



The Buttons to Push to Change Student Outcomes in a Major Way

Don Deshler
University of Kansas

Influencer

The
**Power
To Change
Anything**

Kerry Patterson • Joseph Grenny
David Maxfield • Ron McMillan • Al Switzler

Vital Behaviors

- Exponentially improve your results.
- Tell you exactly what to do and how to do it.
- Tend to stop self-defeating behaviors.
- Often start a reaction that leads to good results.

The Keys

- Behaviors are actions
- Behaviors are not results or qualities
- Not all behaviors are equal
- Only a few are genuinely vital

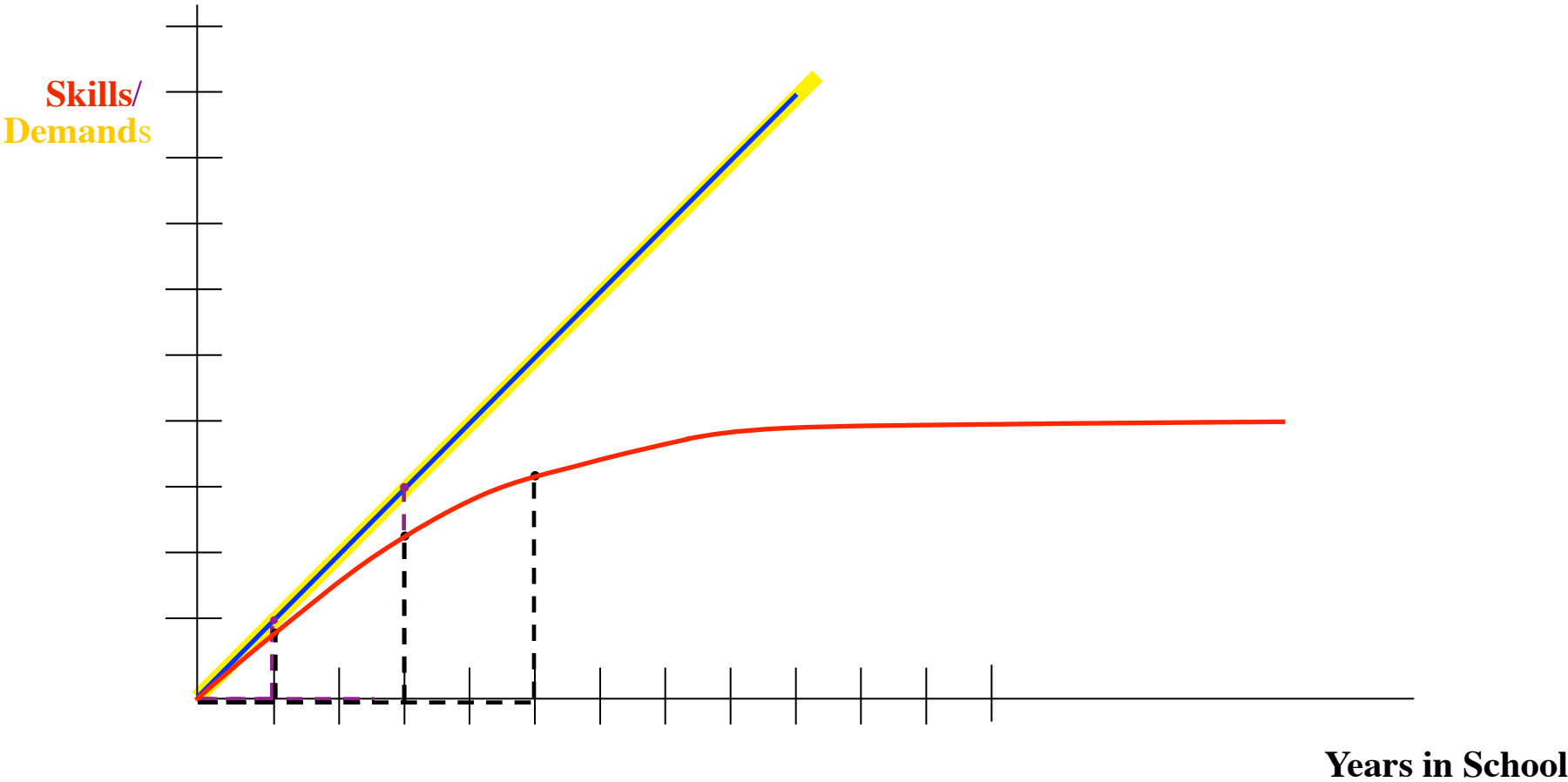
Why Vital Behaviors are SO important.....

- There is lots to do.....on the surface, most of the things are “good” things.
- The issue isn't whether it's “good” or not.....the issue is whether it's **vital!!**

So ■ ■ ■ ■

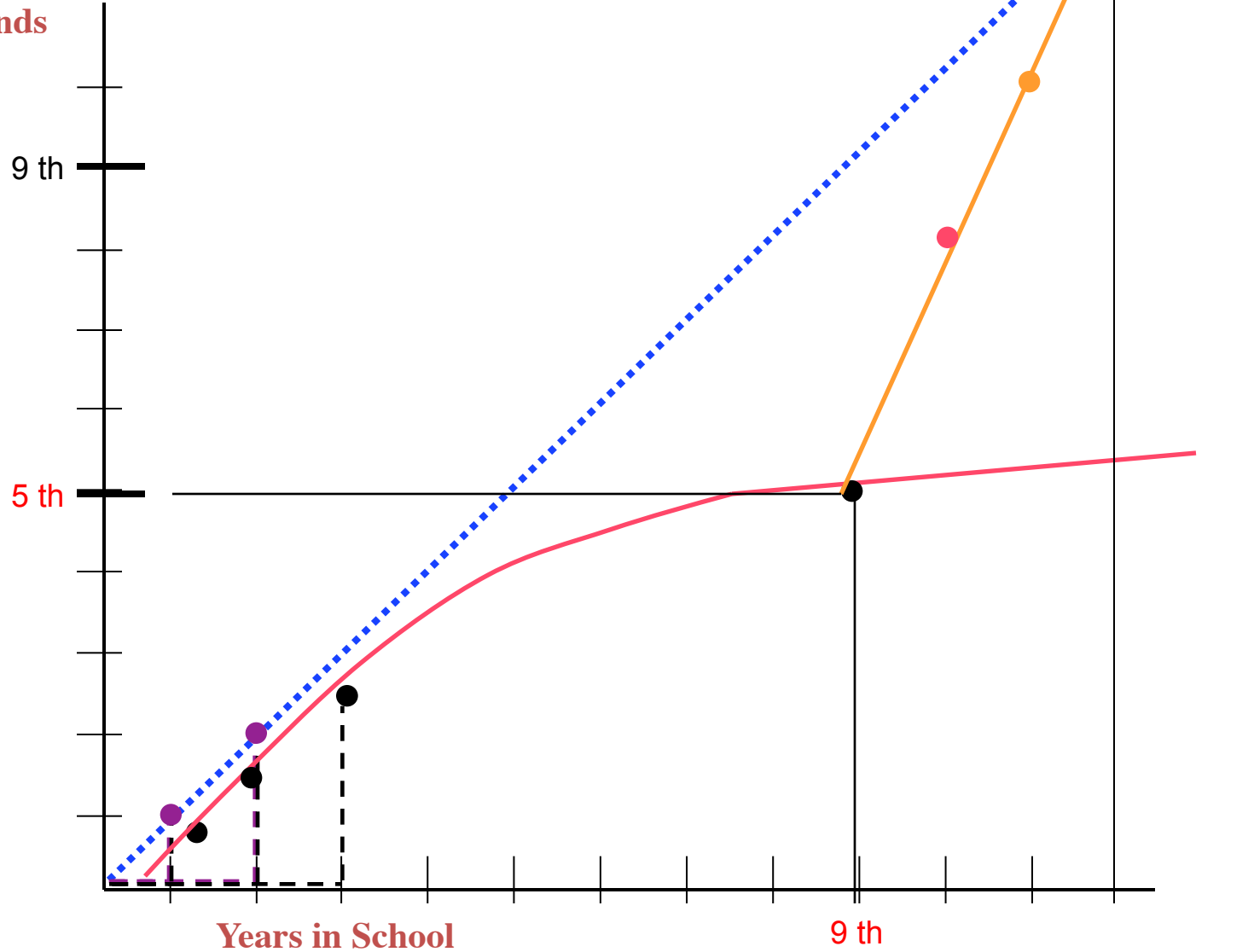
in your world, what are the vital behaviors for moving the needle in a significant way?

The Performance Gap



The Performance Gap

Skills and Demands



FROM THE AUTHOR OF *REACH FOR THE MOON*

*My
Thirteenth
Winter*

A Memoir

SAMANTHA ABEEL



How many words a year do 5th graders read who read at the **50th** percentile?

(A) 250,000

(B) 400,000

(C) 600,000

(D) 900,000

How many words a year do 5th graders read who read at the **10th** percentile?

- (A) 60,000**
- (B) 100,000**
- (C) 180,000**
- (D) 250,000**

How many words a year do 5th graders read who read at the **90th** percentile?

(A) 1,800,000

(B) 2,500,000

(C) 3,000,000

(D) 4,000,000

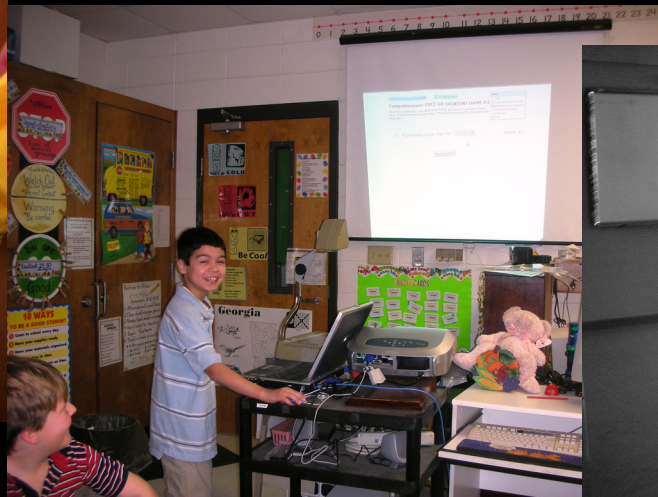
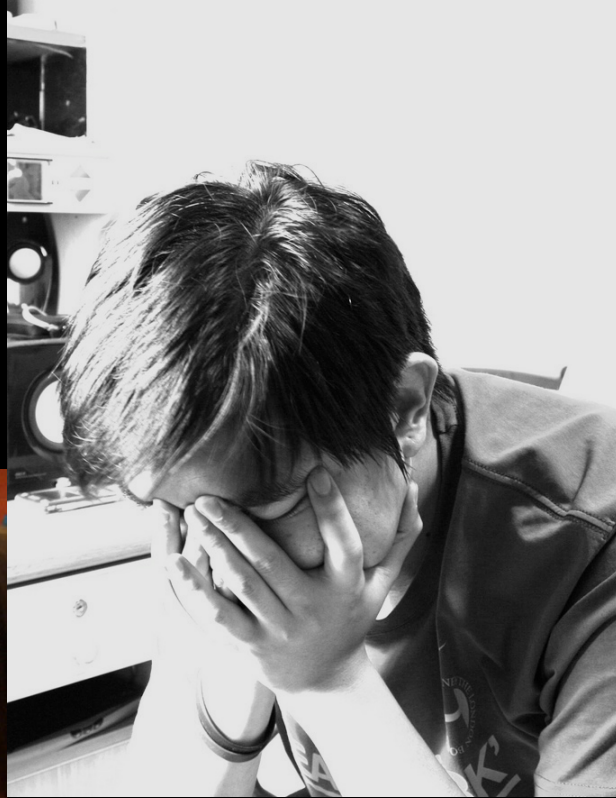
What are *your* 3 golden nuggets for moving the needle on literacy performance???









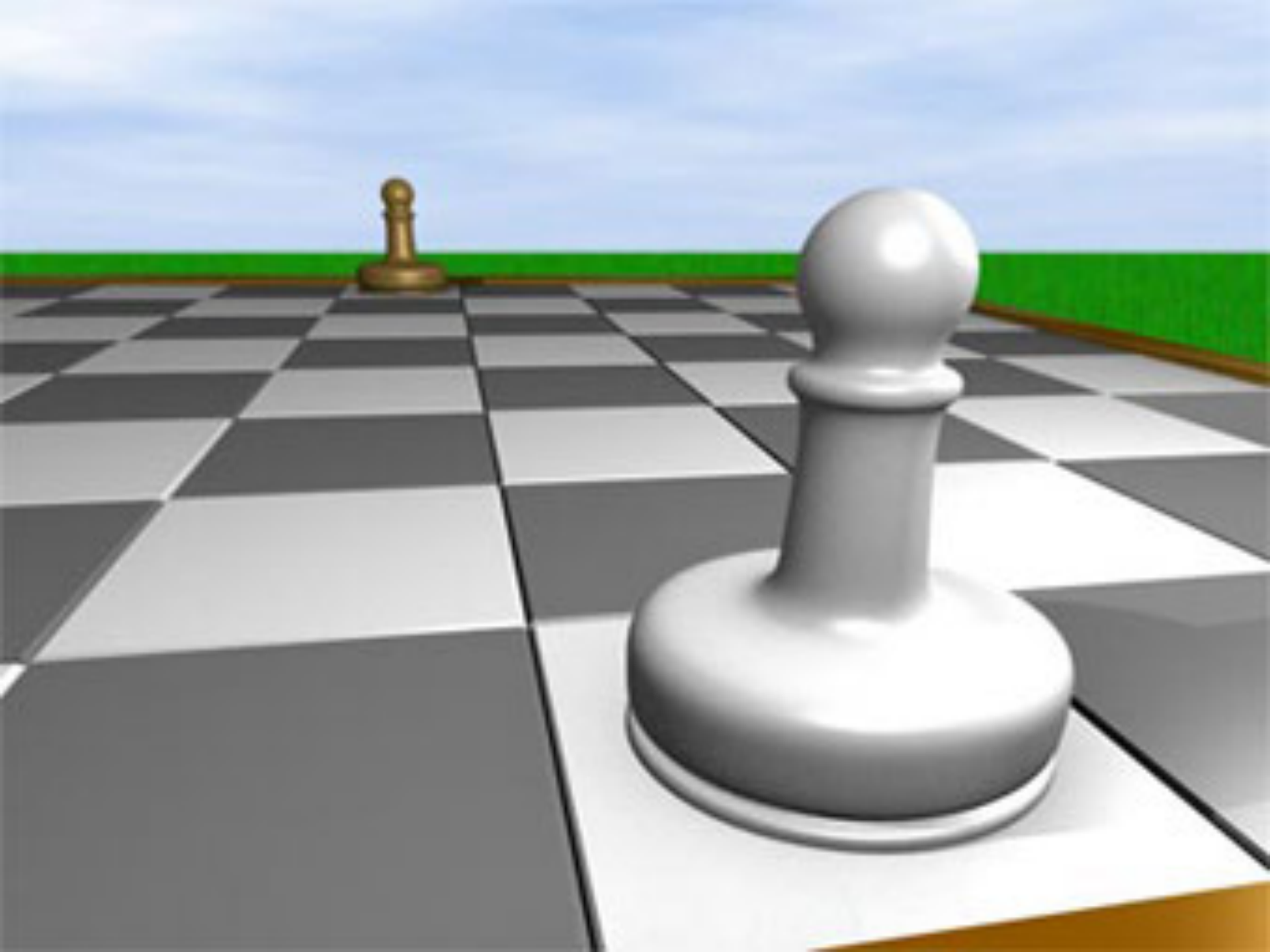


What's written on our "Belief Window" about.....

