

# Missing in Action: Vocabulary Instruction in Pre-K

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Strategies that introduce young children to new words and entice them to engage in meaningful contexts through semantically related activities are much needed.

Talk may be cheap, but it's priceless for developing young minds. Research confirms the importance of language interaction and its profound influences on vocabulary development and reading proficiency (Dickinson & Neuman, 2006). In *Meaningful Differences in the Everyday Experience of Young American Children*, Hart and Risley's (1995) landmark study of early language development, children who scored highest in reading and math at age 10 were reported to have heard 45 million words from birth to age 3, or about 30,000 words per day, compared with those children who scored lowest, at 13 million words. Trends in the amount of talk—the actual trajectory of vocabulary growth—and the styles of interaction were well established at 3 years old, only a harbinger of greater gaps to come.

It's not only the quantity but the quality of talk that plays such an important role in children's lives and future possibilities. Longitudinal studies (Sénéchal, Ouellette, & Rodney, 2006) have demonstrated the critical contribution of a rich foundation of vocabulary knowledge to reading comprehension and achievement. In a meta-analysis of 61 studies, for example, Scarborough (1998) found a significant mean correlation of 0.46 between the complexity of kindergarten vocabulary and student reading achievement two years later. Moreover, unlike constrained skills such as alphabetic knowledge, these relationships persist over time. Cunningham and Stanovich (1997) reported that vocabulary size in 1st grade strongly predicted reading comprehension in 11th grade—a full 10 years later.

The most plausible explanation for vocabulary's connection to better reading ability is that vocabulary is more than words. It is knowledge. To know a word's meaning is to know what a word represents and to begin to understand the network of concepts that goes with it (Stahl & Murray, 1994; Stahl & Nagy, 2006). Research studies (Vellutino, Fletcher, Snowling, & Scanlon, 2004) suggest that it is this rich interconnection of knowledge that drives children's comprehension. Further, knowledge of new words builds upon prior knowledge (Hirsch, 2003). It is cumulative and interactive. The more words you know, the easier it is to learn more words. Even before they enter formal schooling (Neuman, 2006), young children will need a fairly extensive knowledge network of words and concepts to successfully learn to read and comprehend.

Given its substantial role in reading development and the significant vocabulary gap prior to age 4, one would expect to find an emphasis on vocabulary early on, especially in the preschool and primary grades years. Paradoxically, this appears not to be the case. Neuman and Roskos (2005) in their examination of early learning pre-K standards, for example, found that states in the U.S. rarely included specific vocabulary guidelines. Likewise, Beck & McKeown (2007) in their extensive studies reported a paucity of rich, explicit instruction in vocabulary development in the primary grades. Summarizing the research on vocabulary teaching, the National Reading Panel report (National Institute of Child Health and Human Development [NICHD], 2000), as well, found little evidence of intentional vocabulary instruction in the early grades.

As the Early Reading First legislation and the recent reauthorization of Head Start make clear, however, curriculum can play an important role in promoting research-based practices. Given the recent attention to pre-K and its important role in promoting vocabulary and school readiness skills,

it seemed logical to examine whether curriculum could provide specific help for teaching vocabulary. Although teachers' manuals and instructional materials clearly do not represent enacted curriculum, a review of these materials could illuminate the prevalence of vocabulary instruction and the pedagogical practices used to support the learning of words and their meanings.

## Our Approach

Recognizing the importance of starting early, the purpose of our project was to examine if and how vocabulary was taught in commercially prepared early literacy curricula for pre-K. Because Early Reading First—a federally funded early childhood program for preschoolers—requires the use of a scientifically based curriculum, it seemed reasonable to select the most common instructional programs adopted by grant recipients. Twelve curriculum programs were identified from grant years 2005, 2006, and 2007. Together, these programs were likely to reach more than 41,000 children throughout this grant program alone. Two programs were eliminated from analysis: High Scope and Building Language for Literacy. The first appeared to be more of a general approach to preschool instruction rather than a targeted literacy program. The second was eliminated because of a conflict of interest.

