

THE EDUCATIONAL LANDSCAPE

Are U.S. Students Ready to Compete?



The latest on each state's int...

SAT reading scores sink to record low with class of 2011

Can Teachers Alone Overcome Poverty? Steven Brill Thinks So

Dana Goldstein August 10, 2011

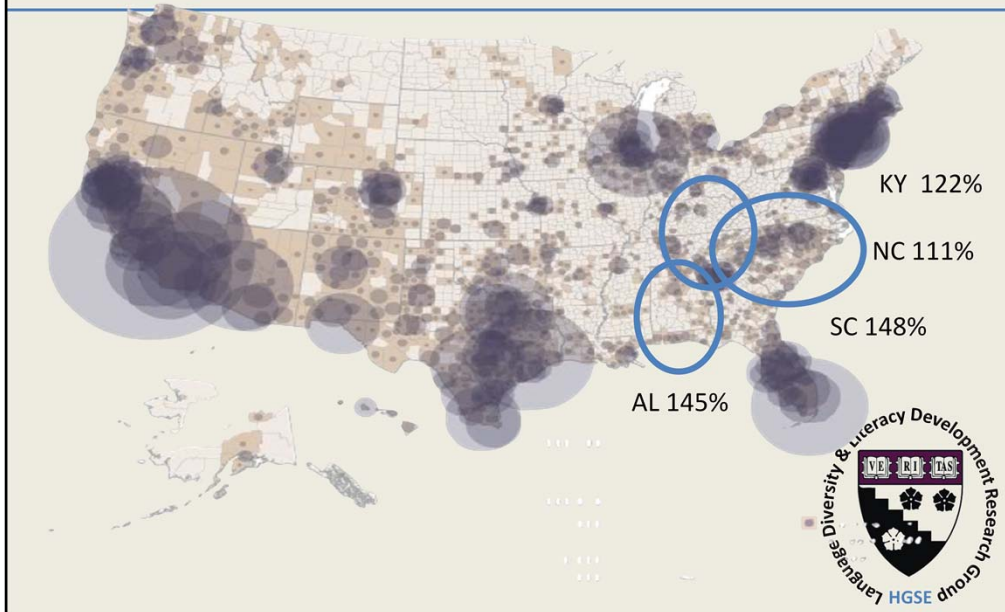
appeared in the August 29-September 5, 2011 edition of The Nation.

School Dropout Rates Add To Fiscal Burden

CLAUDIO SANCHEZ and LINDA WERTHEIMER



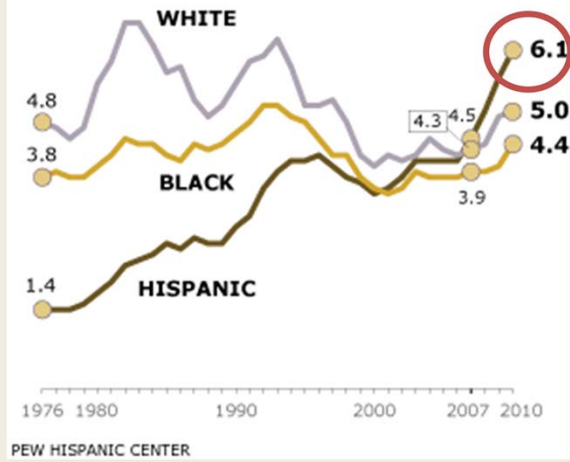
CASE EXAMPLE: IMMIGRATION TRENDS IN THE LATINO POPULATION 2009



CASE EXAMPLE (CONT)

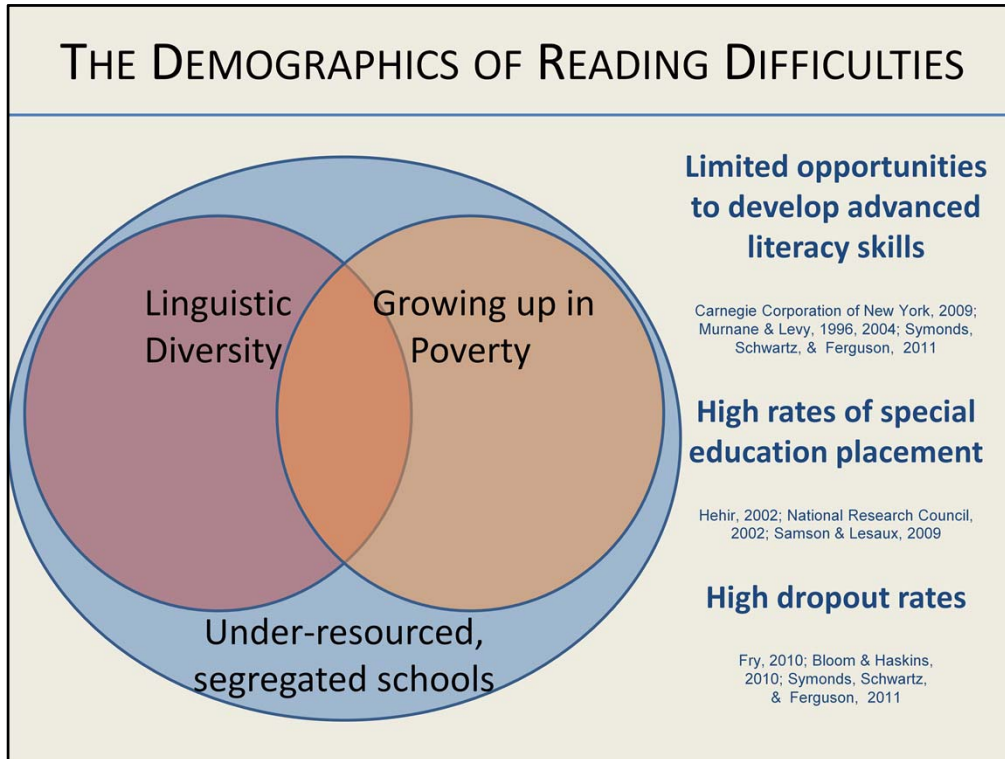
**Number of Children in Poverty
1976 - 2010**

