The South Carolina Reading Initiative: NCTE's Reading Initiative as a Statewide Staff Development Project

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Abstract

The South Carolina Reading Initiative (SCRI), a collaborative endeavor with the National Council of Teachers of English, is a multiyear, site-based, statewide staff development effort. The design of SCRI is grounded in research on teacher quality, staff development, and best practices. Survey and case study research studies were conducted to understand the impact of SCRI on teachers' beliefs and practices. Findings across all three surveys (est. 800 to 1,400 responses per survey) and thirty-nine case studies indicate that the beliefs and practices of participating teachers became increasingly consistent with SCRI Belief Statements and, therefore, with state and national standards. Three studies examined the reading levels or standard test scores of students in the classrooms of SCRI teachers compared to those of students in the classrooms of non-SCRI teachers. The number of students in these studies ranged from 145 to 27,000. Struggling readers in SCRI classrooms were able to read more difficult texts and had higher standardized test scores. In addition, the number of students receiving individualized education programs (IEPs) decreased for students in SCRI classrooms. This research suggests that research-based, statewide staff development programs can have a considerable impact on the beliefs and practices of teachers and on the students who learn from them.

The literacy scores of students in South Carolina have been among the lowest in the nation for many years (see, for example, National Assessment of Educational Progress (NAEP) scores from 1992, 1994, 1998, 2002). If their literacy levels are left unchanged, the future for these students is grim. Statistics gathered by South Carolina's *Success by Six* organization (2002) predicted that, of the 54,500 students who enter first grade in South Carolina in a given year, 30 percent will not graduate from high school, 85 percent will receive public assistance, and 65 percent will spend time in confinement. Because literacy makes possible a different future, the state of South Carolina made a long-term, systematic commitment, in the fall of 1999, to improving the literacy skills and strategies of students in grades K–5. This responsibility fell to the State Department of Education (SDE). The first decision was that South Carolina's efforts to improve literacy would be based on research. The first step was to consider critically and systematically the research about teacher quality and student performance, effective professional development, and best practices. The review led to three major findings that were used as the research base for the long-term staff development program, the South Carolina Reading Initiative (SCRI), a collaborative endeavor with the National Council of Teachers of English (NCTE).

Research-Based Findings

1. It is the teacher, not the method, that makes the difference (Anderson, Hiebert, Scott, & Wilkinson, 1985; Bond & Dykstra, 1967, 1997; Ferguson, 1991).

2. Effective professional development has particular characteristics. As subsequently summarized by Richardson and Placier (2001), it is (a) schoolwide and context specific; (b) supported by principals; (c) long term, with adequate support and follow-up; (d) collegial; (e) based on current knowledge obtained through well-designed research; and (f) adequately funded.

3. In the field of language arts, there are well-established best practices. As summarized in the federal report *Becoming a Nation of Readers* (1985), these include reading aloud to students; providing students with ample time for independent reading and with access to books; ensuring that the books used are well written and matched to the student's reading level; allowing students ample time for writing; helping students understand the alphabetic principle, identify unfamiliar words rapidly, and make connections between what they already know and the text; and providing students with explicit instruction in comprehension strategies.

Research Finding #1: It is the teacher, not the method, that makes the difference.

Despite the suggestions of sales representatives, radio, television, and journal ads (and, sometimes, government-funded reports), there is no packaged program or single method that helps all students. Instead, it is the teacher that makes the difference. This finding was first established almost forty years ago by Bond and Dykstra's studies of first- and second-grade reading instruction (Bond & Dykstra, 1967, reprinted 1997; Dykstra, 1968a; Dykstra, 1968b; Sipay, 1968). These researchers concluded that it was not the method that made the difference; they argued

> To improve reading instruction, it is necessary to train better teachers of reading than to expect a panacea in the form of materials . . . No one approach is so distinctly better in all

> situations and respects than the others that it should be considered the one best method and the one to be used exclusively. (Bond & Dykstra, 1967, reprinted 1997, p. 416)

Eighteen years later, Harste (see Crismore, 1985) conducted a meta-analysis of the reading comprehension research conducted from 1974 to 1984. Harste's conclusions mirrored the findings of Bond and Dykstra, who had concluded that it was the teacher, not the method, that made the difference. Harste extended these findings by concluding that nearly every method made the same amount of difference. In his meta-analysis, nearly every intervention yielded a gain effect size of .7. Nearly every method was helpful for some group of students under some conditions. However, no method was helpful for all students under all conditions. Because a method worked for one group at one time did not mean that particular method would produce the same results with another group at another time. It was the teacher, not the method, that made the difference. As Anderson et al. (1985) concluded in *Becoming a Nation of Readers*, "Improving reading instruction in the United States is not possible without good teachers" (p. 114). Several other studies conducted in the past twenty years also support the findings of Bond and Dykstra:

- In 1986, Texas required all teachers to take the Texas Examination of Current Administration and Teachers (TECAT). Ferguson (1991), using data from nine hundred school districts attended by 2.4 million students, studied the relationship between teacher scores on the TECAT and the scores of first, third, fifth, seventh, ninth, and eleventh graders on the Texas Educational Assessment of Minimal Skills (TEAMS). Ferguson found that teacher quality accounted for more variation in student achievement than any other factor, e.g., family, community background, socioeconomic status (SES), or parents' level of education. Ferguson concluded, "What the evidence here suggests most strongly is that teacher quality matters and should be a major focus of efforts to upgrade the quality of schooling" (1991, p. 490). Commenting on the Ferguson study, Darling-Hammond and Loewenberg-Ball (1998) concluded

> The effects were so strong . . . that, after controlling the socioeconomic status, the large disparities in achievement between black and white students were almost entirely explained by differences in their teachers' qualifications (p. 2).

- An analysis of fourth-grade test data [1992 NAEP (1994)] showed a relationship between teacher qualifications and student scores. Students whose teachers had a master's degree had the highest scores. Students whose teachers had a bachelor's degree had slightly lower scores. Students whose teachers had no certification or a provisional or emergency certification had the lowest scores.

- In 1984, Sanders (1988) used three years of test data from students in one county and the statistical procedure of value-added assessment to examine the relationship between student achievement and contextual factors such as SES, class size, student variability, and teacher effectiveness. He found that teacher effectiveness was the major factor influencing students' academic gains. The lowest-achieving students benefited most from more effective teachers, and the students of the most effective teachers made similar achievement gains regardless of their prior achievement levels. In 1992, Sanders's work was integrated into Tennessee's school improvement efforts. Studies conducted by Sanders since 1984 continue to confirm the relationship between teacher effectiveness and student gain.

A number of other studies also concluded that it is the teacher, not the method, that makes the difference (see, for example, Darling-Hammond, 2000; Duffy, 1983**;** Duffy, Roehler, & Putnam, 1987**;** Langer, 2000). Indeed, researchers have found that instructional eclecticism, not programmatic fidelity, is one of the hallmarks of effective teaching. Effective teachers modify programs and materials to meet the needs of students in particular situations and contexts (Hoffman et al., 1998; Duffy & Hoffman, 1999; Shanahan & Neuman, 1997).

In their review of the literature, stakeholders at the South Carolina SDE came to understand what researchers have documented: there is no "magic bullet," no one-size-fits-all reading program; the most effective teachers use a variety of methods. They also found out that researchers have called into question the "perfect method" concept itself. As Duffy and Hoffman (1999) explained,

> [T]he perfect method concept promotes the idea that good teachers simply follow directions. Who will be attracted to teaching as a lifelong career if problem solving and reflective action are replaced by such procedural compliance? In sum, the perfect method concept is not a solution. The solution is development of teachers who know a variety of methods and approaches, and who orchestrate those thoughtfully and adaptively according to their students' needs. (p. 13)

Similarly, Oakes, Franke, Quartz, and Rogers (2002) argued that attempts by district and state policymakers to compensate for the shortcomings of underprepared teachers by turning to highly prescriptive, teacher-proof curricula "will diminish the capacity of the teaching force for years to come" (p. 228). They concluded that, instead of being required to follow a script, teachers need to become members of stable learning communities where they can interact with other professionals, improving their teaching practices through collegial study and reflective action. Allington (2002) concurred:

> A series of studies have confirmed what was probably obvious from the beginning. Good teachers, effective teachers, matter much more than particular curriculum materials, pedagogical approaches, or 'proven programs.' It has become clearer that investing in good teaching—whether through making sound hiring decisions or planning effective professional development—is the most 'research-based' strategy available. If we truly hope to attain the goal of 'no child left behind,' we must focus on creating a substantially larger number of effective, expert teachers.
>
> Effective teachers manage to produce better achievement regardless of which curriculum materials, pedagogical approach, or reading program they use. (pp. 740–742)

This extensive body of research on teacher effectiveness and student achievement led South Carolina educators to the conclusion that investing in the teacher knowledge base was the best means for helping students become better readers.

Research Finding #2: Effective professional development has particular characteristics. As subsequently summarized by Richardson and Placier (2001), effective professional development is (a) schoolwide and context specific; (b) supported by the principals; (c) long

term, with adequate support and follow-up; (d) collegial; (e) based on current knowledge obtained through well-designed research; and (f) adequately funded.

Each of these points is supported by a number of research studies. Consider the need for collegiality. Little (1982), for example, was interested in understanding organizational characteristics conducive to teachers' learning on the job. She conducted semistructured interviews with 105 teachers and fourteen administrators and also conducted observations to understand school as a workplace. She concluded that teacher collegiality was essential for teacher learning. She identified four characteristics of schools that supported teacher collegiality:

1. Teachers engaged in "frequent, continuous, and increasingly concrete and precise talk about teaching practice" (p. 331);

2. Teachers were "frequently observed and provided with useful (if potentially frightening) critiques of their teaching" (p. 331);

3. Teachers planned, designed, researched, evaluated, and prepared teaching materials together; and

4. Teachers talked with each other about "the practice of teaching" (p. 331).

Sparks (1988) studied nineteen junior high teachers in order to understand the relationship between "teachers' attitudes towards teaching practices presented in in-service training and the subsequent use of those practices." Pre- and post-observations, interviews, and questionnaires were used. Sparks identified self-efficacy as critical and suggested that one way to "increase (or, at least, capitalize on) self-efficacy is to provide intimate, structured small-group sharing and problem-solving sessions for teachers" (p. 117).

Richardson (1990) reviewed the literature on teacher change and recommended that opportunities needed to be "created to allow teachers to interact and have conversations about standards, theory, and classroom activities." In such a setting, "research becomes one basis for the development of warranted practices with which teachers may experiment in their classrooms" (p. 16).

Peterson, McCarthy, and Elmore (1996) were interested in understanding successful school restructuring. They studied three elementary schools for two years via observation and interviews. Peterson et al. concluded that "changing teachers' practice is primarily a problem of learning, not of organization" (p. 139). Among the factors influencing teacher change were "teachers meeting together as a whole school or in teams [with] access to new ideas through professional development opportunities" (p. 119).

Anders, Hoffman, and Duffy (2000) reviewed the literature on professional development related to teaching reading. In examining the literature concerning in-service teacher education, they noted: "Many studies have suggested that conversation and discussion makes up a critical element in supporting the change element" (p. 730). As support for this statement, these authors cite the work of Anders and Richardson (1991); Combs (1994); Hollingsworth (1994); Krauss (1992); and Shepperson and Nistler (1991, 1992).

The SDE review of the literature found substantial support not only for collegiality, but for all of the staff development characteristics identified by Richardson and Placier (2001): (a) schoolwide and context specific; (b) supported by the principals; (c) long term, with adequate support and follow-up; (d) collegial; (e) based on current knowledge obtained by well-designed research; and (f) adequately funded. The SDE decided that all of these attributes would be characteristics of its staff development program.