- **Self**
- **Students**
- **Others**
- **Craft**

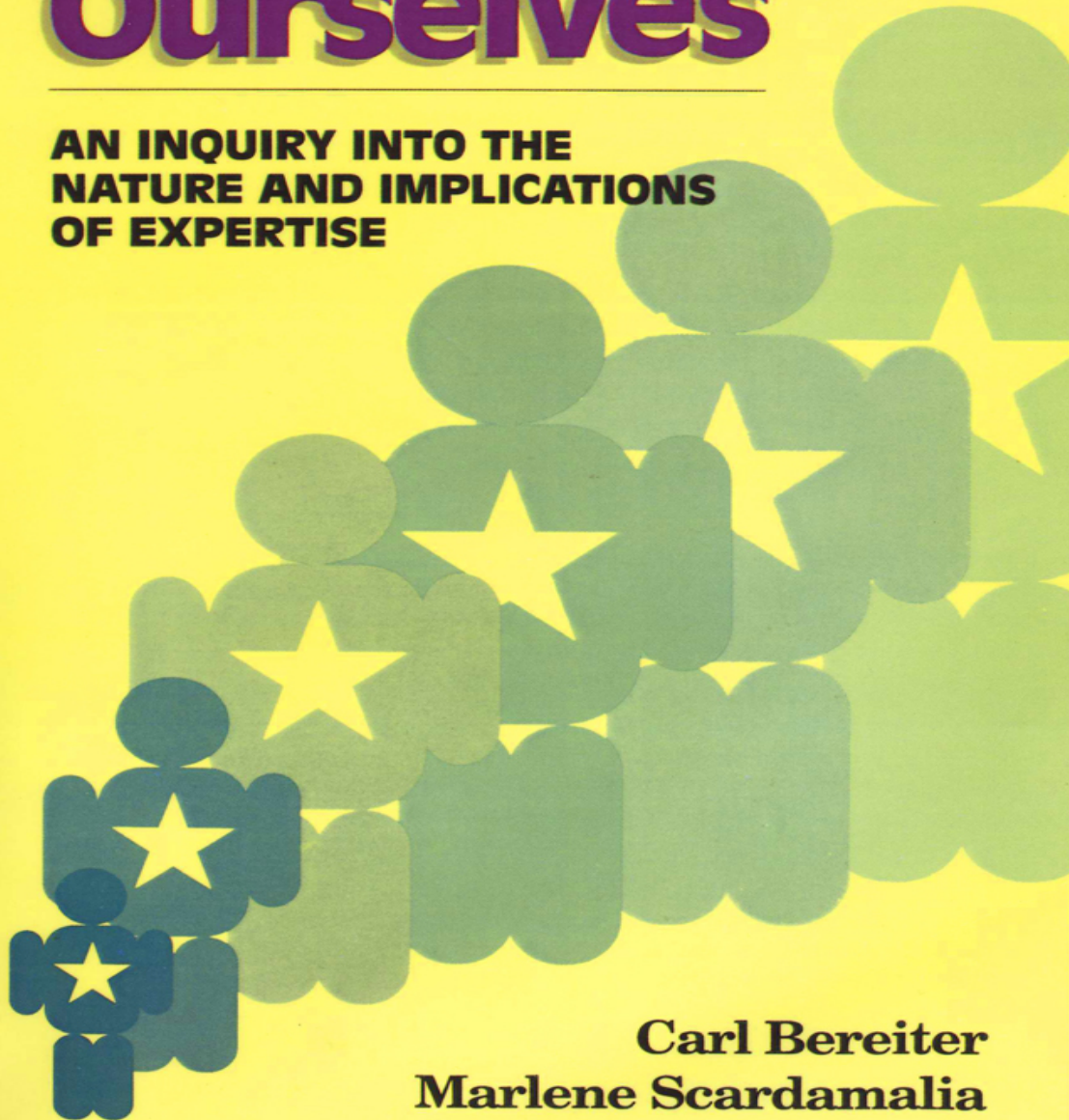
What's written on our "Belief Window" about....

Self



Surpassing Ourselves

**AN INQUIRY INTO THE
NATURE AND IMPLICATIONS
OF EXPERTISE**



**Carl Bereiter
Marlene Scardamalia**



- To the extent that people engage in progressive problem solving they work *at the edge of their competence*. Working here is both risky and taxing – but it has the potential of yielding superior accomplishments.

ATUL
GAWANDE

AUTHOR OF *COMPLICATIONS*

better

A Surgeon's Notes on Performance



“Better is possible. It does not take genius. It takes **diligence.** It takes **moral clarity.** It takes **ingenuity.** And above all, it takes a **willingness to try.”**

"Don't let yourself be! Find something new to **try**, something to **change. Count** how often it succeeds and how often it doesn't. **Write** about it. **Ask** a patient or a colleague what they think about it. See if you can **keep the conversation going."**

" Betterment is perpetual labor.

The world of medicine is chaotic, disorganized, and vexing. To complicate matters, we in medicine are also only human ourselves. We are distractible, weak, and given to our own concerns. In spite of all of these things, having accepted the responsibility, **how one does such work well is what professionalism is all about."**



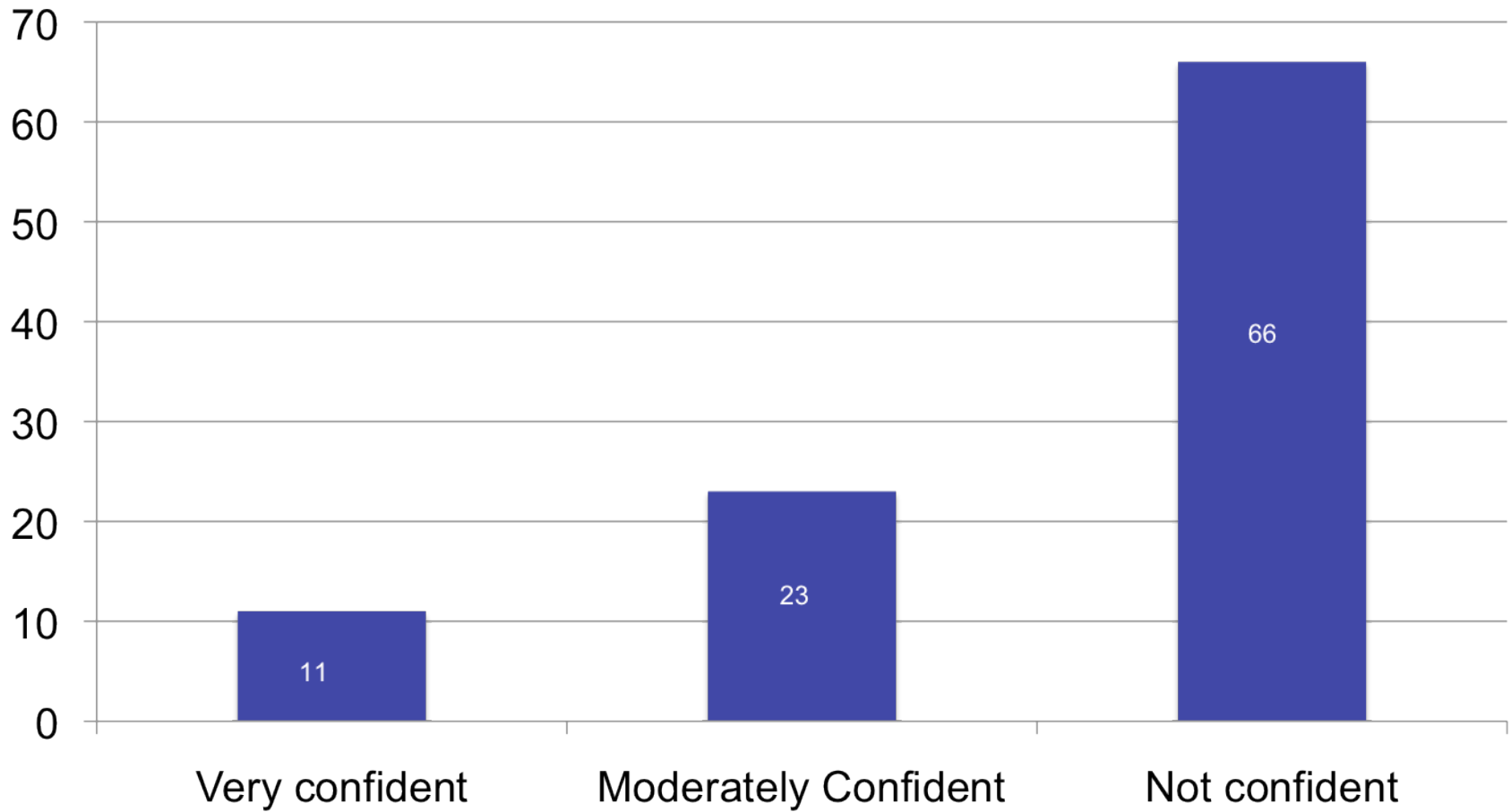
What's written on our "Belief Window" about....


Students

Teachers' Explanations

- Biggest barrier to struggling learner success
 - Student attitudes
 - Students neglect of work
 - Low ability
 - Poor attendance
 - Unsupportive parents

Given high quality instruction, how confident are you that struggling adolescent readers can read close to grade level?





JOSHUA BELL

BRUCH · MENDELSSOHN
MOZART

Violin Concertos

DECCA



What's written on our "Belief Window" about....

Others

School culture

can stop

change dead in

its tracks!

Organizations can
engage in **self-**
destructive
behavior

Academic Optimism

A new way to explain
student achievement

Hoy, Hoy, & Tarter

Components

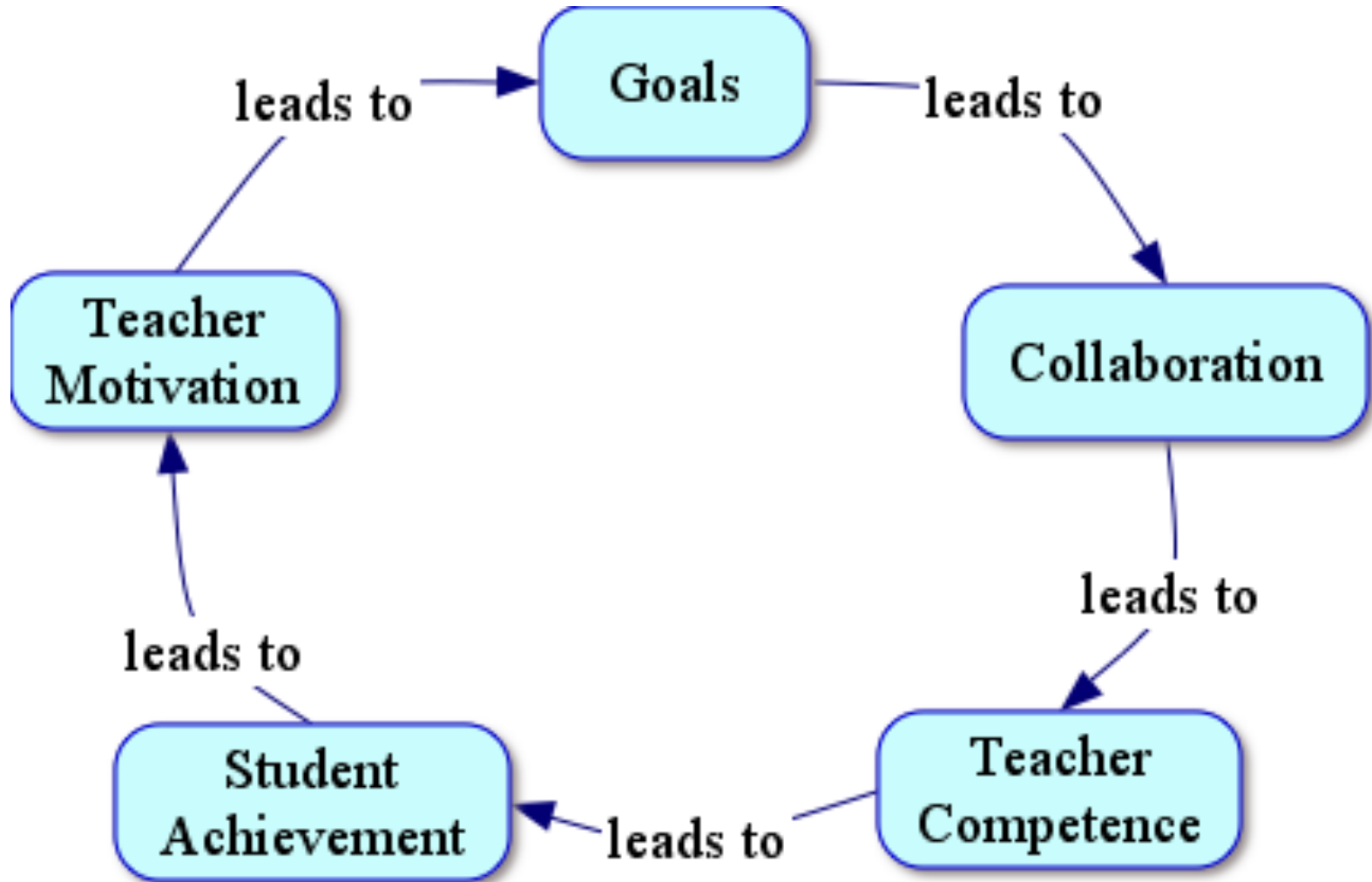
- **Academic emphasis** (extent school is driven by a quest for academic excellence – a press for academic achievement)
- **Collective efficacy** (belief that the faculty as a whole can organize and execute actions required to have a positive effect on students)
- **Trust** (in colleagues, parents, students)

Synergy

- **Work together to create a positive academic climate**
- **Administrators and teachers have reason to be optimistic and empowered**
 - Neither they nor their students are irretrievably trapped by socioeconomic factors

Moving Schools

(Rosenholtz, 1991)



Indicators of school culture...

- Do we have a **culture of encouragement**?
- Is there a **shared sense of purpose**?
- Is there a deep commitment to *each of us* **improving our craft**?
- How **transparent** is our **instruction**?
- Is there a **culture of** individual and group **accountability**?
- What characterizes our **interactions with each other**?

