

# THE LANGUAGE PARADOX: THE CHALLENGE OF EARLY CHILDHOOD EDUCATION

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# The Paradox

- Language is a fundamental human ability.
  - ▣ We are genetically prepared to learn language.
  - ▣ All cultures have complex language systems.
  - ▣ All societies teach their young their language.
  - ▣ Barring abnormal development all children acquire it.
- BUT .... differential language abilities are a primary cause of literacy failures.
  - ▣ Limited education and income are strongly implicated.
  - ▣ The problems begin as language is learned.

# Language, Thought and Talk

- Language is foundational to higher cognition:
  - ▣ Facts and concepts are learned through language and accessed through words.
  - ▣ Language helps guide action
    - Regulation of impulses, direction of attention
    - Planning of future actions
  - ▣ Language is foundational for reading.
- Adult-child conversations mediate children's access to language and knowledge.

# Language, Social Life and Identity

- Language is the primary tool used to negotiate the social world.
- Ways of using language reflect cultural and personal identities.
- We are largely unaware of our culturally patterned ways of using language.
- Changing how we use language is difficult and can cause threats to identity.

# The Problem: Unequal Access

- Children learn language from infancy as they interact with parents.
  1. Foundational language abilities are universally fostered.
  2. Access to knowledge and specialized vocabulary is linked to education and literacy.
- Teachers can support learning, but in the US:
  1. They often are poorly paid and come from the same backgrounds as the children they serve.
  2. To provide optimal language support they need to:
    - a) adopt new ways of using language (genres);
    - b) Use language and teach knowledge at the edges of their abilities.

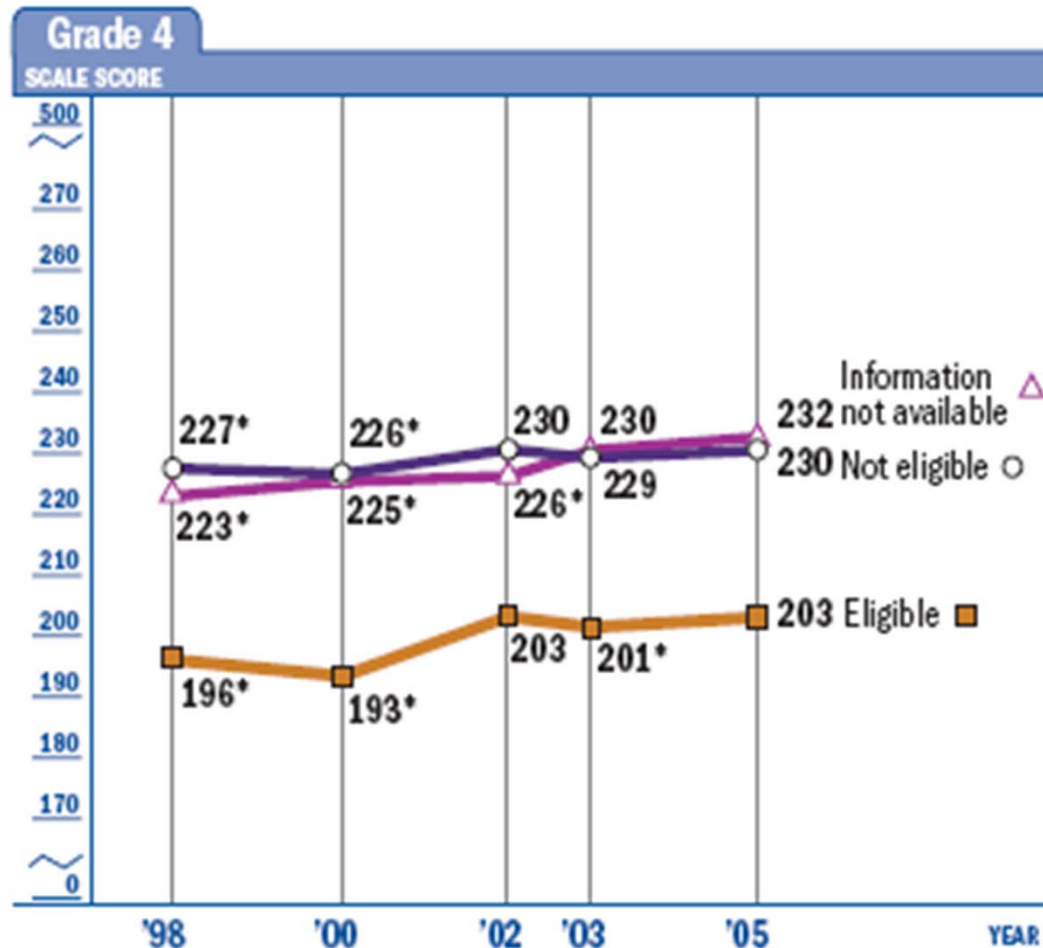
# Education, Income & Culture

Literacy success is strongly related to demographic variables.

