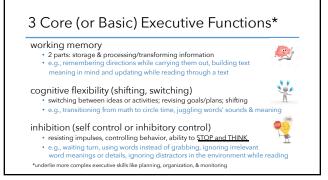
- executive skills
- executive functions
- executive functioning skills
- executive control
- executive control processes



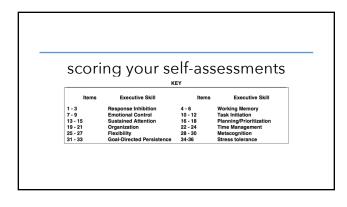


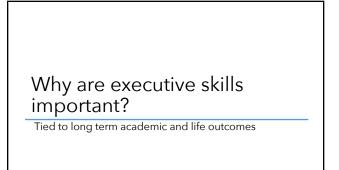
Turn and Talk

- What specific skills did you note?
- Do you see these (or the need for these) in your students?













The Marshmallow Study (Mischel et al. 1972)

- One marshmallow now, or wait and get two
- Self control (waiting, delaying gratification) was related to: • higher SAT scores
 - better social, cognitive, and emotional coping in adolescence
 - educational achievement
 - adult self-worth
 - · better ability to cope with stress as adults
 - · less crack cocaine use (in vulnerable populations)



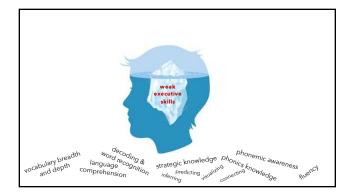
(Mischel et al., 2011)

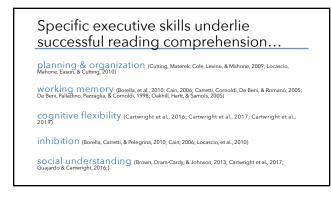
$\underset{(Moffitt et al., 2011; controlled for IQ and SES)}{\text{Low self controlled for IQ and SES}}$

- More teen "snares" that led to negative long term outcomes (early smoking, dropping out of school, pregnancy)
- Worse **health** as adults
- Higher risk of substance dependence as adults
- Poor money management, less wealth as adults
- More crime (more likely to be convicted of a crime by age 32)

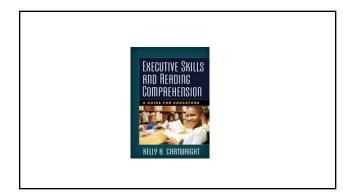








How can we teach executive skills to support reading comprehension?



Teaching executive skills...

- Requires that we TALK about THINKING in ways that may be unfamiliar to us
- Goes beyond comprehension strategies & typical thinkalouds
- Is also familiar because it brings together many things that we already do!



Introducing 6 executive skills...

For each of the 6 skills:

- introduction, definition, examples (assessments, games) brief review from keynote
- how you might explain the skill
- applications to reading instruction

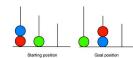
1. Planning (Chapter 2)

People with goals succeed because they know where they're going (good comprehenders understand because they know why they are reading)

-- attributed to Earl Nightingale, brainyquote.com

Planning (& Organization) (ability to implement multi-step tasks, in proper order, to reach a goal)

 Tower of London task: arrange balls or disks on pegs to match a goal (count number of moves, errors, speed)



How many moves would it take you to get these colored balls from the starting position to the goal position, moving only ONE ball at a time?

- Games that require planning: Jenga, Chess, Checkers
- Games that require organization: 20 questions, Apples to Apples

Explaining Planning

"Good readers are good planners. This means that before good readers start reading, they do lots of things to help themselves understand what they read. They start with a plan to understand! The first thing good readers do is to set a goal for reading. This means that good readers know why they're reading. They make a plan to understand the text in a certain way or for a certain reason. Then, to help themselves reach the goal, they take steps to get there..."

