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Regional Educational Laboratory
At SERVE Center UNC, Greensboro

Evidence-based decisionmaking: assessing reading across the curriculum interventions

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June 2007

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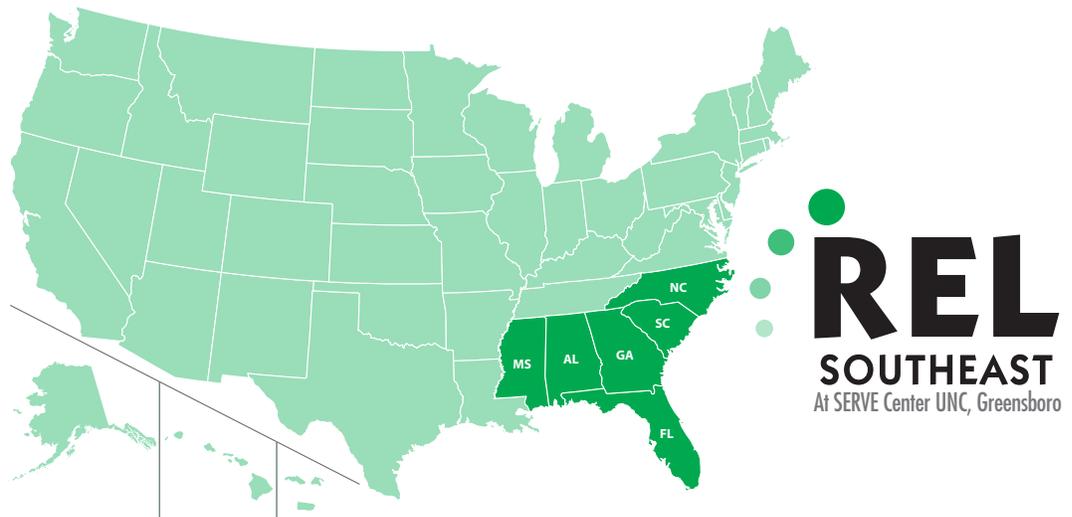
Issues & Answers is an ongoing series of reports from short-term Fast Response Projects conducted by the regional educational laboratories on current education issues of importance at local, state, and regional levels. Fast Response Project topics change to reflect new issues, as identified through lab outreach and requests for assistance from policymakers and educators at state and local levels and from communities, businesses, parents, families, and youth. All Issues & Answers reports meet Institute of Education Sciences standards for scientifically valid research.

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Summary

Evidence-based decisionmaking: assessing reading across the curriculum interventions

When selecting reading across the curriculum interventions, educators should consider the extent of the evidence base on intervention effectiveness and the fit with the school or district context, whether they are purchasing a product from vendors or developing it internally. This report provides guidance in the decisionmaking.

Many states, districts, schools, and educational support organizations have identified improving adolescent literacy outcomes as a pressing need. For example, the Georgia Department of Education incorporated Reading Across the Curriculum Standards as part of its 2004 revisions to state performance standards. These new standards represented a significant challenge for content-area teachers. Georgia, among other states, was interested in information on the kinds of professional development interventions available to support teachers' efforts to integrate these new expectations about reading in the content areas into their teaching. This report looks at what reading across the curriculum interventions states and districts might consider in their plans to improve reading outcomes at the secondary level.

Seven interventions were identified for review: ReadAbout, Reading in the Content Areas, Concept-Oriented Reading Instruction (CORI), CReating Independence through Student-owned Strategies (CRISS), Reading Apprenticeship, Literacy First, and Strategic Instruction Model–Content Literacy Continuum (SIM–CLC). While not an exhaustive list of the professional development interventions available, these seven represent the types of external support that schools might access. Of the seven interventions, only Concept-Oriented Reading Instruction has had several quasi-experimental studies and an experimental study conducted on its effectiveness. In addition, four interventions—ReadAbout, CReating Independence through Student-owned Strategies, Reading Apprenticeship, and Strategic Instruction Model–Content Literacy Continuum—are currently the focus of federally funded studies that will examine the interventions' effectiveness through experimental studies.

A primary purpose of this report is to compare these interventions in a way that is helpful to decisionmakers. One important dimension of comparison is the extent of evidence of intervention effectiveness.

In addition, the report offers the following practical guidance to decisionmaking teams tasked with finding ways to support content-area teachers in improving reading across the curriculum:

1. Consider professional development interventions in light of a clear understanding of the changes desired and the local context.

2. Think about the selection of a professional development intervention as part of an evidence-based decisionmaking cycle.

3. Consider structuring a comprehensive planning process that goes beyond selecting a professional development intervention.

Following a thoughtful evidence-based decisionmaking process should enhance the likelihood that a district or school reading across the curriculum initiative will achieve the desired outcomes.

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When selecting reading across the curriculum interventions, educators should consider the extent of the evidence base on intervention effectiveness and the fit with the school or district context, whether they are purchasing a product from vendors or developing it internally. This report provides guidance in the decisionmaking.

Ensuring adequate ongoing literacy development for all students in the middle and high school years is a more challenging task than ensuring excellent reading education in the primary grades for two reasons: first, secondary school literacy skills are more complex, more embedded in subject matters, and more multiply determined; second, adolescents are not as universally motivated to read better or as interested in school-based reading as kindergartners (Biancarosa & Snow, 2004, p. 1).

Despite the critical role that literacy plays for adolescents, national reading results from the National Assessment of Educational Progress show that the proportion of 12th graders scoring at the proficient level or better declined from 40 percent in 1992 to about a third in 2002 (NCES, 2003). Many states, districts, schools, educational support organizations, and foundations have identified improving adolescent literacy outcomes as a pressing need (Biancarosa & Snow, 2004; Bottoms, 2005; Kamil, 2003; Meltzer, 2001; National Association of State Boards of Education, 2006). Working across content areas with teachers at the middle and high school level and with adolescents who are generally less motivated to read the older they get (Kamil, 2003) makes this a difficult challenge. The problem cannot be solved simply by having all students take a reading course or by ramping up the reading requirements in state content-area tests.

The challenge requires a significant change in expectations for how content-area teachers embed reading materials, strategies, demands, assignments, and assessments into their courses. For example, when the Georgia Department of Education incorporated standards on reading across the curriculum as part of the 2004 revisions to the Georgia Performance Standards, it sought information on professional development interventions to support teachers' efforts to integrate these new expectations about reading into their teaching. In response to such requests this report provides information on state initiatives in adolescent

BOX 1

How the interventions were identified

Interventions were selected for analysis in a three-phase process. The first phase involved gathering information from Southeast Region state education agency contacts and from documents on their initiatives in adolescent literacy. This information provides a context for how the six states in the region are beginning to address reading at the secondary level.

The second phase was a search for professional development or teacher-support interventions designed to help content-area teachers increase their attention to reading. The search for programs included lists provided by other regional educational laboratories, content centers, research centers and organizations, Southeast Region state departments of education, and federally funded literacy projects. Information was also obtained from the Education Resources Information Center, conferences, and knowledgeable researchers and practitioners. The focus was on well-articulated, readily available external interventions designed to help content-area teachers improve their students' reading in that content area. These included programs that:

- Seemed to target all content-area teachers.

- Were aimed at improving teacher instruction and assessment at the classroom level (not aimed at small groups of students).

- Were relevant for 4th through 12th grade teachers.

- Provided enough information to determine their purpose, content, audience, and desired outcomes.

- Were currently in use (not under development).

- Were available for purchase from external vendors.

The following seven interventions were identified: ReadAbout, Reading in the Content Areas, Concept-Oriented Reading Instruction (CORI), CReating Independence through Student-owned Strategies (CRISS), Reading Apprenticeship, Literacy First, and Strategic Instruction Model–Content Literacy Continuum (SIM–CLC). This is not an exhaustive list, but it represents the types of external support that schools in the Southeast Region might access.

The third phase involved a search for evaluation reports and studies on the seven interventions so that the extent of the evidence base on effectiveness could be described.

literacy and on external professional development or teacher support interventions designed to help content-area teachers increase their focus on reading. The report also describes the available evaluation data on the interventions identified for review.

Seven interventions were identified (see box 1 and appendix A for methodology) and compared to provide a good understanding of their approach and evidence base. The evaluation results are described in a way that should help educators understand the limitations of certain evaluation methodologies in drawing conclusions about program impact. Of the seven interventions, only Concept-Oriented Reading Instruction (CORI) had several quasi-experimental studies and an experimental study conducted on its effectiveness. In addition, four interventions—ReadAbout, CReating Independence through Student-owned Strategies (CRISS), Reading Apprenticeship, and Strategic Instruction Model–Content Literacy Continuum (SIM–CLC)—are currently the focus of federally funded studies that will examine the interventions' effectiveness through experimental studies.

The report also provides guidance to decisionmaking teams engaged in finding ways to support content-area teachers in improving reading across the curriculum. In particular, practical guidance is provided through three recommendations:

1. Consider professional development interventions in light of a clear understanding of the changes desired and the local context.

2. Think about the selection of a professional development intervention as part of an evidence-based decisionmaking cycle.

3. Consider structuring a comprehensive planning process that goes beyond selecting a professional development intervention.

Following a thoughtful evidence-based decision-making process should enhance the likelihood that a district or school reading across the curriculum initiative will achieve the desired outcomes.

WHAT THE SOUTHEAST REGION STATES ARE DOING NOW

Although all six Southeast Region states (Alabama, Florida, Georgia, Mississippi, North Carolina, and South Carolina) have some form of adolescent literacy initiative under way, the intensity of efforts in professional development for content-area teachers varies. (Appendixes B and C provide background information on the work of each of the six state education departments.) A sample set of state activities is briefly introduced below as context (table 1).

Working on reading across the curriculum standards

Georgia began by creating new performance standards to ensure that literacy skills are expected of students in all content areas. These standards are expected to drive professional development planning for teachers at the local level. Georgia first implemented its performance standards in 2004/05. Its new Reading Across the Curriculum Standards have been developed in science, social studies, math, and language arts for all students in grades 6–12.

Providing professional development to support teachers

A key assumption of most states is that content-area teachers need support in making instructional and assessment improvements to strengthen reading. The Alabama Reading Initiative is an ongoing state-developed and -managed professional development program that offers an intensive two-week workshop each summer. The training is provided to school teams that must apply to participate. After much experience providing professional development at the elementary and middle school levels, the state is expanding its literacy efforts to professional development for high schools.

Content Area Reading Professional Development in Florida is an in-service program that qualifies participants to serve as reading-intervention teachers in their content areas. It will be available soon to provide educators with a reading endorsement (http://www.justreadflorida.com/endorsement/).

North Carolina provides several professional development options related to adolescent literacy. For example, LEARN NC provides online courses for content-area teachers addressing content-area reading comprehension in kindergarten through eighth grade (http://www.learnnc.org and http://www.ncpublicschools.org/profdev/online/).

Using literacy coaches to help teachers

The Southeast Region state education agencies are interested in literacy coaches as a way of helping teachers improve their instruction in reading. The

TABLE 1

Summary of state adolescent literacy activities

Initiative component	Alabama	Florida	Georgia	Mississippi	North Carolina	South Carolina
Reading Across the Curriculum Standards			✓			
Professional development currently offered for content-area teachers	✓	✓	✓		✓	✓
Literacy coaches	✓	✓			✓	✓
Evaluation of professional development	✓	✓				✓

North Carolina Governor's Office recently funded 100 literacy coaches to work in the lowest performing middle schools. Florida requires districts to include literacy coaches to work with content-area teachers on improving reading skills as part of their district plans. South Carolina uses regional and district literacy coaches. These coaches work in classrooms to provide support to South Carolina Reading Initiative teachers, guide twice monthly discussion meetings, and participate in monthly summer groups to better understand the reading process. The regional literacy coaches provide ongoing support to district literacy coaches to ensure that teachers can make the connection between what they are learning and how they apply it in the classroom. Although the use of literacy coaches is prevalent, the states are still trying to determine whether the coaches are an effective means of improving student literacy.

> Some states are conducting evaluations of their professional development efforts to inform their decisionmaking

Evaluation of professional development initiatives is limited

Evaluation reports describing the implementation or impact of professional development programs or other kinds of support in adolescent literacy are limited, because most states are in the planning stages of improving reading instruction in content areas. However, Alabama and South Carolina have examined the impact of their professional development work on teachers and students. A report on the Alabama Reading Initiative noted that the initial delivery of the professional development was "one size fits all" with content focused on the elementary grades (Bacevich & Salinger, 2006). Secondary teachers had to adapt the materials to the needs of their students. As part of an in-depth study of the South Carolina Reading Initiative, South Carolina collects data from participating teachers and coaches to monitor changes in practice and discern how teachers are applying information from professional development to the classroom. The study also looks at changes in students' skills and strategies (South Carolina Reading Initiative, 2003). Florida has research under way through work with the RAND Corporation to study the impact of reading coaches on student achievement.

IDENTIFYING WHAT INTERVENTIONS ARE AVAILABLE TO SUPPORT TEACHERS

With the Southeast Region state departments of education still exploring strategies and professional development approaches designed to improve reading outcomes at the secondary level and

TABLE 2

Summary of selected interventions and status of research on effectiveness

Intervention	Grades served	Status of research on effectiveness
Category 1: Supplementary materials		
ReadAbout	3–8	Research in progress
Reading in the Content Areas	6–12	None yet
Category 2: Professional development programs		
Concept-Oriented Reading Instruction (CORI)	3–12	Completed
CReating Independence through Student-owned Strategies (CRISS)	3–12	Research in progress
Reading Apprenticeship	6–12	Research in progress
Category 3: Professional development as schoolwide effort		
Literacy First	6–12	None yet
Strategic Instruction Model–Content Literacy Continuum (SIM–CLC)	6–12	Research in progress

with few evaluations of state programs available, it is important that decisionmakers know about the types of interventions available.

The main question addressed in this section is what reading across the curriculum interventions might be considered in plans to improve reading outcomes at the secondary level. Seven interventions were identified for review (see box 1 and appendixes A and B) and organized by type (table 2).

Brief description of the seven interventions

Category 1: supplementary materials in support of content-area reading skills. At the simplest level of support content-area teachers may need supplementary materials to provide instruction in reading comprehension. These types of approaches assume that teachers just need more materials. The materials are organized and sequenced to bring strategies identified by research into the classroom. They provide materials for teachers to use in direct instruction of strategies along with reading materials for students to practice.

1. *ReadAbout,* developed by Scholastic, Inc., is intended for use in mixed-ability classrooms in grades three to eight as a way of differentiating reading instruction and giving students practice in nonfiction texts. ReadAbout offers students self-managed, online supplementary readings and strategy instruction. Recommended for use for 20 minutes, three times a week, the program includes:

- ReadAbout software.

- Independent reading cards.

- Teacher's guide.

- Two days of teacher training on the Read-About software and two half-day supplemental seminars on reading motivation and writing strategies.

The strategies taught include 10 comprehension skills and 7 strategies, vocabulary acquisition, and writing. Students build their content-area knowledge with readings in science, social studies, and life experiences. The software includes motivating activities with immediate feedback, video segments, and continuous online assessment. Extra support is provided for English language learners and struggling readers.

2. *Reading in the Content Area,* developed by Globe Fearon Publishers, is intended to build content literacy through high-interest, real-life readings for grades four to seven (Shanahan, 2005). The materials can be used by any teacher as part of regular instruction, not just in remedial situations. The intervention includes:

- A vocabulary handbook and workbooks on reading strategies for four content areas (social studies, science, mathematics, and English).

- Teacher's guide for each workbook and a guide with tips for helping students read to learn.

- Placement guide.

The strategies taught include use of graphic organizers and study strategies for before, during, and after reading; Cornell note-taking; outlining; survey, question, read, recite, review; and strategies for dealing with content area vocabulary (Kinsella, 2000). It uses a direct-instruction strategy teaching model (introduce the strategy, model it, use a think-aloud lesson plan, review the strategy, and use workbook for guided practice).

> **At the simplest level content-area teachers may need supplementary materials to provide instruction in reading comprehension**

Category 2: professional development course or program. Category 2 approaches assume that teachers need professional development in helping students become more effective readers in the content areas.

3. *Concept-Oriented Reading Instruction (CORI)* was developed by University of Maryland College

Park researchers John Guthrie and Allan Wigfield to increase the time students are engaged in reading. The objective is for students to be engaged in reading 60 minutes daily. Therefore, the professional development associated with it works with teachers to envision what a classroom of engaged readers would look like. The classroom goals focus on improved reading comprehension, writing, science (as the content area of emphasis), and student motivation (Guthrie & Davis, 2003). Although the program was developed for use by third and fourth grade teachers, it is included here because of its focus on components that are hypothesized as critical for engaged reading in the classroom and its expansion to 6th through 12th grade teachers (Guthrie et al., 2004). The professional development program helps teachers to:

- Use practices to motivate students to read independently.

- Teach cognitive strategies for reading comprehension.

- Provide a deep knowledge base in science as the source of content reading.

> **Category 2 approaches assume that teachers need professional development in helping students become more effective readers in the content areas**

Ten days of training are required for teachers to learn about the strategies and plan for implementation of the 12 weeks of science materials. The curriculum guides include sample daily plans, sample weekly plans, booklists for student reading, and student worksheets for summarizing and portfolio use. Two books, *Monitoring Reading Comprehension: Concept Oriented Reading Instruction* and *Concept Oriented Reading Instruction: Engaging Classrooms, Lifelong Learning*, explain the practices and components and help teachers plan integrated units of instruction for creating engaged readers.

4. *CReating Independence through Student-owned Strategies (CRISS)* dates back to 1979, when a small group of Kalispell, Montana, teachers developed a

professional development program for secondary teachers. The program was designed to provide content-area teachers and their students with a common vocabulary for strategies in reading to learn. Professional development includes 12–18 hours of staff development that prepares teachers in grades 4–12 to implement, in their respective content areas, the strategies outlined in a teachers resource guide and a materials packet (Santa, 2004). Two teachers from each content area and school-level and district-level administrators are invited to the training. The strategies include:

- Identifying the author's craft and design.

- Organizing information.

- Developing memory.

- Writing reports and taking essay tests.

- Writing strategies.

- Developing vocabulary.

- Discussing strategies.

- Evaluating students.