Contacting representatives from the publishing companies associated with each of the curricula, we requested teachers' manuals and auxiliary materials (e.g., children's books; alphabet cards, etc.). All programs had copyright dates of 1995 or later. Therefore, each program had ample opportunity to include current research in language and vocabulary and its role in learning to read (NICHD, 2000; Snow, Burns, & Griffin, 1998) and to disseminate what was learned from these consensus documents to form specific suggestions for teaching vocabulary and word meaning in the early years.

Because our goal was to look broadly across curricula, we chose to disguise the names of the curricula, referring to each by a letter name. A full list of the curricula and their publishers are provided in Table 1. Letter names for the curricula used in this article do not correlate to the order shown in Table 1.

**Table 1**  
**Curriculum Programs**

Breakthrough to Literacy. (2004). New York: Wright Group/McGraw Hill.
D.L.M. Early Childhood Express; Ready, Set, Leap. (2004). New York: Wright Group/McGraw Hill.
Early Childhood Program. (2003). New York: Scholastic.
Houghton Mifflin Pre-K. (2006). Boston: Houghton Mifflin.
Open Court Pre-K Reading Program. (2003). New York: SRA/McGraw Hill.
Opening the World of Learning. (2005). New York: Pearson.
Pebble Soup. (2002). Austin, TX: Rigby.
Leap. (2003). Emeryville, CA: LeapFrog.
Rigby's Activate Early Learning. (2005). Austin, TX: Harcourt Achieve.
Trophies Storytown. (2007). New York: Harcourt.

## Conceptualizing Vocabulary and Vocabulary Instruction

Vocabulary refers to the words we must know to communicate effectively: words in speaking (expressive vocabulary) and words in listening (receptive vocabulary). Children use the words they hear to make sense of the words they will eventually see in print. Vocabulary instruction, therefore, must be more than merely identifying or labeling words. Rather, it should be about helping children to build word meaning and the ideas that these words represent. By understanding words and their connections to concepts and facts, children develop skills that will help in comprehending text.

Although much of the literature on vocabulary instruction focuses on the primary and the upper grade levels, consensus documents (Bowman, Donovan, & Burns, 2000; Snow, Burns, & Griffin, 1998) and reviews of best practices suggest that effective teaching should do the following:

- Be systematic and explicit, providing children with plenty of opportunities to use words in classroom transactions (Pressley, 2001; Wharton-McDonald, Pressley, & Hampston, 1998).
- Involve a good deal of practice that is active, guided, and extensive (Beck, McKeown, & Kucan, 2002; Hoffman, 1991).

- Incorporate periodic review (Brophy & Good, 1986; Rosenshine, 1986).
- Include observation and progress-monitoring assessments to inform further instruction (NICHD, 2000).

It seemed logical, therefore, to examine the pre-K early literacy curriculum for evidence of these principles in their daily lessons. Specifically, we were interested in whether these curricula provided specific help for teaching vocabulary knowledge to preschoolers, and if so, the pedagogical strategies that were most common throughout the curriculum.

## Method of Analysis

To conduct this analysis, two specific portions of each curriculum were examined. To begin, we first reviewed the curriculum's scope and sequence. These materials are generally designed to provide guidance to teachers on the essential understandings, knowledge, skills, and processes that will be contained throughout the curriculum and how they may be introduced to children in a logical, sequential, and meaningful manner.

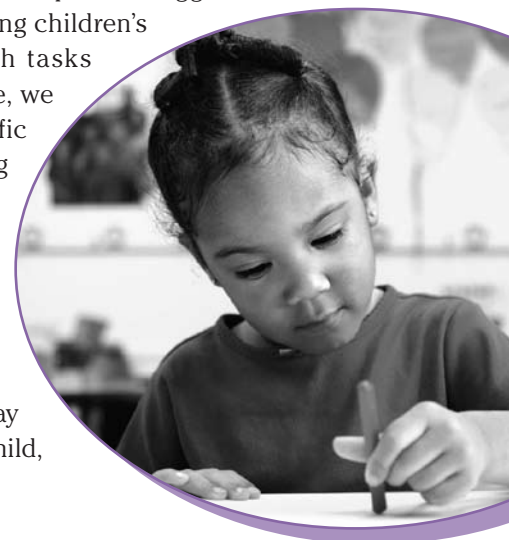
Next, we selected a five-day sequence of instruction for each curriculum. This unit of analysis was designed to review a typical instructional regime for children, one that could help us determine how teachers might build on the previous day's learning and monitor and practice new words to construct children's word knowledge. Avoiding the opening weeks of the curriculum when instruction might be less intensive and the final weeks when lessons might focus substantially on review, we randomly selected a five-day sequence from the middle of each curriculum. Taken together, we attempted to examine the instructional flow and how vocabulary was treated throughout the activities.

