

Literacy Intervention Programs at the Middle and High School Levels

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Introduction

We subscribe to the view that intervention programs aimed at improving adolescent literacy achievement must address the complex issues around youth's engagement with texts, both traditional print texts and those of the new media and information communication technologies that surround us on all sides. This view calls for rethinking the teaching of youth whose motivations to read (or not to read) hinge on a wide range of factors, including the cognitive, social, and cultural, for starters. It involves rethinking intervention programs, perhaps along the lines of what Cole and Griffin (1986) earlier, and Luke and Elkins (2000) more recently, have alluded to as re/mediating adolescent literacies. It also involves rethinking our definition of text, broadening it to include both visuals and print, as suggested by the New London Group's (2000) framework of multiliteracies.

Drawing on some interesting derivatives for *medium*, *media*, and *mediate*, Luke and Elkins (2000) point out that these are concepts for communicating, framing, and scaffolding ideas and relationships among people and their material worlds. In much the

same way, the concept of re/mediation involves rethinking or reframing the way we think about intervening in students' reading lives. It calls for moving beyond fruitless searches for some method (or magic bullet, if you will) that promises to fix kids' so-called deficits in reading. Re/mediation, in the sense that Luke and Elkins (2000) used the term, involves fashioning instructional conditions that enable us as educators "to come to grips with the contextual variables in adolescent lives, all of the complex causes and consequences of any given action and intervention, and the multiple relations between media technologies that adolescents juggle every day" (p. 397). In a metaphoric sense, then, re/mediation involves fixing the conditions in which students learn rather than fixing the students per se.

Teaching with an eye to re/mediation requires letting go of (or at the very least rethinking) some old adages. For example, the popular motto "every teacher, a teacher of reading" sounds like a good idea, but a brief look at the literature on content area literacy instruction for the last five decades clearly shows that it is a motto seldom taken up by more than a few staunch supporters in a few isolated instances (O'Brien, Stewart, Moje, 1995). Perhaps more detrimental, however, is the oft-repeated saying that students learn to read before they read to learn. Not only is this wrongheaded, it is also potentially damaging from an instructional point of view. Separating the act of reading from one of its functions – reading to learn *something* – makes no sense. Though it can be argued that developmentally, beginning readers are different from skilled readers, the difference between these two age groups lies more with the content or subject matter materials they are expected to read than with any overall purpose for reading.

Another continual favorite—reading across the curriculum—sounds simple and straightforward. However, if taken literally, this saying can be somewhat misleading. For example, reading across the curriculum would suggest that individuals who can apply a set of reading skills in one disciplinary area will be equally successful when applying that same set of skills in another disciplinary area. Yet, as any proficient reader knows, the structures of disciplines (e.g., history, science, mathematics, literature) differ greatly, and so do the text structures that support them in the content area textbooks a student reads. Ways of talking about science, engaging in science experiments, and being recognized as a scientist are vastly different from the ways of talking about history, writing a history book, and being recognized as a historian. These discourses and their corresponding differences make it imperative that a reader approach any given text by asking critical questions about whose message is being conveyed, by what means, and for what purposes. Not only will the answers to such questions vary from one content area to another, but so also will the skills a reader brings to the task.

Finally, rethinking the dominance of print in teaching and learning from (and with) texts may take some doing on everyone's part. Print and its close association with "text" have been the norm for so long that it is almost second nature to equate the two. Yet sweeping changes in interactive communication technologies require that we prepare students to interpret and respond to multimedia and hypermedia texts, with their richly integrated uses of print, visual, and auditory elements (Bean, Bean, & Bean, 1999; Elkins & Luke, 1999; Rush, 2003). The necessity of preparing students to comprehend and respond to these kinds of texts challenges educators to move beyond narrowly conceived notions of literacy.