Research Finding #3: In the field of language arts, there are well-established best practices. As summarized in* Becoming a Nation of Readers *(1985), those best practices include reading aloud to students; providing students with ample time for independent reading and with access to books; ensuring that the books used in the classroom are well written and matched to the student's reading level; allowing students ample time for writing; helping students understand the alphabetic principle, identify unknown words rapidly and thus read fluently, and make connections between what they already know and the text; providing students with explicit instruction in comprehension strategies.

Despite frequent references in the media to "reading wars," there has been considerable consensus about what constitutes "best practices." In 1985, for example, the authors of the federally sponsored report *Becoming a Nation of Readers* defined reading as a constructive, strategic process and concluded

> The knowledge is now available to make worthwhile improvements in reading throughout the United States. If the best practices seen in the classrooms of the best teachers in the best schools could be introduced everywhere, the improvements would be dramatic. (p. 3)

The report identified these best practices:

1. Reading aloud to students ("The single most important activity for building the knowledge required for eventual success in reading is reading aloud to children" p. 23);

2. Providing students with ample time for independent reading ("Research suggests that the amount of independent, silent reading children do in school is significantly related to gains in reading achievement" p. 76);

3. Providing students with access to books ("Analyses of schools that have been successful in promoting independent reading suggest that one of the keys is ready access to books" p. 78);

4. Ensuring that the books used in the classroom are well written and matched to the reading level of the students (see, in particular, pp, 43–48 and 62–65);

5. Providing students with ample time for writing ("Opportunities to write have been found to contribute to knowledge of how written and oral language are related, and to

growth in phonics, spelling, vocabulary development, and reading comprehension" p. 79);

6. Helping young students understand the alphabetic principle, that there is a relationship between letters and sounds ("The best way to get children to refine and extend their knowledge of letter-sound correspondences is through repeated opportunities to read" p. 38);

7. Helping students identify unfamiliar words rapidly and therefore read fluently ("Interestingly, it does not appear that skilled readers identify unfamiliar words by rapidly applying 'rules' governing the relationships between letters and sounds. Instead, research suggests that they work by analogy with known words" p.12; see also pp. 10–12);

8. Helping students make connections between what they already know (their background knowledge) and the text (see, in particular, pp. 49–51);

9. Providing students with explicit instruction in comprehension strategies ("Children should not be left guessing about how to comprehend" p. 72).

A few years later**,** the analysis of the 1992 NAEP fourth-grade data (see Figure 1) showed that many of these same practices were positively correlated with *higher* scores on the NAEP:

1. Use of trade books (as opposed to basal readers);
2. Heavy emphasis on integrated reading and writing;
3. Instruction time on comprehension and interpretation;
4. Emphasis on literature-based reading;
5. Library visits for students at least once a week;
6. Weekly use of written assignments to assess students in reading.

These practices correlated with *lower* scores on the NAEP:

1. Amount of time devoted to teaching subskills (as opposed to integrative approaches);
2. Use of reading kits;
3. Use of workbooks and worksheets;
4. Monthly use of multiple-choice or short-answer tests to assess reading.

Figure 1. ***Correlates of reading achievement, average student proficiency scores, NAEP, 1992.***

Correlates of Reading Achievement	Lower Scores	Higher Scores
Teaching Practices		
Types of materials used	Primarily basal readers 216	Primarily trade books 223
Instructional approaches	Structured subskills 200	Integrative language 220
Emphasis on literature-based reading	Little or no emphasis 211	Heavy emphasis 220
Frequency of use of reading workbooks and worksheets	Almost every day 215	Less than weekly 221
Frequency with which students write about what they have read	Less than weekly 216	Almost every day 220
Frequency with which teachers use reading kits to teach reading	At least once a week 211	Never or rarely 219
Frequency with which teachers take class to library	Never or rarely 209	At least once a week 222
Use of multiple-choice tests to assess students in reading	At least once a month 209	Less than monthly 222
Use of short-answer tests to assess students in reading	At least once a month 214	Less than monthly 222
Use of written assignments to assess students in reading	Less than monthly 210 Once or twice a year 209	At least once a week 221

Source: 1992 NAEP Trial State Assessment, as reported in Darling-Hammond (1997).

Most of these comparisons were not provided for subsequent administrations of the NAEP. However, three comparisons were provided for the 1994 NAEP Students who had higher scores read trade books (instead of basal readers), used workbooks and worksheets less than once a week, and wrote almost daily about what they read (NAEP, 1996).

In 1995, Pressley and his colleagues began to study the instructional practices of primary teachers considered to be effective in promoting literacy. In their first study (Pressley, Rankin, & Yokoi, 1995), they surveyed highly effective teachers across the country who were selected based on nominations from fifty randomly selected reading supervisors. The supervisors were asked to provide information about the effectiveness of teachers and rate their confidence in their

evaluation of the nominated teachers. Teachers responded to two questionnaires, in which they reported on their use of instructional practices, the characteristics of quality learning environments, general teaching processes, specific teaching processes related to the teaching of reading and writing, and the teaching of students who were experiencing difficulties. The researchers concluded that the following were exemplary characteristics of instruction:

1. Classrooms were filled with print;
2. Most reading was of children's literature;
3. Teachers modeled extensively;
4. Students had extensive opportunities to read and write;
5. Teachers provided instruction via small, flexible groups;
6. Teachers individualized instruction according to student needs;
7. Teachers taught basic skills in the context of real reading and writing;
8. Teachers assessed students frequently;
9. Teachers spent time motivating students to be literate.

In 1998, Wharton-McDonald, Pressley, and Hampston conducted observations in the classrooms of ten teachers who were recommended to them as exemplary. One teacher left the study. Based on student achievement data, the researchers identified three of the remaining nine teachers as very effective, three teachers as somewhat effective, and three as not very effective. Their findings resonated with the findings from the 1995 study previously mentioned. In addition, they found that, in the most effective classrooms,

1. Teachers provided scaffolding for students so they could be independent and successful;
2. Teachers taught and encouraged self-regulation;
3. Teachers integrated reading and writing into content areas;
4. Teachers provided a substantial amount of instruction in whole-group, small-group, and one-on-one settings.

Findings from research continue to support the importance of these best practices. In 2000, for example, Taylor, Pearson, Clark, and Walpole studied reading instruction in primary grades in low-income schools. Their interest was in schools that "beat the odds" and were highly successful with a low SES population. In terms of reading instruction, Taylor et al. found significant positive relationships between student achievement and

1. The time teachers spent providing instruction to students in small, flexible groups whose members were determined by ongoing, classroom-based assessment;

2. The amount of time students spent reading.

They also noted that the "most effective first-grade teachers . . . taught decoding skills explicitly and provided their students with many opportunities to engage in authentic reading" (p. 61); they concluded

> What distinguished the most accomplished teachers . . . from their peers was their use of coaching to help students learn how to apply word recognition strategies to real reading. (p. 61)

In 2001, Allington and Johnston reported on their study, which involved observing and interviewing thirty exemplary fourth-grade teachers in five states. In those classrooms,

1. Classroom talk was used as a means of communicating, conducting inquiry, and building trust.

2. Teachers were not married to one particular program but were flexible in their use of materials and strategies.

3. Teachers used planning but were not afraid to stray from the plans when faced with a teachable moment.

4. Teachers based evaluation more on the growth of the individual than on a preset criterion.

That same year, Pressley, Allington, Wharton-McDonald, Block, and Morrow (2001) expanded their observational study to sites across the country. Their findings were consistent with the earlier study. In addition, they learned that, in the classrooms of exemplary teachers, (a) students learned how to use multiple cues to read words; and (b) teachers explicitly taught comprehension.

In 2003, Taylor, Pearson, Peterson, and Rodriguez studied reading growth in eighty-eight high-poverty classrooms. They used a hierarchical linear model to examine teaching variables that had a substantial impact on student achievement. Their "most consistent" finding was that teachers "who emphasized higher order thinking, either through the questions they asked or the tasks they assigned" prompted the most reading growth (p.15).

After reviewing this literature and understanding the consistency in the field about what constituted best practice, the South Carolina SDE committed to developing an effective staff development program in which teachers learned about these best practices—the SCRI**.**

The SCRI

The SCRI was designed as a three-year, research-based staff development initiative. It was grounded in knowledge of all three previously discussed bodies of research—teacher quality, staff development, and best practices—and was consistent with the state and national standards for language arts and professional development. SCRI is unique to South Carolina, but it was informed by other large-scale successful staff development endeavors: The National Writing Project (n.d.)**,** Reading Recovery (n.d.), and NCTE's Reading Initiative (RI) (n.d.). Indeed, SCRI is a partnership with NCTE. NCTE's RI was designed to help teachers broaden and deepen their knowledge base via long- term (three-year), site-based study groups that included eight to ten teachers and their principals. Consultants (most often from local universities) facilitated the study

groups. South Carolina used NCTE's RI model as a basis for its statewide reading initiative structure, adding four additional components that made it possible to expand NCTE's RI statewide: (1) a site-based Literacy Coach, hired by the local school district, who visits teachers in their classrooms and helps them implement ideas from the study group; (2) a Regional Coach, hired by the SDE, who visits and supports literacy coaches at their schools and meets with them once a month; (3) a SDE liaison person to support both regional and literacy coaches with implementation; and (4) a multiyear staff development process for coaches—nine cohorted graduate hours per calendar year. SDE and NCTE collaboratively developed the curricular materials used in both the state study and in the site-based study groups.

In the original iteration of SCRI (SCRI K–5 Phase 1), district-based literacy coaches worked in four schools, spending one day per week in each school. Principals were required and teachers volunteered to participate in SCRI, and the recommended number of participants per school (and, therefore, per study group) was eight to ten individuals. Literacy coaches facilitated bimonthly, two-hour, after-school study group sessions, in which they helped participants conduct systematic inquiry into reading research and practice. Literacy coaches then spent four of their weekdays with teachers in classrooms, helping them implement best practices by providing demonstration lessons or providing feedback to the teachers about lessons observed.

Regional literacy coaches supported the work of the five to six district literacy coaches through monthly meetings and on-site visits. At the day-long monthly meetings, they helped literacy coaches broaden and deepen their knowledge base and advised them about implementation issues. Once per month, they observed the literacy coaches as they facilitated study groups and worked with teachers. The regional coaches' job was to coach the coaches.

One Friday per month, the district and regional literacy coaches met in cohort groups for a state meeting. These cohorts, led by a university faculty member (a.k.a. the Teaching Team), became learning communities—whose members learned from and with one another over the three years of the initiative. District and regional literacy coaches earned twenty-seven hours of graduate credit in reading (nine hours per year for three years) for their SCRI coursework. The literacy coaches used the remaining two Fridays per month to engage in research. On these two Fridays, they collected and analyzed student data, designed and prepared for study group sessions, and made plans and gathered materials for classroom visits.

The SDE assigned a liaison person to work with each cohort. This liaison person attended and participated in the state study and was responsible during the academic year for using her or his expertise in reading and language arts to support both the coaches and the school districts.

After studying together for three years (2000 to 2003), the literacy coaches became certified and were eligible to participate in ongoing professional development. The ongoing professional development included in-state and out-of-state conferences, summer study, and twelve days of staff development during the school year. (For further information about the design of the SCRI and about funding, see Appendix A).

Research on SCRI K–5 Phase 1

In order to understand the impact of SCRI on teachers and students in South Carolina, researchers from the University of South Carolina proposed to study SCRI K–5 Phase 1 and received funding from the Office Educational Research and Improvement. in the spring of the first year of SCRI. The study sought to understand

(1) How the beliefs and practices of SCRI teachers changed over the three years of SCRI K–5 Phase 1, and

(2) The effects of SCRI instruction on the development of reading skills and strategies of students in SCRI K–5 Phase 1.