Planning and Reading Comprehension

- Draws on many things we know good readers do
- Involves goal-setting and teaching students steps they can take to reach their reading goal for a particular text

My Plan to Understand

Good readers are good planners: Know why they are reading and make a plan to get there

My Plan to Understand First, set a goal: ________*discuss w/students THEN ask yourself these questions • Preview: Looking through the book, what do I see to help me get there? • Focus: Should I pay more attention to some parts and slow down for others? • Connect: What do I already know about this topic that will help me reach the goal? • Question: What goal-related question(s) can I ask myself? • Predict: What do I guess will be in this book? • What other steps can I take to reach my goal? • What will I know when I'm done?

Questions to guide goal-setting discussions (first step in plan)...

- Why are you reading this text?
- What kind of a text is it, a story or an informational text (fiction or non-fiction)?
- · What do you need to know when you are done?
- Do you need to remember details of a story, or are you reading to learn information about a new topic?
- Are you reading to answer questions?
- Are you reading to find a particular kind of information?
- Are you reading for fun?

Explicit reminders to support the development of planning...

- Don't forget to follow the steps in your Plan to Understand
- While you're reading, it helps to keep your goal in mind.
- · Remember what you're trying to do; remember why you're reading this text.
- Use your steps to help you ______ (fill in the goal).
- Good job! You remembered what this text was about (or wrote a good summary, or found the information you were looking for, etc.) because you followed your Plan to Understand.

Planning for Students

My Plan to Understand

First ask: Why am I reading? What is my goal?

Then, with my goal in mind . . .

- Preview: Looking through the book, what do I see to help me get there?
- Should I pay more attention to some parts and slow down for others?
- Connect: What do I already know about this topic that will help me reach the goal?
- Question: What goal-related question(s) can I ask myself?
- Predict: What do I guess will be in this book?What other steps can I take to reach my goal?
- What will I know when I'm done?

2. Organization (Chapter 3)

Organization is what you do before you do something, so that when you do it, it's not all mixed up.

(Authors use different kinds of organization to help us understand text; good readers use that organization to help themselves understand text.)

- Attributed to A. A. Milne (https://www.goodreads.com/quotes)

Explaining Organization

"Remember how we talked about good readers being good planners? Good readers are also organized thinkers! This means that they are good at noticing patterns and sequences in things, and using those patterns and sequences to better understand text. Sometimes, good readers pay attention to the patterns in stories to help them remember information from stories they read. Other times, good readers notice the different kinds of patterns in informational texts - books that are written to give us information and use those patterns to understand texts better. Good readers are also good at arranging information in their heads so that it's easier to remember and use later..."

Organization and Reading Comprehension

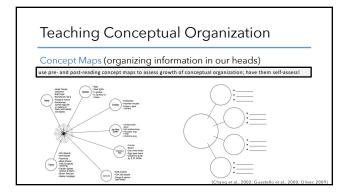
Recognition of organization already in texts
• syntax (word order)

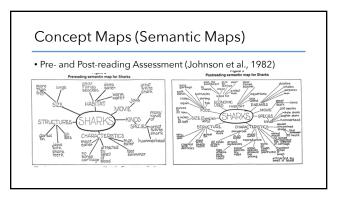
· text structure (narrative or various informational structures)

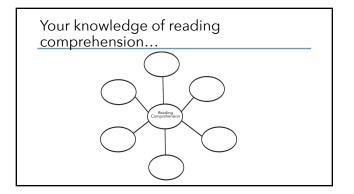
Ability to USE a text's organization to remember what's in it

Ability to apply one's own knowledge of organization to words and texts (requires explicit knowledge of organization as a tool)

Good readers are organized thinkers: They know how words, stories, and books are put ogether and use what they know to help them remember what they read







Turn and Talk

- What did you write?
- What factors contribute to successful reading comprehension?