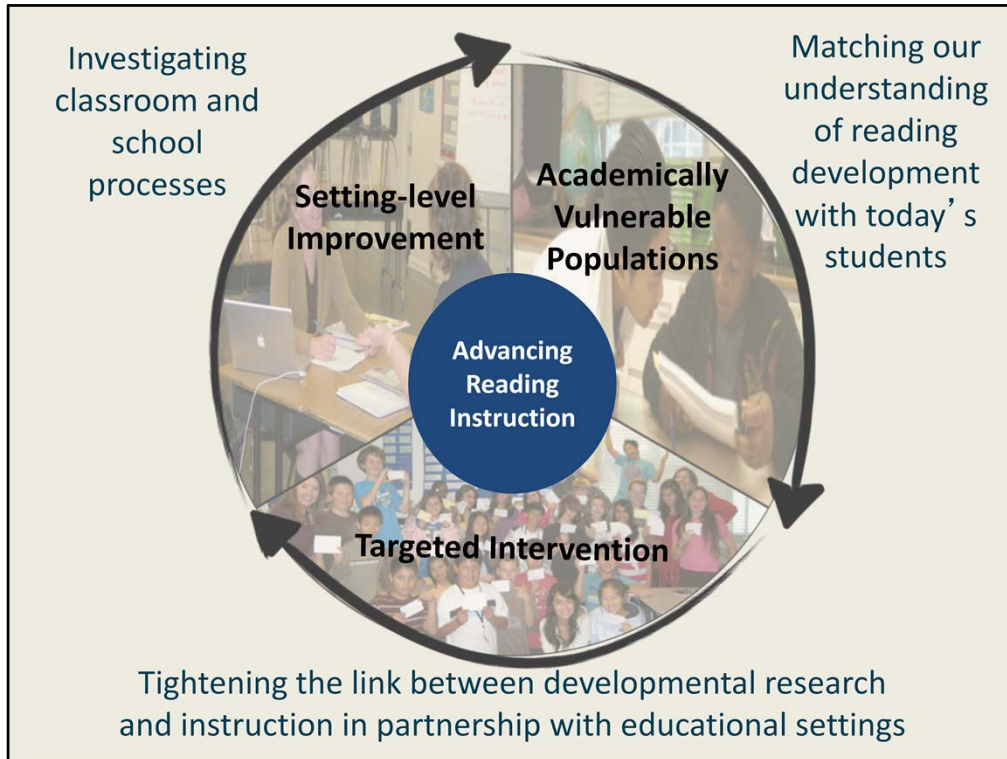
IN MILLIONS

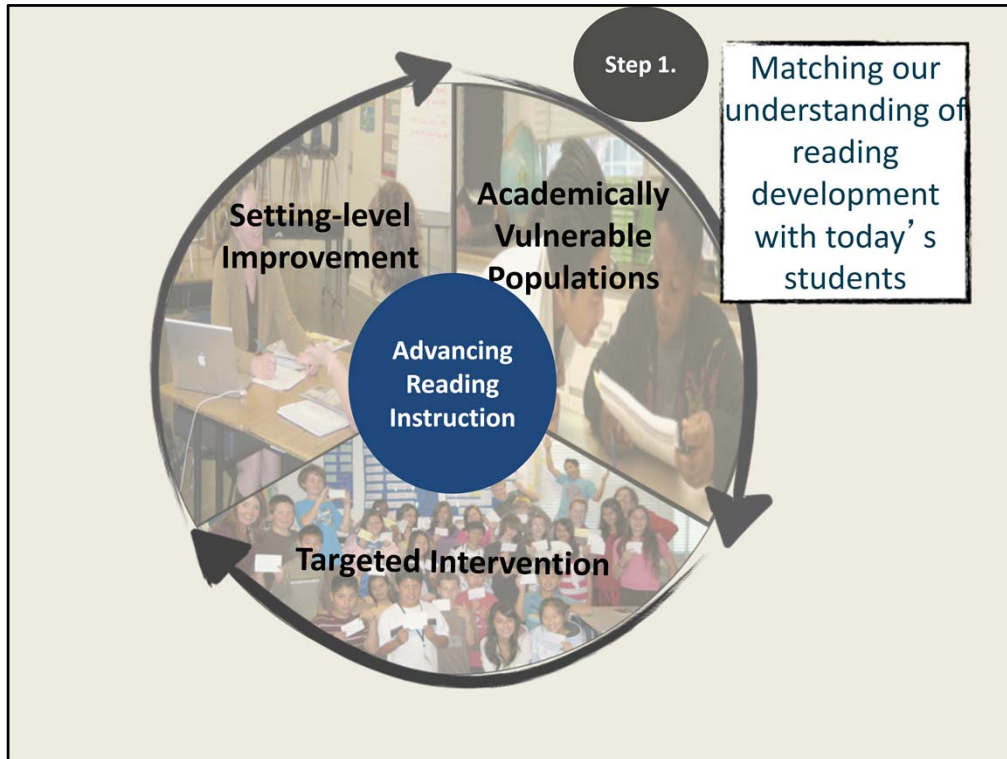


1 in 3 Hispanic children live in poverty









READING FOR SUCCESS

- * Letter knowledge & sound-symbol correspondences
 - e.g., 26 letters, 44 sounds, & their combinations
- * Accurate, fluent word reading
- * Vocabulary and background knowledge
 - Concepts and ideas
- * Topic familiarity
- * Critical thinking & reasoning skills
- * Motivation, interest



WHAT IS READING

“-igh family”
high
sigh
thigh

/H/

Cognitive strategies

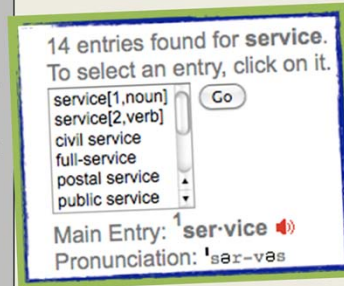
Interest and motivation

4 sounds, 1 word:
/s/ /p/ /ee/ /d/

High-Speed Trains
A type of high-speed train was first introduced in Japan about forty years ago. The train is low to the ground, and its nose looks somewhat like the nose of a jet. These trains provided the first passenger service that moved at a speed of one hundred miles per hour. Today, they are even faster, traveling at speeds of almost two hundred miles per hour. There are many reasons that high-speed trains are popular.

Understanding of language

115+ words correct per minute (grade 5)



Vocabulary

Relevant background knowledge

TWO DIFFERENT PROBLEM SPACES

Code-based skills

/H/

“-igh family”

high

sigh

tigh

4 sounds, 1 word:

/s/ /p/ /ee/ /d/

115+ words correct
per minute (grade 5)

High-Speed Trains

A type of high-speed train was first introduced in Japan about forty years ago. The train is low to the ground, and its nose looks somewhat like the nose of a jet. These trains provided the first passenger service that moved at a speed of one hundred miles per hour. Today, they are even faster, traveling at speeds of almost two hundred miles per hour. There are many reasons that high-speed trains are popular.

Meaning-based Skills

Vocabulary

Cognitive
strategies

Relevant
background
knowledge

Understanding of
language

Interest and
motivation

CHANGING TEXT DEMANDS

The Train Trip

I like to ride the train.
I can walk all around the train car whenever I want.

Grade 1

High-Speed Trains

A type of high-speed train was first introduced in Japan about forty years ago. The train is low to the ground, and its nose looks somewhat like the nose of a jet. These trains provided the first passenger service that moved at a speed of one hundred miles per hour. Today, they are even faster, traveling at speeds of almost two hundred miles per hour. There are many reasons that high-speed trains are popular.

Grade 5

Economic and Governmental Forces: Their Impact on American Railroads in the Twentieth Century

And so began one of the biggest populist campaigns ever seen in America – the crusade to harness the railroad robber barons. Before long, that drive had spread to Washington where in 1887, Congress legislated not out of reason but out of fear to create the Interstate Commerce Commission. Remember that in the days of a relatively powerless federal government, the railroad industry budget was many times the size of the federal budget.