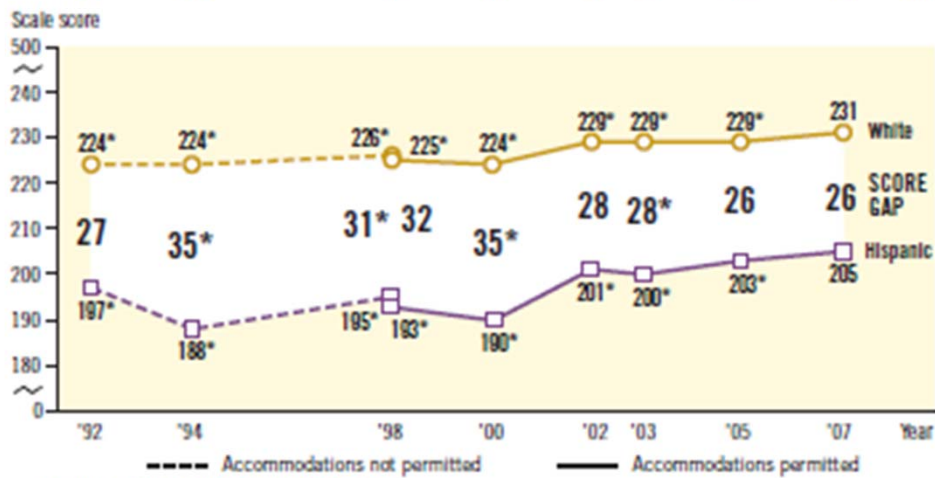
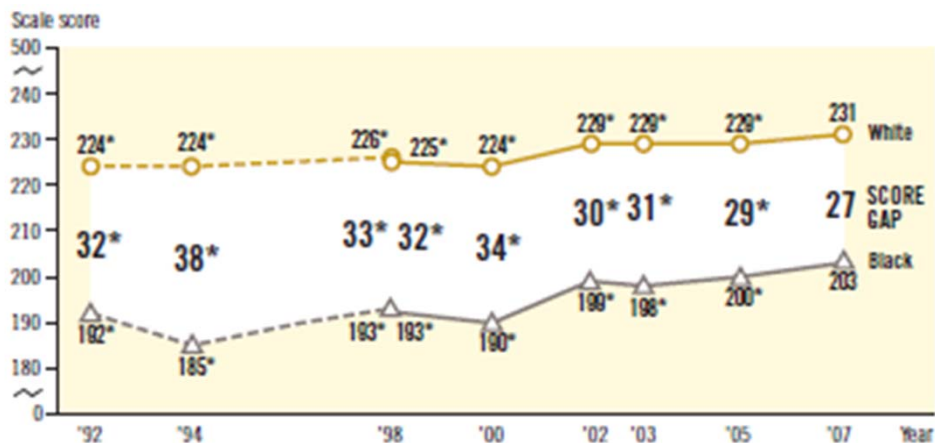
Home patterns of use reflect income, education and cultural influences

# Achievement Gap Among 9 Year Old Children by Family Income (NAEP, 2005)

Figure 6. Average scale scores and achievement-level results in reading, by students' eligibility for free/reduced-price lunch, grade 4: Various years, 1998–2005



# Grade 4 Reading: White vs. Black, White vs. Hispanic



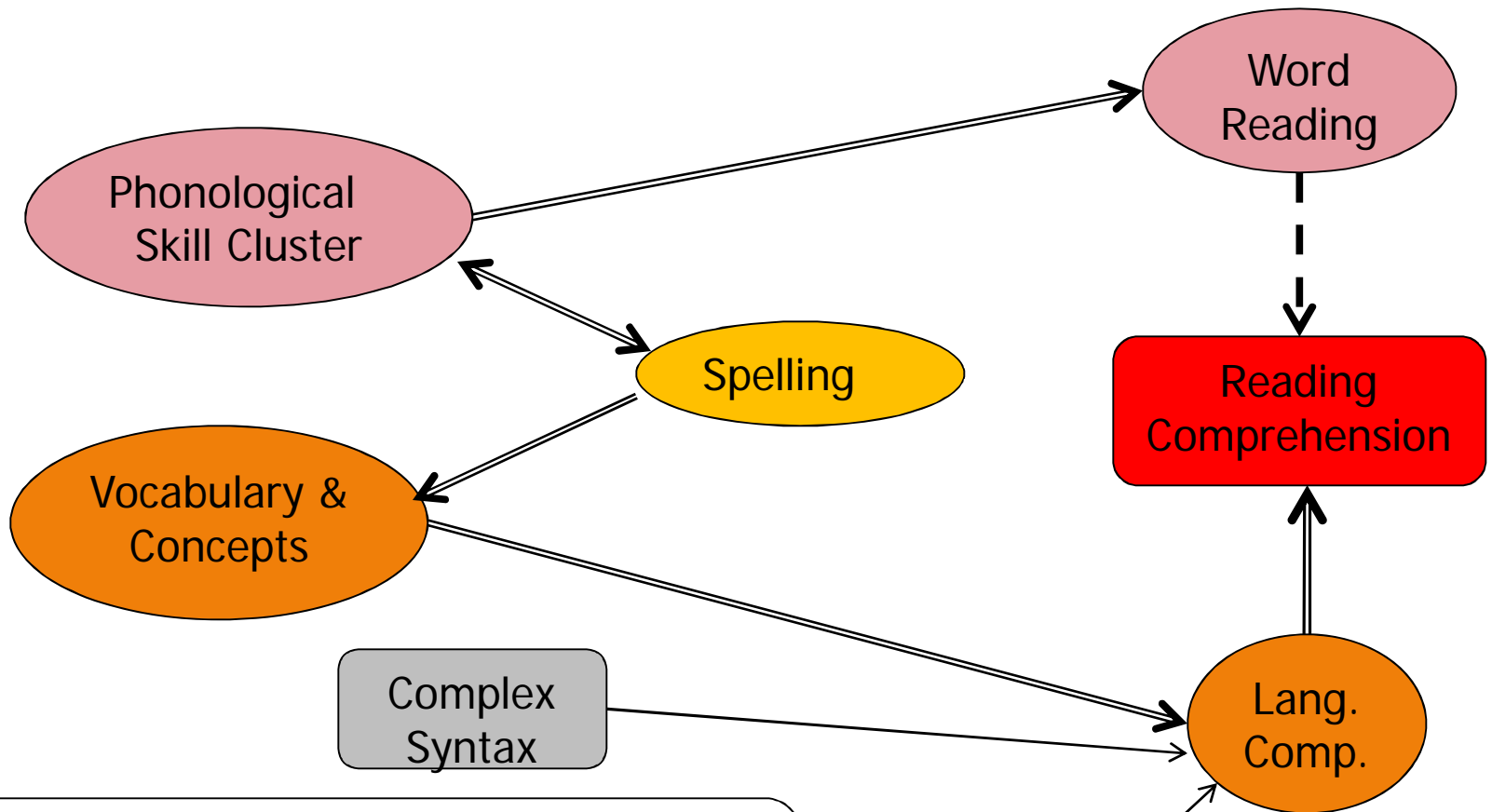
\* Significantly different ( $p < .05$ ) from 2007.

