Adolescent Literacy: Issues, knowledge base, design principles and challenges

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Adolescent literacy: Issues

What is the state of knowledge about how well high school students

- **achieve in reading,**
- **are motivated and strategic in reading, and**
- **are instructed in reading?**

Reading Achievement

- See NAEP Achievement levels
- Basic = global idea, literal info., relate to personal experience
- Proficient = complex inferencing, integrate knowledge and text, describe literary devices, characters
- Advanced = perceive abstract themes, analyze, synthesize, evaluate viewpoints, transfer and apply text-based knowledge

How good are G 4 students at reading?

- NAEP data Grade 4: 2003 total
- Below basic = 37%
- Below proficient = 59%

  NCLB expectation in 2014

Reading Achievement: Conclusions: G 12 reading comprehension

- **Substantial, recent (1992-2002) declines in comprehension**
- **W-B (and W-H) achievement gap is 4 years at secondary level, with no change in 10 years**
- **Typical students have basic understanding, low inference, connections**
- **Below Basic students rarely gain simple facts, infer, or connect text to knowledge**

Literacy engagement

Engagement refers to:

- **Behaviors, (school, reading)**
- **Motivations, (goals, reasons for behavior)**
- **Strategies, (tools for reading, studying)**

School Behaviors: G4-12

- **Every school day, 3,000 students drop out of high school.**
- **Only 70% of high school students graduate on time with a regular diploma.**
- **High school students in the lowest 25% of their class are 20 times more likely to drop out than the highest performing students.**

Reading Next: Advancement for Excellent Education, October 2004

Reading Behaviors: NAEP items	Percent
Do not read daily for school	93 %
Rarely read science articles, history sources or textbooks	74
Almost never read for own enjoyment	69
Reading is not a favorite activity	66
Do not read a book from the library more than once a month	62
Do not choose what to read for school	52

Literacy engagement

How do USA students compare to OECD students (age 15) in reading engagement?

Engagement =

- **reading time,**
- **breadth of materials (books, magazines, content),**
- **self-rating of interest, self-efficacy**

Reading Engagement: International comparisons with USA in PISA, 2000

Construct	USA rank in 28 OECD Countries
Engagement in reading	**20**
Proportion of Book Readers	**24**

International comparisons: PISA 2000; 26 countries; 15 yr.

Ranks of the USA

- Interpret text 15
- Retrieve from text 15
- Reflect on text 11
- Interest in reading 14
- Self-efficacy in reading 11
- Use strategies to read 10
- Preference for social reading 1 (tie)

(nces.ed.gov)

Is reading engagement important?
International comparisons: PISA 2000

Reading achievement (NAEP-like tasks) predicted by:

- **Interest in reading (.27)**
- **Self-efficacy for reading (.16)**
- **Control strategies in reading (.12):**
  predicted by:
  - Self-efficacy (.52)
  - Instrumental motivation (.35)
  - Interest in reading (.15)