The strategies are intended as part of regular course instruction when students are learning content.

5. *Reading Apprenticeship,* developed by WestEd's Strategic Literacy Initiative, began in 1995 as a support system for content-area teachers in San Francisco. Reading Apprenticeship involves a complex set of interrelated components that together enable content-area teachers to engage students as critical readers. The goal of the professional development is to help content-area teachers develop more confident, engaged, and strategic readers who can read to learn in their content courses. The professional development program uses case studies to encourage participants to rethink their approach to teaching content. The program assumes that there are specific ways of

reading and thinking in each discipline and that teachers need to become experts in modeling these processes for their students. It is articulated as an "instructional framework" rather than an isolated set of strategies for students to use. "In Reading Apprenticeship classrooms teachers reconceptualize subject-area learning as an apprenticeship in discipline-based practices of thinking, talking, reading, and writing" (Schoenback, Braunger, Greenleaf, & Litman, 2003, p. 134).

There are four dimensions of the instructional framework that organize the work (Greenleaf, Schoenbach, Cziko, & Mueller, 2001):

- Social dimension, such as sharing book talk and sharing reading processes.

- Personal dimension, such as developing reader fluency and stamina, assessing performance, and setting goals.

- Cognitive dimension, such as monitoring comprehension and using problem-solving strategies.

- Knowledge-building dimension, such as vocabulary, knowledge of text structures, and developing topic knowledge.

Overarching the four dimensions is an emphasis on helping teachers implement "metacognitive conversations" in which students reflect on their mental processes in reading and learning and share their reading processes and strategies (RAND Reading Study Group, 2002).

Category 3: professional development as a schoolwide effort. Two interventions are described as structured support for schoolwide efforts to rethink how literacy expectations are embedded in content courses. As Lenz, Ehren, & Deshler (2005, p. 61) explain, "Positioning literacy improvement efforts as a sidebar to other goals in secondary education has lessened the importance of secondary schools in preparing our children to compete in society and has consistently and

systematically left millions of students behind." A schoolwide approach to literacy seeks to engage every teacher in coordinated literacy improvement efforts.

Like the other interventions the two interventions in this category pay attention to the use of cognitive learning strategies, but unlike the others they do it within the context of a schoolwide, multiyear goal of improving students' literacy skills across content areas.

6. *Literacy First Middle and High School Content Area Process,* developed in 1998 at the Professional Development Institute, is one of four Literacy First models. The other three models address early childhood, elementary and middle school, and high school struggling readers. The goal of the content-area process is to significantly increase achievement of all students in every content-area class and requires a commitment from the whole school, demonstrated by a three-year strategic reading plan.

> **Category 3 interventions provide structured support for schoolwide efforts to rethink how literacy expectations are embedded in content courses**

Principals, literacy specialists, district administrators, and all content-area teachers participate in professional development. The program for teachers is spread over five days during each school year for three years. Principals, secondary literacy specialists, and district administrators attend an annual two-day Leadership Institute to develop their instructional leadership skills. In addition, a Literacy First consultant provides eight consulting days a year for three years. Professional development includes:

- Lesson planning techniques.

- Instructional strategies to engage students in the content.

- Instructional strategies to increase student vocabulary.

- Comprehension strategies customized to the content areas.

- Strategic reading and thinking tools.

- Strategies to help students with metacognition.

Teachers in the content area receive a teachers manual and three resource books that focus on comprehension skills, strategic reading and thinking tools, metacognitive processes, and vocabulary development.

7. *Strategic Instruction Model–Content Literacy Continuum (SIM–CLC)*, developed by the University of Kansas Center on Research and Learning, aims to help secondary schools develop and implement a comprehensive literacy plan over three to four years (Lenz, Ehren, & Deshler, 2005). Initially, the researchers hoped to identify strategies that would meet the needs of adolescents with disabilities and low-achieving students who struggled with the challenges of reading in content-area classes, but they believed that the same strategies were important to help all students learn. The Content Literacy Continuum builds on the Strategic Instruction Model research and focuses on literacy as a schoolwide effort.

The program introduces teachers to a complex array of strategies for use with a wide range of students. It includes five levels: content mastery,

embedded strategy instruction, explicit strategy instruction, intensive skill development, and intensive clinical intervention. The levels are explained in various manuals and on a CD-ROM. The program is implemented over four phases, beginning with planning and analysis of student and school data. The intent is to support schools over a sustained period in helping all students learn critical content, regardless of their literacy skills.

Comparing interventions by expressed and measured teacher outcomes

Before selecting an approach to support content-area teachers in improving reading across the curriculum, the decisionmaking team must be able to articulate the key knowledge or skills that teachers are supposed to gain from the professional development experiences. What does the intervention program provider say about the aspects of teaching that will be improved? Will teachers learn concrete practices that can be used immediately or will they learn a framework and have to figure out how to apply what they learned on their own?

Expressed intervention outcomes for teachers. This section compares interventions in terms of their expressed goals for participating teachers (table 3).

- *Cognitive strategies.* All the interventions focus on providing teachers with additional

TABLE 3
Main focus of five interventions

Intervention	Cognitive strategies	Content-specific planning	Writing	Student engagement	Social interactions (discussions)	Assessment and meta-cognitive strategies
Concept-Oriented Reading Instruction (CORI)	✓	✓	✓	✓	✓	✓
CReating Independence through Student-owned Strategies (CRISS)	✓		✓		✓	✓
Literacy First	✓		✓		✓	✓
Reading Apprenticeship	✓		✓	✓	✓	✓
Strategic Instruction Model–Content Literacy Continuum (SIM–CLC)	✓	✓	✓		✓	✓

instructional strategies in reading comprehension, vocabulary, and sometimes critical-thinking skills and fluency. The instructional strategies are key to all these interventions, but the form of the support differs (ranging from resources used by individual teachers, as in Reading in the Content Area, to phasing in for an entire faculty over 3–4 years, as in Strategic Instruction Model–Content Literacy Continuum).

- *Approaches to content planning.* Concept-Oriented Reading Instruction, Literacy First, and Strategic Instruction Model–Content Literacy Continuum focus on changing teachers' approaches to planning in the content areas. Concept-Oriented Reading Instruction expects teachers to develop units in the content area that embed the research-based cognitive and motivational strategies they are taught. Strategic Instruction Model–Content Literacy Continuum spends 28–32 hours of workshop time on content organization and planning during the first two phases of implementation. Although some approaches assume that teachers know their content and can readily incorporate new strategies, others recognize the need to provide support for lesson and unit planning to make content more accessible and interesting to students.

- *Motivation and engagement in reading.* Teachers are expected to learn motivation strategies in ReadAbout (if they take the supplemental seminar), Concept-Oriented

Reading Instruction, and Reading Apprenticeship. Concept-Oriented Reading Instruction and ReadAbout are explicit about teachers learning motivational strategies. ReadAbout offers optional half-day seminars that address motivation. Concept-Oriented Reading Instruction expects teachers to learn how to promote engaged reading through hands-on activities, student choice, interesting text, and collaboration. Reading Apprenticeship offers an instructional framework of four dimensions for content teachers to consider in planning instruction. One is the personal dimension, which includes practices that lead to increased confidence and engagement of student readers.

Measured intervention outcomes for teachers. Interventions that have a heavy focus on improving teacher practice should provide a way to measure the growth in teacher practice over time to see whether the desired growth occurs. Data may come from classroom observations, teaching artifacts, teacher interviews or surveys (table 4), or interviews with students (asking them to report on teachers' use of strategies taught in the professional development). Teachers' self-reporting of their use of practices is often not very reliable; students may be better able to report on what their teachers are doing.

Studies of Strategic Instruction Model–Content Literacy Continuum (for example, Bulgren, Deshler, Schumaker, & Lenz, 2000) have included classroom observers who used a checklist in examining

TABLE 4
Methods used in assessing outcomes for teachers vary by intervention

Intervention	Self-report/ survey	Classroom observation	Interviews	Artifacts[a]
Concept-Oriented Reading Instruction (CORI)		✓	✓	✓
CReating Independence through Student-owned Strategies (CRISS)	✓			
Reading Apprenticeship		✓	✓	✓
Strategic Instruction Model–Content Literacy Continuum (SIM–CLC)	✓	✓	✓	

a. Journals, reflections, lesson plans, assignments, and student work.

teacher use of particular strategies (table 4). Reading Apprenticeship reports have mentioned collecting teacher journals, lesson plans, assignments, and student work in describing the extent of teacher implementation of the four dimensions. CReating Independence through Student-owned Strategies reports have summarized data from teacher self-report surveys that asked teachers about their use of specific instructional strategies. Studies of Concept-Oriented Reading Instruction have examined teacher implementation of lesson plans created during the professional development sessions and have observed in the classrooms to assess teachers' use of the cognitive and motivational strategies learned in professional development.

It is important for potential users to examine the instruments available from the intervention programs for assessing and providing feedback to teachers on their implementation of desired practices. Reviewing these instruments will help in understanding what kind of teacher change the intervention is focused on and how the school might monitor classroom implementation.

What evidence is there on the effectiveness of interventions?

In choosing among interventions, evidence of effectiveness is critically important. What levels of evidence are available for the various interventions examined here?

Some interventions build on prior empirical research. A central aspect of all the interventions reviewed is a focus on helping teachers across the content area with *cognitive strategies* for teaching adolescents to read more efficiently and effectively. This is consistent with the *Report of the National Reading Panel* (National Reading Panel, 2000) that cites research studies on the positive effects of cognitive strategies for increasing reading comprehension. Such strategies include questioning, concept mapping, summarizing, and monitoring comprehension.

> **Existing empirical research cannot inform teachers about how often to use a strategy or when to use it in a particular content-teaching application**

Whether particular strategies or combinations of strategies can be used to improve poor reading performance has received considerable attention from researchers. Much of the adolescent literacy research since 1990 has focused on strategies to improve the reading skills of adolescents who are experiencing difficulty. For example, the Strategic Instruction Model–Content Literacy Continuum intervention emerged from 20 years of research at the University of Kansas on strategy instruction that works with students with disabilities. That research showed that students can learn the steps of a particular strategy, such as "paraphrasing," at a high level of proficiency.

However, the Florida Center for Reading Research (2006, p. 8), which provides summaries of interventions, points out in a review of the Strategic Instruction Model–Content Literacy Continuum that the link between strategy use by students and reading outcome measures is not fully established: "studies reviewed found inconsistent results of the impact of strategy use on reading comprehension or found no differences in reading comprehension between students who learned a strategy and those who did not use a strategy."

The implication of this research on special populations is that it is unclear which strategies in which combinations are most effective for use across the curriculum. Existing empirical research cannot inform teachers about how often to use a strategy or when to use it in a particular content-teaching application. The Strategic Instruction Model–Content Literacy Continuum developers emphasize that there is no single foolproof strategy. Rather, their goal is to provide teachers with an array of possible learning strategies to teach students, with the understanding that teachers will need flexibility in adapting the strategies to the needs of different classrooms. Similarly, the CReating Independence through Student-owned Strategies program models an array of strategies, but it is up to the teacher to choose among them.

Still other interventions add to the focus on cognitive strategies—a focus on strategies to *improve*

reading motivation and engagement. Guthrie et al. (2004, p. 403) developed the Concept-Oriented Reading Instruction intervention to address this component:

> *Relatively little investigation has been conducted on how multiple strategies can be combined in long-term comprehension instruction within the classroom, and more studies of this kind are needed. Even fewer investigations have addressed issues related to motivation in reading instruction. It is increasingly evident that the acquisition of reading strategies and reading comprehension skills demands a large amount of effort and motivation and that outstanding teachers invest substantial time and energy in supporting students' motivation and engagement in reading.*

They explain that motivated students may want to understand a text more deeply and therefore take the time to process the text more completely. Motivated students would tend to read more frequently with a more engaged mindset and thus should gain in reading proficiency.

Guthrie et al. (2004) conducted a study that directly compared a combined-delivery model for teachers (cognitive strategies plus motivation strategies—Concept-Oriented Reading Instruction)—with a single cognitive strategy-only model and also with a traditionally instructed group. The study found that the Concept-Oriented Reading Instruction students measured higher than the other two groups on indicators of reading comprehension, reading motivation, and reading strategies. However, the study was conducted with third graders, so it is not known whether the findings would generalize to secondary teachers.

Another intervention that focuses explicitly on incorporating motivation into work with teachers is Reading Apprenticeship, which proposes that content-area teachers organize classrooms around four overlapping dimensions of students' reading development (social, personal, cognitive,

and knowledge building). The personal dimension is connected to motivation and is defined as the things teachers do that help students develop a reader identity, metacognition, reader fluency and stamina, and reader confidence and range, as well as assess performance and set goals.

Before and after data reported by developers is a first basis for claims of effectiveness—but a weak one. One of the most common approaches developers use to describe the added value of their interventions for teachers is to look at how teachers or students change from before to after the professional development. For example, the two following interventions report before and after data on students in their descriptive materials:

> **Changes in reading achievement after program implementation can reflect the influence of many variables**

Reading Apprenticeship (RA):

> *In five studies conducted since 1997, students whose teachers participated in RA training have become more confident, engaged, and strategic readers. In one study, students in RA classrooms gained two years' reading proficiency in seven months. In another study, students in RA classrooms made significant gains in their national reading percentile ranking. In one urban district, English learners grew as much as their fluent-English speaking peers, and students initially scoring the lowest quartiles made the most rapid gains (http://www.wested.org/cs/we/view/serv/10).*

Literacy First:

> *Principals in Literacy First schools in Florida, North Carolina, and Washington all report a significant increase in students passing state or nationally normed assessment as a result of implementing the Content Area Process (http://www.literacyfirst. com/content.asp).*

Although these reports help potential users understand the impacts they may experience from using the intervention, they do not represent high-quality information about effectiveness. Changes in reading achievement after program implementation can reflect the influence of many variables. Developers often report score increases at schools they have worked with, but it is very difficult to interpret these data as reflecting the impact of a single intervention. Many interventions are likely going on at the same time in most schools.

Another concern with statements such as that from Literacy First is that it is difficult to know how many schools they worked with did not experience positive increases. Typically, intervention developers will report the achievement data from schools they worked with most intensively (their success stories), which makes it difficult to know whether it was just the unusual combination of people in the school who took the ideas from the intervention, adapted them, and made them work—or whether it was really the intervention that made the difference. Thus, developers who report having worked with schools that experienced significant increases in achievement are providing a beginning basis for their intervention's claim of effectiveness, but a very weak one.

> **Three interventions report findings based on quasi-experimental studies**

A few quasi-experimental studies are available and show mixed results. The next level of evidence an intervention might explore is whether participants in their program experienced more positive results on desired outcomes than a comparison group (identified for the evaluation because it was similar in make-up to participants in the intervention). Three interventions report comparison data: ReadAbout, CReating Independence through Student-owned Strategies, and Reading Apprenticeship. Although having comparison data is important and provides more information about outcomes than before and after data with no comparison group, finding existing groups that are equal to the participant group on all dimensions is difficult. Thus, there are limitations to drawing solid

conclusions about intervention effectiveness from quasi-experimental evaluation designs in which participant results are compared with a selected group of nonparticipants.

In contrast to quasi-experimental designs, true experimental designs use random assignment of potential participants to either the intervention group or the control group. Random assignment ensures that there are no preexisting differences between the two groups (such as higher motivation in the intervention teacher group if teachers volunteer). True experimental design provides potential users with greater assurance that any differences between the two groups are due to the intervention and not to preexisting differences between participants and nonparticipants.

Three interventions report findings based on quasi-experimental studies:

- *ReadAbout.* This intervention recently concluded a quasi-experimental study with fifth grade students in New York. The results are not yet available.

- *CReating Independence through Student-owned Strategies.* O'Neil and Associates conducted an evaluation during the 2001/02 and 2002/03 school years in two large Utah school districts using a pre-test and post-test design with a comparison group. As mentioned, a general limitation of this design is that teachers who choose or are selected to participate in the intervention group may be better, more motivated, or more experienced. Thus, positive differences in their students' outcomes compared with those of students of a comparison group of teachers may reflect this preexisting difference rather than the impact of the intervention.

  The outcome measure, a free-recall assessment developed by the program, was used following student reading of a particular content-area selection. Free-recall assessment is a fairly narrow measure of what students

should be gaining from the multiple strategies teachers learn from participating in CReating Independence through Student-owned Strategies. The finding that students of program-trained teachers did better on this measure of free recall does not necessarily mean that they understood the selection any better. No correlational data between this measure and standardized measures of reading comprehension were found; thus, the relation between this program-developed measure and typical reading achievement measures is not clear.

- *Reading Apprenticeship.* WestEd analyzed student data from implementation of a ninth grade Academic Literacy course for below grade-level students that incorporates the four dimensions of the Reading Apprenticeship instructional framework. Significant differences were reported between Reading Apprenticeship students' fall to spring gains compared with the performance of the nationally normed group for the standardized test (Degrees of Reading Power test). This kind of comparison of intervention student results with results for a nationally normed group is fairly weak because the comparison group is not selected for its similarity to the participant group. Nothing is known about how alike or different the characteristics of the comparison group are to those of the participating group.

  No reports of studies could be found that used comparison groups to examine how content-area teachers who go through Reading Apprenticeship training but are not implementing the ninth grade Academic Literacy Course change their practice compared with a comparison group of similar teachers or how their students compare on student achievement measures.

Only one true experimental study with random assignment is available, but others are under way. Rigorously designed experiments that use random assignment of teachers or schools to the intervention or a control group and then examine differences between the groups in measured outcomes

are time consuming and challenging to conduct. Concept-Oriented Reading Instruction has conducted the most extensive set of experimental and quasi-experimental studies. Because the development of this intervention emerges from an ongoing research program at the University of Maryland, research on the intervention builds on prior research on the relationship between reading motivation and reading achievement (Guthrie & Wigfield, 2000; Guthrie et al., 2006).

The question addressed by Guthrie and colleagues is whether an intervention that teaches teachers research-based cognitive strategies and student motivation and engagement strategies will improve student outcomes. In a series of quasi-experimental and experimental studies, they examined whether teachers trained in both the cognitive and motivational strategies (Concept-Oriented Reading Instruction group) got better results than either comparison teachers who received no training or teachers trained in the use of cognitive strategies alone.