NOTE: Black includes African American, and Hispanic includes Latino. Race categories exclude Hispanic origin. Score gaps are calculated based on differences between unrounded average scores.



# Convergent Reading Skills Model

(Simplified) (Vellutino et al., 2007)



Significant only for grades 2 & 3: - - - ->

Significant for grades 2 & 3 and 6 & 7: ==>

# Early Vocabulary Growth Is Key

- The size of a child's vocabulary at ages 3, 4 and the end of preschool:
  - Is related to vocabulary and reading at the end of kindergarten and grades 3 and 4. (Walker & Greenwood, 1994; NICHD, 2005, Storch & Whitehurst, 2002)
- Vocabulary at the end of kindergarten and grade 1 is related to:
  - Comprehension in grades 7 – 8 (Dickinson & Tabors, 2001)
  - Comprehension in 11<sup>th</sup> grade (Cunningham & Stanovich, 1997)

# Academic Language

(Ravid & Tolchinsky, 2001; Corson, 1997)

- **Discourse:**
  - ▣ Knowledge of academic genres
  - ▣ Ability to shift genres flexibly. From experiences with multiple genres in varied contexts
  - ▣ Decontextualized: events, entities not present
- **Linguistic abilities**
  - ▣ Specialized vocabulary (in English: Graceo-Latin)
  - ▣ Embedded, complex syntax
- **Metalinguistic competence**
  - ▣ Talk about words and their meanings
  - ▣ Talk about texts and their meanings

# Oral Access to Literate Genres:

“... oral participation in a culture of literacy seems at least as important for vocabulary acquisition as some of the work on which schools concentrate in the formal teaching of reading or in direct vocabulary instruction.”

(p. 683, David Corson)