In the process of moving beyond outmoded conceptions, we might also begin to rethink the kinds of interventions necessary for re/mediating the conditions in which struggling readers learn. The importance of doing so seems self-evident and is backed by efforts on many fronts. For example, consider the Carnegie Foundation's innovative initiative, *Schools for a New Society* (<http://www.carnegie.org/sub/news/sns.html>). This initiative, which was launched in October 2001, is in response to the fact that in the United States close to 50% of the incoming ninth graders in this country's comprehensive, public high schools cannot comprehend the texts that their teachers assign. Students who have not had opportunities to engage critically with the textual practices and discourses common to the subject matter they are expected to read not surprisingly end up failing their courses and eventually dropping out of school.

This chapter is divided four ways. In the first part, we focus on middle and high school literacy intervention programs that are currently in use at the district, state, or national level and that are supported by research—though not necessarily independently conducted research, a factor to which we return later in the chapter. Second, we offer a critique of these programs in terms of how they fit within the re/mediation perspective introduced earlier. Specifically, do the programs involve interventions for fixing the conditions in which students learn, or do they simply attempt to fix the students? Our belief in the need to re/mediate the conditions for student learning in subject matter classrooms is perhaps best mirrored in Greenleaf, Jimenez, and Roller's (2002) redefinition of the term *intervention*. In their words, it is “integrated, strategic, meaningful, and, if necessary, intensive curriculum and instruction to powerfully enrich and expand adolescents' reading lives” (p. 495). Third, we offer a set of educator

guidelines for applying what can be learned from the critique in part two to classroom practice. Finally, we conclude with a discussion of several issues that make broad implementations of adolescent literacy programs problematic and the research that might address these issues.

Intervention Programs

In an effort to cast a fairly wide net in our search for literacy intervention programs designed for teaching and learning at the middle and high school levels, we posted questions on the National Council of Teachers of English (NCTE) listserv and on the International Reading Association's (IRA) Adolescent Literacy Commission listserv that asked for program nominations. We also attended sessions at the annual meetings of NCTE, IRA, the American Reading Forum (ARF), and the National Reading Conference (NRC) that addressed issues concerning intervention programs for youth who find school literacy a challenge. In addition, we did a hand search of *Reading Research Quarterly*, *Journal of Literacy Research*, and *Reading Research and Instruction* for articles related to this topic. The seven programs described here were the results of that effort.

Accelerated Reader

Accelerated Reader (AR) is a program for computer-assisted student self-assessment of reading comprehension. Originally published by Advantage Learning Systems, now called the School Renaissance Institute, it is described as both a reading motivation program and a learning information system, through which teachers can manage the reading practice of their students. Students begin the program by taking a *Standardized Test for Assessment of Reading (STAR)*, which is a computerized cloze test, with no accompanying test of oral reading comprehension or teacher observation of

reading behaviors. Once a reading or grade level has been established for a student, he or she selects a trade book to read from a list of over 13,000 titles. Each book is assigned a certain point value, based on the number of words in the book and its readability. After reading the chosen book, the student takes a computerized multiple-choice comprehension test on the content of the book. The computer scores the test, awards the student points based on test results, and keeps a complete record of results. The software originated in the US and is supported by extensive staff development known as “Reading Renaissance.” *AR* is currently used in over 40,000 schools in the US and its use is spreading to other countries.

Although the Renaissance Learning website (www.renlearn.com) listed 87 research abstracts on *AR* at the time of this writing, we found very little in the way of peer-reviewed, published research reports. Many of the reports listed on the website are district reports written by district personnel, including curriculum supervisors and teachers. These district reports present a positive picture of *AR*'s success in percentages of improvement on standardized reading test scores, increased library circulation, and improved attitude toward reading. In addition to district reports are several conducted as dissertations or other graduate school projects (Kambarian, 2001; Mathis, 1996).

