

Teaching Reading Comprehension: Research, Best Practice, and Good Teaching

P. David Pearson
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www.scienceandliteracy.org

For more information about my views of comprehension...

- ▶ Nell Duke and P. David Pearson (2002) *Effective Practices for Developing Reading Comprehension*. In S. J. Samuels and A. E. Farstrup (Eds.) *What research says to the teacher* (3rd edition). Newark, DE: International Reading Association.
- ▶ Underwood, T., Yoo, M., & Pearson, P. D. (2007). Understanding reading comprehension in secondary schools through the lens of the four resources model, in Rush, L.S., Eakle, A.J., Berger, A. (Eds.) *Secondary school literacy: What research reveals for classroom practice* (pp 90-116). Urbana IL: National Council of Teachers of English.

Survey

- Elementary?
- Secondary?
- College?
- What's the difference



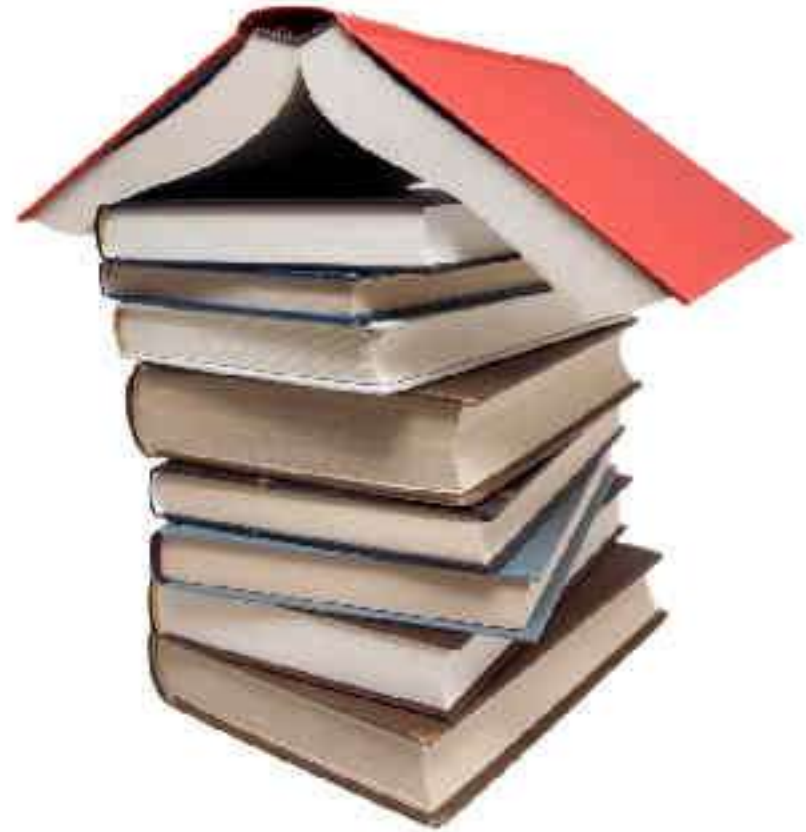
Elementary Teachers Love

- Their kids



Secondary Teachers Love

- Their subjects



College Teachers Love

- Themselves




Why Comprehension?



Why now?

- ▶ There is a new sheriff in town (in the US)...
- ▶ Teaching for understanding...
 - ▶ But with high levels of accountability
- ▶ More challenging curriculum for all kids
- ▶ We'll be overturning the Basic Skills Conspiracy:
 - ▶ First ya' gotta' get the words right and the facts straight before you can do the what ifs and I wonder whats of the curriculum.
- ▶ Replacing it with a Keep Your Eye on the Prize approach
 - ▶ Phonics is on the road to comprehension



-
- ▶ The job of phonics is to get to
 - ▶ Word pronunciation on the way to
 - ▶ Word meaning on the way to
 - ▶ Text understanding
 - ▶ Even the job of phonemic awareness is to get to
 - ▶ Phonics
-
- 

So how do you design a comprehension curriculum for teachers to enact in their classrooms?

For presentations and papers, go to www.scienceandliteracy.org

What I try to convince folks of when it comes to supporting comprehension

- ▶ A goal
- ▶ A supportive context
- ▶ An instructional model
- ▶ A comprehension curriculum



1. You need a goal: what is an expert reader

- Active
- Planful
- Integrate PK and TI
- Constant revision
- Monitor
- Take stock

Consuming,
continuous,
complex,
engaging



Assumptions: Things I won't talk about

- ▶ Selected a curriculum
- ▶ Selected an assessment system.



The perils of performance assessment: or
~~maybe those multiple-choice assessments~~
aren't so bad after all.....

- Some people can tell what time it is by looking at the sun, but I never have been able to make out the numbers.
- There are four seasons: salt, pepper, mustard, and catsup.

The perils of performance assessment

- "Water is composed of two gins, Oxygin and Hydrogin. Oxygin is pure gin. Hydrogin is gin and water."

The perils of performance assessment

- "Germinate: To become a naturalized German."
- "Vacumm: A large, empty space where the pope lives."

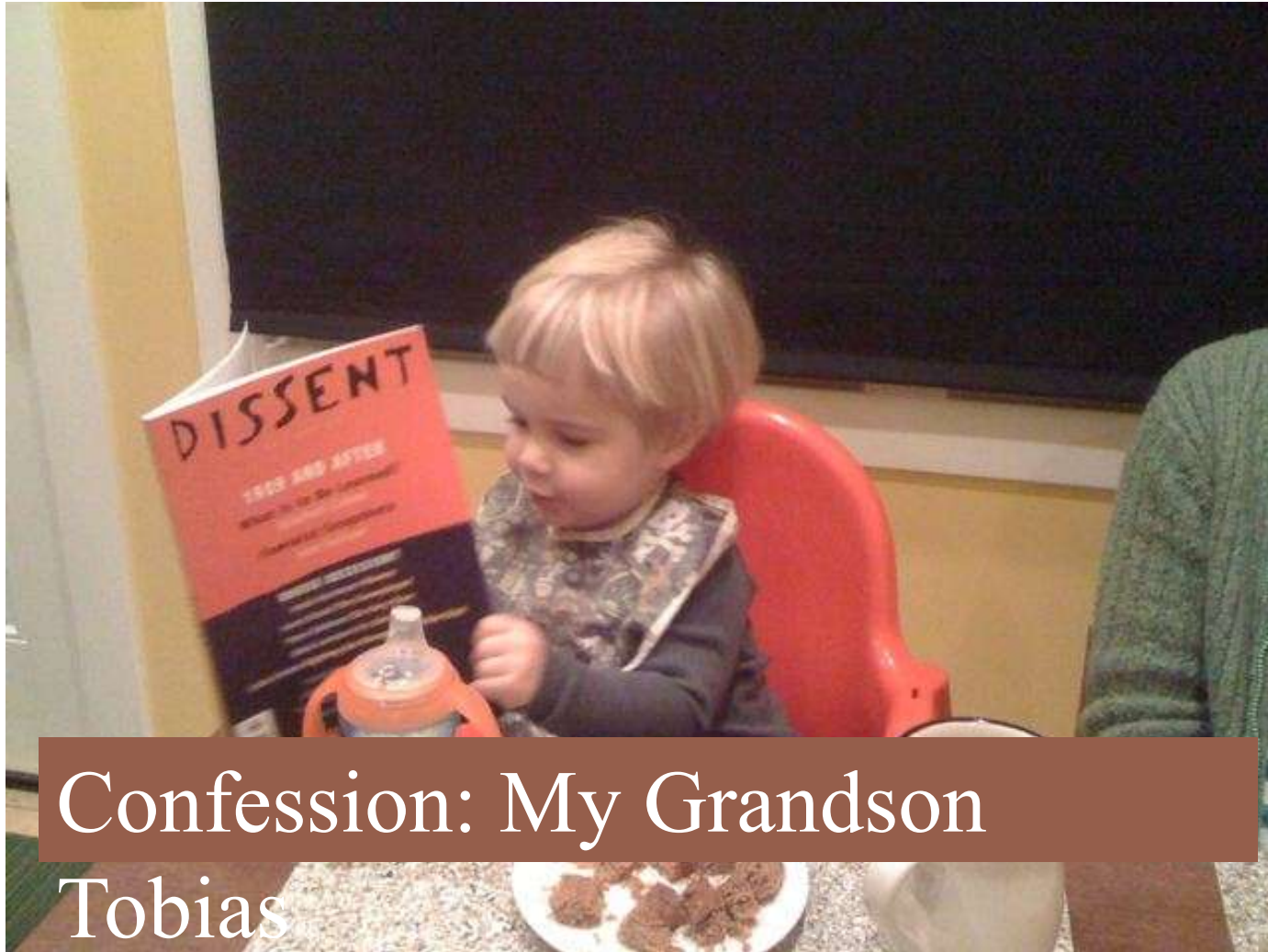
The perils of performance assessment

- Genetics explains why you look like your father, and if you don't, why you should.