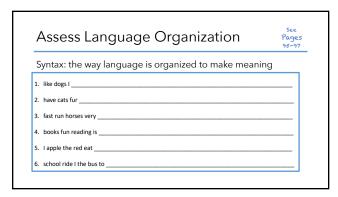
Teaching Language Organization: Scrambled Sentences

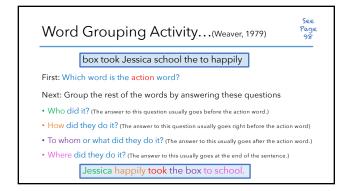
Syntax: the way language is organized to make meaning Example:

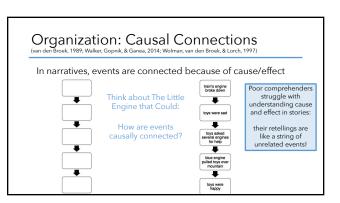
quickly backyard dog the she in brushed the

You can begin each day with a sentence anagram (scrambled sentence) on the board to provide practice! Discuss and have them explain reasons for their choices.

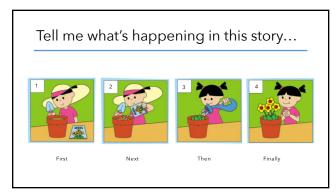
Guo et al., 2009; Nation & Snowling, 2000; Shiotsu & Weir, 2007)



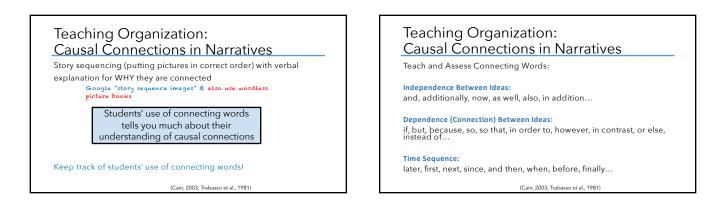


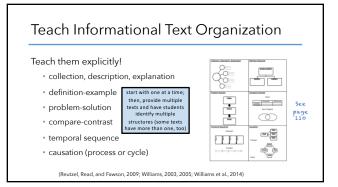


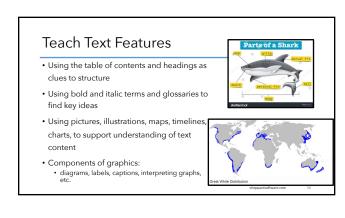








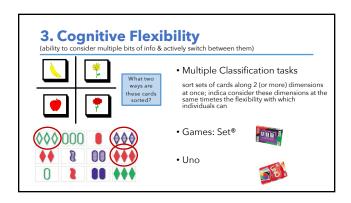




3. Cognitive Flexibility (Chapter 4)

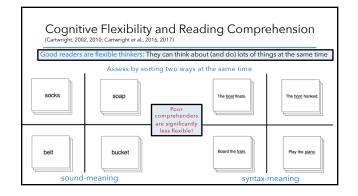
The test of a first-rate intelligence is the ability to hold two opposed ideas in mind at the same time, and still retain the ability to function. (and the test of a good reader is whether he or she can juggle multiple aspects of text, actively switching between them while reading!)

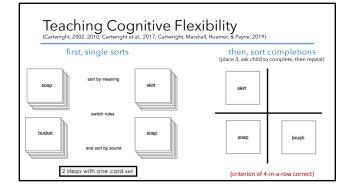
-- F. Scott Fitzgerald (1964, p. 69)

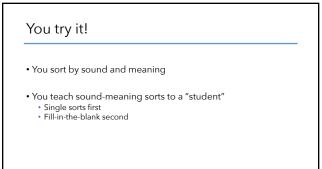


Explaining Cognitive Flexibility

"Good readers are flexible thinkers. Does anyone know what flexible means? (*students respond*) ...Yes, that's right! Flexible means that someone can bend or stretch really well. When good readers read, they don't just think about texts and words in one way or stretch their minds a little bit. Instead, they are able to bend or stretch their thinking so that they can juggle lots of aspects of the words they're reading at the same time!..."







