



# Vocabulary Support Throughout the Day in Preschool Classrooms: Does Curriculum Matter?

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# Longitudinal Data: Long-term Effects of Preschool Language Experiences

- Home-School Study of Language and Literacy Development (Snow, Dickinson, Tabors)
- Classroom observations at age 4; Homes: 3 & 4
- Testing: end of kindergarten, grade 4
- Analytic sample: 57
- Teachers audiotaped throughout the day
- Coded for content by setting
- CHILDES: ratio of teacher relative to child talk; % sophisticated vocabulary use by teachers

# Predicting Grade 4 Abilities

(Dickinson & Porche, *Child Development*, in press)

- **Reading comprehension**
  - Sophisticated **vocabulary** in free play (indirect through K literacy )
  - Kindergarten vocabulary
- **Receptive vocabulary**
  - Analytic utterances in book reading (indirect through K. **vocabulary**)
- **Word recognition**
  - Sophisticated vocabulary in free play (indirect through K vocabulary)

# Promising Conversation Variables

- Individualized conversations
  - Relative amount of teacher talk (less is better)
  - % sophisticated vocabulary (is it the talk or is it a marker of effective teachers?)
- Book reading:
  - Analytic talk about stories and words
- Other research
  - Explicit attention to the meanings of words
  - Frequency of exposure

Thus ...

It appears that some aspects of language environments in preschool classrooms may have lasting effects on later reading. Improved vocabulary indirectly accounts for some of these effects.

**CAN WE FIND EVIDENCE OF INSTRUCTIONAL STRATEGIES THAT ACCOUNT FOR FALL-SPRING VOCABULARY GROWTH IN HEAD START CLASSROOMS?**

# Instruction Across the Day

## (with Hofer, Freiberg, Darrow)

- Sample
  - 52 classrooms: 13 centers in 6 clusters
    - Control (16); OWL (17); OWL + EMT (19)
  - 438 children with pre- and post- test scores
- Assessment: PPVT-IV (fall, spring)
- Hierarchical Linear Models included covariates:
  - Classroom quality (ELLCO); completed mid-year
  - Classroom instructional challenge factors
    - Average classroom score on the American Guidance System Profile (AGS) (screening tool)
    - Proportion of 3-year-olds in a classroom
- Child demographics: age at testing
- Teacher demographics: years of experience