Based on the principles of effective vocabulary instruction, we developed a rubric to examine each five-day sequence. Specifically, we looked for the presence or absence of the following five instructional features:

- Introduces vocabulary words to be learned—Did the curriculum explicitly identify words to be introduced to children prior to the instructional sequence whether it be a story, poem, or song? For example, we looked for words that

might be highlighted, placed on a sidebar, or specifically defined sections, such as "Exploring Vocabulary."

- Provides strategies for teaching the identified vocabulary words—Were specific word learning strategies identified? Here, we looked for examples of the ways teachers could engage children in learning new words, such as suggesting that they show a picture along with each new word. Statements such as "talk to children about..." were not regarded as specific teaching techniques.
- Provides opportunities to use and practice vocabulary words in context—Recognizing the importance of a gradual release of responsibility, did the curriculum give children opportunities to use their new vocabulary independently? In this instance, we looked for examples or activities that might help children use words on their own, such as going on a "shape hunt" in a classroom after they were taught to identify certain shapes.
- Provides opportunities to review previously learned vocabulary words—Did the curriculum provide for review of words learned in previous weeks? Along with the scope and sequence, we looked throughout the teacher's materials, including prior lessons, to examine whether words were revisited or reviewed. For example, a lesson might recommend that teachers remind children about a topic such as transportation and "review the word transportation."
- Provides strategies for ongoing progress monitoring of vocabulary development—Did the curriculum provide specific suggestions for monitoring children's progress through tasks or activities? Here, we focused on specific informal, ongoing assessment strategies that might occur throughout the five-day sequence. A lesson might suggest that the teacher play a game where a child,



who would then be asked to name a target word previously taught to monitor comprehension and learning. Activities such as “observe children and take notes” were not regarded as well-defined progress-monitoring tasks.

In reviewing the materials, we first looked for evidence of the instructional feature “Identifies words to be learned.” These words might be found in a sidebar or under the specific goals of the lesson. If detected, we would record its presence. If the curriculum did not explicitly state vocabulary words to be taught, we recorded its absence. Next, using the identified words, we worked through the five-day sequence to look for evidence that these words were taught, practiced, reviewed, and informally assessed. If words were not identified, we still reviewed materials for whether they might provide instruction in some form during the lesson. We used the scope and sequence as well as end-of-unit sections to examine as thoroughly as possible opportunities for review and informal assessment. For each curriculum, therefore, the score might range from 0 to 5 on the rubric.

Two research assistants independently coded a sequence for the presence or absence of each feature (not the frequency or its quality) for a total of 50 ratings per assistant. Inter-rater reliability indicated 90%, suggesting a high level of agreement. Following this procedure, research assistants independently analyzed curriculum for evidence of each instructional feature and then corroborated their findings through discussions. In addition, both assistants took qualitative notes, looking for examples of strategies for incorporating vocabulary instruction throughout lessons.

## What We Found

### Scope and Sequence

Results of our analyses of the scope and sequence of vocabulary instruction in curriculum materials for pre-K are summarized in Table 2. Clearly, there was little consensus on the breadth (the number of objectives) or depth (the level of specification) of vocabulary teaching in these early years. Scope of vocabulary objectives ranged from 0 to 26, with a median of 4.5 objectives. In one case, there were no objectives devoted

at all to vocabulary. Half of the 10 curricula embedded vocabulary within the broader category of oral language development, while the others included objectives specific to vocabulary alone. Only one of the objectives in one program, Curriculum C, linked vocabulary with content learning. The objective states, “identifies the meaning of content-specific vocabulary.”