Kambarian (2001) analyzed scores on the CTBS Terra Nova test for 2nd through 6th grade students in two groups, one of which had been exposed to *AR*, and the other which hadn't, over a three-year period. The study found that the youngest cohort of students – 2nd through 4th grade – who had been exposed to *AR* showed the greatest improvement. Mathis analyzed the Stanford Achievement Test scores of 30 6th grade students both before and after their use of the *AR* program. Results indicated no significant increase in

reading comprehension scores. These conflicting findings indicate that further research is necessary.

Published articles' findings on AR (Pavonetti, Brimmer, & Ciplewski, 2002; Topping & Paul, 1999; Vollands, Topping, & Evans, 1999), when taken together, are mixed. Pavonetti et al used a Title Recognition Test to examine whether 7th graders who had used AR in elementary school tended to read more books than those 7th graders who hadn't. Their results don't support AR's claim that the use of their product leads to the development of life-long readers. Vollands, Topping, & Evans (1999) contains two action research projects; in both of these projects group of students using AR are compared to groups using other reading programs. The authors claim that the use of AR yielded gains in reading achievement for at-risk readers.

Read 180

Read 180, which is a *Scholastic* computerized program based on the work of Ted Hasselbring and the Cognition and Technology Group at Vanderbilt University, Janet Allen and the Orange County Literacy Project in Florida, and the development staff at Scholastic, targets students in grades 4-12 who are reading below grade level. It allows students to work on improving vocabulary, reading, and writing skills through computer-based programs with supplemental books and audiotapes. According to the Scholastic website, (www.scholastic.com), Hasselbring's research in 1985 led to the development of a software program that used individual student performance data to differentiate reading instruction. Originally called the *Peabody Learning Lab*, this software was combined with Janet Allen's literacy workshop model for use in the Orange County (FL) Literacy Project. This project, piloted in three middle school classrooms in 1994-1995, was

extended to 13 classes in 1996, and district-wide in 1997. *Scholastic* became involved with the project in 1997, and published it under the name of *Read 180* in 1999-2001. The program is currently available for use at the elementary level (Stage A), middle school level (Stage B), and high school level (Stage C). The program has four main components: interactive CD-ROM software for students and management software for teachers; audiobooks; leveled paperbacks for independent reading; and various teacher resources. Each segment of the software begins with a video and a passage that summarizes the video. As students move through the software, they are given opportunities to complete activities that repeat words from the passages and are given immediate feedback on errors, as well as strategies for remediation. Repeated readings and review of words are used to enhance fluency. Support for English–language learners is provided in the software through both clickable translations of passage text and Spanish summaries of the videos and reading passages. READ 180 is currently being used in California, Massachusetts, Florida, Georgia, Ohio, Texas, and in Department of Defense schools.

Research on the piloting of the Orange County Literacy Project’s use of the software found that students in the Literacy Project made significantly larger gains than the nationally normed group on the *Degrees of Reading Power* test (Scholastic, 2002). As the READ 180 version for grades 9 and above was released in August of 2002, no research is yet available on the work of the program with high school students.

Reading is FAME

Reading is FAME is designed as an intervention program for adolescents who lack the decoding ability and/or word knowledge needed to comprehend reading materials at grade level. The initial piloting of this program took place at Father

Flanagan's Boys and Girls Town in Nebraska, where the average participant is 15 years old and is in residence from 18-22 months. Adolescents are sent to Boys and Girls Town because of "chronic neglect and abuse, illegal and antisocial behaviors, and academic failure" (Curtis & Longo, 2001, p. 1). The *FAME* program was designed by Mary Beth Curtis and Anne Marie Longo based on Chall's (1983) stages of reading development. The program is comprised of 4 courses, each 16 weeks in length. The first course, Foundations of Reading, which is aimed at students in grades 7-12 who are reading below a fourth grade level, teaches relationships among most common letter combinations. The second course, Adventures in Reading, for students in grades 7-12 reading at between fourth and sixth grade levels, is designed to promote fluency in word recognition and to promote knowledge of word meaning. The third course, Mastery of Meaning, is designed to build vocabulary knowledge of students in grades 9-12 who read between the sixth and eighth grade levels, and the fourth course, Explorations, for students in grades 9-12 reading above an eighth grade level, involves improving integration of text information through reading and writing. Reading is FAME programs are in place in Nebraska, Iowa, Wyoming, Utah, South Carolina, New York, Texas, Georgia, and Washington, D.C. (Curtis & Longo, 1999). Research on Reading is FAME at its initial site found that students gained about a year in reading achievement, as measured by the Woodcock-Johnson Psycho-Educational Battery, for every semester's worth of instruction. Similar gains were found in a public high school implementation of the program (Curtis & Longo, 1999).