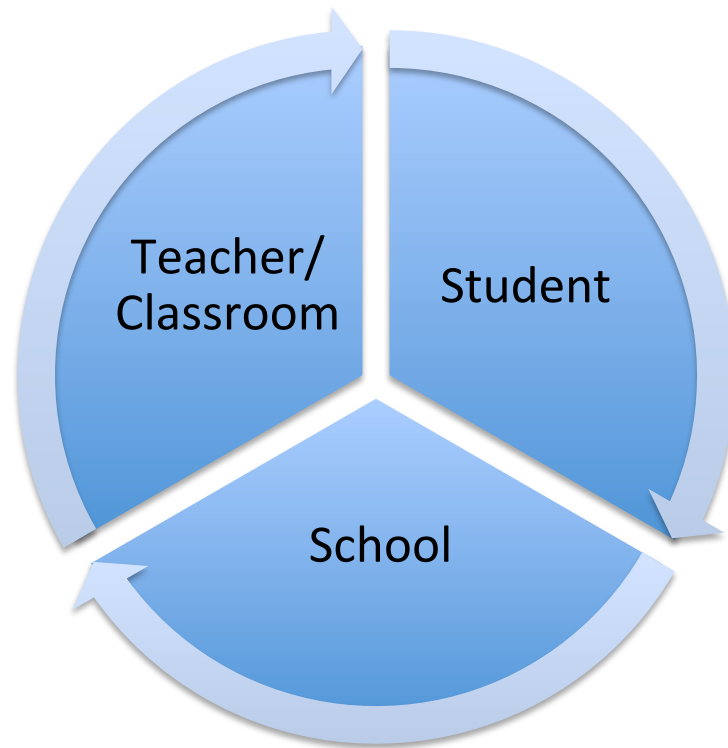


What's written on our "Belief Window" about our.....

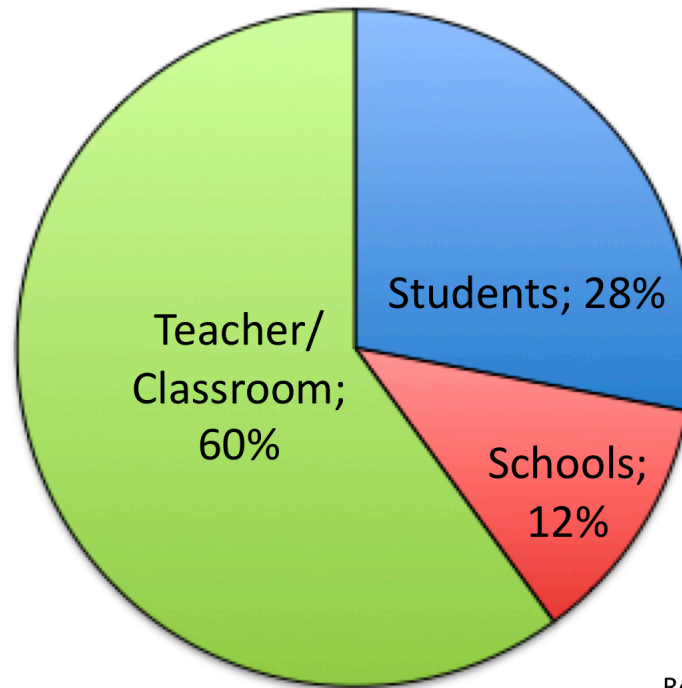
Craft

Proportion of Variance in Student Reading Gain Scores

What do you think are the biggest contributors to student achievement gains?



Proportion of Variance in Student Reading Gain Scores



Rowan, et. al., (2005)

<i>Influence</i>	<i>Effect Size</i>	<i>Source of Influence</i>
Feedback	1.13	Teacher
Students' prior cognitive ability	1.04	Student
Instructional quality	1.00	Teacher
Direct instruction	.82	Teacher
Remediation/feedback	.65	Teacher
Students' disposition to learn	.61	Student
Class environment	.56	Teacher
Challenge of Goals	.52	Teacher
Peer tutoring	.50	Teacher
Mastery learning	.50	Teacher
Parent involvement	.46	Home
Homework	.43	Teacher
Teacher Style	.42	Teacher
Questioning	.41	Teacher
Peer effects	.38	Peers
Advance organisers	.37	Teacher
Simulation & games	.34	Teacher
Computer-assisted instruction	.31	Teacher
Testing	.30	Teacher
Instructional media	.30	Teacher
Aims & policy of the school	.24	School
Affective attributes of students	.24	Student
Physical attributes of students	.21	Student
Programmed instruction	.18	Teacher
Ability grouping	.18	School
Audio-visual aids	.16	Teacher
Individualisation	.14	Teacher
Finances/money	.12	School
Behavioural objectives	.12	Teacher
Team teaching	.06	Teacher
Physical attributes (e.g., class size)	-.05	School
Television	-.12	Home
Retention	-.15	School

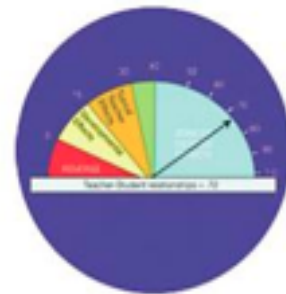
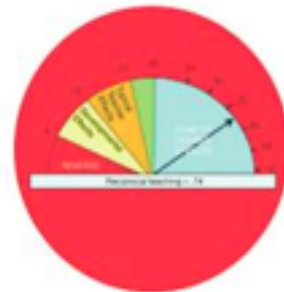
Refine our craft

□ Work on Instructional Practice

- Develop protocols for observing practice
- Observe, describe, analyze instructional practice
- Build common language and expectations

VISIBLE LEARNING

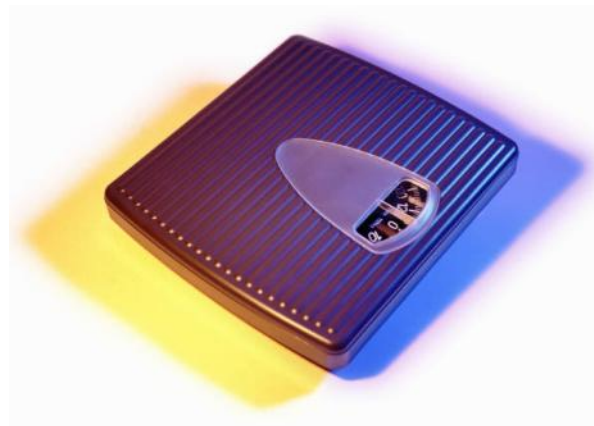
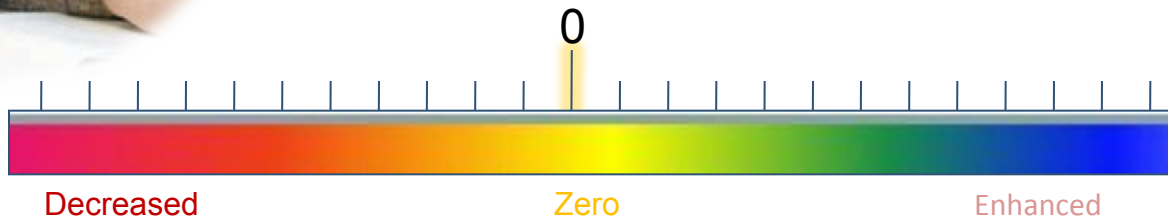
A SYNTHESIS OF OVER
800 META-ANALYSES
RELATING TO ACHIEVEMENT



JOHN HATTIE



Influences on Achievement ?



The typical influence on achievement

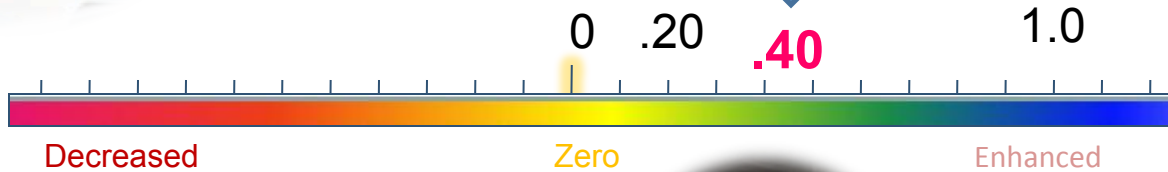
So what is the typical effect across

- **750+ meta-analysis**
- **50,000 studies, and**
- **200+ million students**

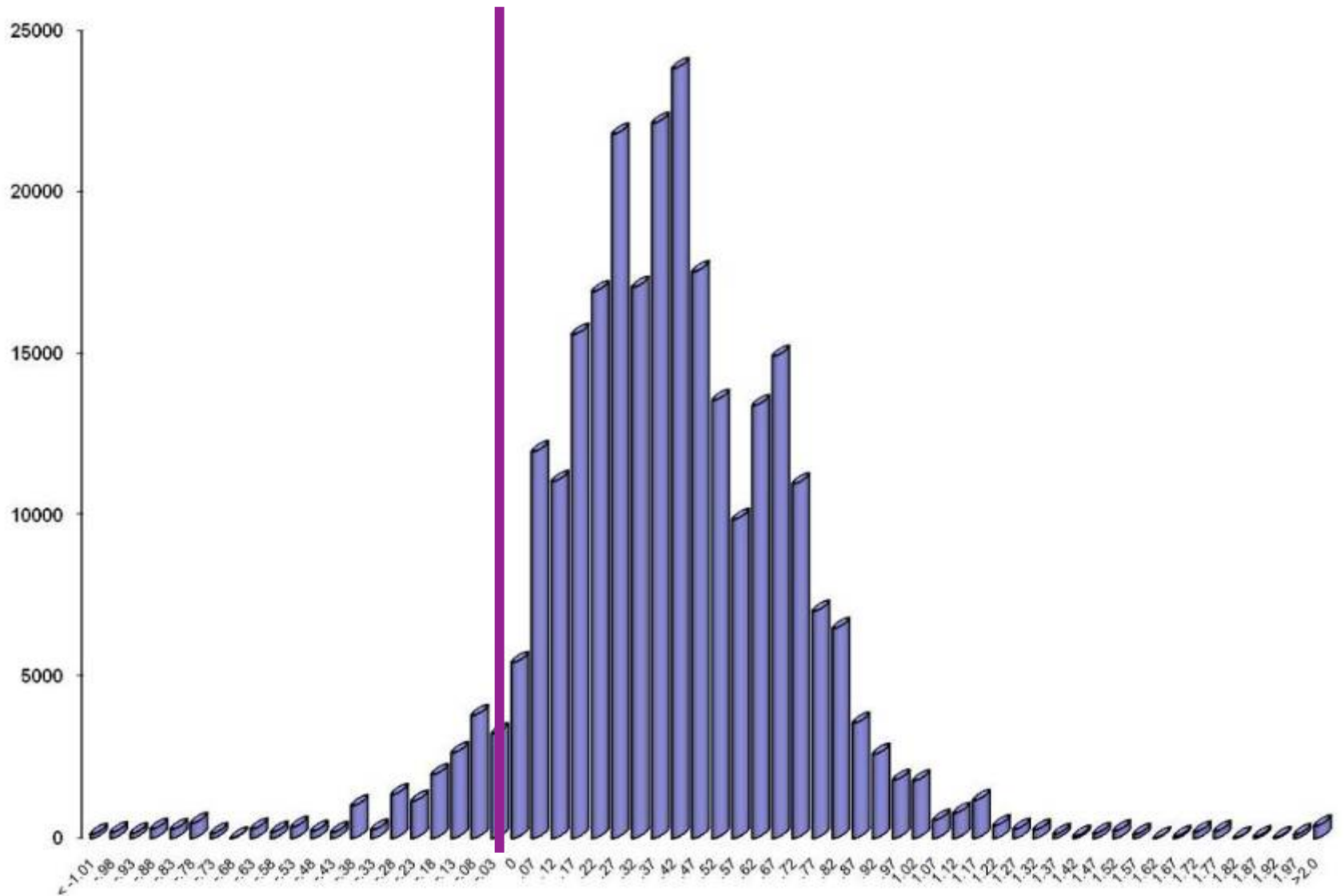
Effect on Achievement over time?



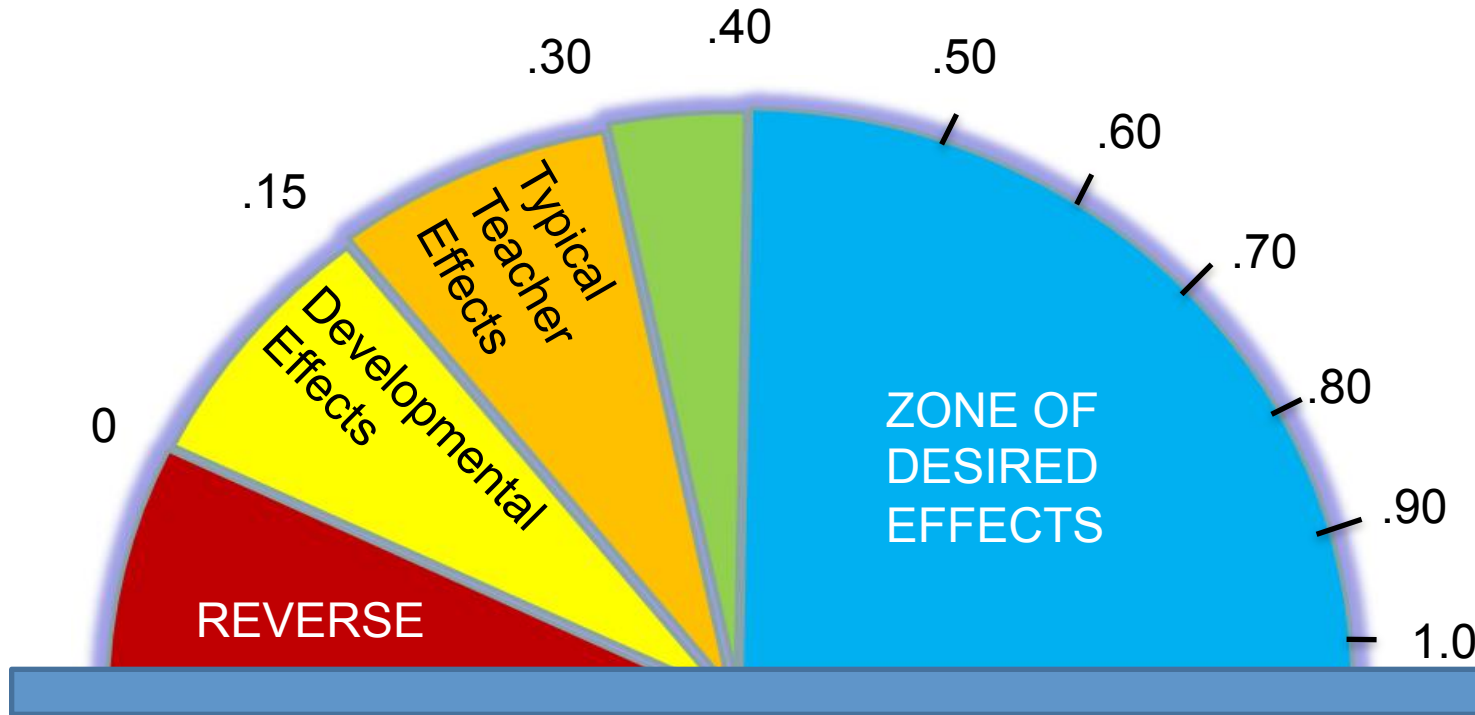
Typical
Effect
Size



Distribution of effects

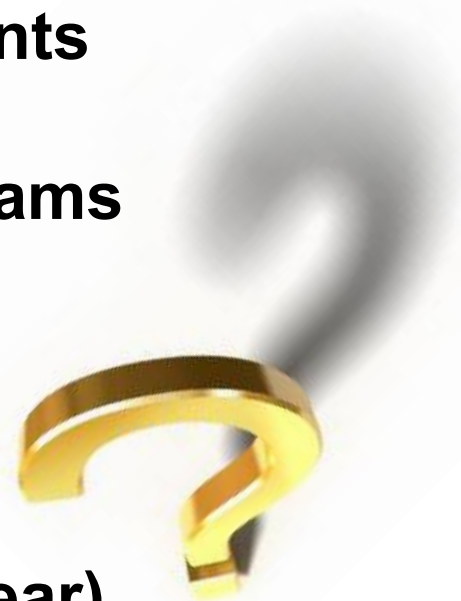


Influences on Achievement



Rank these 11 effects:

- **Reducing disruptive behavior in the class**
 - **Feedback**
 - **Acceleration of gifted students**
 - **Reading Recovery**
 - **Integrated curriculum programs**
 - **Homework**
 - **Individualized instruction**
 - **Ability grouping**
 - **Open vs. traditional classes**
 - **Retention (holding back a year)**
 - **Shifting schools**
- (from 1 = highest effect to 11 = lowest effect)



Rank these 11 effects: Answers

- Reducing disruptive behavior in the class .86
- Feedback .72
- Acceleration of gifted students .60
- Reading Recovery .50
- Integrated curriculum programs .40
- Homework .30
- Individualized instruction .20
- Ability grouping .10
- Open vs. traditional classes .00
- Retention (hold back a year) -.16
- Shifting schools -.34



Major domains of interest

- Curricula



- Home



- School



- Student



- Teacher













- Teaching













The Disasters ...



