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**Striving Readers
Year 3 Evaluation Report:
Danville, Kentucky**

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Executive Summary of Findings: Implementation and Impact

This Striving Readers evaluation is occurring in ten middle, nine high, and two 6-12 schools in seven rural school districts serving large percentages of at-risk students in Kentucky. It examines the impact of a targeted intervention, the Learning Strategies Curriculum (LSC) developed by the University of Kansas Center for Research on Learning, on struggling middle and high school students' reading achievement, strategy use, and motivation. The intervention is a supplement to the regular curriculum wherein students in the targeted intervention participate in a reading class in place of an elective as part of their regular school day. The control-group condition is "business as usual," wherein students in the control group take a regular elective such as band, theater arts, civics, or physical education.

In addition to the targeted intervention, this study evaluates a whole-school intervention, the Collaborative for Teaching and Learning Adolescent Literacy Model (ALM), on teacher and student outcomes. This school-wide model provides professional development for content teachers in integrating literacy strategies across content areas in service of content learning. All teachers in the Striving Readers schools are expected to implement the whole-school intervention, and all students should receive instruction in the whole-school techniques across the content areas.

In this Striving Readers project, each school employs a literacy coach who is responsible for both teaching the targeted intervention to struggling readers *and* for coaching content teachers in implementing the whole-school intervention¹. Through the project, these coaches have the opportunity to participate in a literacy leadership certification program through the University of Louisville.

The impact research questions that motivated the study design and analysis plan during the first three years are:

¹ When describing the intervention teacher's role, we will refer to the literacy coach as the "LSC teacher," and when describing the whole-school program coach's role, we will refer to the literacy coach as the "ALM coach".

- What is the impact of the LSC on the reading achievement, strategy use, and motivation of struggling adolescent readers?
- What changes occurred in the personal and collective efficacy of the LSC teachers/ALM coaches over the course of the project?
- What is the impact of the ALM on content teachers' personal and collective efficacy for literacy teaching?

LSC Targeted Intervention

This study examined both the implementation and impact of the LSC in the first three years of the Striving Readers project.

Implementation. During each year of the project, LSC teachers participated in training and on-site support, and training was provided for school administrators. In year 1, LSC teachers were provided seven days professional development training and up to 60 hours support from visits by mentor coaches. In year 2, the LSC teachers were provided seven and one-half days training and up to 48 hours of on-site support. In year 3, LSC teachers were provided seven days professional development training and up to 72 hours of on-site support. Mentor coach site visits decreased from year 1 to year 2, as expected, and decreased further in year 3. School administrators were provided a total of five days training in the intervention in years 1, 2, and 3. Overall, participation in the professional development inputs for middle, high, and 6-12 LSC teachers and administrators was high, with 100% of teachers participating fully in the training each year of the project.

Classroom implementation fidelity was measured through classroom observations and by calculating the percentage of days that students received instruction by a trained LSC teacher (teacher attendance). Observations indicated that fidelity to the targeted intervention was relatively low in year 1, with 6th grade teachers achieving 58.4% implementation fidelity and 9th grade teachers achieving 70.4% fidelity. In year 2, implementation fidelity increased to 80% for 6th grade teachers and 78.5% for 9th grade teachers. In year 3, implementation fidelity continued to rise, with 6th grade teachers achieving 87.2% fidelity and 9th grade teachers achieving 86.6% fidelity of implementation. Teacher attendance was relatively high across all years of the project.

Impacts. This study used HLM analyses to measure the impacts of the LSC on 6th grade (middle school) and 9th grade (high school) students' reading achievement, strategy use, and motivation. In the first three years of this Striving Readers study, there were no impacts on 6th grade students' reading achievement, as measured by the *Group Reading Assessment and Diagnostic Evaluation*, but there were significant impacts for 9th grade students' achievement. Results on the *Metacognitive Awareness of Reading Strategies Inventory* (Mokhtari & Reichard, 2002) indicated significant impacts for 6th grade on students' self-reported reading strategy use but revealed no significant impacts on strategy use for 9th grade. Results on the *Motivation to*

Read Questionnaire (Wigfield & Guthrie, 1997) indicated significant effects for both 6th and 9th grade students in the area of reading motivation.

ALM Whole-School Intervention

In the first three years, this Striving Readers study examined the implementation of the ALM, its impacts on content teachers' personal and collective efficacy for literacy teaching, and its impacts on student achievement in reading.

Implementation. The professional development inputs for the whole-school intervention were multi-faceted, as training was provided for content teachers, ALM coaches, and school administrators. Over the first three years of the project, content teachers were provided at least nine days training in the whole-school model, and teachers' participation in those training sessions (as measured by attendance) was relatively high. The proportions of schools with full participation in the school-wide training for middle schools, high schools, and 6-12 schools, respectively, were 70%, 66.7%, and 100% in year 1, 80%, 55.6%, and 50% in year 2, and 70%, 66.7%, and 100% in year 3. Additional ongoing, job-embedded professional development for content teachers was provided by the school-based ALM coaches. The ALM coaches were provided thirty days of training in the school-wide intervention, and their participation was high in all years, overall, with 100% of ALM coaches participating fully in the training each year of the project. To further their professional development, ALM coaches were provided up to 165 hours of on-site support by a mentor coach over the course of the three years. School administrators were provided 14 days professional development in the school-wide model over the first three years, and their participation (as measured by attendance) was relatively high in all years.