High School



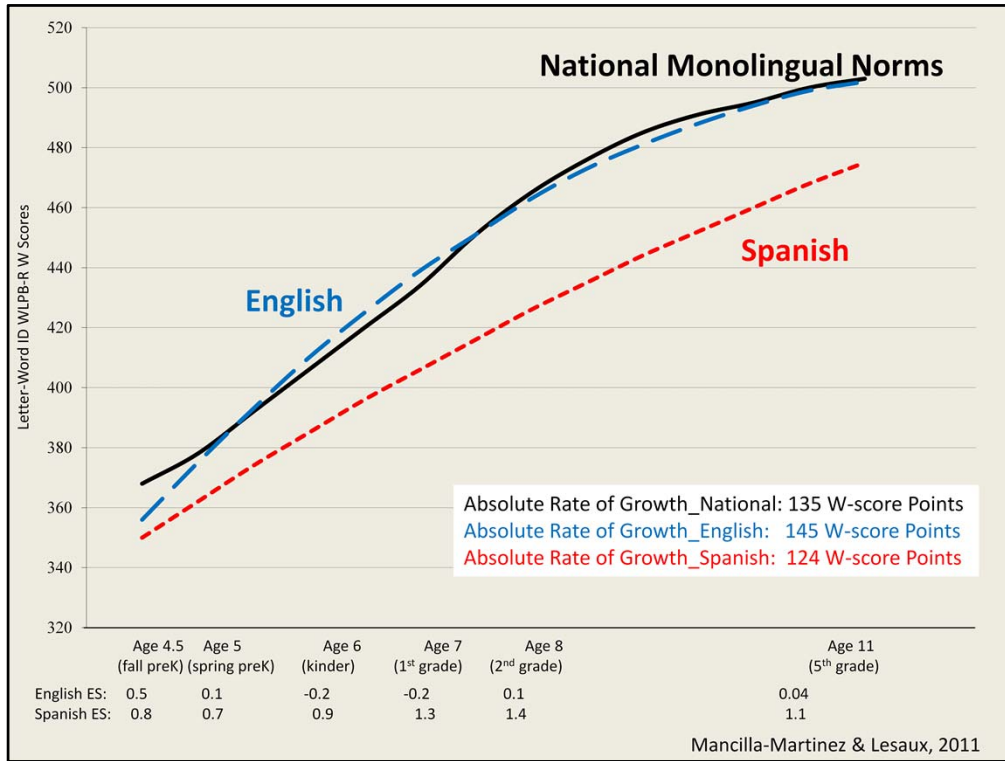
RESEARCH FRAMEWORK

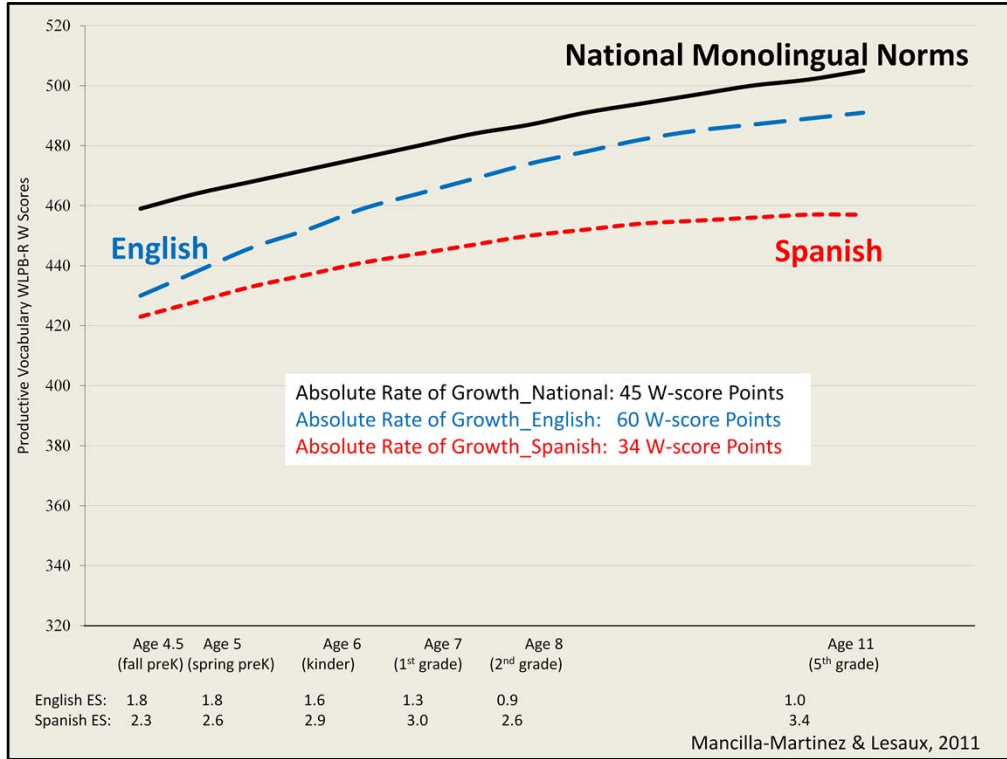


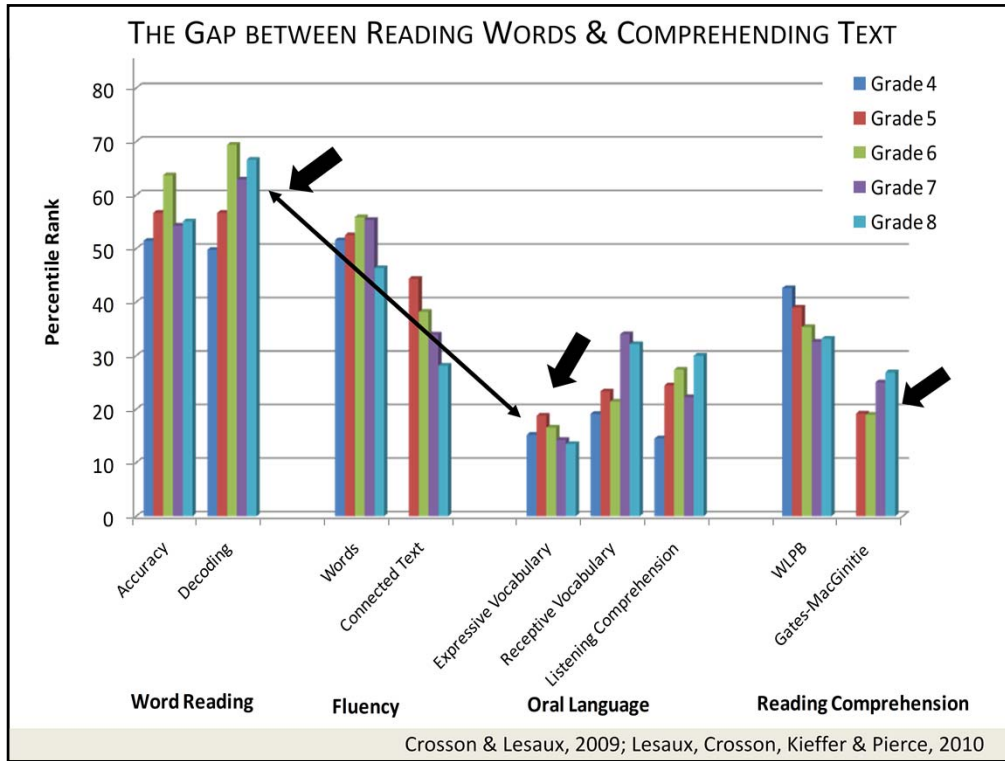
* Three developmental studies to inform instruction:

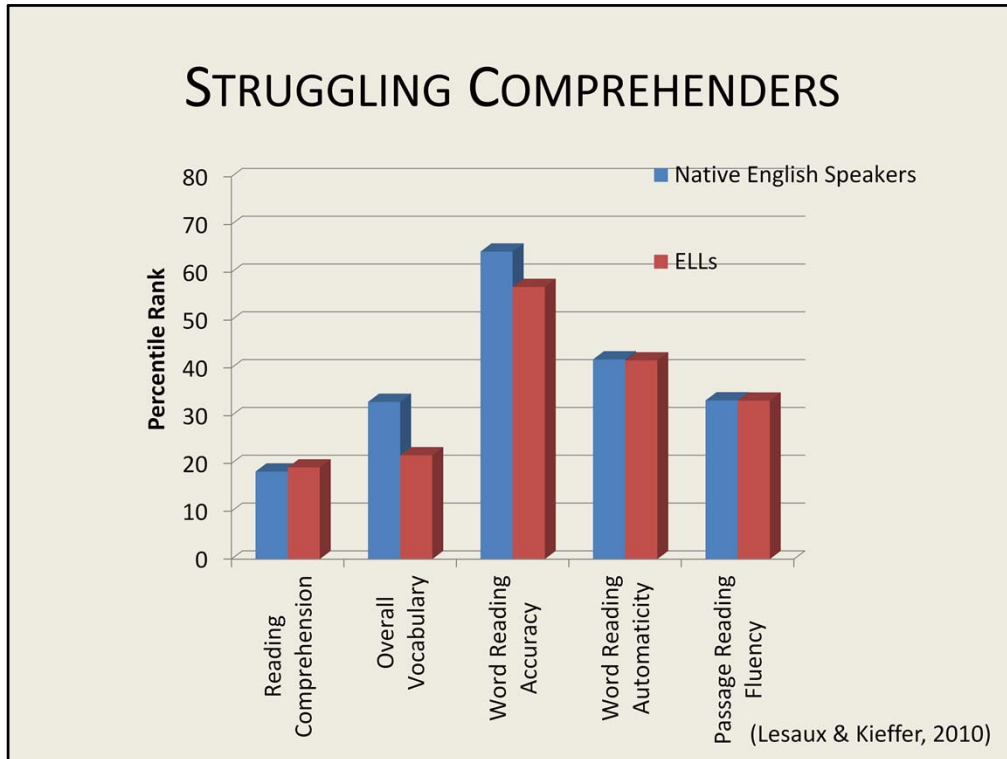
- Preschool to Early Adolescence (ELLs)
- 5-year study, 4th - 8th grade (ELLs)
- Comparative study of ELLs and native English speakers (strugglers, 6th grade)