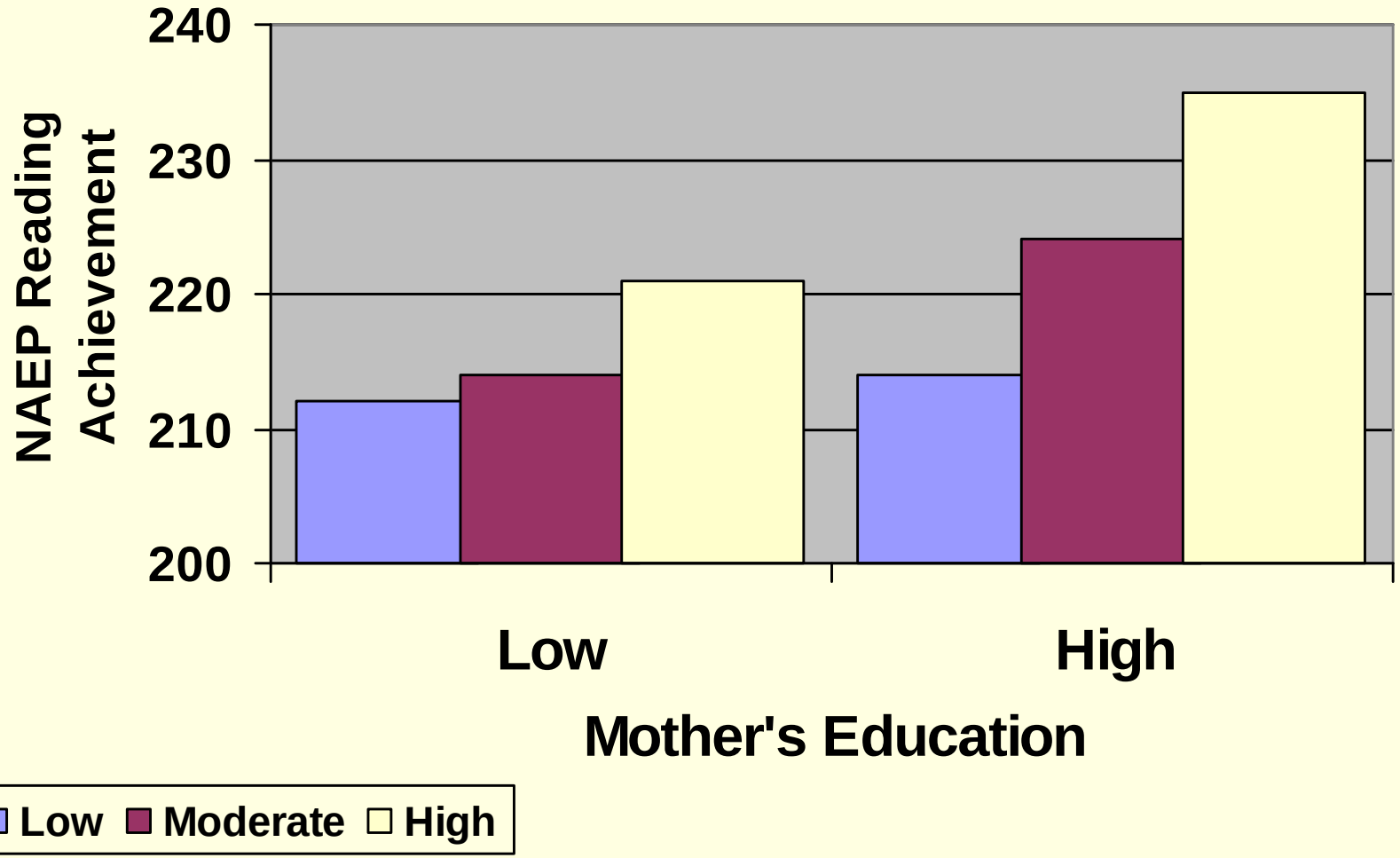
Engagement construct from NAEP Questionnaire

How often:

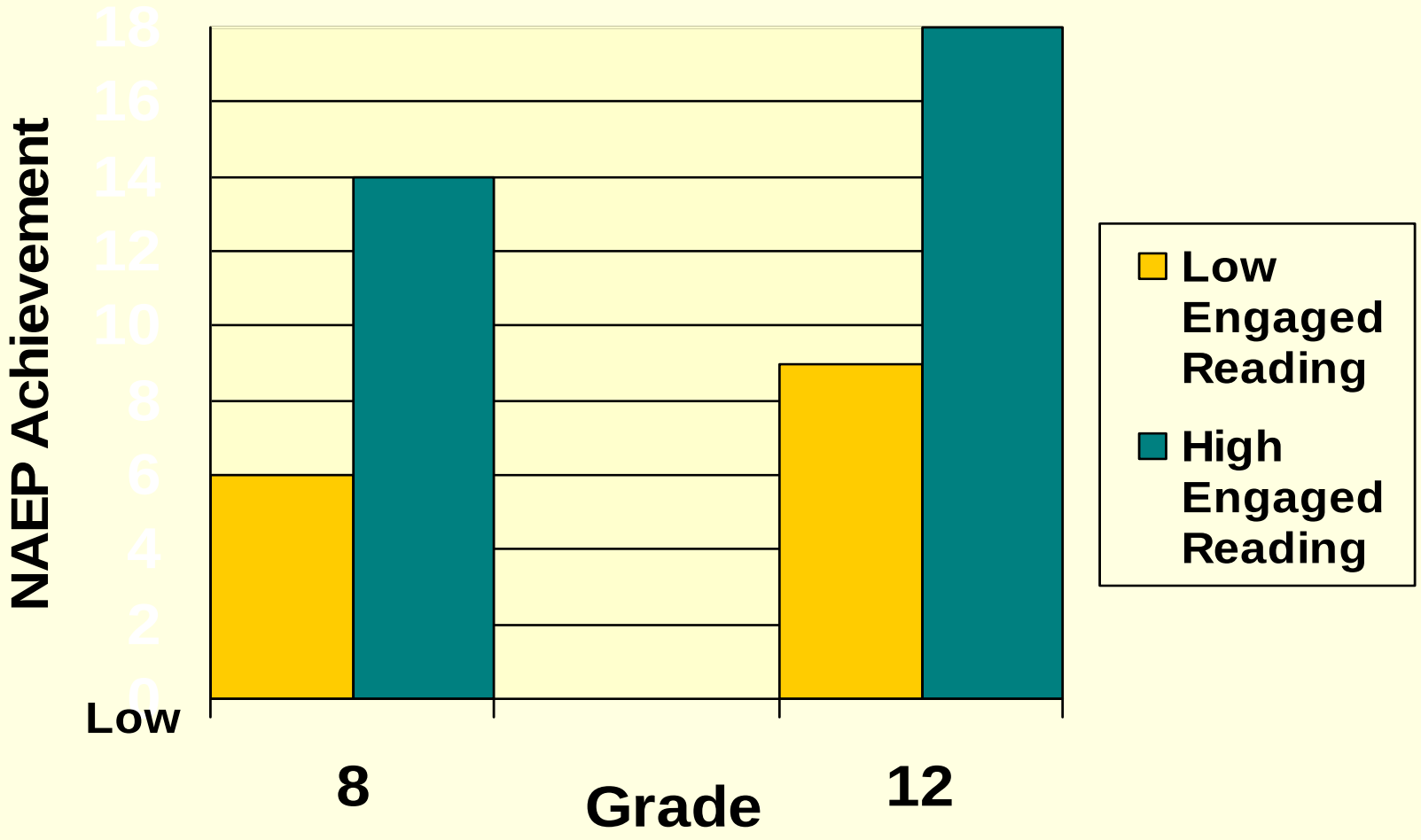
- do you read for fun on your own time?
- does your teacher give you time to read books you have chosen yourself?
- does your teacher ask you to read silently?
- do you take books out of the school library or public library ?