The perils of performance assessment

- You can listen to thunder and tell how close you came to getting hit. If you don't hear it, you got hit, so never mind.
- "When you breath, you inspire. When you do not breath, you expire."

The Goal: The Active Meaning Maker



Confession: My Grandson
Tobias

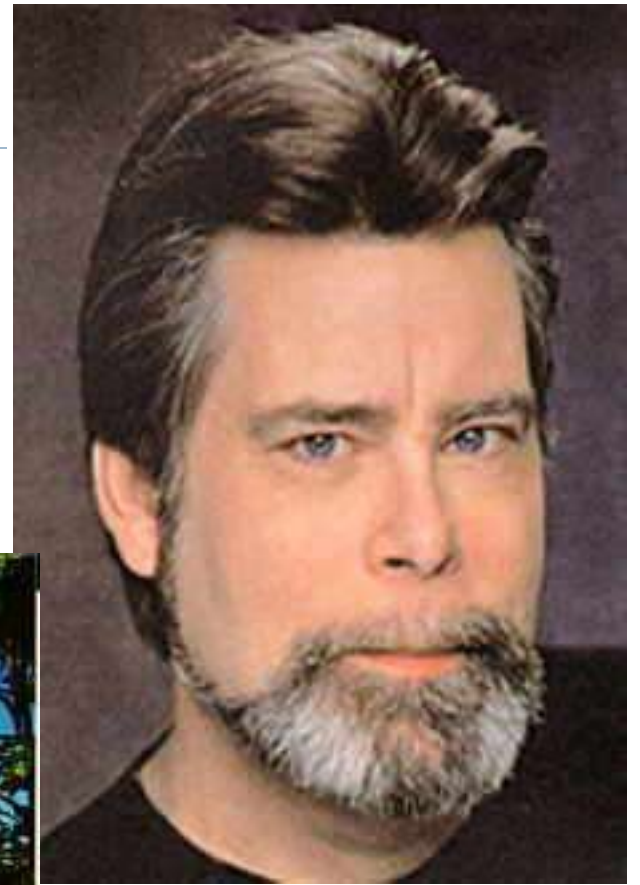


From Stephen King

- ▶ *On Writing: A Memoir of the Craft*, by Stephen King
- ▶ He got it right about building what it takes to build a model of reading
- ▶ Listen as I read his words...







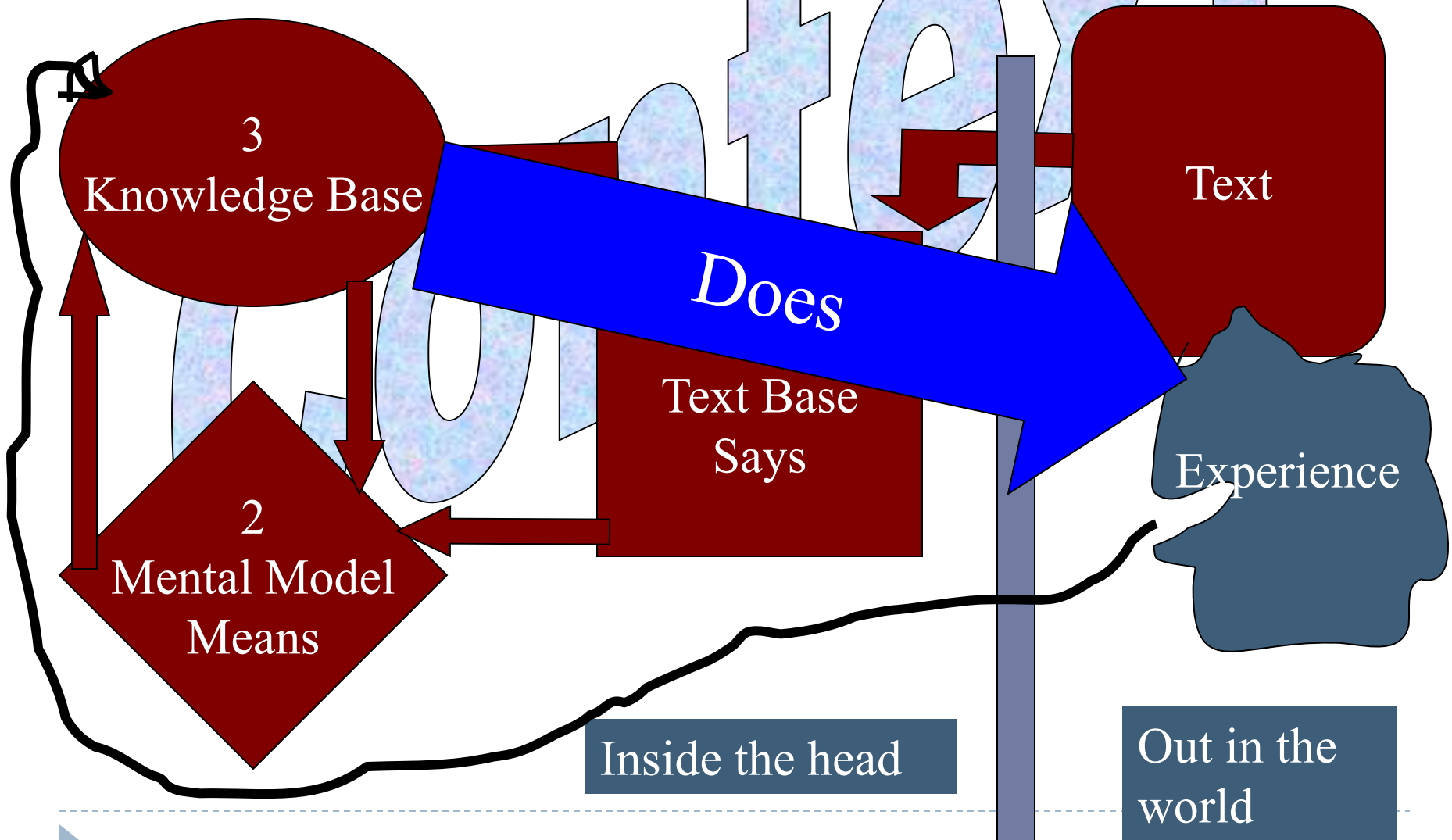


What can we learn from Stephen King about building mental models?

- ▶ That writers expect us to fill in some of the details in building a model of meaning.
- ▶ That no two readers will ever build exactly the same mental model
- ▶ That our models will often be similar enough to allow us to “talk about a text.” (we need to agree on the general frame not the details)*
- ▶ That some things are more important than others
- ▶ Whose minds meet in reading? Reading is an inherently social activity

▶ *levels of accountability in making meaning

Kintchian-derived model...



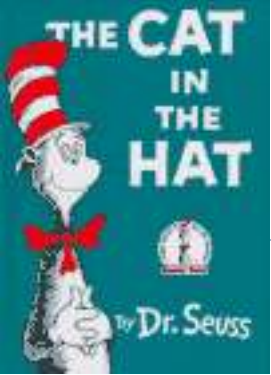
2. You need a supportive classroom context*

- ▶ Opportunity: large amounts of time for actual text reading
 - ▶ Talk: talking about text, with a teacher and one another
 - ▶ Words: Conceptually driven vocabulary development
 - ▶ **Enabling Skills**: solid base of decoding, monitoring and fluency
 - ▶ Writing: writing texts for others to comprehend
 - ▶ Critique: Learning how writers use language to shape readers' understanding
-

The nature of texts

- ▶ The texts are interesting and comprehensible and sufficiently varied so that all students can find texts to relate to (interest and motivation).
- ▶ Daily, students read texts that are personally interesting and easy to read. *Why?* So that students can consolidate their learning of skills and strategies.
- ▶ Also on a daily basis, students read, with teacher support, more challenging texts. *Why?* In order to stretch their knowledge and skill repertoire. Establish tomorrow's prior knowledge.





The nature of texts in effective programs

1. While common sense suggests that some of these texts should allow students to apply the decoding and comprehension skills they are learning, there is precious little evidence to support the creation and use of special instructional texts for this purpose.

2. The current corpus of children's books contains numerous texts that provide many of the opportunities students need.



Opportunity

- ▶ The big ruckus from the National Reading Panel
- ▶ Should we promote independent reading?