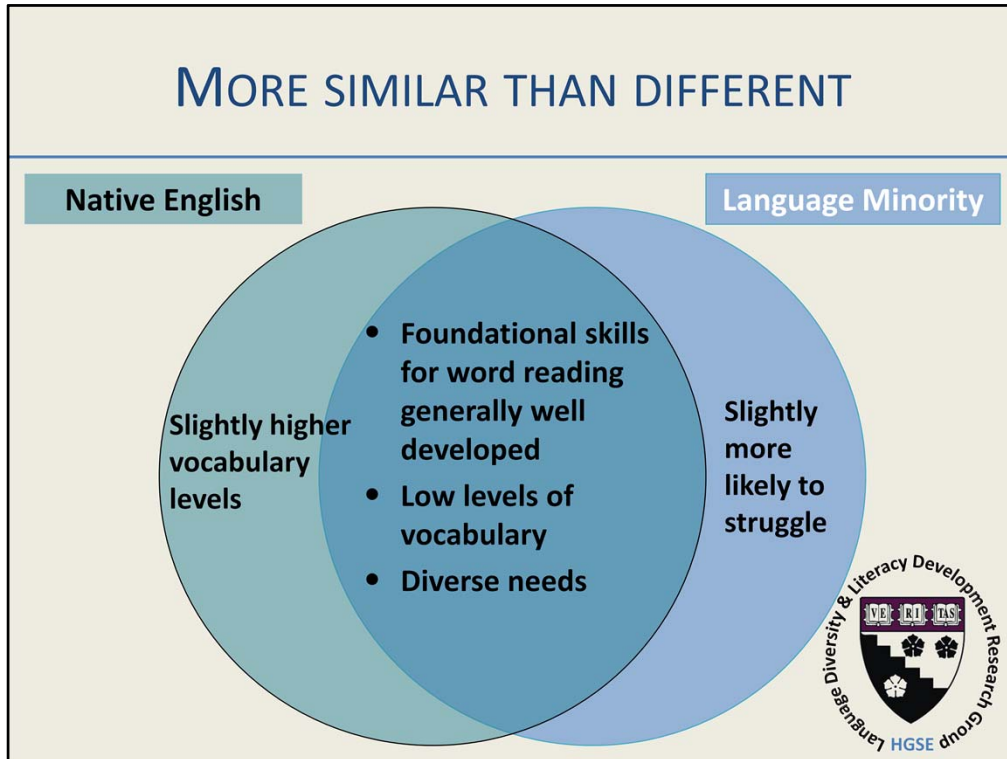


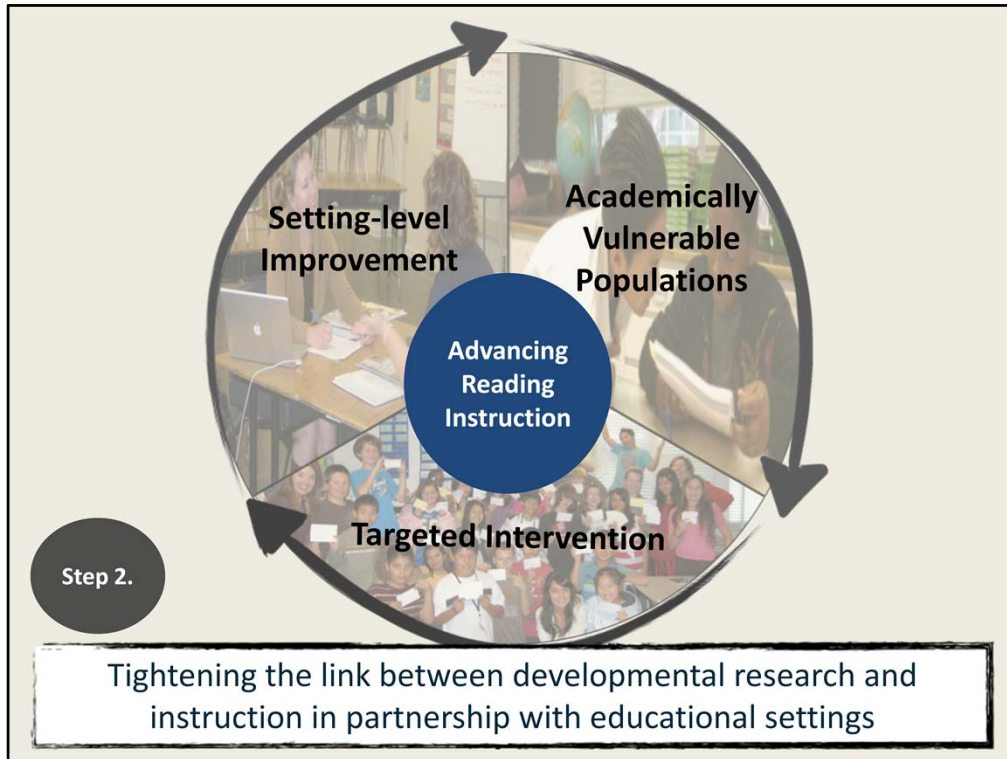












TARGETED INTERVENTION

- * Focus on the oral language-comprehension connection
- * Implement classroom-level, universal design
 - Student needs amenable to whole group instruction
 - Opportunity to capitalize on ELL learning rates
 - Pull-out model historically inefficient and ineffective



ZEROING IN ON ACADEMIC LANGUAGE

- Academic words
- Multiple meaning words
- Specialized words
- Word analysis
- Sentence structure
- Corresponding background knowledge

Influences performance across the content areas, even in math

Economic and Governmental Forces: Their Impact on American Railroads in the Twentieth Century

And so began one of the biggest populist campaigns ever seen in America – the crusade to harness the railroad robber barons. Before long, that drive had spread to Washington where in 1887, Congress legislated not out of reason but out of fear to create the Interstate Commerce Commission. Remember that in the days of a relatively powerless federal government, the railroad industry budget was many times the size of the federal budget.

High School

DESIGN GOALS

- * Operationalize principles of vocabulary instruction for target population (build knowledge)
- * Simultaneously attend to:
 - Students' developmental needs
 - Teachers' professional needs



PROGRAM ELEMENTS



Logistics: 20 weeks (10 two-week units), 45 mins/day, replacing standard English language arts instruction, teacher-delivered (with coaching support)

Platform for Discussing Big Concepts...

community service
Tolerance

...And big questions:
How do you build community?