- A study using random assignment of schools to two training conditions found that Concept-Oriented Reading Instruction-trained third grade teachers surpassed teachers trained in strategy instruction only in student performance on reading comprehension, reading motivation, and reading strategy measures (Guthrie et al., 2004).

- Using a quasi-experimental design, Concept-Oriented Reading Instruction teachers surpassed comparison group teachers in student performance on reading comprehension and reading strategy use (Guthrie et al., 1998).

- Using a quasi-experimental design Concept-Oriented Reading Instruction teachers surpassed comparison group teachers in student

Several of the interventions are currently the focus of federally funded studies that will address the intervention's effectiveness through experimental studies

performance on reading motivation (Guthrie, 2004).

Although several of these studies are quasi-experimental, they are included in this section because the studies as a whole constitute a well-developed research program with both quasi-experimental studies and true experimental studies (with random assignment). Ideally, an intervention that claims to be scientifically based should have replicable findings across various methodologies. Guthrie and colleagues have conducted both rigorous quasi-experimental and experimental studies that show that Concept-Oriented Reading Instruction has a significant impact on student outcomes. Their published research provides enough information to examine and critique the designs and replicate the evaluation designs in various settings, grade levels, and content areas to continue to explore effectiveness.

> **Decisionmaking to improve reading across the curriculum should consider professional development interventions in light of a clear understanding of the changes desired and the local context**

Several of the interventions are currently the focus of federally funded studies that will address the intervention's effectiveness through experimental studies:

• The U.S. Department of Education's Institute of Education Sciences is studying the effectiveness of four reading comprehension programs. ReadAbout and CReating Independence through Student-owned Strategies are two of the four programs that were randomly assigned to fifth grade classrooms in nine districts across the country (U.S. Department of Education, 2006).

• An experimental study on CReating Independence through Student-owned Strategies is being planned by the Northwest Regional Educational Laboratory. The study will focus on ninth graders, and schools will be randomly assigned to participate or not.

• WestEd received an award from the U.S. Department of Education's Institute of Education

Sciences in 2005 to study the efficacy of Reading Apprenticeship in high school history and science teaching.

• Strategic Instruction Model–Content Literacy Continuum is also proposed for an experimental study of its effectiveness, to be conducted by the regional educational laboratory system. In addition, it is being studied by Brown University and RMC Research Corporation through a U.S. Department of Education Striving Readers Grant.

MAKING DECISIONS ABOUT INTERVENTIONS TO IMPROVE LITERACY ACROSS THE CURRICULUM

This section provides practical guidance for decisionmaking to improve reading across the curriculum. It considers professional development interventions in light of a clear understanding of the changes desired and the local context. It suggests thinking about the selection of a professional development intervention as part of a decision-making cycle. And it recommends structuring a comprehensive planning process that goes beyond selecting a professional development intervention.

Consider professional development interventions in light of a clear understanding of the changes desired and the local context

Interventions designed to provide support to teachers can have impacts at two levels: teacher practices and student outcomes. The decisionmaking team needs to articulate its own desired outcomes in order to choose a professional development intervention that aligns with its goals and to be able to follow up on whether teachers and students change in the desired ways. For example, the following scenarios for desired outcomes are very different and lead to consideration of different interventions.

Scenario 1. Goal : to find supplemental material to use with students. Content-area teachers at a school have expressed concern that they do not have the curriculum materials to embed more reading

comprehension into the content-area instruction in their courses, as required by the state's new reading across the curriculum standards. State reading achievement scores at the school are very high, so increasing reading achievement is not the primary focus. Rather, the decisionmaking team, curriculum director, and literacy coach are focused on finding the best supplementary materials for teachers to use to increase students' opportunities and success in reading to learn in the content area. Thus, the primary desired outcomes are that teachers will be able to use the supplementary materials and that students will find them helpful and engaging.

Since the investment in teachers' time and effort is modest, the decisionmaking team may decide to have a few teachers pilot various published materials and then compare them on dimensions that matter to them, such as ease of use, student responsiveness, and student-engaged reading time.

Scenario 2. Goal: to support content-area teachers in embedding cognitive and motivational strategies into instruction. A school improvement team is looking for a professional development experience for teachers across the content areas to help them teach students cognitive strategies for improving reading comprehension. The school wants to help teachers teach students more explicitly how to organize and process information when students read their assignments.

One thing decisionmakers may need to think about before sending a team of teachers to learn new strategies is how to support teachers in incorporating the strategies into their lesson plans and how to continue to enable teacher discussions about the impact of the strategies on students' reading assignments. The desired outcome is that teachers return from the professional development with concrete strategies for their content-area teaching to support deeper student reading and understanding in the content-area reading assignments. Someone in the school will need to be assigned to monitor the use of strategies after the professional development to determine whether follow-up is needed.

Consider finding out more about:

- *CReating Independence through Student-owned Strategies*—2–4 days with local observation.

- *Concept-Oriented Reading Instruction*—5 days in summer, 5 days during the year, with 4–6 months for planning and implementation of a unit.

- *Reading Apprenticeship*—up to 8 days.

Scenario 3. Goal: to engage in systematic long-term school change around the teaching of literacy across content areas. A school improvement team is thinking about a multiyear, schoolwide literacy across the curriculum initiative to change how teachers think about literacy so that all students become more confident, engaged, and strategic readers. The team understands that achieving this comprehensive goal will take involvement by all teachers over time in reflecting on their current lesson and unit planning, with a new understanding of how students become literate in course content. The desired outcomes are that teachers will:

- Provide more frequent opportunities for supported reading experiences.

- Give regular and explicit coaching in discipline-based strategic-thinking processes.

- Foster a collaborative, inquiry-oriented classroom environment.

- Support and model metacognitive conversation with students.

For this broad vision of content-area teaching to emerge, school-based expertise will need to be developed to support teachers as they experiment with ways of moving toward the vision. An

> **Someone in the school will need to monitor the use of strategies after the professional development to determine whether follow-up is needed**

ongoing relationship with the external provider may also be critical to keep the school focused over several years. Monitoring teachers' progress and student motivation and engagement in reading will be important. A secondary goal for the planning team may be to reduce the amount of pull-out reading remediation that is needed.

Consider finding out more about:

- *Literacy First*, which is staged over three years (used primarily for Title I schools to "accelerate reading achievement").

- *Strategic Instruction Model–Content Literacy Continuum*, which is staged over 3–4 years.

Consider the selection of a professional development intervention as part of a decisionmaking cycle

The Institute of Education Sciences of the U.S. Department of Education has defined evidence-based

decisionmaking as routinely seeking out the best available information on prior research and evaluation findings before adopting programs or practices that demand extensive material or human resources (including funding and teacher time) and affect significant numbers of students (Whitehurst, 2004).

This report should help school and district decisionmakers faced with deciding how best to provide support to content-area teachers at the middle and high school level in ratcheting up their focus on reading in the content area. This review of seven interventions is designed to help secondary school teachers improve reading outcomes across the curriculum through changes in instruction and assessment. The decisionmaking cycle illustrated in figure 1 shows how various inputs or sources of information can be used in selecting and implementing an intervention. The figure is a way of describing what evidence-based decisionmaking might look like in action.

FIGURE 1
The evidence-based decisionmaking cycle
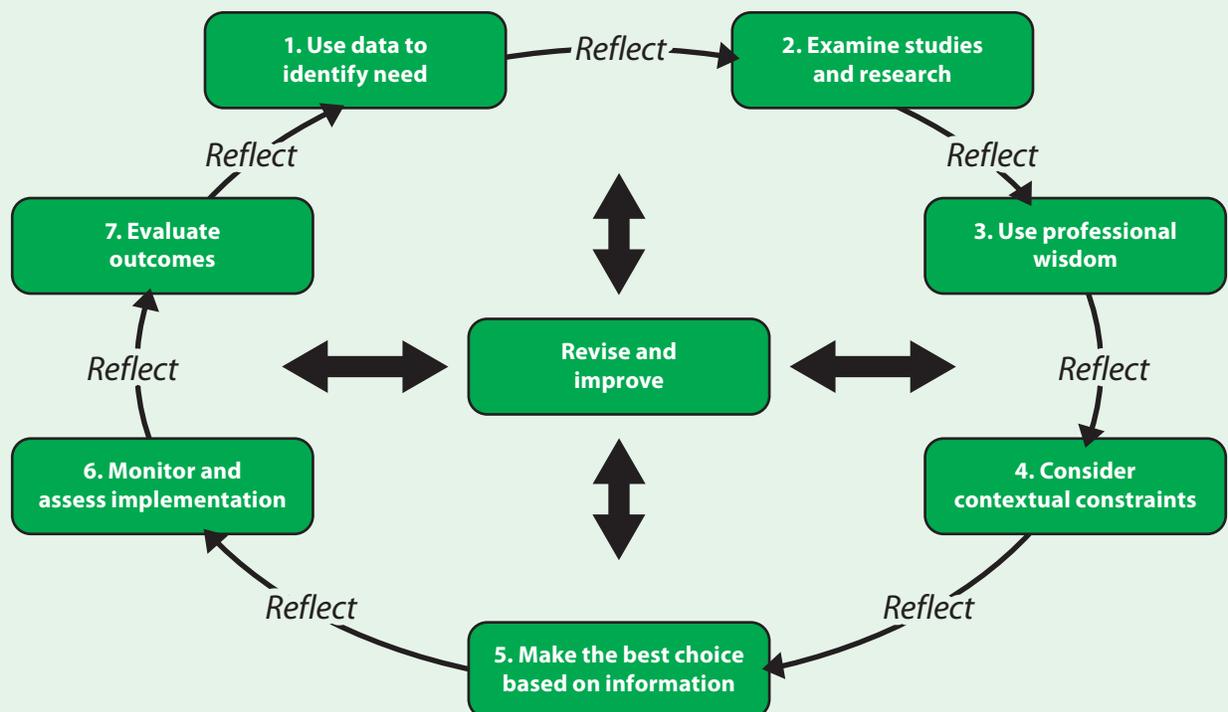
Following a thoughtful decisionmaking process about interventions as outlined below should enhance the likelihood that a district or school reading across the curriculum initiative will result in the desired outcomes.

1. Use data to identify need, assess the current situation, and know what level of change is expected. The seven interventions (and any others under consideration) represent different levels of expectations for teacher change. For example, the supplementary materials, such as Reading in the Content Areas, represent the least amount of expected change for teachers, whereas Strategic Instruction Model–Content Literacy Continuum requires significant work by teachers in content organization. Reading Apprenticeship and Concept-Oriented Reading Instruction both support a fairly complex instructional framework that incorporates many features into instruction that research has shown to be related to increased engagement and motivation to read. Decisionmakers may want to think about how to pilot various interventions with small groups of teachers to build internal expertise and help to decide about the kind of teacher change envisioned.

Some of the instruments available from the various interventions might be useful for conducting an initial needs assessment. For example, student motivation surveys such as those used in the Concept-Oriented Reading Instruction research could be useful for understanding where students in the school are at baseline and for convincing teachers of the need to work toward more engaged reading by students.

2. Examine studies and research. All the interventions examined focus on assisting teachers with cognitive strategies to help students process information from texts (such as paraphrasing, word identification, and summarizing). This focus reflects the finding of a number of research studies that reading comprehension improves when such strategies are used with struggling readers in small groups. However, it is important to understand that this strategy instruction approach has generally not been researched in classrooms

of students with mixed abilities. Also, research cannot inform teachers about which strategies to use with which reading assignments or how much repetition in strategy instruction is needed. So, much remains to be discussed and monitored by the implementing teachers.

The question raised by the Concept-Oriented Reading Instruction research is central in thinking about desired teacher changes to improve reading outcomes: does the addition of research-based motivation strategies (using content goals in reading instruction, promoting student-to-student collaborative learning about texts, and so on) lead to increased student engagement in reading (which is hypothesized to lead to greater reading comprehension)? Guthrie's research provides evidence (at the upper elementary level) that adding motivation strategies to cognitive strategies is more powerful than using cognitive strategies alone.

> **Research cannot inform teachers about which strategies to use with which reading assignments or how much repetition in strategy instruction is needed**

3. Use professional wisdom. Professional wisdom means that decisionmakers apply information about what has been learned from experiences with teacher change or what others are learning about the use of interventions. In a report from the Center for Evaluation and Assessment at the University of Iowa on interviews with 54 high school teachers who had attended a range of professional development offerings for improving reading outcomes, the authors conclude:

> *Nearly all the teachers interviewed believed their school's efforts to incorporate reading had been overall worthwhile and effective. They described how students' confidence, motivation, and ability with reading-related tasks had improved. Additionally, most teachers felt that low-performers, especially, benefited from the strategies. Some teachers felt that the strategies were not beneficial for high-performers, and some*

teachers felt that the reading programs were leading to a narrowed educational focus. (Stevenson & Waltman, 2006, p. 1)

This is an example of the kinds of information and food for thought in planning that can be gained from talking to teachers and others about their experiences with an intervention. The report stresses that the majority of teachers interviewed lamented the lack of time for continuing application, implementation, and discussions of the strategies learned. This is a common reaction of teachers to professional development experiences and should be taken seriously in planning.

> **The reading across the curriculum initiative may need to start small—in one school with a few teachers developing a better understanding of the need**

4. Consider contextual constraints. Elements of the school or district context that need to be considered when selecting professional development include leadership, funding, teacher attitudes and understanding of the need for change relative to students' reading outcomes, and available internal expertise for facilitating a new vision for instruction in the content areas. Teachers may be overwhelmed with other professional development requirements. Thus, the reading across the curriculum initiative may need to start small—in one school with a few teachers developing a better understanding of the need through interventions such as CReating Independence through Student-owned Strategies and ReadAbout. Another school may be responding to a districtwide strategic plan that expects significant, schoolwide attention to improving reading motivation and outcomes, with all teachers expected to be involved over time.

5. Make the best choice based on information. As noted, the evidence base for most interventions is weak. Except for Concept-Oriented Reading Instruction (studied only at the upper elementary level), no well-designed experimental studies with random assignment could be found that clearly describe a treatment group that experienced superior outcomes to those of a control group. CReating Independence through Student-owned

Strategies reports data on significant differences between participating and nonparticipating teachers on a measure of students' free recall. But because this is a program-developed measure, it is not clear what significance the measure has for students' overall reading comprehension. Thus, in terms of evaluation findings, the evidence base is not yet a significant help in decisionmaking. Before and after data presented by program developers in schools with which they have worked cannot be given much weight.

6. Monitor and assess implementation (and adjust professional development as needed). Decision-makers should consider how to monitor instructional changes that are expected to result from the professional development experience. Monitoring may be part of the role of a literacy coach, curriculum coordinator, or other teacher leader. Teachers will need time to plan, implement, and discuss what worked and what did not with their peers. Student feedback may also be helpful to gain additional perspectives.

7. Evaluate outcomes (and adjust or plan new professional development as needed). In addition to tracking student progress on measures of reading comprehension and possible strategy use, Guthrie's work argues for tracking measures related to student engagement in reading (attitudes toward reading assignments, difficulties experienced, interest in texts assigned, amount of choice in reading selections offered, and so on). Overall, it will be important to evaluate both teacher and student outcomes.

Consider structuring a comprehensive planning process that goes beyond selecting a professional development intervention

A potential weakness in this process of improving literacy across the curriculum is that selecting a professional development intervention could become the end rather than the means. The professional development selected may be written into a school or district improvement plan as the strategy for the year, without an individual or

team accepting ownership for the bigger goal of improving reading in the content areas. That is, once the teachers participate in the professional development selected, the school assumes that the goal has been accomplished.

Planning an initiative to improve complex student outcomes such as reading to learn involves more than picking a program or vendor. Ownership of the initiative should lie with those invested in achieving better outcomes for students.

The selection of a program implies some front-end and back-end work. On the front end the planning team should:

- Develop a common understanding of the end goals of the initiative for student competencies as readers.

- Know where the district or school's students stand as readers.

- Understand what is reported in the literature as effective practices in reading across the curriculum.

- Know where content teachers stand in their beliefs, knowledge, and skills with these practices.

On the back end the planning team should:

- Be able to explain the logic for the selection of the professional development approach.

- Think through the details—timelines, incentives, support needed from school leaders and participants, and other implementation considerations.

- Prepare to monitor both teacher response to and implementation of practices in the professional development intervention.

- Monitor student reactions and any improvements in reading.

- Adapt the support provided to teachers as needed based on data.

Below is a possible set of seven planning steps, described in the context of a reading across the curriculum planning effort (Comprehensive School Reform Quality Center, 2005; Hassel, Hassel, Arkin, Kowal, & Steiner, 2006; Schwartzbeck, 2002; Walter, 2004):

1. Identify a planning committee with good representation across stakeholders. The purpose of a planning committee is to ensure that the initiative is owned by those closest to the need. During planning it is critical that stakeholders provide input into decisionmaking. A school may choose to have a wide range of role types as part of the initial planning. Sometimes, external facilitators can be helpful in ensuring open and honest discussions about data, needs, resources, and potential problems in implementation. Including someone with research or evaluation expertise can help the group engage in discussions of published research and think about how impact will be assessed.

2. Clearly articulate expectations for students in literacy, understand the focus of reading assessments available for students, and describe students' strengths and weaknesses as readers.

> **A potential weakness is that selecting a professional development intervention could become the end rather than the means**

For both teachers and students it is important to understand expectations for students in reading. The standards-based movement, as reflected in the No Child Left Behind Act of 2001, is built on the assumption that educators and students know what is expected of them. The Georgia Department of Education included Reading across the Curriculum Standards in its revised curriculum standards to make it clear to teachers and students that the state had expectations in this area. Districts and school teams will need to discuss and process these kinds of standards as a first step toward planning instruction.

In addition to states' work on reading across the curriculum standards, others are also doing development work in this area. A project led by P. David Pearson, a reading researcher and dean of the College of Education at the University of California at Berkeley, identifies this step as the starting point for refocusing instructional efforts on reading comprehension across the curriculum. Pearson (2006) describes the process this way:

"So how do you design a reading comprehension curriculum? You need. . .