What NRP really says

- ▶ The evidence is too sketchy to draw any conclusion one way or another...
- ▶ About school-based programs to promote independent reading
 - ▶ DEAR
 - ▶ SSSR



My own view

- ▶ The lack of credible evidence one way or another is no basis for getting rid of programs that have other virtues: interest & motivation
- ▶ Is reading the only phenomenon in human experience that doesn't get better with practice? (well at least until you reach my age)
- ▶ If you do it, do it right and do it well
 - ▶ Make sure kids have things to read
 - ▶ Make sure kids DO read
 - ▶ Provide incentives, support, and accountability



Talk about Text

- ▶ An environment rich in high-quality talk about text.
 - ▶ teacher-to-student
 - ▶ student-to-student talk.
- ▶ Many levels
 - ▶ What the text says: clarifying and connecting
 - ▶ What the text means: relating, interpreting
 - ▶ What the text does: Critique and evaluation



Recent meta-analysis

- ▶ Murphy, P. K., Wilkinson, I. A. G., Soter, A. O., Hennessey, M. N. & Alexander, J. F. (in press). Examining the effects of classroom discussion on students' high-level comprehension of text: A meta-analysis. *Journal of Educational Psychology*.



We have pretty good models and research on this score

- Instructional Conversations
- Questioning the Author
- Junior Great Books

What the text SAYS

Efferent

What the text MEANS
Aesthetic-Expressive

- Book Club
- Literature Circle
- Grand Conversations

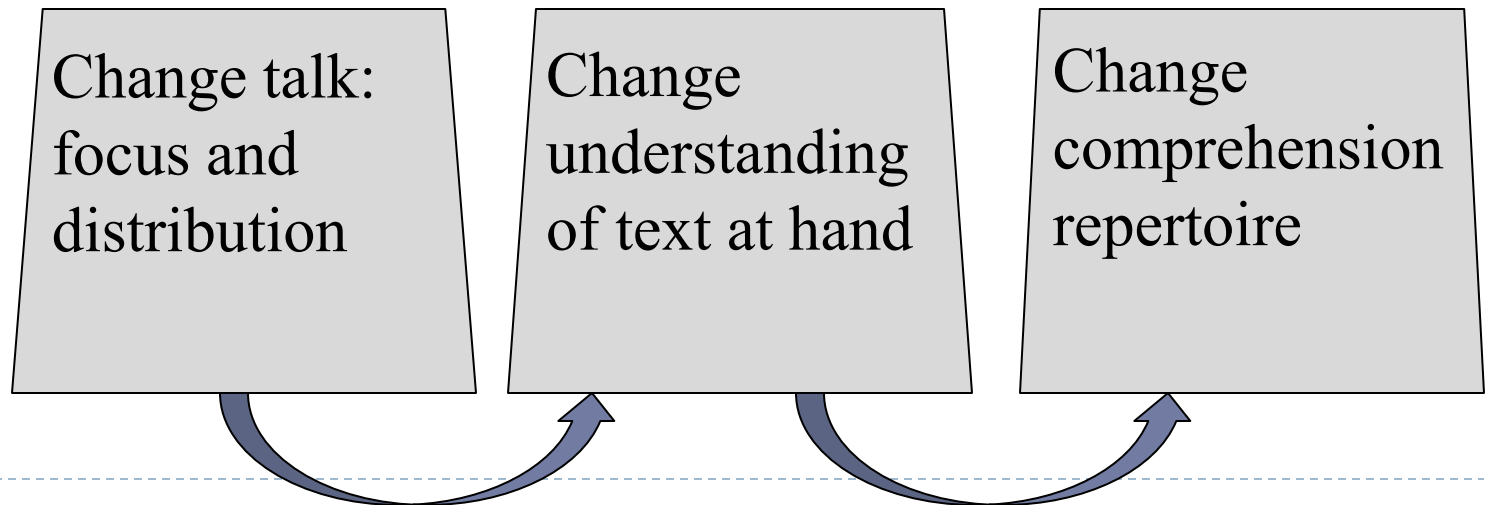
- Collaborative Reasoning
- Paidea Seminar
- Philosophy for Children

What the text DOES

Critical Analytic

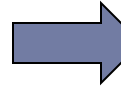
Murphy et al Meta-analysis

- ▶ What's the underlying theory of all of these interventions?



Summary findings

- ▶ Stronger effects on talk than comprehension.

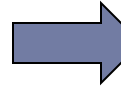


- **Changes in participation are a necessary but not a sufficient condition for comp**



Summary findings

- ▶ Some evidence of you get what you pay for, especially for critical thinking.

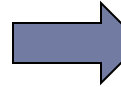


- **Probably means you gotta do it all...**
 - **Literal**
 - **Inferential**
 - **Critical**



Summary findings

- ▶ Seems to be more important for average and low achievers

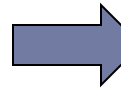


- **Ironically, most of us spend more discussion time with the high achievers**
- **Beware self-delusion**



Summary findings

- ▶ Time matters: longer is better



- **Stay the course**
- **Ironically, we tend to discard things rapidly**



Upcoming video

- ▶ **Context**
 - ▶ NYC
 - ▶ ELL—monolingual Spanish in Grade 1
- ▶ Watch the teacher
- ▶ Watch the kids enter the conversation
- ▶ See how the text gets used



A great example from NYC



▶ Watch the teacher; watch the kid to kid talk

Observations

- ▶ **Teacher role**
 - ▶ What has happened before this taping?
- ▶ **Kids role in conversation**
 - ▶ **School wide practice**
 - ▶ Accountable talk
 - ▶ Discourse moves



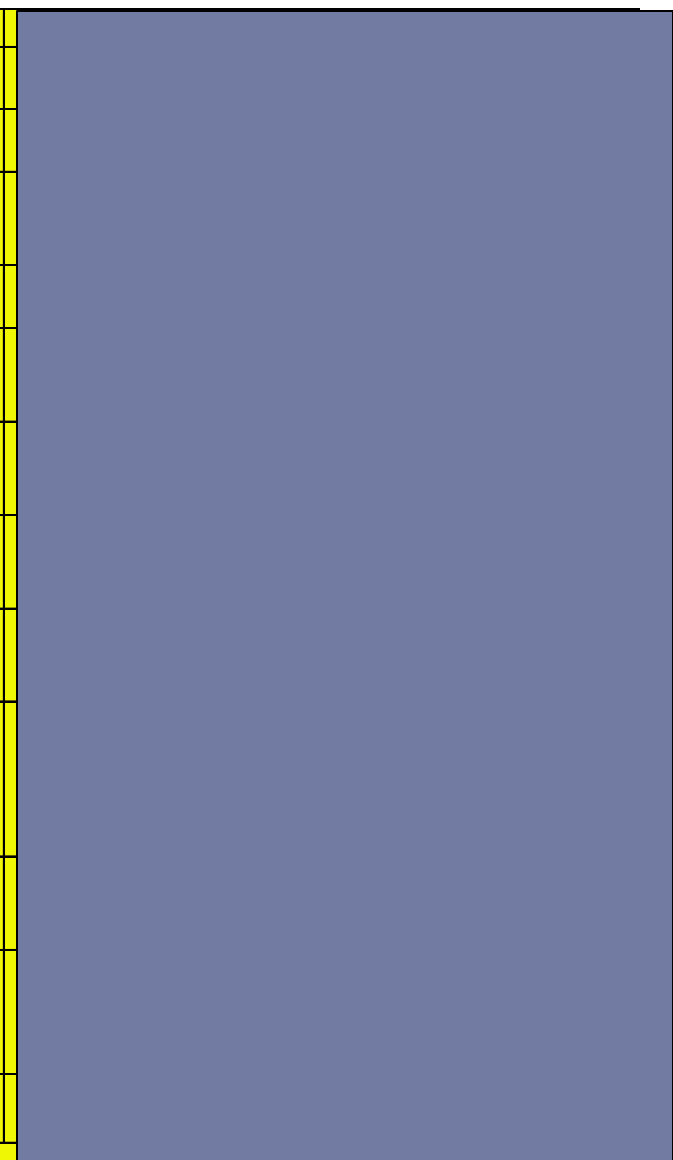
Toughest Problem: Promoting higher level talk about text

- ▶ In our CIERA work, the good news is that when we saw it, it improved learning and achievement, but...
- ▶ The bad news is that we didn't see it very much



Supporting talk about text

Conversational Move	Definition	Example (Student talk)
Restating	Repeating a previous contribution	Linda said that the fish was sad, because he was lonely.
Inviting	Inviting a participant to contribute	I'd like to hear what George thinks.
Acknowledging or validating	Recognizing a response without agreeing or disagreeing	I can see why you said that. I get what you're saying. I hadn't thought of that.
Focusing/refocusing	Making a metacomment about the course of the conversation	We were talking about the reasons that Frank ran away from home.
Agreeing		I agree, because Yeah. That's right, because
Disagreeing		I see what you're saying, but But what about? I disagree, because
Elaborating	Extending one's own or another's assertion	I agree with Juan that the fish was lonely, and I think that he... Also
Requesting clarification or elaboration		What do you mean? Can you say more about that? What makes you think that?
Providing an example	Providing an example from inside of the text or outside to support one's own or another's assertion. Examples can be explanatory or evidentiary	For example It's like when
Signaling a change	Changing the direction of the conversation	I want to talk about the mother.
Providing evidence		
Posing a question to the group		Does anyone think ?



