

'Whole Language' Gets a Critical Read

Rancorous debate over the best way to teach youngsters how to read currently focuses on the "whole-language" approach employed in grade schools throughout the United States, Canada, and elsewhere. Whole-language classes reject traditional phonics approaches, which teach sounds associated with letters that make up words. Instead, teachers read interesting stories aloud, and students write stories and read them aloud, often collaboratively.

Whole-language proponents hold that reading skill emerges naturally among children immersed in literature, just as speaking develops naturally among kids exposed to daily torrents of conversation (SN: 2/29/92, p.138).

But new research, presented at the annual meeting of the American Psychological Association in Toronto last week, suggests that educators should avoid relying exclusively on whole-language techniques, especially for children who start out with meager reading skills. Rather, psychologists argue, teachers must tailor lessons to each student's needs by weaving together appropriate strands of phonics, whole-language, and mental strategies for effective reading.

"I think we'll see a lot of research in the next few years on one-to-one reading instruction strategies, especially with poor readers," asserts Michael Pressley of the State University of New York at Albany. "We can design instruction that retains the best of whole language as it does much, much more."

A study of third-graders in Grey County, Ontario, where public schools employ a whole-language curriculum, finds that substantially more boys than girls display severe reading problems. Ineffective readers apparently try to glean meaning from the general context of a story because they fail to "sound out" individual words accurately, assert Janet Glasspool and Gretta Hutton of the Grey County Board of Education in Markdale.

Glasspool and Hutton studied 124 third-graders chosen at random from English- and French-speaking classrooms. They tracked the children's progress during the fall 1990 to spring 1991 school year.

Sixteen boys and four girls showed minimal or no comprehension of written material on a reading comprehension test.

Moreover, when asked to read out loud and then recount a story, 39 boys and 18 girls met criteria for ineffective reading. These students usually did not attempt to correct oral reading errors, even if an error made no sense. Yet about three-quarters of these children scored adequately on the reading comprehension test, indicating that they derive meaning

from the general context of a story.

Teachers need to conduct vocabulary-building exercises with these youngsters and take more time for oral reading and group discussion in class, the researchers argue. Phonics instruction may also prove helpful in some cases, they add.

Whole-language classrooms typically emphasize the reading of fairy tales and other fiction, but Canadian boys generally reported much more interest in books about animals, science, and other nonfiction topics, Glasspool and Hutton note.

Other strategies can also aid particular children experiencing reading difficulties, they contend. These include placing visual aids, such as drawings, above words in reading textbooks and studying groups of letters that occur in different positions within different words.

Poor readers indeed benefit from such methods, holds Andrew Biemiller of the University of Toronto. A 16-week training program for ineffective readers designed by Biemiller and his co-workers, which uses phonics and taped reading selections so that students can hear the text as they read it, boosts reading comprehension in Toronto third-graders attending whole-language classes, he says.

Those who complete the program read much more on their own than classmates who read poorly and receive only whole-language instruction, Biemiller asserts.

Children tend to enter school with one of two strategies for oral reading, he adds. Some read all of the words in a passage and make numerous errors, whereas others skip words they do not know. The latter group makes much faster progress in reading accuracy and comprehension, according to Biemiller.

Successful readers first learn to understand individual words on the page and then move on to grapple with the context of sentences and stories, the Toronto researcher holds. "The ability to read words out of context is where the action is in early reading," he contends.

Phonics combined with the teaching of reading strategies greatly helps poor readers when offered throughout the school year, Pressley says. During the 1991-92 school year, Pressley directed a study of five second-grade classes receiving whole-language instruction and five second-grade classes emphasizing "translational strategies" instruction.

The latter approach varies from one child to another, using a mix of phonics, silent and oral reading, story writing, and coaching in basic strategies for successful reading. These include using a rapid return sweep from the right-hand side of the page while reading, monitoring whether a passage makes sense, reread-

ing difficult sections, and self-correcting reading errors.

Reading skills improved more among students getting strategies instruction, particularly among those who started out as poor readers, Pressley says.

This multifaceted approach, which many highly effective reading teachers already use, offers help to educators dealing with children from disadvantaged homes, where exposure to print is often minimal, he says. It may also prove successful with the increasing number of children who start school speaking a language other than English, Pressley contends.

— B. Bower

Underwater eruption detected in Pacific

Armed with newly acquired access to the Navy's underwater sound surveillance system, U.S. scientists have for the first time detected and monitored the eruption of a deep-sea volcano. Information provided by such highly sensitive listening posts on the seafloor opens up a vast range of possibilities for researchers studying the 50,000-kilometer-long chain of volcanoes that winds through the world's oceans like the seam on a baseball.



Embley

Fresh pillow lava from an underwater eruption off the coast of Oregon.

"This is the first time that we can actually eavesdrop on eruptions on the deep-sea floor. And these techniques will really begin to answer some of the questions [we have] about the Earth's largest volcanic system," says Robert Embley, a marine geologist with the National Oceanic and Atmospheric Administration (NOAA) in Newport, Ore. Embley and his colleagues announced their discovery last week.

Two years ago, the Navy began granting NOAA researchers access to data from its classified network of seafloor hydrophones, which monitor ocean sounds ranging from the hum of submarine en-