- *A framework for determining what we should expect of students at what points along the way in their school careers.*

- *Some clear and compelling illustrations of what it would mean to meet these expectations.*

- *A set of instructional routines that we can count on to help students meet those expectations.*

- *Some assessment tools to help us as teachers and our students determine: how well we are meeting those expectations and what we could do to make things better.*

The New Standards Project at the National Center on Education and the Economy is working on intermediate grade standards that accomplish the first two items. The goal for developing these standards is to present a "thoughtful vision of comprehension reflecting 30 years of cognitive and instructional research and to present compelling performances of students that demonstrate what it means to meet the expectations we hold for students in grades 4 and 5" (Pearson, 2006). Although these standards are developed for elementary school grades, the developers are attempting to build the comprehension curriculum on the

findings of prominent cognitive psychologists, and the findings may therefore be instructive for states, districts, and schools trying to infuse clearer expectations for reading across the curriculum into middle and high school.

Another effort that should inform state and district initiatives for standards in reading across the curriculum is that of the National Assessment Governing Board of the National Assessment of Educational Progress. The governing board has developed a new reading framework (American Institutes for Research, 2005; Kamil, 2006) to guide item development for 2009 and beyond. This new framework for assessing reading achievement defines reading as an active and complex process that involves understanding written text, developing and interpreting meaning, and using meaning, as appropriate, to type of text, purpose, and situation (American Institutes for Research, 2005, p. iv). The new reading framework includes a new vocabulary component, use of both literary and informational types of texts, and three cognitive targets: locate/recall, integrate/interpret, and critique/evaluate.

In addition to reflecting on standards for reading across the curriculum, it is also important to reflect on the extent to which state, district, school, and classroom assessments currently focus on reading in content areas and thus provide baseline data. Understanding students' strengths and weaknesses as readers in content areas is important background information for planning.

3. Develop an understanding of the ways researchers and practitioners describe "effective" adolescent literacy practices and compare those with current conditions. A planning team needs to understand what researchers are concluding about strategies that may improve adolescent literacy outcomes. There is some agreement among researchers on the features of effective literacy programs for adolescents, as a comparison of the features mentioned in some recent research reviews indicates (table 5).

The research suggests that school- or district-improvement teams need to think about the quality of teachers' practices in the school relative to:

- Direct instruction, modeling, and practice in reading comprehension strategies.

- Structuring of content area instruction and reading assignments to make them more accessible to students.

- Selection of texts for students to read in a way that builds motivation and persistence.

- Structuring of group work and rigorous peer discussions to reinforce the notion of reading for a purpose and to encourage a classroom social environment that values reading to learn.

- Use and availability of diverse texts.

- Use of writing to extend and reinforce reading.

- Use of technology to reinforce skills and keep students motivated.

- Use of appropriate formative and summative assessments that reinforce goals for reading.

- Use of tutoring as needed to assist individual students.

Professional development for teachers should inform them about this larger set of practices, even if the professional development focuses on a narrower set as a starting point.

> **Understanding students' strengths and weaknesses as readers in content areas is important background information for planning**

4. Compare programs available from vendors in terms of local conditions and needs. The underlying assumption of the planning initiative is that teachers will need some structured support to make reading a reality across the curriculum. Often, schools or districts look to external professional development programs or support materials for this purpose. Understanding what researchers are concluding about effective practices can inform a review of the interventions that planning teams are considering.

TABLE 5

Comparison of features mentioned in some research reviews on literacy

Key components of a literacy program	National Institute of Child Health and Human Development, 2000	RAND Reading Study Report, 2002 *(focus on comprehension only)*	Kamil, 2003	Biancarosa & Snow, 2004	Phelps, 2005
Direct, explicit instruction in reading comprehension	✓	✓	✓	✓	✓
Involvement of academic content areas	✓	✓	✓	✓	✓
Motivation and self-directed learning		✓	✓	✓	✓
Text-based collaborative learning	✓		✓	✓	✓
Diverse texts	✓	✓		✓	✓
Writing			✓	✓	✓
Technology		✓	✓	✓	✓
Assessments (ongoing, formative, and summative)		✓		✓	✓
Strategic tutoring				✓	✓

Done well, evidence-based decisionmaking requires a tremendous amount of staff time in searching out available interventions and understanding what they are and how developers have studied or evaluated effectiveness. District and school planning teams will need to consider the evaluation studies completed on these programs and what they say about program effectiveness.

However, making an evidence-based decision does not necessarily mean that a district or school team should automatically choose the intervention that has the most convincing studies on effectiveness. Contextual factors, such as cost, fit of intervention with school context and teachers' expressed interests, and other factors may be more important. For example, an intervention may be too narrowly focused or too prescriptive for the experience and knowledge level of the teachers in the school. In addition, a school or district may not have the resources (budgetary, literacy expertise) needed to implement some interventions. A school or district with extensive internal expertise might pick a more loosely developed approach, knowing that it can develop, adapt, and evaluate as it moves forward.

One caveat is to beware of a natural attraction toward the simplest or easiest approach to teacher change, a "just give the teachers something they can take back and use" philosophy. It is important for a planning group to ask: even though a particular intervention might fit the resources and context, is it going to make a difference in student outcomes? The possible payoffs for more difficult and challenging interventions should be considered.

> **Despite increasing use of literacy coaches there is little research confirming a relationship between coaching and improved student achievement**

5. Consider the pros and cons of different approaches to teacher support. It makes sense to start a review with an understanding of the interventions that are available for purchase, because developing a high-quality professional development program is very time intensive. Having done that, a school or district may decide that none is a good fit. Some districts or schools have extensive internal expertise in reading or have invested in literacy coaches over the years and so may decide to develop their own training or coaching program for content-area teachers. For example, several states and districts are considering funding literacy coaches so that they can deliver what teachers need on a more individualized basis, providing feedback and coaching in more effective practices in real classroom settings. The International Reading Association (2006) suggests that literacy coaches are a popular means to support struggling students and to help content-area teachers assist their students to become better readers.

Despite increasing use of literacy coaches as a strategy for improving instruction, however, there is little research confirming a relationship between coaching and improved student achievement. In a review of research on instructional coaching Burney, Corcoran, & Lesnick (2003) found very few studies linking coaching to measurable improvements in student achievement. They report that support for coaching models is based on the intrinsic appeal of the idea rather than evidence (p. 6). In addition, there are some anecdotal reports that coaches can be ineffective if their roles are not clearly specified (Neufeld & Roper, 2003). It is also likely that the quality of coaching is correlated with the skills and knowledge of the coach.

Professional learning teams and teacher study groups are another popular avenue for building teacher capacity to implement improved instruction. In districts or schools where teachers have an interest or extensive experience in forming teacher study or learning teams, teacher group processes may be considered as a vehicle for structuring teacher exploration and learning toward improving reading across the curriculum. Conclusive research on the effectiveness of this approach is not yet available, however (Manouchehri, 2001; Spraker, 2003). One hypothesis about this approach is that it empowers teachers, but follow-through in the classroom may be difficult to ascertain.

All three approaches—a relationship with an external provider, literacy coaches, and teacher study groups—may be considered. Based on evidence, collective professional wisdom, and contextual constraints, the planning team can decide on the best approach to support teachers. During this stage, it is important to share information with teachers and decisionmakers. All stakeholders should have the opportunity to provide input and discuss the challenges of each approach.

School and district leaders can also affect the quality of implementation of an initiative to support teacher change. Leadership is crucial to ensure teachers are held accountable for continuous movement toward the desired goal.

6. Develop a plan to monitor teacher implementation and student progress. The better articulated the plan, the more likely it is that the implementation will go smoothly. Selecting an external intervention is not itself the objective, nor is it a release from responsibility for taking ownership of the vision for change. Schools should guard against professional development becoming the goal rather than a means to the end of a more explicit focus on reading across the curriculum. Interim goals need to be defined as well, so that if the selected strategies or interventions do not work, they can be adjusted more strategically.

7. Plan how to evaluate implementation and impact. Educators are continuously looking for ways to improve the achievement of their students. For a reading across the curriculum initiative to have staying power, resources should be provided for evaluating the quality of implementation, tracking progress on key indicators, and looking at student outcomes in greater depth than is provided for on most state tests. Whatever approach is selected (external provider, internal literacy coach, teacher study groups, or other), it will be necessary to look at what happens with instruction in the classroom and whether students make progress in developing the reading motivation, persistence, and strategies needed for success in the content areas. Evaluating the initiative should be part of a continuous process of decisionmaking about strategies to achieve the goal of reading across the curriculum.

> **Schools, districts, and states should choose based on what approach best fits their context using an evidence-based decisionmaking model to ensure that high quality information informs their decisions**

Many interventions claim to address literacy across the curriculum, but schools, districts, and states should choose based on what approach best fits their context using an evidence-based decisionmaking model to ensure that high quality information informs their decisions. Doing so should enhance the likelihood that a reading across the curriculum initiative will achieve the desired outcomes.

APPENDIX A
METHODOLOGY

The analysis for this report had three phases. The first phase involved a protocol to gather information from state education agency contacts and documents on adolescent literacy. The second phase involved a search for professional development or teacher support interventions designed to help content-area teachers increase their focus on reading. The third phase involved a search for evaluation reports and studies on the seven interventions identified to summarize the extent of the evidence base on effectiveness.

Questions addressed

The study set out to address three sets of questions:

1. *Inventory of state initiatives to set the regional context:* What are state departments across the Southeast Region doing to address the issue of improving adolescent literacy through a focus on reading across the curriculum?

2. *Description of available interventions (curricular or professional development interventions available to help secondary teachers):* What interventions are being used or proposed for use in the Southeast Region states? Nationally, are additional interventions referenced in published research? Are there similar characteristics across interventions? How and in what ways do they differ?

3. *Description of the evidence available on interventions:* What kinds of data have been reported on the interventions' effectiveness?

Approach used

Phase one: A summary of state initiatives (such as standards, relevant policies, and planned professional development) under way in the Southeast Region on improving adolescent literacy through a cross-curricular focus. The information-gathering protocol focused on policy, professional development, evaluation, and funding for adolescent literacy initiatives. Information on each state's initiatives was gathered from the state education agencies and supplemented with information from the Internet and state publications. Follow-up conversations were conducted with key state agency personnel to clarify and expand on information. Individual state profiles and a cross-state table were drafted to summarize information gathered in the protocols. The profiles and tables were reviewed by state agencies for accuracy.

Phase two: A search for existing curriculum and professional development interventions on reading across the curriculum. The Education Resources Information Center database and lists provided by other regional educational laboratories, content centers, research centers and organizations, reading organizations, Southeastern state departments of education, and federally funded literacy projects were searched to identify available interventions.

REL staff attended relevant conferences and used personal communications with researchers and practitioners. Each REL staff member who assisted with the intervention search process followed the same protocol. The summary tables asked for:

• Name of intervention.

• Web site information.

• Audience.

• Whether the intervention addressed reading across the curriculum.

• The focus of the intervention.

• A brief summary.

Once the relevant interventions were identified, interventions that did not address the guiding questions were screened. For example, many interventions focused on helping "struggling readers," which was not the focus. Finally, the list

was narrowed to seven interventions available to support secondary school content teachers.

Phase three: Description of the effectiveness evidence available on the seven interventions. Evidence of effectiveness of the seven identified interventions was sought on the developers' web sites, the U.S. Department of Education web site, and in educational journals, other regional educational laboratories, content centers, and research centers. Abstracts were developed for each intervention (see appendix D).

Phase I: Information-gathering protocol for state education agency context

Background on state focus on adolescent literacy

- ☐ Does your state have an adolescent literacy focus?

  - If not, describe what efforts are taking place concerning literacy in general; what is your state's implicit approach to adolescent literacy?

  - If so, what was the impetus (for example, achievement scores, state board of education, legislators, local education agencies) for the state-wide initiative on adolescent literacy?

Components of state initiative

- ☐ Describe your state's implicit or explicit approach to adolescent literacy.

- ☐ Items you may want to include:

  - Is the initiative mandated?

  - Is there a timeline?

  - Who has taken the leadership role (such as state, district, or local education agencies)? Is there a commission or planning committee? If so, who are the members (representatives, teachers, institutions of higher education, parents)?

- On what content areas does the initiative focus?

- Are there standards (for example, Georgia Reading Across the Curriculum Standards 6–12)?

- Are professional development timelines and types provided? What kinds? For whom? Over what time period?

- What curriculum materials are provided?

- Are assessments being used?

- Are there teacher certification/requirements for courses?

- Is there funding? Do they have external funding (such as Carnegie, Striving Readers)?

- Has there been a state-sponsored adolescent literacy conference? If yes, when, audience, number in attendance, overall goals? If not, what plans do you have in the future for a conference?

- ☐ Do any local education agencies have a literacy initiative? How many? Have any of these education agencies received state or federal recognition for their adolescent literacy initiatives? If yes, briefly describe.

Approach to identification/selection of interventions to increase teachers' competence across the curriculum in adolescent literacy

- ☐ Is the state planning on recommending specific interventions? If yes, what is the status? If no, why?

- ☐ What interventions have they discussed? Please list.

Documents needed

- ☐ State initiative.

☐ List of interventions being considered by state education agencies.

☐ Funding information.

☐ State approved local education agency initiatives and interventions.

☐ Sources of information.

☐ Any other information that would give us a complete picture of what is happening.

☐ Sample professional development materials.

☐ Data that may be used/collected already on the initiative (if it exists).

REL-Southeast policy analysts provide answers to questions in a detailed brief using the aforementioned questions as a reporting template.

Phase II: Guidelines for intervention search process

☐ Conduct structured search of appropriate databases and search engines. Primary search terms and keywords will include: adolescent literacy, middle school literacy, literacy across the curriculum, reading across the curriculum, high school literacy, and others.

- U.S. Department of Education–Institute of Education Sciences.

- Regional Education Laboratories.

- Research centers.

- Comprehensive centers.

- Content centers.

- Florida Center for Reading Research.

- Alliance for Excellence in Education.

- National Middle School Association.

- National Council of Teachers of English.

- International Reading Association.

☐ Identify relevant documents.

☐ Compile documents into a folder for each intervention.

☐ Complete summary table items for each potential intervention.

Initial list of interventions

Below is a list of the interventions we originally identified but that were not included in the final analysis (table A1). The reasons for exclusion are checked. There are many interventions developed for use with struggling readers. These were not included as our focus was on support for content-area teachers across the curriculum.

Phase III: Guidelines for intervention evidence of effectiveness search process

☐ Conduct search of appropriate organizations and educational databases for reports on each intervention using:

- Intervention developer's web site.

- Wilson Web (through University of North Carolina, Greensboro Library).

- ERIC.

- FirstSearch.

- JSTOR.

- Psychology Index.

- U.S. Department of Education –Institute of Education Sciences.

- Regional Education Laboratories.

- Research centers.

- Comprehensive centers.

- Content centers.

- Florida Center for Reading Research.

☐ Identify relevant developer documents, studies, and reports.

☐ Compile studies and reports into a folder on each of the seven interventions.

☐ Draft intervention abstract including summary about research available.

TABLE A1
Rationale for interventions not described

Name	Did not address reading across the curriculum (content-area reading)	Did not address students in grades 4–12	Primarily addressed struggling readers	Not aimed at improving teacher instruction and assessment at the classroom level	Part of CSR model	In early stages of development	Not enough information to determine their purpose, content, audience, desired outcomes as of 8/18/06
Academy of Reading	✓		✓				
Accelerated Literacy Learning		✓	✓				✓
Accelerated Reader	✓						
America's Choice Ramp-Up to Literacy				✓			
Amp Reading System			✓				
Carbo Reading Styles Program	✓		✓				
Collaborative Strategic Reading			✓				
Comprehension Plus	✓	✓		✓			
CREST						✓	
Essential Learning			✓	✓			
Exemplar Center for Reading Instruction							✓
Failure Free Reading	✓		✓				
Fast Forward Language Software	✓		✓				
Fast Track Reading	✓		✓				
Great Leaps Reading	✓						
HOSTS Link Language Arts	✓						
Kaleidoscope	✓						
Language! (3rd Edition)			✓				
Lexia Reading S.O.S.	✓			✓			
Lindamood-Bell Learning Processes	✓						

TABLE A1 (CONTINUED)
Rationale for interventions not described

Name	Did not address reading across the curriculum (content-area reading)	Did not address students in grades 4–12	Primarily addressed struggling readers	Not aimed at improving teacher instruction and assessment at the classroom level	Part of CSR model	In early stages of development	Not enough information to determine their purpose, content, audience, desired outcomes as of 8/18/06
My Reading Coach			✓				
Plato Software/ Intermediate Reading Skills			✓				
REACH System	✓		✓				
Read 180			✓				
Read for Real	✓					✓	
Read Naturally			✓				
Read XL			✓				
Reading for Knowledge	✓					✓	
Reading is Fame			✓				
Reading Plus			✓				
REWARDS (Reading Excellence: Word Attack and Rate Development Strategies)			✓				
Second Chance at Literacy Learning							✓
Skills Handbooks				✓			
Soar to Success	✓						
Spalding Writing Road to Reading	✓						
Spell Read P.A.T.	✓	✓	✓				
Success for All Middle School/ Reading Edge					✓		
SuccessMaker Enterprise	✓			✓			
Supported Literacy	✓						
Talent Development High School					✓		
Talent Development Middle School					✓		
Thinking Reader			✓				
Voyager Passport E, F., G			✓				
Wilson Reading System	✓		✓				

APPENDIX B
SOUTHEASTERN STATE SUMMARY

Approach	Alabama	Florida
Literacy initiatives/ plans Does the state have a literacy plan or initiative? Who initiated it? Is there funding?	• The Alabama Reading Initiative (ARI) is not a program, but an ongoing professional development opportunity for all school faculty. It began in 1998 and was voluntary; now all K–3 schools have to become ARI schools by 2006. The goal is 100% literacy. • It was initiated by the Alabama State Board of Education (ALSBE) and Alabama Department of Education (ALDOE), with support from the A+ Foundation, which funded the initiative for the first two years. • For 2006, ARI received $56 million dollars in funding; $53.5 went back to ARI schools.	• Florida has a K–12 focus on literacy through *Just Read, Florida!* The goal of this initiative is for all students in Florida to be able to read at grade level or higher by 2012. • The Florida Department of Education (FLDOE) took the lead in recommending legislation to the Florida Legislature, which adopted the language in its mandated policies. • Funding for reading is a permanent priority and was funded in the amount of $111.8 million for the 2006–2007 school year.
Middle school/high school (6–12) initiatives/ plans If the state has a recent initiative or plan, is there a middle school/high school component? Or, does the state have a separate middle school/high school initiative? Is there any funding? Does the state have a literacy across the curriculum/ literacy in the content area initiative?	• Almost 25% of the ARI schools cover grades 4–12. • ARI/ A-PAL (Project for Adolescent Literacy) is a pilot secondary ARI program. • ARI/A-PAL focuses on reading across the curriculum.	• There are three main groups working to provide adolescent literacy leadership through a strategic five-year plan: (a) educators to recommend a plan to (b) a group of legislators, superintendents, and (c) representatives from different administrative associations. • The planning stage is funded by the NGA/Carnegie Corporation and its $50,000 *Reading to Achieve* grant.
Standards How do the state standards in the content areas reflect literacy expectations?	• ARI is aligned with state standards and is set up to support them.	• The standards, approved in 1996, were written in seven subject areas, each divided into four separate grade clusters (PreK–2, 3–5, 6–8, and 9–12). • The state standards are the basis for state assessments at each grade from 3–10 in language arts and mathematics (www.firn.edu/doe/curric/prek12/frame2.htm).