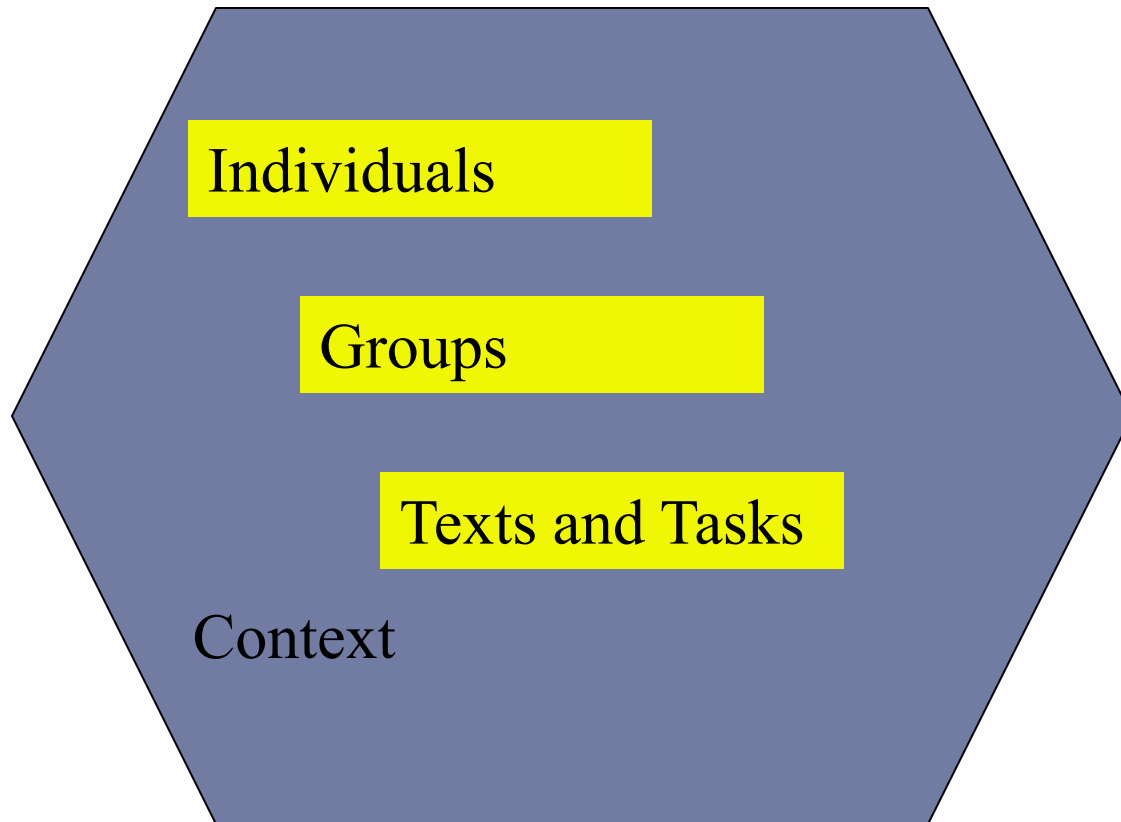
Same teacher--more scaffolding



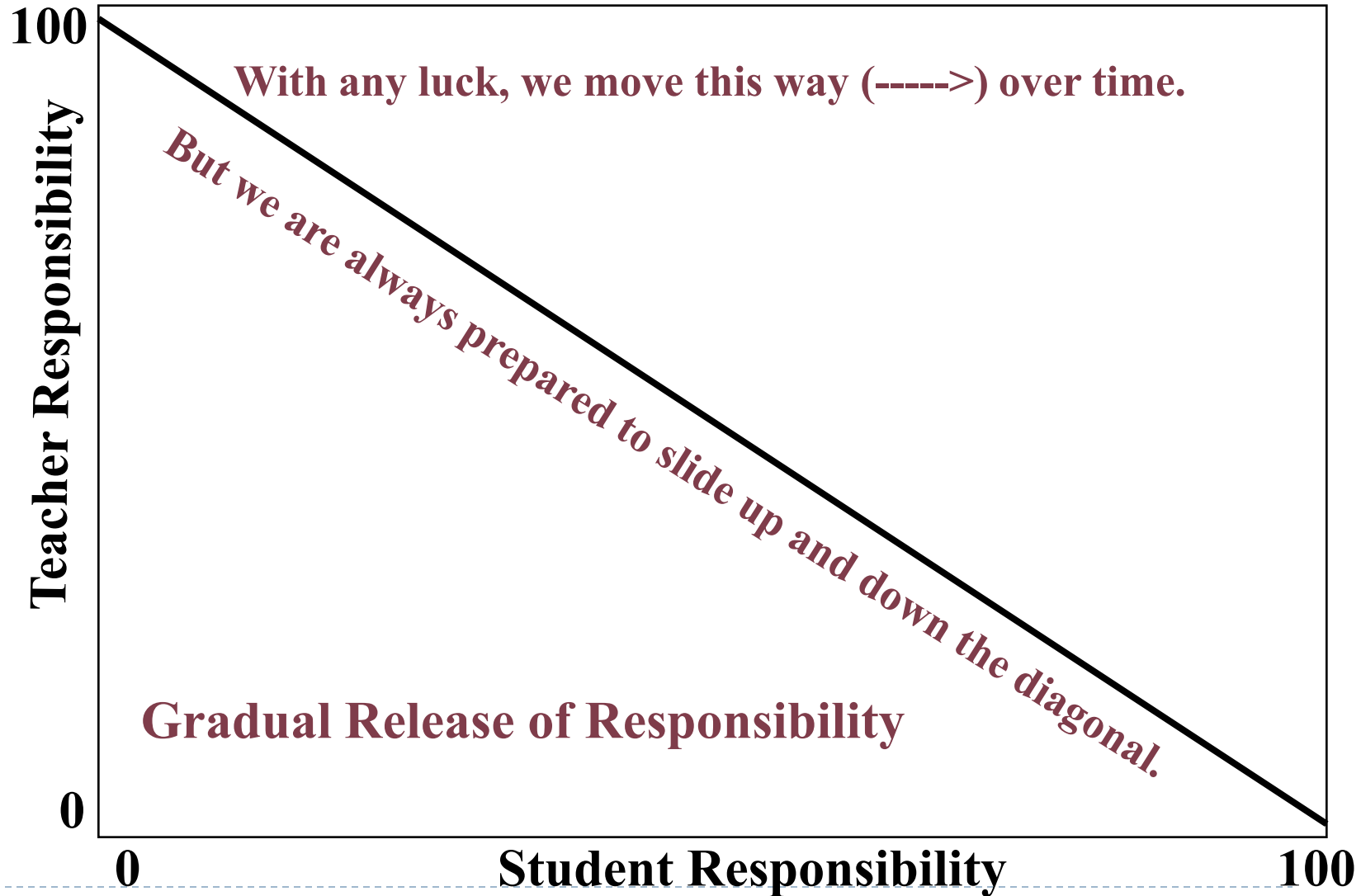
Different Teacher--More Novice Kids: Even more scaffolding



The nature and amount of scaffolding is a matter of being responsive...



3. a model: Cognitive apprenticeship

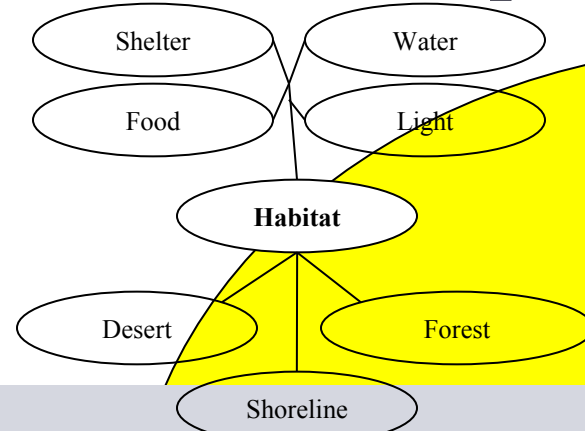


Vocabulary/Concept Development



Habitat

Words are Concepts



If we wish to maintain a terrarium in our classrooms, we should establish conditions that are consistent with the organisms' natural habitats.