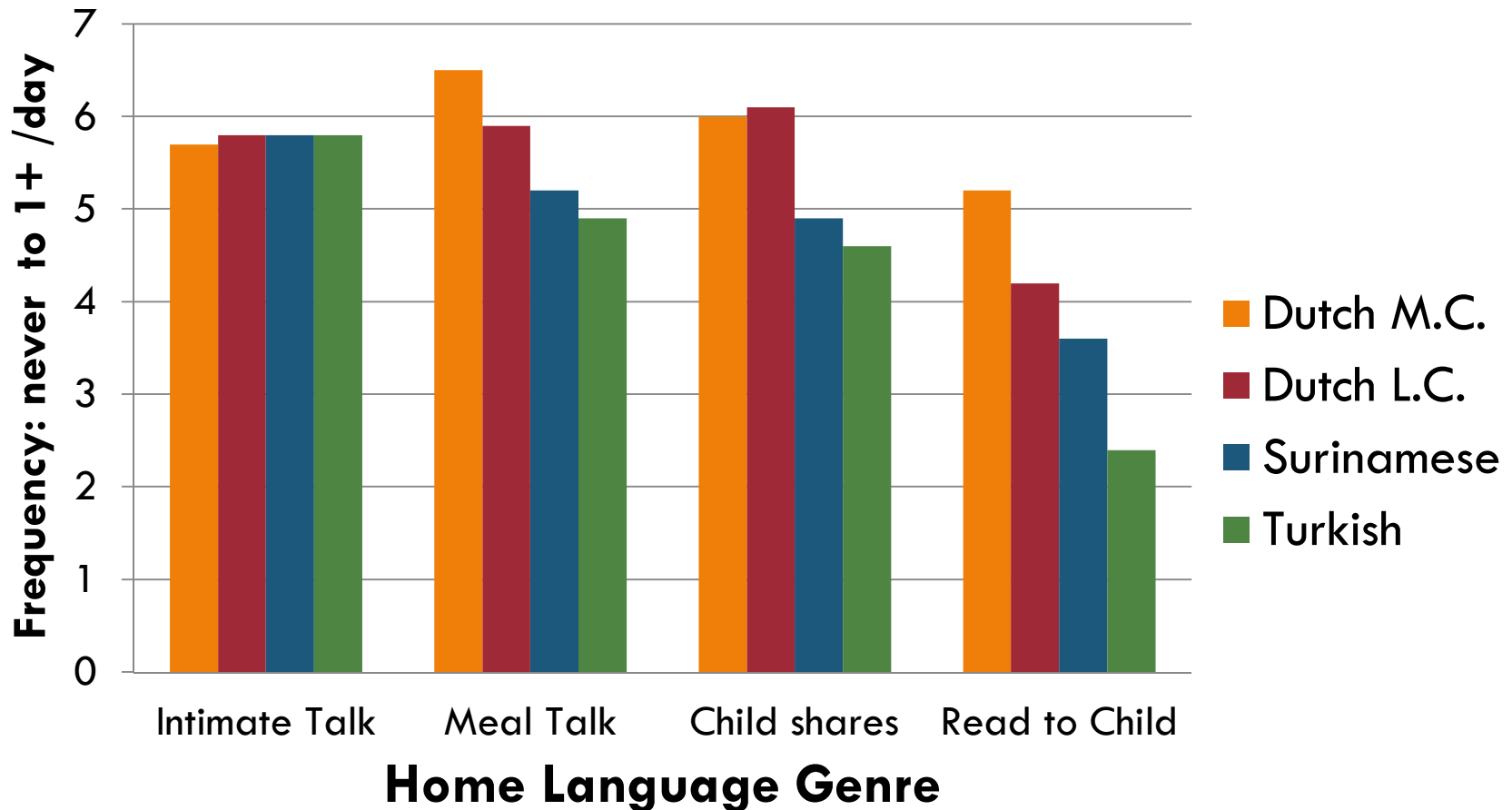
- One must be positioned to participate in the culture of literacy.
- This can occur through oral experiences.

# Paul Leseman & Cathy van Tuijl

(2006 – Handbook of Early Literacy Research)

- Studies of Dutch, Surinamese and Turkish children in Holland.
  - 3-4 and 4 – 7 years old
  - Interviewed and observed in homes: book reading and joint problem solving
  - Assessments of reading, language
- Reported frequencies of home language experiences involving young children varied by group.

# Oral Language Genres of 3-year-olds (Leseman & van Tuijl, 2006)



# Differences in the Content of Talk

- Book reading with 3 year olds
  - ▣ Frequency of challenging questions :
    - Explanation of word meanings
    - Evaluation of story events
    - Extension of stories beyond text
  - ▣ Turkish: pause to complete text rather than talk about it
- Problem solving (all groups)
  - ▣ Start session by stating overall purpose and approach (talk about the task)

# Age 9 Reading Comprehension

- Predicted by:
  - ▣ Age 7 printed language knowledge (technical skill)
  - ▣ Vocabulary and language comprehension
  
- Most important home factors:
  - ▣ Frequency of book reading at home
  - ▣ Instructional quality of home book reading
  - ▣ Instructional quality of problem solving



# Variables Predicting Language Use

- Parents' job: symbolic requirements
- Parents' literacy level
- Parenting beliefs:
  - ▣ Individualistic: foster independence, discovery (+)
  - ▣ Authoritarian: obedience, respect for authority (-)
- National origin, education and income were not important after these variables were considered.

# Preschool Classrooms

- Preschool is used to equalize opportunities
- Varied beliefs about features of early childhood classrooms that are most important.
- Catherine Snow and I hypothesized:
  1. Specialized language experiences in the preschool years foster vocabulary and decontextualized (academic) language growth.
  2. There is variation within low-income families.
  3. Preschool language experience predicts later reading comprehension.

# Home-School Study of Language & Literacy Development

- All low SES children
- Recorded in homes and classrooms at age four
- Analyzed transcripts of teachers' language from across the day.
- Tested beginning at the end of kindergarten
- Controlled for home language exposure at age 3 and demographic factors.
- Dickinson & Porche, *Child Development*, 2011.

# Preschool Language, Grade 4 Comprehension and Cultural Factors

- Use of lower frequency vocabulary in 1-1 conversations. This requires:
  1. Broad vocabulary & associated knowledge
  2. Inclination to engage children in such conversations
- Analytic talk about books. This requires:
  1. Comfort reading books
  2. Skill talking about words and texts
- Teachers talk less and listen. This requires:
  1. Seeing children as conversational partners.
  2. Conversational style that involves listening.

