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ABSTRACT
                A study reviewed the effects of the whole language
movement. Two forms of analysis were used: meta-analysis, and a
simple "vote-counting" procedure. Quantitative studies that compared
a whole language and a traditional (or basal reading) approach,
published between 1988 and 1993, were selected for analysis. A total
of 45 studies were identified, but statistical tests were not
conducted since only 14 of the studies reported numerical data.
Results indicated that: (1) goals of research shifted from
achievement to attitude; (2) researchers used several different types
of reading comprehension measures; (3) a number of studies used a
variety of isolated word measures, another group of studies examined
the effects of whole language on decoding measures; (4) the
usefulness of whole language instruction seems well established; (5)
no significant effects were found on attitude measures; (6) younger
students tended to focus on reading as decoding, and older readers
defined reading as meaning-making; and (7) Reading Recovery,
literature discussion groups, and supplemental literature programs
are similar to whole language but differ in one or more significant
respects. Findings suggest that: whole language approach has a small
positive effect on reading comprehension; explicit phonics
instruction might not be out of place in a whole language program; an
emphasis on challenging students to read and learn from more complex
materials is important; open-ended tasks should be emulated in all
reading classes; and the use of quality literature is important.
(Contains 106 references.) (RS)

ED 364 830

The Effects of Whole Language Instruction:

An Update and a Reappraisal

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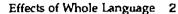Running Head: Effects of Whole Language

The Effects o˘ ˉ˙Vhole Language Instruction:

An Update and a Reappraisal

One can trace the beginnings of the current whole language movement back to a talk given by Kenneth and Yetta Goodman in 1976 at a conference on the Theory and Practice of Early Reading at the University of Pittsburgh (later published as Goodman and Goodman, 1979). In this talk, the Goodmans melded Ken's psycholinguistic model of reading, augmented with a broader view of the functions of language, with Yetta's interest in emergent literacy. The resultant paper, "Learning to read is natural," set forth the basic principles of what was to be called the whole language movement, that reading and writing are forms of language, and function like other forms of language; that children can learn to read as they learned to speak, through exposure to a literate environment; that children will learn to read and write best when the reading and writing are for authentic purposes, and so on. Our purpose in fixing the beginning of the whole language movement to a date in 1976 is not to slight others who have contributed greatly to whole language -- certainly the ideas of Jerome Harste, Louise Rosenblatt, Frank Smith, among many others, have been influential. Nor is it to suggest that whole language "emerged whole out of Ken Goodman's head." As Y. Goodman (1989), among others, has pointed out, the whole language movement is part of a continuous progressive movement in education, ranging back through the language experience movement, through the ideas of Dewey and other 20th-Century progressives. Instead, our purpose in setting that beginning is merely to state that the whole language movement, to this writing (late in 1993), just is 17 years old. And 17 years, for an idea, is barely out of infancy.

For an idea so young, whole language has had a tremendous impact on reading education. Whole language has been the topic of entire issues of education journals, such as *The Reading Teacher, Elementary School Journal*, and *Instructor*. Although the whole language movement pointedly opposes the use of basal readers, its principles have been enshrined in the latest revisions of

basal readers (Hoffman, McCarthey, Abbott, Christian, Corman, Curry, Dressman, Eliot, Matherne, & Stahle, 1993; Pagnucco, in progress).

<u>Earlier Reviews of the Effects of Whole Language</u>

Given the headlong plunge into whole language, it would not be surprising to find that implementation of whole language has far outstripped research evaluating the effectiveness of the approach. In addition to the U.S.O.E. Cooperative Studies in First Grade Reading, Stahl and Miller (1989) found only 46 studies comparing whole language and the earlier language experience approaches (WL/LEA) with traditional, basal reader instruction. Those studies failed to find an overall difference between WL/LEA and basal reader instruction, with WL/LEA producing somewhat lower effects on comprehension measures and in more recent studies. It is the more recent studies which used the whole language philosophy, suggesting that this latest evolution may not have been an improvement over the earlier LEA approach.

Stahl and Miller (1989) also found that whole language approaches were more effective in Kindergarten than in first grade. They suggested that Whole Language approaches promote children's conceptual base for reading. The social interactions around a text, both student-teacher and student-student, mirror those found in households with a high literacy press (e.g., Snow & Ninio, 1986). In those households, parents and children read together, shifting their focus to different aspects of print as the need arises. Through similar interactions, using Big Books or experience charts, students in whole language classes can develop a solid concept of the functions of print, needed for formal reading instruction. Writing using invented spelling also seems to be a spur to the development of an understanding of many conventions of print, including spacing and directionality, as well as a beginning of knowledge of letter-sound relations.

