

NCCRESt Conference

*English Language Learners Struggling to Learn: Emergent  
Research on Linguistic Difference and Learning Disabilities*

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## Response-to-Instruction Models of Assessment: Are They Valid for English Language Learners?

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# About the Project...

**LaPatera** is a longitudinal project funded by the OELA/USDOE to implement and investigate effects of intensive intervention on **English** word reading by **Spanish-speaking** kindergarteners who perform poorly on **Spanish** phonological processing tasks.



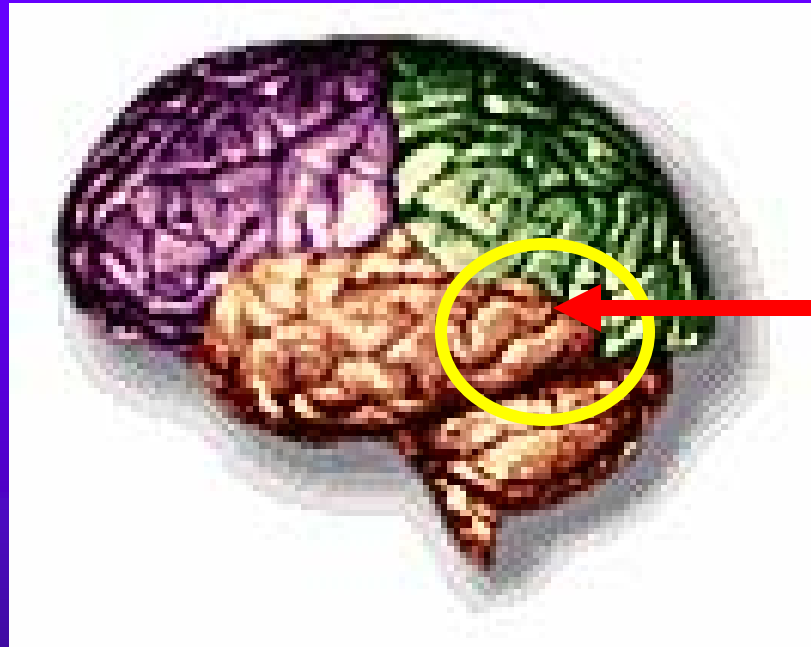
# Learning Disabilities

## Public Law 94-142:

- ✓ .... a disorder in one or more of the basic psychological processes involved in understanding or in using language
- ✓ ... includes such conditions as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia.
- ✓ ... does not include children who have learning problems which are primarily the result of visual, hearing, or motor handicaps, or mental retardation, or emotional disturbance or of environmental, cultural, or economic disadvantage.



**“ Children with dyslexia showed a correlation between the magnitude of increased activation in left temporo-parietal cortex and improvement in oral language ability (Temple et al., 2003, p. 2860).**



**Treatment was associated with improved reading scores and increased brain activation during both tasks, such that quantity and pattern of activation for children with dyslexia after treatment closely resembled that of controls (Aylward et al., 2003, p 212).”**



## Central Concern for Reading

However, about 80% of children identified as learning disabled have failed to achieve in reading. Students with LD typically have more difficulty with fluent word reading rather than comprehension (Lerner, 1989; Kavale & Reese, 1992; Stanovich, 1990) .



# What are phonological skills?

- ◆ Pre-reading abilities related to awareness and mental manipulation of speech sounds (phonemes)
- ◆ Skills that gradually become integrated during early preschool and school experience.
- ◆ Performance requiring these skills can be interpreted to indicate how well children understand the sound structure of language and its relation to written words.



## What we know...

∞ Large, convergent literature shows that L1 phonemic awareness predicts word decoding in early grades

(Wagner & Torgesen, 1987)



∞ Longitudinal studies show intensive interventions with kindergartners who perform poorly on phonological processing tasks result in word decoding performance in 1st and 2nd grades more similar to that of peers

(Bus & van Ijzendoorn, 1999; Ehri et al., 2001)



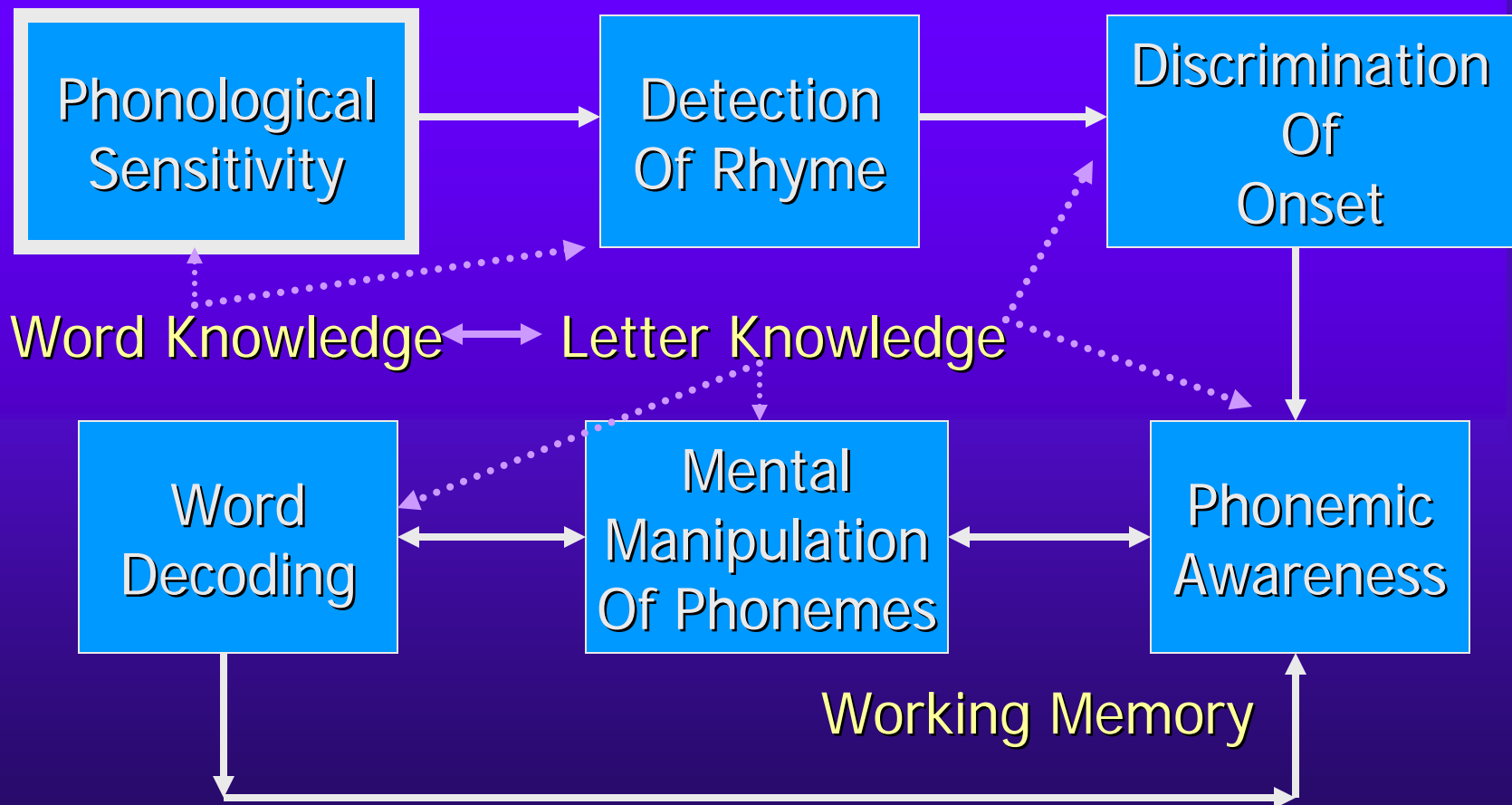


↪ Equivalent demonstrations exist for early readers in many other languages.

↪ Performance in L1 is related to performance in L2.

(Durgunoğlu, Nagy, & Hancin-Bhatt, 1993; Cisero & Royer, 1995; Geva, Wade-Woolley, & Shany, 1997; Riccio, Amado, Jiménez, Hasbrouck, Imhoff, & Denton, 2001; )

# Theoretical Developmental Path

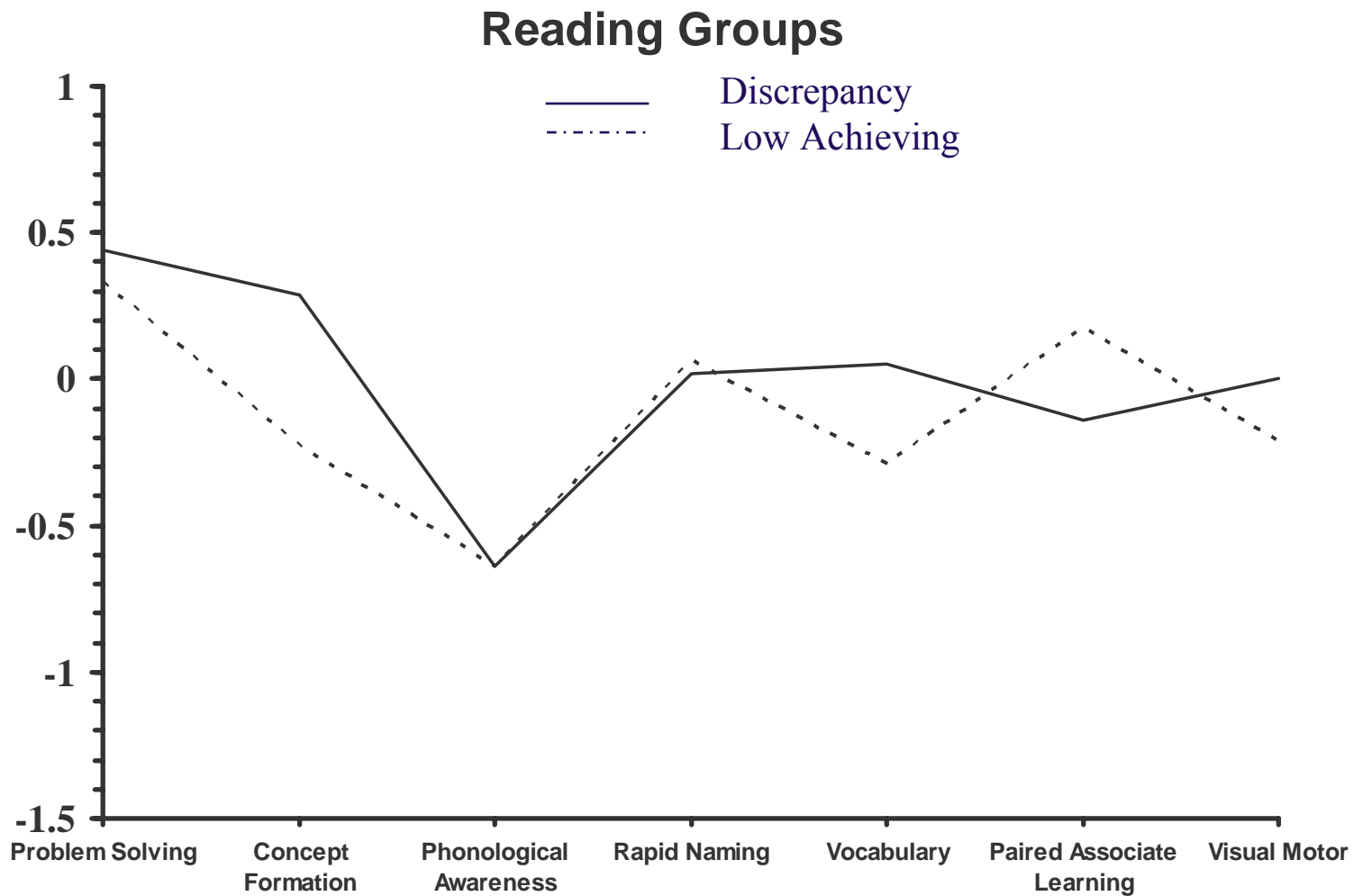




Generally, though, learning disabilities have been identified when achievement (e.g. reading score) is significantly (e.g., 1.5+ standard deviations) below ability (e.g., IQ) and ability is in the *normal* range.