Teaching Cognitive Flexibility: Multi-feature Questions - sound & meaning

I am thinking of a yellow food that starts with /b/.

I am thinking of a beach container that rhymes with rail.

Tell me a /d/ word that names a kind of flower.

Can you think of a /p/ word that you can eat?

4. Working Memory (Chapter 5)

I am an omnivorous reader with a strangely retentive memory for trifles. (Isn't that what we want for all of our readers - to retain what they read?!)

- Sherlock Holmes (Doyle, 1986, p. 692)

4. Working Memory (storage & processing: ability to hold information in mind while completing a task)

Let's try a sentence completion task...

Another assessment: the letters backward task "I'm going to say some letters, and you repeat them backwards."

Q K becomes K Q
 Z P N becomes N P Z
 F T S B becomes B S T F

Games: "Johnny has a _____ in his pocket" & "The name game"

- Pocket Game: Students take turns, add an item each time; alphabetical order; say entire list PLUS their new item on their turn
- Name Ice breaker: Each student says their name and something they like; subsequent students must remember each student, their liked item, AND come up with their own response, adding it to the list

Explaining Working Memory

"Today I'm going to tell you about another thinking skill that good readers have. Good readers have really good memories. And, they are good at a specific kind of memory called working memory. Working memory is that space in your head where you hold information will help you're doing something because that information will help you do it better. When you're reading, working memory helps you understand texts better. It helps you connect things in texts to knowledge you already have, and it helps you connect different pieces of text together. Both of these help you better understand what you read. Let me show you what I mean...(see book)

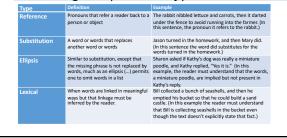
Working Memory and Reading Comprehension

Storage AND Processing

- Constructing and remembering text meaning (storage), while
 - Processing anaphors (e.g., pronoun references)
 - Encountering new ideas in a text & updating
 - Connecting text with prior knowledge
 - Inferring missing bits by connecting text parts or filling gaps
 - Using strategies to monitor/maintain meaning
 - Keeping goal of reading in mind while reading
- Good readers have good memories: They can keep some things in mind while doing other things

Teaching Working Memory: Resolving Anaphors Sally loves to go the the park with Lang because she Marker of Lange bits of text, and we have to figure out what they mean. Requires holding words in mind so you can connect them to later words. Jim's mother said he couldn't have a pet because he didn't have time to take care of one.

Teaching Working Memory Resolving Anaphora (4 types)



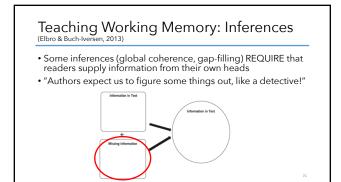
Teaching Working Memory: Inferences

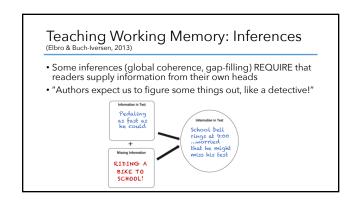
It was 8:55, and the school bell rings at 9:00. Andy was pedaling as fast as he could, because he was worried that he might miss his test.

Where was Andy going? (Text-connecting, local coherence inference)

How was Andy getting there? (Gap-filling, global coherence inference)

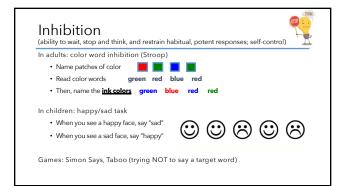
(Bowyer-Crane & Snowling, 2005; Cain & Oakhill, 1999; Elbro and Buch-Iversen, 2013)





5. Inhibition (Chapter 6)

Upon reading these various extracts, they not only seemed to me irrelevant, but I could perceive no mode in which any one of them could be brought to bear upon the matter at hand. - Poe (1899, p. 87)



Explaining Inhibition

"Sometimes our thinking gets in the way of understanding! Let me explain what I mean. Sometimes, when we read words that can have two meanings, we think about the wrong meaning - the one that doesn't fit in the text. When we do that, we don't understand what we read as well as we could. Other times, words might distract us, and get us thinking about things that are not related to what we are reading, like when you start thinking of your own birthday party when reading about a character's birthday. So, good readers are good at ignoring things that are not relevant or important for understanding a text. The ability to ignore things that aren't important to understanding texts is called inhibition. Good readers are good at inhibition."