- **Guthrie, et al. J.Ed.Res., 2001: Similar to PISA, 2000**

Influences of Engaged Reading on Grade 4 Achievement for Levels of Education



Influences of engaged reading on Grade 8 and 12 Achievement



Conclusions about association of engagement and achievement

- G 4: Amount of reading engagement is more highly associated with NAEP reading achievement than demographic variables that represent traditional barriers to achievement.
- G 8: High reading engagement produces more reading achievement than 3 years of secondary education.
- Curriculum and instruction should aim toward twin goals of engagement and achievement.

Reading Engagement conclusions

Highly engaged students:

Read widely, high amount of time, for intrinsic (interest), and extrinsic (succeed in school/career) reasons

Use control strategies (deep processing) in reading

Reading Engagement conclusions

Less engaged students:

Read magazines for brief time, few books, low interest, low success goals

Use surface reading strategies (memorization; test relevant only)

Reading Instruction

- **What is the nature of reading instruction in high school?**
- **National survey of students' reports of instruction. NAEP**
- **Question: "when you get reading assignments in school, how often…"**

Reading Instruction Grade 12, from NAEP 1998 + 2002, Student Reports on "when you have reading assignments, how often…"

Questionnaire item	Percent (Daily Weekly)
Read silently in school	74 %
Read book for English Class	62
Explain understanding of what you read to class	65
Class discussion about what you read	62
Write about what you read	61
Make presentation to class about something you read	54

Reading Instruction Grade 12, from NAEP 1998 + 2002, Student Reports

	Percent Never
Read aloud	**51**
Read other than textbook for science	**65**
Read other than textbook for social studies	**62**
Work in groups to talk about text	**65**
Do a group project about what you read	**71**
Teacher helps you break words into parts	**77**
Teacher helps you understand new words	**45**
Time to read books you have chosen	**82**
Use library to borrow books for school	**86**
Use library to do research for school	**80**

Literacy instruction: grade 12 conclusion

Students report that they frequently:

- **Read silently,**
- **Have class discussion,**
- **Write about what they read.**

Literacy instruction: grade 12 conclusion

Students report that they usually do *not:*

- **Read anything other than textbooks**
- **Choose what they read**
- **Discuss in teams**
- **Do projects about reading**
- **Get help from teacher in reading**
- **Use the library**

Literacy instruction: grade 12 conclusion

Instruction *is*:

Textbook-driven; teacher-controlled; content-centered;