# Why Discrepancy Criteria Fail

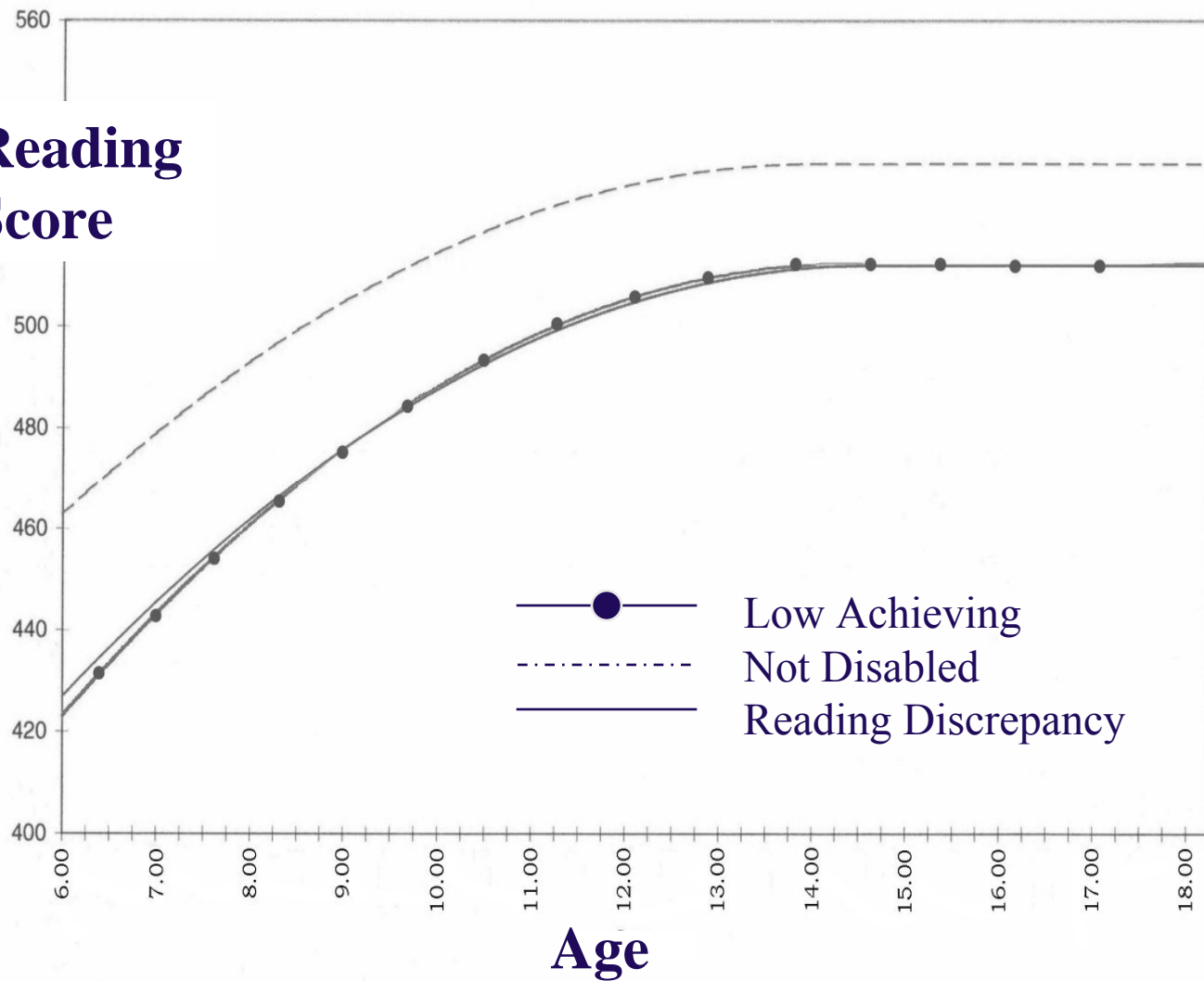
(From: Fletcher, 2002)



(From: Francis et al., 1996)



## Reading Score



# Responsiveness to Instruction as an Indicator of Exceptionality



1. Teachers provide instruction in the curriculum
2. Teachers periodically note progress or lack of progress
3. Teachers try a different approach for those who do not seem to be making progress
4. Instruction continues and, at some point, progress is noted
5. Teachers seek outside help for those who continually show lack of progress, including referral for special education

# Teachers-as-Test

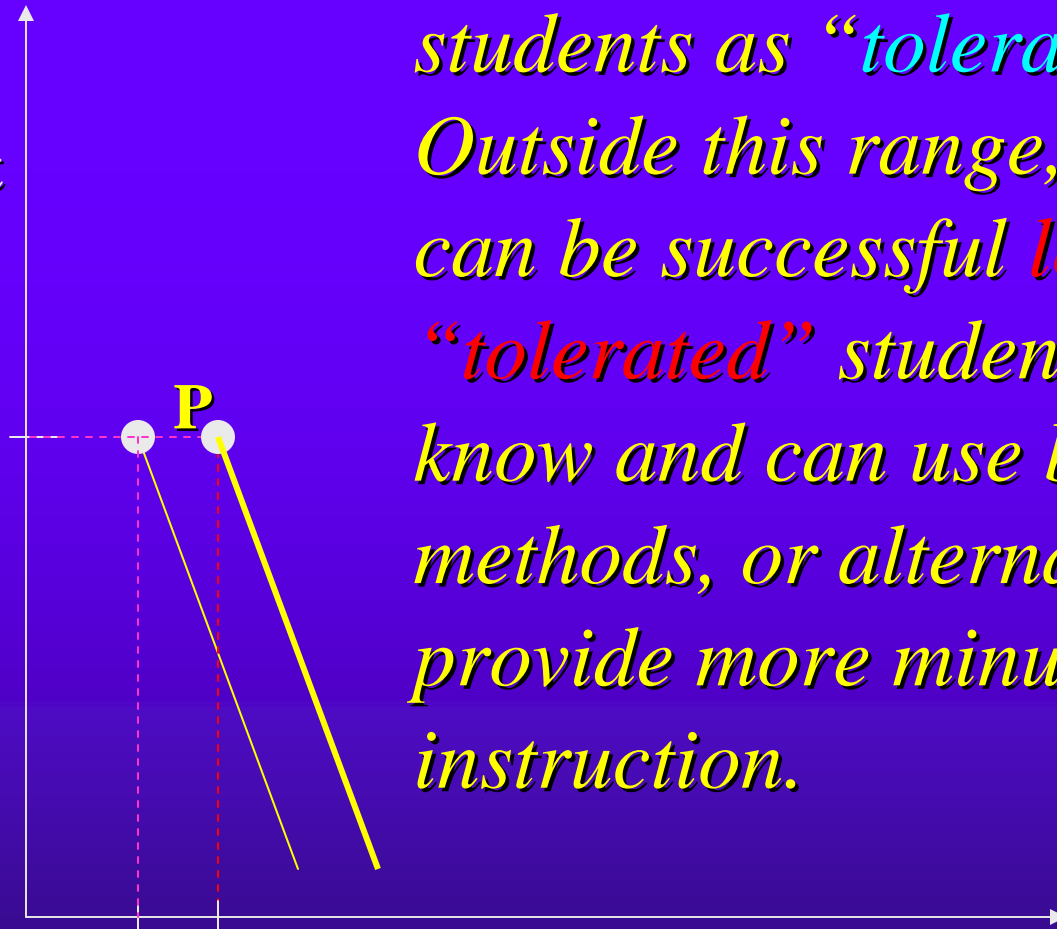
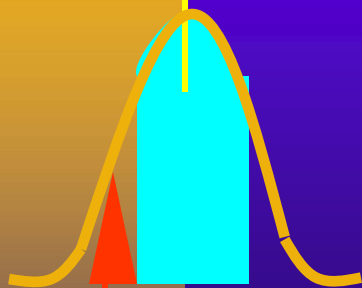
(Gerber & Semmel, *Educational Psychologist*, 1984)

- ◆ “...agreement between teachers and ‘objective’ instruments may not be an acceptable test of concurrent or predictive validity of teachers-as-test (p. 143).”
- ◆ “...referral behavior may indeed reflect an underlying lawfulness in how teachers form judgments about teachability, how these judgments are translated into referrals...and how teacher identification ... can appear at once so idiosyncratic but at the same time reliable (p. 145).”





Achievement  
for Modal  
Students



Achievement for Highest Risk Student(s)

*Teachers treat responsive students as “tolerably” similar. Outside this range, teachers can be successful **less** “tolerated” students IF they know and can use better methods, or alternatively, provide more minutes of instruction.*





# Models of RTI

## Problem Solving

What schools now do. Variable in specific approach, process, procedures, and capacity.

## “Standard Protocol”

Teaching becomes the test. Must provide high baseline of instruction, standard procedures.