Target Words:

affect, community, contribute, culture, establish, ethnic, resident, welfare

Instructional approach:

Writing, debate, and discussion
Word analysis and study

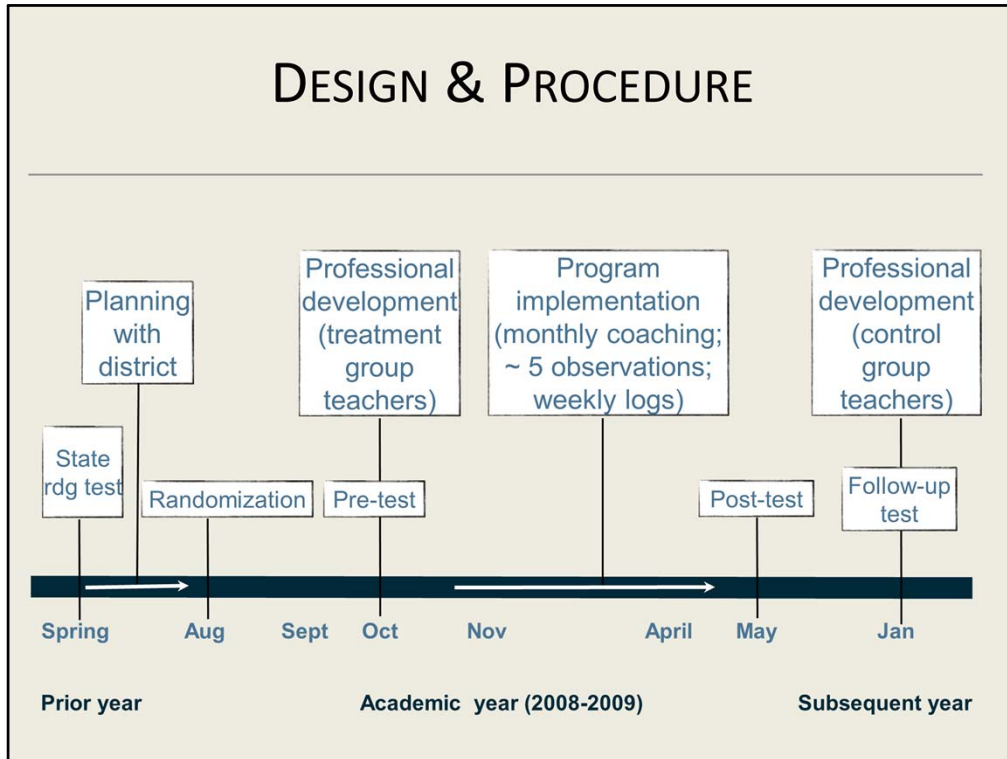
CLUSTER-RANDOMIZED FIELD TRIAL

- * 14 participating middle schools
- * 50 teachers randomly assigned to treatment or control
 - 25 Treatment (39 classes); 25 Control (41 classes)
- * approx. 2300 participating students
- * 70% language minority learners; 30% native English speakers

Data Sources:

- * Student assessments
- * Implementation logs; videotaped observations
- * Teacher survey
- * Teacher interviews
- * Student focus groups





OUTCOME MEASURES

- * Academic Words Taught
- * Depth of Word Knowledge
- * Morphological Skills
- * Understanding of Academic Words in Context
- * Comprehension of Passages with Words Taught

- * Gates MacGinitie Reading Comprehension Test
- * Writing (Oral & Written Language Scales)
- * California ELA Standards Test



ANALYSES

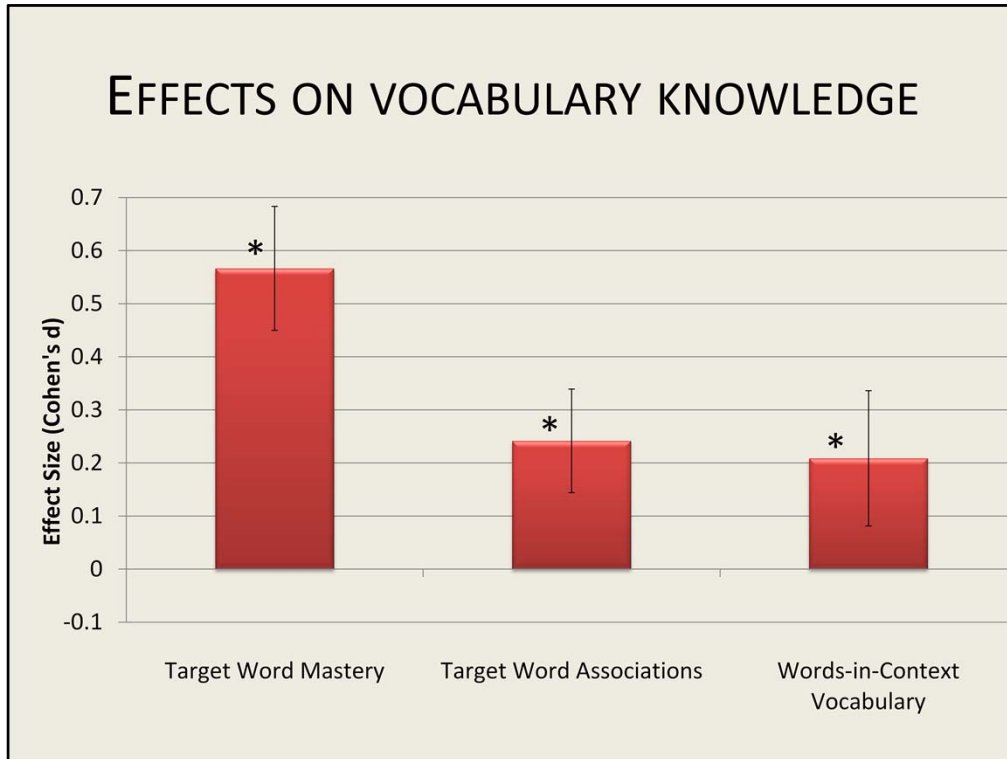
- * 4-level Multilevel Modeling (aka HLM) to account for nesting of students within class periods within teachers within schools
- * Pretest covariates used to improve precision (i.e., statistical power) and to investigate if treatment effect differs by students' pretest scores
- * Effect sizes are robust, whether we include covariates and random effects at each of the four levels
- * Student* treatment interaction
 - LM, EO; initial vocabulary level