# Academic Language in Preschool

# Intervention in a Low-Income Preschool

- Children:
  - ▣ English spoken in the home; low language
- Teachers: Experienced, Limited education
- Curriculum: language and literacy focus
  - Sophisticated books, analytic conversations
  - Science content and vocabulary
  - ▣ Teaching routines with content focus:
    - Small groups
    - Large groups
- Training and coaching provided

# Small Group: Lemonade Activity

- Activity: make and drink lemonade
- Instructional purposes:
  - ▣ Observe, explore, and describe plants and other materials.
- Recommended vocabulary:

fruit	lemon	lemonade	seeds
rinds	sour	sweet	(bitter)
blend	measure	mix	
stir	sweeten	taste	

# Teacher 1: Metalinguage Use

TCH: What are these?

CHI: Orange.

CHI: No peaches.

TCH: Think about what - what did I say we're going to make? [mental state; talk about text (spoken); syntax - embedded clause; accountability]

CHI: **Lemonade.**

TCH: We're going to make **lemonade**. [attend to text]

TCH: So in order to make **lemonade**, you have to have [verbalized future action; complex syntax]

CHI: **Lemonade.**

TCH: **Lemons**. [brief interruption] [accountability]

TCH: And **lemons** are a **fruit**. [formal definition]



# Teacher 1

TCH: This right here is called the **rind**. [vocabulary, conceptual grounding]

CHI: **Rind**.

CHI: We don't need to **taste** the **rind**.

TCH: No you don't need the **rind**. [meaning in use]

TCH: You see that, Isaiah?

TCH: The **rind**?

CHI: You can't eat the **rind**.

TCH: No you don't eat the **rind**.

TCH: It's very very **bitter**. [conceptual deepening]

CHI: it's very very **bitter**.

CHI: You gonna be sick if you eat it.

# Teacher 2: Procedural

- TCH: You smell it? [context-defined term]
- \*CHI: Yeah.
- \*CHI: Ooh you smell.
- \*CHI: Smells like orange. [no correction]
- \*TCH: It smells sour. [odd conceptual support]
- \*CHI: It smells like orange.
- \*CHI: It smells like ... it smell like orange?
- \*CHI: It smell like orange. [interruption]
- \*CHI: It smell like orange. [no correction]

# Procedural Teacher

TCH: You see the **seeds** that are in the lemon? [correct use]

CHI: Yeah.

TCH: See the little **seeds**? [use]

CHI: Yep.

TCH: I want you to take your spoon and pick the **seeds** out before you **squeeze** the juice in your cup. [use; complex syntax]

TCH: Did you take your **seeds** out? [use]

TCH: Use your spoon and make sure you have all the **seeds** out of your cup. [use; complex syntax]

CHI: Yep.

TCH: Because I don't want anybody to **choke** on the **seeds**.  
[explanation of intention; complex syntax]

