

Reading Can Make You

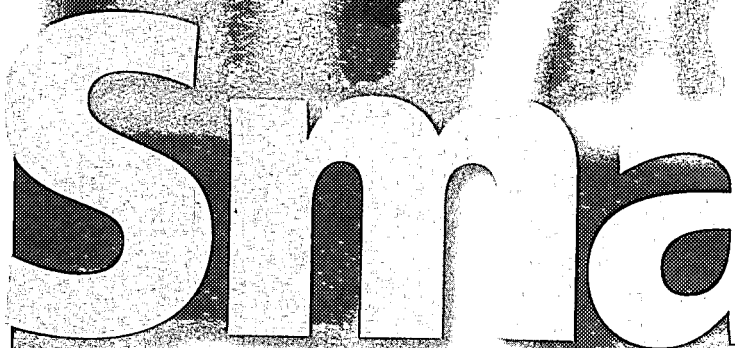
Anne Cunningham and Keith Stanovich

The more children read, the greater their vocabulary and the better their cognitive skills.

We've known for a while how children learn to read and the foundational milestones they must achieve to become fluent and accomplished readers. But now we are seeing that the amount of print children are exposed to has profound cognitive consequences, and that the act of reading *itself* serves to increase the achievement differences among children.

IN BRIEF

Two researchers examine the "positive feedback loop" that avid readers experience and present research findings to support their belief that reading itself—no matter the reading level—builds vocabulary and increases the ability to read fluently.



Smart



Enter!

Research has shown that early success at reading is clearly one of the keys that unlocks a lifetime of reading habits. We now understand that children who crack the spelling-to-sound code early appear to enter something like a positive feedback loop, a reciprocal effect in which reading *increases* their ability to read.

This may explain the Matthew Effect seen so often in literacy development, a rich-get-richer and poor-get-poorer phenomenon that has early and efficient acquisition of reading skill yielding faster rates of growth not only in reading achievement but other cognitive skills as well (Stanovich 1986; Walberg & Tsai 1983). We believe that independent reading may help explain the widening achievement disparities between the educational haves and have-nots.

Building Vocabulary

Support for our belief can be seen most easily in the field of vocabulary development. Research has shown that after decoding skills, a child's vocabulary is one of the most important factors in fluent and easy reading. Children with limited vocabularies stumble over unfamiliar words in trying to read a sentence and can't keep the thread of the idea—a sure formula for difficulty and dislike of reading.

While it is generally agreed that most children's vocabulary growth occurs indirectly through language exposure rather than direct instruction, we now realize it is reading volume, rather than oral language, that is the primary source of their differences in vocabularies. This has been shown through Hayes and Ahrens' (1988) research analyzing the frequency and complexity of words a person might encounter in different contexts.

Hayes and Ahrens analyzed three different categories of language: written language sampled from texts ranging in difficulty from scientific articles to preschool readers; words spoken on different types of television

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The Principal's Role

As instructional leaders, principals should promote extended independent reading opportunities at home and after school by ensuring the following:

During the school day:

- Classrooms are full of books and writing materials.
- There are special book centers with places to read comfortably.
- A wide variety of genres (both informational text as well as literature) are available.
- Children's compositions and illustrations about favorite books are prominently displayed in the classroom.
- Frequent opportunity for children to read in teacher-selected books and on their own in self-selected books.
- Teachers work together to support and teach reading across all subject areas.
- Teacher-led discussions of books and print are frequently observed.

Outside the school day:

- Establish a schoolwide reading program at home and support it by replenishing books and print material.
- Demonstrate to parents the importance of reading out loud to children in text that is above their reading level.
- Provide after-school reading programs to support extended experiences with print.
- Develop a literacy attitude checklist to keep in touch with motivational levels and provide specific support.

"We do not have to wait for 'prerequisite' abilities... Even the student with limited reading and comprehension skills will build vocabulary and thinking skills through reading."

shows; and adult speech (*Table 1*). They then analyzed the words according to a standard frequency count that tells how often an average person would hear or read a particular word (Carroll *et al.* 1971). So, for example, "the" is ranked number 1 in terms of frequent use (out of roughly 87,000 words) while a more specialized word like "amplifier" is ranked 16,000th.

For vocabulary growth to occur (especially after the middle grades) children must be exposed to words that are relatively rare, and it is print that provides many such word-learning opportunities. For example, Hayes and Ahrens found children's books to have 50 percent more rare words in them than adult prime-time television or the conversation of college graduates.

These relative differences have

direct implications for children's vocabulary development. For if most vocabulary is acquired outside of formal teaching, then opportunities to acquire new words occur vastly more often while reading rather than listening.

So if we want children to improve their vocabulary and reading fluency, we must get them to log many hours on printed pages. But there is a huge difference in reading volume between avid and reluctant readers. Data from a study of out-of-school reading time by fifth graders show that a child at the 50th percentile read about five minutes a day, or a half-hour per week—more than six times as much as a child at the 20th percentile (Anderson *et al.* 1988). *Table 2* illustrates the enormous differences in word exposure generated by chil-

dren's different proclivities toward reading. For example, just two days' out-of-school reading for a child at the 90th percentile amounts to an entire year's reading for a child at the 10th percentile!

Reading Works for Everyone

It is one thing to speculate how differences in reading volume may have specific cognitive consequences. It is another to demonstrate that these effects are occurring. All of our studies have demonstrated that reading a lot is effective *regardless* of the level of a child's cognitive and reading ability. We do not have to wait for "prerequisite" abilities to be in place before encouraging students' free reading. Even the student with limited reading and comprehension skills will build vocabulary and thinking skills through reading.