Research Question #1: How will the beliefs and practices of SCRI teachers change over the three years of SCRI K–5 Phase 1?

To address this question, quantitative and qualitative data were collected and analyzed. To document the changes in the beliefs and practices of all participating teachers, the research team used two instruments developed for this study: the *Theoretical Orientation to Reading Profile* (TORP) (DeFord, 1985) and the *South Carolina Reading Initiative Profile* (South Carolina SDE, 2000). The TORP is a five-point Likert-scale instrument, consisting of twenty-items, which is used to identify teachers' theoretical orientation. The research team did not choose the TORP because of an interest in theoretical orientation per se, but because, at the beginning of SCRI, there was no instrument that specifically addressed the consistency of teachers' beliefs and practices with SCRI. However, the TORP could provide some data on teacher beliefs. In order to use TORP data to this end, each member of the SCRI team read through the TORP statements independently; then, using a consensus approach, the team identified eleven TORP statements that could be used to indicate shifts in the consistency of teachers' beliefs and practices with SCRI. The Belief Statements of the SCRI guided the team's selection of appropriate TORP items (see Appendix B for a copy of the Belief Statements).

The South Carolina Reading Profile was developed to provide South Carolina literacy leaders with an instrument that would specifically help them understand teachers' self-reported beliefs and practices relative to the goals and beliefs of SCRI. The Profile is a sixty-item scale that focuses on the beliefs and practices in the teaching of reading that align with the SCRI Beliefs Statements. The Profile uses a four-point Likert-scale response system (1 = strongly disagree to 4 = strongly agree). There are seventeen belief and practice clusters of statements, with four prompts for fourteen clusters and two prompts for the remaining three clusters. These statements assess a teacher's agreement or disagreement with a theoretical core belief and with an associated classroom practice. Core areas address reading and writing connections, independent reading, reading aloud, ongoing reflection, use of multiple cues, research-based instruction, curriculum, skill and strategy instruction, phonics, diversity, genre, integration of reading and writing, matching texts to readers, matching text levels to readers, assessment, instructional groups, and relating to characters in texts.

The SCRI research team also had access to survey data collected by the SDE. In addition to these three forms of survey data, the research team had case study data. We observed and interviewed forty-one teachers who were considered to be representative of all 1,800 participants. (See Appendix C for a description of the teacher selection process.). The forty-one selected teachers were interviewed during the 2001–2002 school year and again during the 2002–2003 school year. The first year, the teachers were interviewed and observed two to three times. The second year, the teachers were observed three times and interviewed twice. When possible, a debriefing followed the lesson. The debriefings and interviews were taped and transcribed. Field

notes were elaborated. Interviews and field notes were returned to the teacher for verification and further elaboration.

Research Question #2: "What are the effects of SCRI instruction on the development of reading skills and strategies of students?"

Both quantitative and qualitative data were collected to answer this question. During Year 1 of SCRI K–5 Phase 1 (2000–2001), each coach collected data on students in matched pairs in SCRI and non-SCRI classrooms. The pairs were matched by grade level, ethnicity, gender, SES, and reading level at the beginning of the year. Principals were asked to assign the students who were in SCRI classrooms during 2000–2001 to those same classrooms for 2002–2003 and to do the same for students in non-SCRI classrooms. Data were collected on two, six, or twelve students, respectively, by the regional coaches, grade-level coaches (teacher specialists hired to support teachers in districts with the greatest needs), and district coaches as follows:

Year 1:	First- and third-grade students in SCRI classrooms First- and third-grade students in non-SCRI classrooms
Year 2:	The same students (now in second and fourth grade)
Year 3:	The same students (now in third and fifth grade)

Depending on the needs of the student, the quantitative data included Observation Survey (Clay, 1993), Miscue Analysis (Goodman & Burke, 1972), or Running Records (Clay, 1979). Coaches who conducted a miscue analysis or took a running record were asked to use texts leveled by Fountas and Pinnell (1999), the texts in the *Dominie Reading and Writing Portfolio* (DeFord, 2001), or the texts in the *Developmental Reading Assessment* (Beaver, 1997) and to determine an instructional reading level for each student. Hard copy of all of the data that coaches collected was turned in after each collection period (Fall and Spring), and these data were checked for completeness by the research team. Data from all assessments were entered in a Web-based data collection program. Coaches also entered demographic information, such as placement in reading groups (High, High Middle, Middle, Low Middle, Low, or No Groups), reading proficiency, language background, SES, gender, date of birth, ethnicity, and retention history. These data were also checked for completeness.

The SCRI team subsequently conducted two additional studies on the reading achievement of students in SCRI K–5 Phase 1 classrooms versus non-SCRI classrooms: (1) a study of how fifth graders in SCRI K–5 Phase 1 classrooms in SCRI schools performed on the English language arts (ELA) portion of the state ELA PACT scores for non-SCRI fifth graders in non-SCRI schools, and (2) a study of how the PACT scores of a matched subset of fifty-five of these SCRI fifth graders who had been in SCRI K–5 Phase 1 classrooms for three years compared to the scores of fifty-five non-SCRI fifth graders who had not been in SCRI classrooms for three years.

Findings

Research Question #1: How will the beliefs and practices of SCRI teachers change over the three years of SCRI K–5 Phase 1?

The TORP (DeFord, 1985) was administered in the fall and spring of the first year of SCRI K–5 Phase 1 (2000–2001), before funding for the study was received, and in the fall and spring of both subsequent years. Table 1 provides the numbers of SCRI K–5 Phase 1 teachers who participated in the project for each of the six data collection periods and who completed and returned the survey. Prior to the merge, the data were cleaned to delete duplicate records and remove records for which teachers did not complete at least 90 percent of the items. The final merged data set contained TORP data from the 817 SCRI teachers who completed the TORP for all six data collection periods.

Table 1. Total responses and matched responses.

Data Collection Period	Returned Responses	Matched Responses Remaining After Each Merge
Fall 2000	2,009	
Spring 2001	2,038	1,916[a]
Fall 2001	1,944	
Spring 2002	1,973	1,284[b]
Fall 2002	1,597	
Spring 2003	1,619	817[c]

Notes: [a]This number refers to the total valid cases after the merge for the first two time periods.
[b]This number represents the valid cases after the merge for the first four time periods.
[c]This number refers to the valid cases after the merge for the six time periods.

The TORP uses a five-point Likert scale (1 = strongly disagree; 5 = strongly agree). For the positively stated items, consistency with SCRI corresponds to strong disagreement with the item. Those responses were recoded before analysis. As shown in Table 2, the mean total TORP scores increased from 84.07 to 91.65 (approximately eight points) from the baseline (Fall 2000) to the final data period (Spring 2003). This difference was statistically significant at the $p<.01$ level.

Table 2. Means, standard deviation, p-value, and effect size for TORP (n = 817), Fall 2001 to Spring 2003.

	2001 Mean	2001 SD	2003 Mean	2003 SD	Diff[b]	t	p-value	Effect size
Total TORP (n = 817)	84.07	11.82	91.65	13.31	7.58	18.33	<.01**	.60

The change in overall means on the TORP indicates that teachers participating in SCRI for three years shifted toward an integrated approach to teaching reading. The means on all eleven items addressing aspects of reading that were consistent with the goals of SCRI increased significantly from the first to the last data collection periods ($p<.01$).

The change in means (see Table 3) varied from 0.21 to 0.61; the gain effect scores ranged from .17 to .63.

Table 3. Significance of shift in means (from Fall 2000 to Spring 2003) for eleven items from the TORP that were identified as indicative of consistency with SCRI (n = 817).

		Fall 2000		Spring 2003					
Item	Statement[a]	Mean	SD	Mean	SD	Diff[b]	T	p-value	Effect size
1	A student needs to be able to verbalize the rules of phonics in order to ensure proficiency in processing new words.	3.74	1.00	4.35	.91	.61	15.69	<.01**	.63
6	When students do not know a word, they should be instructed to sound out its parts.	3.02	1.13	3.48	1.16	.47	10.33	<.01**	.40
8	The use of a glossary or dictionary is necessary in determining the meaning and pronunciation of new words.	3.52	1.07	3.95	1.06	.43	10.11	<.01**	.40
11	It is important for a word to be repeated a number of times after it has been introduced to ensure that it will become a part of sight vocabulary.	2.21	1.09	2.41	1.27	.21	4.29	<.01**	.17
13	It is a sign of an ineffective reader when words and phrases are repeated.	3.81	.92	4.04	1.02	.23	5.63	<.01**	.24
14	Being able to label words according to grammatical function (e.g., nouns) is useful in proficient reading.	3.71	1.05	4.03	1.07	.32	7.85	<.01**	.30

		Fall 2000		Spring 2003					
Item	Statement[a]	Mean	SD	Mean	SD	Diff[b]	T	p-value	Effect size
16	Young readers need to be introduced to the root form of words (e.g., run, long) before they are asked to read inflected forms (e.g., running, longest).	2.78	1.19	3.29	1.33	.50	10.18	<.01**	.40
17*	It is not necessary for a student to know the letters of the alphabet in order to learn to read.	2.58	1.41	3.07	1.43	.49	8.41	<.01**	.34
18	A flash-card drill with sight words is an unnecessary form of practice in reading instruction.	2.71	1.05	3.30	1.26	.59	12.48	<.01**	.51
20	Controlling text through consistent spelling patterns (e.g., The fat cat ran back. The fat cat sat on a hat.) is a means by which students can best learn to read.	3.20	1.13	3.71	1.24	.51	11.29	<.01**	.43
22	Phonic analysis is the most important form of analysis used when students are meeting new words.	3.34	1.06	3.93	1.04	.59	13.78	<.01**	.56

Notes: All statistics are rounded to the nearest 100th decimal. [a]n = 817 for each statement.
*Indicates that the item is negatively stated. All of the positively stated items have been recorded before analysis.
**Indicates statistically significant change (p<.01).
[b]Diff = Difference of the mean of Spring 2003 – the mean of Fall 2000.

The shifts in means on these eleven TORP items from teachers who were in SCRI for all three years (n = 817) suggest that the teachers' self-reported ideas about these aspects of teaching reading became increasingly consistent with what they were being taught in SCRI and, therefore, with state and national standards. [For further information about this analysis, see Hao. and Gallant, (2003b).]

The South Carolina Reading Profile (South Carolina SDE, 2001) was administered during the fall and spring of the second and third years of SCRI. This instrument was designed to assess changes in teachers' beliefs and practices about literacy instruction. The research team used the Belief Statements as well as state and national standards to identify seventeen clusters of what were later termed *SCRI-ness* (see Figure 2 for a list of the seventeen clusters and

representative theory statements). There are four items for thirteen of the clusters and two items for four of them. When there are four items, two of them ask about beliefs or theories; two ask about practice; two are stated positively; and two are stated negatively. When there are two items, one addresses beliefs or theories; one addresses practices; and both are stated positively. Examples of four-item and two-item clusters are shown in Figure 3.

Figure 2. South Carolina Reading Profile clusters with associated positive theory statement.