Georgia	Mississippi	North Carolina	South Carolina
• During the 2004–05 school year, Georgia began implementing its new standards-based curriculum, the Georgia Performance Standards (GPS). • An important innovation within the GPS is the incorporation of Reading Across the Curriculum standards.	• Mississippi has goals for all readers and the four goals were laid out in the 1997 Mississippi Reading Initiative, Every Child a Reader. • To support this initiative, in 1998 the Mississippi Legislature created a Reading Sufficiency Program of Instruction. This law requires every school district to establish and implement a program for reading reform.	• North Carolina 's "Strategic Plan for Reading Literacy" will be presented to the North Carolina State Board of Education (NCSBE) in March 2007. The plan includes six priority action steps. • The effort was initiated by the NCSBE. • The state received a National Governors Association (NGA)/Carnegie Corporation grant of $50,000 to write their plan.	• The South Carolina Reading Initiative (SCRI) was created after Governor Jim Hodges' Institute of Reading held the South Carolina Reading Summit in 1999. SCRI began its work with K–5 schools. • The SCRI model was developed by SC in collaboration with the National Council of Teachers of English (NCTE). • The General Assembly has allocated a total of $4.3 million for the initiative, and participating schools receive up to $50,000 from the Governor's Institute on Reading.
• Georgia added Reading Across the Curriculum Standards as a component of all the Georgia Performance Standards for grades 4–12.	• Adolescent literacy is also a focus of the 2006 legislation that established an Office of Dropout Prevention within the Mississippi Department of Education. • Mississippi received a *Reading to Achieve* grant funded by the NGA/ Carnegie Corporation to assist the state in developing literacy plans and policies to improve adolescent literacy achievement.	• The North Carolina plan will require a 3-hour literacy credit in a topic from an approved list for teachers in grades 9–12. • The North Carolina plan includes steps to creating literacy strategies in each content area.	• During the 2003–04 school year SCRI began working with middle schools, utilizing $1.3 million in funding. • In addition, the General Assembly allocated $1 million to expand the reading initiative into high schools for the 2006–07 school year. • SCRI is a voluntary program and the participating districts received $50,000 from the Governor's Institute of Reading. • High-need districts were given priority for participation in the middle and high school initiative. • SCRI is intended to be a literacy across the curriculum program.
• Georgia's Reading Across the Curriculum standards are a component of all of the Georgia Performance Standards for all students grades 6–12 in science, social studies, math, and language arts.	• Mississippi Language Arts Framework 2006 standards, and other curriculum frameworks, contain literacy objectives.	• As part of the "Strategic Plan for Reading Literacy," if the plan is implemented, the standards will included "digital and literacy skills for the 21st Century and to ensure that all students are college and work ready." • Revisions will also align English and Math standards to the American Diploma Project benchmarks and 21st Century Skills.	• SCRI works to implement the English/Language Arts (ELA) standards through the use of best practices in literacy, which are explicitly addressed in the Proposed ELA Standards for 2007 draft document.

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APPENDIX B (CONTINUED)
SOUTHEASTERN STATE SUMMARY

Approach	Alabama	Florida
Professional development for middle school/high school teachers Does the state have professional development in adolescent literacy? If so, what kind? To what extent is the state planning for or providing professional development for content area teachers?	• ARI professional development aims to empower teachers with the content knowledge, skills, and strategies necessary to be successful with all students, especially those that challenge them the most—struggling readers. • ARI involves two- week workshops over the summer and follow-up sessions throughout the school year. • Teachers receive ongoing support from literacy coaches.	• Content area Reading Professional Development (CAR-PD) provides educators with an 150 hour in-service program, which makes them eligible to serve as a reading-intervention teacher in their content areas. However, teachers who are teaching academic reading courses still need the reading endorsement and/or K–12 reading certification. • CAR-PD PLUS will be available soon to provide the reading endorsement. • Each district's Comprehensive Research-based Reading Plan must include PD for teaching reading in the content areas, with an emphasis on technical and informational text.
Literacy Coaches What are some ways in which states are building teacher capacity (e.g., literacy coaches, online courses, state-developed programs, etc.)?	• There are three secondary school regional coaches that work with ARI high schools.	• District plans must include high-quality reading coaches along with PD for teachers on teaching reading in the content areas, and supplemental materials. • The Florida Literacy and Reading Excellence Center (FLaRE) at the University of Central Florida provides site-based support for principals, reading coaches, and teachers at the lowest performing middle and high schools in the state.

Georgia	Mississippi	North Carolina	South Carolina
• Georgia training on the GPS began during the 2004–05 school year. GA is using a train-the-trainer model, with district and school representatives receiving state training and then redelivering it at the building level.	N/A	• LEARN NC is hosting the Adolescent Literacy Project, which includes four online courses. It uses a train-the-trainer model. • The NC plan will require a 3-hour literacy credit in a topic from an approved list for teachers in grades 9–12; K–8 already have this requirement.	• The SCRI-MG and the High School Initiative is an intensive four-year, staff-development plan that is designed to improve reading skills and strategies for all adolescents across the curriculum. Literacy coaches provide both individual and group professional coaches to teachers.
• Georgia is currently in the formative stages of crafting a statewide literacy plan.	N/A	• The North Carolina plan includes having literacy/reading coaches in the middle schools. In addition, the plan mentions an expansion of coaches to all elementary and middle schools by 2013. The plan includes a study of the effectiveness of coaches in high schools. • Coming from an initiative sponsored by Governor Mike Easley, the state is already funding 100 literacy coaches for the lowest performing middle schools in the state.	• District/School literacy coaches work in classrooms to provide support to SCRI-MG teachers and also guide twice- monthly discussion meetings. • All coaches participate in summer study and monthly study throughout the year. • Regional literacy coaches provide ongoing support to district literacy coaches.

(continued)

APPENDIX B (CONTINUED)
SOUTHEASTERN STATE SUMMARY

Approach	Alabama	Florida
Middle school/high school struggling readers Does the state have initiatives for struggling adolescent readers and , if so, where are they located?	• ARI is intended to help teachers learn strategies to assist struggling students.	• In middle and high schools, struggling readers are required to have one intervention class, either reading or a content area subject taught by a teacher who has received a reading endorsement.
Research and evaluation Are there any significant studies underway with regard to literacy initiatives?	• An AIR report on the ARI was commissioned by the Carnegie Corporation of New York. • Bacevich, A., & Salinger, T. (2006, June). *Lessons and recommendations from the Alabama Reading Initiative: Sustaining focus on secondary reading.* Washington, DC: American Institutes for Research (AIR).	• The RAND Corporation is to study the impact of reading coaches on student achievement; Florida is one of the study sites. • The Columbia Group will conduct a cost analysis of reading coaches in the classroom.
Web site	**ALSDE Reading Initiative Publications** http://www.alsde.edu/html/sections/documents.asp?section=50&footer=sections **AIR Report** http://www.air.org/publications/documents/AIR%20Popular%20Report_final.pdf	**FLDOE** http://www.fldoe.org **Endorsement** http://www.justreadflorida.com/endorsement/ **FLaRE** http://flare.ucf.edu

Georgia	Mississippi	North Carolina	South Carolina
• Georgia maintains a remedial education program for students in grades 6–12 with identified academic deficiencies. • The program operates at the system level, and offers individualized instruction to eligible students using several scheduling models. • The program is housed at the state level in the Department of Curriculum and instruction. Information is available at http://public.doe.k12.ga.us/ci_services.aspx?PageReq= CIServRemedial	• The new dropout prevention legislation mandates that the Office of Dropout Prevention build in a focus on adolescent literacy.	• If implemented, the North Carolina plan includes an analysis of the need to provide extra assistance to struggling middle and high school readers.	• SCRI is focused on providing teachers with skills/resources so that they can ensure that all students develop strong skills. • As a part of this, South Carolina has developed a remediation plan focused on ensuring that students in grades 3–8 acquire the skills they need to be successful. Information is available at http://ed.sc.gov/agency/offices/sq/AcademicPlans/index.html
• Georgia is working with SERVE on this Fast Response Brief on adolescent literacy across the curriculum, to guide planning for further SEA support to local systems and schools in this area.			• Researchers have undertaken an in-depth study of SCRI. It is focused on changes in the beliefs and practices of teachers and on changes in the skills and strategies of students; it also examines the relationship between SCRI and students test scores on standardized tests. • South Carolina also collects data from participating teachers and coaches to assess changes in practice and outlook. Interim reports are available at http://www.ncte.org/profdev/onsite/readinit/groups/110385.htm
GADOE http://public.doe.k12.ga.us/ci_services.aspx?PageReq= CIServEnglish	***MS DOE/Reading Curriculum*** http://www.mde.k12.ms.us/ACAD/ID/LAER/goals.html	***NCDPI Literacy Proposal*** http://www.ncpublicschools.org/sbe_meetings/0608/0608_hsp/hsp/0608hsp06.pdf	***NCTE*** http://www.ncte.org/profdev/onsite/readinit/groups/110385.htm http://www.ncte.org/profdev/onsite/readinit/groups/sc/110387.htm ***SC Dept of Ed*** http://ed.sc.gov/

**APPENDIX C
SOUTHEASTERN STATE PROFILES**

The six southeastern states served by the REL-Southeast are currently attending to the need to improve adolescent literacy outcomes. The approaches are varied, but a commonality is that all assume that content area teachers will need support in embedding literacy development more systematically into their curriculum. The work of the six states is described below.

Alabama

In the past, Alabama schools have faced a continuing struggle with low literacy achievement among students, as evidenced by National Assessment of Education Progress (NAEP) scores and other indicators. In November 1996, in an effort to address this issue, the Alabama State Department of Education, in concert with other educational organizations, brought together a panel of business and education leaders. This group met for a two-week working session to envision a statewide plan to ensure 100 percent literacy among Alabama school children. This was the beginning of the Alabama Reading Initiative (ARI).

Implemented in 1998, the ARI is a statewide, ongoing professional development program. The initiative is collaborative in that it values innovation in implementation at the local level. Through high-quality professional development based on the support of reading specialists, an intensive two-week workshop each summer, and involvement with a professional community composed of peers, administrators, and university-level mentors, it is hoped that ARI participants will acquire the knowledge, skills, and strategies to support successful literacy learning for all students across the curriculum, with a special emphasis on struggling students. Evaluation of this state initiative in professional development is ongoing, and considerable information is offered at http://www.alsde.edu/html/sections/documents.asp?section=50&footer=sections, where Alabama has published the Executive Summary of the *Evaluation Report 2005, Years 7 and 8.*

The ARI was originally supported by the A+ Foundation of Montgomery, which provided the initial funding and assisted in recruiting partners for the first two years of the initiative. As the promise of the program became evident, Governor Don Siegelman proposed state-wide expansion of the program. Funding for the initiative has grown from $1.5 million in 1998 to $56 million allocated in 2006 by the Alabama legislature.

Although the initiative was conceived as a K–12 program, initial training and materials were created as "one size fits all," with a focus on K–3. Teachers and reading coaches in secondary programs adapted materials to meet their needs and had some positive experiences in applying materials to their contexts (Bacevich & Salinger, 2006). However, while some staff support and professional development is available at the secondary level, schools have experienced difficulty in maintaining ARI programs because of funding limitations. As a result of these limitations, state officials determined that Alabama schools are best served by full implementation of ARI in all K–3 schools rather than partial implementation in some K–12 schools. Therefore, implementation in middle and high schools has been delayed. All Alabama schools with K–3 programs were required to be ARI schools by 2006. To move toward implementation in middle and high schools, a state sponsored adolescent literacy conference was held in June 2006, and Alabama has recently developed and introduced A-PAL, a reading initiative targeted at adolescent readers that will build on ARI, offering more support for reading in the content areas. A-PAL will be piloted at a limited number of Alabama schools beginning in 2006/07.

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Florida

Florida developed a multipronged approach to support adolescent literacy learning as a part of

legislation called *Just Read, Florida!* (JRF). With its goal that all students be able to read at grade level, the effort is funded by law through the Florida Education Finance Program (FEFP), a line-item in the state budget for the Florida Literacy and Reading Excellence Center (FLaRE). The state also received a *Reading to Achieve* grant from the National Governors Association.

Districts write a K–12 Comprehensive Research-based Reading Plan, which is then approved by the JRF Office at the state department. The plan must focus on struggling readers and provide reading coaches. Students scoring a Level 1 or Level 2 on the Florida Comprehensive Assessment Test (FCAT) must have an intervention plan, which is required by the A++ Plan to include at least one intervention class, either reading or subject area, taught by teachers who have a reading endorsement. Professional development is available through Content Area Reading Professional Development (CAR-PD), and once completed, teachers are eligible to serve as reading intervention teachers in their subject area (academic reading teachers still need certification or endorsement). Summer institutes are available for principals and literacy coaches.

The CAR-PD consists of 150 in-service hours for content-area teachers. Sixty hours are completed through the Florida Online Reading Professional Development (FOR-PD), a course focused on the basics of reading. Thirty hours are part of a practicum. Finally, 60 hours are obtained through a face-to-face academy to be offered spring/summer 2007. The academy is intended to be a train-the-trainer model where literacy coaches or other interested district educators receive training and, in turn, train content teachers in their districts. The CAR-PD training was created by FLaRE and designed for vocabulary development and comprehension skill development in the higher levels. It is not intended to build decoding or fluency skills.

In addition, FLaRE provides site-based support for the lowest performing middle and high schools. The center works with principals, reading coaches,

and teachers. It is hoped that the combined professional development, along with online logs submitted by reading coaches, will encourage and improve the opportunities for individual growth among teachers and students. The Carnegie Foundation asked the RAND Corporation to study the impact of reading coaches on student achievement and Florida is one of the study sites.

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Georgia

Georgia's attention to adolescent literacy emerged as a result of the Georgia Performance Standards, which were presented to the state in 2004/05. An important change from the previous state standards was the integration of Reading across the Curriculum standards, which represent a move toward developing a statewide literacy plan.

The Reading across the Curriculum standards are embedded in the content area standards for grades 6–12 in science, social studies, mathematics, and language arts, providing a reading standards component in each content area. They emphasize such skills as reading in content areas, enhancing students' ability to read and understand content-specific material, developing appropriate vocabulary, and discussing and evaluating material. An important component of these standards is the 25-book requirement, which requires each student to read a minimum of 25 books, or their equivalent, per year across curriculum areas. Content-area teachers are supposed to incorporate the Reading across the Curriculum standards in their classroom practice.

Georgia used a train-the-trainer model to introduce the new Georgia Performance Standards in 2004/05, with district and school representatives receiving training from the state Department of Education and, in turn, providing it to all teachers at school sites. Currently, the state Department of Education is developing a

statewide literacy plan to ensure that teachers have the support they need in teaching to these new Reading across the Curriculum standards. The plan is expected to offer direction to local education agencies on a comprehensive set of plan components. Already, a limited number of middle schools fund literacy coaches through Title I funds, and some have Learn and Serve grants that incorporate literacy training. These changes represent a significant movement toward providing an effective literacy curriculum for all Georgia middle and high school students.

In an effort to provide useful resources and support for secondary content teachers, for whom these new standards may represent a significant challenge, the Georgia state school superintendent asked REL-Southeast to help answer the question, What literacy across the curriculum support interventions might the Georgia Department of Education consider as part of a research-based, comprehensive plan to improve secondary literacy and student achievement? The results of this brief will be used to support the state's work in this area.

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Mississippi

Mississippi identified goals for all readers in its 1997 Mississippi Reading Initiative and also developed the Mississippi Reading Reform Model in 1997. The model includes four basic components:

- Well-designed early literacy interventions to ensure reading readiness.

- Prescriptive direct instruction utilizing the essential elements of reading instruction and based upon results of appropriate, valid, and reliable assessments.

- Extended instructional opportunities for children.

- High-quality professional development to improve reading instructional practices of Mississippi teachers, administrators, and support staff.

The state has long had K–3 reading initiatives, including the Barksdale Reading Institute, created from a $100 million gift given to the University of Mississippi Foundation from Jim and the late Sally Barksdale; Reading Sufficiency, a comprehensive effort to improve the teaching and learning of reading and language arts in Mississippi's classrooms through the support of rigorous reading standards for students; and Reading First, which provides assistance to states and districts to establish research-based reading programs for K–3 students. The state now appears to also be focusing on struggling readers from 4th grade through high school. More specifically, through high school redesign work and the new Office of Dropout Prevention, the state plans to address the needs of adolescent readers. In addition, like Florida and North Carolina, Mississippi received a National Governors Association *Reading to Achieve* grant funded by the Carnegie Corporation of New York and is developing a more comprehensive policy and plan to improve adolescent literacy achievement.

The National Governors Association *Reading to Achieve* grant will provide funding for the establishment of a state literacy task force that will be responsible for accomplishing the following broad goals (Mississippi Department of Education press release, Feb. 16, 2006):

- Develop a detailed report describing current reading performance.

- Increase public understanding of and support for a literacy focus in Mississippi.

- Build on Mississippi's existing literacy plan with particular emphasis paid to literacy achievement in grades 4–12.