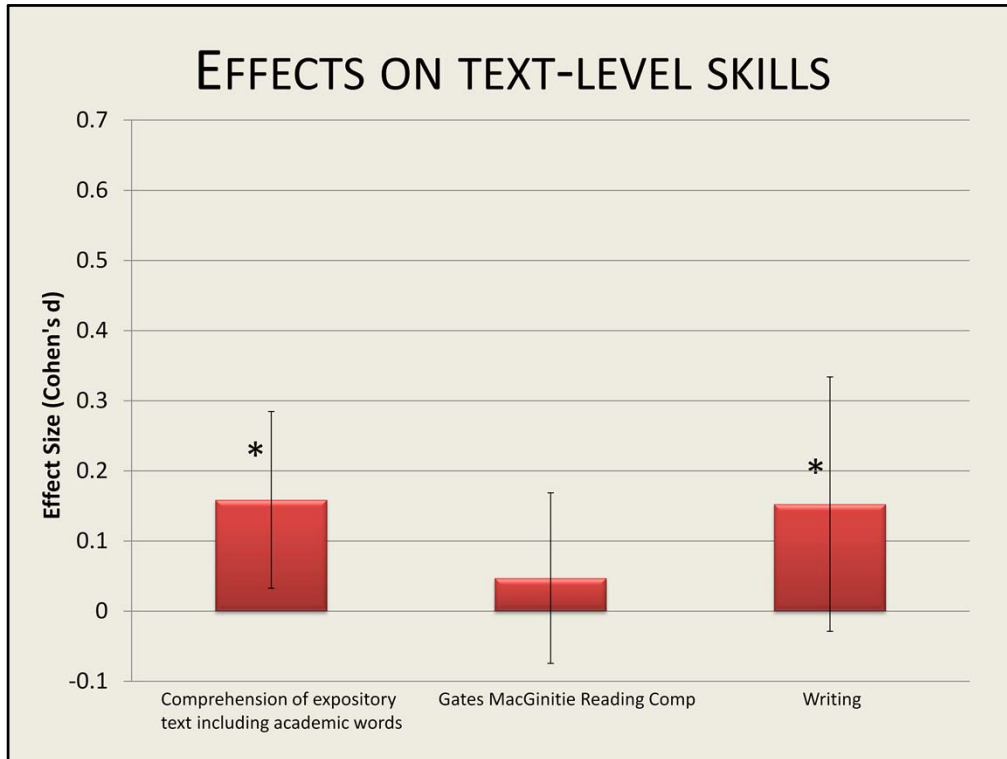


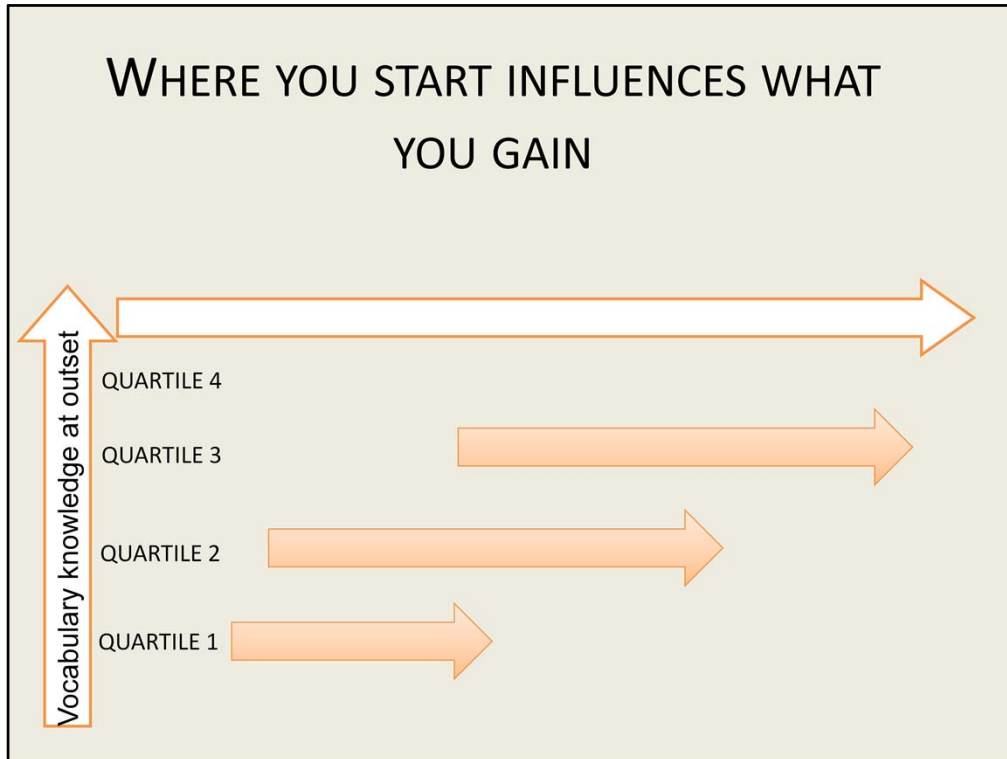
FINDINGS: OVERALL TRENDS

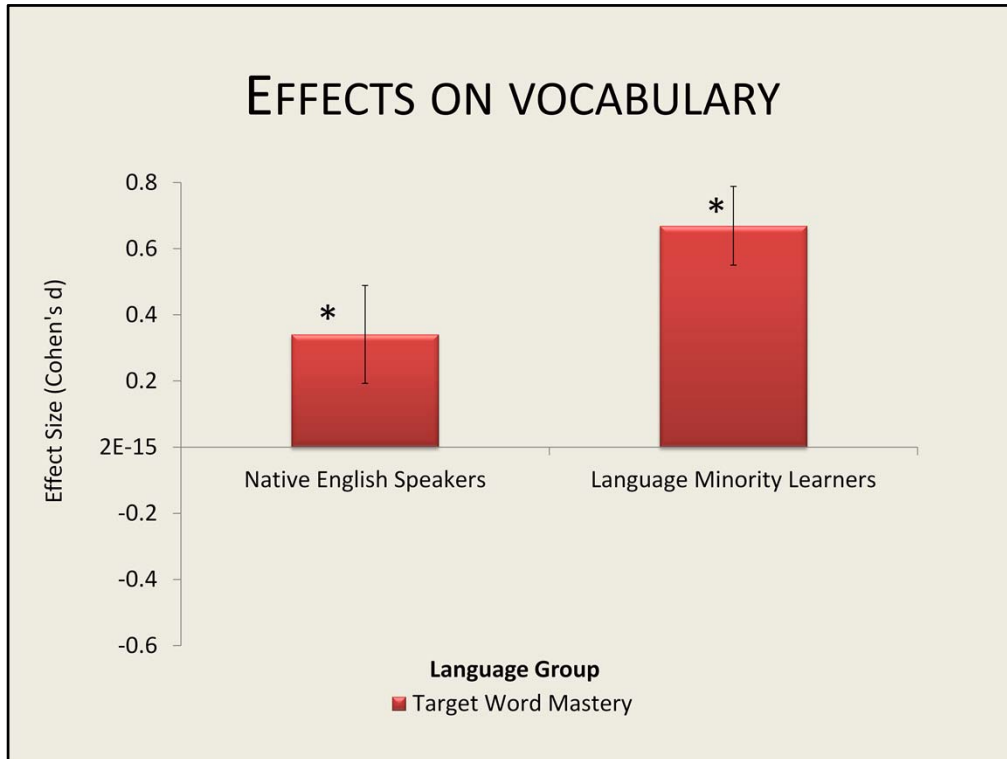
- * Overall, effects on vocabulary, word-learning, comprehension of expository texts including academic words, and writing
- * Student-by-treatment interactions
 - where you start influences what you gain