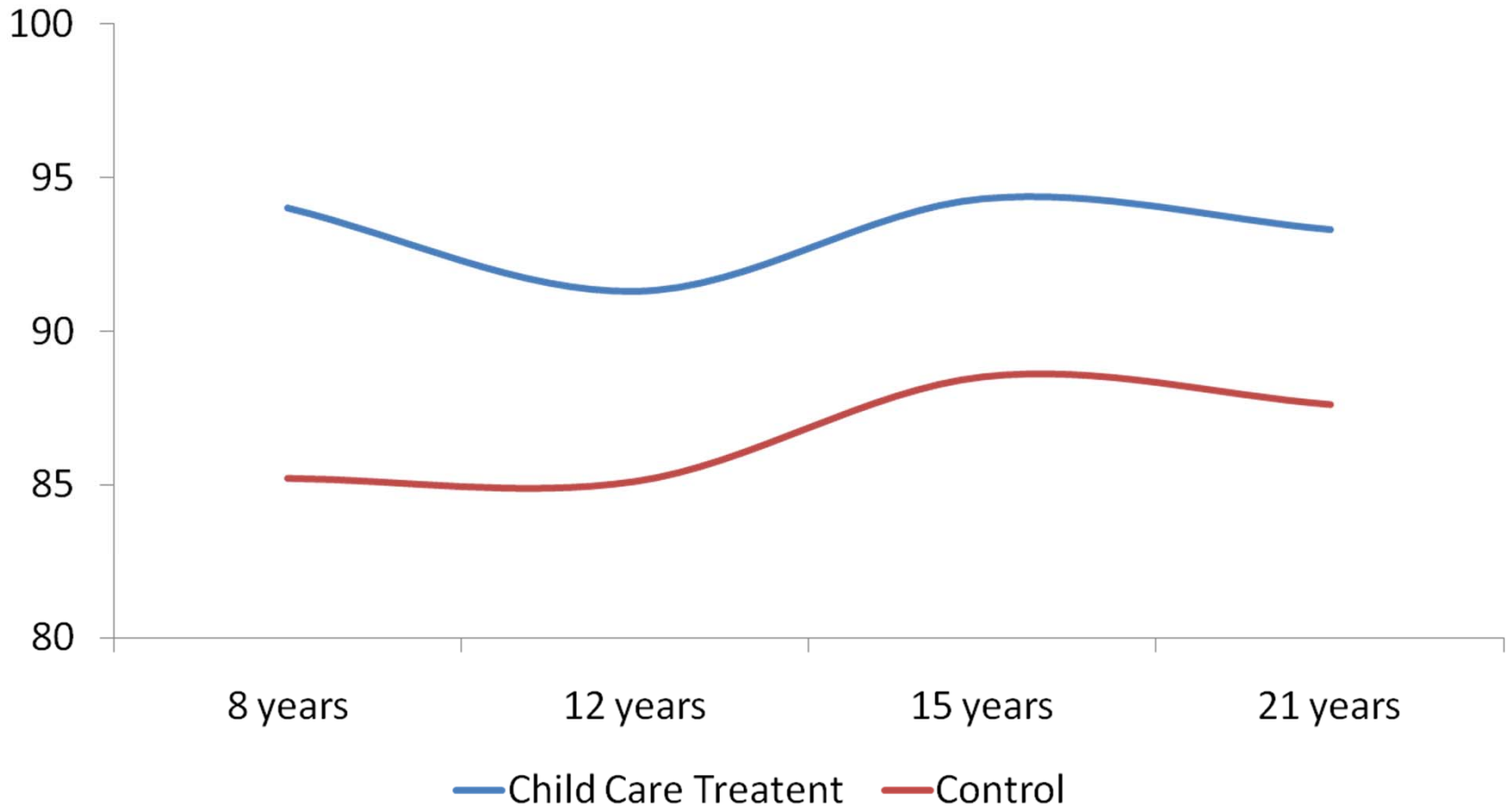
# In Sum

- Surface features are the same:
  - All children make and drink lemonade.
  - All are well behaved; hands on activity
  - Teachers: warm and responsive
  - Health-safety concerns
- Access to knowledge is dramatically different:
  - # of words defined : 3 vs. 0; used: 6 vs. 1
  - Attention to low-frequency terms (rind, bitter)
  - Accuracy and depth of word meanings
  - Metalanguage: Talk about word meanings, reference to spoken text

# The Intervention Challenge

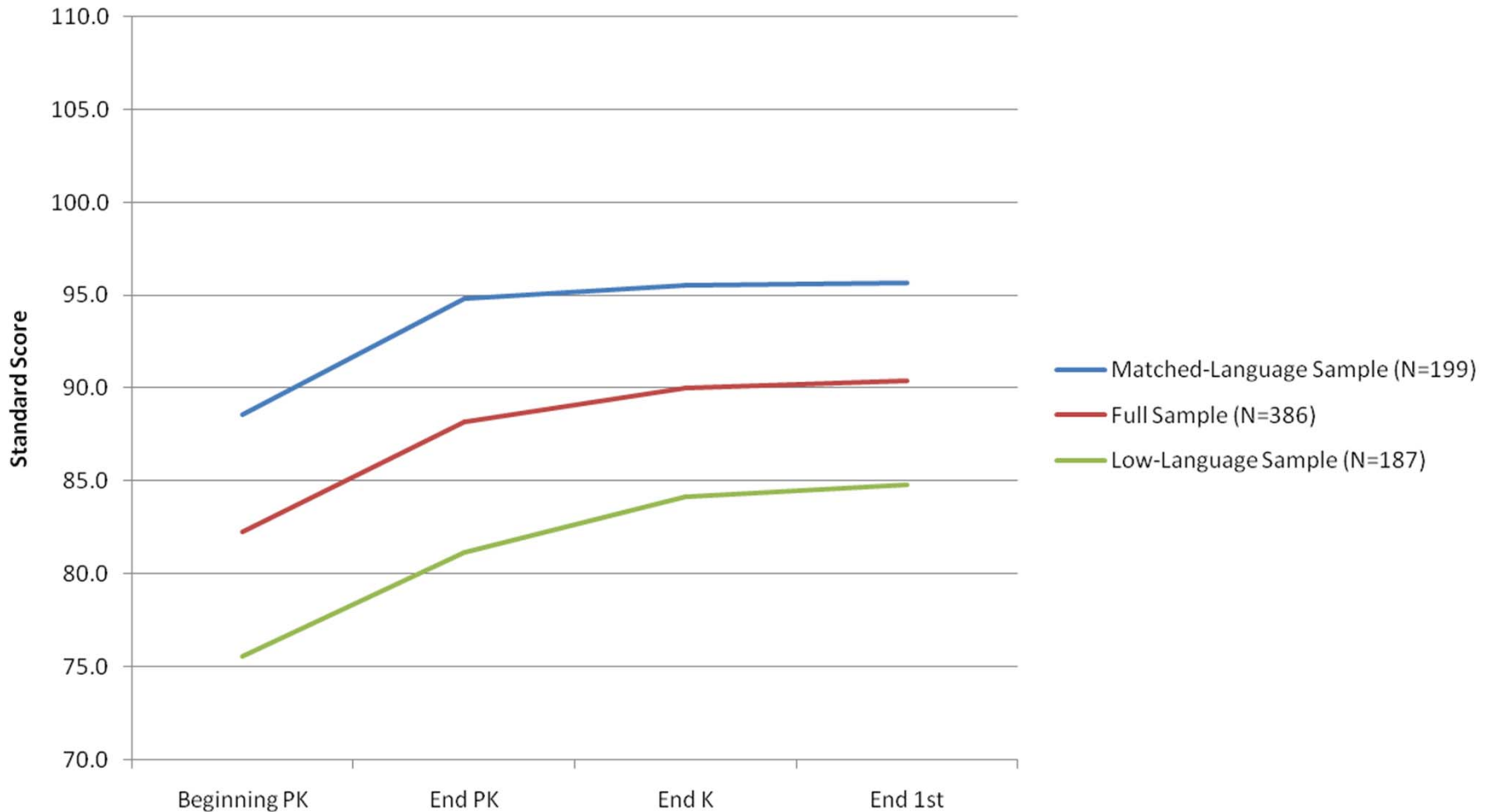
1. Some interventions are effective.
2. There may be a threshold of quality required.
3. High quality language is critical but hard to achieve.