Recognition

Definition

Relationships

Context

Application

Synthesis

Habitat: the place where an organism gets the food, water, light, and shelter that it needs to survive

A habitat has everything an animal needs to survive.
The grassland habitat is windy with few trees.

All living things exist within habitats and have adaptations that allow them to survive in those habitats. No one habitat can support all living habitats.



Contextual

- ▶ Try to use words in sentences.
- ▶ Find sentences in a selection or a chapter in which a word is used, try to come up with a definition.
- ▶ Two senses of context
 - ▶ Introduce new words in context (a teacher strategy)
 - ▶ Use context to figure out the meaning of unknown words (a student strategy)
- ▶ Very useful as a “problem solving” strategy because we often encounter new words in context. Modeling is a good start.
- ▶ A good thing to do as a class activity on a second pass: clarifying meaning.



In content areas, teach words in conceptual networks

decomposers are organisms that live in the soil and breakdown dead organisms

plants are organisms that live in the soil

organisms are living things, such as plants and animals

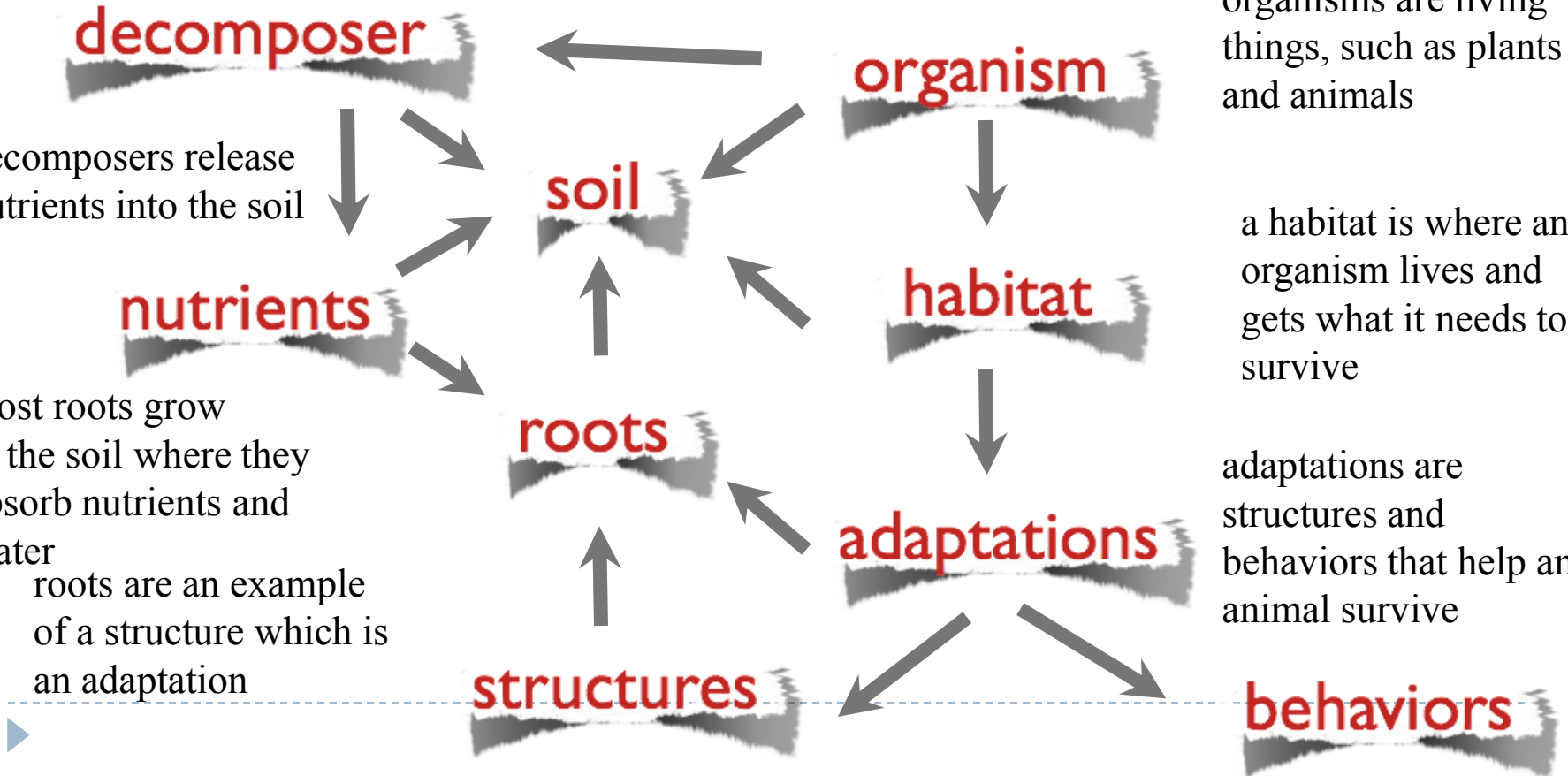
decomposers release nutrients into the soil

a habitat is where an organism lives and gets what it needs to survive

most roots grow in the soil where they absorb nutrients and water

roots are an example of a structure which is an adaptation

adaptations are structures and behaviors that help an animal survive



Integration is tough...What happens when you try to integrate reading and math?

- ▶ **The evolution of mathematics story problems during the last 40 years.**



1960's

- ▶ **A peasant sells a bag of potatoes for \$10. His costs amount to $\frac{4}{5}$ of his selling price. What is his profit?**



1970's (New Math)

- ▶ A farmer exchanges a set P of potatoes with a set M of money.
- ▶ The cardinality of the set M is equal to \$10 and each element of M is worth \$1. Draw 10 big dots representing the elements of M .
- ▶ The set C of production costs is comprised of 2 big dots less than the set M .
- ▶ Represent C as a subset of M and give the answer to the question: What is the cardinality of the set of profits? (Draw everything in red).



1980's

- ▶ **A farmer sells a bag of potatoes for \$10. His production costs are \$8 and his profit is \$2. Underline the word "potatoes" and discuss with your classmates.**



1990's

- ▶ **A kapitalist pigg undjustlee akires \$2 on a sak of patatos. Analiz this tekst and sertch for erors in speling, contens, grandmar and ponctuassion, and than ekspress your vioos regardeng this metid of geting ritch.**

Author unknown



2000's

- ▶ **Dan was a man.**
- ▶ **Dan had a sack.**
- ▶ **The sack was tan.**
- ▶ **The sack had spuds**
- ▶ **The spuds cost 8.**
- ▶ **Dan got 10 for the tan sack of spuds.**
- ▶ **How much can Dan the man have?**



Extended talk about words

- ▶ See Beck &McKeown (Bringing Words to Life)
- ▶ Splendid: Which of these would be splendid?
 - ▶ A dirty sock
 - ▶ A sunny day in the park
 - ▶ Your own bicycle
 - ▶ A rainy day



Beck & McKeown

- ▶ Which of these would “astound” you?
 - ▶ a monkey driving a car
 - ▶ a homework assignment to do 10 problems in math
 - ▶ a magic trick by a friend
 - ▶ a clock on the wall



So what is a body to do?

My response to the research

- ▶ Pre-teach only the most conceptually important vocabulary
- ▶ Do lots of “point of contact” defining and explaining to “get through the text”
- ▶ For Tier 2 words (ala Beck & McKeown) do the bulk of vocabulary instruction after reading--revisiting and expansion
- ▶ For Tier 3 words, use a conceptual approach in which vocabulary instruction = knowledge acquisition
- ▶ Help students develop a set of strategies for unpacking unknown words in context



The common element in all of these activities is

- ▶ Conversation: the key; the experiences of other students is as important as those of the teacher
- ▶ The overall goal is for any new concept is to help kids figure out
 - ▶ What it is like
 - ▶ How it is different from what it is like
 - ▶ Family resemblances



Writing

- ▶ Lots of time spent writing texts for others to comprehend. Again, students should experience writing the range of genres we wish them to be able to comprehend. Their instruction should emphasize connections between reading and writing, developing students' abilities to write like a reader and read like a writer.