Rank	Category	Influence	Studies	Effects	ES
100		Mobility (shifting schools)	181	540	-.34
99		Retention	207	2675	-.16
98		Television	31	235	-.14
97		Summer vacation	39	62	-.09
96		Open vs. traditional	315	333	.01
95		Multi-grade/age classes	94	72	.04
94		Inductive teaching	24	24	.06
93		Reading: Whole language	64	197	.06
92		Perceptual-motor programs	180	637	.08
91		Out of school experiences	52	50	.09













The Well belows...

Rank	Category	Influence	Studies	Effects	ES
90		Distance education	788	1545	.09
89		Web based learning	10	10	.09
88		Ability grouping	494	1363	.11
87		Teacher training	53	286	.11
86		Diet on achievement	23	125	.12
85		Teacher subject matter knowledge	27	64	.12
84		Gender (girls – boys)	2926	6051	.12
83		Multi-media methods	244	133	.15
82		Problem based learning	203	345	.15
81		Home-school programmes	14	14	.16











Not Worth it yet ...



Rank	Category	Influence	Studies	Effects	ES
80		Extra-curricula programs	96	68	.17
79		Family structure	660	846	.18
78		Co-/team teaching	136	47	.19
77		Learning hierarchies	24	24	.19
76		Aptitude/treatment interactions	61	340	.19
75		Individualised instruction	581	1030	.20
74		Charter schools	18	18	.20
73		Religious schools	56	56	.20
72		Class size	96	785	.21
71		Teaching test taking	267	364	.22











Typical “average teacher” territory ...



Rank	Category	Influence	Studies	Effects	ES
70		Finances	189	681	.23
69		Summer school	105	600	.23
68		Competitive learning	831	203	.24
67		Programmed instruction	464	362	.24
66		Within class grouping	148	297	.25
65		Mainstreaming	150	370	.28
64		Desegregation	335	723	.28
63		Exercise/relaxation	227	1971	.28
62		Audio-based teaching	146	48	.28
61		Home visiting by teachers	71	52	.29











Close to average



Rank	Category	Influence	Studies	Effects	ES
60		Reducing anxiety	69	904	.30
59		Principals/school leaders on student achievement	344	1008	.30
58		Ability grouping for gifted students	125	202	.30
57		Homework	261	275	.31
56		Inquiry based teaching	205	420	.31
55		Simulations and gaming	342	449	.32
54		Reading: Exposure to reading	145	324	.36
53		Bilingual programs	128	666	.37
52		Teacher positive expectations	635	745	.37
51		Computer assisted instruction	4481	8079	.37











Average ...



Rank	Category	Influence	Studies	Effects	ES
50		Enrichment on gifted	214	543	.39
49		Integrated curriculum programs	61	80	.39
48		Adjunct aids	138	323	.41
47		Hypermedia instruction	46	143	.41
46		Behavioral organisers/adjunct questions	577	1933	.41
45		Self-concept on achievement	324	2113	.43
44		Frequent/effects of testing	323	1077	.46
43		Early intervention	1627	9050	.47
42		Motivation on learning	322	979	.48
41		Small group learning	78	155	.49











Getting there ...



Rank	Category	Influence	Studies	Effects	ES
40		Questioning	214	342	.49
39		Cooperative learning	2285	1519	.49
38		Reading: Second/third chance programs	52	1395	.50
37		Play programs	70	70	.50
36		Visual based/audio-visual teaching	468	3860	.51
35		Outdoor programs	187	429	.52
34		Concept mapping	91	105	.52
33		Peer influences	12	122	.53
32		Keller's mastery learning program	263	162	.53
31		Reading: Phonics instruction	407	5950	.53











Let's have them



Rank	Category	Influence	Studies	Effects	ES
30		Reading: Visual-perception programs	762	5244	.55
29		Parental Involvement	694	1761	.55
28		Peer tutoring	767	1200	.55
27		Goals - challenging	454	671	.56
26		Mastery learning	369	284	.57
25		Social skills programs	540	3068	.57
24		Socio-economic status	499	957	.57
23		Home environment	35	109	.57
22		Providing worked examples	62	151	.57
21		Reading: Comprehension programs	365	2416	.58











Exciting



Rank	Category	Influence	Studies	Effects	ES
20		Direct instruction	304	597	.59
19		Time on task	64	100	.59
18		Study skills	656	2446	.59
17		Acceleration of gifted	60	412	.60
16		Problem solving teaching	221	719	.61
15		Teacher professional development on student achievement	450	1790	.64
14		Reading: Repeated reading programs	54	156	.67
13		Reading: Vocabulary programs	301	800	.67
12		Meta-cognition strategies	43	123	.67
11		Teaching students self-verbalisation	92	1061	.67

The Winners ...



Rank	Category	Influence	Studies	Effects	ES
1		Self-report grades	209	305	1.44
2		Absence of disruptive students	140	315	.86
3		Classroom behavioural	160	942	.80
4		Quality of teaching	141	195	.77
5		Reciprocal teaching	38	53	.74
6		Prior achievement	3387	8758	.73
7		Teacher-student relationships	229	1450	.72
8		Feedback	1276	1928	.72
9		Providing formative evaluation to teachers	21	21	.70
10		Creativity programs	658	814	.70

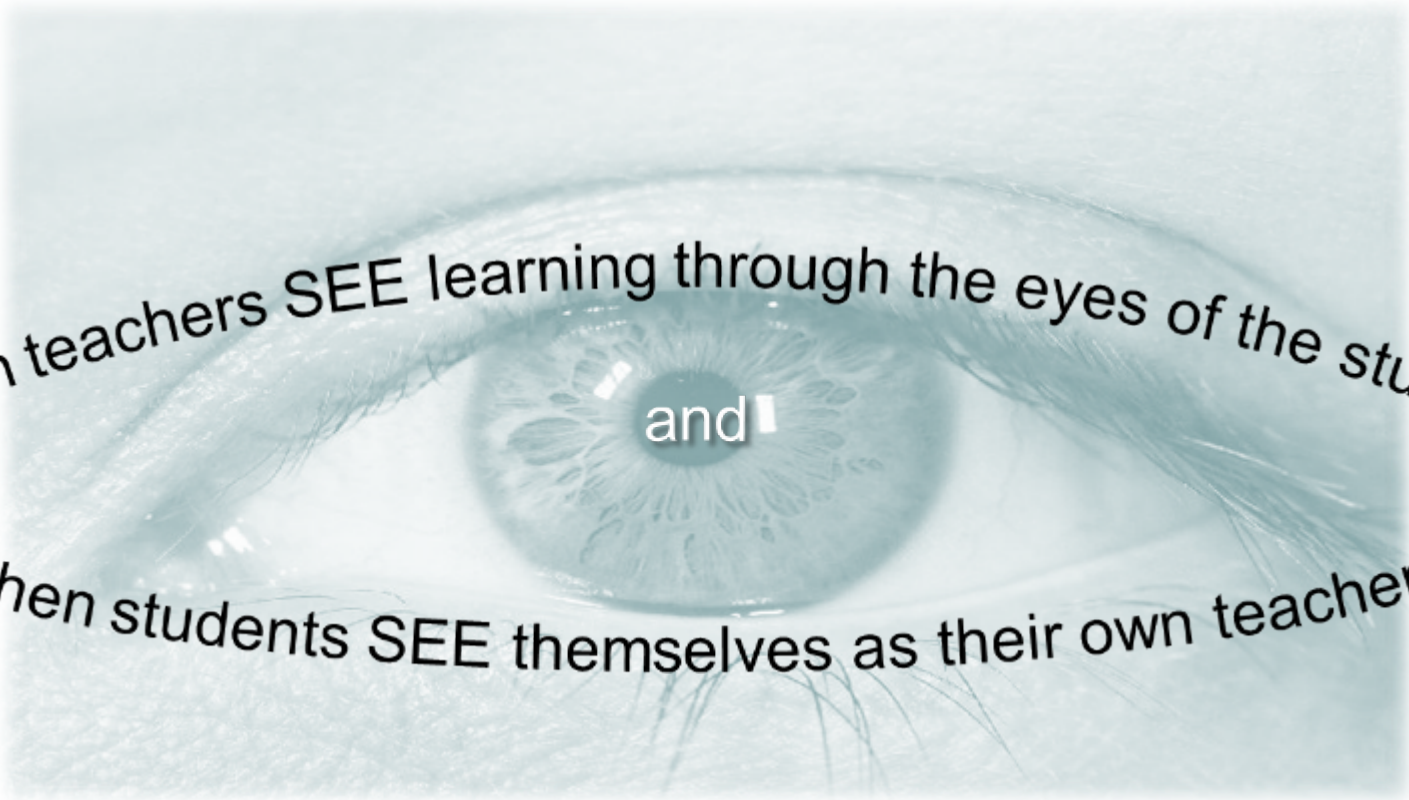
Various Influences

	<u>Metas</u>	<u>Studies</u>	<u>People</u>	<u>Effects</u>	<u>ES</u>	<u>se</u>
Teacher	29	2,052	.5m	5,379	.50	.05
Curricula	135	6,892	7m	29,476	.45	.07
Teaching	344	24,906	52m	50,953	.43	.07
Student	133	10,735	7m	37,308	.39	.04
Home	31	1,998	10m	3,968	.35	.06
School	96	4,019	4m	13,609	.23	.07
Average	768	50,602	82/241m*	140,693	.40	.06

Visible teaching & Visible learning

- **What some teachers do!**
 - **In active, calculated and meaningful ways**
 - **Providing multiple opportunities & alternatives**
 - **Teaching learning strategies**
 - **Around surface and deep learning**
 - **That leads to students constructing learning**

Visible Teaching – Visible Learning



When teachers SEE learning through the eyes of the student

and

When students SEE themselves as their own teachers

Teachers

- **Clear learning intentions**
- **Challenging success criteria**
- **Range of learning strategies**
- **Know when students are not progressing**
- **Providing feedback**
- **Visibly learns themselves**



Students ...

- **Understand learning intentions**
- **Are challenged by success criteria**
- **Develop a range of learning strategies**
- **Know when they are not progressing**
- **Seek feedback**
- **Visibly teach themselves**



The Contrast

- **An active teacher, passionate for their subject and for learning, a change agent**

OR

- **A facilitative, inquiry or discovery based provider of engaging activities**



Activator or Facilitator ?

An Activator

Reciprocal teaching

Feedback

Teaching students self-verbalization

Meta-cognition strategies

Direct Instruction

Mastery learning

Goals - challenging

Frequent/ Effects of testing

Behavioral organizers

A Facilitator

Simulations and gaming

Inquiry based teaching

Smaller class sizes

Individualized instruction

Problem-based learning

Different teaching for boys & girls

Web-based learning

Whole Language Reading

Inductive teaching

Activator or Facilitator ?

An Activator

Reciprocal teaching	.74
Feedback	.72
Teaching students self-verbalization	.67
Meta-cognition strategies	.67
Direct Instruction	.59
Mastery learning	.57
Goals - challenging	.56
Frequent/ Effects of testing	.46
Behavioral organizers	.41

ACTIVATOR

.60

A Facilitator

Simulations and gaming	.32
Inquiry based teaching	.31
Smaller class sizes	.21
Individualized instruction	.20
Problem-based learning	.15
Different teaching for boys & girls	.12
Web-based learning	.09
Whole Language Reading	.06
Inductive teaching	.06

FACILITATOR

.17

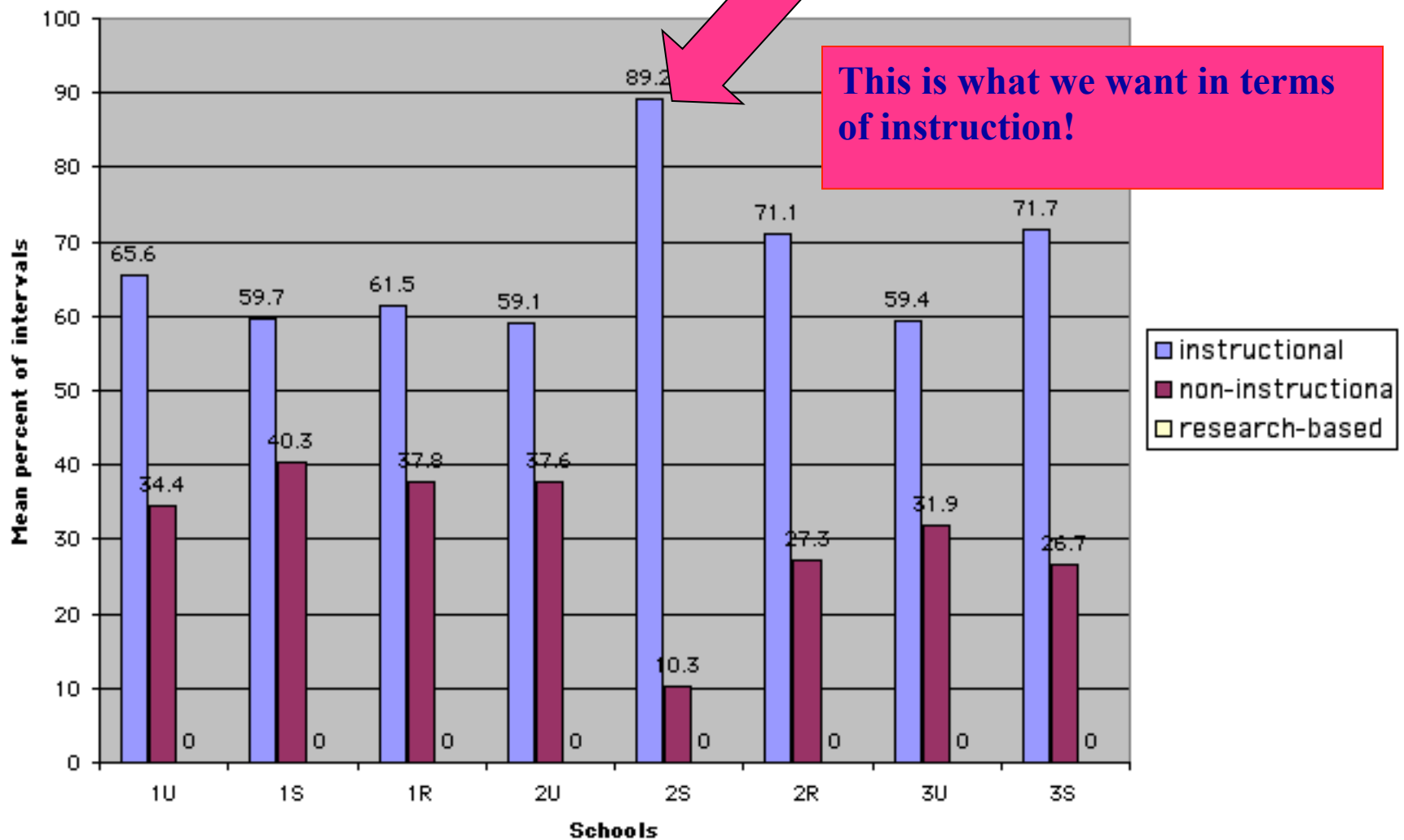
Teaching or Working Conditions?