# Vocabulary Instruction Observations

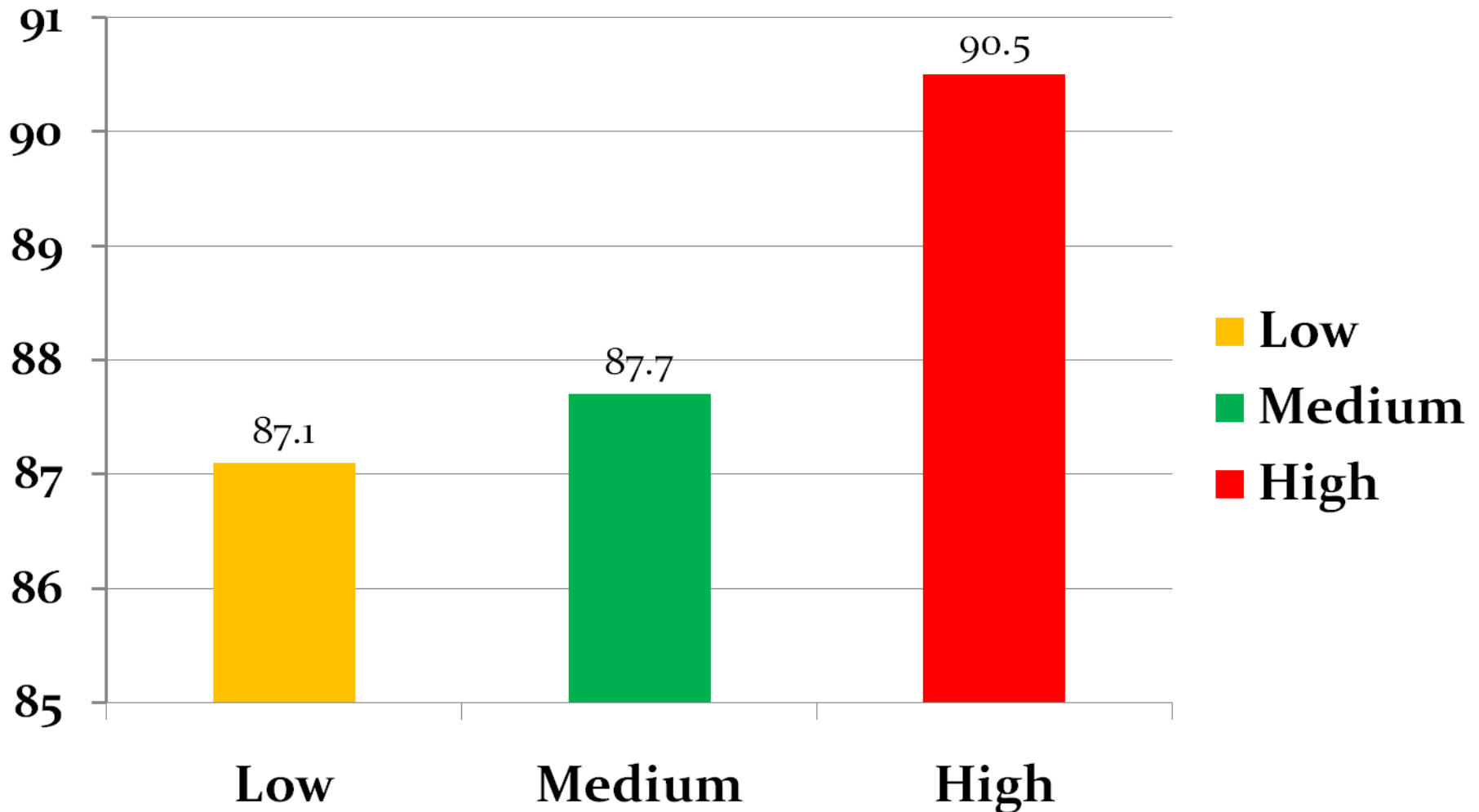
- Live observation: 0 – 3 scale
  - One observation in January – February
  - Explicit efforts to teach vocabulary
    - Meal time: 2 + efforts observed
    - Centers: 2+ efforts observed
    - Book reading: 3+ efforts
- Coding teaching from videotapes of small group instruction: 0 – 2 scale
  - Average of two observations: early/late in year
  - Uses precise vocabulary (0 – 3, 4 – 6, 7+ times)

1. Teacher holds book so that all children can see.	No	0
	Yes	1
2. Teacher reads in a manner designed to hold attention: varies volume, pace, may use facial expression or gesture.	No	0
	Yes	1
3. While reading the book, teacher helps with understanding of book - emotions, motivations, cause-effect links.	No	0
	Yes	1
<b>4. Teaches vocabulary directly: tells meanings or points to pictures 3+ times.</b>	No	0
	Yes	1
5. Teaches vocabulary implicitly with gestures, points to pictures, expressions 3+ times.	No	0
	Yes	1
6. Is responsive to children. Responds to comments and relevant questions in a positive, helpful manner 3+ times (include before, during, after reading).	No	0
	Yes	1
7. After reading, teacher asks 1-2 thought-provoking questions that lead to some conversation.	No	0
	Yes	1
8. Teacher focuses on quiet attentiveness; discourages participation or responses.	Yes	-1
	No	0
9. Pursues topics with limited relationship to the story.	Yes	-1
	No	0
10. Engages in excessive talk, risking children losing track of the storyline.	Yes	-1
	No	0
11. Teacher fails to maintain the attention of several children for ½ or more of the story	Yes	-1
	No	0



# Standardized Spring PPVT Score by Vocabulary Instruction Across the Day

( $p = .008$ )



Thus it appears that ....