Why Writing Helps Reading

- ▶ You can't write without reading: the writer's first reader.
- ▶ When you write, you often seek information through reading
- ▶ Writing makes the metaphor “constructing a model of meaning” completely explicit.
- ▶ Writing helps us decide what we really “think” about a topic (stares back at you).
- ▶ Writing makes metacognition transparent (makes monitoring visible)

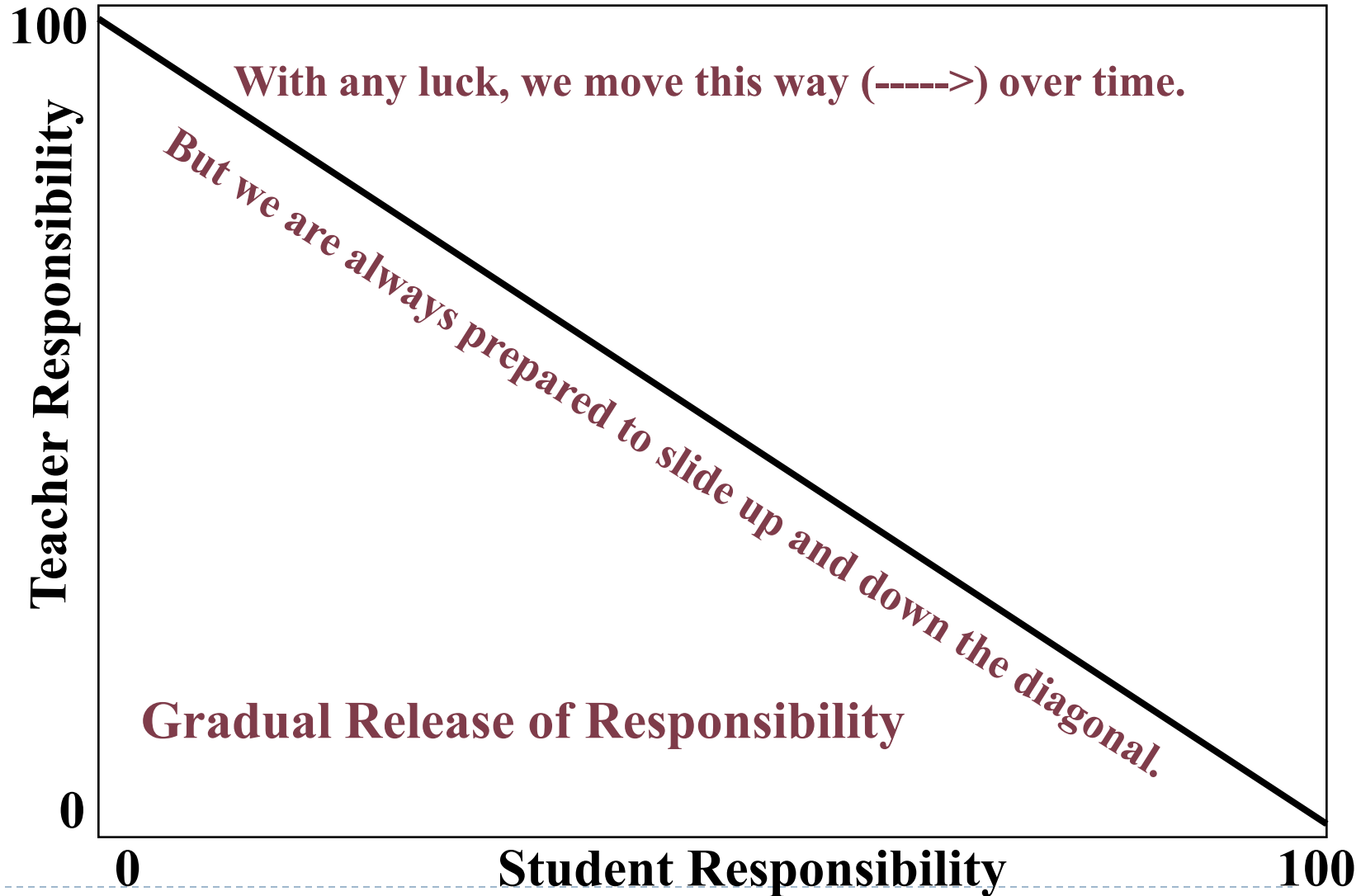


Why Writing Helps Reading

- ▶ **Writing reinforces some reading processes**
 - ▶ An authentic context for phonemic awareness (listen to the word in parts, match a letter to each part)
 - ▶ Examining claim and support is like unearthing the relationship between MI and Details
- ▶ **By the way, reading helps writing too--by providing good models of well-crafted prose, spelling, and punctuation.**