- Make specific research-based recommendations leading to student gains in reading performance.

- Develop a plan for changing classroom instruction based on scientific reading research.

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North Carolina

Like Florida and Mississippi, North Carolina received a National Governors Association *Reading to Achieve* grant funded by the Carnegie Corporation of New York and used the funds to develop a K–12 plan. Concerned with dropping National Assessment of Educational Progress scores, North Carolina formed a committee of stakeholders to develop a six-priority action-step plan, the "Strategic Plan for Reading Literacy," which will be presented to the State Board in March 2007. The six priority action steps are:

- Amend the curriculum revision process to include literacy strategies in each content area and a focus on digital reading.

- Develop student assessment processes that provide for open-ended and performance assessments.

- Provide opportunities for leadership development for principals and central office staff.

- Enhance preparation and professional development for elementary, middle, and high school teachers.

- Analyze the need for policy revision and development.

- Develop benchmarks at the school level for each grade and subgroup.

The original literacy plan covered only grades K–8; but the current plan is for K–12. The plan also includes two new strategies that will directly affect adolescent readers—one aimed at teacher skills and knowledge of reading instruction and the other at struggling readers. The first policy will require all grade 9–12 teachers to get three-hour credits in literacy as part of their licensure renewal. The second strategy under consideration is the revisitation of the Personalized Education Plans.

At this time the plan has not been presented to the State Board for approval, but other actions are being taken to improve adolescent literacy. Already in place are four online courses in reading in the content areas which have been developed by LEARN NC (http://www.learnnc.org/courses/) to support teachers. In addition, the Office of the Governor has also funded 100 literacy coaches to be provided to the lowest- performing middle schools.

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South Carolina

In 1999, then Governor Jim Hodges created the Governor's Institute of Reading (GIR), a partnership of businesses, community organizations, and education organizations to focus on early reading. In December 1999 the GIR sponsored the South Carolina Reading Summit. As a result of this Summit, input from the GIR Task Force and a review of best practices, the South Carolina Reading Initiative (SCRI) came into being and was announced in 2000. The SCRI began with K–5 but has since broadened its scope, initiating work with middle schools during the 2003/04 school year and, more recently, with high schools.

SCRI is a voluntary program funded through the General Assembly, which allocated $1.3 million to allow the program to expand into middle schools and an additional $1 million in 2006/07 for expansion into high schools. Participating schools may receive up to $50,000 dollars from the GIR to support implementation of the initiative's seven

goals. To participate, schools submit an implementation plan. Because the initiatives have not been fully funded, a competitive grant process is used in some instances to determine which schools will receive funds. However, high need districts are given priority.

The SCRI-MG (middle grades) and the High School Initiative is an intensive four-year, staff-development plan designed to improve reading skills and strategies for adolescents across the curriculum by providing support and resources to teachers. District and school literacy coaches work in classrooms four days each week to provide support to participating teachers, as well as leading SCRI teams in twice-monthly meetings to consider research and practice. Coaches continue to develop their own skills as they work with regional literacy coaches, faculty from the University of South Carolina (USC), state department staff, and the National Council of Teachers of English to build a common knowledge base by participating in summer institutes and monthly study throughout the year. The training was initially developed as

a collaborative effort of the University of South Carolina, South Carolina Department of Education, and the National Council of Teachers of English. Training continues, with USC faculty, regional literacy coaches, visiting instructors from other South Carolina institutions, and national consultants serving as instructors.

South Carolina is evaluating the effects of the SCRI. The SCRI research team has collected data for a three-part study using a variety of criterion-referenced tests in addition to state standardized tests such as the Palmetto Achievement Challenge Test. Data are also being collected related to changes in teacher practices and attitudes.

Contact: Allison Norwood (SCRI-HS), Office of Curriculum and Standards, South Carolina Department of Education, anorwood@ed.sc.gov, (803) 734-2469

Caroline Savage (SCRI-MG), Office of Curriculum and Standards, South Carolina Department of Education, csavage@ed.sc.gov, (803) 734-4770

APPENDIX D
INTERVENTION ABSTRACTS

Concept-Oriented Reading Instruction (CORI)	
Type of intervention	This program consists of teaching teachers to use multiple cognitive strategies for activating background knowledge, questioning, searching for information, summarizing, organizing information graphically, and structuring stories. These strategies are combined with the multiple motivational practices of using content goals in reading instruction, providing hands-on activities, affording students choices, using interesting texts, and promoting collaboration among school staff in reading instruction. The content area of major focus for the research has been science.
Developer	John Guthrie & Allan Wigfield, University of Maryland
Contact information	John Guthrie & Allan Wigfield (301) 314-8448—General Information jguthrie@umd.edu or awigfiel@umd.edu
Brief description	Concept-Oriented Reading Instruction incorporates reading strategy instruction, student engagement strategies, and science inquiry activities in interesting and unique ways for students. The goals of CORI are to increase students' reading comprehension, motivation to read, and science knowledge. The CORI program equips participating teachers with the skills to accomplish these classroom goals through interactive, professional development workshops and established CORI guidelines.
Expected outcomes for teachers	Teachers learn instructional and motivational strategies that can be used to increase students' reading comprehension, engagement in instruction, science knowledge, and motivation to read.
Expected outcomes for students	Students learn numerous reading strategies including how to use background knowledge to inform their reading, form questions about text material, search for information, summarize accurately, organize their new-found knowledge, and monitor their own comprehension of text. Students' written language skills are also targeted for overall improvement.
Grade range	Research on CORI was originally conducted with students in 3rd–5th grades, but CORI has also been adapted for students in 6th–12th grades.
Reading level range	Varied
Materials provided	• CORI Facilitator Guide • CORI Teacher Guides • CORI Books—*Motivating Reading Comprehension: Concept-Oriented Reading Instruction* & *Concept-Oriented Reading Instruction: Engaging Classrooms, Lifelong Learners* • Videos/DVDs
User requirements	4–6 months of planning by 1–3 full-time staff members, 5 days of teacher professional development, and funds to purchase books, manipulatives and portfolios necessary for instruction.
Time commitment	• Professional development for instructors in the CORI model requires a minimum of 10 days in the summer to give instructors an opportunity to adapt existing materials to the curriculum framework. • Each CORI teacher receives a minimum of 5 days of professional development in the summer and 5 days of coaching during the fall.
Cost structure *(as of 3/20/07)*	• Several independent trainers are available for the 10-day training course. • A trainer charges approximately $10,000 for the introductory course. • Books for a room of about 20 students can cost approximately $2,400 for the initial investment.
R&D summary	• This program was first developed in 1992 in Maryland as a collaboration between Louise Bennett, an elementary school science teacher, and John Guthrie, a reading and literacy researcher. • Bennett and Guthrie designed CORI to teach students strategies used by skilled readers, increase student engagement in reading and science, and help students develop science inquiry skills. • Numerous quasi-experimental studies on the CORI model have been conducted. • The researchers of CORI have received funds from the U.S. Department of Education and the National Science Foundation to examine the impact of CORI on student achievement.

Concept-Oriented Reading Instruction (CORI)	
Results of R&D	• Using random assignment of schools, the authors reported that CORI-trained teachers surpassed teachers trained in Strategy Instruction Only in their students' performance on reading comprehension, reading motivation and reading strategy measures (Guthrie, Wigfield, Barbosa, Perenchevich, Taboada, Davis, Scafiddi & Tonks, 2004). • Using a quasi-experimental design, CORI-trained teachers surpassed comparison teachers in their students' performance on reading comprehension and reading strategy use (Guthrie, Anderson, Alao & Rinehart, 1999; Guthrie, Van Meter, Hancock, Alao, Anderson & McCann, 1998). • Using a quasi-experimental design, CORI teachers surpassed comparison teachers in their students' performance on reading motivation (Guthrie, Wigfield & VonSecker, 2000; Wigfield, Guthrie, Tonks & Perencevich, 2004).
References	Guthrie, J. T. (2004). Teaching for literacy engagement. *Journal of Literacy Research, 36*, 1–30. Guthrie, J. T., Anderson, E., Alao, S., & Rinehart, J. (1999). Influences of Concept-Oriented Reading Instruction on strategy use and conceptual learning from text. *The Elementary School Journal, 99*(4), 343–366. Guthrie, J. T., & Davis, M. H. (2003). Motivating struggling readers in middle school through an engagement model of classroom practice. *Reading & Writing Quarterly, 19*, 59–85. Guthrie, J. T., Hoa, L. W., Wigfield, A., Tonks, S. M., Humenick, N. M., & Littles, E. (in press). Reading motivation and reading comprehension growth in the later elementary years. *Contemporary Educational Psychology*. Guthrie, J. T., Hoa, L. W., Wigfield, A., Tonks, S. M., & Perencevich, K. C. (2006). From spark to fire: Can situational reading interest lead to long-term reading motivation? *Reading Research and Instruction, 45* (2), 91–118. Guthrie, J. T., Van Meter, P., Hancock, G. R., McCann, A., Anderson, E., & Alao, S. (1998). Does Concept-Oriented Reading Instruction increase strategy-use and conceptual learning from text? *Journal of Educational Psychology, 90*(2), 261–278. Guthrie, J. T., Wigfield, A., Barbosa, P., Perencevich, K. C., Taboada, A., Davis, M. H., Scafiddi, N. T., & Tonks, S. (2004). Increasing reading comprehension and engagement through Concept-Oriented Reading Instruction. *Journal of Educational Psychology, 96*, 403–423. Guthrie, J. T., Wigfield, A., Humenick, N. M., Perencevich, K. C., Taboada, A., & Barbosa, P. (2006). Influences of stimulating tasks on reading motivation and comprehension. *Journal of Educational Research, 99*, 232–245. Guthrie, J.T., Wigfield, A., & Perencevich, K.C. (Eds.). (2004). Motivating reading comprehension: Concept-Oriented Reading Instruction. Mahwah, NJ: Erlbaum. Guthrie, J. T., Wigfield, A., & VonSecker, C. (2000). Effects of integrated instruction on motivation and strategy use in reading. *Journal of Educational Psychology, 92*(2), 331–341. Lutz, S. L., Guthrie, J. T., & Davis, M. H. (2006). Scaffolding for engagement in learning: An observational study of elementary school reading instruction. *Journal of Educational Research, 100,* 3–20. Wang, J. H., & Guthrie, J. T. (2004). Modeling the effects of intrinsic motivation, extrinsic motivation, amount of reading, and past reading achievement on text comprehension between U.S. and Chinese students. *Reading Research Quarterly, 39*, 162–186. Wigfield, A., Guthrie, J. T., Tonks, S., & Perencevich, K. C. (2004). Children's motivation for reading: Domain specificity and instructional influences. *Journal of Educational Research, 97*, 299–309. Wigfield, A., & Guthrie, J. T. (1997). Relations of children's motivation for reading to the amount and breadth of their reading. *Journal of Educational Psychology, 89*, 420–432.
States used in	Maryland, Iowa, North Carolina, and Utah
Web site	http://www.cori.umd.edu/

CRISS (CReating Independence through Student-owned Strategies)	
Type of intervention	Professional development course designed to help teachers incorporate additional instructional strategies for reading and writing into their regular content instruction.
Developer	Carol Santa and her colleagues in the Kalispell, Montana, School District.
Contact information	Lynn Havens, Project CRISS Director (406) 758-6440—General Information info@projectcriss.com
Brief description	This program began in 1979 and was originally developed as a secondary program (Content Reading in Secondary Schools). In addition, it received federal validation and funding through the National Diffusion Network of the U.S. Department of Education. The purpose is to provide students with reading, writing, and study skill strategies that will help them better organize, understand, and retain information. The CRISS strategies can be incorporated into any existing curriculum and content area.
Expected outcomes for teachers	Teachers learn instructional strategies and assessment techniques to enhance student progress in reading, writing, and in content subjects.
Expected outcomes for students	Students acquire skills to set their own learning goals and use strategies that work best for them. They acquire learning strategies, including meta-cognitive approaches and monitoring of their own learning, to enhance academic progress.
Other expected outcomes *(administrative, organizational, curriculum)*	Strategies are designed to be adapted and implemented across the curriculum.
Grade range	3–12
Reading level range	Varied
Materials provided	3rd Edition of *CRISS Teacher Training Manual* (for Level I Training).
User requirements	• Local facilitator needed to coordinate the program and periodically observe classes and arrange follow-up sessions 3–6 months after the final training session.
Time commitment	• Level I Training/ Teachers—12–18 contact hours. • Level II Training/ Certified District Trainer—28 contact hours.
Cost structure	• Level I Training/ Teachers—$45.00/55.00 per person. • Level II Training/ Certified District Trainer—$200.00 per person. • A variety of instructional materials are available ranging in price from $10 for 10 student overviews of CRISS strategies to $550 for a complete set of classroom materials.
R&D summary	The developers list the following evaluations: • 1985—National Validation study, Horsfall & Santa (1985). • 1993–1994—Validation study (4th, 6th, 8th and 11th grades), Horsfall & Santa (1994). • 2001–2003—Comparison study, 4th, 7th and High School Students in Utah, O'Neil and Associates (2004). • 2003–2004—Study in 2 High Schools in Las Vegas, Santa and Vick (2004). • Overall, several pre-post-test evaluations with comparison groups are reported using a Free Recall Assessment as the outcome measure. • Currently, the REL-Northwest is planning an evaluation of the program using an experimental design. *(The O'Neil and Associates (2004) and Santa & Vick (2004) reports were mentioned on the developers website, but we have been unable to obtain a copy.)*

CRISS (CReating Independence through Student-owned Strategies)	
Results of R&D	The O'Neil and Associates (2004) evaluation findings as reported by the developer were that randomly selected students from a school with teachers trained in CRISS scored better on the Free Recall Assessment (created by the developer) than randomly selected students in schools where the teachers had not been trained in CRISS.
	In their review of the research on this intervention, the Florida Center for Reading Research points out some of the potential problems with the research conducted to date, "Although in some classrooms, students with *CRISS* trained teachers showed significantly stronger performance at the posttest, it is questionable whether the differential gains can be attributed to *CRISS* for two reasons. First, as schools were not randomly assigned to receive *CRISS* training, pre-existing school differences may have influenced the results. Second, the repeated measures ANOVA procedures used to analyze the data were not able to correct for pretest differences between groups of students (FCRR, 2004, p. 3)."
References	Horsfall, S., & Santa, C. (1985). *Project CRISS: Validation report for the Joint Review and Dissemination Panel.*
	Horsfall, S., & Santa, C. (1994). *Project CRISS: Validation report for the Program Effectiveness Panel.*
	Santa, C. (1995). *Project CRISS: Evidence of effectiveness in Spokane, Washington, and Aurora, Colorado.* Technical Report.
	Santa, C., & O' Neil, R. (2004). Project CRISS: Evidence of effectiveness, constructive accountability: Creating a culture for progress. *Utah Association of Curriculum Development, 15,* 21–32.
	Santa, C., & Vick, L. (2004). *Project CRISS evidence of effectiveness in Las Vegas Schools.* Technical Report.
	U.S. Department of Education, Institute of Education Sciences (2006). *National assessment of Title I Interim Report: Executive summary.* Washington, DC: Author.
States used in	Over 43 states (Canada and Norway as well) (based on information from their web site)
Web site	http://www.projectcriss.com

Literacy First—Middle/High School Content Area Process	
Type of intervention	Literacy First is a comprehensive reform process which aims to accelerate reading achievement through four distinct programs for students in grades PreK to 12th through professional development and onsite coaching and consulting.
Developer	Bill Blokker, President Professional Development Institute, Inc.
Contact information	Literacy First Process 3109 150th Place SE Mill Creek, WA 98012 (425) 745-3029
Brief description	Literacy First Middle/High School Content Area Process is a professional- development and change process that consists of the following: an analysis of the school's current reading program infrastructure and culture in comparison to research-based best practices; development of a customized three-year strategic plan; plan implementation through intensive professional development (28 days); systematic, explicit onsite coaching and consulting (24 days); and monitoring and support of the plan.
Expected outcomes for teachers	With respect to the Middle School/High School Content Area Process, teachers are expected to learn to help students better understand the content information taught in their classrooms. A small cadre of teachers will become secondary reading specialists. These teachers will teach in the Intensive Reading classes.
Expected outcomes for students	Though the intervention includes processes for grades PreK to 12th, the goal of the Literacy First Middle School/High School Content Area Process is to significantly increase achievement of ALL students in all content-area classes, provided they are reading no more than two grades below level.
Other expected outcomes *(administrative, organizational, curriculum)*	As part of the intervention, Literacy First monitors the support of the program from school and district administrators and holds the leadership team and teachers accountable for effective implementation of the strategic plan.
Grade range	6–12
Reading level range	Varied
Materials provided	Teachers in the content area receive a teacher's manual and three resource books, all of which focus on comprehension skills, strategic reading/thinking tools, metacognitive processes, and vocabulary development.
User requirements	Commitment from the school principal to be an integral part of the change process and implementation is needed.
Time commitment	The intervention entails a three-year process to include reading program analysis, 15 days of professional development, 24 days of onsite coaching and consulting, and unlimited email and phone consultation.
Cost structure	Dependent on the number of schools that participate and what they choose to include as the program customizes their plan to meet the needs of the individual schools.
R&D summary	The Oklahoma Commission for Teacher Preparation contracted with the Southwest Educational Development Laboratory (SEDL) to conduct an independent evaluation of the impact of the Literacy First Process in 29 schools in Oklahoma. SEDL compared the 29 Literacy First schools to 29 non-Literacy First schools with similar demographics. On the nationally normed assessment used in the state, the Literacy First schools increased an average of 9 percentage points on 3rd-grade reading scores compared to a 1 percent increase in comparable schools. During the same time period, the average increase of reading achievement in all Oklahoma schools was 3 percentage points (Southwest Educational Development Laboratory, 2003). (*This report was mentioned on the developer's website, but we have been unable to obtain a copy.*)
Results of R&D	In their review of the research on this intervention, the Florida Center for Reading Research noted: "Literacy First cites preliminary data (including surveys, interviews, and observations) that indicated changes in teachers' knowledge and classroom implementation of explicit teaching directed at the students' instructional level. Presently, Literacy First is designing a study to collect more evidence about its impact on cultural change and school reform (FCRR, 2004, p. 2)."