Reading and writing connection	Having students write helps them as readers.
Reading independently	Students consistently need to read independently as part of reading instruction.
Reading aloud	Reading aloud on a regular basis from picture books and chapter books helps students improve as readers.
Ongoing reflection	Teachers and students need to engage in ongoing reflection and experimentation as part of learning.
Use of multiple cues	An accomplished reader makes use of multiple cues to derive meaning from text.
Research-based practices	Teachers should use research-based classroom practices to increase reading and writing achievement.
Curriculum	Curriculum should be driven by knowledge of reading and of students' instructional needs relative to standards and goals.
Skill and strategy instruction	Skills and strategies are best taught when readers are reading and writing connected text.
Phonics	An effective design in classroom reading instruction includes fostering the student's ability to sound out letters and words strategically.
Diversity	Effective instruction recognizes and builds on diverse student experiences and cultural backgrounds.
Genre	Using poetry, nonfiction, short stories, and plays enhances students' understanding of texts and of the reading process.
Integration of reading and writing	When teachers integrate reading and writing activities, students develop an awareness of the connections between the processes.
Matching texts to readers	Matching authors and characters to the students' ethnicities and cultures improves reading comprehension.
Matching text levels to readers	It is important for teachers to select reading materials that meet each student's instructional reading level.
Assessment	It is necessary to use multiple forms of assessment to make decisions about reading and writing instruction
Instructional groups	All reading instruction should be whole group; students should read the same book or story at the same time.
Relating to character	When a student relates to characters in the story, the student's understanding of the story increases.

*Indicates areas of significant change from Fall of Year 2 to Spring of Year 3.

Figure 3. Examples of theory and belief statements associated with particular clusters from the South Carolina Reading Profile.

Key:
T = Theory or Belief
P = Practice
+ Indicates that the statement is consistent with SCRI Belief Statements.
– Indicates that the statement in inconsistent with SCRI Belief Statements.

INSTRUCTIONAL GROUPS (#12, 18, 34, 42*)*

+T 18. Moving students in and out of reading groups enables the teacher to meet the needs of individual students.

+P 34. In my classroom, I move students in and out of reading groups so that I can meet the needs of individual students.

–T 42. Keeping students in the same reading group all year allows the teacher to meet students' needs

–P 12. In my classroom, I keep students in the same reading group all year so I can meet their needs.

MATCHING TEXTS TO READERS # 6, 57

+T 6. Matching authors and characters to the student's ethnicity improves reading comprehension.

+P 57. To improve reading comprehension in my classroom, I match the ethnicity of students to characters and authors.

For all four data collection periods, 1,005 SCRI K–5 Phase 1 teachers completed and returned the South Carolina Reading Profile (see Table 4).

Table 4. Summary of responses and data points for South Carolina Reading Profile.

Data Collection Period	Returned Responses	Matched Responses Remaining After Each Merge
Fall 2001	1,944	
Spring 2002	1,973	1,643
Fall 2002	1,597	1,136
Spring 2003	1,619	1,005

The total possible score was 240 across all sixty items of the Reading Profile. In Fall 2001, the overall mean was 212.37, and, in Spring 2003, the overall mean was 220.59. These changes were statistically significant ($p>.05$) (see Table 5).

Table 5. Means, standard deviation, p-value, and effect size for South Carolina Reading Profile (n = 1005), Fall 2001 to Spring 2003.

South Carolina	Fall 2001		Spring 2003				
Reading Profile	M	SD	M	SD	Diff[c]	T	p-value
(n = 1005)	212.37	14.31	220.59	14.11	8.22	18.87	<.01**

As shown in Table 6, the mean differences for sixteen of the seventeen clusters were also statistically significant. There were no statistically significant shifts in the means for the cluster focused on phonics. (Comments made by teachers about this item identified some ambiguous aspects, so the item was reworded for subsequent administrations as follows: "Effective reading instruction includes explicitly and systematically teaching letter and sound relationships as part of reading and writing connected text.")

Table 6. Post hoc paired t-tests of the seventeen clusters, Fall 2001 to Spring 2003 (n = 1005).

Cluster Number	Cluster Name	Mean Difference	SD	t	Sig. (two-tailed)	Effect Size
1	Reading and writing connection	.10	.41	8.04	p<.00**	.30
2	Independent reading	.19	.48	12.44	p<.00**	.46
3	Read aloud	.06	.38	4.92	p<.00**	.21
4	Ongoing reflection	.14	.48	8.89	p<.00**	.33
5	Use of multiple cues	.12	.37	9.89	p<.00**	.33
6	Research-based instruction	.17	.50	11.01	p<.00**	.39
7	Curriculum	.14	.44	9.97	p<.00**	.37
8	Skill and strategy instruction	.23	.54	13.36	p<.00**	.41
9	Phonics	.02	.52	1.36	p>.17	.05
10	Diversity	.10	.48	6.31	p<.00**	.22
11	Genre	.07	.34	6.15	p<.00**	.23
12	Integration of reading and writing	.12	.41	9.13	p<.00**	.35
13	Matching texts to readers	.38	.81	15.01	p<.00**	.51
14	Matching text levels to readers	.16	.45	11.43	p<.00**	.40
15	Assessment	.14	.41	10.70	p<.00**	.39
16	Instructional groups	.16	.45	11.36	p<.00**	.42
17	Relating to character	.16	.60	8.28	p<.00**	.33

Notes:
Thirteen of the clusters consist of four items and four consist of two items. The clusters have been transformed to the same scale by dividing the raw cluster score by the numbers of items under that cluster.
**Indicates statistically significant change.

These findings suggest that, in their second and third year of SCRI, teachers believed that their beliefs and practices became increasingly consistent with SCRI. [See Hao and Gallant (2003a) and Hao (2004) for further information on analyses of South Carolina Reading Profile data].

We also had found this pattern of increased consistency in the three years' of data from the eleven items on the TORP and on a conceptually similar item on the End-Point Survey distributed by the South Carolina SDE. On that survey, given in May of the last year (2003) of SCRI K–5 Phase 1, participants were asked, "How would you rate the degree to which your classroom practices and beliefs were consistent or not consistent with SCRI beliefs and practices in each year of the initiative (1 = not consistent; 4 = very consistent)?" Their responses, shown in Table 7, indicate a considerable shift in practices (2.61 to 3.83) and in beliefs (from 2.77 to 3.87). [See Gallant (2003) for further analysis of this survey data.]

Table 7. Participants' ratings of the consistency of their classroom practices and beliefs with SCRI practices and beliefs across the three years of SCRI K–5 Phase 1 (n = 1428).

Category	*n*	*Mean*	*SD*
Practices			
Prior to SCRI	1,314	**2.61**	.67
Year 1	1,319	3.13	.55
Year 2	1,239	3.59	.53
Year 3	1,106	**3.83**	.40
Beliefs			
Prior to SCRI	1,304	**2.77**	.72
Year 1	1,297	3.30	.62
Year 2	1,230	3.71	.49
Year 3	1,095	**3.87**	.36

The TORP, South Carolina Reading Profile and SDE End-Point Survey all yield large-scale, self-report data and, as such, are limited in that participants report what they believe and their responses are guided by their understanding of the constructs represented in each item. The research team therefore sought to understand the change process from a perspective other than that of the participants: case study research was conducted on forty-one teachers who were representative of those who participated in SCRI K–5 Phase 1. The team interviewed and observed all forty-one teachers in 2001–2002. Two of these teachers did not continue with SCRI in 2002–2003; however, the team visited and interviewed the remaining thirty-nine teachers that year; each member of the research team was responsible for observing and interviewing the same six or seven teachers over both years. In 2002–2003, the team also interviewed each teacher's literacy coach and principal. During 2003–2004, we began to develop a Consistency Rubric as a way for the research team to document the change process of these teachers. To develop the rubric, we identified ten aspects of teaching that could be observed in the classroom or inferred from interview data:

- Respect
- Physical environment
- Materials

- Interaction patterns
- Implementation of instructional practices
- Grouping
- Assessment
- Informed practice
- Trying new ideas
- Voice

These aspects of teaching were grounded in the SDE SCRI Belief Statements (Appendix B) and were consistent with state and national standards. For example, the first belief statement is

> **Teachers understand young students and commit to their learning:** Teachers understand, recognize, and appreciate the intellectual, linguistic, physical, social, oral, emotional, creative, and cognitive needs of young students. They design instruction that facilitates the development of the individual student. They create classrooms that promote positive, productive language and learning environments. They foster students' self-esteem and show respect for diversity (i.e., they immerse students in books, language, music, and art, and use personal artifacts that represent their individual, cultural, religious, and racial differences).

The research team decided to assess consistency with this standard by making judgments, based on observations and interviews, about teachers' (1) respect, (2) physical environment, (3) use of materials and (4) interaction patterns. We described each of these aspects of teaching. Respect, for example, was described as

> Through verbal and nonverbal interactions, the teacher conveys warmth, kindness, thoughtfulness, and respect toward individuals and groups of students.

The research team developed rubrics for assessing consistency on each of the ten aspects of teaching on the Consistency Rubric. (See Appendix D for an example of a rubric.)

To ensure rater agreement, the six members of the research team who were conducting case study research viewed classroom videotapes of several teachers and independently assessed the teachers using the Consistency Rubric. We then shared our ratings. If points of disagreement arose because the rubric was not explicit enough, changes were made to the Consistency Rubric. We also read and rated transcripts of interviews and field notes. Over the course of a year, we used consensus to achieve rater agreement on our scoring.

In 2004–2005, we completed the Consistency Rubric and began to use it to understand change patterns across teachers. We used our data to determine whether, on a given aspect, a teacher's beliefs, practices, or both were inconsistent or consistent with SCRI. If the teacher's beliefs or practices were inconsistent with SCRI, we used the descriptors on the rubric to rate the teacher as a 1, 2, or 3. If we considered a teacher's beliefs or practices relative to that aspect to be consistent with SCRI, we used the rubric to rate the teacher as a 4, 5, or 6. Each of the research team members who had followed teachers reread the data on each teacher and marked portions of their elaborate field notes and interview transcripts that related to each of the areas on the Consistency Rubric. Using this information, the research team members determined a score of each item on the Consistency Rubric for each of their teachers and averaged those scores to determine an overall rating. A teacher who was rated as a "2" on most items in Fall 2001, for

example, would be considered a "2" at that point in time. We did this scoring for the thirty-nine teachers who participated from Fall 2001 through Spring 2003. As shown in Table 8, we then did a tally across all teachers to determine dominant patterns.

Table 8. Change patterns for case study teachers (n = 39).

From 2 to 2 n = 2	From 2 to 3 n = 0	From 2 to 4 n = 1	From 2 to 5 n = 0	From 2 to 6 n = 0
From 3 to 4 n = 13	From 3 to 4.5 n = 0	From 3 to 5 n = 2	From 3 to 6 n =0	
From 4 to 3 n = 1	From 4 to 4 n = 0	From 4 to 4.5 n = 0	From 4 to 5 n =4	From 4 to 5.5 n = 6
From 5 to 5 n = 1	From 5 to 5.5 n =0	From 5 to 6 n = 7		

What became evident was that thirty-five of the thirty-nine teachers we followed became increasingly consistent with SCRI and therefore consistent with state and national standards. The exceptions were three teachers who did not evidence change in either direction (from 2 to 2; from 5 to 5) and one teacher who became less consistent over time (from 4 to 3). This finding is consistent with those from the self-report data—the TORP, the South Carolina Reading Profile, and the SDE's End-Point Survey.

Our close examination of the way in which each teacher changed suggested, however, that teachers changed in different ways and that various factors (see Figure 4) influenced the change process. Each teacher began in SCRI with particular strengths and areas of interest, and each left SCRI with different strengths and areas of interest.

Figure 4. Factors that impacted the change process.

Factor	Definition	Example
Context	The school environment in which the teacher worked	Some schools fully supported teacher's participation in SCRI, some were moderately supportive, and some were not at all supportive. Some sent teachers conflicting messages, e.g., wanting them to implement SCRI practices along with all of the other established (but not research-based) practices.