3. a model: Cognitive apprenticeship



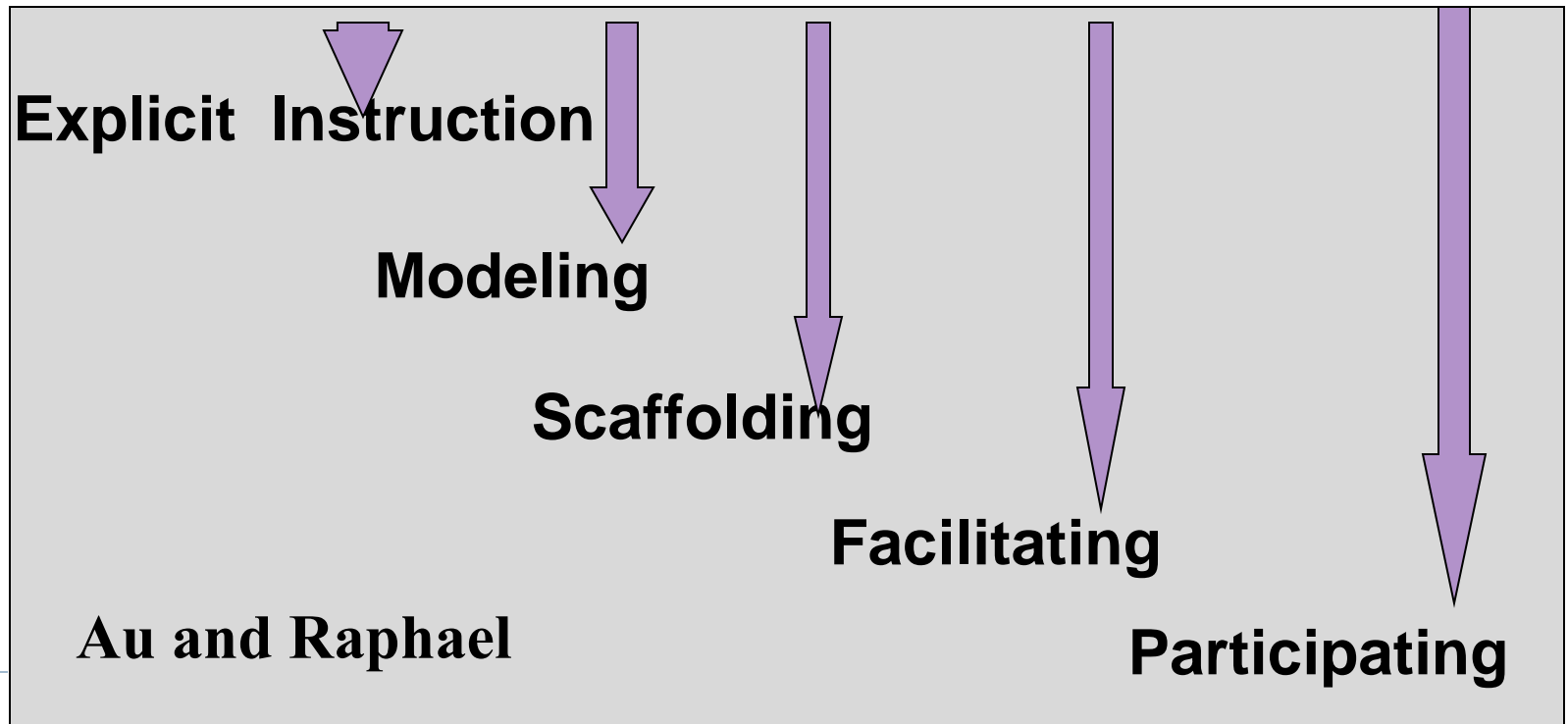
Changing Teacher Roles

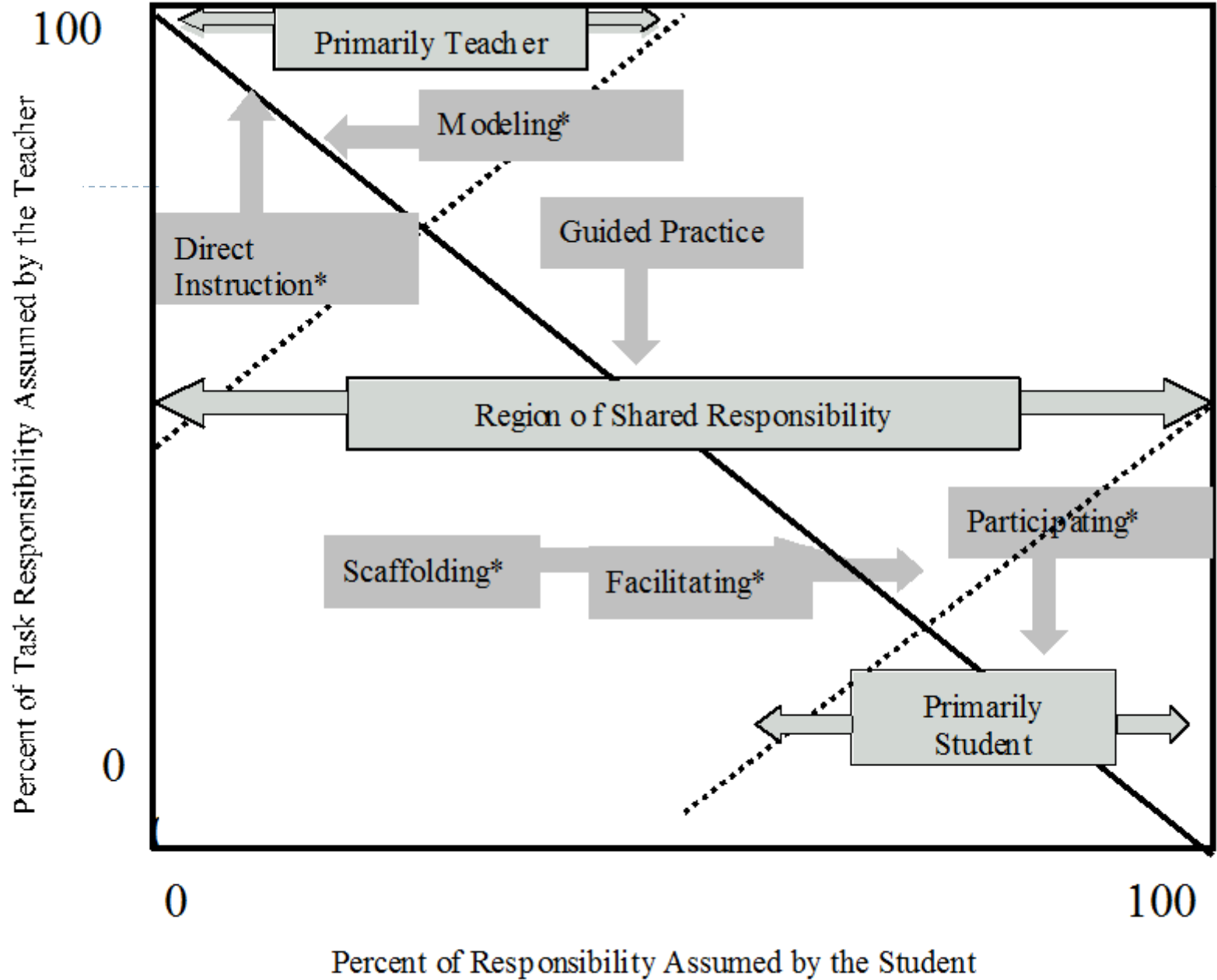
High Teacher

Low Teacher

Low Student

High Student





From Duke & Pearson

Key elements in GRR

- ▶ Child does as much as (s)he can independently
- ▶ Teacher intervenes with scaffolding: just enough assistance to ensure success
 - ▶ Goldilocks: Just in time delivery
 - ▶ Not too early
 - ▶ Not too late



4. You need a comprehension curriculum: sure fire strategies and routines/packages.

▶ Individual Strategies

- ▶ Making predictions
- ▶ Think-alouds
- ▶ Uncovering text structure
- ▶ Summarizing
- ▶ Question-generation
- ▶ Drawing inferences

▶ Routines or Packages*

- ▶ Reciprocal Teaching
- ▶ SAIL/Transactional Strategies Instruction
- ▶ Questioning the Author
- ▶ CORI
- ▶ *Oczkus, Harvey-Goudvis, Almasi books



Strategy Instruction

- ▶ What strategies do we pick?
- ▶ How do we teach them?



Picking strategies

- ▶ NRP
- ▶ Duke & Pearson
- ▶ Routines such as Reciprocal Teaching or Transactional Strategies Instruction
- ▶ Good news
 - ▶ Lots of overlap
 - ▶ No definitive set



Pearson & Duke, 2002

- 📖 Making predictions
- 📖 Think-alouds
- 📖 Using text structure
- 📖 Summarizing
- 📖 Question-generation
- 📖 Drawing inferences



The evidence for Strategies

- ▶ **Solid evidence of improvement on**
 - ▶ specific strategies
 - ▶ content of the lessons
 - ▶ more general comprehension
- ▶ **Suites of strategies appear to be more effective than a string of individual strategies**
- ▶ **It would be irresponsible not to teach them...**
- ▶ **But...**



Can strategies be taught with the little ones

- ▶ Yes!
- ▶ Reciprocal teaching with kindergarteners on listening activities
- ▶ Debbie Miller in Denver Colorado
- ▶ Shared reading work with Russell Whitehurst and Chris Lonigan: Dialogic Reading
- ▶ Lesley Morrow: retelling with Kindergarteners



A few cautions with strategies

- ▶ Like phonics rules, they can become
 - ▶ a an end unto themselves
 - ▶ rather than a means to an end
- ▶ Strategies are to be used strategically
 - ▶ When comprehension breaks down
 - ▶ Otherwise just do it: SKILLED reading
- ▶ A strategy is just a skill under deliberate rather than automatic control



Fresh Insights about Strategies

- ▶ Pressley's work in early 2000s
- ▶ New papers from the Handbook of Reading Research
- ▶ Set of waves



Wave Zero

- ▶ Pre 1978: What Dolores Durkin found in her classic study of comprehension instruction:
 - ▶ NO instruction
 - ▶ Assignment
 - ▶ Assessment
 - ▶ Rapid fire interrogation



Wave One: Single Strategy Instruction

- ▶ 1978-now
- ▶ Identify the strategies and teach them one by one
- ▶ Pearson and colleagues at CSR
- ▶ Mosaic of Thought (still aligned with this approach)



Wave Two: Multiple Strategies at Once

- ▶ 1984 till now
- ▶ Reciprocal Teaching is the classic example



Wave Three

- ▶ 1990-now
- ▶ Transactional Strategies
- ▶ Flexible tool kit to haul out when the going gets tough



Wave Four: Dialogic Teaching in the context of rich discussions

- ▶ 2005-now
- ▶ Post explicit strategies approach
 - ▶ Questioning the author
 - ▶ Rich talk about text
- ▶ Encounter opportunities to apply strategies on the fly
- ▶ Make understanding the text at hand the real goal
- ▶ Avoid decontextualized enactment
- ▶ Invoke them to solve particular problems with text.

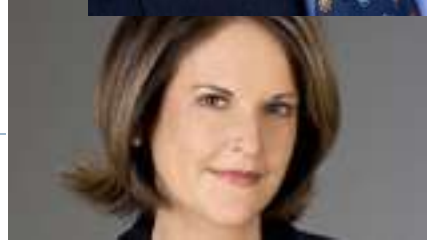


The ultimate goal: Critical Literacy

- ▶ Go beyond what the text **says**
 - ▶ Literal Comprehension
- ▶ To what the text **means**
 - ▶ Inferential Comprehension
- ▶ To what the text **does**
 - ▶ Critical comprehension



American Politics and Media



American Business

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Oh, the go-ing's great in the "88,"
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**You want to go where no one has gone before.
This weekend.**



*If you want to go farther than all
the others, consider this:
Almost overnight, Explorer passed
the rest to become the best seller.
Nothing in its class has so much over-
all room. Or, lets you go from 2WD to
4WD High and back, on the fly, at the
push of a button.
A 4.0L EFI V-6 and rear anti-lock
brakes are standard. Available ameni-
ties from a tilt-up open-air roof to
leather seating surfaces can make
your Explorer a luxurious, and very
personal, statement.
Explorer has all it takes to go
where no one's gone before.
And now, so can you.*