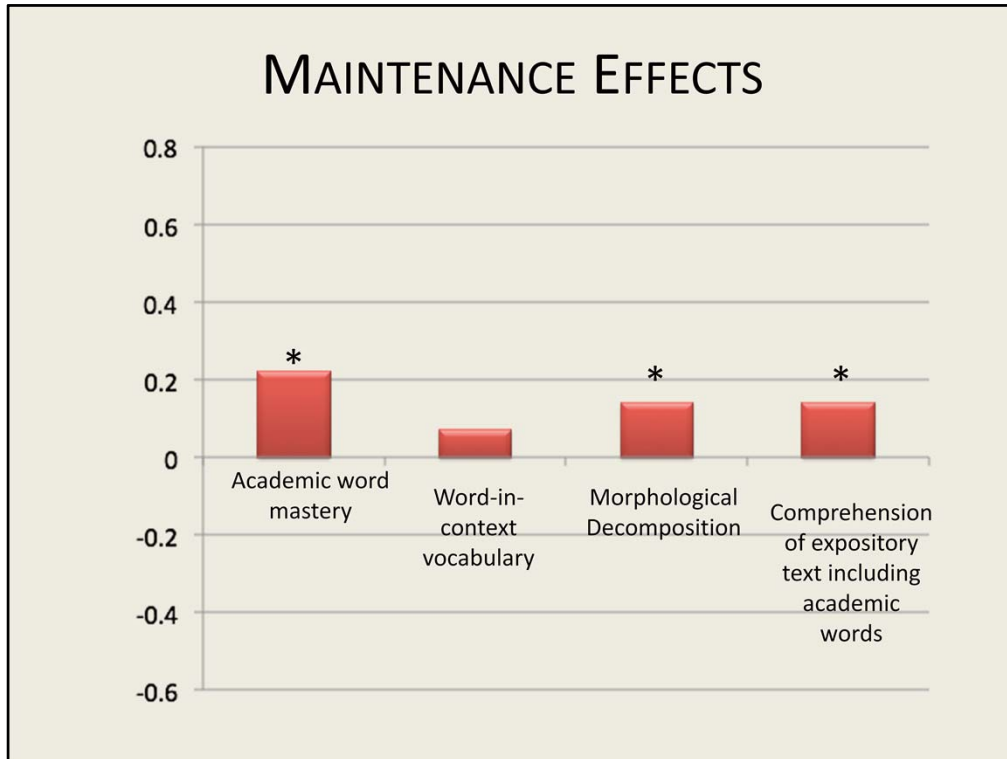


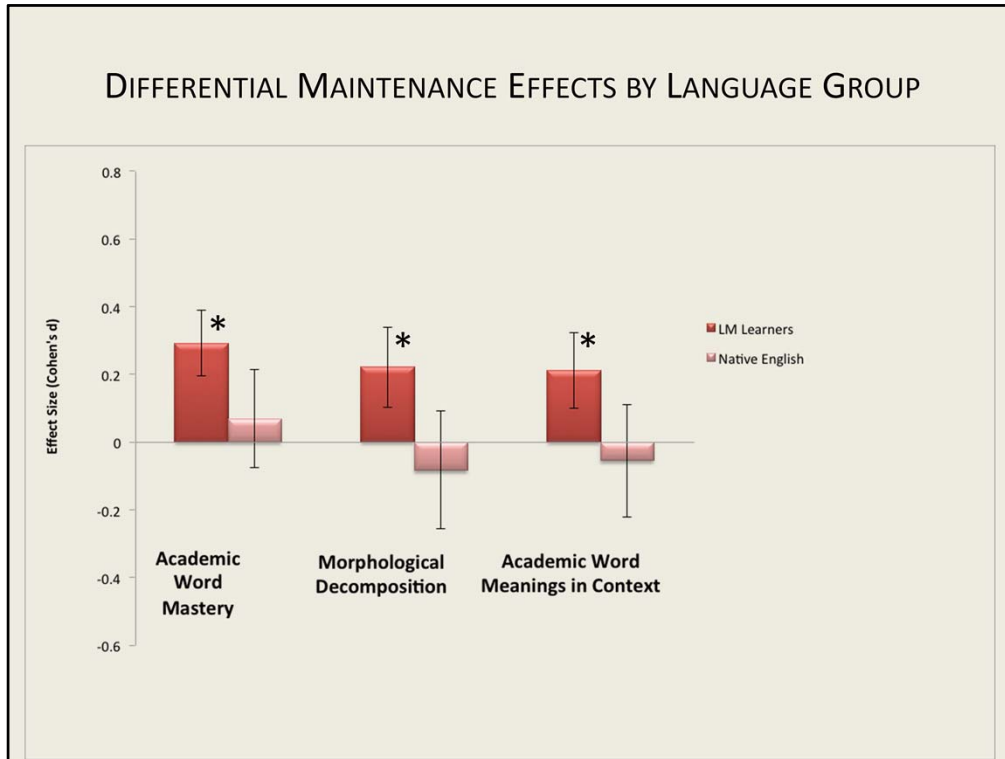








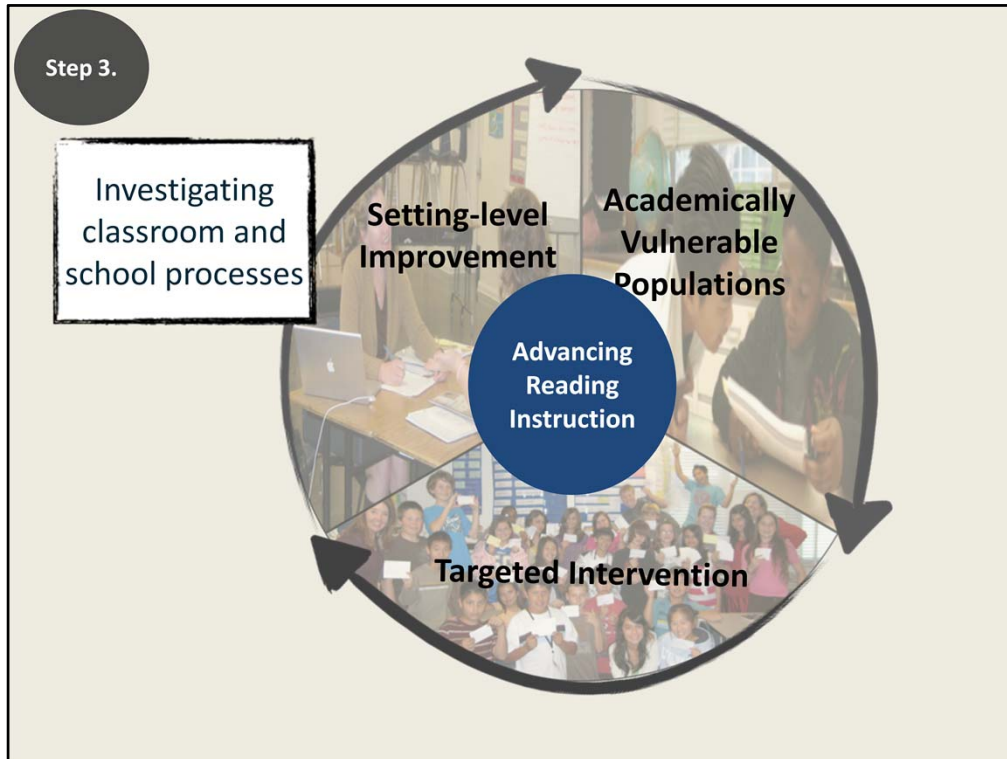




A STEP IN THE RIGHT DIRECTION FOR ACCELERATION

- * Desired effects of a universal intervention:
 - All participants appeared to gain in some way
 - Those who needed the most help got the most
 - * No stigma effects for high risk
 - * Did not hinder the progress of low-risk youth





Advancing reading instruction for setting-level improvement

Sharp contrast to standard practice; positive student response

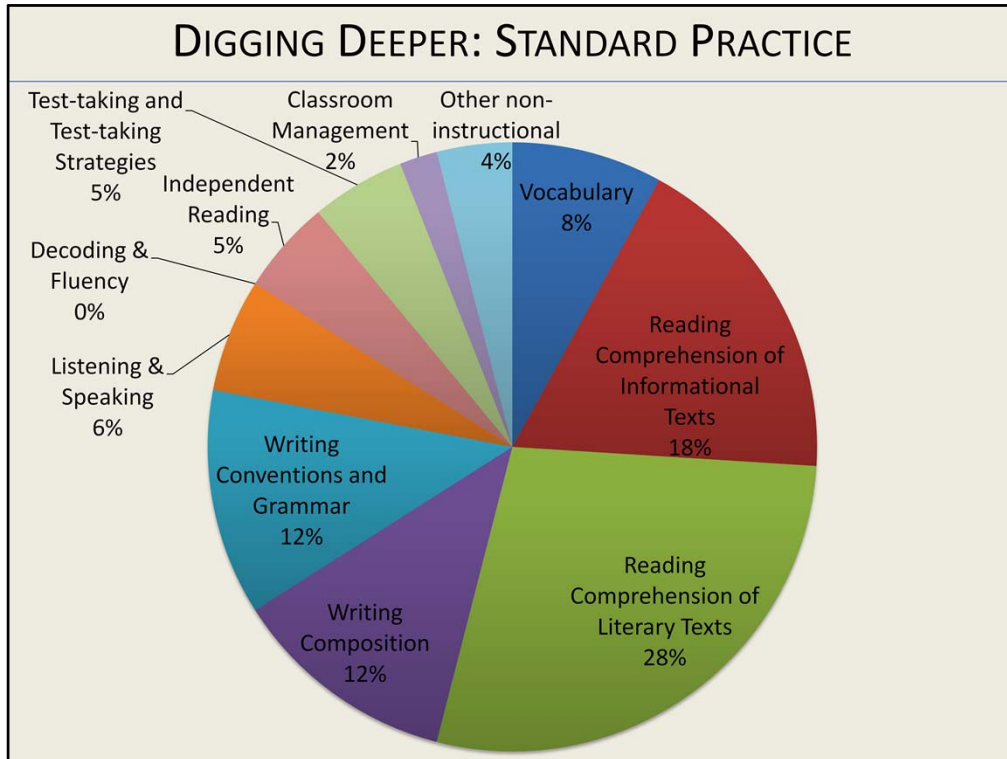
The role of professional collaboration and experience