<i>Teaching</i>	<i>ES</i>	<i>Structural/Working Conditions</i>	
Quality of teaching	.77	Within class grouping	.28
Reciprocal teaching	.74	Adding more finances	.23
Teacher-student relationships	.72	Reducing class size	.21
Providing feedback	.72	Ability grouping	.11
Teaching student self-verbalization	.67	Multi-grade/age classes	.04
Meta-cognition strategies	.67	Open vs. Traditional classes	.01
Direct Instruction	.59	Summer vacation classes	-.09
Mastery learning	.57	Retention	-.16
AVERAGE	.68		.08

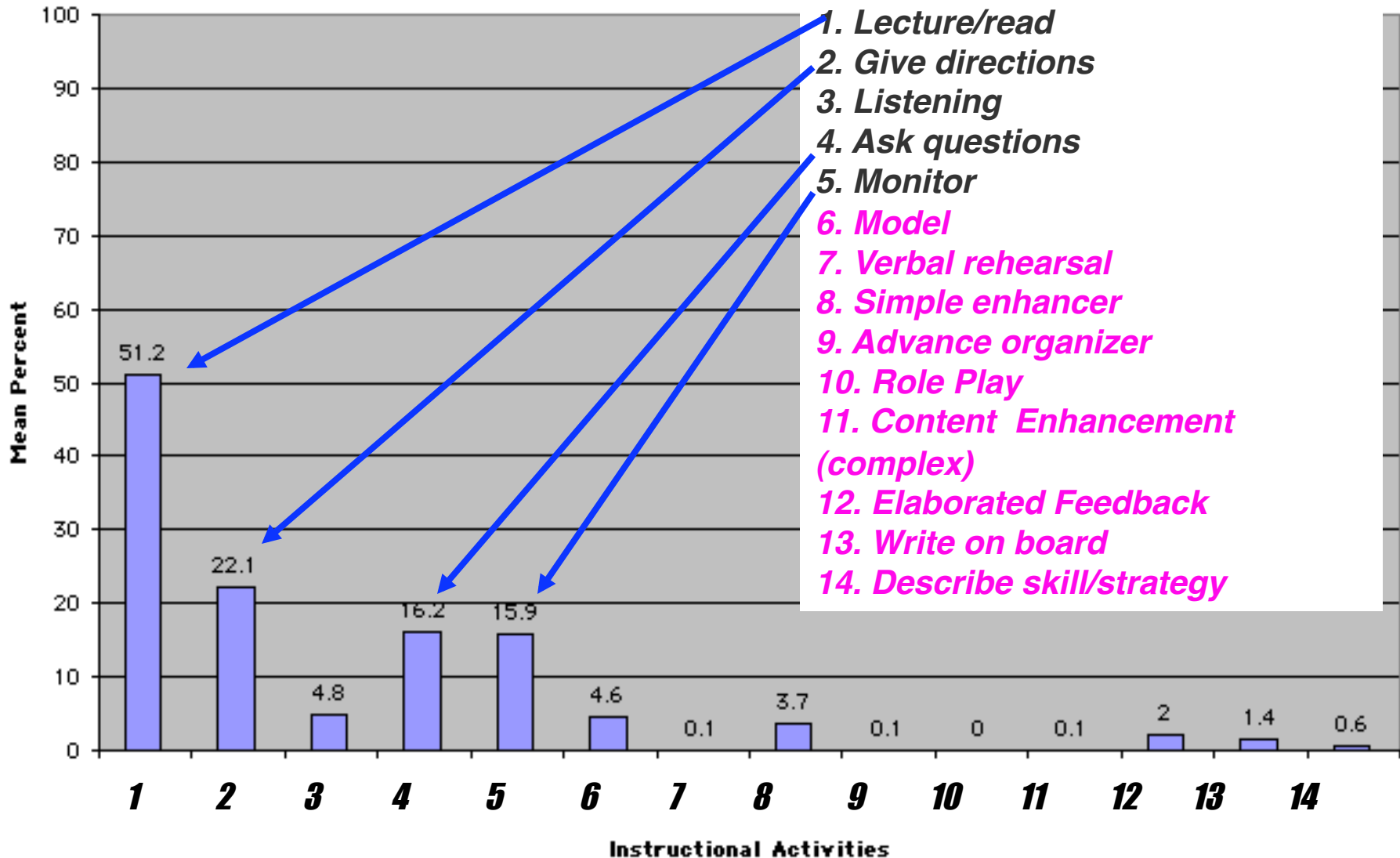
Prediction time!

- **In 9th grade core classes (science, history, etc.)...**
 - What percentage of time do teachers spend in active instruction?
 - How frequently are “high impact” strategies used that research has shown to work with students who struggle in learning?
- **In 9th grade “supplemental” classes...**
 - What percentage of time do teachers spend in active instruction?
 - How frequently are “high impact” strategies used that research has shown to work with students who struggle in learning?

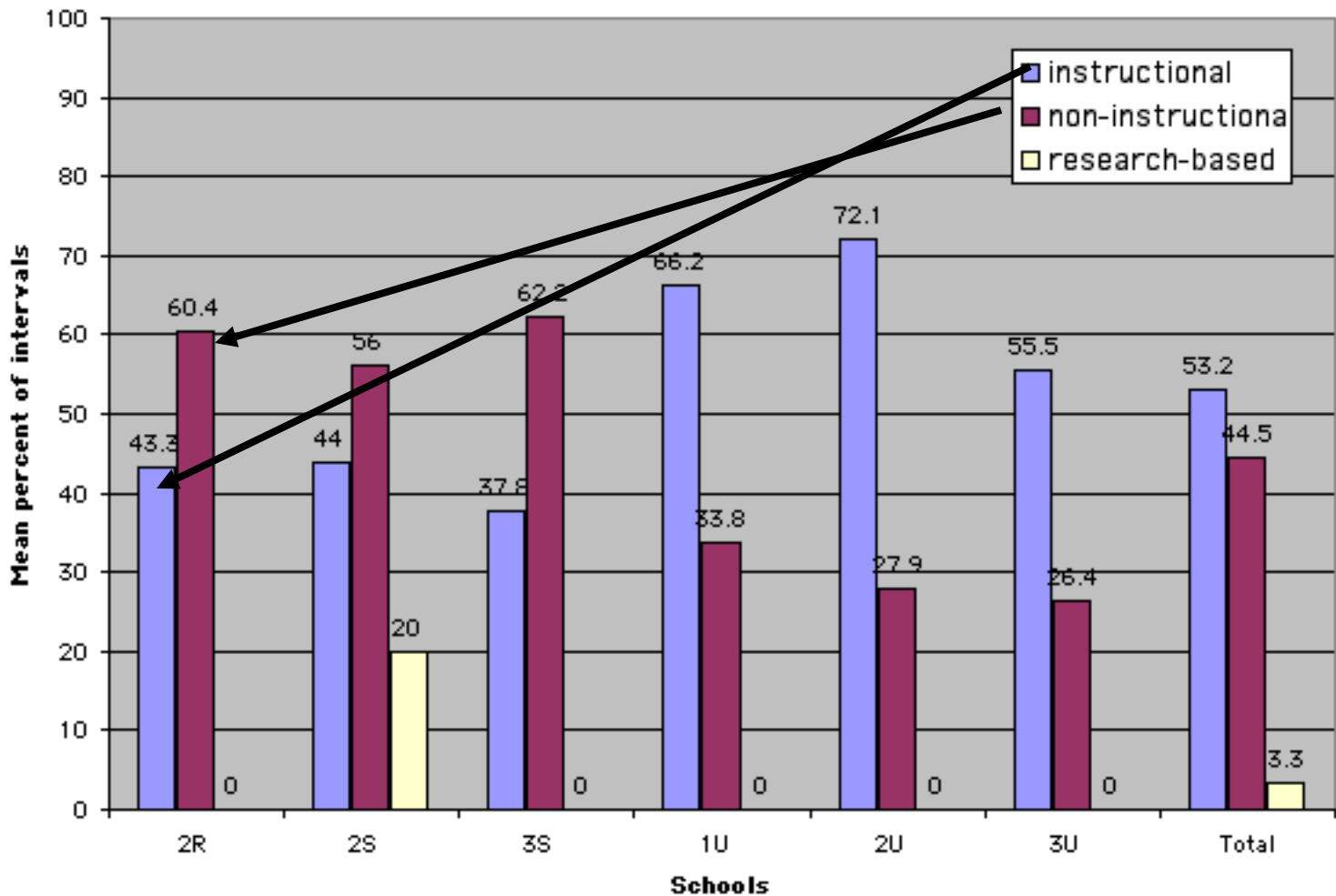
General Education Teacher Observation Interval Type



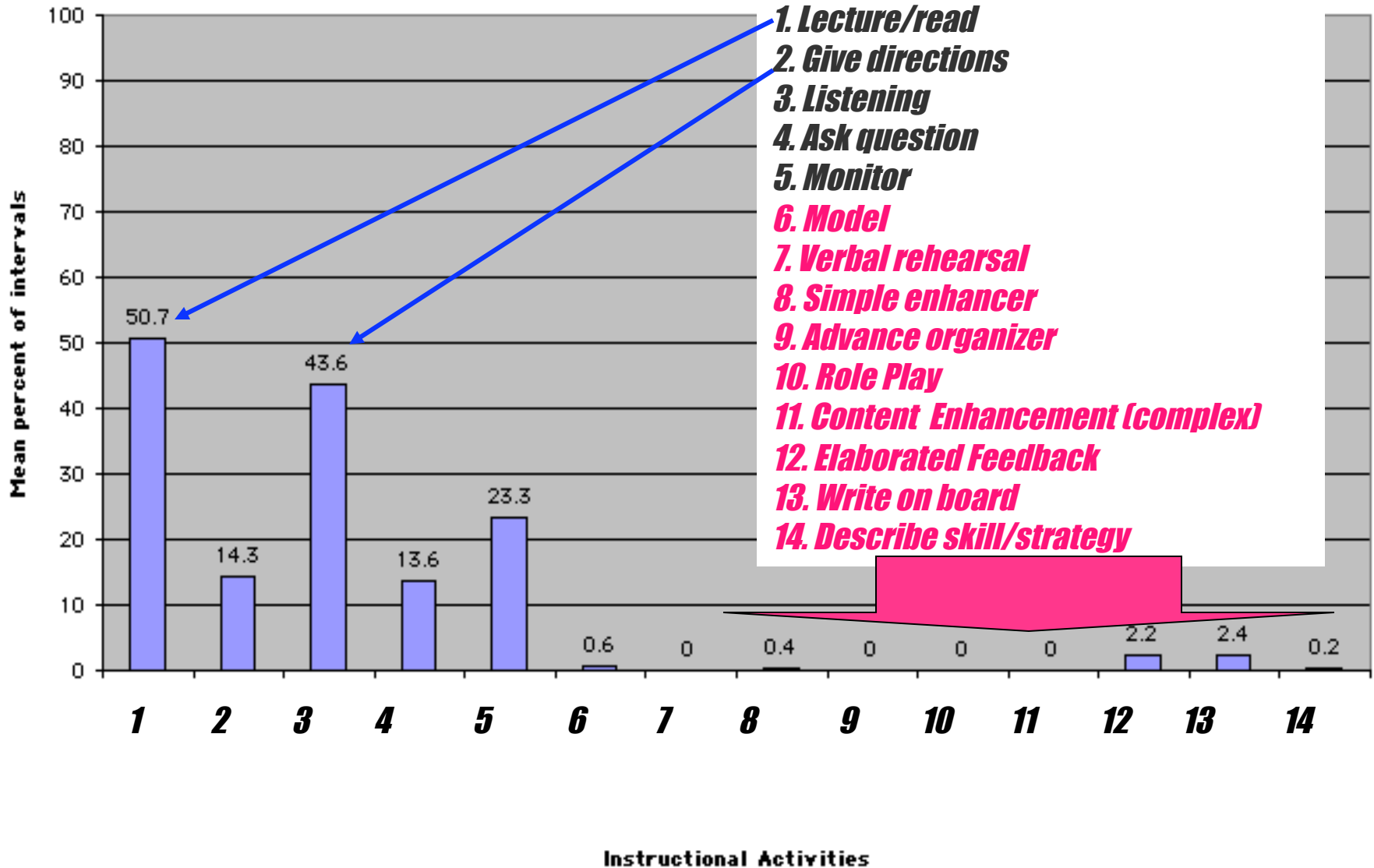
Observation of Teacher Practice Study



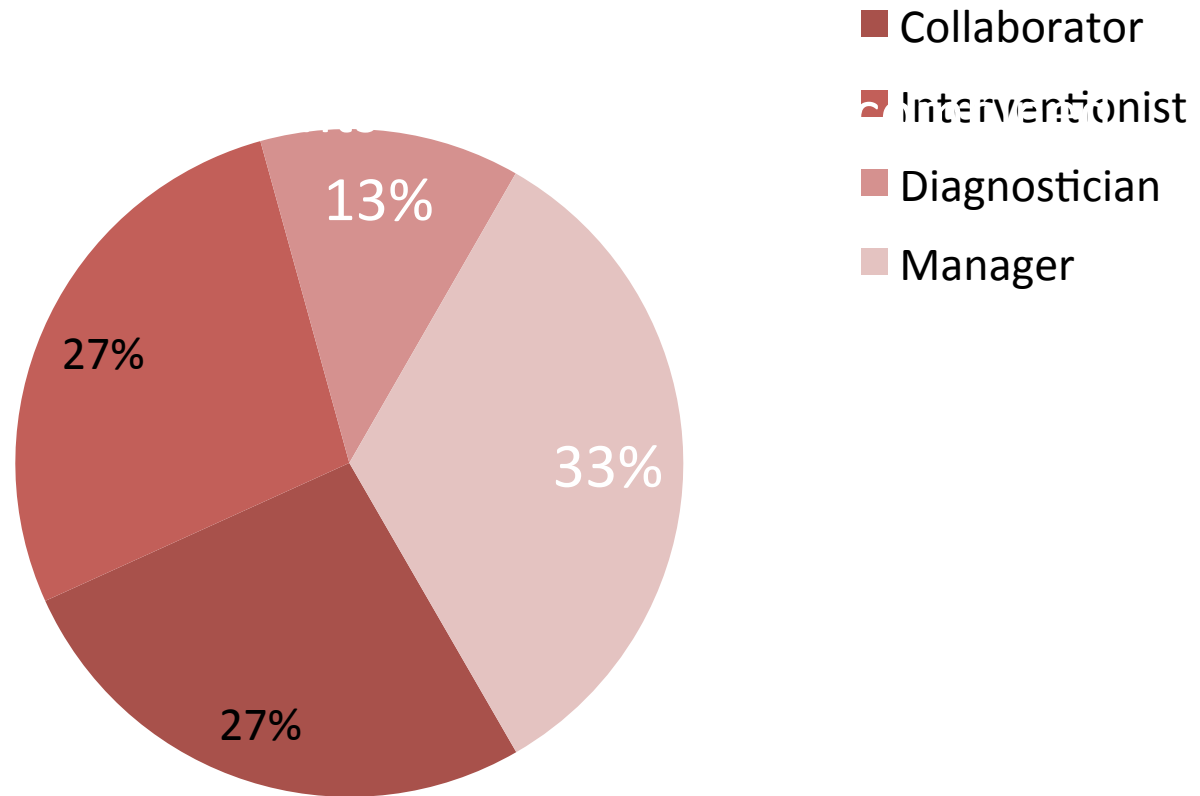
Mean percentage of intervals special education teachers were observed in various activities for each school.