Many of the objectives lacked specificity. For example, “Shows a steady increase in listening and speaking vocabulary,” appearing in 5 of the 10 curricula or “participates in word-learning activities” would be difficult to measure in terms of recording children’s progress over time. More often than not, vague statements such as “learn new vocabulary words” or “use new vocabulary independently” were reflected throughout the curriculum programs.

There were some striking similarities and differences in the scope of these curricula. Perhaps reflecting a particular state’s early learning guidelines, Curriculum G and H, with different publishers, included identical objectives, with Curriculum H adding only one phrase of “borrowing and extending words to create meaning.” Problematic in both programs, objectives appeared to extend already existing vocabulary rather than “introduce,” “teach,” or “identify” new words.

On the other hand, vagueness was hardly the issue for Curriculum B, which contained 26 objectives in vocabulary alone. This curriculum stood apart from all others in its detailed focus on vocabulary, expecting preschoolers to learn high-frequency words, words with Greek and Latin roots, words associated with academic vocabulary, among many others. Based on an analysis of the scope only, students would be exposed to widely different opportunities for vocabulary growth in different curriculum programs.

Turning to a review of the sequence of skills in the scope and sequence of programs, our analysis revealed a striking finding: There was none. Rather, it appeared more like a laundry list of objectives than

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**Table 2**  
**Instructional Objectives in Pre-K Vocabulary Curriculum: Scope and Sequence**

Curriculum	A	B	C	D	
Vocabulary Objectives Scope and Sequence	<p>TOTAL: 4</p> <ul style="list-style-type: none"> <li>■ Uses new words as a part of speaking vocabulary in meaningful ways</li> <li>■ Says new words and dialogue from stories</li> <li>■ Shows a steady increase in the number of words in listening vocabulary</li> <li>■ Refines and expands understanding of known words in English or home language</li> </ul>	<p>TOTAL: 26</p> <ul style="list-style-type: none"> <li>■ Antonyms</li> <li>■ Comparatives/superlatives</li> <li>■ Compound words</li> <li>■ Connecting words (transition words)</li> <li>■ Context clues</li> <li>■ Contractions</li> <li>■ Figurative language</li> <li>■ Greek and Latin roots</li> <li>■ High-frequency words</li> <li>■ Homographs</li> <li>■ Homophones/homonyms</li> <li>■ Idioms</li> <li>■ Inflectional endings</li> <li>■ Irregular plurals</li> <li>■ Multiple meaning words</li> <li>■ Multisyllabic words</li> <li>■ Position words</li> <li>■ Prefixes</li> <li>■ Question words</li> <li>■ Root or base words</li> <li>■ Selection vocabulary</li> <li>■ Suffixes</li> <li>■ Synonyms</li> <li>■ Time and order words (creating sequences)</li> <li>■ Utility words (colors, classroom objects, etc.)</li> <li>■ Word families</li> </ul>	<p>TOTAL: 10</p> <ul style="list-style-type: none"> <li>■ Uses newly learned vocabulary on multiple occasions and in new contexts</li> <li>■ Identifies a wide variety of objects through receptive language</li> <li>■ Names and describes actual or pictured objects</li> <li>■ Shows a steady increase in listening and speaking vocabulary</li> <li>■ Identifies the meaning of content-specific vocabulary</li> <li>■ Uses position words</li> <li>■ Uses sensory words</li> <li>■ Uses temporal words (before, after, first, next, last)</li> <li>■ Begins to understand simple multiple meaning words, homonyms, synonyms, antonyms</li> <li>■ Begins to understand naming words, action words, describing words</li> </ul>	<p>TOTAL: 2</p> <ul style="list-style-type: none"> <li>■ Uses new vocabulary in everyday communication</li> <li>■ Refines and extends understanding of known words</li> </ul>	
	E	F	G + H (Same)	I	J
Vocabulary Objectives Scope and Sequence	<p>TOTAL: 6</p> <ul style="list-style-type: none"> <li>■ Learns new vocabulary words</li> <li>■ Increases listening and speaking vocabulary</li> <li>■ Gains word meaning from oral discussion and explanation</li> <li>■ Uses new vocabulary independently</li> <li>■ Participates in word-learning activities</li> <li>■ Answers vocabulary-related questions about texts read aloud</li> </ul>	<p>TOTAL: 0</p>	<p>TOTAL: 5</p> <ul style="list-style-type: none"> <li>■ Shows a steady increase in listening and speaking vocabulary</li> <li>■ Uses new vocabulary in everyday communication</li> <li>■ Refines and extends understanding of known words</li> <li>■ Attempts to communicate more than current vocabulary will allow</li> <li>■ Links new learning experiences and vocabulary to what is already known about a topic (borrowing and extending to create meaning—Curriculum H only)</li> </ul>	<p>TOTAL: 1</p> <ul style="list-style-type: none"> <li>■ Uses descriptive and naming words</li> </ul>	<p>TOTAL: 4</p> <ul style="list-style-type: none"> <li>■ Uses new vocabulary words in everyday conversation</li> <li>■ Uses sequence words (first, next, last)</li> <li>■ Refines and extends understanding of known words</li> <li>■ Uses words to describe location</li> </ul>