Factor	Definition	Example
Coach	The knowledge, ability, and availability of the literacy coach with whom the teacher worked	Some coaches were very knowledgeable and skilled and were able to provide strong support immediately. Some coaches were new to this job and were learning along the way. Some coaches were able to be in the classroom with the teacher from the very beginning; others were not.
Life	What was occurring in the teacher's life, outside of school, while participating in SCRI	Some teachers had things happening in their lives that required additional time and energy, such as caring for aging parents or a new baby, that may have interfered with full participation in SCRI.
Reading	The amount and quality of reading the teacher did	Some teachers read beyond what was assigned for study groups and read additional professional books and articles, but some did no reading outside the required readings. Others did not complete the required readings.
Reflection	The degree to which teachers reflected on their practices	Some teachers consistently stepped back and reflect on their practices, asking themselves hard questions and examining their interactions with students, fellow teachers, and parents; some did this less often.
Teacher Stance	How teachers viewed their role as teachers	Some teachers felt that their job was to give information to students; some felt their job was to provide opportunities for students to create and construct their own understandings. Others fell in other places along this continuum.
Learner Stance	How teachers took on new information— the way they wanted to gather new information	Some teachers preferred explicit directions on how to do something before trying it in their own classroom; other teachers felt comfortable with trying things out on their own.
Courage or Risk-Taking	The teacher's willingness to try something new	Some teachers were willing to let go of some practices to try new ones. Others found it hard to let go or to try.

Factor	Definition	Example
Confidence	Teachers' confidence in themselves as people, teachers, and learners	Some teachers felt confident about what they were doing and so did not want to consider new ideas. Other teachers felt confident but were open to change. Others did not feel confident and this limited what they were willing to try in their classrooms.
Conversation	The conversations that teachers had with fellow teachers and administrators	Some teachers talked a lot about their teaching practices on a regular basis in both formal (study group) and informal (hallway, lunchroom) settings. Others did not.
Materials	Professional books, materials for classroom libraries	Some teachers had access to or owned professional books and ample materials for the classroom; others did not.

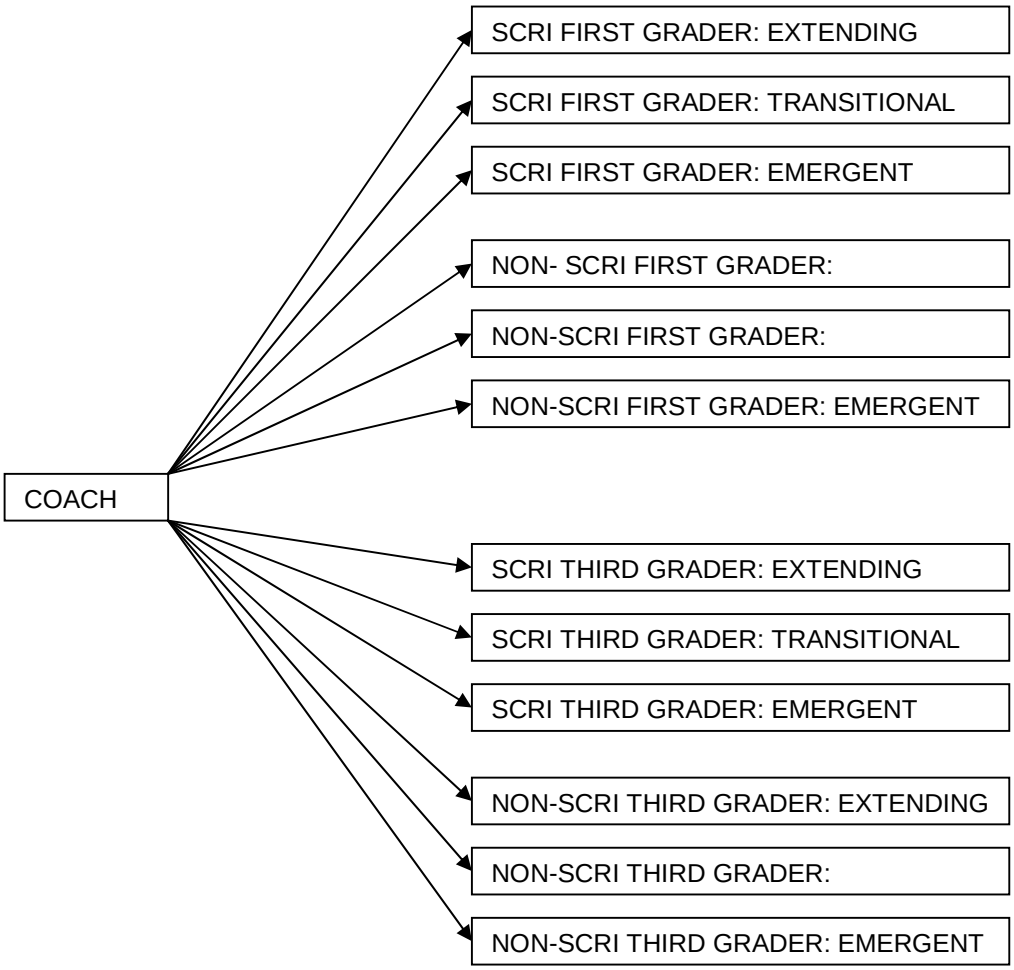
Our finding from the self-report data gathered by the research team (TORP, South Carolina Reading Profile) and by the SDE (End-Point Survey), coupled with our case study research, was that SCRI positively impacted the beliefs and practices of participating teachers. From their perspective and ours, the beliefs and practices of SCRI participants became increasingly consistent with SCRI and, therefore, with state and national standards.

Research Question #2: What are the effects of SCRI instruction on the development of students' reading level?

Study 2.1: A study of the text reading levels of first and third graders who spent three years (or not) in SCRI classrooms in SCRI schools.

We originally addressed this question by collecting data on students in the classrooms of SCRI teachers in SCRI schools and on a matched set of students in the classrooms of non-SCRI teachers in SCRI schools. We collected data at five data points: Fall 2000, Spring 2001, Fall 2001, Spring 2002, and Spring 2003. Our design called for all seventy-three full-time literacy coaches to collect data on twelve students, six in first grade and six in third grade (see Figure 5). The twenty-nine individuals who were both literacy and grade-level coaches (teacher specialists) were asked to collect data on only six students, all from the grade level to which the teacher specialist was assigned. Regional coaches collected data on two students. The research team provided all literacy coaches with a rubric and ask them to identify, in SCRI classrooms, one student at each grade level who would be considered an early reader, a transitional reader, and a proficient reader. The coaches then were to identify students in non-SCRI classrooms (but in SCRI schools) who met the same criteria-matching on gender, race, and SES. Principals were asked to keep the designated SCRI students in SCRI classrooms for three years and to keep the designated non-SCRI students in non-SCRI classrooms for three years.

Figure 5. Data collection framework.



In theory, this framework would yield three years' of data on about 1,000 students. However, a number of factors limited the how many students for whom we subsequently had three years' of data.

1. Teachers who were fully participating in SCRI were supposed to attend study groups facilitated by a literacy coach (or teacher specialist) and be supported in the classroom by that coach. However, once SCRI was underway, the office at SDE that oversees the teacher specialist program decided that to the specialists could only go into the classrooms of teachers at their assigned grade level. This meant that a teacher from that school might attend a study group but would not have classroom-based support. Conversely, because study groups in all SCRI schools were optional, a teacher in a school with a teacher specialist might have classroom-based support (because that was the job of the teacher specialist) but might not choose to attend a study group. Because many of the teachers served by teacher specialists did not get the full SCRI intervention (study group plus classroom support), the research team decided to omit from the analysis the student data that were collected by grade-level coaches. This became a nearly moot point

because, two years into SCRI Phase 1, the state legislature decided that, if schools had made adequate progress, the teacher specialist could not remain at that school. As a result, most teacher specialists did not stay at the same site for three years; therefore, very few of them had three years' of data on the same students.

2. Principals were asked to ensure that students being followed for the research would be placed in either SCRI or NON-SCRI classrooms consistently from year to year. However, in many cases, principals did not or could not make this happen. For example, although at least one teacher at each grade level originally committed to participating in SCRI, subsequently, as a result of teacher turnover, sometimes there was not a teacher at every grade level. The net result was that a given student might have been in an SCRI classroom in Years 1 and 2 but in a non-SCRI classroom in Year 3.

3. Some literacy coaches moved to different districts or changed jobs, so the research team lost the ability to collect data on the students that the coach had been following at a particular school.

4. Some students moved and left SCRI schools.

5. Some schools chose not to continue with SCRI K–5 Phase 1, and others joined the initiative.

Because of these four factors, although the literacy coaches continued to collect data on twelve students, those students were not always the same ones from year to year. When a student moved, the literacy coach began with a new student. If a literacy coach changed schools, the literacy coach began with twelve new students.

The impact of all of these factors was considerable. Table 9 shows the number of students in grades 1 through 5 on whom the coaches collected data each year. Table 10 shows the grade-level distribution of students who stayed in either an SCRI or a non-SCRI classroom for three years. At the end of the third year of data collection, there were only 157 such students: 70 who had been in SCRI classrooms for three consecutive years and 87 who had been in non-SCRI classes for three consecutive years.

Table 9. Number of students for whom data were collected.

	Year 1	Year 2	Year 3
Grade 1	337	77	24
Grade 2	85	343	59
Grade 3	267	85	232
Grade 4	35	250	50
Grade 5	18	43	166
Total by year	742	798	531

Table 10. Grade levels in Year 1 of all students who spent three years in either an SCRI or a non-SCRI classroom.

Group	Grade Level	Frequency	Percent	Valid Percent	Cumulative Percent
SCRI	First Grade	47	67.1	67.1	67.1
	Second Grade	1	1.4	1.4	68.6
	Third Grade	21	30.0	30.0	98.6
	Fourth Grade	1	1.4	1.4	100.0
	Total	**70**	100.0	100.0	
NON-SCRI	Kindergarten	1	1.1	1.1	1.1
	First Grade	41	47.1	47.1	48.3
	Second Grade	9	10.3	10.3	58.6
	Third Grade	36	41.4	41.4	100.0
	Total	**87**	100.0	100.0	

As shown in Table 10, several literacy coaches collected three years of data on students who began Year 1 in grades other than first and third grade. Because the number of students in those grade levels was so small, the research team decided to remove the data on those students from the data set so that the subject pool comprised 145 students: 47 SCRI and 41 non-SCRI students who were in the first grade in 2000–2001 and 21 SCRI and 36 non-SCRI students who were in the third grade in 2000–2001, as shown in Table 11.

Table 11. First- and third-grade students (2000–2001) who remained in SCRI or non-SCRI classrooms for three years (by group).

Group			Frequency	Percent	Valid Percent	Cumulative Percent
SCRI	Valid	First Grade	47	69.1	69.1	53.4
		Third Grade	21	30.9	30.9	100.0
		Total	**68**	100.0	100.0	
Non-SCRI	Valid	First Grade	41	53.2	53.2	36.8
		Third Grade	36	46.8	46.8	100.0
		Total	**77**	100.0	100.0	

For each of five data collection points during the study, literacy coaches asked students to read texts that were leveled along a gradient of difficulty. The particular text that a student read should have been a text at the student's instructional level—i.e., the level at which the student could read with 90 to 94 percent accuracy. Coaches were then asked to take a running record (Clay, 1979) or to do a miscue analysis (Goodman & Burke, 1972) on each text read by each student. These measures are similar in that both involve creating a coded, written record of a

student's reading of a text. We chose to use oral reading analyses as measures of reading because we believe that reading is a meaning-making process and that such measures provide an opportunity to understand the way individuals construct meaning while reading. The coach was then asked to analyze reading miscues (errors) for patterns in the student's use of cues. Coaches provided the research team with a copy of every text read by the students they followed. The research team examined each data set and reanalyzed the student's oral reading to determine whether an accurate instructional level was obtained for each student. Because literacy coaches often used different text-leveling systems or texts (e.g., basal readers, STAR reading assessment system) than requested, the research team undertook a text-leveling project to create a text-level equating scale to convert these various texts to a common scale. To do this, the research team read and analyzed every text read by every student for whom we had three years of data. Based on our analysis, we developed a system that allowed us to equate texts from different publishers, including publishers of classic and popular children's literature, so that all the texts were ordered from easiest to most difficult. An equated text reading level and a grade level equivalent (see Appendix E) were then assigned to every text.