# Abecedarian Project Supports Later Reading Success



# Vocabulary Growth in a High Quality Head Start and in Primary Grades

## PPVT Unadjusted Standard Scores Over Time



# High Quality Language Use Can Be Very Hard to Achieve ...

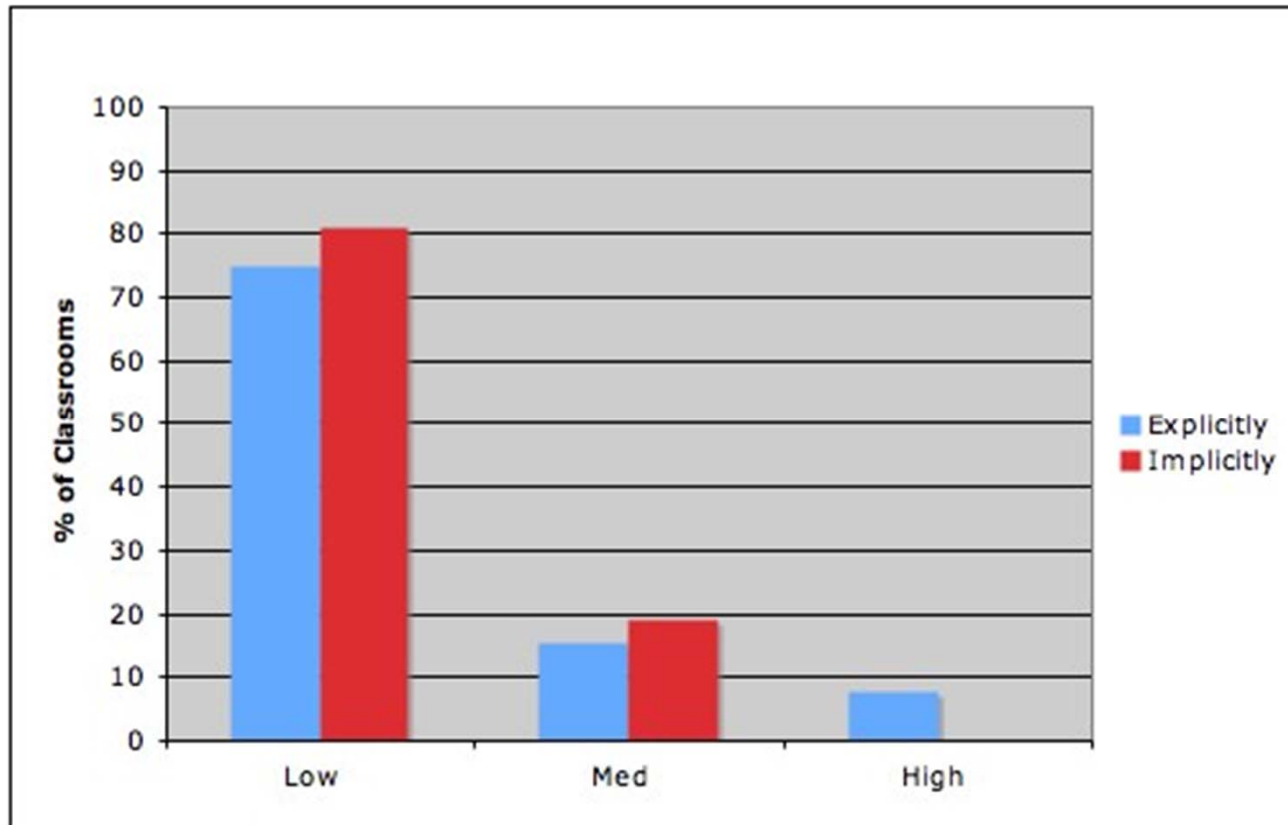
- When the teachers have personal language histories that match those of the children.
- Features of language use associated with later literacy are linked to culturally conditioned ways of using language:
  - How much and when one talks
  - Views of child development and child rearing
    - Behaviors valued
    - View of children as conversational partners
  - Talk about language and texts



# Variability in Talk About Vocabulary Across the Day (n = 44 classrooms)

	<b>Minimum # utterances</b>	<b>Maximum # utterances</b>	<b>Mean # utterances</b>
Across the entire day	6	268	67.27
Book Reading	0	104	26.3
Small Group	0	91	16.13
Centers	0	71	9.38
Group Content	0	66	14.7