Stahl and Miller (1989) also found that whole language approaches appeared better at developing word recognition than comprehension, and that the better designed studies tended to

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produce lower effects for whole language, especially those studies which included an observational component to verify treatment.

The Stahl and Miller (1989) study went to press five years ago. The purpose of this paper is to review the effects of the whole language movement. We will present, first, an updated quantitative synthesis of research conducted since 1988. We will use our reading of the qualitative research, both comparative and non-comparative, to augment our points.

Analysis of Achievement and Attitude Research

We used two forms of analysis to examine the quantitative studies on effects of whole language. The first was a meta-analytic procedure. In meta-analysis, one takes different measures from different studies and creates a standard metric, the effect size, which can be averaged, correlated, etc. to evaluate treatment effects over a variety of studies (see Glass, McGaw, & Smith, 1981; Light and Pillemer, 1984). The other analysis is simply a vote-counting procedure. For this procedure, each effect is tallied as either significantly favoring the whole language treatment, significantly favoring the traditional treatment, or finding no significant difference.

Each of these procedures has advantages and disadvantages. The meta-analysis procedure is more sensitive to small effects. It is possible that individual effects are not significant in various studies, but consistently favor one group. Small effects, not high enough to reach statistical significance, but consistent, can be detected through meta-analysis, but missed through vote-counting. However, not all studies provide the numerical information needed to do a meta-analysis. Vote counting, on the other hand, allows one to use a larger sample of studies, since many studies do not give enough information to calculate effect sizes.

<u>Study Selection</u>

For both meta-analysis and vote counting, we looked for studies which met the criteria used by Stahl and Miller (1989), namely that they compared a whole language and a traditional (or basal
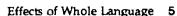
reading) approach, published between 1988 and 1993. We accepted a number of synonyms for whole language, including literature-based, process-oriented, and so on. We searched for the descriptor "whole language" on the ERIC, PSYCHLIT, and Dissertation Abstracts databases, and conducted hand searches of the Annual Summaries of Research in Reading (e.g., Weintraub, 1993). Each study which contained a comparison between whole language approaches and traditional instruction was included. Sources located through ERIC or PSYCHLIT were found in their entirety and reviewed. Reference lists were checked to find additional sources. Since most dissertations were unavailable, sources reviewed in Dissertation Abstracts were reviewed in abstract only, unless otherwise noted.

Unlike Stahl and Miller (1989), we have included studies which examined classrooms other than first grade or Kindergarten, although the majority of the research covers the early grades. We also included studies with purely qualitative measures. We did not include any studies dealing purely with language experience approaches. At this time, such a label would be anachronistic. We used the author's definition of whole language rather than imposing any definition of our own. The definitions that were provided have ranged from very detailed, including observations and illustrative anecdotes, to very sketchy. The definitions did bear "family resemblance" to each other. The majority of definitions mentioned the use of literature instead of a basal, the importance of reading books to children, the integration of reading and writing, and involving children in authentic reading and writing experiences from the first day of school. Any study which seemed at variance with a particular aspect of whole language was not included in this analysis, although many of these studies are discussed following the overall analysis.

Results and Discussion

We found 102 citations when limiting the search to "Research Reports." From this corpus, and from checking citations and conference programs, we found only 28 studies comparing whole

language and traditional approaches to reading. Of these, an additional 17 were available in Dissertation Abstract form only. Of the 45 studies, only 14 had numerical data, allowing us to use them for a meta-analysis. This is not enough data to draw conclusions from. Therefore, we will be reporting effect sizes for illustration only, but not conducting statistical tests on those effect sizes. Because writing is dealt with by Graham and Harris (this issue), we will not report the results from the writing measures in this paper.

A Shifting of Goals. This relative lack of research is interesting, considering the flurry of implementation of whole language procedures. What is more interesting than the relative lack of research is the apparent shift in the goals of that research.   What we seem to be finding is that researchers who are looking at whole language are largely ignoring the questions raised by Stahl and Miller (1989). Of the 45 comparative studies that we have looked at, only 20 used any measure of reading achievement at all (44%). In contrast, 22 used affective measures such as attitude toward reading, orientation toward reading, or self-esteem (49%). In addition, 15 studies looked at writing development, a marked change from the Stahl and Miller (1989) review, when we found only a handful of writing studies and decided that there were too few to review. These studies are included in the references, but not reviewed in this paper (see Graham & Harris, this volume).