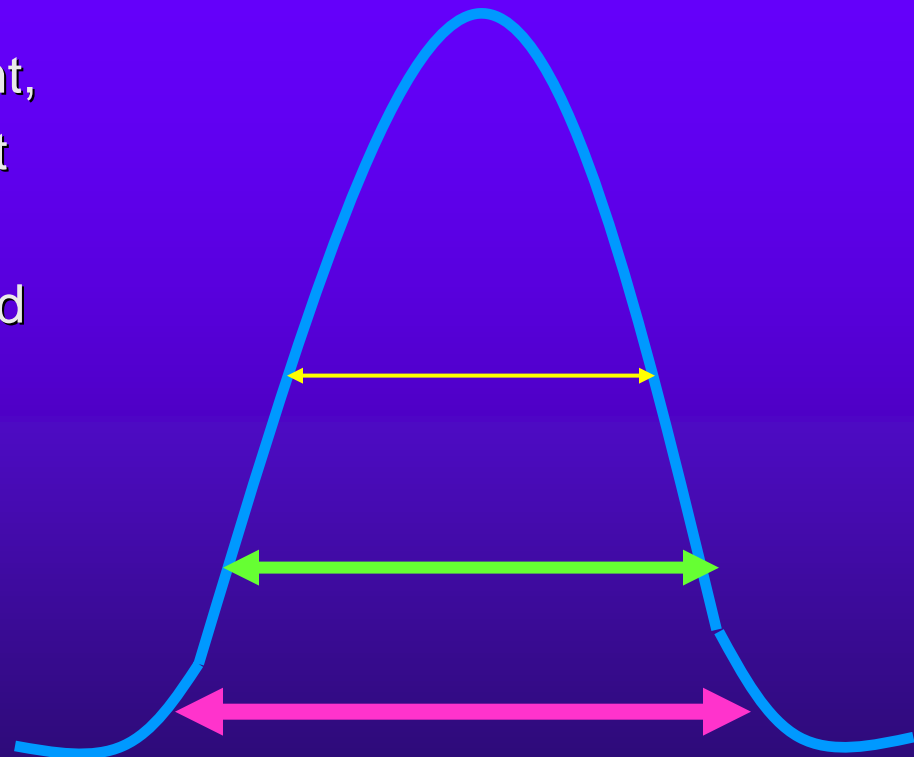


\* Adapted from Fuchs, Mock, Morgan & Young, 2003

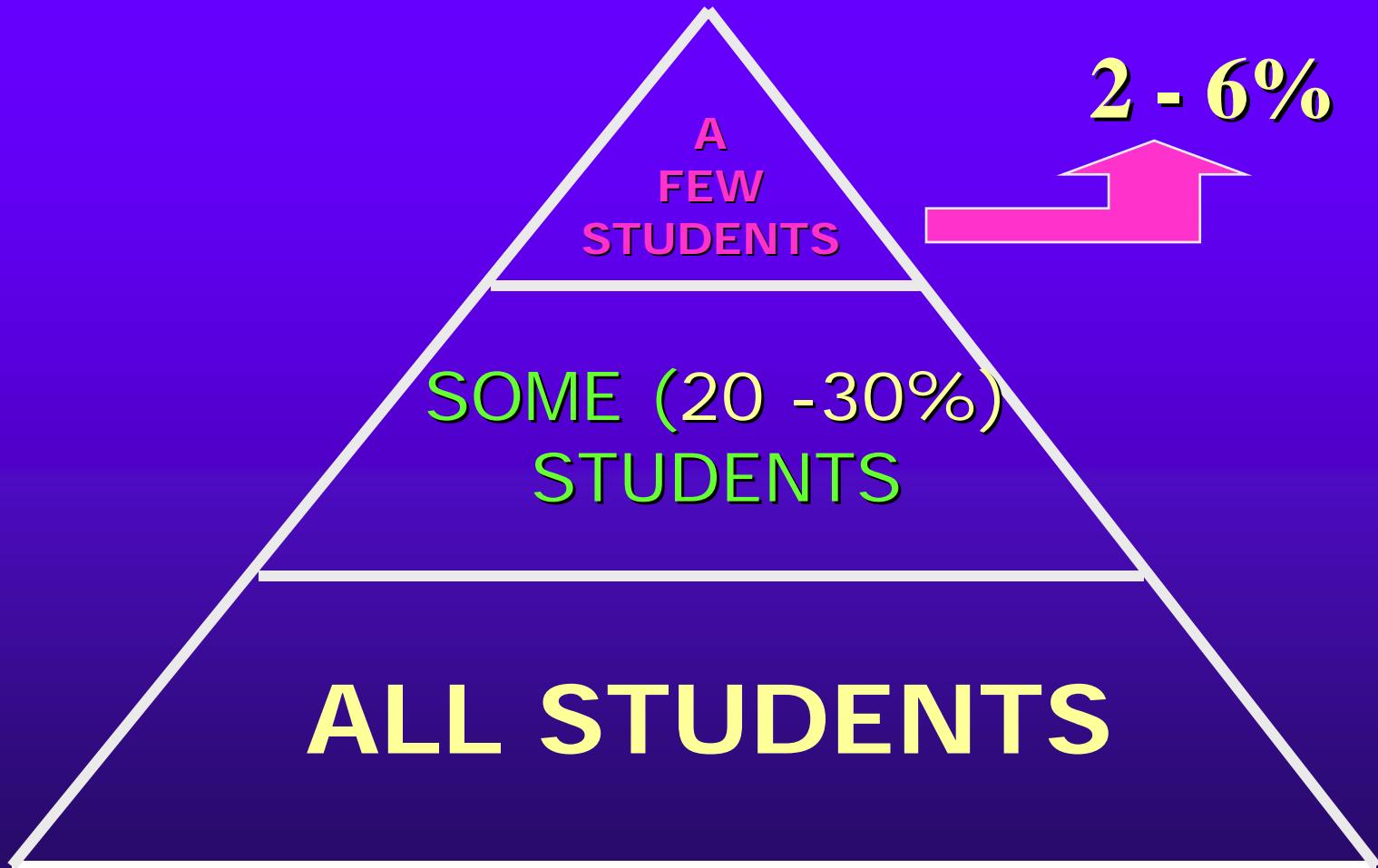
# RTI and Classroom “Tolerance”

RTI implies new effort, professional development, new in-class assessment procedures, and new **primary**, **secondary**, and perhaps **tertiary** interventions

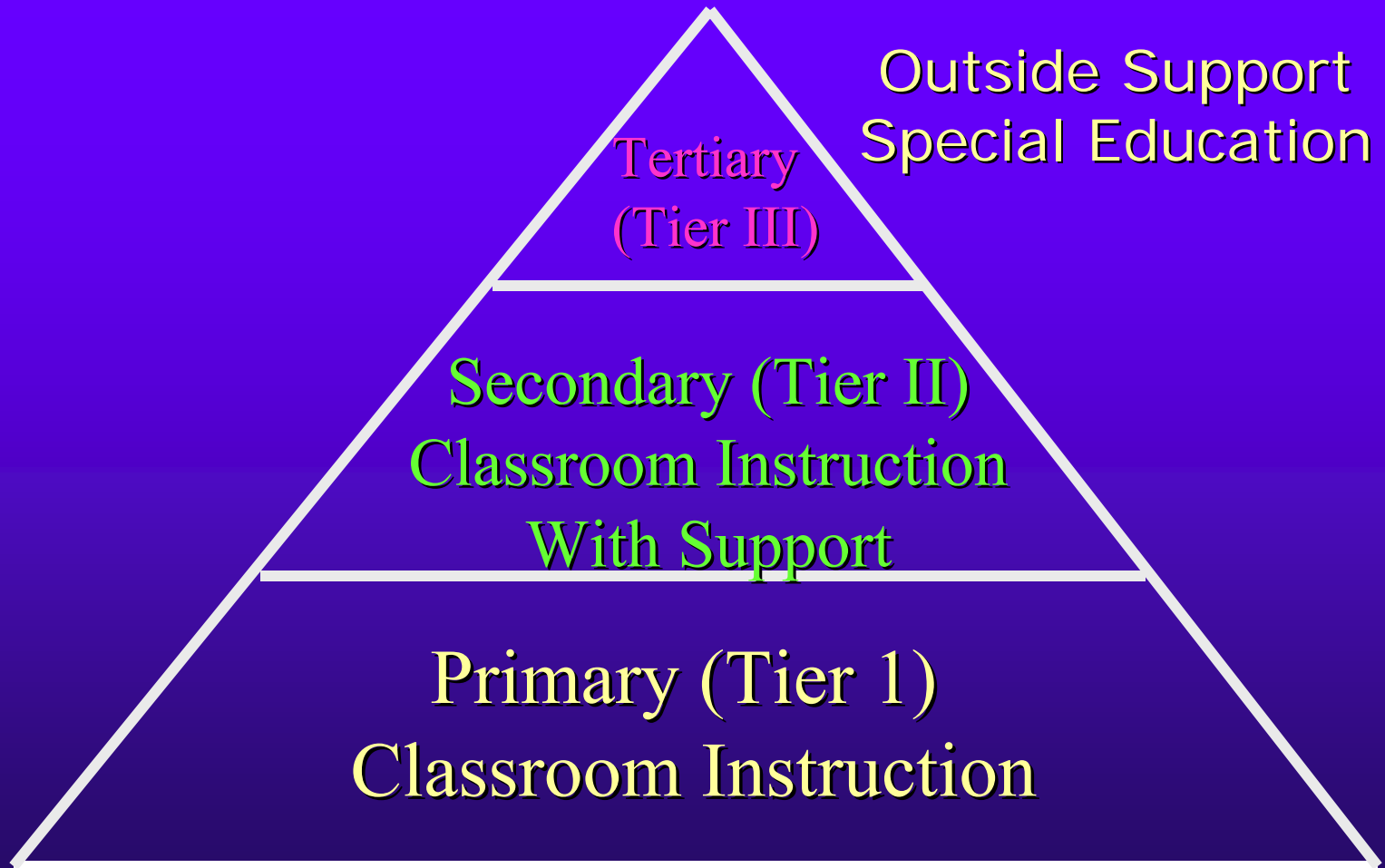
The net effect is to increase classroom “tolerance.”



# *Reading First:* Multi-Tiered Instruction



# *Reading First:* Multi-Tiered Instruction



# Response to Responsiveness

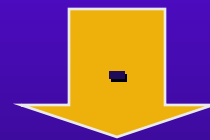
High Quality  
Instruction



Continuous Monitoring  
Of Indicators



Continue



Intensify



# Teaching Effort Required

Source: Torgesen, J. K. (2002). Lessons learned from intervention research in reading: A way to go before we rest. *Learning and Teaching Reading*. British Psychological Society.



Researcher	Intervention	Sample Failure*	Population Failure*
Foorman	174 hrs.- classroom	35%	6%
Felton	340 hrs. - groups of 8	32%	5%
Vellutino	35- 65 hrs. 1:1 tutoring	46%	7%
Torgesen	88 hrs. 1:1 tutoring	30%	4%
Torgesen	80 hrs. 1:3 tutoring	11%	2%
Torgesen	91 hrs. 1:3 or 1:5 tutoring	8%	1.6%

\* Scoring below the 30%ile

# Rime

• *Example Spanish:*  
“Pan, Cual palabra  
rime o suena como  
pan, flan o sal?”



• *Example English:* “Can,  
which word rhymes with or  
sounds like can,  
pig or man?”



# Onset

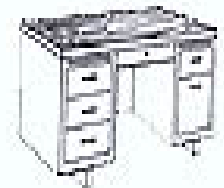
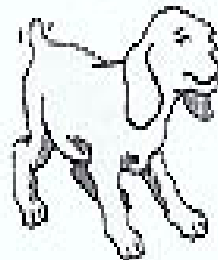
- *Example Spanish:*

“Casa, cual palabra empieza con el mismo sonido que casa, leche o cara?”



- *Example English:*

“Pail, which word begins with the same sound as pail, puppy or desk?”