a sequence of skills. For example, a consensus of research studies suggests that an effective instructional flow moves from teacher to student, beginning with teacher modeling to guided practice, culminating with independent student performance. However, this was clearly not the case in these programs. In Curriculum C, for example, objectives move from “uses newly learned vocabulary on multiple occasions” to “identifies a wide variety of objects” to “names and describes actual or pictured objects” to “shows a steady increase in listening and speaking vocabulary.”

Looking at the scope and sequence across curriculum programs, therefore, one finds a rather confusing pedagogical landscape: Curriculum programs lacked focus, measurable objectives, instructional flow, and sequence of skills for teaching vocabulary instruction in pre-K.

### Instructional Features

Analyzing the instructional features of curriculum programs (see Table 3), we found a similar puzzling portrait. Notably, only Curriculum J contained all five features of an instructional regime. Although Curriculum B, and even E to a great extent, showed indications of an instructional flow, all other programs

fell short, providing teachers with little guidance and support for teaching vocabulary.

Turning to each instructional feature, we found that all programs “introduced words.” In 7 of the 10 curricula, target words were listed in a sidebar clearly delineating the vocabulary of the week; in two programs, words were listed within the portion of the lesson. But this is where the similarities among programs ended. Some programs identified 1 or 2 words for the day, while others focused on 6–12 words a week. In one curriculum, for example, the vocabulary word *cooperating* appeared to be related to the key concept of the theme, “working together.” However, in another curriculum, the manual identified all words related to a particular book, including 10 different animal names such as *panda*, *porcupine*, and *octopus*.

Further, there appeared to be no criteria for word selection. For example, in one curriculum, vocabulary for the week included the words *move* and *ride* (e.g., which, according to the MacArthur-Bates Communicative Development Inventories (Fenson et al., 2007) are words typically learned by children at age 30 months). Other curricula seemed to use thematically based words, without much attention to difficulty or concept level. The word list in one set of

**Table 3**  
Vocabulary Instructional Features in 10 Preschool Literacy Curricula

Instructional feature	A	B	C	D	E	F	G	H	I	J
1. Introducing vocabulary words to be learned	+	+	+	+	+	+	+	+	+	+
2. Provides strategies for teaching the identified vocabulary words	-	+	-	-	+	-	-	-	-	+
3. Provides opportunities to use and practice vocabulary words in context	-	+	-	-	+	+	-	-	-	+
4. Provides opportunities to review previously learned vocabulary words	-	+	-	-	-	-	-	-	-	+
5. Provides strategies for ongoing progress monitoring of vocabulary development	-	-	+	+	-	-	-	-	-	+

Note. + = presence; - = absence



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lessons, for instance, included *mice*, *small*, *house*, *fast*, *grandma*, *celebration*, and *piñata*—most likely selected from the particular literature in the program or judged by someone as likely to be unfamiliar. Yet neither Biemiller's (2006) criteria, which advocates that teachers focus on words that are partially learned, nor Beck & McKeown's (2007) selection guidelines based on Tier II words

(words with high frequency for mature language users found across a variety of domains) appeared to be used. More often than not, we could find neither rhyme nor reason for the selection of words in each unit.