Intentional, explicit attention to word meanings throughout the day is related to somewhat greater fall-spring vocabulary growth.

**CAN A CURRICULUM  
INTERVENTION AFFECT TEACHER  
LANGUAGE USE ACROSS THE DAY?**

# Preschool Classroom Language Environments

(with Barnes, Darrow, Freiberg)

- To what extent can a curriculum accompanied by modest coaching encourage the type of language that has been associated with better vocabulary learning?

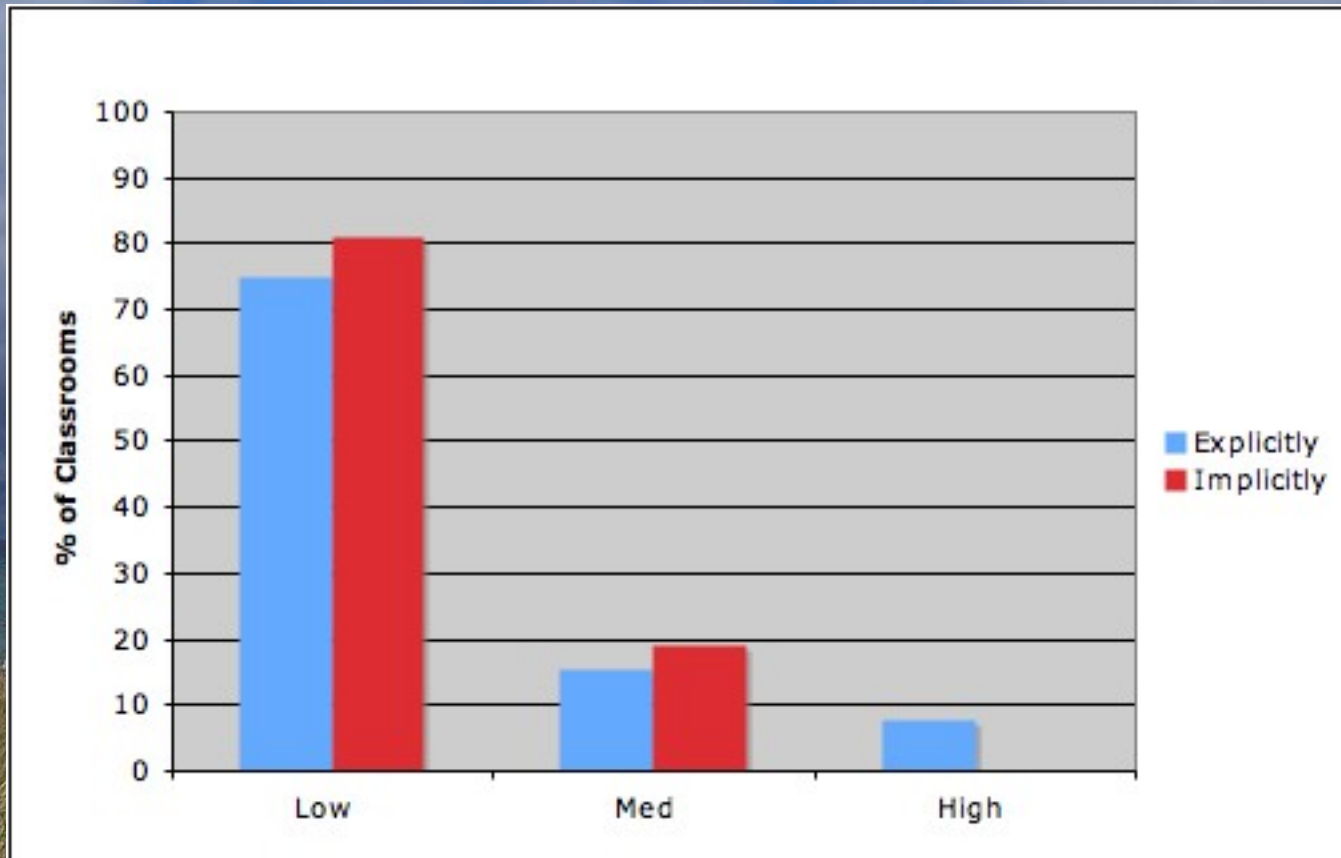
# Methods

- Fidelity of implementation coded from videotapes, two per year:
  - Small groups; Book Reading; Letters & PA; Content Teaching – full group
- Transcribing teacher videotapes, selected settings
  - Centers, lunch time, small groups, book reading, group content teaching
  - In-process coding:
    - Teachers' use of complex syntax
    - Topic maintenance and development, conversational moves, semantic content
- Analyzing transcripts using CHAT programs
  - Lexical diversity (*D*)
  - Percentage teacher talk
  - Words per minute

# Does the Fidelity of Implementation Predict Vocabulary Use?

- View videotapes and code videotapes by setting.
- We coded for multiple behaviors
- Vocabulary codes include
  - Explicit instruction
  - Implicit teaching (e.g., pointing, gestures)
  - Use of precise and therefore less common words