This seems to represent a shifting of goals, from achievement to attitude. A survey conducted by the Universities of Georgia and Maryland (O'Flahaven, Gambrell, Guthrie, Stahl, Baumann, & Alvermann, 1992) found that research intended to increase motivation to read was consistently rated by teachers as more important than research intended to improve comprehension. Others, such as Tunnell and Jacobs (1989), have also noted the increasing stress on attitude. We have also found in our discussions with teachers that they are placing increasing stress on getting students interested in reading, assuming that increased skill in reading will follow.

Reading Comprehension.

Researchers used several different types of reading comprehension measures. A number of studies used traditional standardized comprehension tests. Whole language advocates have criticized the use of standardized reading achievement measures, especially the multiple-choice variety, as fragmenting reading ability and representing an "unnatural" reading act. They argue that the special skills needed to do well on standardized tests are not practiced in whole language classes, where the emphasis is on the use of literacy for authentic purposes, thus putting students in whole language classes at a disadvantage on those measures. On the standardized reading comprehension tests, we found four effect sizes -- -.54, .38, -.11, and .58 -- an average effect size of ..08. a small effect size favoring the whole language approaches. One other study used the comprehension section of an informal reading inventory to measure comprehension (e.s. = -.74).

McCallum (1987) compared a whole language approach to a traditional, skills-oriented approach on learning the main idea, and found that both approaches were equally effective at teaching this particular skill. In the traditional approach, the skill was taught in isolation. In the whole language approach, the main idea instruction was embedded in real reading activities.

Four other studies used either free-choice or multiple choice cloze tests. Although cloze tests have a long history of use in reading research and practice, there is a great deal of controversy about their validity. Shanahan, Kamil, and Tobin (1982) found that cloze measures were sensitive to sentence comprehension, but not intersentential comprehension. But McKenna and Layton (1990), and others, found that students scores on cloze measrues correlated very highly with their scores on other types of comprehension measures. The four studies that used such measures found effect sizes of -.31, 1.63, .24,and .25. The 1.63 effect size, found in Miller and Mulligan's (1989) study, is an outlier, since it is well above any other effect size found in the study. It used a simple, experimenter-made cloze comprehension measure with first graders, a population that our experience suggests has

difficulty with cloze. Its large effect size may reflect the specific training in use of context given to the whole language students which would advantage them on this type of task.

Looking over the vote-counting analysis, four studies found significant comprehension effects favoring whole language approaches, one study found significant comprehension effects favoring the traditional program, and twelve studies found no significant difference between programs. Putting these two sets of analyses together seems to reveal a slight effect favoring whole language programs. The average of the comprehension effect sizes is about .13, ignoring the outlier (.29, if the outlier is included), a small effect. The range of the effect sizes, from -.74 to +.75, suggests a variability that might not solely be due to differences in methods. We will discuss this point more fully later.

What is more interesting than these findings is what is not included. The usually valid criticisms of standardized comprehension measures by whole language advocates have led to the development of a number of alternative reading assessments, including performance assessments, reading frameworks (e.g., Paris, Calfee, Filby, Hiebert, Pearson, Valencia, & Wolf, 1992). These new perspectives of assessments have led to changes in the Reading component of the National Assessment of Educational Progress (Foertsch, 1992), performance assessment components of major achievement tests (e.g., Hoover et al., 1993), as well as the assessments used by a great many of the states. Yet, when a comprehension measure was used in these studies, it was generally conventional, either a passage-and-question type measure, or a cloze measure.

Word Reading Measures.

Word Lists. A number of studies used a variety of isolated word measures to evaluate whole language approaches to reading. Stahl and Miller (1989) found that whole language students actually did somewhat better on word recognition measures than on comprehension measures. Five studies used standardized vocabulary tests. Since these were all in grades 1 or 2, these were

primarily measures of word recognition, rather than word meaning. The average of these five was .16, roughly the same as for the comprehension measures. Another study reported the findings from a word list on an Informal Reading Inventory and found an effect size of -.54.

Decoding. Another group of studies examined the effects of whole language approaches on decoding measures. The effect sizes on these measures were quite low, ranging from -.80 to .43, for an average of -.09. Since whole language approaches do not stress decoding, especially of words in isolation, and more traditional approaches do, one would not expect whole language approaches to do well on measures of decoding words in isolation. The lowest effect size was on a measure of reading nonsense words, a skill definitely not stressed in whole language classes.