Truly striking, however, was how little guidance teachers were given for teaching new words, the second instructional feature. Only three programs provided any teaching suggestions at all, and these were often of questionable value.

Say the word *move*, and ask children to say it with you. Explain that the word means "to go from place to place." To demonstrate, ask a volunteer to come to the board. Then have the volunteer move to a table. Explain that this is an example of going from place to place.

Examples of teaching vocabulary consisted of mostly repeating words in unison. Of the programs examined, only Curriculum B, E, and J included specific suggestions, encouraging teachers to use a combination of strategies that includes definitions, demonstrations, and choral response.

Curriculum J, in particular, included an intentional approach to vocabulary instruction. In a unit focusing on "Spatial Relations," word selection included *top/bottom*, *front/back*, and *over/under*. Teachers were given the following instructions:

Use the Concept Board to emphasize the position words: *top* and *bottom*. Point to the Concept Board. Say "These are shelves. We put things on shelves." Point to each shelf as you say, "This is a shelf." Then point to the top shelf and place the crayon box magnetic piece on it. Say, "This is the top shelf. I put the crayons on the top shelf." Say the following chant as you point to the crayons, "Where, where, where, should it go?" Put it on the top shelf. (The teacher then is directed to play a CD with this chant on it several times, etc...).

Throughout the lesson, multiple examples are used to support word learning. This kind of teacher guidance was a far cry from other materials that might merely mention words. In a unit centered on "Stories and Fun for the Very Young," for example, teachers were encouraged to "discuss the terms *aunties* and *snazzy*."

Opportunities to use and practice vocabulary words, the third instructional feature, were evident in four of the programs. After teaching the word *cooperate*, Curriculum E—in an "extensions" section—recommended that children engage in a shared writing activity and suggested that the teacher write down "things they can do during the day to cooperate." Or in Curriculum F, teachers were encouraged to ask children open-ended questions to elicit target words, such as "Which baby animal from *Baby Bumblebee* is your favorite? Why?"

Curriculum B included specific suggestions for reviewing previously learned words, but only "if time allows." Recommendations such as "Remind children that they are learning about ways to go from place to place" and "review vocabulary words 'move' and 'ride'" was one of the few instances we could find where word meanings were revisited throughout the five-day sequence of any of the programs.

Three of the 10 curricula provided strategies for ongoing assessment. Curriculum C, for example, included a sidebar described as "Observing Children": If children have difficulty understanding the meaning of the vocabulary words such as *buttons*, *carves*, *measures*, or *prunes*, then demonstrate each action for them using real objects.

However, these words, now being assessed, had never been identified, taught, practiced, or reviewed at the beginning of the lesson. Similarly, Curriculum D, under a section called "Informal Assessment," contains the following recommendation:

There are some new words introduced in the book, such as *bale*, *herd*, and *groom*. Do children now have a basic understanding of what these words mean? Were children able to name and describe objects they saw on each page?

Curiously, none of the words above were originally emphasized in the teacher's manual. In fact, there was a total mismatch between the words identified to be taught in the five-day sequence (*tractor*, *pig*, *wheelbarrow*, and *cow*) and the words to be assessed. More than likely, it appeared that these sections were

designed to alert teachers to the importance of observing children's behavior rather than to focus on specific words to be learned. Unfortunately, no suggestions for how to use these observations to tailor instruction to children's needs appeared to follow.

Only Curriculum J provided ongoing progress monitoring of vocabulary development based on words identified at the beginning of the instructional sequence. For example, teachers were encouraged to "note how easily children utilize position words in retelling a story." Further, it provided some guidance for instruction, "If children have difficulty, then review each word as you point to the illustration that supports it." No other examples of progress-monitoring strategies were reported.