Supported Literacy Approach

The *Supported Literacy Approach*, a project within the larger, multidisciplinary and programmatic REACH Institute (2001), was designed by Catherine Morocco, Alisa Hindin, and associates at the Education Development Center in Newton, MA. Supportive literacy instruction is focused on advancing diverse groups of middle-school students' (especially those with disabilities) understanding of literature. The *SLA* draws from research conducted within a sociocultural perspective on the learning process, which basically adheres to the notion that students learn to read by participating in group activities that are mediated by students' and teachers' uses of language, such as whole class, small group, and peer-led discussions. Research on the *Supported Literacy Approach* (Hindin, Morocco, & Aguilar, 2001; Morocco & Hindin, 2002) has shown that integrating peer-led discussions with reading and writing about young adult literature enables students with disabilities to perform similarly to their peers in regular education.

Strategic Literacy Initiative

The *Strategic Literacy Initiative* is a professional development and research program of WestEd that focuses on improving adolescents' literacy by building teachers' expertise in teaching reading in their subject matter areas. The program's co-directors, Ruth Schoenbach and Cynthia Greenleaf, have developed with their WestEd colleagues what they call a reading apprenticeship model that takes into account adolescents' interests and provides instruction in guided reading, reciprocal teaching, vocabulary, metacognition, and other useful teaching and learning strategies taught in regular content area classes. The model, which is viewed as an alternative to pull-out remediation programs for under prepared high school students, was evaluated during the 1996-1997 academic year in the San Francisco Bay area. The results of that evaluation showed that

struggling 9th grade readers enrolled in a regular education classroom in a culturally diverse high school achieved two years' growth in a seven month period as measured by a standardized test of reading comprehension (Greenleaf, Schoenbach, Cziko, & Mueller, 2001). Since then professional staff developers at the National Institute in Reading Apprenticeship have launched similar reading apprenticeship programs in urban school districts outside the Bay area. According to Greenleaf and Schoenbach (in press), new cohorts of students in regular content area classrooms show gains similar to those achieved by students in the 1996-1997 study, with those who are furthest behind at the beginning of the school year making the greatest gains.

Project CRISS

*CR*eating *I*ndependence through *S*tudent-owned *S*trategies (*CRISS*) was originally developed by Carol Santa and her colleagues in Kalispell, Montana. Its purpose was to support secondary teachers of science, social studies, English, mathematics, and reading as they worked together to develop practical approaches for helping students learn from (and with) their content area texts. Santa and her colleagues met in teams to read the research and professional literature on applying key principles from cognitive psychology to classroom reading instruction (Santa, Havens, & Maycumber, 1996). They also designed teacher researcher studies that permitted them to examine the effectiveness of *Project CRISS* in actual classroom practice.

In 1985, the U.S. Department of Education and the Joint Dissemination Review Panel recognized *Project CRISS* as an exemplary high school program—one that uses research-based reading and writing strategies to help students improve their learning in content area classes—and named it as part of the National Diffusion Network. This

validation of the project led to further development over the next 15 or so years by Carol Santa and Lynn Havens. For example, in 1993, national validation of the project was expanded by the U. S. Department of Education and the Program Effectiveness Panel to include grades 4 – 12 (Killion, 1999; Project CRISS, 1996). *CRISS*-based practices, which had been largely literacy-oriented, were extended to include professional development models of teaching, reading engagement, and school change, all built on evidence-based research across several disciplinary areas. There is also a professional development component for parents, including a workbook available in English, Spanish, and soon in Vietnamese.