After an independent text level, an equated text reading level, and a grade-level equivalent were determined for each student, we categorized the student based on his or her text reading level at the beginning of the study. Figure 6 describes the decision rules for that recoding. Table 12 shows the frequencies that resulted from this recoding.

Figure 6. Proficiency rating decision rules.

Fall 2000	Classification	Fall 2000 Equated Text reading Level
First Grade	Struggling	0, 1, 2, 3
	Doing OK	4, 5, 6
	Excelling or Extending	7 and above
Third Grade	Struggling	19 and below
	Doing OK	20–36
	Excelling or Extending	37 and above

Table 12. Proficiency ratings recoded by grade and group.

Grade	Group	Proficiency Rating	Frequency	Percent	Valid Percent	Cumulative Percent
First	SCRI	Struggling	5	10.6	10.6	10.6
		Doing OK	13	27.7	27.7	38.3
		Excelling or Extending	29	61.7	61.7	100.0
		Total	47	100.0	100.0	
	NON-SCRI	Struggling	5	12.2	12.2	12.2
		Doing OK	15	36.6	36.6	48.8
		Excelling or Extending	21	51.2	51.2	100.0
		Total	41	100.0	100.0	
Third	SCRI	Struggling	2	9.5	9.5	9.5
		Doing OK	16	76.2	76.2	85.7
		Excelling or Extending	3	14.3	14.3	100.0
		Total	21	100.0	100.0	
	NON-SCRI	Struggling	10	27.8	27.8	27.8
		Doing OK	24	66.7	66.7	94.4
		Excelling or Extending	2	5.6	5.6	100.0
		Total	36	100.0	100.0	

The research team then compared the text reading levels and grade-level equivalencies of 145 students in SCRI and non-SCRI classrooms (in SCRI schools) who had been in SCRI or non-SCRI classrooms for three years. We found no practical differences in the grade-level equivalencies for the two groups. SCRI students who started out in first grade and were in third grade at the end of three years showed about 4.25 years' growth compared with 3.9 years for the non-SCRI group. For students who began the study in third grade and were in fifth grade at the end of three years, SCRI students gained about 2.77 years, whereas non-SCRI students gained about 3.54 years (see Table 13).

Table 13. Mean change in grade-equivalent levels for SCRI and non-SCRI students.

Grade	Group		n	Mean
Firs	SCRI	Grade Equivalent Growth Year 1 to Year 3	47	4.25
	NON	Grade Equivalent Growth Year 1 to Year 3	41	3.90
Third	SCRI	Grade Equivalent Growth Year 1 to Year 3	21	2.77
	NON	Grade Equivalent Growth Year 1 to Year 3	36	3.54

However, when the data were disaggregated by proficiency level (struggling, OK, extending), SCRI teachers appeared to have had a greater impact on the lowest-achieving students, especially in the lower grades, as shown in Table 14. First-grade students who were identified as struggling readers in the Year 1 data and were in SCRI classrooms for three years showed an average of 5.14 years of reading growth compared to 2.18 years of growth for the struggling readers who were in non-SCRI classrooms for three years**.** Students identified as struggling readers in third grade at the beginning of the study also showed a similar pattern. Students in SCRI classrooms in third to fifth grades progressed almost two grade levels, whereas students in non-SCRI classrooms progressed less than one grade level. Apparently, the positive effects of SCRI on reading growth—as measured by grade-level gains in text reading level—diminished as students became more proficient as readers and as they grew older.

Table 14. Grade level equivalent growth from Fall Year 1 to Spring Year 3 (by group).

Grade	Proficiency Rating	Group	n	Mean	
			Statistic	Statistic	Std. Error
First Grade	Struggling Readers	SCRI	5	**5.1**	1.38
		NON	5	**2.1**	.36
	Doing OK	SCRI	13	**3.7**	.62
		NON	15	**3.2**	.59
	Extending Readers	SCRI	29	**4.3**	.33
		NON	21	**4.7**	.30
Third Grade	Struggling Readers	SCRI	2	**1.9**	1.05
		NON	9	**.7**	.28
	Doing OK	SCRI	16	**2.9**	.48
		NON	25	**4.5**	.30
	Extending Readers	SCRI	3	**2.4**	.58
		NON	2	**2.9**	.70

Study 2.2: A statewide study of the standardized test scores of fifth graders in SCRI classrooms in SCRI schools compared to fifth graders in non-SCRI schools.

The research team was concerned about the low number of first-to-third and third-to-fifth grade students on whom we had three years of data. We were also concerned about "contamination." In nearly every SCRI K–5 Phase 1 school, there were non-SCRI and SCRI teachers at the same grade level. As a result, SCRI teachers could share what they were learning with their colleagues and, indeed, this sharing was encouraged. In addition, with support from coaches and from the SDE, many principals began sharing what they were learning with the entire staff and implementing schoolwide changes. These changes made it difficult to determine the impact of the SCRI endeavor on non-SCRI students and therefore the impact of treatment. We subsequently decided to conduct two additional studies. The first was a study of 27,129 fifth-grade students from 1,870 classrooms and 456 schools: these were students who had taken the ELA section of the state standardized test, the Palmetto Achievement Challenge Test (PACT), in fourth grade and who also took that test as fifth graders. (It was not possible to determine students' growth in ELA over multiple years because the PACT test is not vertically equated.)

Students from schools participating in another iteration of SCRI, SC READS, which began in 2002, were not included in either the SCRI or non-SCRI population because SC READS was considered another treatment. Fifth graders in SCRI K–5 Phase 1 schools with teacher specialists were not included in the treatment group because the job description of teacher specialists made it impossible for them to implement SCRI as it was originally designed. Finally, fifth graders in non-SCRI classrooms in SCRI K–5 schools were not included in the control group; in some cases, those students were not a true control group because of grade-level and schoolwide influences.

Five percent of the students (1,356 students) included in the study were in fifth- grade classrooms with an SCRI K–5 Phase 1 teacher. Males and females were represented in equal

proportions. Slightly over half of students in both groups (54 and 59 percent, respectively) were European-Americans. Approximately half of the students were eligible for the free or reduced-price lunch program. Their average age was 11.365 years. Demographics for SCRI and non-SCRI groups are listed in Table 15.

Table 15. SCRI and Non-SCRI demographics.

Status	Male	European-American	FRLUNCH	No IEP	Age
SCRI	50.4%	53.9%	51.7%	92.6%	11.35
Non-SCRI	49.6%	59.0%	49.7%	88.4%	11.38

Data were analyzed using hierarchical linear modeling (HLM) (Raudenbush & Bryk, 2002). The differences between the fourth-grade PACT scores of the SCRI and non-SCRI students were used to control for previous ELA achievement (see Table 16).

Table 16. ELA PACT scale score descriptive statistics.

Year	Classroom	Mean	SD
2003	SCRI	498.97	24.93
	Non-SCRI	493.94	44.28
2002	SCRI	404.78	15.22
	Non-SCRI	400.41	363.95

The HLM analysis of the PACT scores of the 27,000 fifth graders revealed that students who received SCRI instruction had PACT scores that were 1.84 points higher, on average, than students who did not receive SCRI instruction. This difference was statistically significant. There was a statistically significant gap between the means of minority and nonminority students. Minority PACT scores were 2.2 points lower than the scores of nonminorities. The largest statistically significant effect was associated with free or reduced-price lunch status. Students eligible for free or reduced-price lunch scored 3.55 points lower on PACT than those students who were not eligible for it. The conclusion drawn was that SCRI may mediate the effects of minority and free or reduced-price lunch status. For example, the minority gap decreased to 0.36 for minorities receiving SCRI instruction. Similarly, the socioeconomic gap was reduced by half for the students in SCRI fifth-grade classrooms (3.55 for non-SCRI low SES to 1.71 for SCRI low SES). [For further information on this analysis, see Meyer (2003).]

Study 2.3: A comparison of the fifth-grade PACT scores for matched subset of fifty-five SCRI fifth graders who had been in SCRI classrooms for three years compared to fifty-five fifth graders who had not participated in SCRI.

In our third study, we studied a subset of the larger sample of SCRI K–5 Phase 1 fifth graders. We identified fifty-five of them who had been in SCRI classrooms (in SCRI schools) for three years and matched them with fifty-five fifth graders who had been in non-SCRI classrooms (in non-SCRI schools) for three years. These students were matched on initial ELA PACT performance at the end of Year 1 of SCRI (2001), ethnicity, gender, SES (as indicated by lunch status in 2001), and IEP status (in 2001). Unlike the criteria used in the previous study, students who took an off-grade-level PACT in 2001 were not included in the comparison, nor were students who had any ELA modification (e.g., extended response time). We then compared the

fifth-grade scores of 110 students on the ELA section on the PACT. There was no mean difference between the two groups.

Table 17 provides the means and standard deviations for 2001 and 2003 ELA scale scores for the 110 fifth graders by SCRI status. In 2003, SCRI students scored approximately 2 points, on average, higher than non-SCRI students. This difference was not statistically significant. Thus, the fifty-five fifth graders who had been in SCRI K–5 Phase 1 classrooms for three years were performing as well as students who had not been in SCRI classrooms.

Table 17. Means and standard deviations for 2001 and 2003 ELA scale scores by SCRI status after matching students.

	Non-SCRI (n = 55)		*SCRI (n = 55)*	
	Mean	*Standard Deviation*	*Mean*	*Standard Deviation*
2001		13.48	307.36	13.48
2003	499.60	16.96	501.67	12.29

However, when we disaggregated the scores by initial proficiency level, the scores on the state standardized test of the thirty SCRI students who scored basic or below basic in third grade were statistically higher in fifth grade than the scores of the non-SCRI students (see Table 18). That is, students in SCRI classrooms who were labeled as *struggling* as readers in third grade did better on the PACT in fifth grade than did their peers in non-SCRI classrooms in non-SCRI schools.

Table 18. Means and standard deviations for 2003 ELA scale scores of struggling students by SCRI status after matching students.

	Non-SCRI (n = 30)		*SCRI (n=30)*		*Effect Size*
	Mean	*Standard Deviation*	*Mean*	*Standard Deviation*	
2003	489.97	14.91	495.40	10.19	0.43

In addition, when comparing the pre- and postdemographic data, we found that the percentage of students needing an IEP in third grade was cut in half for the SCRI students but remained the same or decreased slightly for the non-SCRI students (see Table 19).

Table 19. Frequencies and percentages of demographic information for fifth-grade non-SCRI and SCRI students in 2003.

Demographics	*Non-SCRI (n = 55)*		*SCRI (n = 55)*	
	Frequency	*Percent*	*Frequency*	*Percent*
Ethnicity				
White	26	47.3	26	47.3
Nonwhite	29	52.7	29	52.7
Gender				
Female	29	52.7	29	52.7
Male	26	47.3	26	47.3
Lunch				
Not eligible	26 (27)	47.3 (49.1)	32 (27)	58.2 (49.1)
Free or reduced	29 (28)	52.7 (50.9)	23 (28)	41.8 (50.9)
IEP				
IEP	11 (11)	**20.0** (20.0)	6 (11)	**10.9** (20.0)
No IEP	44 (44)	**80.0** (80.0)	49 (44)	**89.1** (80.0)

Note: The numbers in parentheses represent the frequencies and percentages of demographic information for third-grade non-SCRI and SCRI students in 2001.