Evaluators conducted classroom observations to assess content teachers' classroom implementation of the whole-school model. In year 1, all English/Language Arts (E/LA) teachers were observed, and in year 2, E/LA teachers and a sample of teachers in other content areas were observed. In year 3, a random sampling of teachers was observed across content areas. In year 1, middle- and high-school E/LA teachers spent approximately one-quarter of class time using ALM techniques during the observations. In years 2 and 3 middle school teachers implemented the ALM at higher levels than high school teachers.

Impacts. All teachers in Striving Readers schools and teachers in matched schools (twelve matched schools in year 1, nine in year 2 and eight in year 3) completed a teacher efficacy survey at the start of the project and at the end of years 1, 2, and 3. The ANOVA procedure indicated that teachers' personal efficacy at Striving Readers schools was lower than at matched schools at the start and ended higher. Teachers' personal efficacy increased significantly over time and was marginally higher at Striving Readers schools. The ANOVA procedure for collective efficacy indicated that teachers' collective efficacy was also lower at Striving Readers schools at the beginning of the project and ended higher than matched schools. Although collective efficacy did not increase significantly over time, it was marginally higher at Striving Readers schools. For the ALM coaches/LSC teachers, personal and collective

efficacy increased with exposure to the Striving Readers program. After teachers' first year in the program, personal efficacy dipped, but it recovered and increased after their second and third year. Their collective efficacy increased their first year in the program, dipped in the second year and recovered in the third year.

Conclusions

In the first three years of this Striving Readers project, literacy coaches, administrators, and content area teachers achieved high levels of participation in the professional development inputs, overall, for both the targeted intervention and whole-school model. However, there was more variation in the levels of classroom implementation of the targeted and whole-school interventions. For the targeted intervention, implementation was relatively low in year 1 but improved to high levels in years 2 and 3. For the school-wide model, middle school teachers' implementation was higher than high school teachers' classroom implementation.

The first three years of the Striving Readers project have yielded positive impacts on students. In particular, the targeted intervention (LSC) seems promising for impacting the reading achievement of 9th grade struggling readers and for affecting the reading strategy use of 6th grade struggling readers. In addition, LSC had a positive effect on both 6th and 9th grade students' reading motivation. While the targeted intervention did not have a statistically significant impact on 6th grade students' reading achievement in the first three years, impacts on student achievement may be found in the final year of the project evaluation.

Introduction and Study Background

Context for the Study

In the first three years, the Danville, Kentucky Striving Readers project involved ten middle schools, nine high schools and two 6-12 schools in seven rural school districts. One of the 6-12 schools is an alternative school for students who have not succeeded in a traditional middle and high school setting. Student populations within these schools ranged in size from 33 to 1,222 with a mean of 555 students per building. The school demographics are shown in Table 1.1 for years 1, 2, and 3. The school demographics remain fairly constant across years, with the possible exception of a decline in high school enrollment in year 3.

Table 1.1

School Demographics

	Number of schools	Average enrollment (min, max)	White	African American	Free/reduced	Disability
<i>Year 1</i>						
MS	12	460 (12, 816)	91.9%	4.2%	50.4%	14.7%
HS	11	682 (56, 1144)	92.7%	4.2%	37.3%	12.1%
<i>Year 2</i>						
MS	12	457 (26, 834)	91.5%	4.3%	49.6%	12.8%
HS	11	703 (26, 1222)	92.7%	4.1%	34.4%	10.6%
<i>Year 3</i>						
MS	12	475 (49, 825)	90.5%	3.7%	53.2%	14.4%
HS	11	577 (49, 952)	91.5%	4.5%	40.3%	12.6%

Note. Middle schools are grades 6-8. High schools are grades 9-12.

Theoretical Rationale for and Description of the Intervention Models

Targeted Intervention. The targeted intervention for the Danville project was the Learning Strategies Curriculum (LSC), developed by the University of Kansas Center for Research on Learning (KU-CRL) as one component of the Strategic Instruction Model (SIM) (Tralli,

Colombo, Deshler, & Schumaker, 1996). The LSC was developed to assist adolescents with learning disabilities in the general education classroom and is divided into three strands: (a) Acquisition, (b) Storage, and (c) Expression. Each strand includes a number of strategies designed to help students derive information from texts, identify, and remember important information, or develop writing or academic competence. Each strategy is taught through eight instructional stages: pretest and commitments; describe; model; verbal practice; controlled practice; feedback; posttest and commitments; and generalization.