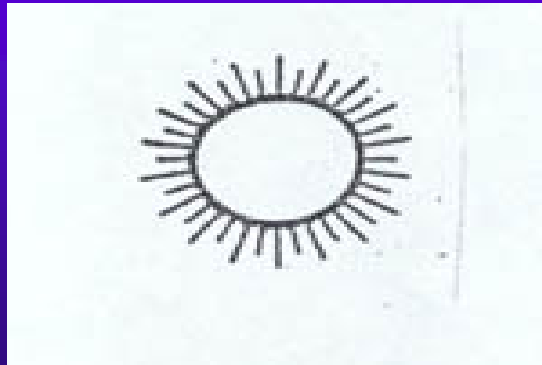


# Segmentation



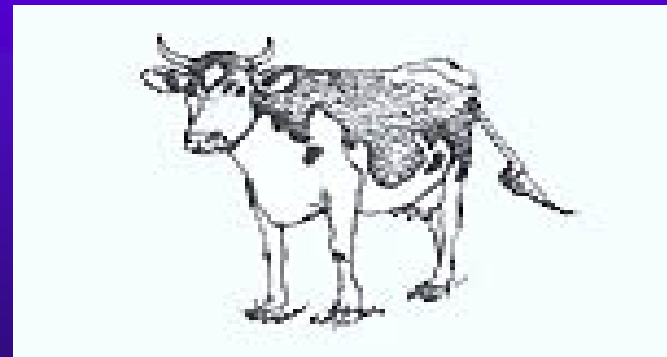
- *Example Spanish:*

- Assessor: “sol”
- Student: s-o-l



- *Example English:*

- Assessor: cow
- Student “c-ow”





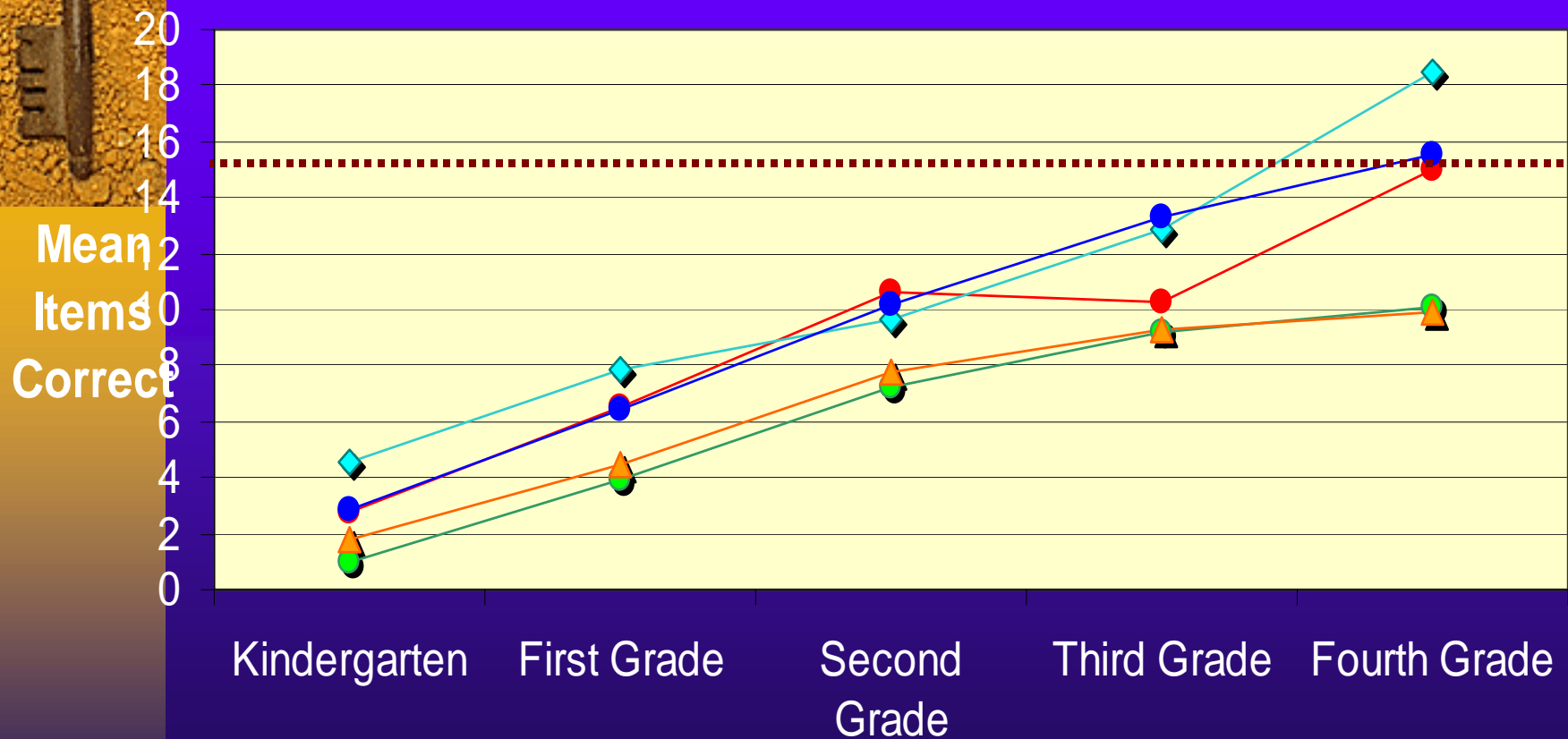
## Is RTI different for English Learners?

The effects of *individual differences* in phonological processing abilities on early word reading for monolingual learners is well documented.

**We do not understand yet how these mechanisms work during bilingual acquisition.**

# Change in Phonological Measures

- Phoneme elision
- Phoneme segmentation
- ▲ Blending phonemes - nonwords
- ◆ Sound categorization
- Blending phonemes - words

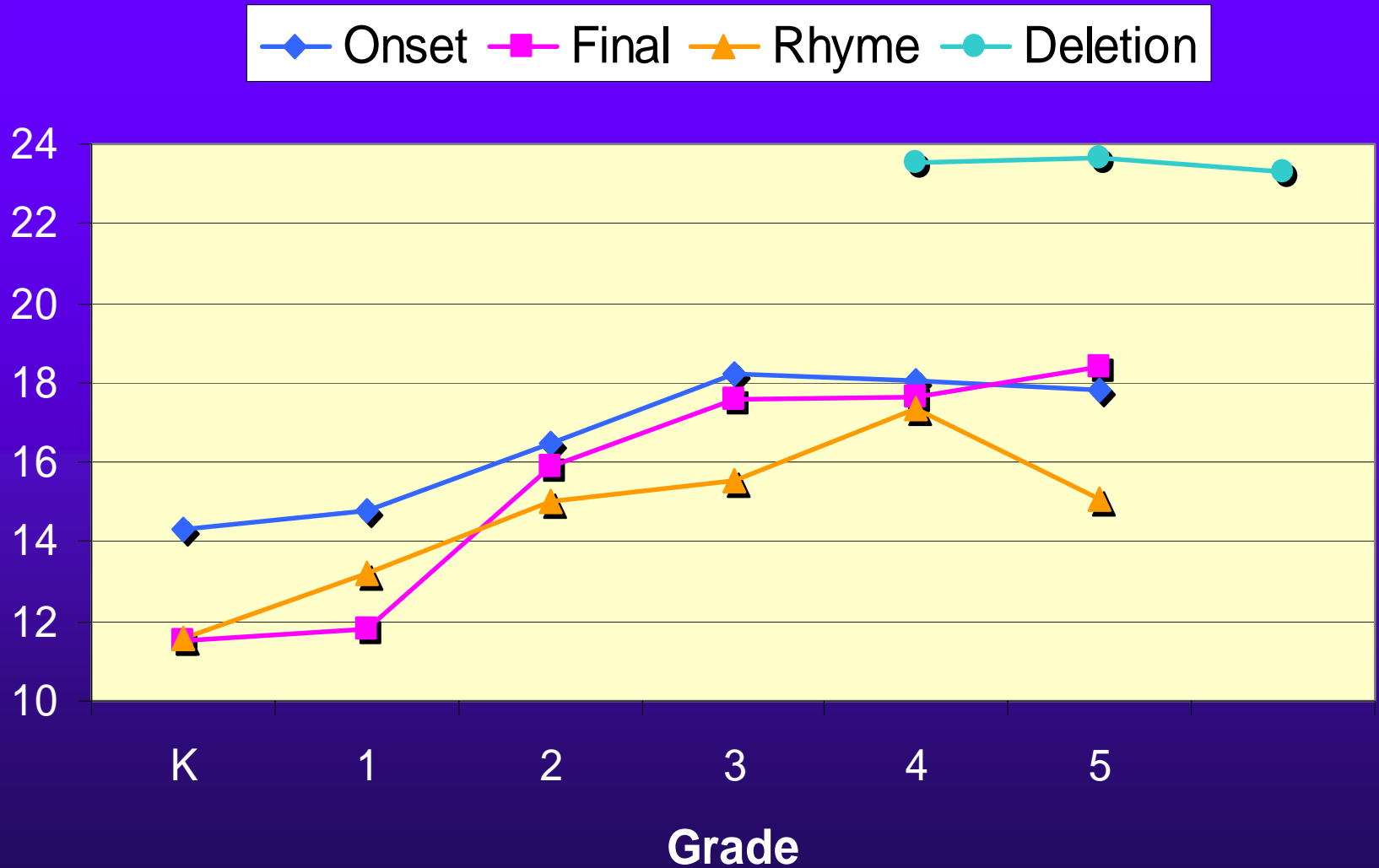


# Development of Spanish Phonological Measures

(Riccio, Amado, Jimenez, Hasbrouck, & Imhoff, 2000)