Subsequently, as a part of a larger study of 17,748 fifth graders in the state who did not participate in SCRI and the fifty-five fifth grade students who had participated for three years, we had information on the percentage of those SCRI and non-SCRI students who had IEPs in 2001 versus the percentage who had them in 2003. Those data support the pattern shown in Table 19. In that comparison (see Table 20), the percentage of students with IEPs declined for both groups. However the percentage of SCRI students with IEPs declined from 20.0 to 10.9 and the percentage for non-SCRI students declined from 10.9 to 7.4.

Table 20. Frequencies and percentages of demographic information for fifth-grade non-SCRI and SCRI students in 2003 versus 2001 (in parentheses).

Demographics	*Non-SCRI (n = 17,748)*		*SCRI (n = 55)*	
	Frequency	*Percent*	*Frequency*	*Percent*
Ethnicity				
White	10,581	59.6	26	47.3
Nonwhite	7,167	40.4	29	52.7
Gender				
Female	9,103	51.3	29	52.7
Male	8,645	48.7	26	47.3
Lunch				
Not eligible	9,274 (9,493)	52.3 (53.5)	32 (27)	58.2 (49.1)
Free or reduced	8,474 (8,255)	47.7 (46.5)	23 (28)	41.8 (50.9)
IEP				
IEP	1,312 (1,926)	**7.4** (10.9)	6 (11)	**10.9** (20.0)
No IEP	16,429 (15,822)	**92.6** (89.1)	49 (44)	**89.1** (80.0)

Note: The numbers in parentheses represent the frequencies and percentages of demographic information for third-grade non-SCRI and SCRI students in 2001.

It is important to note, however, that in this larger comparison we found no mean difference between the ELA PACT scores of the fifty-five SCRI fifth graders who had been in SCRI classrooms for three years and those of 17,748 fifth graders in the state who did not participate in SCRI K–5 Phase 1. This finding is not the same as that in Study 2.2. However, the number of fifth-grade non-SCRI students in this comparison group was lower than that in Study 2.2 because students who were taking an off-grade-level test or who had ELA modifications were not included in this study. This difference suggests that SCRI may have a greater impact on those students than on the population as a whole.

The findings on student achievement across all of these studies suggest that struggling students in the classroom of an SCRI teacher for three years may become able to read more difficult text and score higher on the ELA portion of the state standardized test; the SCRI classroom experience may also decrease the number of students receiving an IEP compared with their peers in non-SCRI classrooms.

Implications

This study provides strong evidence that SCRI K–5 Phase 1 had an impact on the beliefs and practices of participating teachers and that the shifts teachers made were in the direction of increased consistency with research-based state and national standards. Our research also suggests that the professional development provided by SCRI had a positive impact on teachers' abilities to support struggling readers. These shifts occurred within a statewide version of NCTE's RI, a professional development model that focuses on helping teachers broaden and deepen their knowledge base so that their curricular and instructional decisions better support the student's reading development rather than on "teacher proof" materials (as some states have chosen under Reading First).

In the field of reading education, many voices are calling for research-based practices. In response, however, some states are not making research-based decisions. First, far too many states are putting money and energy into scripted reading programs, despite the research clearly showing that it is the teacher, not the method, that makes the difference for student achievement. Second, far too many states are developing one-shot in-service sessions or asking teachers to log on to a computer for their staff development, despite the research on effective staff development. Third, far too many states are ignoring decades of research on best practices and limiting their staff development programs to only the five areas addressed in the National Reading Panel Report (2000), five areas that the authors of the report carefully explain are but a small window on what is known and needs to be known about reading and reading instruction.

NCTE's RI and South Carolina's version, the SCRI, are exceptions to this pattern. South Carolina policymakers used the research on teacher quality, staff development, and best practices and made what seems, in these political times, to be a radical decision: They decided to focus on broadening and deepening teacher knowledge as a means of raising the level of literacy in the state, and they did so in collaboration with a national education organization, the NCTE.

The findings from this study raise questions about the decisions concerning professional development for teachers around the United States. We suggest that policymakers in all states need to ask questions of those charged with literacy improvement. Why don't all states use a research-based approach to professional development? What don't all states bet on teachers instead of on programs as the research advises? Why don't all states ensure that all teachers

understand what the field has long recognized as best practices? Why don't all states partner with professional organizations as a means to support professional development?

The research shows that teachers can make a difference. Based on our research and our political stance—favoring teachers as decision makers—we believe it is time for policymakers across the country to take on the responsibility for allowing teachers to take action to ensure a better present and future for themselves and for their students. The phrase *research-based* needs to stop being a slogan that limits teachers' decision making; instead, it should become the mantra that drives all instruction and all staff development. If the future is to be better, teachers—not legislators—are going to make the difference. Teachers are doing this now in South Carolina. Surely the same professional opportunities can happen on a large scale for teachers in the other forty-nine states.

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Appendix A
Additional Information about Design and Funding

Legislative funding supported SCRI K–5 Phase 1. School districts submitted proposals, and those receiving awards were given $50,000 to support the costs associated with participation in SCRI. Most districts used these funds toward the salary of a Literacy Coach. The SDE paid for all staff development costs.

In the third year of SCRI K–5 Phase 1, the SDE received Reading Excellence Acts funds from the federal government and used these funds, in part, to support SC READS, an iteration of SCRI targeting students in pre-K to third grade in low-performing schools. Based on what was learned from SCRI K–5 Phase 1, changes were made to the SCRI design and incorporated into SC READS and into all subsequent iterations. These changes included having a coach work with only one school and specifying that the first year of coach training was to be a year in which the coach stayed in the classroom and had a partner teacher with whom he or she collaboratively put into practice what s/he was learning about in state study. The coach would then work as a coach for the next three years and would attend state study for four years instead of three. Another change that was initiated with SC READS specified that the same teaching team member would no longer stay with a cohort for all of the years of state study. Instead, whenever possible, one teaching team member would work with the cohort for the first two academic years, a second teaching team member would work with them for the second two academic years, and a third team member would teach the coaching course offered between the first and second years.

Phases 2 (2003–2006), 3 (2004–2008), and 4 (2006–20010) of SCRI K–5 have been supported with lottery funds distributed both to the SDE and to local school districts. SC Reading First (2004–2008) is supported with federal Reading First monies (as part of No Child Left Behind).

SCRI Middle Grades Phase 1 (2003–2007) and Phase 2 and SCRI HS High School Phase 1 (2006–2010) are supported with legislative funds.

To date, approximately 4,000 teachers have participated in SCRI study groups; an average of 80,000 students a year are in the classrooms of SCRI K-12 teachers.

Appendix B
SCRI Belief Statements

Teachers participating in SCRI demonstrate certain beliefs as they practice their knowledge and skills in the teaching of reading. Making informed decisions based on professional judgment having expertise and knowledge of students' individual needs, they demonstrate understanding of the major concepts, principles, theories, and research related to students; thus, these accomplished teachers provide opportunities for learning, growth, and development for every student. SCRI teachers

1. Understand young students and commit to their learning.

2. Possess specialized knowledge of the reading process.

3. Assess students' progress and performance.

4. Integrate reading and writing instruction.

5. Critically and regularly analyze their practice.

6. Collaborate in a professional community.

7. Involve parents and the community.

Appendix C
Selection of Representative Teachers

Our goal during the first year of funding (2001–2002) was to select forty-eight teachers to be representative of all of the teachers participating in SCRI. We chose to select forty-eight teachers because there were sixteen regions in the state and we hoped to have at least three teachers from each region. We also thought that our six-person research team would have the time needed to conduct forty-eight case studies. The process of selecting teachers began the prior year, the first year of SCRI K–5 Phase 1 (2000–2001). Across that year, literacy coaches collected data on teachers. These data included copies of journal entries, instructional records, reflective responses, and field notes. Teachers wrote narratives about their learning across the year. Coaches conducted end-of-year interviews and wrote summaries about each teacher.

In the summer of 2001, a representative from each region (most often, the regional coach) read data collected from his or her region, identified patterns within the data, and met as a group to identify patterns across regions. Members of the research team and SDE staff also participated in this process. The group was identified as the Regional Research Team. Five teacher profiles emerged from the work of this team, and Regional Research Team members used the data to write narratives that described each of the teacher profiles.

The research team (funded by the Office of Educational Research and Improvement), which included Drs. DeFord, Donnelly, Morgan, and Stephens in addition to doctoral students Karen Crowder and Erin Hamel, used the teacher data, the identified patterns, and the narratives (a) to create a visual model of the change process during Year 1 and (b) to identify factors that influenced the change process during Year 1. These factors (and the descriptors subsequently used) emerged from that analysis:

- **Initial consistency of beliefs and practices with SCRI** (C = consistent, M = moderately consistent, and L = inconsistent);

- **Initial voice** (S = strong voice, G = growing voice, and N = no voice); and

- **Initial response to SCRI** (E = enthusiastic, T = neutral, U = unenthusiastic).

Both the school context (+ = supportive, ~ = somewhat supportive, and – = not supportive) and **the coaches' expertise as a coach** (S = strong, E = emerging, and B = beginning) were also identified as salient factors. Descriptors were developed for each of these factors.

The research team asked coaches to code their teachers and themselves using a three-letter code. The first letter referred to consistency of beliefs and practices, the second to voice, and the third to initial response. Coaches were also asked to record a context code for each of their schools. Coaches were given a 3 X 5 card for each of their teachers. The card included the name of the teacher and the school, and coaches were asked to add the three-letter teacher code, the three-letter coach code, and the one-letter context code to each card. To ensure representation across the state, our research team gathered information about **grade level of SCRI teachers** (K–5) and **SES of participating schools** (L = low; O = other). This information was also included on the cards. For example, on a particular teacher's card, the code might be **MGT/CSE, E, +, L, 1st,** indicates that the teacher's knowledge base at the beginning of SCRI was **M**oderately consistent with SCRI, his or her voice was **G**rowing, and the initial response was neu**T**ral. The coach's initial beliefs were **C**onsistent with SCRI, the coach had a **S**trong voice, and was initially

Enthusiastic about SCRI. The coach's ability to coach was considered **E**merging, the school was Supportive (+), the SES was **L**ow, and the teacher taught **first** grade.

In Fall 2001, the research team sorted the cards into three groups based on the first letter of the three-letter code assigned to each teacher—the code that described each teacher's initial level of consistency with SCRI beliefs (**C**onsistent, **M**oderately consistent, inconsistent – **L**). Cards for principals, guidance counselors, and other educators not in the classroom were set aside, as were the cards of teachers whose district had left SCRI, who had changed buildings, etc. The final sample size was 1,633 teachers. The cards in each of these groups were then separated by school district. The cards from each school district were organized by the name of the regional coach who served that region.

In the following section, we detail the steps in the selection process using the 414 teachers considered to be Consistent (C) with SCRI. The same process was used for the 750 teachers whose beliefs and practices were considered to be Moderately (M) consistent, and the 469 teachers whose beliefs and practices were considered to be inconsistent (L) with SCRI.

Within C, there were nine possible combinations of codes : CSE, CGE, CNE, CST, CNT, CSU, CGU, CNU, and CGT. The team counted the number of cards in each of the nine subsets in order to identify the dominant patterns within C. The codes CSE and CGE had, respectively, 201 and 157 teachers in each group and so were considered to be dominant patterns. The next highest code within the C was CST (24 teachers) and so CST was not considered to be a dominant pattern. In M, the dominant categories were MGE (n = 307), MSE (n = 138), and MGT (n = 116). The dominant categories in L were LNT (n = 151), LGE (n = 82), and LGT (n = 71). The 1,223 teachers in these eight dominant patterns represented 75 percent of the 1,633 teachers in SCRI.