# Frequency of Intentional Vocabulary Teaching During Book Reading in Intervention Classrooms

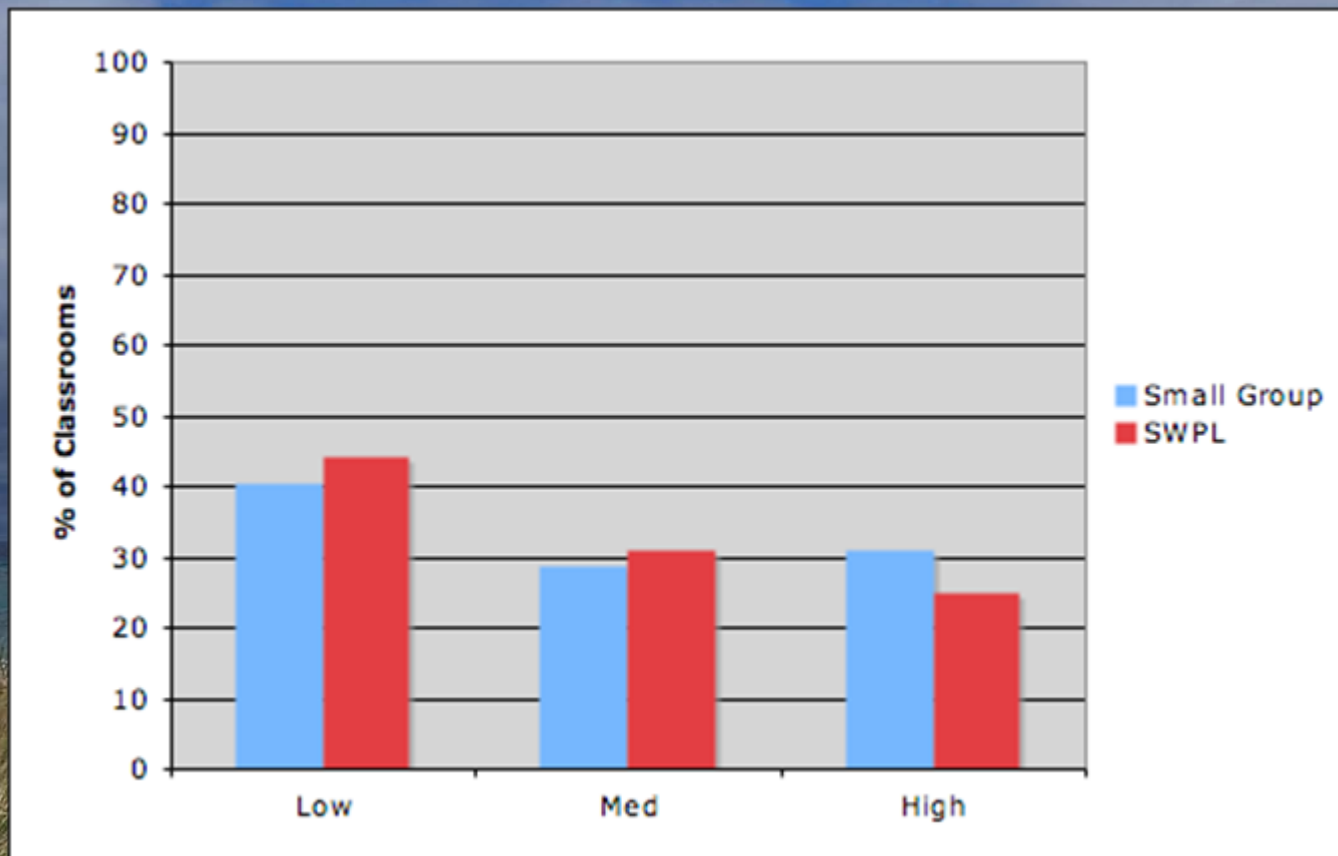


“Low” = defining 0-2 words

“Medium” defining 3-6 words

“High” defining 7+ words

# Frequency of Intentional Vocabulary Teaching During Small Group and Letter and PA Instructional Times in Intervention Classrooms