One study reported an oral reading measure from an Informal Reading Inventory. This study found a significant effect in favor of the traditional approach, with an effect size of -.36. Whole language advocates have long recommended using oral reading passages as an assessment tool, since they assess children's reading using multiple cue systems. That only one study could be found that used such a measure is noteworthy.

Emergent Literacy

Stahl and Miller (1989) found that Whole Language approaches seemed to be more effective when used in kindergarten or when compared to a readiness program at the beginning of first grade, than when compared to a formal reading program in first grade. They suggested that whole language approaches were effective in developing children's concepts of the form and functions of print. Only two studies in this group used measures of print concept. Manning, Manning, and Long (1989, 1990) found strong and significant differences (e.s. = 1.27) favoring the whole language group on the Concepts about Print test (Clay, 1985). Kasten and Clarke (1989) found that an experimental whole language program produced significantly greater gains on most early reading measures in both preschool and kindergarten. It is difficult to draw conclusions from

these two studies as to the effects of whole language in kindergarten.

There have been a number of qualitative and non-comparative quantitative studies which have found whole language kindergarten programs to be effective. Allen with Clark, Cook, Crane, Fallon, Hoffman, Jennings, and Sours (1989) found that kindergarten students made gains over the school year. For example, in September, 35 students did not know the alphabet, but, by May, only 2 did not, and, in September, only 1 child could read at the preprimer level, but, in May, 27 could. Akers (1988) found similar results.

Other studies have described the growth of kindergarten students in reading and writing over the year. Sulzby (1985) and Sulzby and Teale (1987), for example, document the growth in young students' story re-enactments, from pseudoreading, or "pretend" reading of the story without regard for the words on the page, to increasing concern with the written word and accurate reading. In writing, Dobson (1989), Sulzby, Barnhart, and Hieshima (1989) and Teale and Martinez (1989) all document growth over the kindergarten year and how that growth in writing is connected to exposure from reading.

The usefulness of whole language instruction in kindergarten seems well established. However, there is some evidence that programs which immerse students in literacy can be improved with the addition of training in phoneme awareness. Byrne and Fielding-Barnsley (1991) found that a phoneme awareness training program, included in a developmental kindergarten program, significantly improved students' reading skills.

Affective Measures

Attitude Surveys. Whole language instruction also does not appear to have the effects on attitude that are claimed either, at least not when survey-type measures are used. Sixteen studies used attitude surveys, but only two found significant differences in favor of whole language, and one found significant differences in favor of the traditional class. The remaining 14 studies found

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no difference between the two approaches, a result similar to earlier findings (Stahl & Miller, 1989).

Mervar and Hiebert (1989) examined children's book selection strategies and the amount of reading at home. They found that the children in literature-based classes had more sophisticated strategies for selecting books, but they did not read more at home than did children in basal-oriented classes.

Although we did not find significant effects on attitude measures, one study suggests that at least some features of whole language instruction might lead to increased motivation to learn to read. Turner (1991, 1992) used proximal measures of motivation, using observed behaviors rather than surveys to measure motivation. She reasoned that more-motivated students would show more use of reading and learning strategies; exhibit more task persistence; employ volitional strategies such as moving away from distractions, asking neighbors to quiet down, or using self-talk; and seeking help from others. She found that first-grade students in whole language classrooms were more likely to show these motivational behaviors than students in traditional classes. Although only the difference in use of learning strategies was statistically significant, students in the whole language classes were higher in all categories.

In a sense, it would have been difficult for students in Turner's (1991) traditional classes to show these motivational behaviors. Work in those classes consisted of worksheets in which students filled in a single word or selected answers from choices (77% of the time observed). Students would not need to use reading or learning strategies for such work. Fisher and Hiebert (1990) found that tasks in whole language classes tended to be more open-ended, allowing greater use of strategic behavior than the closed tasks typical of basal reading programs.

There is no reason, however, why the open-ended tasks and the greater use of student-selected activities (as recommended by Turner, 1992), could not be combined with the direct and explicit instruction typical of traditional instruction. Indeed, traditional basal reading programs are

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including more student-selection and more open-ended tasks (Hoffman, McCarthey, Abbott, Christian, Corman, Curry, Dressman, Eliot, Matherne, & Stahle, 1993; Pagnucco, in progress).

