

# N IS for Nonsensical

*Low-income preschool children need content-rich instruction, not drill in procedural skills.*

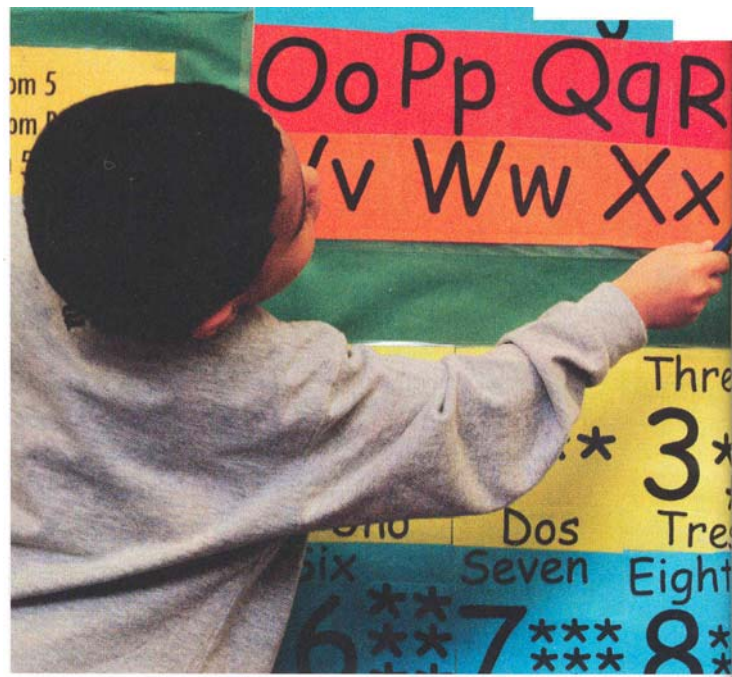
**Susan B. Neuman**

**P**ublic school for 3- and 4-year-olds has begun to take center stage as the newest cure-all for struggling schools. Recognizing that the achievement gap starts early, policymakers have implemented such new policies as the Bush administrations "Good Start, Grow Smart" initiative (2002), designed to prevent reading difficulties in children who are at risk of falling behind and staying behind.

Recently, I watched as the day unfolded in an inner-city preK classroom that the local school district had identified as exemplary. The room was filled with print. Pocket charts, alphabet letters, words, numbers, signs, and environmental print adorned every available space. Sitting with "quiet hands and quiet feet," in their designated spaces in the circle, the children were about to begin their lesson.

Taking a pointer in hand, the teacher began, "Good morning, boys and girls." As she pointed to each word, the children recited in unison the daily schedule, pretending to read seven simple sentences: "We will have circle time"; "We will read a story"; and so on, until they finished with "We will go home." Next came the days of the week, which the children repeated in chorus. This was followed by reciting the months of the year and the alphabet.

But all this activity was just a prelude to the big event: The letter of the week. "And what's our letter of the week?" "Yes, it's N and n," the teacher prompted as she wrote these letters on the board. "What words do we know?" "Night, nut, and noodles." "And why are we learning about noodles this



week?" In unison the children responded, "We are learning about the letter N."

Over the next 55 minutes, these children learned to point, circle, and underline the letter N. They recited it, drew it, and looked around the room for it. They heard it, saw it, even felt it, having it traced on their backs by their peers. And after sitting for what seemed to be an interminable amount of time in the circle, they were allowed the choice of tracing it, cutting it, or rolling modeling clay into the shape of it.

"To be able to be caught up into the world of thought-

That is being educated." - Edith Hamilton

Aside from the numbing mindlessness of these exercises and their questionable age appropriateness for these children, I found this visit most disconcerting because it demonstrated a pattern of literacy learning that has become all too typical throughout the United States (Dickinson & Neuman, 2006). Call it chiming, repeating, reciting, or recalling, it all has a similar effect. Not once did I see any effort to engage children's minds through stimulating content.

Some would argue that students must learn the basics of decoding before they tackle content or higher-order thinking. Students supposedly move from "learning to read" in the early years to "reading to learn" as they grow older. In

theory, the skills, procedures, and general-purpose maneuvers that students learn in preK settings will be put to good use later on when they take on more complex texts in an array of subject areas.

But here's the tragic irony of this approach: Such a narrow, limited view of reading may actually harm, not help, these learners. Comprehension of text, the purpose of reading, depends not on a small set of procedural skills but on a great infusion of knowledge—knowledge of words and their meanings, understanding of the concepts that connect them, and ability to think critically about what one reads. Serving as a foundation for literacy learning, such knowledge accelerates student achievement far more than recognizing the letter N does.

behind children in higher-income families academically, socially, and physically.

Differences in material resources and in-home environments account for a large portion of this achievement gap (Hart & Risley, 2003; Mayer, 1997). Economically disadvantaged children often have far fewer rich experiences from which to build *schemas*, described by Rumelhart (1980) as the "building blocks of cognition." Schemas, patterns that the brain imposes on complex experiences, enable human beings to make sense of the world around them by classifying incoming bits of information into groups.