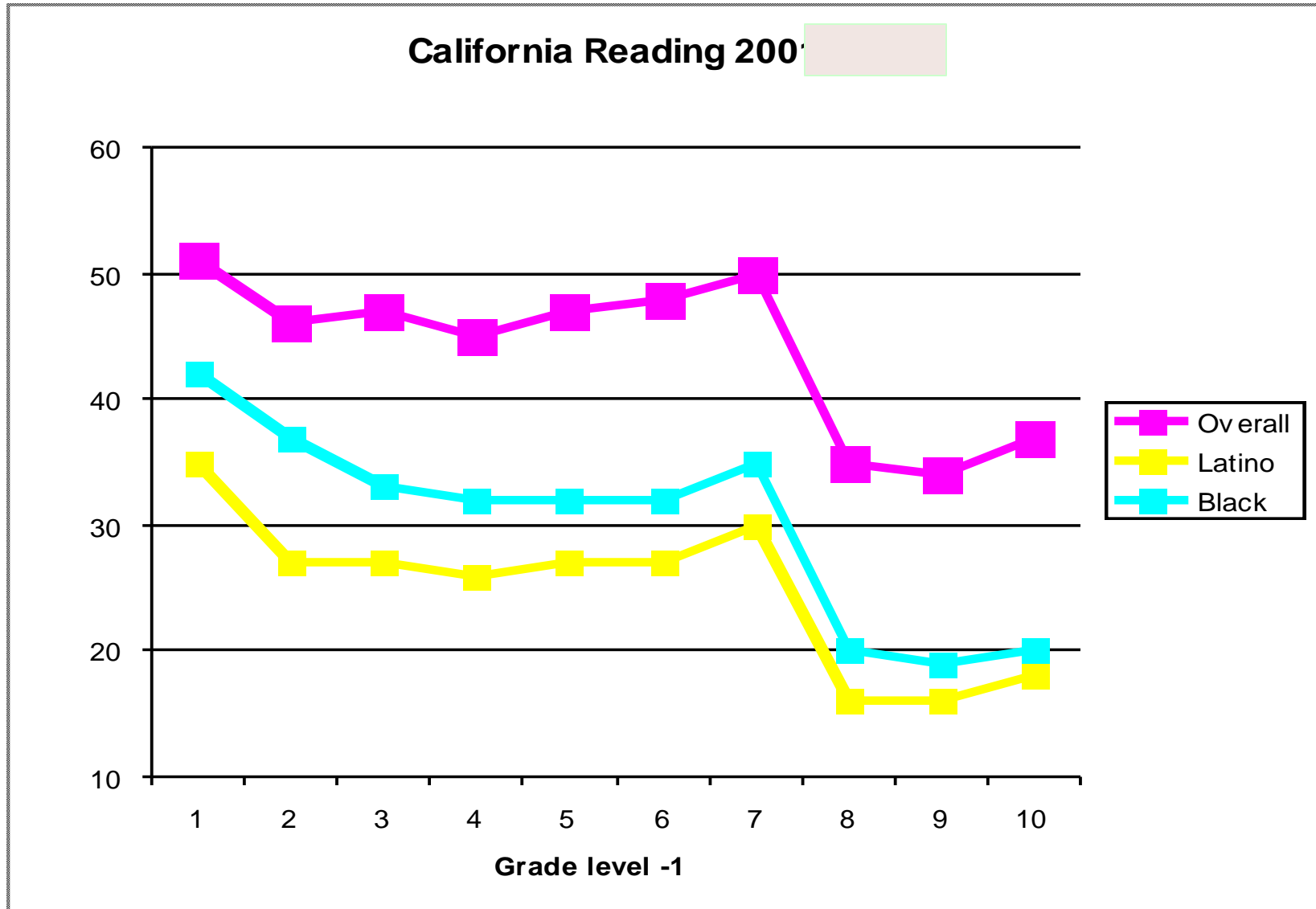
Your Explorer is ready.

Buckle up — together we can save lives.



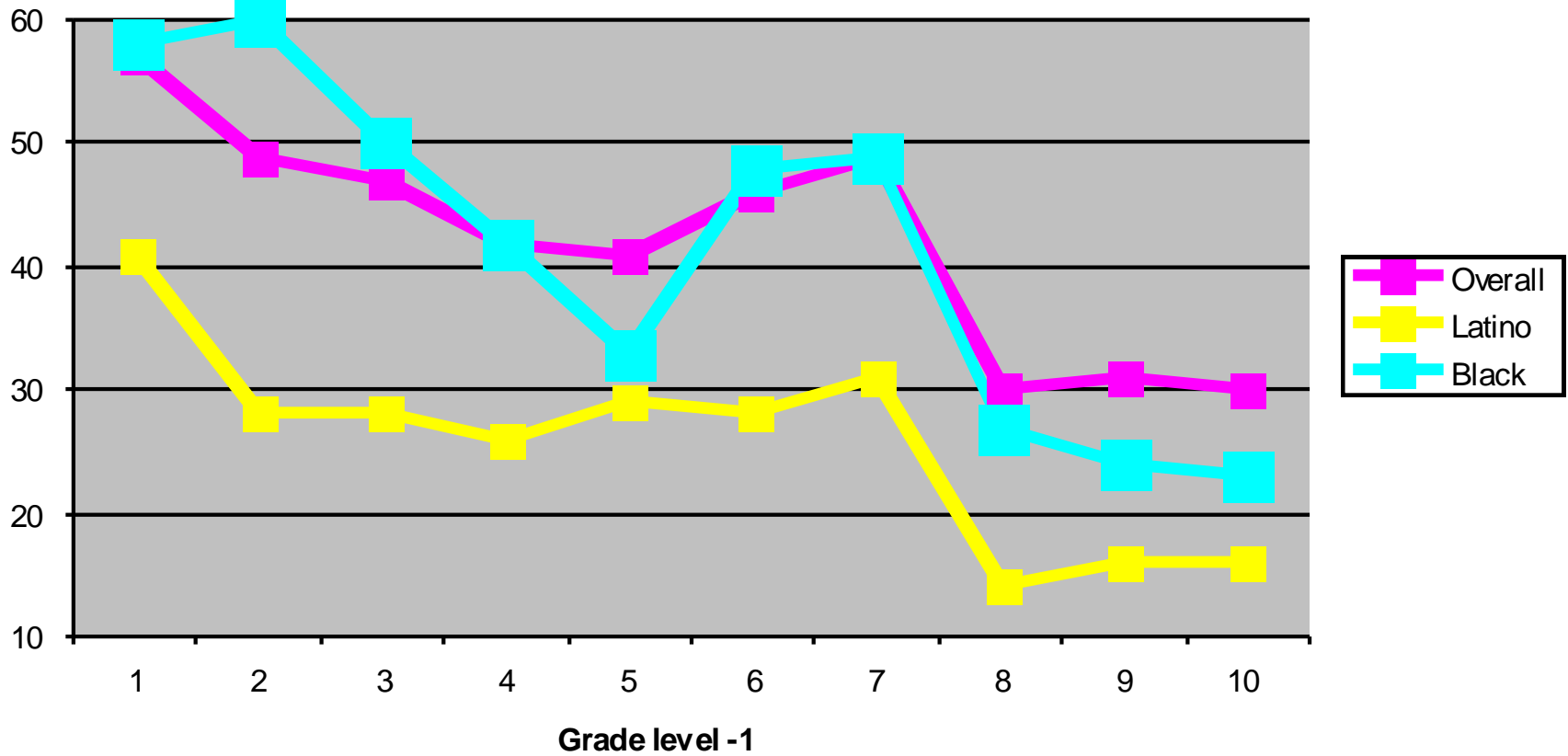
Have you driven a Ford... lately?

Yes, California SAT-9: % kids about 50th percentile



% kids about 50th percentile

Oceanside Reading 20



Two aspects of critical: critical thinking and critical literacy

- ▶ **CT: Eighth graders reading a political tract:**
 - ▶ How has the author organized the basic argument in this essay?
 - ▶ What is wrong with this argument?
 - ▶ How good is the evidence
- ▶ **Versus CL:**
 - ▶ What does the way the author has organized the arguments in this essay tell you about her politics?
 - ▶ Whose point of view is privileged?
 - ▶ Whose is marginalized?
 - ▶ Who is absent?



Summary: Comprehension improves when

- ▶ We support it with other types of instruction (**vocabulary**, word identification, fluency, writing)
- ▶ We teach strategies and routines explicitly and in as contextualized a manner as we can muster!
- ▶ We provide lots of opportunities for just plain reading
- ▶ We engage students in rich **discussions** that allow students to integrate knowledge, experience, strategies, and textual insights
- ▶ We aim for critical analysis of ideas:
 - ▶ From what the text Says → Means → Does
- ▶ We provide teachers with real support in PD



Second Grade

Reading Standard 2:
Getting the Meaning

Self-Monitoring and
Self-Correcting Strategies

Daniella reading
Giant Jam Sandwich

Ultimate Accountability

- ▶ Government
- ▶ School authority
- ▶ Kids and their families





My grandson, Tobias: Why I care about what you do!!!!

Kids are who they are



They know what they know



They bring what they bring