During the 2001-2002 school year, *Project CRISS* evaluators conducted an extensive study of the effectiveness of the program in the Granite County School District of Salt Lake City, Utah. The study's design included experimental and control classrooms at each of three grade levels: grade 4, grade 7, and grade 10 biology classes. Pre- and posttest measures were administered to both experimental and control groups at the beginning and end of the school year. The intervention consisted of the experimental group teachers receiving professional development in how to integrate *Project CRISS* principles and strategies into their teaching. Students in the experimental condition were taught by the specially trained teachers for one school year. At the end of the year, students in each of the experimental classrooms showed statistically significantly larger gains than the control group on tests of comprehension and recall of information in age-appropriate social studies or science selections, four to eight pages in length. Similar results were found in earlier evaluations of *Project CRISS* in Colorado, Florida, Montana,

and Virginia (Killion, 2002a, 2002b; Personal communication, Lynn Havens, April 22, 2003)

Talent Development High School Literacy Program

The *Talent Development High School Literacy Program (TDHS Literacy Program)* is designed to accelerate the literacy growth of under prepared high school students. It was developed by the high school reform team at the Center for Education of Students Placed at Risk (CRESPAR) and the Center Social Organization of Schools at Johns Hopkins University. This year-long program, which currently serves only under prepared students at the 9th grade level (Personal correspondence, James McPartland, March 24, 2003), consists of four components. The first component involves students in block-scheduled instruction for 90 minutes a day in math and English for a whole year. The second component consists of two semester-long blocks. In the first semester, students enroll in three courses designed to help them overcome their lack of preparation: 1) a course on Strategic Reading; 2) one on Transition to Advanced Mathematics; and 3) the Freshman Seminar. The Strategic Reading course uses four approaches to improve students' fluency and comprehension: read-and-think-aloud demonstrations by the teachers; mini-lessons on specific comprehension and writing strategies (e.g., skimming and identifying elements of various genres); cooperative learning teams to practice new vocabulary and develop fluency; and self-selected reading and writing activities (high interest fiction and nonfiction). The second semester course uses the district's English I syllabus. In the third component, teachers receive intensive and sustained professional development that includes 25 to 30 hours of course-specific sessions and weekly in-classroom coaching provided by teachers on special assignment and instructional

facilitators from Johns Hopkins University. The fourth component is the Ninth Grade Success Academy, which is located in a separate part of the main school building. In this component, students receive instruction from teachers who have a common planning period in which to coordinate efforts related to student outreach and recovery (Balfanz, 2002).

Although several evaluation studies have been conducted on the *TDHS* instructional interventions in reading and literacy between 1999-2001, only data from those pertaining to the *TDHS Literacy Program* are included here. In 1999-2000, the literacy intervention was used in 20 regular education classes by eight teachers in three Baltimore non-selective neighborhood high schools. The curriculum coaches rated one teacher as a high implementer, five as medium implementers, and two as medium-low implementers. In the three control schools, students received 90 minutes a day of mathematics and English instruction for one school year. Students in both the experimental and control schools had attendance rates of 87% to 89%, which suggests that they were present frequently enough to have been impacted by the interventions. Overall, students in the experimental schools significantly outperformed students in the control schools on standardized measures of reading. During the 2000-2001 school year, similar results were found in two supplemental studies of the *TDHS Literacy Program* when it was implemented in 11 high-poverty, non-selective high schools in Newark, Philadelphia, Baltimore, and New York City (Balfanz, 2002).