Moreover, in our research we have observed the large and unique contribution independent,

Table 1. Selected Statistics for Major Sources of Spoken and Written Language

	Rank of Median Word	Rare Words per 1,000
I. Printed texts		
Abstracts of scientific articles	4,389	128.0
Newspapers	1,690	68.3
Popular magazines	1,399	65.7
Adult books	1,058	52.7
Comic books	867	53.5
Children's books	627	30.9
Preschool books	578	16.3
II. Television texts		
Popular prime-time adult shows	490	22.7
Popular prime-time children's shows	543	20.2
Cartoon shows	598	30.8
Mr. Rogers and Sesame Street	413	2.0
III. Adult speech		
Expert witness testimony	1,008	28.4
College graduates, friends, spouses	496	17.3

Adapted from Hayes and Ahrens (1988).



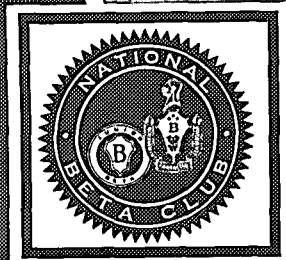
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out-of-school reading makes toward reading ability, aspects of verbal intelligence, and general knowledge about the world (Cunningham & Stanovich 1990, 1991, 1997; Stanovich 1993, 2000; Stanovich & Cunningham 1992, 1993; Stanovich & West 1989). We have found that there are specific effects of reading volume that do not simply result from the higher cognitive abilities and skills of the more avid reader.

This is an encouraging message for principals to give teachers of low-achieving students. Since reading has such profound consequences, it is imperative that we do not deny reading experiences to precisely those students whose verbal abilities most need bolstering. If we want them to get a successful early start for reading ability, it is critical that we support their extensive engagement with print. □

Table 2. Variation in Independent Reading by Fifth Graders

Readers (%)	Minutes of Reading Per Day	
	Books	All Reading
98	65.0	90.7
90	21.1	40.4
80	14.2	31.1
70	9.6	21.7
60	6.5	18.1
50	4.6	12.9
40	3.2	8.6
30	1.3	5.8
20	0.7	3.1
10	0.1	1.6
2	0.0	0.2

Adapted from Anderson, Wilson, and Fielding (1988).

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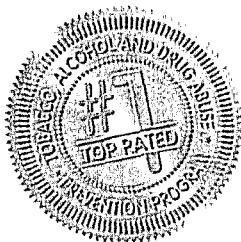
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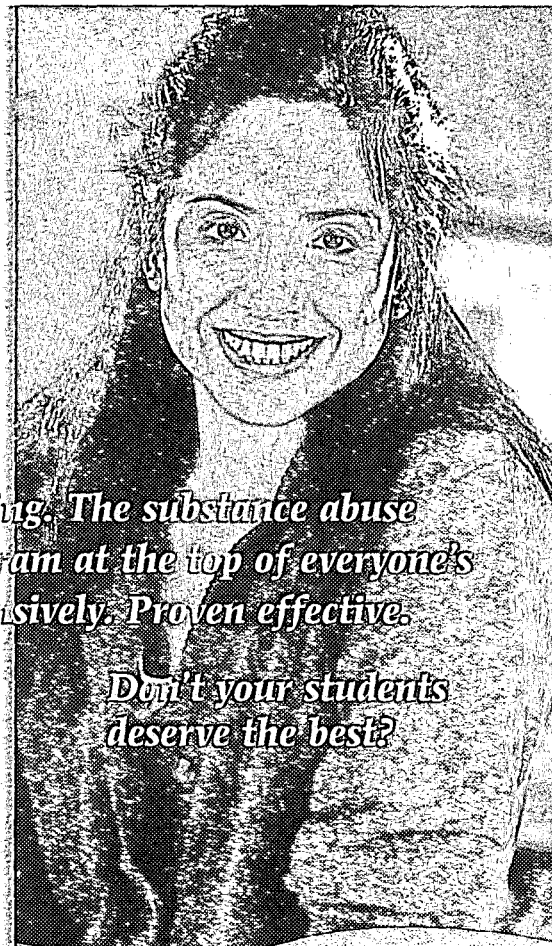
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WEB RESOURCES

The International Reading Association has a number of resources on reading and literacy, including an archival listing of published articles on vocabulary.
<http://pqasb.pqarchiver.com/reading/>

The Virginia Tech Division of Student Affairs provides brief guidelines for building vocabulary.
www.ucc.vt.edu/stdysk/vocabula.html

SuperKids posts game-like strategies to help children build vocabularies.
www.superkids.com/aweb/tools/words/

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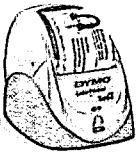
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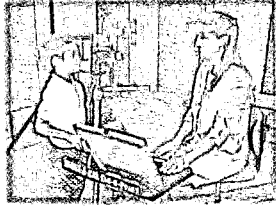


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The Child Identification Program

Parents Expect Schools To Ensure Their Child's Safety

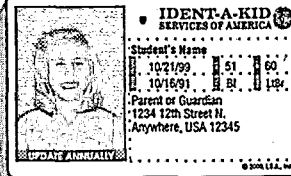
Parents are concerned! According to sources, close to 1 million children are reported lost or missing each year. The IDENT-A-KID® Program provides parents with a durable laminated child identification card containing a child's photograph, fingerprint and physical description. The service is performed on site by your local Program Director.



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- Important Information

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