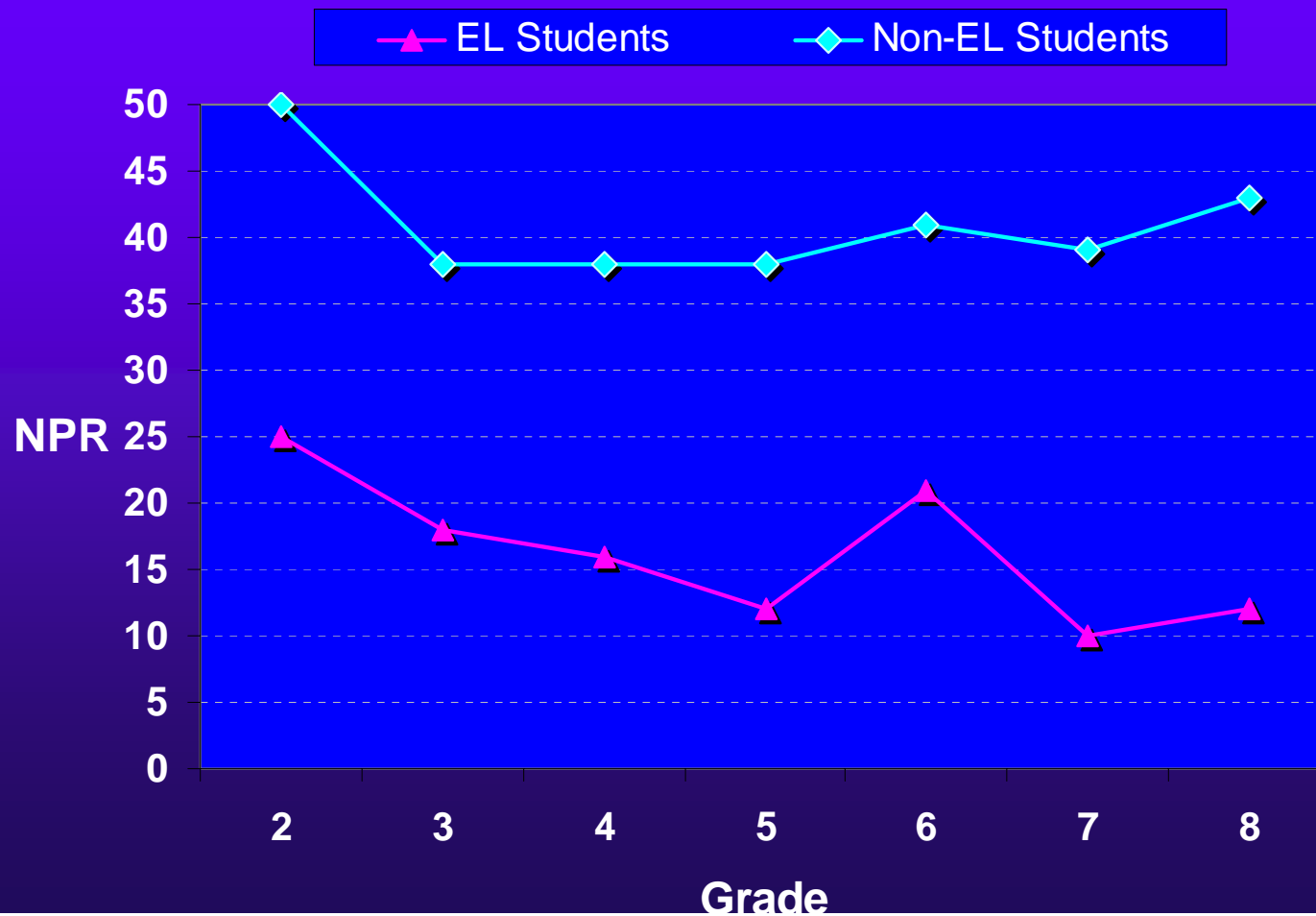


Mean  
Correct





# Project La Patera Schools 2000 –2001 SAT-9 Reading





# Methods

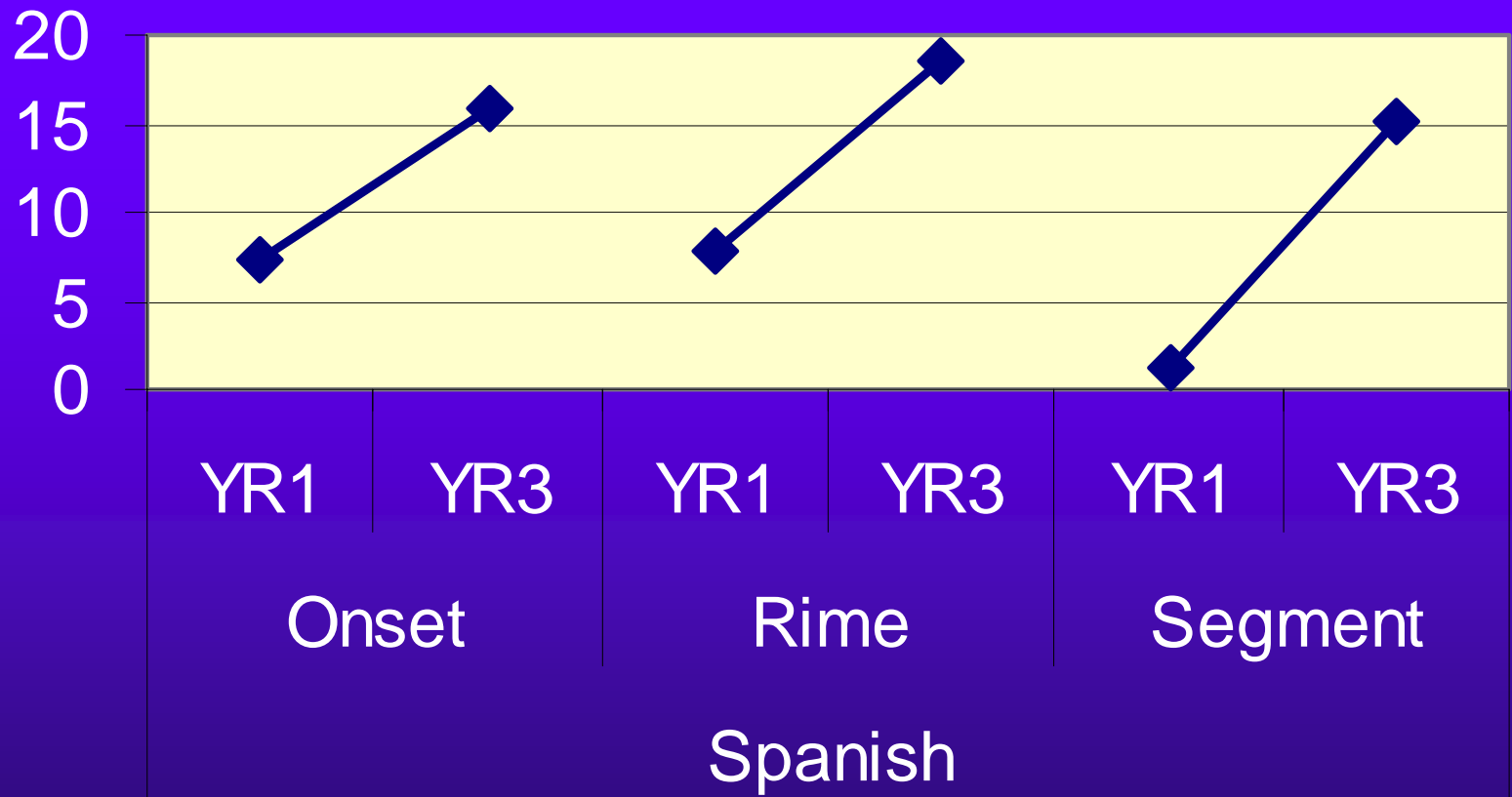
- ◆ **Independent measures:** Status on battery of phonological and preliteracy predictive measures, home inventory
- ◆ **Intervention:** Intensive instruction in phonological skills with teacher and parent training/participation
- ◆ **Dependent measures:** English word/pseudoword decoding, spelling, SAT9 (end of second grade)



# Methods

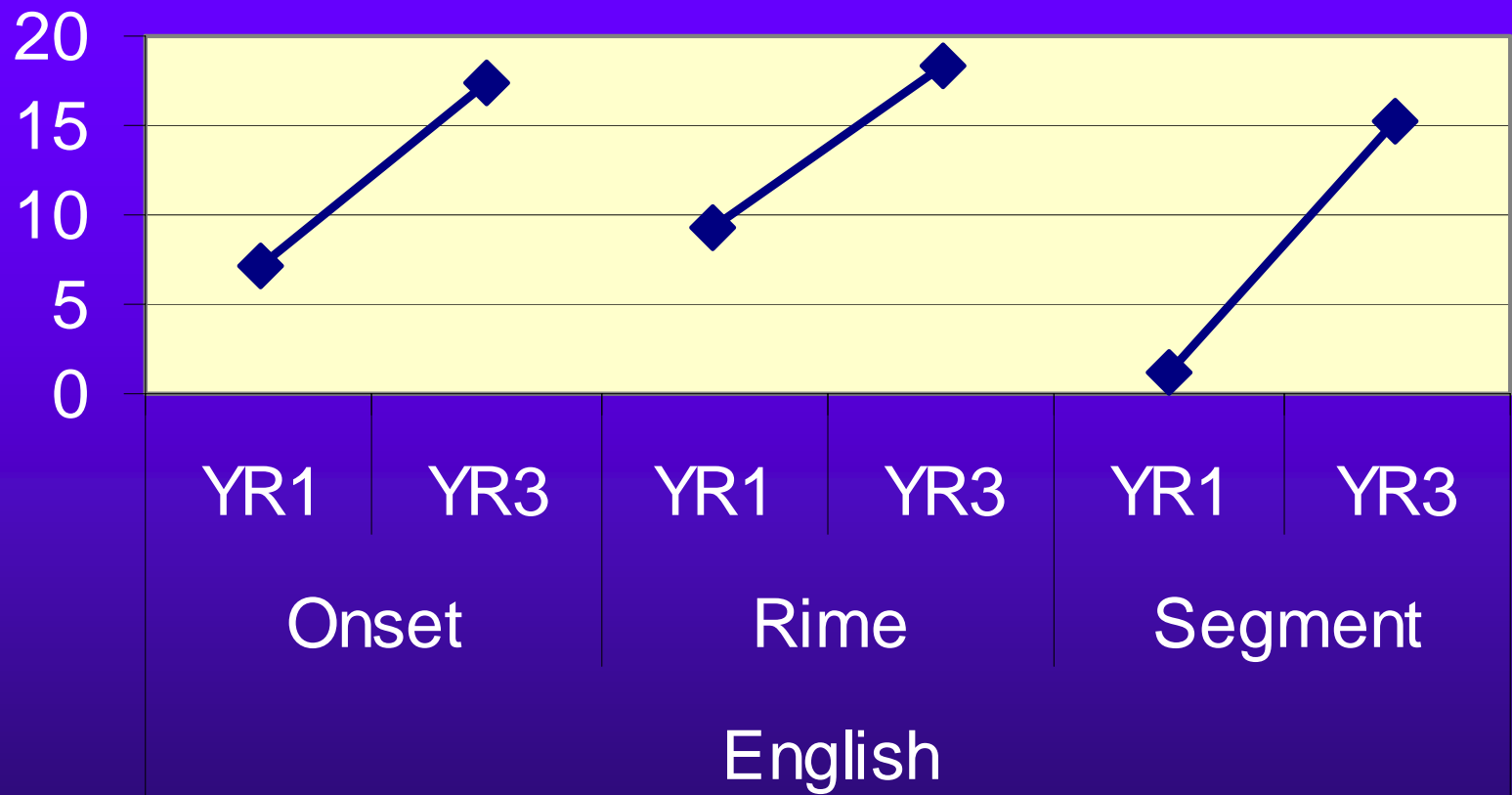
- ◆ **Setting:** Three school districts in California
- ◆ **Sample:** Entering kindergarteners (Sept. 2000) 23 intact classrooms with students who are predominantly Spanish-speaking (N=377)
  - 20 English only instruction
  - 5 Bilingual instruction
- ◆ 48 % female
- ◆ Low SES (>40% below Census poverty level)