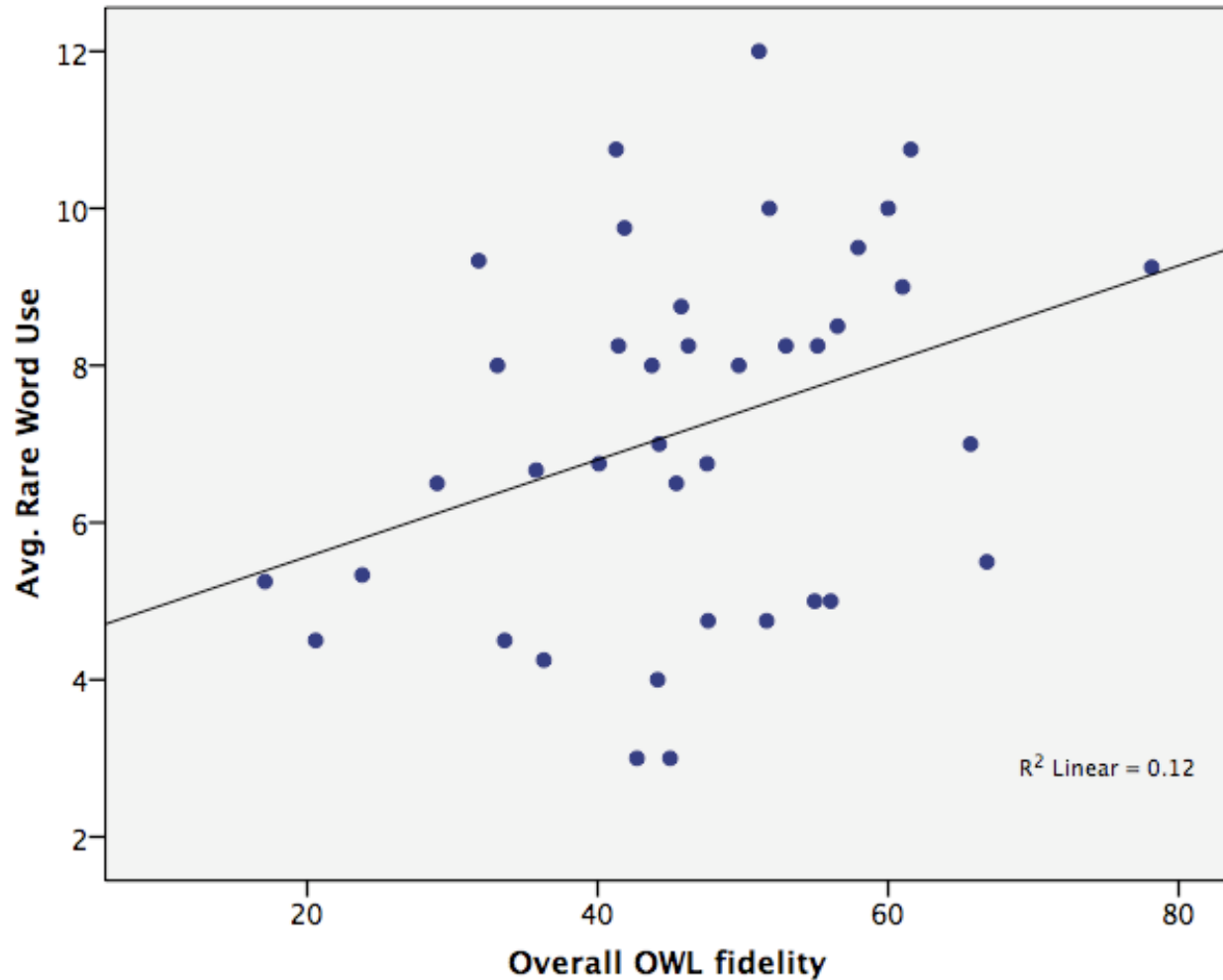


“Low” = defining 0-3 words

“Medium” defining 4-6 words

“High” defining 7+ words

# Fidelity of Implementation Relates Modestly to Average Sophisticated Word Usage ( $r = .35$ , $p = .03$ )





# Fine-Grained Analyses

- Transcribing selected settings (free play, lunch, small group, book reading, group instruction)
- Coding for complex syntax, topic development, semantic content
- Analyses using CHAT programs
  - Sophisticated words
  - Lexical density
  - % teacher talk during book reading only
  - Words per minute

# Hypothesized Curriculum Effects on Language Usage Across the Day

- Feature of language use:
  - Sophisticated words
  - Lexical density
  - % teacher talk during book reading only
  - **Not:** % teacher talk or words per minute
- Setting:
  - Book reading
  - Small groups
  - Centers
  - **Not** lunch time

# Language Use by Curriculum

Setting	% T. Talk	WPM	Diversity -D	Soph. Voc.
Book Reading			<b>Teacher Text</b>	<b>Teacher Text</b>