Orientation toward Reading. Five studies examined students' orientation toward reading, or whether they appeared to define reading as a decoding process or as a meaning-gathering process. Older and better readers tend to define reading as a meaning-gathering process; younger and less accomplished readers tend to focus on the decoding aspects (Baker & Brown, 1984). Four studies (Boljonis & Hinchman, 1988; Burns-Patterson, 1991; El-Amin & Richmond, 1992; Stahl, Osborn, Pearson, & Winsor, 1992; Stahl, Suttles, & Pagnucco, 1992) found few or no differences due to teaching orientation between students in whole language classrooms and those in traditional classrooms. DeFord (1981)[1] and Hagerty, Hiebert, and Owens (1989) found that first-grade students given whole language approaches tended to focus more on meaning gathering than those in basal reader classrooms. Dahl and Freppon (in press) and Freppon (1991) report strong similarities between students taught in traditional and whole language classes as well as some differences in orientation. Gambrell and Palmer (1992) found that students in literature-based classes were more likely than students in conventional classes to give a decoding response when asked what they would do when they came upon a word they did not know; students in conventional classes were more likely to ask someone.

That most students would tend to focus on decoding, especially in the first and second grades where these studies were conducted, seems sensible. Children come to school with a reasonable command of their native language in its oral form. They lack knowledge of the written language. Since the texts used in first and second grade are generally within the child's language competence, but do require the child to be able to decode the written text fluently and automatically (e.g., Chall, 1983), it seems reasonable that students would focus on the part of the

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[1]This study was not included in the Stahl and Miller (1989) analysis.

task that they are working to master, not the part that they already can do. Later, when decoding is automatic and the text is more complex, one would expect students to focus on comprehension, because that will be the area that will tend to give them difficulty.

The differences between the two sets of studies, those which found no differences in orientation or strategy use between whole language and traditional classes and those which did find such a difference, may lie in differences in instructional talk. In the whole language classes that Stahl, Suttles, and Pagnucco (1992) observed, the teacher did not talk about reading strategies while reading with students. In contrast, in another whole language teacher's class (Galda, Pelligrini, Shockley, & Stahl, in progress), there was a great deal of talk about strategies by the teacher, talk which was picked up by the students. On an interview, classes with such strategy talk embedded into their lessons would be more oriented toward meaning and mention more strategies than classes, traditional or whole language, which do not hear such talk. Thus, these differences may reflect the nature of the teacher's instruction, rather than a particular program. This instructional talk may fit in well with whole language practices but is not universally found in such classes. It also could fit into traditional classes, as well.

Research on Related Programs

The research reviewed so far dealt with programs in which a whole language philosophy permeated the entire reading program, as far as we could tell from the program descriptions. As noted earlier, these descriptions ranged from fairly detailed to little more than a label, so it is possible that many programs discussed earlier are not true whole language programs, but variants of whole language. The programs discussed in this section are similar to whole language, but differ from the archetypical whole language program in one or more significant respects. One can learn a great deal about the impact of whole language practices from examining three related programs -- Reading Recovery, literature discussion groups, and supplemental literature programs.

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Reading Recovery. Reading Recovery is a program intended for first graders who are not succeeding in their beginning reading instruction. In the United States, it is generally given to children in the bottom 20% of their class, regardless of the achievement level of that class. In New Zealand, where it was developed by Marie Clay (1985), approximately 25% of children are receiving help from Reading Recovery (Nicholson, 1992). The effects of Reading Recovery are well-documented (see the papers in DeFord, Lyons, & Pinnell, 1991).

Reading Recovery shares a number of common characteristics with whole language. Both approaches use only whole books, both teach skills and strategies in the context of real reading and writing, not in isolation, both view the reader as orchestrating a variety of strategies to identify words and do not focus on one strategy (such as phonics) to the detriment of others, and both use predictable texts and invented spelling as integral parts of instruction.

However, Reading Recovery differs from whole language in several key aspects. First, the teacher, not the student, decides what texts are to be read and what strategies need to be learned. Teachers make daily diagnoses of their students, using running records of their oral reading. Based on these running records, teachers choose which strategies to stress in the instructional portion of the lesson and what level book to introduce. In whole language, children select their own books to read, and teachers choose strategies to teach based on the struggles that children are having with the books they have chosen. Teachers may choose to invite students to read other books, but these are invitations, which could be declined by the students.