# Spanish Phonological Pretests



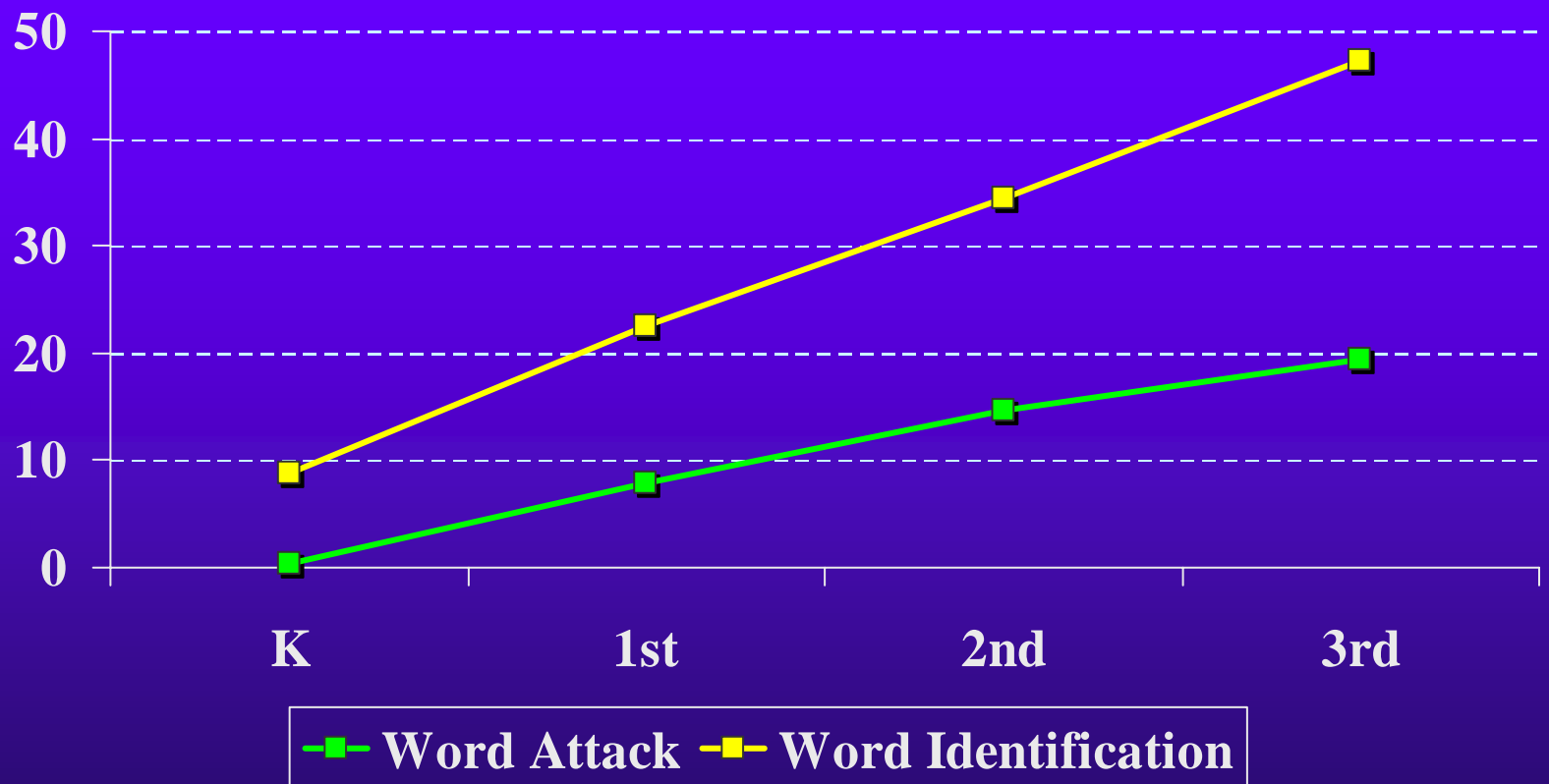


# English Phonological Pretests





# Four Year (K-3) Performance





# Core Intervention Model

- Small group (4) direct instruction
- Distributed practice (300 mins.)
- Focused on specific skills
- Fast-paced
- “Step-down” correction (re-teaching)
- High motivation