OWL	<b>91.7</b>	<b>102.0</b>	<b>75.5</b> <b>73.89</b>	<b>9.61</b> <b>22.26</b>
Control	<b>86</b>	<b>91.4</b>	<b>72.6</b> <b>26.90</b>	<b>6.30</b> <b>8.06</b>
Lunch				
OWL	66	61.03	75.0	6.82
Control	68	61.48	81.15	7.27
Small Group				
OWL	84	86.68	63.80	<b>5.57</b>
Control	83	83.02	64.36	<b>4.15</b>
Centers				
OWL	80	85.6	<b>66.36</b>	<b>8.56</b>
Control	79	86.8	<b>69.40</b>	<b>7.06</b>

# Does Curriculum Relate to Consistently Richer Vocabulary Support?

	Bottom 25% tile on D and soph. vocab.	Top 25% on D and soph.
Range D soph. vocab.	50.13 – 63.27 3 – 5	76.41 – 89.62 9.25 - 12
OWL (n = 17)	1 (6%)	4 (24%)
OWL + EMT (n = 19)	2 (10%)	2 (10%)
Creative Curriculum (n = 16)	4 (25%)	1 (6%)

# Where Are We?

- This curriculum-based intervention appears to have an impact on language use:
  - Complexity of book language
  - Use of sophisticated vocabulary and density of varied words by teachers across contexts
- Teacher-related factors can override curriculum effects.
- Do these changes lead to improved learning? Is increasing lexical richness alone enough to improve learning?