Inhibition Problems

- Calling up irrelevant word meanings (*jam*: traffic jam or edible jam)
- Difficulty inhibiting/ignoring irrelevant word meanings
- Trouble ignoring irrelevant details
- Trouble ignoring distractions while reading
- Reflexively blurting out the first word that comes to mind with partial letter-sound information ("bring" for "bridge")

• Reflexively blurting out "stories" that are marginally related to a text

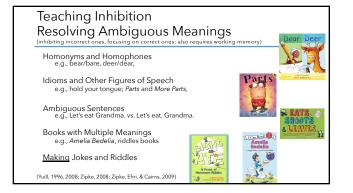
Good readers are good at ignoring (inhibiting) things that are not important to understanding



He eats shoots and leaves. He eats, shoots, and leaves.

> Let's eat Grandma! Let's eat, Grandma!

commas save lives!



Teaching Inhibition: Polysemy and Academic Language (Homonyms) Poly = many; semy = meanings Sometimes we expect students to learn (or know) academic meanings for words that also have everyday meanings readers (and listeners) must inhibit the common meaning and pay attention to the more specialized academic meaning!

"sentence" in language arts vs. math class "some" (part) vs. "sum" (total)

Common vs. Academic Meanings... (Logan & Kieffer, 2017 - assessment for common & academic meanings)

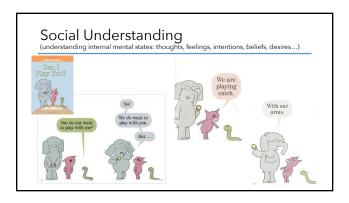
l scratched my head in confusion.	The general is the head of the army.
Does <i>head</i> mean:	In this case, does <i>head</i> mean:
a. cabbage b. sneaker c. part of the body d. leader of a group e. to go somewhere	a. cabbage b. sneaker c. part of the body d. leader of a group e. to go somewhere

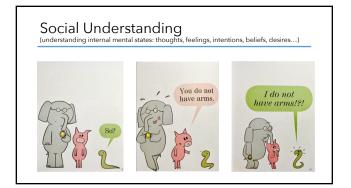
6. Social Understanding (Chapter 7)

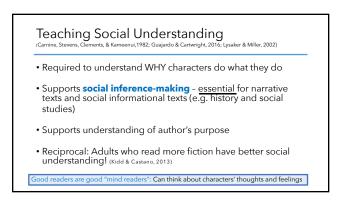
"What an astonishing thing a book is. It's a flat object made from a tree with flexible parts on which are imprinted lots of funny dark squiggles. But one glance at it and you're inside the mind of another person, maybe somebody dead for thousands of years. Across the millennia, an author is speaking clearly and silently inside your head, directly to you. Writing is perhaps the greatest of human inventions, binding together people who never knew each other, citizens of distant epochs. Books break the shackles of time. A book is proof that humans are capable of working magic."

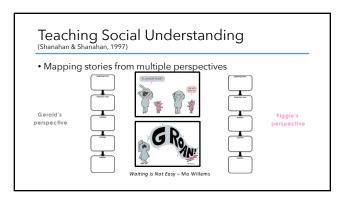
Explaining Social Understanding

"Good readers are really good at thinking about why characters do the things they do, because good readers think about what characters might be thinking or feeling! You might say that good readers are good 'mind readers.' They read characters' minds! When we read about characters, we read about the actions that they take, but that is only part of the story..."