# Few Intervention Teachers Consistently Defined Words During Book Reading



“Low” = defining 0-2 words

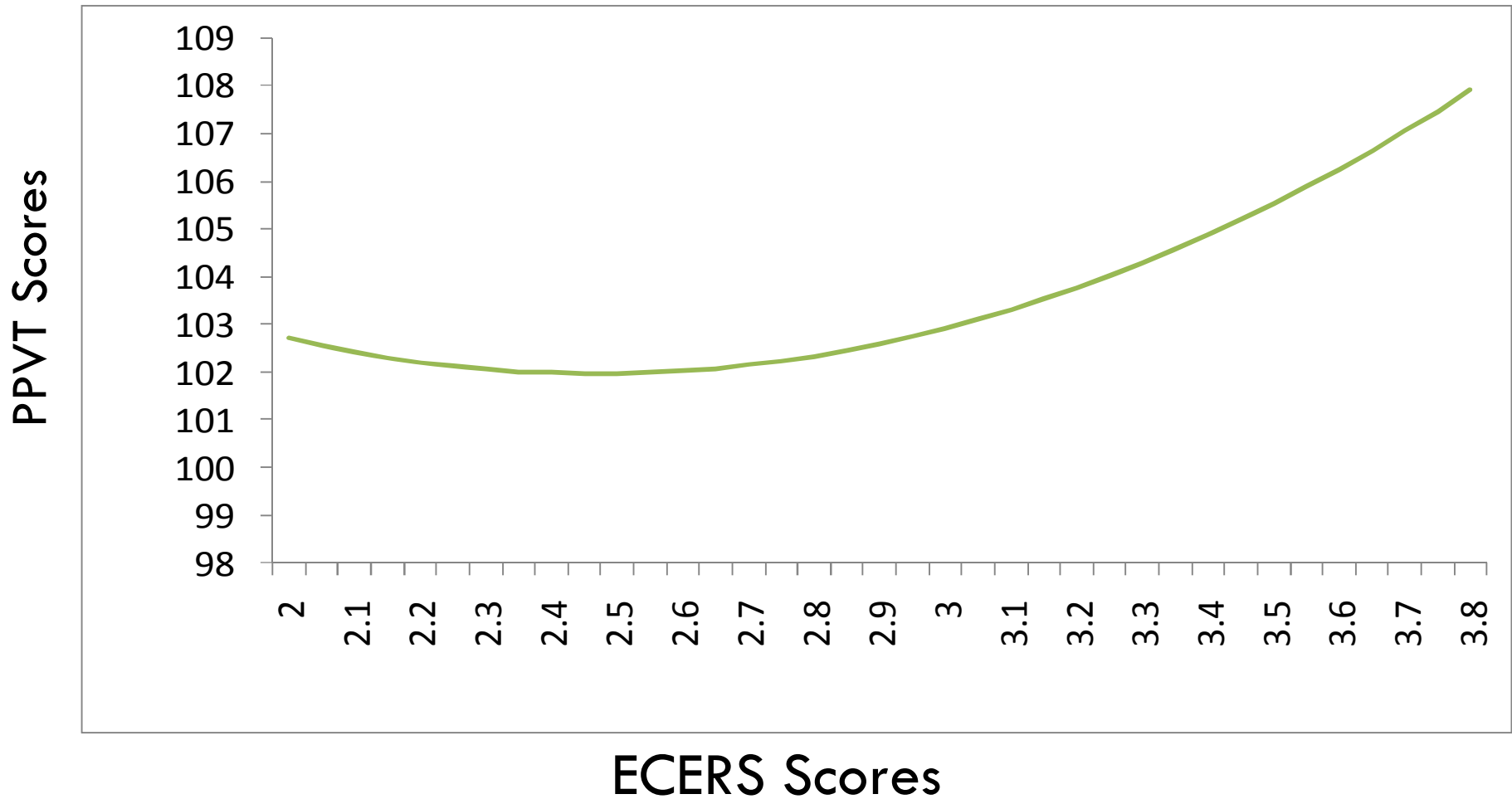
“Medium” defining 3-6 words

“High” defining 7+ words



# Future Directions

# Aim to Reach Thresholds of Quality Needed (Burchinal, '10)



# Take Language Seriously

- Place the highest priority on ensuring high quality language support.
- Hire teachers with strong language or
  - ▣ Provide sensitive yet intensive coaching support
    - Discuss belief systems
    - Model, videotape and analyze in detail
- Provide curriculum or materials that create occasions for using rich language.

# Target Specific Settings

- Comprehensive change is hard to achieve
- Book reading
  - ▣ Provide vocabulary, make have thematic link
  - ▣ Natural context for talk about text
- Dramatic play linked to books
  - ▣ Comfortable context for extended discourse
  - ▣ Teachers can be responsive, children can initiate
  - ▣ Children can extend play and related language

# Dealing with the Paradox

- Use the language-cognition linkage:
  - ▣ Language provides us a means to improve literacy success among populations at risk of reading problems.
- Recognize the cultural grounding of language:
  - ▣ Take seriously the difficulty of changing features of language use that are most important for children's later literacy.