Special Education Teacher Observations



Results: Role Observation



Results: Instruction Observation

Instructional Practices with Greatest Effects

Instructional Practices with Typical Effects

Feedback	11.93%	Physical Observation	11.08%
Exposure to Reading	11.38%	Not Engaged in Instruction	9.24%
Manipulate/Generalize	10.21%	Lecture	2.05%
Fact/Concept Review	9.29%		
Give Directions	8.95%		
On-going Assessment	8.20%		
Skill/Strategy Review	6.67%		
Modeling	4.63%		
Questioning	3.24%		
Video	1.96%		
Listening	1.06%		
Graphic Devices	0.07%		
Describe Skill/Strategy	0.04%		
Total	77.63%	(Mitchell, 2011)	Total
			22.37%

Another way of saying it.....

- 27% of time spent in instruction
- \times
- 77% of time using practices with “greatest effects”
- $=$
- 21% of time/week in “effective” instruction

• 1 day/week

WHAT 5 QUESTIONS ABOUT LITERACY SUPPORTS SHOULD BE ASKED?



#1

What's in place in core classes to ensure that students will get the “critical” content in spite of their literacy skills?

#2

Are powerful learning strategies embedded in courses across the curriculum?

#3

What happens for students who know how to decode but can't comprehend well?

#4

What happens for those students who are reading below the 4th grade level?

#5

**What happens for students
who have language
problems?**

Continuum of Literacy Instruction

CONTENT CLASSES

- Enhanced Content Instruction
- Embedded Strategy Instruction

SUPPLEMENTAL CLASSES

- Intensive Skill Instruction
- Intensive Strategy Instruction

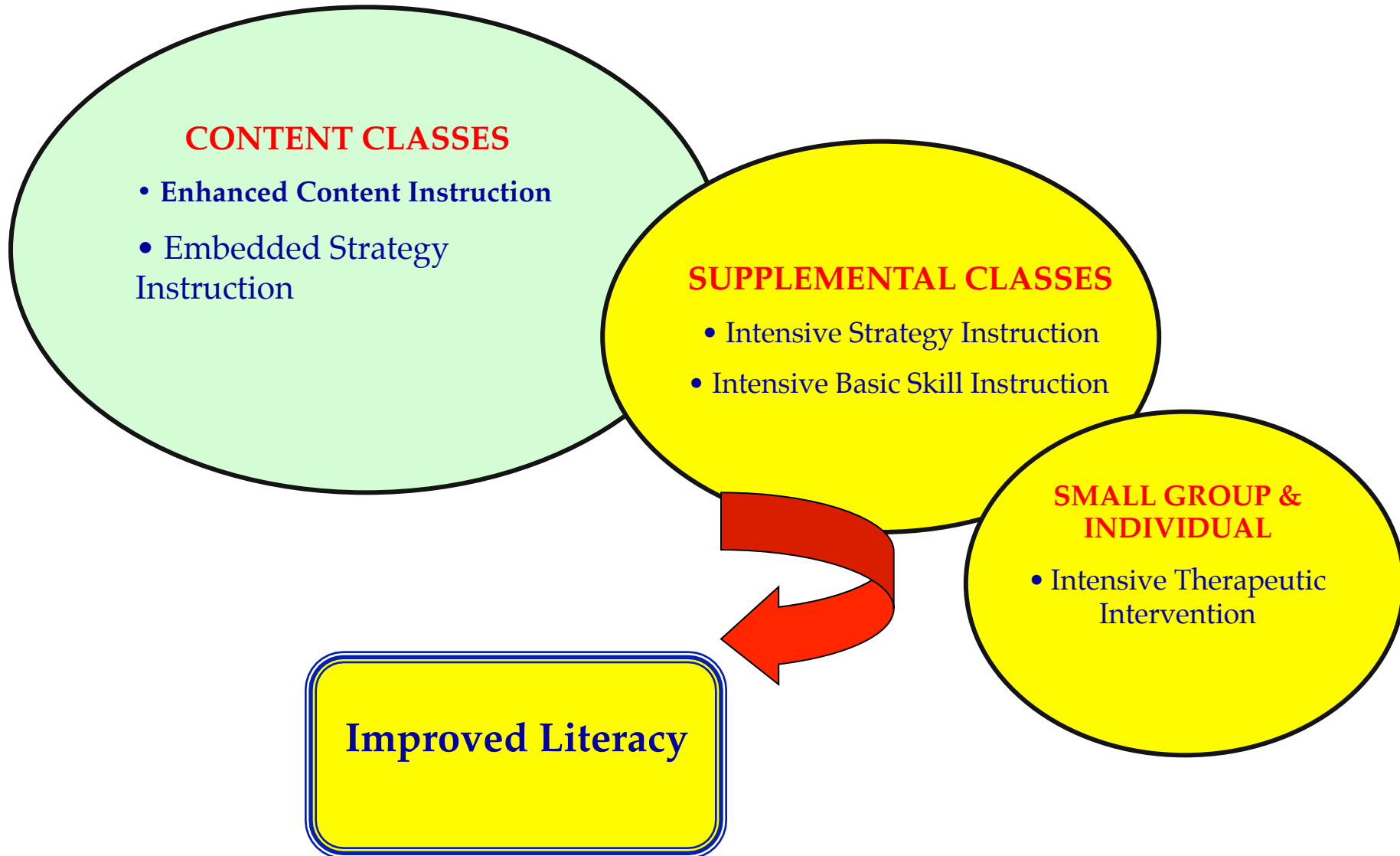
SMALL GROUP & INDIVIDUALIZED

- Intensive Intervention

Improved Literacy



Continuum of Literacy Instruction



Design Features in Content Enhancement to Support Literacy and Learning

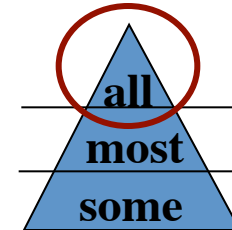
- Support for Prior Knowledge
- Organization and manipulation of information
- Metacognitive components
- Graphic Organizer
- Embedded cognitive strategy
- Explicit instruction
- Interactive construction of knowledge & comprehension

What is content enhancement?

Barrier-free instruction

Content Enhancement: Big Idea # 1

All content is not equal



- Too often, the clock is more important than the content
- Effective instruction involves planning to ensure that proper emphasis is given to more important information
- Proper emphasis could involve more time or more intensive or explicit instruction

SMARTER Planning

Not harder, but ...

SELECTING the critical questions.

MAPPING content structures.

ANALYZING learning difficulty based on:

- Quantity
- Interest Background
- Relevance
- Abstractness
- Complexity
- Organization

REACHING enhancement decisions by selecting powerful...

Teaching Devices

TEACHING strategically through explicit...

Teaching Routines

EVALUATING enhancements

REEVALUATING outcomes

ORGANIZATION

KNOWLEDGE STRUCTURE

GUIDING QUESTIONS

The Unit Organizer

④ BIGGER PICTURE

NAME _____
DATE _____

← The roots and consequences of civil unrest →

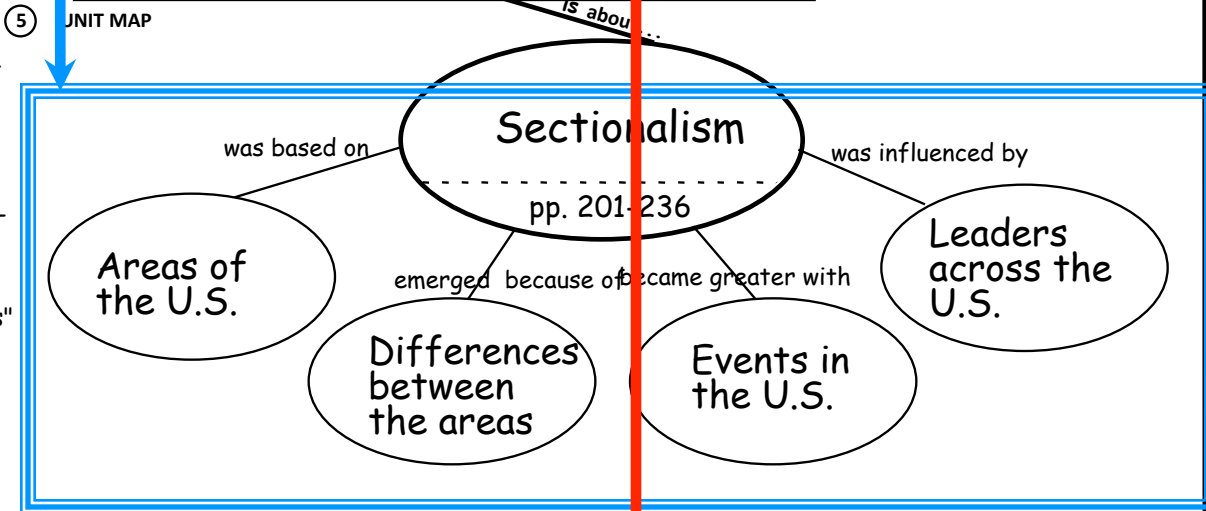
② LAST UNIT /Experience
Growth of the Nation

① CURRENT UNIT
The Causes of the Civil War

③ NEXT UNIT /Experience
The Civil War

⑧ UNIT SCHEDULE

1/22	Cooperative groups over pp. 201-210
1/28	Quiz
1/29	Cooperative groups over pp. 210-225
	"Influential Personalities" project due
1/30	Quiz
2/2	Cooperative groups - over pp. 228-234
2/6	Review for test
2/7	Review for test
2/6	Test



- ⑦ UNIT SELF-TEST QUESTIONS
- What was sectionalism as it existed in the U. S. of 1860?
 - How did the differences in the sections of the U.S. in 1860 contribute to the start of the Civil War?
 - What examples of sectionalism exist in the world today?

⑥ UNIT RELATIONSHIPS

descriptive
compare/contrast
cause/effect

PRIOR KNOWLEDGE

Hierarchical CATEGORIZATION

ANALYSIS of characteristics

DISCRIMINATING EVALUATION

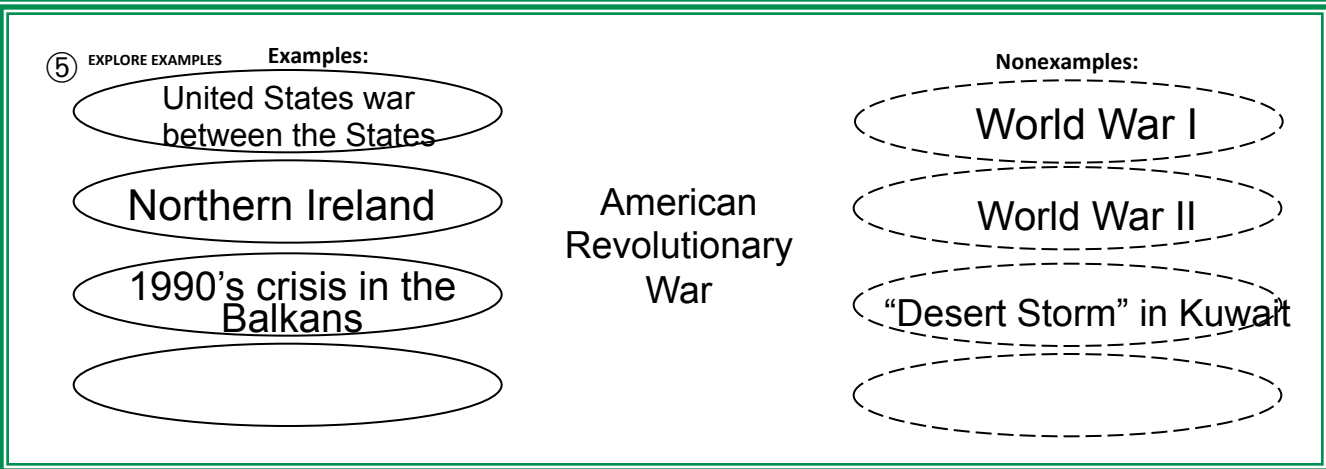
CONCEPT DIAGRAM

- ③ Key Words
- U.S. Civil War
 - Northern Ireland
 - citizens
 - one nation
 - ethnic
 - many nations
 - social rights
 - Desert Storm in Kuwait

- ① CONVEY CONCEPT
- ② OFFER OVERALL CONCEPT
- ③ NOTE KEY WORDS
- ④ CLASSIFY CHARACTERISTICS



Always Present	Sometimes Present	Never Present
• Groups of citizens	economic	War between nations
• Within a single nation	religious	
About distribution of power	ethnic	
	social	
	political	