Second, there is an emphasis on mastery and accuracy in Reading Recovery. In Reading Recovery, children practice a book repeatedly, until they have mastered it. In whole language approaches, children practice a book only if they are interested in it. Children's pseudoreading, or imaginative retellings of stories that differ from the print on the page, are honored in whole language classes as indications that children are getting meaning from a book. In Reading Recovery,

a student who engaged in pseudoreading would be given a strategy lesson on the imj rtance of noticing the print and given an easier book to read. Although both whole language approaches and Reading Recovery use invented spelling, in Reading Recovery lessons students invent spelling on a practice page. When their writing is completed, it is spelled correctly. In whole language classes, invented spellings are not ordinarily corrected. Instead, they are honored as attempts toward expressing meaning through print.

Third, Reading Recovery lessons have an explicit focus on achievement. Teachers are expected to plan each lesson so that the child can advance in reading skill so that they can rejoin their class reading at the level of the average group in their class at the end of six to ten week tutoring period. This differs markedly from the philosophy of many whole language teachers who feel that children should progress at a rate the children feel comfortable with.

Literature Discussion Groups. Literature discussion groups are an attempt to move away from the inquisition mode of typical basal reading lessons to a more open-ended, response oriented discussion of literature. Eeds and Wells (1989) found that fifth and sixth graders were able to participate in rich discussions of literature, articulating and changing their constructions of the meanings in the text. O'Flahaven (1991) also found that second graders could participate fruitfully in conversational discussion groups, with or without the guidance of a teacher, and that these second graders were also able to come up with sophisticated insights into the meanings of the stories they were reading.

McMahon (1992a, 1992b) examined the interactions of fifth graders participating in "Book Clubs." In an examination of conversations of students over one ten-week period, she found that the Club was effective in getting children to develop more sophisticated understandings of the underlying themes of the first three books studied. However, for the fourth book in the unit, the discussions broke down. McMahon (1992b) speculated on some of the causes of this breakdown,

including a different mix of children in the groups, disinterest in the fourth book, substitute teachers who were not imbued with the philosophy behind the Book Clubs, and interruptions.
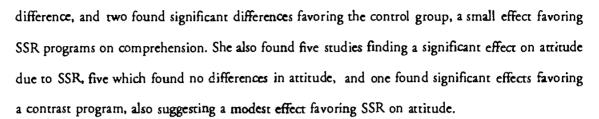
Literature Discussion Groups are similar to whole language approaches in that whole, authentic texts are the focus of instruction, both focus on students' meaningful interpretations of texts, at. ' neither use isolated skills instruction. In these groups, however, books were assigned by the teachers, not the students. This is a crucial difference, since it ensures that the books chosen would be of an appropriate level of challenge for the students, both in terms of readability and in terms of the complexity of the ideas present in the books. Eeds and Wells' (1989) groups were led by a teacher; McMahon's (1992a) and O'Flahaven's (1991) were not. But in both cases, teachers provided direction and modelling of group behavior, as might whole language teachers as well.

O'Flahaven (1991) evaluated his program using cognitive, affective, and social measures. In terms of cognitive growth, the students in the control groups had given longer retellings of texts after treatment, and these retellings contained larger amounts of central and supporting information than the students in the two Literature Discussion Groups. In terms of the social and affective dimensions of literacy, children who participated in the Literature Discussion Groups tended to have a greater tendency to shift from an external to an internal locus of control and had more constructive views of the roles of discussion in literacy.

Supplemental Literature Programs A number of authors have tested the effects of supplemental literature programs. In the simplest form, this might involve a period of sustained silent reading (SSR), from 10 to 30 minutes a day, in which everyone in the class, including the teacher, stops and reads a self-selected book. Such an approach has been used for at least twenty years. The research on the effectiveness of SSR is mixed. Manning-Dowd (1985), for example, found twelve studies of the effectiveness of SSR on reading comprehension and students' attitude toward reading. She found that five studies found significant effects favoring SSR, six found no

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difference, and two found significant differences favoring the control group, a small effect favoring SSR programs on comprehension. She also found five studies finding a significant effect on attitude due to SSR, five which found no differences in attitude, and one found significant effects favoring a contrast program, also suggesting a modest effect favoring SSR on attitude.