***Rarely* addresses learning from text (e.g., reading)**

***Not* supporting students' needs for autonomy, competence, relatedness**

Adolescent Literacy: Design principles

- **1. Use knowledge goals in a conceptual theme for reading instruction.**
- ***Reading Next, #2.***
- **Example---Concept-Oriented Reading Instruction (CORI)**

Conceptual theme

Grade 5: 12 weeks; Concept map

- **Communities of plants and animals**
- **Interaction concepts of: mutualism, commensalism, predation, herbivory, parasitism**
- **Survival concepts of: locomotion, feeding, competition, reproduction, defense, communication, adaptation to habitat, niche, others**
- **Examples of plants and animals showing each.**

Adolescent Literacy: Design principles

- **1. Use knowledge goals in a conceptual theme for reading instruction.**

***Mastery goals* prevail in classroom**

Teachers statements about school:

The emphasis is on understanding schoolwork, not just memorizing it.

Students are frequently told that learning should be fun.

A lot of the work students do is boring and repetitious (reversed).

Adolescent Literacy: Design principles

- **1. Use knowledge goals in a conceptual theme for reading instruction.**

***Mastery goals* prevail in classroom**

Teachers statements about school:

Students are told that mistakes are OK, as long as they are learning and improving.

The importance of trying hard is really stressed to students.

(high positive correlation with achievement)

Adolescent Literacy: Design principles

- **1. Use knowledge goals in a conceptual theme for reading instruction.**

Performance goals **prevail in classroom**

Teachers compete with each other.

Students scores are frequently compared.

Students with good grades are shown as examples to others.

You hear a lot about high test scores.

(negative correlation with achievement)

Adolescent Literacy: Design principles

- **2. Provide fluency -- every subject.**
- **Fluency correlates with reading comprehension; grades 4-8 reading level**
- **Fluency enables comprehension by freeing cognitive resources (inference)**
- **Fluency brings language to text (reciprocal with comprehension)**
- **Repeated reading; assisted reading.**

NAEP, 2003; Rasinski, 2005; Mastropieri.

Adolescent Literacy: Design principles

- **2. Provide fluency -- every subject.**
- **Fluency development depends on decodable text.**
- **Text criterion: 5 unknown words/page or fewer; high easy word recognition**
- **Within 1 year of comprehension level**
- **Grade 10 below average Ss (at 7-8 grade level) require texts at 7-8 grade, not 9-10.**
- **Consequence of mismatch? No learning.**

Using text-student mismatch: A disengaging practice

Avoid undermining self-efficacy for reading

Don't (negative association with engagement) (student perspective)

- **T makes us read the textbook that we can't read.**
- **When she gives questions, I always get low scores.**
- **T likes the students that get everything right.**

Adolescent Literacy: Design principles

- **3. Give direct instruction for reading comprehension processes and strategies**
- **Reading Next--#1.**
- **Strategies—National Reading Panel**

  questioning, summarizing, graphic organizing, comprehension monitoring, activating background knowledge, others.

Summarizing Instruction

Identify text—Estuary

Paragraph, section, book, (illust?)

Work with a partner.

1. **Circle key concepts (2-4 key words)**
2. **Underline important supporting information (3-4 key phrases)**
3. **Ignore less important information**
4. **Write a summary**
5. **SCAFFOLD THIS PROCESS**

Questioning Instruction

Rubric:

4. Question asks about patterns of relationships, using knowledge

3. Question asks about a concept and evidence for it, using knowledge

2. Question asks about a global concept

1. Question requests a fact—yes/no

Taboada & Guthrie— Motivating Reading Comprehension, 2004; Journal of Literacy Research, Spring, 2005

Questioning Instruction

Rubric:

4. How is predation in the sea the same and different from predation on land?

3. How does a shark's protection of its young differ from that of a squid?

2. What is the diet of a shark?

1. How long is a shark?

Criteria for strategy instruction success:

- **competence, awareness, self-initiation**
- **SCAFFOLD QUESTIONING, BY LEVELS**

Reading strategy instruction video

- **Grade 4; Reading integrated into science**
- **Survival in wetlands**
- **Previous field trip to wetland**
- **Reading to explain life in wetlands**

Comprehension Instruction Programs: Evidence-Based

- Questioning the Author—Isabel Beck
- PALS—Peer-assisted learning strategies—Doug Fuchs
- Reciprocal Teaching—AnneMarie Palinscar
- CORI—Guthrie and others
- Theme scheme: J. Williams
- Summary Street—E. Kintsch

Adolescent Literacy: Design principles

4. Support extensive, elaborate writing (expression of knowledge) based on text

Evidence of knowledge from reading is shown in writing that reflects:

- **Explaining, arguing, debating, demonstrating, enacting, re-composing, applying, criticizing, questioning, summarizing, mapping conceptually, extending, connecting**
- *Not* **repeating, listing, completing sentences,**

  true-false, literal multiple choice

Learning knowledge from text

- **Example of high knowledge**

Import page from high G5 book

- **Example of lower knowledge**

Import page from low G5 book

Show knowledge rubric 6 levels

Scaffold writing to levels

Little experimental research; some observational studies; CORI; Pressley outstanding elementary teachers.