# “Step Down” Prompting

“Supply” Question

Binary Choice

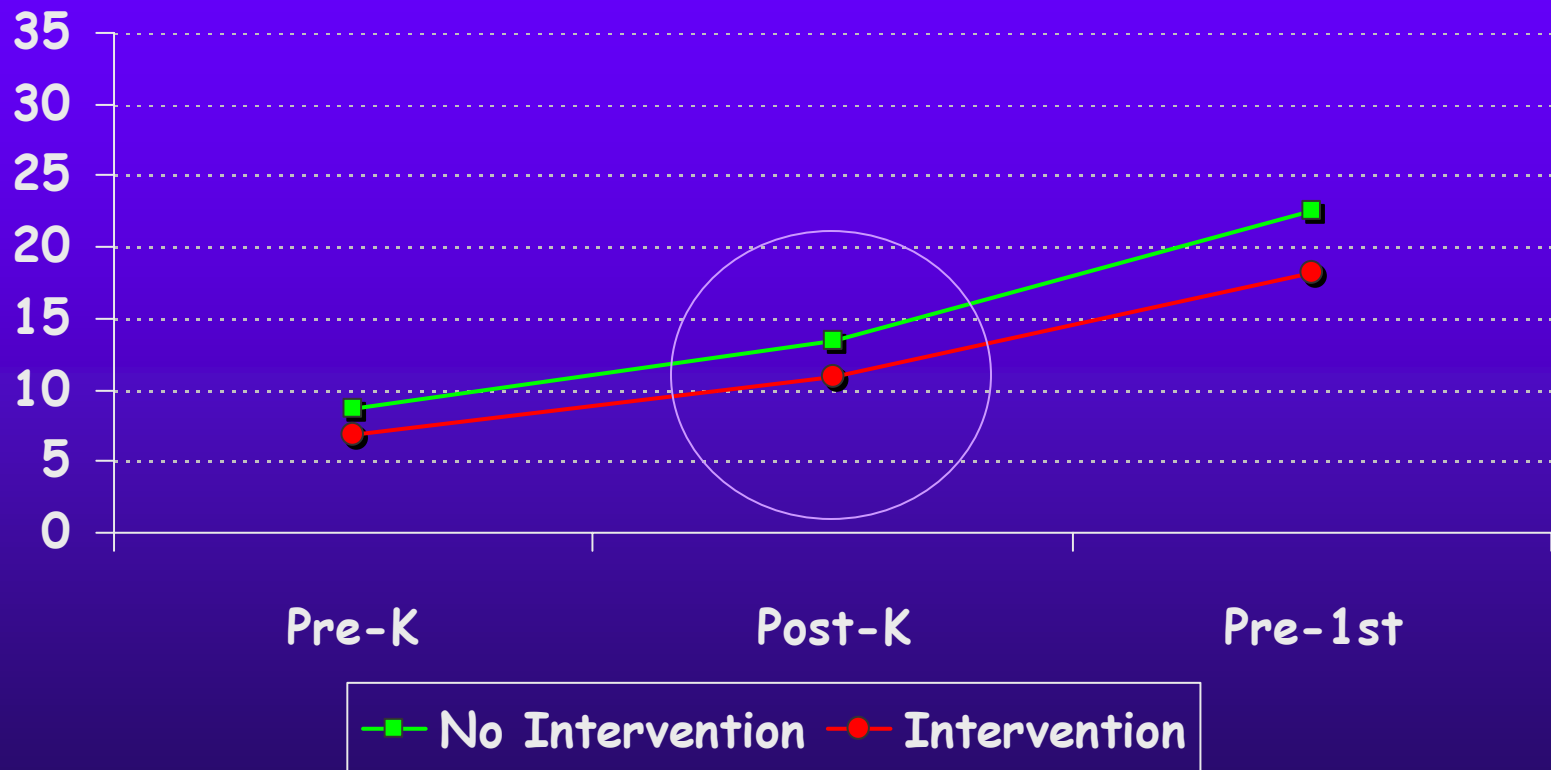
Model-Lead

Simple Imitation





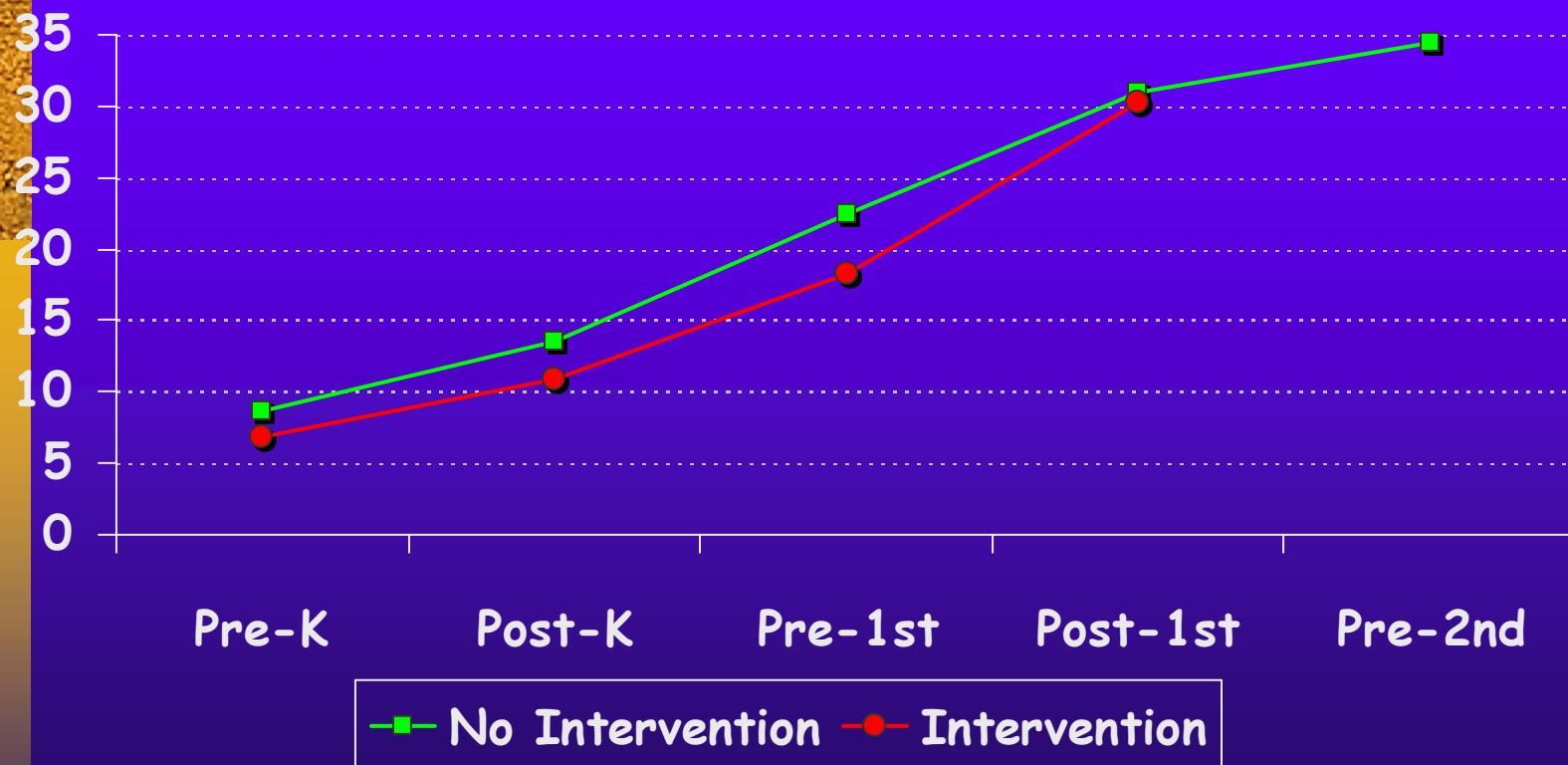
# Word Identification 1st Grade Pretest



# Word Identification 1st Grade Posttest



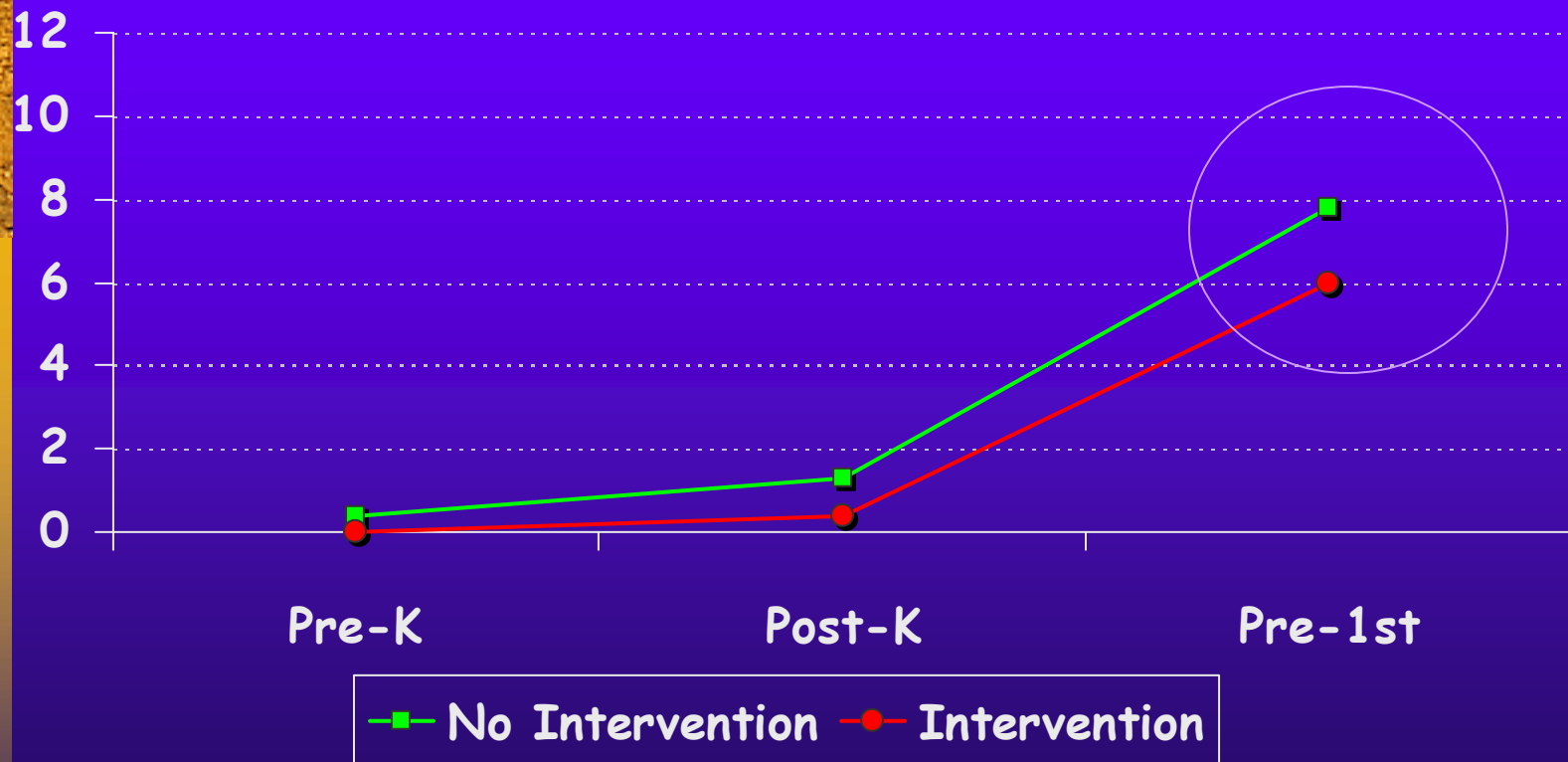
# Word Identification 2nd Grade Pretest





# Word Attack

## 1st Grade Pretest





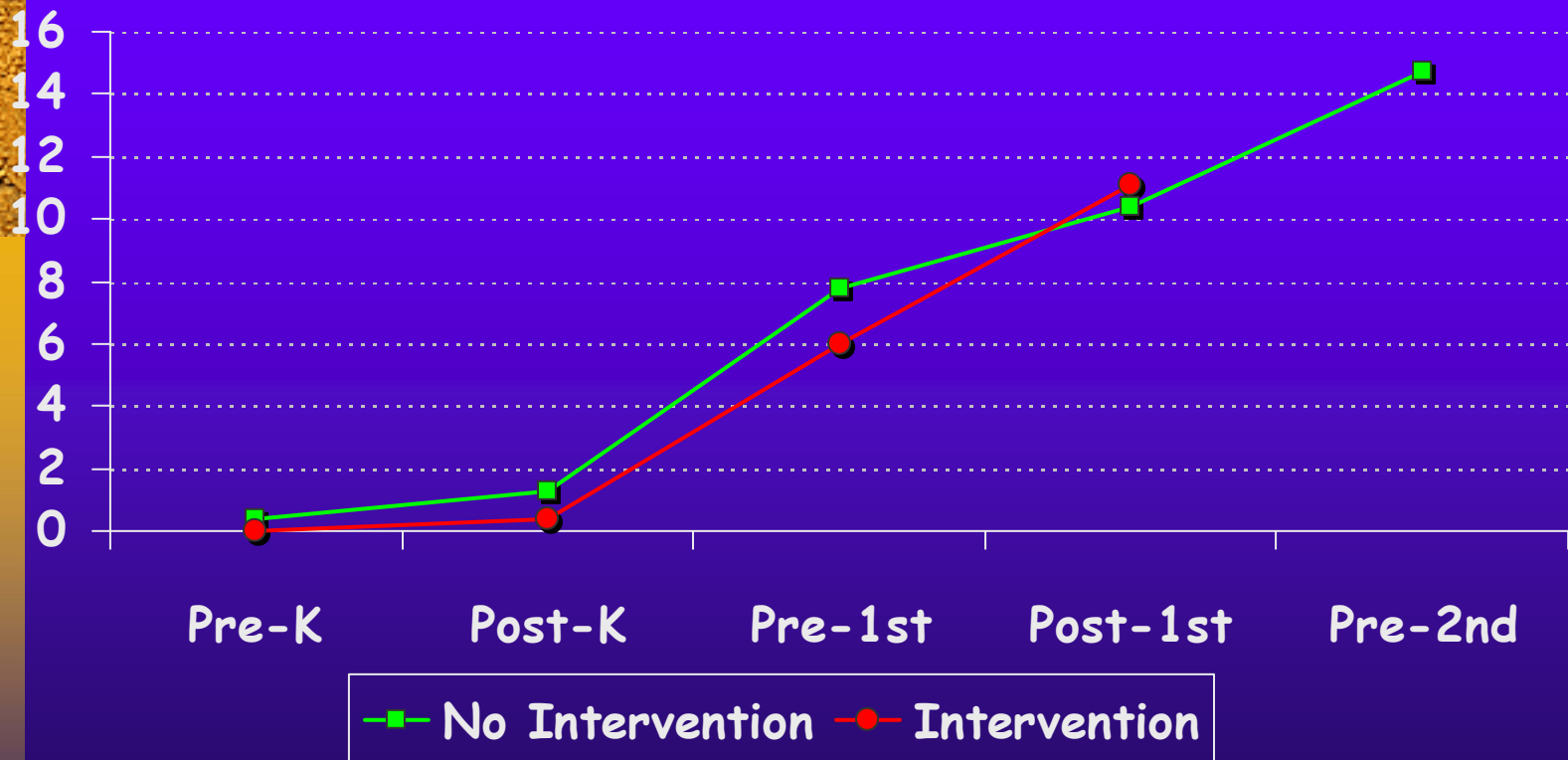
# Word Attack

## 1st Grade Posttest

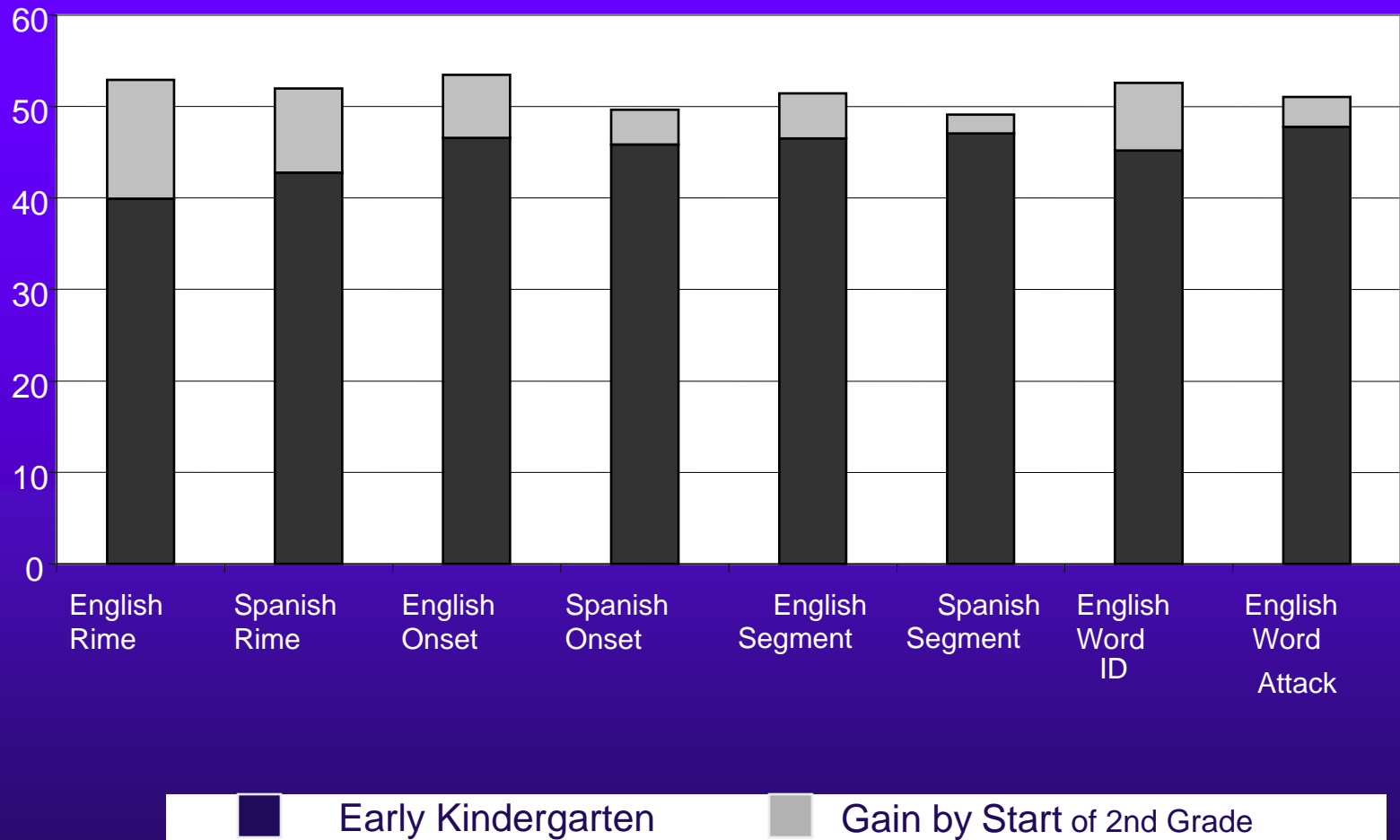



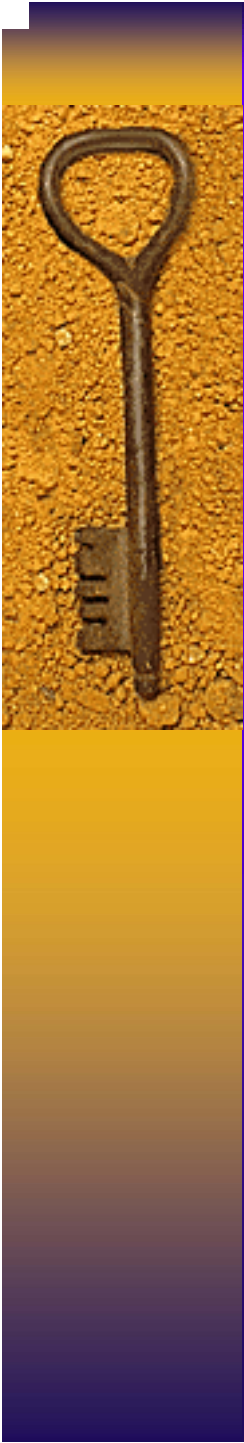
# Word Attack

## 2nd Grade Pretest



# Standard Score Gains





# Research Questions

- ◆ How do students most at-risk respond *during* instruction?
- ◆ What are the characteristics of those students who are responsive compared to those who are not responsive?
  - Specifically on development of strategies, ongoing fluency, and number of responses during instruction