A Critique from the Standpoint of Re/mediation

Attempting to fix, or intervene, in the material conditions in which middle and high school students learn, as opposed to trying to change something about the learners

themselves, is a distinguishing characteristic of Luke and Elkins' (2000) notion of re/mediation. It is a far cry from earlier uses of the term *remediation*, minus the slash mark, which typically meant sorting students by reading ability level and then removing the lowest performing students from their regularly assigned classes in order to work with them in one-on-one or small group settings. Sometimes referred to as the medical model of remediation, the assumption was that something was inherently wrong in a young reader's development and that it was up to the reading specialist to "diagnose" the problem and to fix it with the appropriate instructional materials available. In some of the intervention programs we overviewed earlier, this older model is still in operation.

For example, although *Accelerated Reader* is advertised as a motivating program for reluctant readers, its use seems to be based on the assumption that students with reading difficulties lack practice in reading and that providing practice with books at their reading level will improve their fluency and comprehension. Although this assumption has appeal, a problem that arises with it in this case is the blanket application of the program to students, teachers, and learning contexts regardless of their unique qualities. Here, the problem is perceived as residing within the student and the solution is to turn that student over to a computer program for assistance. This perception can be seen throughout the program, as testing through *STAR* is relied upon as an assessment of students' silent reading comprehension without reference to any other factors. This testing is then used to assign students' reading level, and students are directed toward and tested on appropriate leveled books.

Even if *AR* is seen purely as a tool for reading motivation, problems arise. It is our belief, because of what we know about the problems of extrinsic motivation for reading

(Baker & Wigfield, 1999; Cameron & Pierce, 1994; Gambrell & Marinak, 1997; Sweet, 1997; Wigfield & Guthrie, 1997), and from the research of Pavonetti, Brimmer, and Cipielewski (2002), that even though *AR* may motivate some students to read temporarily, it has little effect on reading comprehension abilities and little long-term effect on reading motivation.

To a lesser degree, we place *READ 180* in the same category as *AR*. Like *AR*, *READ 180* is a computerized program designed to assist students who struggle with reading. We find the program to be much more sophisticated than that used by *AR*, in that it provides feedback to students, makes use of video and audiotape components, and provides support for English language learners. However, we find that *READ 180* is based on the same assumptions about students who struggle with reading: that the problem lies within the student, and that a program such as this can provide a quick fix to that problem. Another concern with both of these programs is the ease with which it is possible for teachers to turn students who struggle with reading over to computerized programs, instead of working to understand how classrooms and instructional methods could be changed to meet the complex and multiple conditions of adolescents' needs.

Reading is FAME is based on the assumption that reading problems for adolescents largely stem either from an inadequate vocabulary base or from problems with phonological processing. Naturally, *Reading is FAME* attempts to resolve this issue with intensive instruction in decoding and word meaning throughout the program. While we applaud this work in its focus on a worthwhile goal – improving adolescents' ability to recognize and use words – we find its focus a bit limited and limiting. *Reading is FAME* lacks the contextual support and flexibility that we would hope for in a reading

program that could expand to meet the complex needs of adolescents, as is required in a program that fits into the re/mediation framework.

The *Supported Literacy Approach* is a good example of a program couched within a re/mediation framework. Its success among middle school students with disabilities in language processing is attributed to teachers' abilities to scaffold whole class, small group and peer-led discussions of young adult literature in ways that teach valuable comprehension skills as students talk about highly motivating material. Although this is a step forward in changing the learning conditions to meet individual needs, the *Supported Literacy Approach* is limited at the present to a focus on literary texts. Whether this approach would work equally well with content area texts is unknown.