## Implications for Vocabulary Instruction

Findings from our analysis of 10 early literacy curricula used by Early Reading First recipients prompt three reactions. The first is the recognition that little exists right now that is helpful to teachers who want to do a better job of providing explicit instruction in vocabulary to young children. We found that only Curriculum B and Curriculum J seemed to systematically address instructional features in teaching vocabulary in an average week's lesson. The remaining seemed to only tip their hat, offering suggestions for identifying words in the instructional manuals but providing little teaching, guidance, or attention to ongoing assessment. These results point to the need for teachers to complement the core curriculum they use with supplemental vocabulary instruction.

The second reaction is puzzlement over the mismatch between the explicitly stated goals in the scope and sequence and the limited practical manifestation of these goals within the curriculum materials themselves. One assumption could be that casual exposure to words might be sufficient for children to make gains in vocabulary. This assumption might be the driving force among curriculum designers given that word selection appeared rather capricious. Contrary to a particular source of guidance, words seemed to be selected on the basis of the specific materials at hand. Another assumption could be that preschool teachers are already equipped with effective teaching strategies for helping children develop vocabulary, and thus, guidance is unnecessary. Because of

the lack of emphasis on the acquisition of vocabulary in school curriculum, however, there is little support for this assumption.

In addition to the absence of actual teaching strategies, we also found that few of the curricula included suggestions for practice, review, or progress monitoring. Rather, there was a general pattern of "acknowledging" the importance of vocabulary but sporadic attention to actually addressing this skill intentionally. There was little evidence of an instructional regime, a deliberate effort to build word knowledge. However, we know that without frequent practice, multiple exposures to words, and systematic opportunities to use words, children are not likely to acquire the vocabulary and the conceptual linkages to knowledge at the pace that will be needed to narrow the achievement gap.

The third reaction is that pedagogical principles for teaching vocabulary to young children are sorely needed. There appears little consensus

on developmentally effective strategies for teaching vocabulary. Some examples of instructional guidance bordered on the incredulous (e.g., teaching the word *prune* through actions). Other instructional recommendations often relied on definitions and choral responses, such as repeating words. Some focused on children's brainstorming words about a topic, assuming that low-income children would have sufficient background knowledge of the words *farming* and *airports* to do so. Only one program appeared to use developmentally appropriate activities, including picture cards and concrete manipulatives for discussing words and their meanings. Clearly, strategies that introduce children to new words and entice them to engage in meaningful contexts through semantically related activities are very much needed.

There are, of course, certain limitations to our analysis. First, our review examined only the scope and sequence and a randomly selected instructional week of activities. It could be that other units or other materials included more vocabulary-related instructional features. Second, it might be that our rubric

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and analytic scheme were unable to capture the ways in which vocabulary was introduced. Perhaps another strategy might have detected subtle aspects of vocabulary instruction. Finally, our analysis examined only the instructional materials and teacher's manuals in these pre-K curricula. Certainly, it would be inappropriate to make assumptions about the enacted curriculum or how teachers might use these materials with children in classroom settings. It could be that the professional development designed to train teachers in the use of these curricula focus on this much-needed skill of vocabulary development.

Nevertheless, providing an initial lens into the content of pre-K early literacy curricula, our findings offer a rather stark portrait of vocabulary instruction in the early years. It should provide both a cautionary note to those who might rely on these programs and a clarion call for those who might wish to develop instructional materials for enhancing children's vocabulary and narrow the persistent gap between low-income and middle-income children.