Mutualisms in the Rainforest: higher

- **Many animals and plants cannot survive by their self in the rainforest. They need other animals to help them and in return they help them. This is called a Mutualism. Many insects help plants to survive. Ants guard a passionflower from animals that eat it. They stand at the entrance of the flower and if any insects try to crawl on it they attack them and inject poison in them from their glands. In return the flower lets the ants drink the nectar from the flower.**

Many frogs like laying their eggs in plants but the plants don’t like it. The bromeliads collect water in their plants. This is a perfect place for frogs to lay their eggs. The poison dart frog eats the insects, which try to hurt the plant. The poison dart frog is able to lay its eggs in the plant. The tadpoles get food because the insects those fly around the plant they eat. Also the plant makes it hard to find the frog so its enemies can’t eat it.

The leopard loves lying in a tree and waits for birds to come by. Then the leopard pounces and catches the bird. When it is finishing eating the bird, it drops the bird from the tree. The bird lands on the ground. After a while the bird decomposes in to the ground, which is like a fertilizer to the tree. The fertilizer helps grow more trees and taller trees. The jaguar gets a place to lye and catch food and the tree gets fertilizer to make it grow taller.

Other Interactions : higher

<u>Commensalisms</u> are when one animal gets a benefit from an interaction, but other animal does not get a benefit at all. It does not affect the other organism. When the windowpane butterfly is hungry it uses proboscis to take the nectar out of the flower. This is food to the butterfly but the butterfly does not help the flower.

The ant bird helps army ants. You would expect them to eat ants but they do not eat army ants. Instead, while the army ants are marching many little bugs are roaming around. The bugs think that there are no birds around so they come out. The birds eat all the bugs around the army ants. This benefits the bird because it gets food but the army ants are not helped or harmed while the bird is doing this.

In the food chain, there is something called predation. This is when animal eats another animal. This animal is also called a carnivore. For example the jaguar eats a bird. This is a benefit to the jaguar because it gets a snack, but the bird is dead.

Another predation is shown by the alligator and the fish. Alligators love the fish in the water. While the fish are sleeping, they make their move. They attack the fish for a small snack. Now the alligator isn't as hungry but the fish is gone.

Mutualism: lower

The jaguar and a tapir are a good example of predation in the rainforest. A jaguar spies on the tapir and when it is not looking, it will kill the tapir. The jaguar gets the + because it is getting food. So that means the tapir has the – because it is getting killed.

Performance Assessment Reading Comprehension Levels

Level 1
Facts and Associations: Simple
Students' writing consists of very few characteristics of either biome or organisms.

Level 2
Facts and Associations: Extended
At this level, students correctly classified several Organisms with accurate descriptions of them.

Level 3
Concepts and Evidence: Partial and Limited
Students will often present one or more ecological concepts with minimal supporting information in a disorganized statement.

Level 4
Concepts and Evidence: Complete and Well-Formed
Students display conceptual understanding of specific organisms and their survival mechanisms In one or more biomes.

Level 5
Pattern of Relationships:
Moderate and Supported
At this level, students show command of ecological concepts. They present highly detailed descriptions of relationships among and between different organisms and the biomes they inhabit.

Level 6
Pattern of Relationships:
Complex and Elaborate
Students describe complex relationships among multiple organisms and their habitats. The concepts and principles presented are supported by statements directly relating them to the organisms' behaviors or physical adaptations. Elaborate food webs and detailed discussions of principles are the fundamental components.

Adolescent Literacy: Design principles

5. Systematically support motivation and engagement in reading.

Reading Next #3

What is motivation?

What do successful comprehenders in 3-8 look like?

- THEY ARE MOTIVATED TO READ
- Interest—topics, authors, series
- Involvement—immersion, time spent
- Knowledge goals—read to learn
- Choice—self-selection, control
- Efficacy—can read
- Social—share, talk, cooperate

Interest

"I think I read about all the books on my bookshelf about four times. I like reading about animals…Really I usually won't put no animal book down unless it's really, really boring…I love animal books a lot."