The *Strategic Literacy Initiative* and *Project CRISS* take the re/mediation model to a new level of sophistication. Instead of simply changing conditions of learning for a particular type of student reading a particular type of text, these two programs concentrate on professional development courses for secondary content area teachers that support them in helping students learn from (and with) the various subject matter texts they assign. By working directly with teachers of science, social studies, English, mathematics, and reading, the professional development staffs of the *Strategic Literacy Initiative* and *Project CRISS* are able to introduce teachers to strategies and skills that extend beyond literacy-oriented instruction in various disciplinary areas. For example, teachers in the *Strategic Literacy Initiative* learn to use the apprenticeship model as a means of helping students who struggle with reading to become more capable learners in their subject matter classes. Students can see for themselves how the use of teacher-guided comprehension and vocabulary strategies can move them along the continuum

from apprentice to expert learner. In the *CRISS Project*, teachers are encouraged to engage in action research projects of their own choosing to improve learning conditions within their own classrooms. Although initially the changes may be local, that is, classroom focused, the possibility exists for influencing wider district-wide changes as well. What is missing in these two programs, as well as in the ones discussed earlier, is an outside evaluation source of how effective they are. To date, the evaluations that have been conducted are internal to the various programs under investigation.

The absence of an external evaluation program is also a concern for the *Talent Development High School Literacy Program*. Although this program has been the object of fairly large-scale assessments using well known standardized reading tests, in high-poverty urban schools, it has been staff at CRESPAR who has conducted them. This is not to say that an independent outside evaluator would find different results, of course, in any of the program evaluations just discussed. What sets the *TDHS Literacy Program* apart from the other programs we have described is its comprehensive school-wide teaching and learning components. For example, teachers and students in this program are involved in year-long professional development and special courses coordinated in a manner that not only changes the conditions for learning but also the curriculum. Rather than trying to fit within a school's particular prescribed curriculum, those involved in the *TDHS Literacy Program* are the beneficiaries of re/mediation at its best.

What we could not determine from the available literature on any of the programs we examined is the degree to which the various interventions took into account the need for direct instruction in critical and evaluative reading. As noted earlier, disciplinary structures differ and so do the skills necessary for reading them critically and

evaluatively. Certainly some of the interventions discussed here incorporated strategies (e.g., guided reading, peer-led discussions, skimming and identifying elements of various genres) that would seem to encourage students to discuss critically the material at hand and to use elements of the writer's craft to point out textual inconsistencies. In this regard, the *Supported Literacy Approach*, the *Strategic Literacy Initiative*, *Project CRISS*, and the *TDHS Literacy Program* appear to do a credible job.

However, not one of the programs under review seems overtly concerned with the various non-print literacies adolescents use today—visual and digital literacies that can extend print-based learning and provide struggling readers with alternative pathways to comprehending disciplinary content. We believe this is a serious oversight, especially given that these same literacies account for a significant amount of adolescents' learning outside school (Alvermann, 2002; Hull & Schultz, 2001; Moje, 2000).

Educator Guidelines

In a re/mediation approach to intervening instructionally, the emphasis is not so much on ensuring that every teacher is a teacher of reading as it is on taking into account the complexities of teaching and learning in content area classes. When teacher educators and other professional development experts work with classroom teachers in ways that demonstrate the futility of thinking of any literacy program as simply a means for superimposing a set of basic reading skills that can be applied without regard to a specific discipline's discourse and textual practices, they accomplish what we propose is the first step to trading in the old remediation model for the newer concept of re/mediation. We realize that this is not a one-step process, and we also acknowledge that re/mediation itself is not the magic bullet that will "fix" every problem adolescents encounter in

learning to read from (and with) their content area texts. Still, we believe that a fundamental change in teachers' and teacher educators' expectations for what needs changing—students or the conditions in which they learn—will lead to the development and implementation of better and more effective literacy intervention programs. With this in mind, and working from what is now available in the literature discussed earlier in this chapter, we propose the following guidelines for educators interested in choosing a program to use with students who struggle to read their content area texts.

1. Choose programs that show promise for intervening in the instructional conditions in which students are expected to learn. Criteria that might be used in making such choices should address issues of feasibility (e.g., is a program's practical implementation likely given the current level of administrative support?) and context (e.g., what changes in teacher and student practices would need to be considered, or what supplementary services, in terms of professional development and technological support, would need to be in place?).
2. Examine the assumptions underlying these programs. For example, is one of the assumptions that students with reading difficulties lack practice in reading and therefore simply providing more practice with materials judged to be at their appropriate reading level will increase their fluency and comprehension? Is there sufficient research evidence to back such an assumption? If one subscribes to the findings of the National Reading Panel (2000), the idea that more practice leads to better reading achievement is not supported, though arguably this idea is still open to investigation using a broader research paradigm than the one that guided members of the panel.