Morrow and her colleagues (1992; Morrow, Sharkey, & Firestone, 1993; Morrow & Weinstein, 1986) have followed a line of research suggesting that a high quality literature program, used as a supplement to a basal program, is highly effective in improving students' story comprehension and story writing abilities. Morrow's (1992) Independent Reading and Writing Periods (IRWP) program requires well-designed library centers in the classroom, to make the books accessible and appealing; the use of teacher-guided reading activities to interest children in books, especially teachers reading books aloud; and the use of cooperative learning activities during the reading of books. Morrow (1992), for example, found that IRWP students had significantly higher comprehension, measured by retelling, questions, and rewriting a story in the students' own words, and writing of an original story. The effects on a standardized comprehension measure were not significant. Morrow, Sharkey, and Firestone (1993), using a qualitative analysis of interview responses, found that these increases in children's interest were attributable to the program.

Students could read silently during an IRWP, but often chose to read orally, in groups with multiple copies of a book or with a Big Book, to write their own story, or to listen to a story on a tape. During this period, the activities resembled similar periods in a whole language classroom (see, for example, Galda, Pelligrini, Shockley, & Stahl, in progress). However, this period was supplemental to the school's regular basal reading program, not replacing it. The time taken for IRWP, at least as reported by Morrow (1992), replaced some of the activities of the basal, forcing the teacher to choose which activities are most helpful and probably making the basal reader instruction more efficient.

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Recommendations

In short, whole language approaches are not a magic bullet, that teachers will not automatically become more effective merely by adapting a particular philosophy toward instruction. To summarize our findings, overall, whole language approaches seem to have a small positive effect on reading comprehension, but there are too few studies that measured comprehension to test whether this effect is statistically significant. There seem to be no differences between whole language and traditional approaches on measures of attitude, orientation toward reading, and writing. Similar to Stahl and Miller's (1989) findings, whole language approaches seem to be significantly more effective when used in Kindergarten, to develop a conceptual base for reading. There seems to be an advantage for traditional programs on measures of decoding, partly because these measures were closer to the instruction given in traditional programs.

These results on the achievement measures are sketchy, because so few measures were used to assess reading achievement. There was large variability in the achievement results that we found, suggesting that something other than the teacher's philosophy is at work. We tried to supplement the analysis of quantitative research with more qualitative studies to get at what that something else might be. We believe that it is not whether the teacher professes a whole language philosophy, but how that teacher instantiates that philosophy. Putting the findings on whole language together with those from related programs, it seems that it is what the individual teacher does which affects instruction, not their belief. In essense, our conclusions represent a different viewpoint from that of whole language advocates, who suggest that the teachers instructional actions come out of their beliefs. In our viewpoint, we are finding that it is their actions that are relevant to achievement, and that their beliefs, whole language or traditional, are less important.

Teaching skills in whole language.

It is easy to listen to the rhetoric of whole language advocates and believe that whole

language is anti-phonics. Although whole language advocates are opposed to piecemeal, worksheet-driven phonics instruction, most support phonics instruction that is embedded into the reading of authentic texts and into children's discovery of spellings (Newman & Church, 1990; Stahl, 1992). Although reviews such as that of Chall (1983) have consistently found that early and systematic instruction in decoding leads to better reading achievement than later and less systematic instruction, there is little evidence that one form of phonics instruction is strongly superior to another. The integrated phonics instruction typical of some whole language first-grade classrooms might work as well as the more structured phonics instruction typical of basal reading programs (Stahl, 1992). It certainly may be as effective as the worksheet-driven instruction typical of many basal reading programs.

It also could be that combining an explicit phonics program with a program which stresses the use of authentic learning tasks and literature might be the best of both worlds. Morrow (1992) found that adding whole language activities to a basal reading program seemed to increase students' comprehension and interest. Another approach is to add explicit skills instruction, especially phonics instruction, to a literature-based program. Eldridge (1991; Eldridge & Butterfield, 1986) found that such a program had strong and significant effects on comprehension, vocabulary, and decoding, when compared to a conventional basal reading program. Uhry and Shepherd (1993) found that a spelling program, whose aim was the development of both phoneme awareness and letter-sound knowledge, made a significant improvement when added to a whole language kindergarten. The Benchmark School program (Gaskins, 1994) and the program developed by Patricia Cunningham with a group of first grade teachers (Cunningham, Hall, & DeFee, 1991) are both effective programs that meld literature-based instruction with explicit phonics instruction. Iverson and Tumner (1993) found that the effectiveness of Reading Recovery lessons could be significantly increased with the addition of systematic lessons in phoneme

awareness and decoding. Although Reading Recovery currently has a considerable emphasis on decoding (Adams, 1990), it is not as systematic as the instruction provided by Iverson and Tumner.