The Middle School

- Large, tracked classrooms
- Teacher as content-area specialist
- Limited professional development and teacher collaboration
- No real mechanisms to serve struggling readers

Salient relationship between teacher language use and student achievement

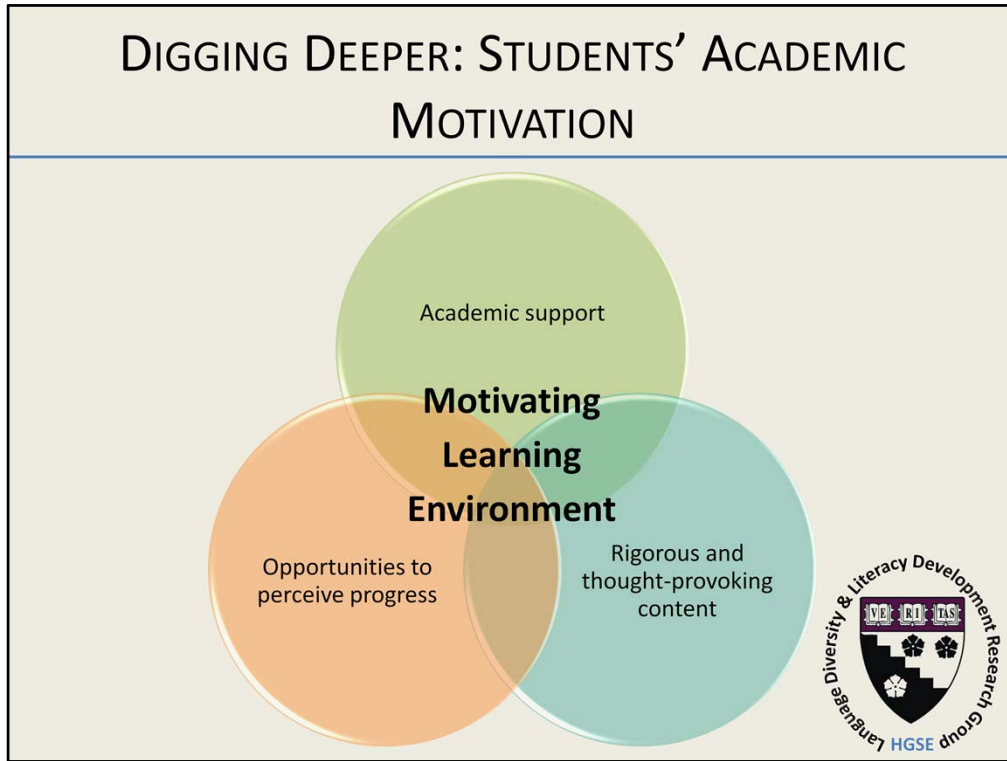
Improved quality of classroom interactions via teacher sensitivity



DIGGING DEEPER: STANDARD PRACTICE (CONT.)

- * Vocabulary Instruction
 - A mile wide and an inch deep
- * Reading and Writing instruction
 - Reading literary texts
 - Writing brief, personal responses
 - Reading and writing in small doses
 - * Writing assignments that take <15 minutes

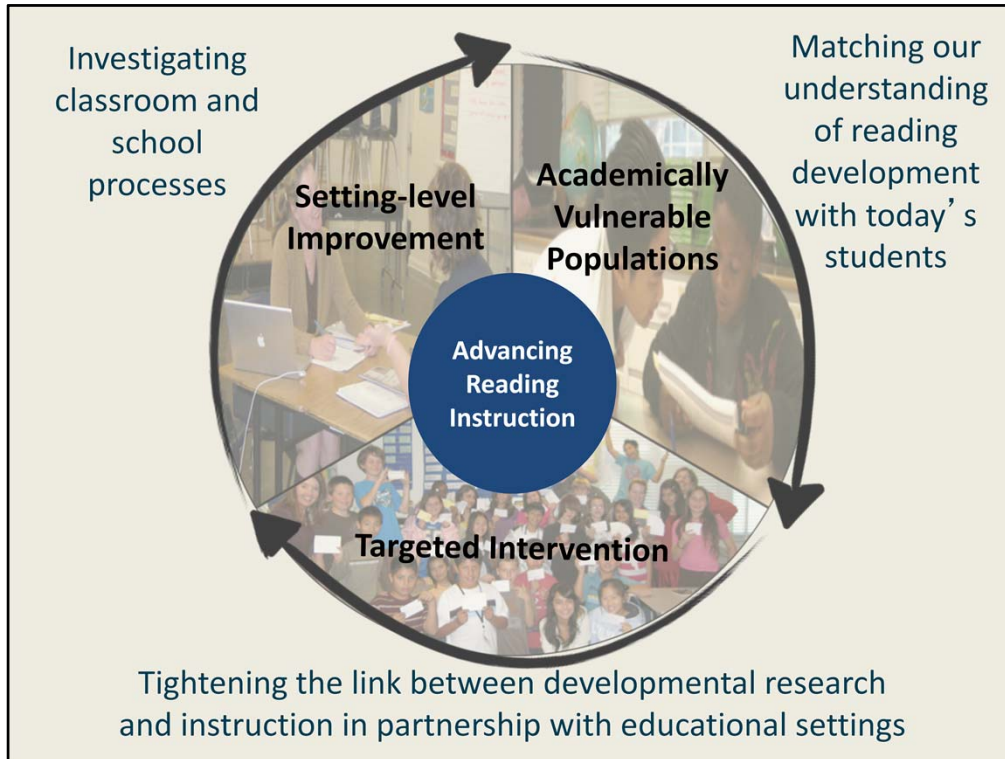




DIGGING DEEPER: INSIGHTS FOR PRINCIPALS

- * Robust materials can be the solution (and the challenge)
- * “Training” didn’t train teachers, teaching did
- * Web-based support may be very helpful, later
- * Regular and repeated routines are a difference-maker for students
- * Empowering students and teachers means setting high expectations





FUNDERS & PARTNERS

Funding Sources



WILLIAM T. GRANT FOUNDATION
Supporting research to improve the lives of young people

- * San Diego Unified School District
- * Boston Public Schools
- * Lawrence Public Schools
- * Framingham Public Schools
- * Montgomery County Schools
- * Needham Public Schools
- * Springfield-Holyoke-Chicopee Head Start



OUR TEAM

EMAIL: rdgstudy@gse.harvard.edu
<http://sites.harvard.edu/lesaux>

RESEARCH ASSOCIATES

Julie R. Harris
Joan G. Kelley
Armida Lizarraga

POSTDOCTORAL FELLOWS & DOCTORAL STUDENTS

Mary Burkhauser
S. Elisabeth Faller
Jennifer Jacoby
Sky H. Marietta
Rebecca Givens Rolland

ASSOCIATED FACULTY

Perla Gamez
Loyola University Chicago

Michael J. Kieffer
New York University

Jeannette Mancilla-Martinez
University of California Irvine