The total number of teachers with a particular pattern was divided by the total number of teachers. This percentage was multiplied by 48 to determine the number of teachers to be selected within each pattern. For example, 201 teachers were coded as CSE, which is 16 percent of the teacher population of 1,223. By multiplying 16 percent by 48, we arrived at the number of CSEs (eight teachers) to include in the sample. This process was repeated for the remaining seven dominant patterns.

The research team then looked at the second three-letter code on the teachers' card, the coach code. We tallied the number of coach codes within each dominant teacher pattern. For example, there were six coach codes listed on the cards of teachers who were coded as CSE (n = 201). These coach codes were CSE (n = 145), CGE (n = 28), CST (n = 9), MSE (n = 4), MGE (n = 4), MNE (n = 3). To distribute the eight teachers proportionately, seven CSE teachers were selected who had CSE coaches (n = 145), and one was selected who had a CGE coach (n = 28). This pattern was followed for the other seven dominant patterns for teachers (CGE, MGE, MSE, MGT, LNT, LGE, and LGT).

In Year 2 of SCRI K–5 Phase 1, 215 schools participated. Based on the Title I list from the SDE, 150 schools qualified for students to receive free and reduced-price lunches. These schools represented 70 percent of the total number of schools participating in SCRI. The remaining 30 percent of the schools were classified by the research team as "other." Because the research team wanted to follow forty-eight teachers teaching in different schools, it was determined that 70 percent of these teachers (n = 33) should be from Title I schools. Schools deemed as "other" represented 30 percent of the total school population, so fifteen teachers would be selected from these schools. The same process was used to determine the number of teachers who would be working with coaches who were strong (n = 9), emerging (n = 27), or beginning (n = 12); in school contexts that were supportive (n = 21), somewhat supportive (n =

21), or not supportive (n = 6); and at kindergarten (7), first (13), second (10), third (8), fourth (7), and fifth (3) grades. To ensure proportionate distribution across the state, the research team counted the number of teachers per region, divided by the total number of teachers, and multiplied that percentage times 48.

All of the calculations described allowed the research team to establish ideal distributions for selecting teachers across the state. Whenever possible, we adhered to these ideal targets.

Appendix D
Details of Consistency Rubric for Physical Environment

2. Physical Environment. The physical environment includes space and materials that are inviting to students and instructional areas that support individual, small group, and whole group instruction.					
Inconsistent			Consistent		
1	**2**	**3**	**4**	**5**	**6**
• The classroom is **not** inviting; there are **no** displays of student work. The room may be overly cluttered or sparse.	• The room is sparsely or overly decorated with commercially or teacher-produced skills-based charts and materials. There is **little or no** evidence of student work.	• The room is colorfully decorated and generally organized. There is some formulaic student work displayed; commercially or **teacher-produced skills-based charts and materials dominate** the physical environment.	• Generally inviting room with **some** authentic student work displayed. The room is pleasantly arranged, but little thought has been given to student access to materials.	• Authentic student work is **often** visible. The room is pleasantly arranged, with thought given to student access to materials.	• Authentic student work is **consistently** used as an important part of the learning environment. The room is pleasantly arranged to provide easy access to numerous and diverse materials.
• There are **no** areas for differentiated instruction.	• There are **few** areas for differentiated instruction.	• There **may** be areas for differentiated instruction, but they are **not used**.	• Teacher provides differentiated instructional areas for small group reading or writing instruction, but they **may not be used regularly**.	• Teacher provides differentiated instructional areas for small group reading or writing instruction and they are **used regularly**.	• The differentiated instructional areas **clearly function** and are **consistently used** for both instructional and student purposes.
• Desks are organized in rows. Teacher's desk or work station is prominent so that instruction can be delivered from one location in the room (teacher to student). Student interaction is **not allowed**.	• The desks are in rows so that the teacher can monitor students' time on task, behavior, etc. during instruction. Student interaction is **discouraged**.	• Desks may be in rows, in a U, or groups of three or four. Space **may not foster** student interaction, and student interaction is **seldom encouraged**.	• Desks are organized to **facilitate** student-to-student interaction. Such interaction is **sometimes encouraged**.	Desks are organized to **facilitate** student-to-student interaction. Such interaction is **often encouraged**.	• Desks, tables, and other furniture are arranged to encourage student interaction. The teacher **consistently encourages** student interactions.

Appendix E
Equating Chart

	Grade Equiv.	Equated	Dominie	DRA	RR	F and P
KDG Levels	**0.1**	**0**	**0** Can You Play?	**A** Can You See?	**A** [Cannot] No No No	
	0.3	**1**	**1A** Scamp	-	**B** (Can) No No No	
	0.6	**2**	**1B** House Cleaning	**1** Things That Go	**1** A Bird Can Fly	
	0.9	**3**	**2** Sally's Tricks	**2** I Can See	**2** Hats	
First Grade Levels	**1.1**	**4**	**2A** Scamp's Bone	**3** I Like Games	**3** At the Zoo	
	1.1	**5**	**2B** Dad's Music	**3** Look at Me	**4** Table on the Porch	**C** The Astronaut
	1.2	**6**	**3** Don't Jump	**4** Where Is My Hat?	**5** A Bird and a Hippo	**C**
	1.2	**7**	**3A** A Day in the Sun	Time to Play **6** Why Are We Stopping?	**6** Dave's Tricks	**Easy D**
	1.3	**8**	**3B** Dan's Present	**8** Duke	**8** The Boat Ride	**Hard D**
	1.3	**9**	**4** Magic Show	**8** The Lost Book	**7** Mr. Jumble	**Easy E** (Jerry Johns) Spotty Swims
	1.4	**10**	**4A** Night Visitor	**10** Shoe Boxes	**Alt 8** Glass Jars **Alt 10** Marble	**E** The First Snow
	1.4	**11**	**4B** The Trophy	_____	**9** Tub in the Yard **Alt 9** Guess What It Is	**Easy F** A Morning in Fall
	1.5	**12**	**5** The Field Trip	**12** Robert's New Friend	**Alt 12** Everybody In **10** John and His Drum	**F**
	1.6	**13**		**14** Allie's Pet	**12** Old Man Moss	**Hard F**
	1.6	**14**	**5A** Birthday Surprise	**14** The Wagon	_____	**Easy G**
	1.7	**15**	**5B** Wise Old Owl	**19** A New School	**14** George the Porcupine	**Hard G**

	1.7	**16**	**6** Smallest Mouse	**16** Pot of Gold	**Alt 16** Something at the Door	**G-H**
	1.8	**17**	**6A** Gorillas at the Zoo	**16** Monkey's Stepping Stones Animal Homes	**16** Hippo in the Hole	**Easy H**
	1.8	**18**	**6B** A Tall Tale	**18** A Giant in the Forest **20** Turtle's Big Race		**Hard H**
	1.9	**19**	**7** Tom's New Pet	**18** Game Day **24** Thin as a Stick	**Alt 18** The Five Brothers	**H-I**
Second Grade Levels	**2.1**	**20**	**7A** A Mystery Box	**20** Green Freddy	**18** A Man and a Dog	**I**
	2.2	**21**	**7B** Rain Man			**J**
	2.3	**22**		**24** The Wonderful Day	**20** The Mouse and the Elephant	**Hard J**
	2.5	**23**	**8** Running Wolf	**28** You Don't Look Beautiful to Me	**22** Light of the Sun	**J-K**
	2.6	**24**	**8A** Picture Rocks	**28** From Peanuts to Peanut Butter		**K**
	2.7	**25**	**8B** Making and Using Kites	**28** Incredible Journeys: Animal Migration **30** Touchdown		**L**
	2.9	**26**	**9** Ten New Friends	**30** Tiger's Whirlwind Day **34** Be Nice to Josephine	**24** No Children No Pets	**M** June 29, 1999
Third	**3.1**	**27**	**9A** Caves and Our Past	**34** Summer Discovery **38** Slammin' Sammy, a Real Hero		**Easy N**

	3.3	**28**	**9B** She Spelled T-e-a-c-h-e-r	**38** Trouble at the Beaver Dam **40** The Amazing Octopus **40** A Pack of Wolves		**Hard N**
	3.5	**29**	**10** Legends: Water Monsters and Unicorns			**N-O**
	3.7	**30**	**10A** Saint George and the Dragon	**50** Cry Foul		**O** - Henry and Beezus - Tornado
	3.9	**31 revisit**	**10B** Night of Terror	**38** Amelia Earhardt **40** Old Ben Bailey Meets His Match **39** All the Way Under **50** Friends in America	**26** The Duck That Came to Dinner	**P** -Wanted Dead or Alive: True Story of Harriett Tubman -Encyclopedia Brown Saves the Day
Fourth Grade	**4.1**	**32**	**11B (new 11A)** Shoemaker of Cobbler Vale (old paper version)	**44** Danger in the Deep **40** A New School Experience **60** Froggy and Princess	**28** Waterbed Mystery	

	4.3	**33**	**<u>11A (new 11B)</u>** Archimedes and the Mystery of the King's New Crown (old paper version)	**70** Lost **50** Lights, Camera, Action **50** Storm Chasers **70** Mt. Washington		**<u>Q</u>** - Anastasia Krupnik - You Be the Jury
	4.5	**34**	**Old 14 (new 12B)** Brave Little Ruby			
	4.7	**35**	**<u>12A</u>** Dragon Shield (old paper version)			**<u>R</u>** Harry Houdini: Master of Magic
	4.8	**36**	**11** Magic Sword			**<u>R</u>** Bracelet
	4.9	**37**	**Old 12B (new 13)** Wolves in Review (old paper version)			
Fifth Grade Levels	**5.1**	**38**	**14B** Gerty Qwerty	**70** Alaska Major		
	5.3	**39**	**12** Eat Not the Meat of the Hare (old paper version)	**80** Upar and the Great Nut Tree		**<u>S</u>**
	5.5	**40**	**<u>13A</u>** Ray of Light			**<u>V</u>** Underground Railroad **<u>S</u>** Facing West
	5.6	**41**	**<u>13B</u>** Opening New Frontiers			
	5.8	**42**	**<u>14A</u>** Flying Machines			**<u>T</u>** - Watsons go to Birmingham -My Mother Got Married
	5.9	**43**	**14** Sleeping Tiger	**<u>60</u>** Mike Fink: King of the Keelboatmen	**<u>30</u>** The Blind Connemara	**<u>Harder T</u>** - Earthquakes - Sea Otter Rescue - Missing May

Sixth Grade Levels	**6.1**	**44**	**15** Ancient Lake Dwellers	**60** Linda Greenlaw, A Swordfishing Boat Captain **80** Duel of the Dinosaur Hunters	**32** The Dinner Party	**U** - Jacob Have I Loved - The Righteous Revenge of Artemis Bonner
	6.5	**45**	**16** Lost Worlds	**70** Thrills and Chills **60** One Brave Heart		**U** - Mysterious Mr. Lincoln - Insects
	6.9	**46**			**34** Virtuoso	**V** Belle Prater's Boy
Seventh Grade Levels	**7.5**	**47**		**80** The Missing Link		**W** - Slam - M. C. Higgins the Great - The Giver
	7.9	**48**	**17** Getting to Know Australia	**80** Surtsey—Birth of an Island		**X** - The Blue Door - Children of the Wild West
Eighth Grade Levels	**8.5**	**49**				**Z** Rosie the Riveter **Z** A Day No Pigs Would Die **Y** Children of the Dustbowl
	8.9	**50**	**18** Becoming a Poet			