Literacy First—Middle/High School Content Area Process	
Program research references	*(n.d.) Literacy First Comprehensive Reading Reform Process*. Mill Creek, WA: Professional Development Institute.
	Florida Center for Reading Research (2004, November). *Literacy first comprehensive reading reform process*. Tallahassee, FL: Author. Available online:http://ww.fcrr.org
States used in	Nationwide K–12, 18 states and over 400 schools. See the Literacy First web site for specific details on states involved. Specific school districts with names for references may be contacted from the website.
Web site	http://www.literacyfirst.com

ReadAbout	
Type of intervention	A computer-based program meant to complement a core-reading program. This supplemental intervention program is designed to help students develop reading comprehension and vocabulary skills.
Developer	Scholastic, Inc.
Contact information	Scholastic, Inc. Worldwide Headquarters and Editorial Office 557 Broadway New York, New York 10012 1-877-234-READ—General Information http://teacher.scholastic.com/products/readabout/contact/customer_service.asp
Brief description	ReadAbout is a self-managed reading program that uses technology to personalize literacy and vocabulary instruction. It is designed to help upper elementary students learn to read nonfiction. ReadAbout complements the core reading program; it uses nonfiction content, plus skills instruction, and reinforcement strategies tailored to the interests and reading level of individual students.
Expected outcomes for teachers	Teacher outcomes for those who take part in the introductory training include an ability to use ReadAbout's software to monitor students' reading progress and to use the reports of students' progress to continue differentiating instruction offline. Teachers who take part in the Scholastic Red online training are expected to learn additional reading instruction strategies for improving student reading comprehension.
Expected outcomes for students	Students are expected to learn vocabulary and expository text structures, to develop graphic organizers and background knowledge, and to practice writing in response to text.
Grade range	3–8
Reading level range	Varied
Materials provided	• ReadAbout software and software manuals. • Teacher guide, topic planners, and organizer. • Worksheets and answer sheets.
User requirements	• Computers for student and teacher use. • A printer for printing reports. • Teachers available to participate in a 2-day introductory workshop.
Time commitment	• 20 minutes, 3 days a week for each student using the program. • 2 days of training on how to use ReadAbout software is provided for teachers for each package of the ReadAbout program purchased.
Cost structure *(as of 10/11/06)*	• The 100 license plan (three classrooms) includes ReadAbout software and materials for 3 classrooms as well as a 2-day training for 3 teachers on how to use the ReadAbout program costs $11,000. • The 100 license plan plus a Scholastic Reading Inventory (SRI) program to determine students' reading level costs $12,000. • The 100 license plan plus Scholastic Red, an online reading instruction course for teachers, costs $12,350. • The 100 license plan plus both SRI and Scholastic Red costs $13,600. • 360 licenses plan (12 classrooms/school level) includes ReadAbout software and materials for 12 classrooms as well as a 2-day training course for 13 teachers on how to use the ReadAbout program costs $23,000. • The 360 license plan plus a SRI program to determine students' reading level costs $27,500. • The 360 license plan plus Scholastic Red, an online reading instruction course for teachers costs $34,875. • The 360 license plan plus both SRI and Scholastic Red costs $30,375.
R&D summary	The U.S. Department of Education's Institute of Education Sciences is studying the effectiveness of reading comprehension programs, and ReadAbout is one of four programs that were randomly assigned to 5th grade classrooms in nine districts across the country (U.S. Department of Education, 2006).
Results of R&D	No results from the USDOE IES study have been reported

ReadAbout	
References	U.S. Department of Education, Institute of Education Sciences (2006). *National assessment of Title I Interim Report: Executive summary*. Washington, DC: Author.
States used in	Not provided, but appears to be used in localities throughout the U.S.
Web site	http://teacher.scholastic.com/products/ReadAbout/index.htm

Reading in the Content Areas	
Type of intervention	This program teaches students reading strategies to guide them in comprehending text material in the subject areas of language arts, social studies, science, and mathematics.
Developer	Globe Fearon
Contact information	Lydia Rainer Sales Representative (Washington, DC) (877)-421-0808 Globe Fearon Dr. Kate Kinsella (Program Consultant) 1–(800)-858-9500 fax: (877)-260-2530
Brief description	The program uses the KWL Plus (Know, Want to Know, Learned), Predict and Confirm, Concept Building, and Cornell Note-taking strategies to increase students' ability to gain subject-area knowledge in language arts, social studies, science and mathematics, literacy comprehension (e.g., understanding of main topics in text material, organizational skills, study skills, and confidence in reading). Teachers take on the role of reading coaches, providing modeling of strategies, and encourage and support students' efforts.
Expected outcomes for teachers	Not explicitly stated in program materials but implied teacher outcomes include improved instructional methods, reading skill-assessment procedures, and methods for motivating students and reducing students' anxiety about academic performance.
Expected outcomes for students	Students will: • Gain confidence to work with diverse text material. • Increase skills to use various cognitive strategies for the purpose of increasing their academic achievement. • Increase literacy comprehension by using the structures and features of text (e.g., topic sentences and transitional expressions). • Gain skills to organize text material. • Increase skills in using prediction and confirmation strategies to enhance reading comprehension. • Gain skills in logical and critical thinking. • Acquire note-taking strategies to enhance retention of information. • Enhance their vocabulary.
Other expected outcomes *(administrative, organizational, curriculum)*	None specified
Grade range	Middle and High School (grades 6–12)
Reading level range	4–7
Materials provided	• Student edition, comprising four progressively more challenging volumes. • Teachers Resource Manual, which provides guidance on strategy instruction, lesson plans/models, graphic illustrations, and helpful links on the Internet. • Placement Guide for placement of students at the correct program level. • Tips for Helping Students Read to Learn provides motivational tips, tips to enhance students' self-sufficiency, and guidance on assessment of student performance.
User requirements	None specified
Time commitment	Not specified
Cost structure	$189.90 for all above-mentioned materials plus 8-10% of the total for shipping and handling of materials.
R&D summary	Program materials, developer website, and literature search did not reveal any research studies supporting the program. However, the program description clearly demonstrates that it is based, at least in part, on the large body of research literature on effective literacy programs (e.g., use of strategy instruction).
Results of R&D	
Program research references	
States used in	Not Specified
Web site	http://www.globefearon.com

Reading Apprenticeship	
Type of intervention	Professional development program focused on enabling teachers to build their understanding of the complexities of reading .
Developer	WestEd's Strategic Literacy Initiative (SLI) Ruth Schoenbach, Director of SLI Cynthia Greenleaf, Associate Director of SLI
Contact information	Jana Bouc, Program Coordinator of SLI 300 Lakeside Drive, 25th Floor Oakland, CA 94612-3534 Tel: (510) 302-4245 Fax: (510) 302-4354 Email: jbouc@wested.org
Brief description	Initiated in 1995, Reading Apprenticeship is a professional development program that was originally designed and implemented through a cross school network of inter-disciplinary site-based teams involving over 300 middle and high school content-area teachers in the San Francisco Bay area. In contrast to conceptualizing literacy as a collection of basic skills, the program's instructional framework is based on the dual notions of literacy as a complex cognitive and social process and of teaching as cognitive apprenticeship—i.e., the teacher serves as the "master" reader to his or her student apprentice readers. The framework consists of four integrated dimensions of classroom life that teachers and students explore together: social, personal, cognitive, and knowledge-building. The program features a guided and structured inquiry process, built around "literacy learning cases" that teachers engage with. Accordingly, in a Reading Apprenticeship classroom, the curriculum expands to include *how* teachers and students read and *why* they read in the ways they do, as well as *what* they read in subject-area classes. A course for 9th graders, Academic Literacy, has also been developed. Participation options include: • Site-based teacher professional development—from a one-time, one-day training, to a three-time 7-day training—conducted by SLI staff and consultants. • National Institute in Reading Apprenticeship: A training-of-trainers program offered by SLI to schools and districts around the country. Team members are required to have leadership experience in literacy, subject-area curriculum and instruction, and professional development.
Expected outcomes for teachers	• Teachers create a classroom environment that is student-centered rather than teacher-directed and that is characterized by high student engagement and self direction. • Instructional practices evidence increased collaboration between and among teachers, including across subject-area divisions, and students. • Teachers and students develop an increased sense of accountability for student learning.
Expected outcomes for students	• Students' engagement, fluency, and competency in reading increases. • Student academic performance increases. • Students gain a greater sense of ownership and control of their reading practices. • Students have greater motivation to read and understand the power of literacy to shape their lives.
Other expected outcomes	None specified
Grade range	Middle and high school
Reading level range	Varies
Materials provided	• Participants in the site-based teacher training receive a copy of the SLI's book, *Reading for Understanding: A Guide to Improving Reading in Middle and High School Classrooms* as well as comprehensive course materials. • Teams participating in the National Institute in Reading Apprenticeship receive copies of the SLI's book, *Reading for Understanding: A Guide to Improving Reading in Middle and High School Classrooms* and a comprehensive set of materials for conducting RA professional development in local education agencies and schools. This includes student and classroom case-study videos and video facilitators' guides; a binder filled with over 400 pages of readings and reproducible resource materials; and membership in an active online discussion group with access to online updated resource file downloads.

Reading Apprenticeship	
User requirements	Organizations sponsoring site-based training provide the meeting rooms, audio/visual needs, and refreshments for participants.
Time commitment	• Site-based teacher training, the specification of which depends on program design. (See cost structure and options below.) • National Institute in Reading Apprenticeship: 8 days of professional development.
Cost structure *(as of Oct. 2006)*	Site-based professional development: Pricing is based on sessions for up to 40 participants. SLI provides two facilitators and covers all of their travel and lodging expenses. Costs are also based on the number of training days and the number of trips that consultants make to a location: Training Days & Trips 1-day, 1 trip: $ 7,500 2-day, 1 trip: $15,000 3-day, 1 trip: $20,000 4-day, 1 trip: $26,000 5-day, 2 trips: $32,000 5-day, 3 trips: $39,000 7-day, 2 trips: $42,000 7-day, 3 trips: $50,000 National Institute in Reading Apprenticeship: $4,000/participant plus travel.
R&D summary	• From 1997–2000, SLI researches examined the impact of RA on teachers' classroom practice related to reading in their content areas. • During 1999–2002, studies collected data on student reading growth in Bay Area and Los Angeles high schools. Student performance was measured using the Degrees of Reading Power (DRP) standardized test of reading comprehension. • There have also been several case studies of high implementation RA classrooms (2001–2003). Student performance was measured using the DRP. • From 2001–2004, case studies were conducted on schools implementing RA as a school-wide initiative. • In 2005, the Institute of Education Sciences awarded WestEd a grant to conduct an experimental test of the effectiveness of Reading Apprenticeship entitled "A Randomized Control Study of the Efficacy of Reading Apprenticeship Professional Development for High School History and Science Teaching and Learning" (full abstract is available at: http://ies.ed.gov/ncer/projects/tq_reading/fy05_wested_abstract.asp). • Overall, numerous implementation and impact studies have been conducted on RA. They have consistently reported pre-post data using state or other commercially available assessments.
Results of R&D	Teacher outcomes related to participation in Reading Apprenticeship have been the subject of investigation (e.g., WestEd 2004d). Results described included increases in teachers' knowledge about reading instruction, pedagogic content knowledge, and approaches to appraising students' literacy skills and instructional needs as well as teacher acquisition of the repertoires of effective instructional practices, teaching roles, and provision of learning opportunities for students consistent with the RA framework. Student outcomes resulting from teacher participation, including their attitudes toward and achievement in reading, have also been a focus of investigation (e.g., Greenleaf, Schoenbach, Cziko, & Mueller, 2001; WestEd 2004b).

Reading Apprenticeship	
Program research references	Greenleaf, C. L., Mueller, F. L., & Cziko, C. (1997). *Impact of the Pilot Academic Literacy Course on ninth grade students' reading development: Academic year 1996–1997.* A Report to the Stuart Foundation. San Francisco, CA: WestEd.
	Greenleaf, C. L., Schoenbach, R., Cziko, C., & Mueller, F. L. (2001). Apprenticing adolescent readers to academic literacy. *Harvard Educational Review, 71*(1), 79–129.
	WestEd. (2004a). *2001–2004 Increasing student achievement through school-wide Reading Apprenticeship.* San Francisco, CA: WestEd.
	WestEd. (2004b). *1996–1999 9th Grade Academic Literacy Course Studies.* San Francisco, CA: WestEd.
	WestEd. (2004c). *1999–2002 Studies of student reading growth in diverse professional development networks.* San Francisco, CA: WestEd.
	WestEd. (2004d). *1997–2000 A study of teacher learning and student reading outcomes in an SLI professional development network.* San Francisco, CA: WestEd.
States used in	National scope
Web site	http://www.wested.org/cs/sli/print/docs/sli/home.htm

Strategic Instruction Model (SIM)–Content Literacy Continuum (CLC)	
Type of intervention	CLC is a 3–4-year school-improvement process that focuses on helping secondary schools develop and sustain comprehensive and integrated literacy programs.
Developer	University of Kansas Center on Research and Learning
Contact information	The Strategic Learning Center 3910 California Ave SW Seattle, WA 98116 (206) 760-7650 slc@smarttogether.org www.smarttogether.org
Brief description	The Strategic Instruction Model (SIM) Content Literacy Continuum (CLC) is a 3–4-year school-improvement process focused on helping secondary schools develop and sustain comprehensive and integrated literacy programs. The goal is to create a school-wide approach to improving literacy for all students in secondary schools so that they can meet higher standards. The process to implement the framework is led by a SIM team that works with administrators, teachers, and staff to develop and implement a standards-based plan to improve literacy and content area learning tied to student performance on state assessments. The model uses a variety of strategies, some focused on helping teachers and others on helping students. Components of the SIM Content Literacy Continuum: • Content Mastery. • Embedded Strategy Instruction. • Explicit Strategy Instruction. • Intensive Skill Development. • Intensive Clinical Intervention.
Expected outcomes for teachers	• Think about, adopt, and present critical content in a learner-friendly fashion. • Use Content Enhancement Routines to promote content mastery. • Differentiate instruction.
Expected outcomes for students	• Learn the skills and strategies needed to learn content. • Learn critical content regardless of literacy level. • Value the process of learning how to learn.
Other expected outcomes *(administrative, organizational, curriculum)*	• Schools will develop intensive and coordinated instructional experiences for students who have difficulty reading and those with serious reading deficiencies. • Support personnel and teachers will learn how to provide intensive instruction and strategic tutoring. • Reading specialists and special education teachers will learn skills and strategies to teacher students with disabilities. • Speech-language pathologists learn strategies to assist students.
Grade range	6–12
Reading level range	Varied
Materials provided	• Guidebooks • Success Guides • Manuals • Notebooks • Learning Strategy Curriculum Manuals • CD-ROM
User requirements	• Commit to the 3–4-year process. • Share achievement data with SIM Literacy Specialists. • Identify a site literacy coordinator. • Align goals associated with SIM Content Literacy activities with school-improvement plans. • Provide logistical resources and time for teachers. • Develop appropriate courses and course supports. • Participate in peer evaluations. • Support teachers by providing professional development group time. • Keep SIM Implementation Team informed of evaluation activities and other school initiatives.
Time commitment	• Minimum 3–4-year process

Strategic Instruction Model (SIM)–Content Literacy Continuum (CLC)	
Cost structure	• N/A
R&D summary	• Components of SIM, or more precisely, specific "routines" embedded in the elaborate SIM framework (e.g., Bulgren et al., 2000; Bulgren, Lenz, Schumaker, Deshler, & Marquis, 2002) have been subject to research over the past 25 years. With some exceptions (e.g., Mothus & Lapadat, n.d.; Perez & Hughes, 2005), SIM-related research and evaluation has been undertaken by the program developers. • Most SIM research has focused on demonstrating the relevance of SIM to students with learning disabilities. • To date, there has been no study of the efficacy of the SIM–CLC intervention as a whole. However, the National Center for Education Evaluation (NCEE) is collaborating with the Office of Vocational and Adult Education (OVAE) in sponsoring a rigorous evaluation of supplemental literacy interventions targeting 9th graders and has contracted with MDRC and American Institutes for Research (AIR) to conduct the study, which will contrast two programs selected by a panel of reading experts through a competitive process: SIM and the Reading Apprenticeship program developed by WestEd. Schools participating in the evaluation will be randomly assigned to one of the two programs. The final report is expected in 2009. For more description and study contacts go to: http://www.aacps.org/aacps/boe/commu/slc/enhanced.htm
Results of R&D	The FCRR review of SIM (January 2006) reported that research encompassing five separate SIM strategies demonstrated that students were able to learn the steps at a high level of proficiency and were able to implement the steps correctly. However, the FCRR notes that research on how strategy acquisition and utilization impacts reading outcome measures, such as reading comprehension, is less highly developed.
Program research references	Bulgren, J. A., Deshler, D. D., Schumaker, J. B., & Lenz, K. B. (2000). The use and effectiveness of analogical instruction in diverse secondary content classrooms. *Journal of Educational Psychology*, *92*(3), 426–441. Bulgren, J. A., Lenz, K. B., Schumaker, J. B., Deshler, D. D., & Marquis, J. G. (2002). The use and effectiveness of a comparison routine in diverse secondary content classrooms. *Journal of Educational Psychology*, *94*(2), 356–371. Mothus, T. G., & Lapadat, J. C. (n.d.). *A strategy intervention to increase the reading comprehension of junior high school students with reading disabilities*. Unpublished Manuscript. (ERIC Document Reproduction Service No. ED490965) Perez, R., & Hughes, E. (2005). *Strategies for Academic Success (SAS) end-of-year report*. El Paso, TX: El Paso Independent School District. Woodruff, S., Schumaker, J. B., & Deshler, D. D. (2002). *The effects of an intensive reading intervention on the decoding skills of high school students with learning deficits*. Research report #15. Lawrence, KS: Institute for Academic Access. (Note: See the SIM Research Report at www.fcrr.org for additional research citations for SIM)
States used in	Connecticut, Florida, Louisiana, Michigan, Minnesota, South Carolina, and Wyoming.
Web site	http://www.ku-crl.org/sim/index.html http://www.smarttogether.org

APPENDIX E
ADDITIONAL RESOURCES

Alliance for Excellent Education

www.all4ed.org

The Alliance for Excellent Education is a policy, research, and advocacy organization dedicated to the support of students in low-performing high schools. In an effort to improve adolescent literacy, the alliance hosts events and develops products focused on this topic. Framework for an Excellent Education is a project initiated by the Alliance to support adolescent literacy improvement by building on Reading First. Their contact for adolescent literacy is Rafael Heller, Senior Policy Analyst, who can be reached at (202) 828-0828 or at rheller@all4ed.org.