Whole language advocates seem to de-emphasize phonics instruction. However, some explicit phonics instruction might not be out of place in a whole language program. Freppon and Dahl (1990) and Mills, O'Keefe, and Stephens (1991) both describe whole language classrooms with high quality phonics instruction integrated into authentic literacy activities. The reading strategy instruction discussed by Turner (1992) also seems to reflect instruction about decoding words integrated into authentic literacy tasks in whole language classrooms. Dahl and Freppon (in press) found that the students they observed learned more about the code in whole language classrooms than similar students in traditional classes. Their observations suggest that both sets of teachers put a great deal of stress on their students' learning to decode. In our observations of an exemplary whole language teacher, we observed some explicit code-instruction, including the teaching of phonogram families, during mini-lessons (Galda, et al. in progress). Although some might object to teaching word parts in isolation, these lessons seem to be in harmony with the students's needs, since the students at that time needed to learn some decoding strategies to advance in their reading and writing skill. A parallel could be found in comprehension instruction. McCallum (1987) found that whole language main idea instruction, which was embedded into story discussions, was as effective as more traditional direct instruction. The teacher in his study discussed main idea comprehension, not as a skill to be learned, but as one way of aiding comprehension of text.

Challenging children to do their best.

An emphasis on achievement, the continual challenge of students to read and learn from more complex materials, also seems to be important. Stahl, Suttles, and Pagnucco (1992) found that the challenge level of the material that children were reading was more important than the

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philosophy of the teacher in predicting children's achievement. If children are left to "do their own thing," there is no guarantee that they will push themselves ahead to progress as readers and writers. Whole language proponents (such as Newman & Church, 1990 and Smith, 1992) are also concerned that whole language classrooms be distinguished from *laissez-faire* environments where children do whatever they want to do. Instead, children should be invited to continually accept new challenges, in an environment that supports children taking risks (e.g., Newman, 1985). However, many teachers misinterpret whole language's belief in not pressuring the child as meaning that the child should be left to his or her own devices in learning. This is a misunderstanding.

Open-Ended Tasks and Literature.

There are some aspects of whole language instruction that should be emulated in all classes that teach reading. The use of open-ended activities, with many possible responses, as observed in whole language classes by Fisher and Hiebert (1990) seems to lead to increased motivation toward reading, as measured by task persistence, and the use of reading and learning strategies, including volitional strategies (see Turner, 1992). The use of open-ended tasks also supports the willingness of a child to take risks in learning, since there are no wrong answers.

The use of quality literature, either as the focus of the program, or as a supplement to a traditional program, seems to be important, if for no other purpose than to continually remind students of why they are learning to read. As a result of the whole language movement, basal readers (Hoffman, et al., 1993; Pagnucco, in progress) no longer modify children's literature, and stories especially written for basals are rare. Teachers also seem to be more aware of quality children's books. A rise in quality of children's reading materials, both in basals and in the increased use of tradebooks in the classroom, is an important legacy of the whole language movement.

A Plea for Eclecticism

Putting these characteristics together, one can see a fairly eclectic reading program

emerging. Such a program might include a great deal of attention to decoding, especially in the early grades, but would give a greater emphasis to the reading of interesting and motivating texts. Such a program might include open-ended tasks and discussion about literature, but also might include some specific instruction about comprehension strategies. Such a program might include student choice of reading materials part of the time, but teachers would choose materials that challenge their students both in terms of readability and of intellectual challenge. In short, such a program would incorporate much from whole language, but include more teacher-directed instruction, especially in terms of decoding and comprehension strategies.

Whole language, however, defines itself as an all-encompassing philosophy or system of beliefs (Bergeron, 1990). Whole language advocates have openly attacked eclecticism and would seem to be disappointed with even partial moves toward whole language. In the view of whole language advocates such as Goodman (1989) and Newman and Church (1990) one cannot have a little whole language and a little of something else. Partial moves toward whole language are acceptable only as a way-station to becoming a true whole language teacher.

The apparent contradiction is that many practices arising from whole language are highly effective as are many arising from traditional practice. Practices drawn from both are needed to meet the different needs of children. Children need to learn to decode, to comprehend, as well as to maintain an interest in reading and critical thinking about what is read. These contradictions come from the nature of children and of learning to read, not from an externally imposed mandate. Our observations of teachers working (e.g. McKenna, et al., 1993; Stahl, Suttles, & Pagnucco, 1992) suggests that they are working these contradictions out in their classrooms. When good teachers try to meet students' needs, what they will do will usually transcend philosophy and politics. This is the way it has been as long as we have been teaching; it is the way it should be.

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