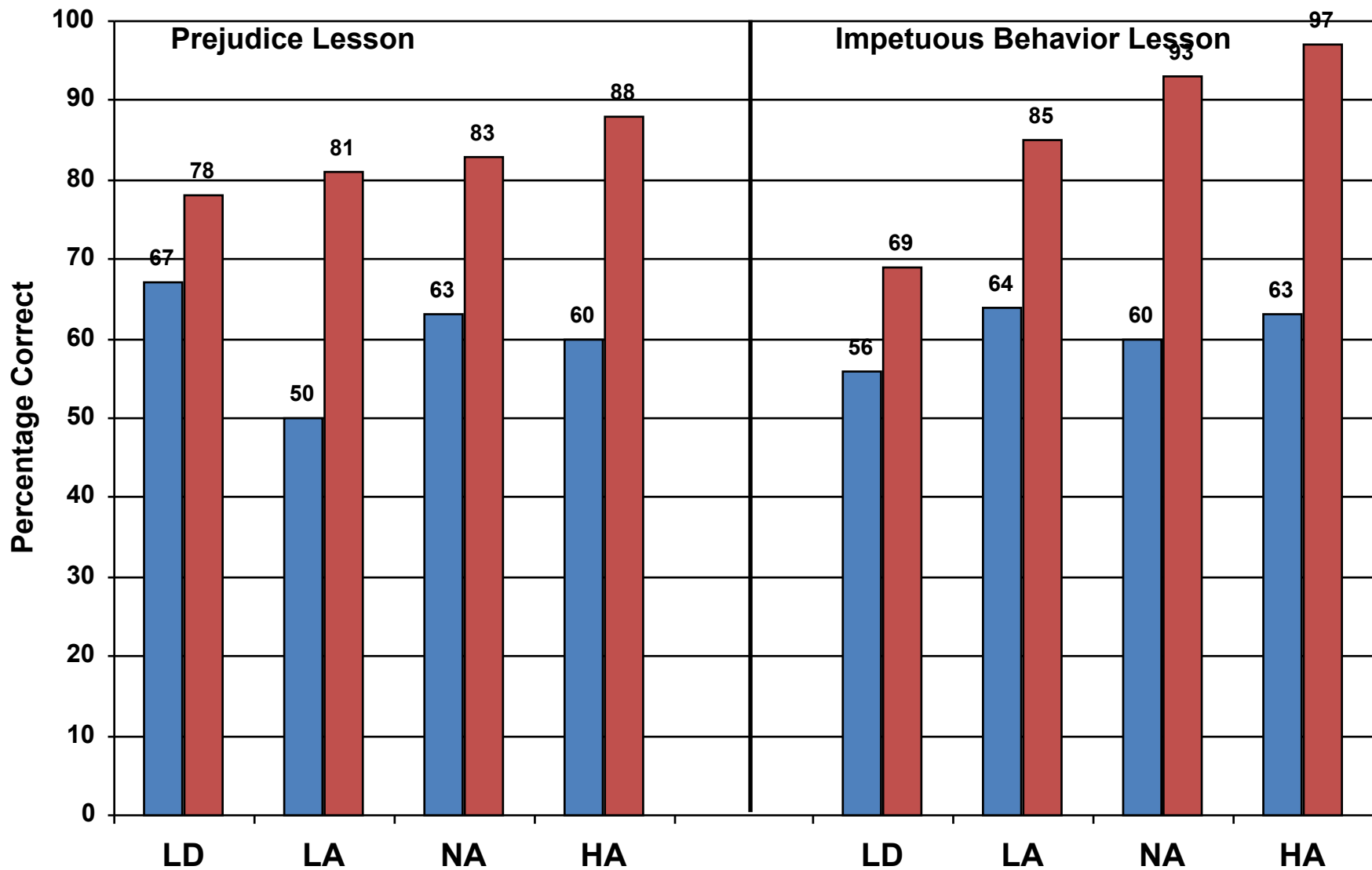
⑥ PRACTICE WITH NEW EXAMPLE

⑦ TIE DOWN A DEFINITION

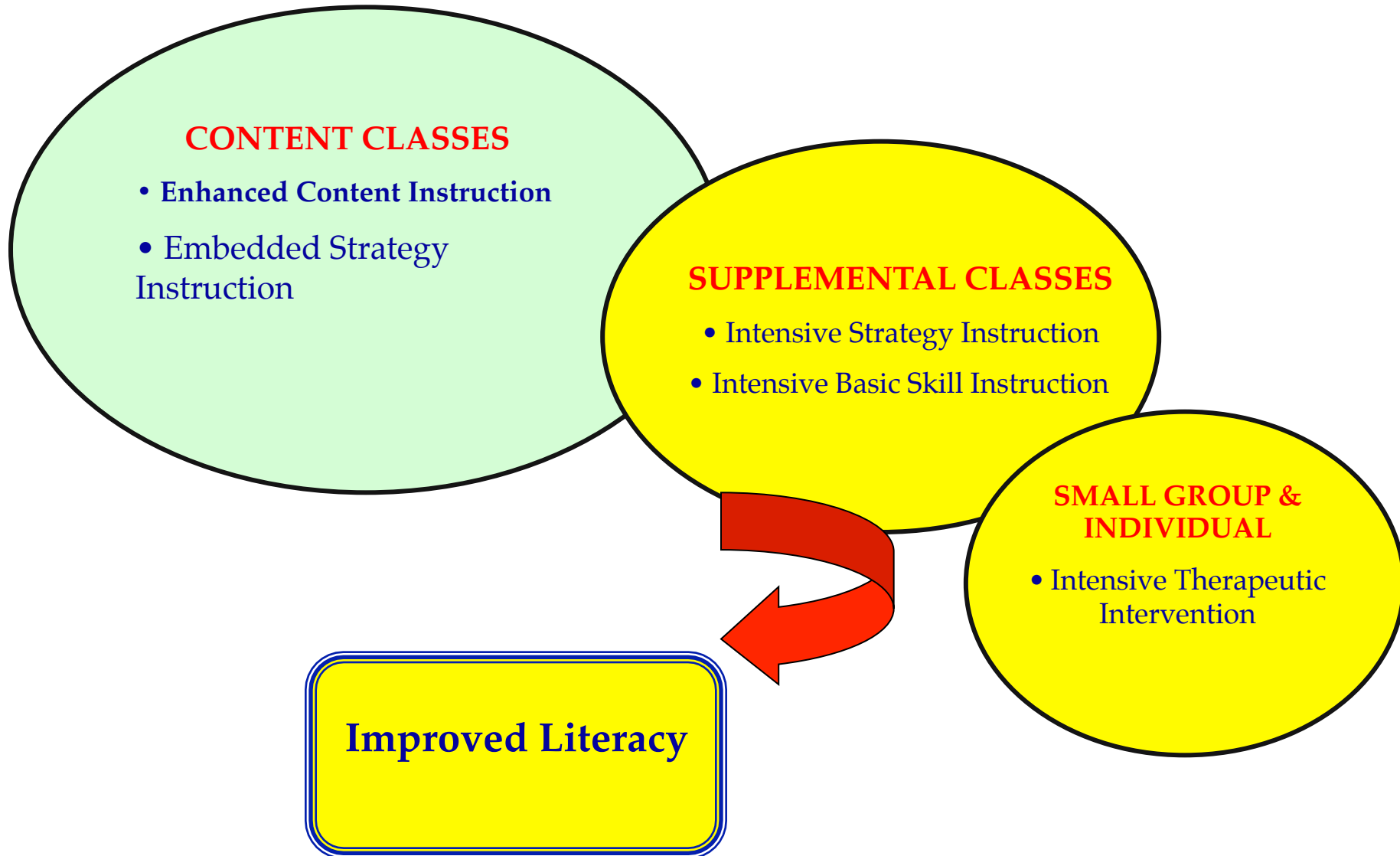
A civil war is a type of armed conflict among groups of citizens of a single nation that is caused by concerns about the distribution of power.

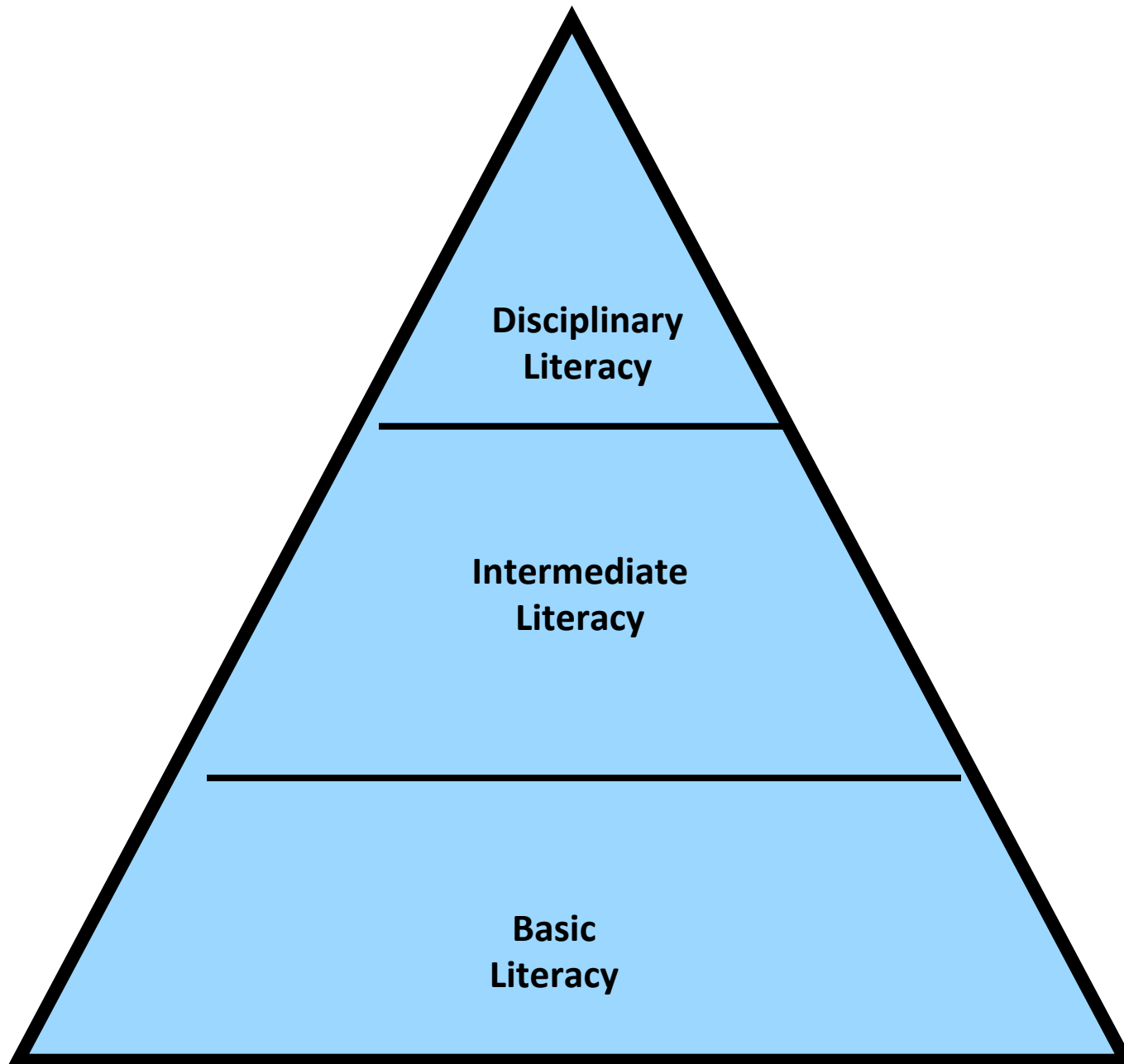
Question Exploration Guide: Generalization Results

Comparison group Experimental group



Continuum of Literacy Instruction





Shanahan & Shanahan (2008)

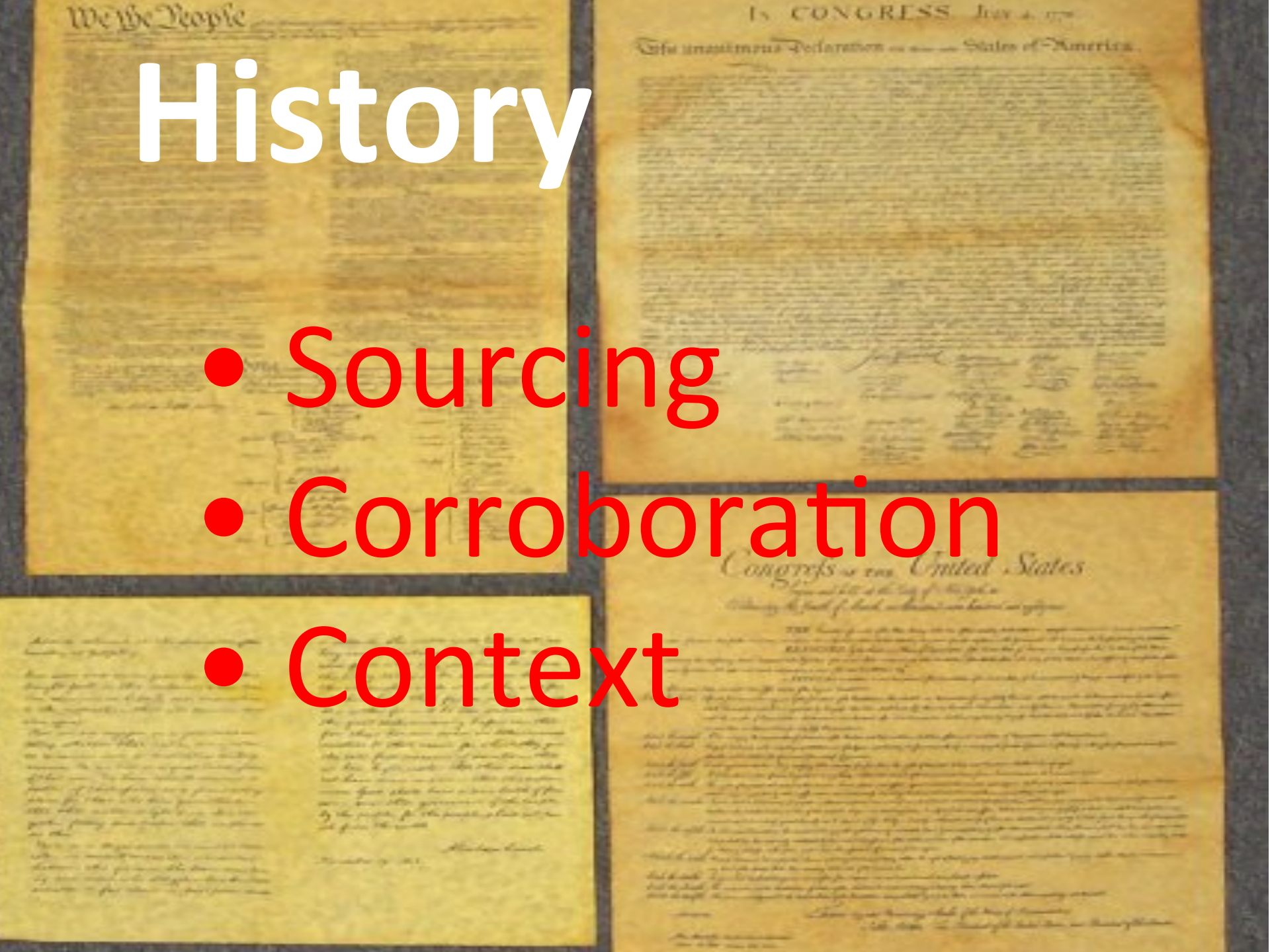
Disciplinary Literacy

“The disciplinary experts approached reading in a very different ways. We are convinced that the nature of the disciplines is something that must be communicated to adolescents, along with the ways in which experts approach the reading of text. Students’ text comprehension benefits when students learn to approach different texts with different lenses.”