Involvement

"I take bottles of water to my room, because when I start to read I don't come out of my room for about three hours…Sometimes I even take books to the dinner table and read."

Knowledge & Information

"I just like to learn a lot. It's really fun for me and it's just really cool that you can learn something that your parents don't even know…I like to teach teachers things that they don't know yet."

Choice & Self-determination

"When I pick out a book, usually it's about something I like…I like picking them out myself because I always pick out a book that inspires me and that I like."

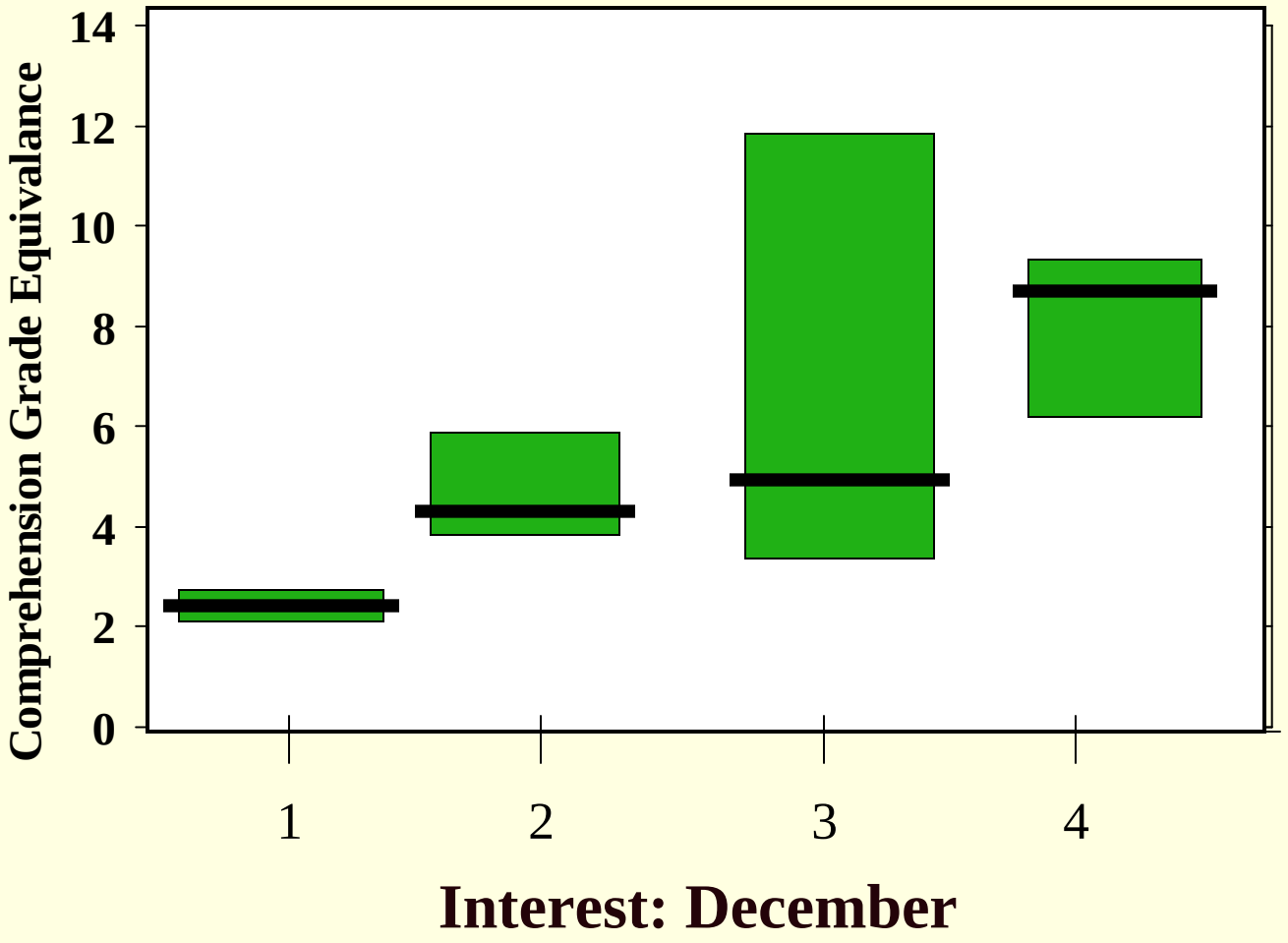
Efficacy

"Usually the books in the library are a little too easy and I don't like easy books. I like challenging books."