In the process of knowledge acquisition, schemas diminish the information-processing load. For example, a young child visiting a library for the first time encounters a complex and confusing new world. The child must decipher new routines

### **In content-rich settings, early literacy skills serve children's developing thirst for knowledge and greater understanding.**

and new kinds of choices among books, activities, and so on. Children whose families routinely take them to the library begin to build a schema of what happens on a visit to the library—they begin to form a mental representation of certain activities. These activities, originally confusing, become understandable and familiar. The children can devote less mental energy to the structure of the activity and more to its content.

In our six-year study of neighborhood public libraries in low- and middle-income communities (Neuman & Celano, 2006), we saw the importance of schemas in enabling children to access knowledge. Although these libraries tried to level the playing field by providing equal and plentiful resources for children in high-poverty neighborhoods, the playing field was hardly level.

From the beginning, preschool children in middle-income neighborhoods were given knowledge about the library. Their parents carefully mentored them on using the resources purposefully and on choosing challenging materials. Low-income children rarely came with an adult and engaged in only short bursts of activity, almost frenetic in nature. They would enter a section, run around, find a book, and quickly flip through some pages, then leave. With little direction,



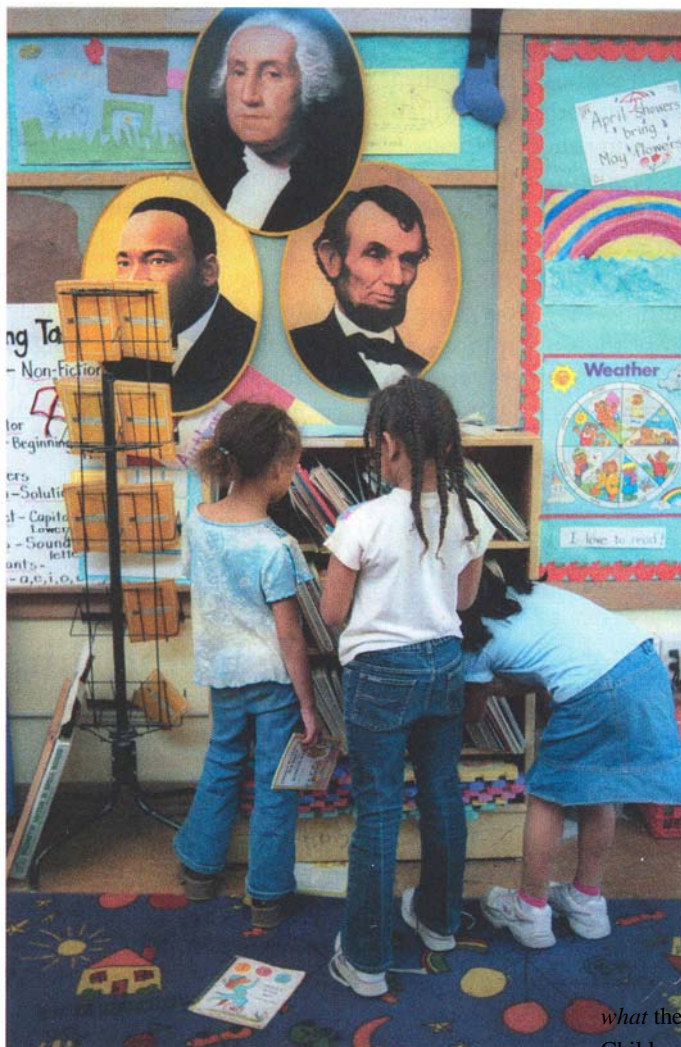
#### **Schemas and the Knowledge Gap**

Economically disadvantaged children do not fare well in our society. Even before formal schooling begins, the ravages of poverty have had their influence (Lee & Burkam, 2002). On average, cognitive scores of low-income 4-year-olds lag as much as 60 percent below those of their more affluent peers. Unfortunately, once they fall behind, children often stay behind. Evidence from the National Assessment of Educational Progress (2004) shows that throughout their schooling, children in low-income families continue to trail significantly

they would pick up books far too difficult, or much too easy. New computer technologies in libraries only extended the previous patterns: poor children used computers to read and learn less than middle-income children did. After foundation funding had enabled the libraries to spend more than 20 million dollars for six years to equalize resources, middle-income children were still learning approximately three times as much as poor children.

Thus, a vicious cycle begins in the early years. Advantaged children read more, engage more in higher-level conversations, and use information for fulfilling specific purposes and needs. Disadvantaged children often avoid reading and other knowledge pursuits. Over time, differences in the speed of information acquisition and schema development accelerate, creating a growing knowledge gap between those who have accumulated a good deal of knowledge and those who have not (Viswanath & Finnegan, 1996). Although the have-nots gain knowledge, the haves gain it faster.