# Participants

- ◆ 4 lowest performing students of 19 Kindergarten students (1 class)
- ◆ Age: 5 years
- ◆ Gender: 2 girls, 2 boys
- ◆ Ethnicity: Latino
- ◆ Average Family Income: \$20,000-\$29,000

# Microgenetic Procedures

Pretest

*Explicit Instruction*  
*2 x 30 min/wk*

Probes  
(5/session)

Revise  
Instruction

Post test  
(Week 10)





# Strategy Development in PA

- ◆ Based on cross sectional pilot study with 1-3<sup>rd</sup> graders (Leafstedt, Richards, & Gerber, 2004)
  - As students become more sophisticated at understanding sound-letter correspondences, strategies become more sophisticated



# Rime

Sounds the same

Without  
letter knowledge

First sound same

last sound same

With  
letter knowledge

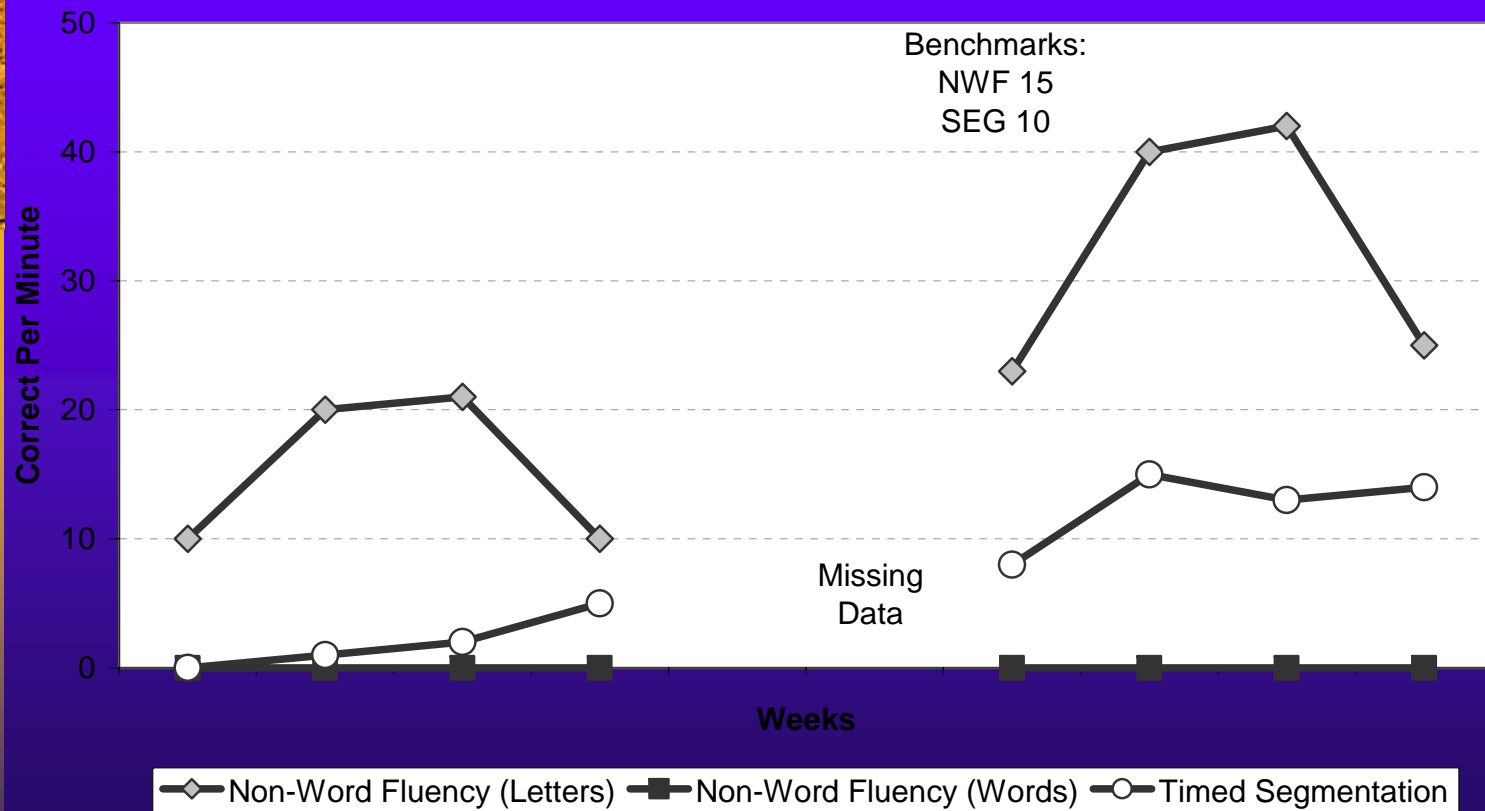
First letter/sound same

last letter/sound same

Ending is the same  
Last consonant & vowel same



# Cesar-Responsive



(From: Richards, 2004)



# Cesar-Strategies

## Rime Strategies

Week 1: “the same...”

Week 6: “They are the same.”

Week 9: “ Because /d/”

## Segmentation Strategies

Week 1: repeats word

Week 6: segments 1 sound (t-tap)

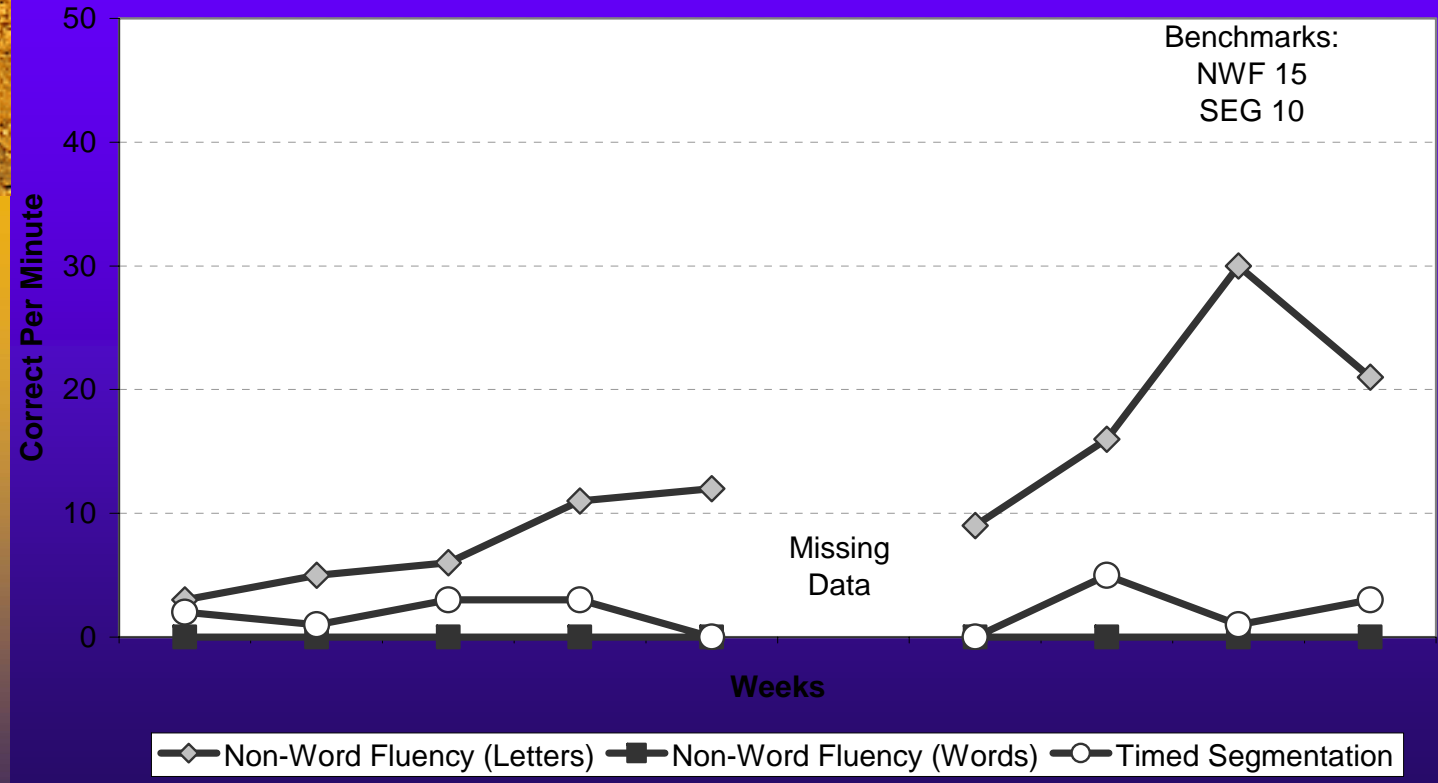
Week 9: segments 2 sounds (kn-ee)



# Cesar-Responses during Instruction

- ◆ Average responses per minute= 3.68
- ◆ Observations: Attentive during other students' responses and questions addressed to others

# Perla-Not Responsive





# Perla-Strategies

## Rime Strategies

Week 1: No response

Week 6: “They are the same.”

Week 9: “They are the same.”

## Segmentation Strategies

Week 1: repeats word

Week 6: segments 1 sound (key=“hhh”)

Week 9: segments 1 sounds (cake=“bbb”)



## Perla- Responses during Instruction

- ◆ Average responses per minute=2.77
- ◆ Observations: off task when not her turn, responds only after being called on only



# Responsive Students

- ◆ Students at-risk who were responsive to intensive intervention
  - Made growth on both fluency measures
  - Progressed in strategy use
  - Integrated information about PA and letter sounds
  - More responses during instruction



## Students not responsive

- ◆ Students who were not responsive
  - Made growth on the nonword fluency but not on the segmentation task
  - Did not reach same strategy level on rime and segmentation tasks
  - Had fewer responses during instruction





## Implications for Using RTI

- ✓ Students should be assessed in L1. Although cognitive abilities are the same, lack of familiarity with English phonology will underestimate capability.
- ✓ Variable knowledge of English, particularly English phonology, in early grades introduces variability (instability) in progress monitoring measures. Judgments about responsiveness after fixed intervals of instruction are subject to error.
- ✓ Better to assess responsiveness *during* instructional interventions.
- ✓ Assessment of “strategies” may be important, but low proficiency in oral English may underestimate true knowledge



## General discussion

Variables that distinguish students who are responsive from those who are not

- Segmentation fluency
- Use of more sophisticated strategies integrating letter knowledge and PA
- Number of responses during instruction



## Implications for intervention

- ◆ Longer intervention-more than 10 weeks
- ◆ More frequent instruction-4 days per week
- ◆ Direct teaching of strategies (i.e., ways of thinking about PA task)
- ◆ Attention to actual number of responses (perhaps smaller group size-3)



## Future Research

- ◆ Further investigation of strategies over time- do students not responsive develop different strategies or just develop them later in time
- ◆ Incorporate strategies into intervention for students not responses to first level of intervention
- ◆ Conduct research on reading comprehension – learning from text – to assess consequences of slow or unreliable processing of phonological information, low fluency in word reading, and vocabulary.