3. Determine the degree to which teachers are expected to lend a guiding hand in helping students become more motivated and proficient learners. Literacy intervention programs that merely turn instruction over to a computer are not likely to assess accurately (and thus respond appropriately) to the complexities involved in working with youth whose motivations to learn may vary greatly according to time, place, and context. Thus, any program that promises a blanket solution to students' literacy learning without considerable teacher involvement should be approached with caution.
4. Analyze what assumptions seem to be operating in a literacy intervention program that treats subject matter as transparent and not open to critical and evaluative questioning by teachers or students. Treating disciplinary knowledge as if it were easily seen through and unchangeable across time and different contexts is equivalent to acting in the interests of what Freire (1972) and others have described as the banking approach to education—that is, filling students' heads with information in an unproblematic way such that the delivery apparatus takes precedence over what might be learned through questioning and debating the very material being presented.

In addition to the previous programmatic guidelines, teachers who are working individually to improve student reading in their own classrooms may want to consider implementing aspects of the reviewed programs that seem promising. One aspect of *Accelerated Reader* and *READ 180* that seems promising is access to large amounts of high quality reading materials for students who struggle with reading. Teachers who provide students with plenty to read give those students options that they might otherwise

not have. Mirroring the work of the *Strategic Literacy Initiative*, teachers may choose to integrate peer-led discussions with reading and writing about young adult literature in their classrooms. Similarly, teachers might follow the lead of *READ 180* and provide feedback on errors and strategies for remediation of reading problems or that of *Reading is FAME* and give students plenty of intensive instruction in vocabulary from texts they are required to read. It is our hope that teachers will also reflect on their instructional practices in light of the re/mediation framework, considering perhaps how this framework may assist in changing classroom learning environments in ways that meet the literacy needs of individual students.

Some Concluding Thoughts on What We Still Need to Know

Of course, as we look at all of these programs and the research done on them, we find that there are still several questions left unanswered. Several of the programs we reviewed are for-profit ventures, owned by companies that make fairly extensive claims for their programs. Others are the work of educational interest groups and individual researchers. Although each has undergone evaluation of varying magnitude and duration, in each instance that evaluation has been internal rather than external. Independent sources of evaluation would add immeasurably to the pool of data that is currently available. Publishing this information in easily accessible formats and through well established national networks (e.g., North Central Regional Educational Lab, WestEd) would make it widely available and subject to frequent updates.

We would also like to see research carried out that looks at the complex settings adolescents in schools experience and how these programs interact with those settings. We see this type of research as providing more depth than that which measures individual

student or group performances on particular tasks. This type of research could answer questions such as the following: What happens when experienced teachers implement these programs? How do the programs change? What happens to student learning? How do students with learning disabilities fare in the programs? What about students who are English language learners? We believe that research conducted by evaluators external to a particular company or group promoting a particular program, as well as research that looks at the complex settings and interactions of both students and teachers, would provide a more compelling picture of the worth of these programs than is presently available.

Finally, we are left wondering whether the bias toward print-based literacy exhibited in each of the seven programs reviewed here is a tell-tale sign of an aging teaching and program development force—one not accustomed to, or perhaps not fully comfortable with, the multiple literacies (e.g., visual, digital, and spatial) that millennial youth have at their disposal and use daily outside school. Are intervention programs that focus exclusively on print-based literacy too shortsighted? Might they be limiting the options available for developing a wide range of literacies in youth who struggle to read print? What might researchers working from a re/mediation perspective learn about conditions that support interventions having a broader view of reading than the current one?

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