Since 1997, more than 90 studies on topics as varied as crime prevention, health, and safety have shown that the knowledge gap persists (Viswanath & Finnegan, 1996). This literature indicates that the gap gets worse during economic downturns and hard times. Given the rapid rise of socioeconomic divisions in the past decade and increasing poverty among many fami



lies, the knowledge gap threatens to grow ever wider.

### How to Close the Knowledge Gap

To reduce the knowledge gap, we need to provide knowledge-building experiences that help children understand their worlds and build rich vocabulary. We need to encourage children to question, discover, evaluate, and use higherorder thinking skills.

Contrast the earlier scene with a preK program that I observed in another inner-city school district. I

enter as sharing circle begins. The children are busily talking about their recent visit to Cobblestone Farm. The room looks warm and inviting, with interesting corn husks, natural fibers, and other objects for children to explore.

After a few minutes, the children pUt on their coats and hats. They are conducting a month-long study of the ecology of the wetlands. Yesterday, they scattered milkweed in the meadows; today they're going to investigate the trees in the area. They've spent some time with an ecologist from a local university, testing the water for certain algae and conducting several other experiments. Throughout the morning, the children engage in lots of literacy activity: reading stories in a small group with the teacher; independently writing about their discoveries ("If you need help with words, I can help," says the teacher); and making maps of the meadow.

But perhaps more striking than *what* the children do is *how* they do it. Children take initiative, ask questions, and group natural things from the outside into little boxes and try to figure how they're alike or different. To link what children know with what they need to learn, the teacher asks questions like, Lets investigate where the rainbow is, What does that make you think of? What do you all think about that? and Why? The class revisits concepts through the day, applying their skills in various other subjects, transferring and extending their understandings to new ideas. The children are engaged, chal

lenced, and proud of their growing accomplishments.

In classrooms like this, the teacher models, tells, shows, explains, and demonstrates information. Children with limited prior knowledge receive the same kinds of opportunities that middle-class children have had. This knowledge then acts as a catalyst for children to acquire more knowledge on their own. In these content-rich settings, early literacy skills serve childrens developing thirst for knowledge and greater understanding.

#### Where Do We Go from Here?

Children learn what we teach. Exposed to a language-rich, content-rich setting, children begin to acquire the broad array of knowledge, skills, and dispositions that build a foundation for literacy. Exposed to a literacy curriculum reduced to a set of narrow, largely procedural skills, children learn to please others by mimicking, reciting, and repeating. They learn how to react, not how to think.

Features of effective content-and language-rich instruction include

- . Time, materials, and resources that actively help students build language and conceptual knowledge.

- . A supportive learning environment in which students have access to a wide variety of print resources.

- . Experiences that help students connect new learning to what they already know and can do.

- . Opportunities for sustained, in depth learning.

- . High levels of teacher interaction to assist and guide students' learning.

We do a terrible disservice to low-income children when we narrow our curriculum to its most procedural elements. There is no joy in learning about the letter N, despite any protests to the contrary.



## Young children experience joy by working on the edge of their current competencies.

Young children experience joy by working on the edge of their current competencies. Learning experiences that help low-income children become skillful at knowing many things-encouraging them to express their ideas through language and enabling them to raise questions that develop more complex understandings and concepts-are the key to closing the achievement gap. ID

#### References

- Dickinson, D., & Neuman, S. B. (2006). *Handbook of early literacy research: Volume II*. New York: Guilford.
- Good Stan, Grow Sman. (2002). A White House Initiative. Available: [www.whitehouse.gov/infocus/earlychildhood/toc.htm](http://www.whitehouse.gov/infocus/earlychildhood/toc.htm)

Hart, B., & Risley, T. (2003). The early catastrophe. *American Educator*, 27(4), 6-9.

Lee, V., & Burkam, D. (2002). *Inequality at the starting gate*. Washington, DC: Economic Policy Institute.

Mayer, S. (1997). *What money can't buy: Family income and children's life chances*. Cambridge: Harvard University Press.

National Assessment of Educational Progress. (2004). *Reading 2003 major results*. Available: <http://nces.ed.gov/nationsreportcard/readingresults2003>.

Neuman, S. B., & Celano, D. (2006). The knowledge gap: Implications of leveling the playing field for low- and middleincome children. *Reading Research Quarterly*, 41, 35-70.

Rumelhart, D.E. (1980). Schemata: The building blocks of cognition. In R. J. Spiro, B. C. Bruce, & W. F. Brewer (Eds.), *Theoretical issues in reading comprehension* (pp. 34-58). Hillsdale, NJ: Erlbaum.

Viswanath, K., & Finnegan, J. (1996). The knowledge gap hypothesis: Twenty-five years later. In B. R. Burleson (Ed.), *Communication Yearbook* (Vol. 19, pp. 187-227). Newbury Park, CA: Sage.

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