## References

- Beck, I.L., & McKeown, M.G. (2007). Increasing young low-income children's oral vocabulary repertoires through rich and focused instruction. *The Elementary School Journal*, 107(3), 251–271. doi:10.1086/511706
- Beck, I.L., McKeown, M.G., & Kucan, L. (2002). *Bringing words to life: Robust vocabulary instruction*. New York: Guilford.
- Biemiller, A. (2006). Vocabulary development and instruction: A prerequisite for school learning. In D. Dickinson & S.B. Neuman (Eds.), *Handbook of early literacy research* (Vol. 2, pp. 41–51). New York: Guilford.
- Bowman, B., Donovan, S., & Burns, M.S. (2000). *Eager to learn: Educating our preschoolers*. Washington, DC: National Academy Press.
- Brophy, J., & Good, T. (1986). Teacher behavior and student achievement. In M.C. Wittrock (Ed.), *Handbook of research on teaching* (3rd ed., pp. 328–375). New York: Macmillan.
- Cunningham, A.E., & Stanovich, K. (1997). Early reading acquisition and its relation to reading experience and ability 10 years later. *Developmental Psychology*, 33(6), 934–945. doi:10.1037/0012-1649.33.6.934
- Dickinson, D.K., & Neuman, S.B. (Eds.). (2006). *Handbook of early literacy research* (Vol. 2). New York: Guilford.
- Fenson, L., Marchman, V., Thal, D., Dale, P., Resnick, J.S., & Bates, E. (2007). *MacArthur-Bates Communicative Development Inventories*. Baltimore: Brookes.
- Hart, B., & Risley, T. (1995). *Meaningful differences in the everyday experience of young American children*. Baltimore: Brookes.
- Hirsch, E.D. (2003). Reading comprehension requires knowledge—of words and the world. *American Educator*, 27(1), 10–13, 16–22, 28–29, 48.
- Hoffman, J.V. (1991). Teacher and school effects in learning to read. In R. Barr, M.L. Kamil, P.B. Mosenthal, & P.D. Pearson (Eds.), *Handbook of reading research* (Vol. 2, pp. 911–950). White Plains, NY: Longman.
- National Institute of Child Health and Human Development (NICHD). (2000). *Report of the National Reading Panel. Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction* (NIH Publication No. 00-4769). Washington, DC: U.S. Government Printing Office.
- Neuman, S.B. (2006). The knowledge gap: Implications for early education. In D. Dickinson & S.B. Neuman (Eds.), *Handbook of early literacy research* (Vol. 2, pp. 29–40). New York: Guilford.
- Neuman, S.B., & Roskos, K.A. (2005). The state of state prekindergarten standards. *Early Childhood Research Quarterly*, 20(2), 125–145. doi:10.1016/j.ecresq.2005.04.010
- Pressley, M. (2001). The nature of first-grade instruction that promotes literacy achievement. In M. Pressley, R.L. Allington, R. Wharton-McDonald, C. Block, & L. Morrow (Eds.), *Learning to read: Lessons from exemplary first-grade classrooms* (pp. 48–69). New York: Guilford.
- Rosenshine, B. (1986). Synthesis of research on explicit teaching. *Educational Leadership*, 43(7), 60–69.
- Scarborough, H. (1998). Early identification of children at risk for reading disabilities: Phonological awareness and some other promising predictors. In B. Shapiro, P. Accerdo, & A. Capute (Eds.), *Specific reading disability: A view of the spectrum* (pp. 75–119). Timonium, MD: York Press.
- Sénéchal, M., Ouellette, G., & Rodney, D. (2006). The misunderstood giant: On the predictive role of early vocabulary to future reading. In D. Dickinson & S.B. Neuman (Eds.), *Handbook of early literacy research* (Vol. 2, pp. 173–182). New York: Guilford.
- Snow, C.E., Burns, M.S., & Griffin, P. (Eds.). (1998). *Preventing reading difficulties in young children*. Washington, DC: National Academy Press.
- Stahl, S.A., & Murray, B. (1994). Defining phonological awareness and its relationship to early reading. *Journal of Educational Psychology*, 86(2), 221–234. doi:10.1037/0022-0663.86.2.221
- Stahl, S.A., & Nagy, W.E. (2006). *Teaching word meanings*. Mahwah, NJ: Erlbaum.
- Vellutino, F.R., Fletcher, J.M., Snowling, M.J., & Scanlon, D.M. (2004). Specific reading disability (dyslexia): What have we learned in the past four decades? *Journal of Child Psychology and Psychiatry*, 45(1), 2–40. doi:10.1046/j.0021-9630.2003.00305.x
- Wharton-McDonald, R., Pressley, M., & Hampston, J. (1998). Literacy instruction in nine first-grade classrooms: Teacher characteristics and student achievement. *The Elementary School Journal*, 99(2), 101–128. doi:10.1086/461918

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