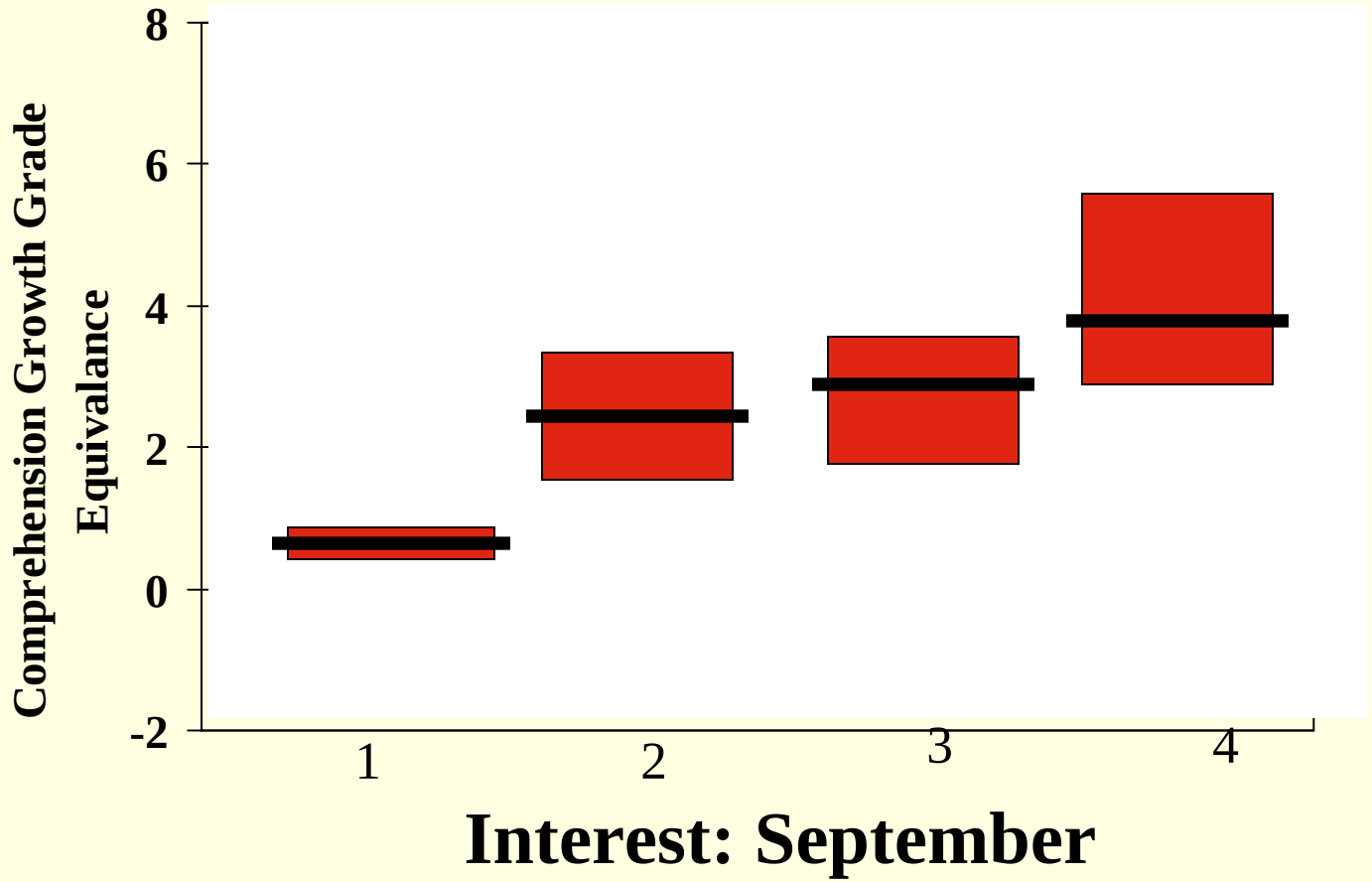
Social

"Sometimes I'll walk up to the teacher at the end of the day and when everyone's left, I'll sit there and talk to her about it, and I'll ask her questions about the book."

Comprehension *Level* and Reading Interest: Grade 4



Comprehension *Growth* and Reading Interest: Grade 4



Motivational practices

Foster relevance of content.