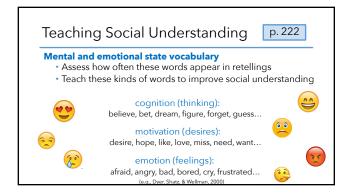












Turn and Talk

- How can you use emojis to help teach social understanding?
- What other ways can you incorporate social understanding into instruction?



Come up with at least three things to try!

Pulling It All Together (Chapter 8)

"Re-vision – the act of looking back, of seeing with fresh eyes, of entering an old text from a new critical direction." -- Rich (1972, p. 18)

(familiar literacy skills in <u>underlined blue font</u> and executive skills in **BOLD blue font**)

Before reading...

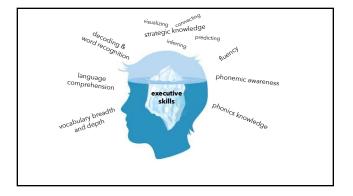
When skilled comprehenders pick up a new text, they **approach the reading task very deliberately, with a plan** to understand the text for a particular purpose. To prepare to understand a text, they <u>preview</u> the text, <u>making connections to their own prior</u>. <u>knowledge</u> about the topic of the text, <u>asking themselves questions</u> about what they might encounter in the text, and <u>making predictions</u> about what they expect to discover as they read. They <u>preview the text's structure</u>, because they are aware that <u>knowledge of</u> <u>text structure</u> will help them <u>organize incoming information</u> as they read and support their own <u>construction of a model of the text's meaning in working memory</u>. Thus, even when <u>planning</u> for comprehension before reading begins, skilled comprehenders display remarkable <u>cognitive flexibility</u>, <u>shifting between thoughts of their own prior</u> <u>knowledge</u> asking <u>questions</u>, <u>making predictions</u>, and <u>previewing text structure</u>, all while <u>maintaining focus on their orimary coal</u> for understanding the text.

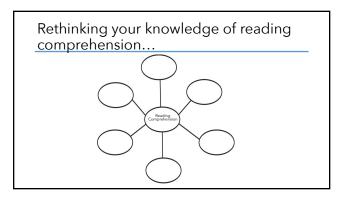
During reading...

Skilled comprehenders build a coherent model of text meaning in **working memory**. To do this, they **flexibly juggle multiple kinds of information** as they read, such as <u>letter</u>, sound information, information about text and <u>lanouage</u> organization, word meanings, and links to prior knowledge, making gas filling inferences, when necessary. They check, predictions, *visualize* events, make text-based inferences, and use **social understanding** to make inferences based on characters' internal mental worlds, while continually monitoring understanding and progress toward their **planned goal**, and **updating their mental model of text meaning in** *working memory***. They draw on** *inhibition* **to suppress irrelevant information, ignore distractions, and refrain from engaging in behaviors that undermine reading comprehension. They are able to manage flexibly** all of these processes while they identify, and **hold in working memory**, the most important features of text to <u>construct summaries</u> that will support comprehension and memory for text content.

After reading...

Skilled comprehenders continue to <u>reflect on text content</u> in working memory, <u>connecting</u> the new information they have learned to their existing knowledge structures. in ways that capitalize on their existing **conceptual organization**, **flexibly shifting and adjusting** their own knowledge structures as necessary in response to the new information gleaned from text. They also <u>draw conclusions</u> about the <u>questions</u> and <u>predictions</u> that guided their **planning** and processing of the text, and they <u>evaluate the</u> <u>extent</u> to which they were successful in implementing their **plan to reach particular comprehension goals**. These post-reading activities necessarily recruit working memory as readers <u>reflect on their summary</u> of text information and **flexibly shift between** thinking about their own prior knowledge, predictions, and questions, revising knowledge structures as necessary, and <u>evaluating the extent</u> to which their.





Turn and Talk

- What do you already do that supports the development of executive skills and self regulation?
- What could you change to better support these skills in your students?

How have you re-visioned reading today?