Shanahan & Shanahan (2008)

History

- Sourcing
- Corroboration
- Context



English

- Interpreting figurative language
- Recognizing symbols
- Irony
- Satire
- Different social, cultural & political contexts

98 Medieval People Eileen Power

WASHINGTON'S
CROSSING

David
Hackett
Fischer

OXFORD

TURNER

JOAN OF ARC

California

WIVES



The
Life and
Death
of
ANNE
BOLEYN

6

THE ELABORATE CENTER OF THE WORLD

WATSON BREAD & ROSES MILLS, MIGRANTS, AND THE STRUGGLE FOR THE AMERICAN DREAM

FOUNDING BROTHERS

JOSEPH J. ELLIS

Science

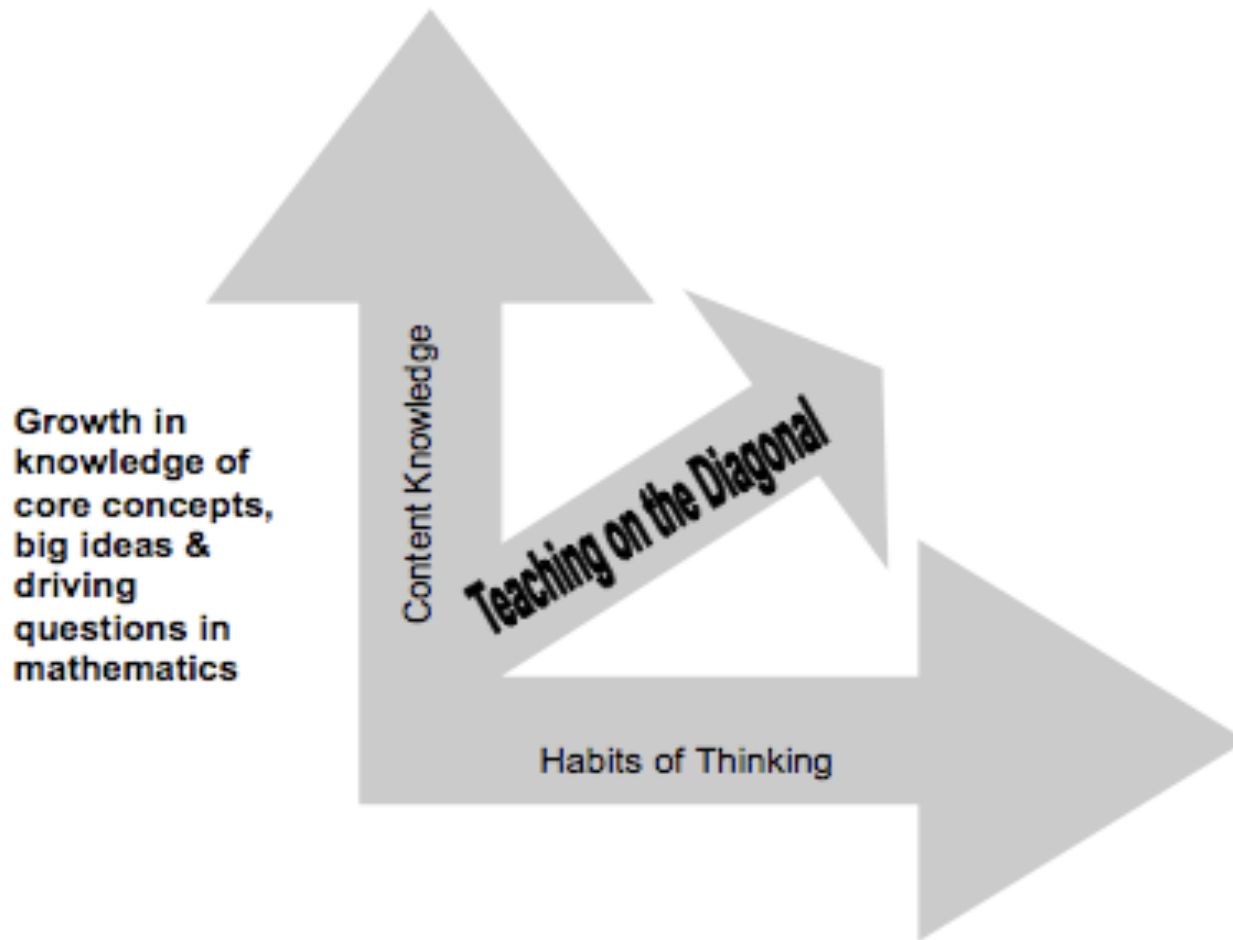
Prediction
Observation
Analysis
Summarization
Presentation



Teachers in “*literacy rich*” classes.....

- Understand the literacy demands of their texts
- Provide guidance to students *before, during, after* reading
- Provide multiple teacher models of how to process discipline specific text
- Focus classroom talk on how to make sense of text

“Teaching on the Diagonal”



Growth in ways of knowing and doing mathematics.

What are the most effective academic interventions?

1. Provide Explicit Instruction and Supportive Practice in the Use of Effective Comprehension Strategies Throughout the School Day¹

1. Initial discussions that help students become more aware of their own cognitive processes and learn about strategies they can use to help increase their understanding of what they are reading. Such discussions help establish the purpose of the work the students will be doing to improve their comprehension.

2. Explicit instruction from the teacher about the particular strategies being learned, with frequent think-aloud demonstrations by the teacher to show how the strategy is used during reading. This instruction includes a discussion of why the strategy can be useful, how to do it, and when it is appropriate to use. Teacher modeling of strategy use is essential.

3. Extended opportunities for students to practice using the strategies in meaningful literacy activities. Sometimes this practice is structured as small-group activities that encourage student discussion of both the text's meaning and how they are using the strategy to help them understand; sometimes it involves whole-class discussions. The purpose of this instruction and practice is to gradually transfer responsibility for selecting and using strategies from the teacher to the students. Researchers have noted a number of important issues in implementing comprehension strategy instruction, including:

a. Balance. Finding a balance between content and strategy instruction that responds to the needs of all students is important. The ideal is to use strategy instruction as a vehicle for effective content teaching and learning. Klingner et al. (1998) provide at least one demonstration that it is possible to do this.

b. Involvement. Using small-group interactions effectively to increase the involvement of underachieving students and facilitate active discussion of both content and strategies is critical. Both Klingner et al. (1998) and Guthrie et al. (2004; reviewed on page 50 of this document) have shown how comprehension strategies themselves can provide a structure for small-group text-related discussions that not only increase student involvement but also foster learning of content and strategies. Other examples of this principle appear in work on cooperative learning (Stevens, Slavin, & Farnish, 1991).

c. Number of strategies. The consensus is that it is useful to teach students more than one comprehension strategy, but it is not clear how many strategies can be effectively taught in any given period of time. The answer will likely vary, depending on teacher skill, student abilities, instructional group size, and the time available for instruction.

d. Time for professional development. It takes time for teachers to become skilled in providing this type of instruction. One group with substantial experience in training teachers to provide comprehension strategy instruction (Brown, Pressley, Van Meter, & Schuder, 1996) found that it often took several years for teachers to become skilled at teaching students to use multiple comprehension strategies flexibly and adaptively.

2. Increase the Amount and Quality of Open, Sustained Discussion of Reading Content

Although the experimental evidence for the effects of discussion-oriented approaches to instruction on reading comprehension is not as strong as it is for explicit instruction in comprehension strategies, a very large amount of qualitative research literature documents the extent to which participation in rich, extended discussions is associated with improvements in the quality of students' thinking about what they read (Applebee et al., 2003). Further, almost all effective applications of explicit strategy instruction include opportunities to practice using these strategies in contexts that foster extended discussions of the meaning of text. Teaching explicit comprehension strategies and providing opportunities for extended discussion of text to enhance comprehension are likely to be closely linked in actual classroom practice.

As discussed in the research literature and documented in the studies presented here, opportunities for extended discussion of text have two potential kinds of impact on student learning. First, opportunities for extended discussion of text can improve students' understanding

¹ *Academic Literacy Instruction for Adolescents: A Guidance Document from the Center on Instruction* (2007)

and learning of the specific texts under discussion. Second, opportunities to engage in text-based discussions over time can have a general impact on reading comprehension. Students who have repeated opportunities to explore the meaning of text in discussions with their teachers or peers develop habits of analysis and critical thinking that support improved comprehension when they read text on their own.

A last point related to this instructional recommendation is that establishing effective discussion-based instructional approaches for adolescents in middle and high school will likely require substantial adjustments to the curriculum. The tension here is between breadth and depth of content coverage. Taking time to build deep understanding through discussion must necessarily affect the breadth of content covered in a given class.

3. Set and Maintain High Standards for Text, Conversation, Questions, and Vocabulary

A broad scientific literature documents the effects of teacher expectations on student performance (Good, 1987; Good & Brophy, 2002). Higher expectations consistently lead to higher levels of student performance. Thus, it is not surprising that raising literacy expectations, and applying them consistently to all students, should be recommended regularly as one element of successful state-, district-, and school-level plans to improve adolescent literacy outcomes. However, it should also be clear that high state literacy standards will have little impact if individual teachers do not adopt those standards and embed them in their classroom curriculum and teaching practices.

Where to start raising standards for adolescent literacy on a large scale seems relatively clear. First, state-level literacy leaders must identify and adopt clear and comprehensive literacy standards, which must be reflected in the state-level accountability measures for literacy outcomes. Second, school-level literacy leaders and teachers must work to understand the meaning of those standards as they apply to classroom instruction and ongoing, formative assessments. If school-level study groups carefully evaluated state assessments (and other assessments as well) for their implicit literacy demands, that would help teachers form a more explicit understanding of the literacy targets or standards at each grade level. Third, classroom teachers must teach in ways that directly support student growth toward the high literacy standards defined by their states, as understood in the analyses described in the second step. All four of the other instructional recommendations contained in this document describe evidence-based instructional techniques that will likely be required to consistently achieve the higher literacy standards we are recommending here.

4. Increase Students' Motivation and Engagement with Reading

Both the theoretical and empirical supports for the role of motivation in improving students' response to instruction in reading comprehension are compelling. Since variability and inconsistency in motivation for reading among students and across subject areas are widely noted in the observational and survey studies of motivation and engagement in middle and high school classrooms (Biancarosa & Snow, 2006), evidence-based methods for improving student motivation and engagement should have a high priority in efforts to improve adolescent literacy outcomes.

One issue several investigators in this area have noted is the large number of motivational strategies used by teachers who successfully promote literacy in their students, even in the elementary grades (Bogner, Raphael, & Pressley, 2002; Pressley, Wharton-McDonald, Mistretta-Hampston, & Echevarria, 1998). However, Guthrie et al. (2004) suggest that it is likely to be most effective to train teachers to focus on a finite number of methods for increasing student engagement during literacy instruction. In their experience, three to five motivational enhancements, used in concert with one another, provide a consistently powerful effect on engagement for most students. Although there is no systematic research to determine which motivational elements are most powerful for specific types of students, Guthrie et al. (2004) recommend that teachers first try to

1. build student autonomy by allowing more choices of texts and assignments;
2. create opportunities for students' social interactions focused on learning and

understanding from text;

3. ensure a range of interesting texts are available to students; and
4. focus students on important and interesting learning goals.

5. Teach Essential Content Knowledge So That All Students Master Critical Concepts

This section contained examples of three approaches to improve content-area teaching that, if widely implemented, could help to increase student learning of essential content. Of all the areas we have discussed, our treatment of this area is most narrow; many, many more instructional improvements might be considered to increase the likelihood that students in content-area classes will understand and retain essential vocabulary, concepts, and facts in science, social studies, history, and other classes (Brophy & Good, 1986a; Brophy & Good, 1986b; Reynolds, 1992; Sanders & Horn, 1998; Stahl & Fairbanks, 1986; Wenglinsky, 2000).

Two studies in this section came from the work of Don Deshler and his colleagues at the University of Kansas Center for Learning; they are at present the single most active group studying Content Enhancement Routines that can be used by late-elementary, middle, and high school teachers. Currently instructional routines have been developed for (1) planning instruction; (2) exploring texts, topics, and details; (3) teaching concepts; and (4) increasing student performance. Details about instructional routines in each of these areas can be found at <http://www.ku-crl.org/sim/ceroutines.html>. In a real sense, some of these Content Enhancement Routines are similar to the reading comprehension strategies discussed earlier. That is, when teachers actively guide students in using the routines during class, students learn more of the content they are studying. Further, over time we might expect students to assume more responsibility for using these routines independently in a manner similar to the way that responsibility for executing comprehension strategies is gradually transferred from teachers to students. Thus, what begins as a teacher-guided learning strategy can become an information-processing habit in students who actively practice using the strategy in multiple contexts over time.

These content enhancement routines may be particularly attractive to content-area teachers because they are designed to increase learning of essential subject matter content. If they also produce a more generalized impact on reading comprehension when students work independently, they would provide a powerful means for both increasing learning of specific content and improving students' ability to learn from text.

Although improved content teaching may not be linked directly to improved literacy in the minds of many teachers, there is, as we have seen, compelling evidence that as students improve their knowledge in any specific area, their ability to comprehend text in that area improves. Thus, any recommendations for the long-term improvement of adolescent literacy must highlight the potential impact of more powerful teaching of essential content both within and across grade levels as one important way to help accomplish this goal.

Checklist for carrying out the recommendations

Recommendation 1. Provide explicit vocabulary instruction

- Dedicate a portion of regular classroom lessons to explicit vocabulary instruction.
- Provide repeated exposure to new words in multiple contexts, and allow sufficient practice sessions in vocabulary instruction.
- Give sufficient opportunities to use new vocabulary in a variety of contexts through activities such as discussion, writing, and extended reading.
- Provide students with strategies to make them independent vocabulary learners.

Recommendation 2. Provide direct and explicit comprehension strategy instruction

- Select carefully the text to use when beginning to teach a given strategy.
- Show students how to apply the strategies they are learning to different texts.
- Make sure that the text is appropriate for the reading level of students.
- Use a direct and explicit instruction lesson plan for teaching students how to use comprehension strategies.
- Provide the appropriate amount of guided practice depending on the difficulty level of the strategies that students are learning.
- Talk about comprehension strategies while teaching them.

Recommendation 3. Provide opportunities for extended discussion of text meaning and interpretation

- Carefully prepare for the discussion by selecting engaging materials and developing stimulating questions.
- Ask follow-up questions that help provide continuity and extend the discussion.
- Provide a task or discussion format that students can follow when they discuss text in small groups.
- Develop and practice the use of a specific "discussion protocol."

Recommendation 4. Increase student motivation and engagement in literacy learning

- Establish meaningful and engaging content learning goals around the essential ideas of a discipline as well as around the specific learning processes used to access those ideas.
- Provide a positive learning environment that promotes student autonomy in learning.
- Make literacy experiences more relevant to student interests, everyday life, or important current events.
- Build classroom conditions to promote higher reading engagement and conceptual learning through such strategies as goal setting, self-directed learning, and collaborative learning.

“What are the most effective academic interventions?”¹

¹ *Improving Adolescent Literacy: Effective Classroom Practices* (2008) – Institute of Education Sciences

Recommendation 5. Make available intensive individualized interventions for struggling readers that can be provided by qualified specialists

Use reliable screening assessments to identify students with reading difficulties and follow up with formal and informal assessments to pinpoint each student's instructional needs.

Select an intervention that provides an explicit instructional focus to meet each student's identified learning needs.

Provide interventions where intensity matches student needs: the greater the instructional need, the more intensive the intervention. Assuming a high level of instructional quality, the intensity of interventions is related most directly to the size of instructional groups and amount of instructional time.

*“What are the most effective academic interventions?”*¹

¹ *Improving Adolescent Literacy: Effective Classroom Practices* (2008) – Institute of Education Sciences