Do (positive association with engagement)

- **T. Talks about connection between what students study in school and real life.**
- **Encourage students to learn things that interest them.**
- **Explain importance of studying certain subjects in school.**

Reading Next # 3

Assor. *Brit. J. Ed. Psych*.,2002: Guthrie, in McCardle, P (Ed) 2004.

Motivational practices

Avoid forced, meaningless work.

Don’t (negative association with engagement) (student perspective)

- **T. forces me to prepare uninteresting homework.**
- **T makes me read boring things**
- **T forces me to complete worksheets that do not help me understand the material.**

Motivational practices

Increase intrinsic motivation

Do (positive association with engagement)

- **Allow students to choose *some* texts**
- **Ask students which topics they want to study**
- **Enable students to choose which questions to answer in an assignment**
- **Encourage students to work in their own ways**

Motivational practices

Avoid undermining intrinsic motivation

Don't (negative association with engagement) (students' perspective)

- **T tells me what to do all the time.**
- **T interrupts me in the middle of activities that interest me.**
- **T only listens to opinions that fit her opinion**
- **T stops me in the middle when I am reading or writing interesting things.**

Motivational practices

Increase self-efficacy for reading

Do (positive association with engagement)

- **Give students materials they can read.**
- **Help students set realistic goals for reading.**
- **Help students learn from homework.**
- **Tell individuals when they have done well.**

Motivational practices

Avoid undermining self-efficacy for reading

Don't (negative association with engagement) (student perspective)

- **T makes us read the textbook that we can't read.**
- **When she gives questions, I always get low scores.**
- **T likes the students that get everything right.**

Using Motivational practices

1. **Do practices daily**
2. **Use during instruction; not aside**
3. **Scaffold motivational processes of: interest, choice, collaboration, efficacy, involvement**

Classroom practices for motivation and engagement

Daily;

During instruction;

Multiple motivational targets;

Scaffolding;

Adolescent Literacy: Design principles

- **6. Provide struggling readers differentiated instruction**

Differentiated according to:

1. **content,**
2. **texts,**
3. **tasks,**
4. **writing complexity,**
5. **engagement support.**

Adolescent Literacy: Design principles

- **6. Provide struggling readers differentiated instruction**

Differentiated according to:

1. **Content**

Subject matter relevance

Big ideas, core concepts, structured relations

Carnine, et al., Read. Write Quart., 2004.

Adolescent Literacy: Design principles

- **6. Provide struggling readers differentiated instruction**

Differentiated according to:

2. Texts

Text matched to students word recognition—imperative

Criterion—More than 90% word recognition

Alternative texts; new books; revisions.

Fluency with text through repeated reading; peer tutoring; assisted reading

Fuchs, et. al, Rem. & Sp. Ed., 1999; Mostropieri, LD Res. & Prac., 2003.

Adolescent Literacy: Design principles

- **6. Provide struggling readers differentiated instruction**

Differentiated according to:

3. Tasks

Simplify same task by 50%; e.g., inferencing, summarizing, graphic organizing

Sequence tasks

Model task performance; scaffold longer

Swanson, JLD, 1999

Adolescent Literacy: Design principles

- **6. Provide struggling readers differentiated instruction**

Differentiated according to:

4. Writing complexity

Reduce amount, complexity, time limits by 50%

Provide goal setting; feedback; scaffolding

Adolescent Literacy: Design principles

- **6. Provide struggling readers differentiated instruction**

Differentiated according to:

5. Engagement support

Same principles; reduced scope

- **Choice---page instead of chapter**
- **Collaboration---partner for 10 min., not 2 days**
- **Content goal setting---easier goal; more feedbk.**
- **Fostering relevance---frequent connections of text to experience, knowledge, curriculum**

Adolescent literacy design principles:

Limitations

- **Based on *extremely* few experimental, controlled studies (less than 1% of K-2).**
- **Based on few controlled correlational studies (SEM) of achievement, not growth.**
- **Based on extrapolations from confined studies, with limited samples.**
- **Not based on controlled field trials in high-risk schools.**
- **Based on impoverished theories of secondary literacy learning.**

Challenges to implementation

- **What are the barriers to implementing these six (6) design principles?**
  - **One barrier for each**
- **How can these challenges to implementation be addressed?**
- ***Discuss with a partner.***

Challenges to implementation

- **Scripted curriculum**
- **Breadth over depth**
- **Teacher expertise**
- **Teacher responsibility**
- **Accountability conflicts**
- **Quick fix: 5 day rather than 5 year plan**
- **Leadership expertise**