American Institute of Research (AIR)

www.air.org

At the request of the Carnegie Corporation of New York, the American Institute of Research (AIR) conducted a descriptive study of the Alabama Reading Initiative (ARI) based on interviews with those involved in ARI including students, teachers, and administrators at the school and state level, university faculty, and other stakeholders. It documents the struggles and challenges involved in implementing a plan intended to touch every student and teacher in Alabama and offers lessons and recommendations derived as the ARI was implemented. The report also describes the positive outcomes of the program, for both teachers and students, that are expected to result in "steady progress" in academics among students. The report can be accessed at www.Air.org/publications/documents/ARI%20Popular%20Report_final.pdf

Center on Instruction

www.centeroninstruction.org

The Center on Instruction is a partnership of five organizations providing resources and expertise

to Regional Comprehensive Centers in reading, mathematics, science, special education, and English-language learners. The Florida Center for Reading Research (www.fcrr.org) leads the reading strand, which is divided into four categories—K–3, 4–12, special education, and English-language learners. The 4–12 section contains resources helpful to administrators, policymakers, and educators.

A substantial list of PowerPoint presentations covering topics such as selection of, planning for, and challenges of adolescent literacy programs; skills, knowledge requirements, and instruction; reading standards and assessments; and English-language learners issues are included in the 4–12 section. A DVD is available for a nominal fee that includes details and information from the Adolescent Literacy Workshop held in Boston in 2006.

The web site also includes links to the Vaughn Gross Center for Reading and Language Arts at the University of Texas at Austin (www.texasreading.org) and the Florida Center for Reading Research (www.fcrr.org).

Institute of Education Sciences

http://ies.ed.gov

The Institute of Education Sciences (IES) is the section within the U.S. Department of Education charged with supporting rigorous research in education and providing information on evaluation and statistics to educators. IES comprises four units: the National Center for Education Research (NCER), the National Center for Education Statistics (NCES), the National Center for Education Evaluation and Regional Assistance (NCEE), and the National Center for Special Education Research (NCSER). Within this framework IES supports research on several adolescent literacy-related initiatives through competitive grants and the regional education laboratory (REL) system. Through the competitive grant process, IES supports Interventions for Struggling Adolescent and Adult Readers and Writers, an NCER program that

funds projects examining strategies to improve basic reading and writing skills for individuals whose insufficient skills impede their success. IES also supports several ongoing adolescent literacy research projects through the REL system (http://ies.ed.gov/ncee/edlabs/).

Learning Points Associates

www.learningpt.org

Learning Points Associates is a nonprofit, educational organization providing resources and technical assistance on various issues in education. Whereas, this study focuses on a review of professional development and other support for content-area teachers in improving reading outcomes for their classes as a whole, Learning Points has produced a document that provides information on programs for use with struggling adolescent readers.

1. The *Adolescent Literacy Intervention Programs: Chart and Program Review Guide* discusses program characteristics for struggling adolescent readers and includes a chart and review guide to help schools choose programs for students.

2. Adolescent Literacy Web site. This web site is a collection of resources, tools, and information on adolescent literacy and is intended to help educators and policymakers gather and apply knowledge to help all students succeed. The site provides an overview of proposed and authorized legislation, components of successful programs, instructional leadership resources, and additional web sites focusing on adolescent literacy.

National Association of State Boards of Education

http://www.nasbe.org/

In *Reading at Risk: The State of Response to the Crisis in Adolescent Literacy* the National Association of State Boards of Education (NASBE) Study

Group on Middle and Secondary Literacy emphasized the need for schools and districts to implement practices that researchers have identified as likely to improve adolescent reading achievement. NASBE laid out recommendations for states interested in improving adolescent literacy, including the need for research to guide practice:

• Set state literacy goals and standards, ensuring alignment with curricula and assessments and raising literacy expectations across the curriculum for all students in all grades.

• Ensure that teachers have the preparation and professional development to provide effective, content-based literacy instruction.

• Strategically use data to identify student needs, design cohesive policies, and evaluate the quality of implementation and impact.

• Require the development of district and school literacy plans that infuse research-based literacy support strategies in all content areas.

• Provide districts and schools with funding, support, and resources.

• Provide state guidance and oversight to ensure strong implementation of comprehensive quality literacy programs.

National Governors Association

www.nga.org

The National Governors Association (NGA) is a bipartisan organization of the nation's governors that "promotes visionary state leadership, shares best practices, and speaks with a unified voice on national policy." The NGA has developed Reading to Achieve: State Policies to Support Adolescent Literacy, a program dedicated to helping policymakers raise adolescent literacy achievement in their states. The project is supported by the Carnegie Corporation and has provided funding to eight states to help

them develop state plans centered on adolescent literacy. These plans incorporate recommendations from *Reading to Achieve: A Governor's Guide to Adolescent Literacy*, an NGA publication that identifies strategies to improve adolescent literacy.

Striving Readers

www.ed.gov/programs/strivingreaders/index.html

Striving Readers is a discretionary grant authorized as part of the 2005 Fiscal Year Appropriations Act under the Title I demonstration authority. Eligible Title I local education agencies serving students in grades 6–12 may apply, or state education agencies may apply on behalf of an eligible local agency. The program supports new

comprehensive reading initiatives or expansion of existing initiatives that improve the quality of literacy instruction across the curriculum; provides intensive literacy interventions to struggling readers; and help build a strong, scientific research base for identifying and replicating strategies that improve adolescent literacy skills. Initiatives include three key components:

1. Supplemental literacy interventions targeted to students who are reading significantly below grade level.

2. Cross-disciplinary strategies for improving student literacy.

3. Strong experimental evaluation components.

REFERENCES

American Institutes for Research. (2005). *Reading framework for the 2009 national assessment of educational progress* (Pre-publication ed.). Washington, DC: National Assessment Governing Board. Retrieved from http://www.nagb.org/frameworks/writing-fw-draft-0508.doc.

Anderson, R. C., Nguyen-Jahiel, K., & McNurlen, B. (2001). The snowball phenomenon: Spread of ways of talking and ways of thinking across groups of children. *Cognition and Instruction, 19*(1), 1–46.

Bacevich, A., & Salinger, T. (2006). *Lessons and recommendations from the Alabama Reading Initiative: Sustaining focus on secondary reading.* Prepared for the Carnegie Corporation of New York. Washington, DC: American Institutes for Research. Retrieved from http://www.air.org/publications/documents/ARI%20Popular%20Report_final.pdf.

Berman, I., & Biancarosa, G. (2005). *Reading to achieve: A Governor's Guide to adolescent literacy.* Washington, DC: National Governors Association, Center for Best Practices.

Biancarosa, G., & Snow, C. E. (2004). *Reading next—A vision for action and research in middle and high school literacy: A report from Carnegie Corporation of New York.* Washington, DC: Alliance for Excellent Education.

Bottoms, G. (2005). Why we need an across-the-curriculum emphasis on literacy. In *Literacy across the curriculum: Setting and implementing goals for grades six through 12. Site Development Guide #12.* Atlanta, GA: Southern Regional Board.

Bulgren, J. A., Deshler, D. D., Schumaker, J. B., & Lenz, B. K. (2000). The use and effectiveness of analogical instruction in diverse secondary content classroom. *Journal of Educational Psychology, 92*(3), 426–441.

Bulgren, J. A., Lenz, B. K., Schumaker, J. B., Deshler, D. D., & Marquis, J. B. (2002). The use and effectiveness of a comparison routine in diverse secondary content classrooms. *Journal of Educational Psychology, 94*(2), 356–371.

Burney, D., Corcoran, T. B., & Lesnick, J. (2003). *Instructional coaching: A review of research.* Philadelphia, PA : The Learning Partnership Consortium for Policy Research in Education.

Clark, A., Anderson, R., Kuo, L., Kim, I., Archodidou, A., & Nguyen-Jahiel, K. (2003). Collaborative reasoning: Expanding ways for children to talk and think in school. *Educational Psychology Review, 15*(2), 181–198.

Comprehensive School Reform Quality Center. (2005). *Moving forward: A guide for implementing comprehensive school reform and improvement strategies.* Washington, DC: American Institutes for Research, CSRQ Center. Retrieved from http://www.csrq.org/documents/MovingForwardGuideFinal11-09-05.pdf.

Davis, D., Spraker, J., & Kushman, J. (2004). *Improving adolescent reading: Findings from research.* Portland, OR: Northwest Regional Education Laboratory.

Florida Center for Reading Research. (2006, June). *ReadAbout.* Tallahassee, FL: Author. Retrieved from http://www.fcrr.org/FCRRReports/PDF/ReadAboutfinalnew.pdf.

Florida Center for Reading Research. (2004, November). *Literacy First comprehensive reading reform process.* Tallahassee, FL: Author. Retrieved from http://www.fcrr.org/FCRRReports/PDF/Literacy_First.pdf.

Franzak, J. K. (2006). Zoom: A review of the literature on marginalized adolescent readers, literacy theory, and policy implications. *Review of Educational Research, 76*(2), 209–248.

Greenleaf, C. L., Schoenbach, R., Cziko, C., & Mueller, F. L. (2001). Apprenticing adolescent readers to academic literacy. *Harvard Educational Review, 71*(1), 79–129.

Guthrie, J. T., Anderson, E., Alao, S., & Rinehart, J. (1999). Influences of Concept-Oriented Reading Instruction on strategy use and conceptual learning from text. *The Elementary School Journal 99*(4), 343–366.

Guthrie, J. T., Van Meter, P., Hancock, G. R., Alao, S., Anderson, E., & McCann, A. (1998). Does Concept-Oriented Reading Instruction increase strategy use and conceptual learning from text? *Journal of Educational Psychology, 90*(2), 261–278.

Guthrie, J. T., & Wigfield, A. (2000). Engagement and motivation in reading. In M.L. Kamil, P.B. Mosenthal, P.D. Pearson, & R. Barr (Eds.), *Handbook of reading research* (Vol. 3, pp. 403–422). Mahwah, NJ: Erlbaum.

Guthrie, J. T., Wigfield, A., Barbosa, P., Perencevich, K.C., Taboada, A., Davis, M.H., Scafiddi, N. T., & Tonks, S. (2004). Increasing reading comprehension and engagement through Concept-Oriented Reading Instruction. *Journal of Educational Psychology, 96*(3), 403–423.

Guthrie, J. T., Wigfield, A., Humenick, N. M., Perencevich, K. C., Taboada, A., & Barbosa, P. (2006). Influences of stimulating tasks on reading motivation and comprehension. *Journal of Educational Research, 99*(4), 232–245.

Guthrie, J. T, Wigfield, A., & VonSecker, C. (2000). Effects of integrated instruction on motivation and strategy use in reading. *Journal of Educational Psychology 92*(2), 331–341.

Hassel E. A., Hassel, B. C., Arkin, M. D., Kowal, J. M., & Steiner, L. M. (2006). *School restructuring under No Child Left Behind: What works when? A guide for education leaders.* Washington, DC: Learning Point Associates, The Center for Comprehensive School Reform and Improvement. Retrieved from http://www.centerforcsri.org/files/RestructuringGuide.pdf.

International Reading Association. (2006). *Standards for middle and high school literacy coaches.* Newark, DE. Retrieved from http://www.reading.org/resources/issues/reports/coaching.html

Kamil, M. L. (2006, July). *NAEP reading framework 2009 and beyond.* Paper presented at the University of California, Berkeley 2nd Annual Summer Institute in Reading, San Francisco, CA.

Kamil, M. L. (2003, November). *Adolescents and literacy: Reading for the 21st century.* Washington, DC: Alliance for Excellent Education.

Kinsella, K. (2000). *Reading in the content areas strategies for reading success: Tips for helping students read to learn.* Parsippany, NJ: Globe Fearon (Pearson Learning Group).

Lenz, B. K., Ehren, B. J., & Deshler, D. D. (2005). The content literacy continuum: A school reform framework for improving adolescent literacy for all students. *Teaching Exceptional Children, 37*(6), 60–63.

MacArthur, C., Graham, S., & Fitzgerald, J. (2006). *Handbook of writing research.* New York: Guilford.

Manouchehri, A. (2001). Collegial interaction and reflective practice. *Action in Teacher Education, 22*(4), 86–97.

Meltzer, J. (2001). *Supporting adolescent literacy across the content areas. Perspectives on policy and practice.* Providence, RI: Northeast and Islands Regional Educational Laboratory at Brown University.

Meltzer, J., Smith, N. C., & Clark, H. (2002). *Adolescent literacy resources: Linking research and practice.* Providence, RI: Northeast and Islands Regional Educational Laboratory at Brown University.

National Association of State Boards of Education. (2006). *Reading at risk; The state response to the crisis in adolescent literacy* (rev. ed.). Report of the NASBE Study Group on Middle and High School Literacy. Alexandria, VA: Author.

National Institute of Child Health and Human Development. (2000). *Report of the National Reading Panel. Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction.* (NIH Publication No. 00-4769). Washington, DC: U.S. Government Printing Office.

National Institute for Literacy. (n.d.). *Facts and statistics: Reading facts.* Retrieved November, 2006, from http://www.nifl.gov/nifl/facts/reading_facts.html.

National Reading Panel. (2000). *Report of the National Reading Panel: Teaching children to read.* Washington, DC: National Institute of Child Health and Human Development.

National Staff Development Council. (2001). *Standards for staff development* (rev. ed.). Oxford, OH: National Staff Development Council.

Neufeld, B., & Roper, D. (2003). *Coaching: A strategy for developing instructional capacity—Promises and practicalities.* Prepared for the Aspen Institute Program on Education and the Annenberg Institute for School Reform. Cambridge, MA: Education Matters. Retrieved from http://www.annenberginstitute.org/images/coaching.pdf.

Pearson, D. (2006, July). *A new framework for teaching comprehension in the upper elementary grades.* Paper presented at the North Region Summer Conference of America's Choice in Saratoga Springs, NY. Retrieved from http://scienceandliteracy.org/Presentations/High%20Expectations.ppt.

Perie, M., Grigg, W., & Donahue, P. (2005). *The nation's report card: Reading 2005* (NCES 2006-451). U.S. Department of Education, National Center for Education Statistics. Washington, DC: U.S. Government Printing Office.

Phelps, S. (2005). *Ten years of research on adolescent literacy, 1994–2004: A review.* Naperville, IL: Learning Point Associates.

RAND Reading Study Group. (2002). *Reading for understanding: Toward a RAND program in reading comprehension.* Santa Monica, CA: RAND.

Santa, C. M. (2004). *Project CRISS*[SM]*: A history of reliable, replicable research.* Retrieved from http://projectcriss.com/prc/pdf_research/7-ReplicableResearch.pdf.

Schoenbach, R., Braunger, J., Greenleaf, C., & Litman, C. (2003). Apprenticing adolescents to reading in subject-area classrooms. *Phi Delta Kappa, 82*(2), 133–138.

Schoenbach, R, Greenleaf, C., Cziko, C., & Hurwitz, L. (2000). *Reading for understanding: A guide to improving reading in middle and high school classrooms*. San Francisco: Jossey-Bass.

Schwartzbeck, T. D. (2002). *Choosing a model and types of models: How to find what works for your school.*

Washington, DC: National Clearinghouse for Comprehensive School Reform.

South Carolina Reading Initiative. (2003). Field Initiated Studies. Retrieved from http://www.ncte.org/library/files/profdev/onsite/RI/SC_Brief.pdf.

Shake, M. C., & Bintz, W. (2001). *Investigating current problems and practices in teaching reading across the curriculum at the middle school and high school levels: Executive summary.* Retrieved November 2006 from http://www.kentuckyliteracy.org/middle_school.pdf.

Shanahan, C. (2005). *Adolescent literacy intervention programs: Chart and program review guide.* Naperville, IL: Learning Point Associates. Retrieved from http://www.learningpt.org.

Snow, C. E., & Biancarosa, G. (2003). *Adolescent literacy and the achievement gap: What do we know and where do we go from here?* Report from Carnegie Corporation of New York, Adolescent Literacy Funders Meeting. New York: Carnegie Corporation of New York.

Spraker, J. (2003). *Teacher teaming in relation to student performance: Findings from the literature*. Portland, OR: Northwest Regional Education Laboratory.

Stevenson, E., & Waltman, K. (2006). *Reading across the curriculum: An investigation of the implementation and impact in secondary schools* (I-ARP Report #001). Iowa City: University of Iowa, Center for Evaluation and Assessment. Retrieved from http://www.education.uiowa.edu/cea/RecentFindings.htm

U.S. Department of Education, Institute of Education Sciences. (2006). *National assessment of Title I Interim Report: Executive summary.* Washington, DC: Author.

U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics. (2003). *The nation's report card: Reading highlights 2002* (NCES 2003-524). Washington, DC: Author.

Walker, K. (n.d.). *Research brief: Literacy across the high school curriculum*. The Principals' Partnership, sponsored by Union Pacific Foundation. Retrieved

November 16, 2006, from http://principalspartnership.com/literacyacross.pdf.

Walter, K. E. (2004). *Making good choices: Sustainable school improvement*. Naperville, IL: Learning Point Associates, North Central Regional Educational Laboratory. Retrieved from http://www.learningpt.org.

Whitehurst, G. J. (2004). *Making education evidence-based: Premises, principles, pragmatics, and politics*. Paper presented at the Institute for Policy Research, Northwestern University, Evanston, IL.

Wigfield, A., Guthrie, J. T., Tonks, S., & Perencevich, K. C. (2004). Children's motivation for reading: Domain specificity and instructional influences. *Journal of Educational Research, 97*(6), 299–309.

Wilkinson, I. (2006). *'Thenken talk': A design for discussion to promote high-level comprehension of text.* Paper presented at the University of California, Berkeley, 2nd Annual Summer Institute in Reading, San Francisco, CA.