The acquisition strand is geared toward helping students gain information from text. This strand includes strategies such as Word Identification, Visual Imagery, Self-Questioning, and Paraphrasing, all of which were taught in this project. In general, previous research has examined the Learning Strategies Curriculum strategies for acquiring information from text and has shown positive results when used for students with learning disabilities in grades seven through twelve (Clark, Deshler, Schumaker, Alley, & Warner, 1984; Lee & Von Colln, 2003; Lenz & Hughes, 1990; Schumaker & Deshler, 1992; Woodruff, Schumaker, & Deshler, 2002).

The strategies in the storage strand are designed to help students identify, organize, and store important information. The storage strand includes the following strategies: FIRST-letter Mnemonic, Paired-Associates, and the LINCS Vocabulary Learning Strategy. Previous studies have suggested the effectiveness of the FIRST-letter Mnemonic and Paired Associates strategies, which are designed to help students remember information (Bulgren, Hock, Schumaker, & Deshler, 1995; Nagel, 1982). In this project, the LINCS strategy was part of the targeted intervention. This strategy, which involves using a mnemonic to memorize word meanings, has yielded positive results in previous research studies (see Ellis, 1992).

The expression strand includes strategies for assisting students with writing and academic competence. It includes the Sentence Writing Strategy, the Paragraph Writing Strategy, the Error Monitoring Strategy, the InSPECT strategy, the Theme Writing Strategy, the Assignment Completion Strategy, and the Test-Taking Strategy. Studies of individual Expression Strand strategies have demonstrated improved sentence writing (Kline, Shumaker, & Deshler, 1991) paragraph organization (Moran, Schumaker, & Vetter, 1981), revising and editing (McNaughton, Hughes, & Ofiesh, 1997), and theme writing (Hock, 1998). The targeted intervention in this project included Sentence Writing and Paragraph Writing.

Theoretically, the pedagogical tenets underlying the LSC are grounded in notions related to self-regulated learning, generalization, and motivation. The primary goal is teaching students “how to learn” (Schumaker & Deshler, 1992; Schumaker & Deshler, 2006). This is accomplished by teaching students a variety of task-specific learning strategies that enable them to deal with the immediate demands of the school curriculum and the self-regulatory processes needed to successfully transfer these skills to other contexts (Deshler & Schumaker, 1986; Schumaker & Deshler, 2006). Thus, students are taught metacognitive skills that enable them to monitor progress made toward achieving goals (Deshler, Warner, Schumaker, & Alley, 1983; Flavell, 1979) and that enable them to control their own learning and thinking (Baker & Brown, 1984; Deshler et al., 1983). Personal attributions are important to this process in that students must

accept responsibility for their own learning (Deshler & Schumaker, 1986) and develop the intrinsic motivation necessary to transfer their knowledge of strategies and how to use them to new situations and settings (Garner, 1990; Schumaker & Deshler, 1992).

In the Danville project, 6th and 9th grade students who scored two grade levels or more below grade level in reading received a minimum of 250 minutes per week of supplemental reading instruction in a targeted intervention class taught by an LSC teacher (who also serves the school-wide model as an ALM coach). Students were placed in this course in addition to their regular reading/language arts classes for an entire school year. Table 1.2 shows the elements of the Learning Strategy Curriculum and the years these strategies were available to teachers for use in their classrooms. It is important to note that, due to scheduling necessities, some intervention classes met for longer than 250 minutes per week. In those classes, teachers were instructed to provide no more than 300 minutes of LSC instruction and to utilize the remaining time on other literacy activities.

Table 1.2

Learning Strategies Curriculum Elements by Implementation Year

Learning Strategy	Implementation Year		
	Year 1	Year 2	Year 3
Word Identification Strategy (DISSECT)	X	X	X
Visual Imagery Strategy (SCENE)	X	X	X
Self Questioning Strategy (ASKIT)	X	X	X
Paraphrasing Strategy (RAP)	X	X	X
Vocabulary Strategy (LINCS)	X	X	X
Sentence Writing Strategy (PENS and MARK)	X	X	X
Inference Strategy (INFER)		X	X
Fundamentals of Paraphrasing and Summarizing Strategy (TMtoD)		X	X
Possible Selves (motivation strategy)			X

The professional development model for the targeted intervention in year 1 included summer and follow-up training and on-site support from a mentor coach. To learn how to implement the targeted intervention, teachers participated in five half-day workshops in the summer which were led by a certified LSC trainer from the University of Louisville (U of L). During the school year, the trainer led the teachers in nine half-day follow-up workshops. To support their ongoing learning and development, teachers participated in monthly coaching visits by mentor coaches from the Collaborative for Teaching and Learning (CTL) who were trained in the intervention alongside the teachers during the summer and over the course of the year. Also, the LSC trainer made visits to teachers who needed additional support. In year 2, teachers participated in a two-day workshop to continue the training in the LSC model. During the school year, teachers participated in eleven half-day follow-up workshops. Teachers again had support from mentor coaches from CTL for approximately three to four days throughout the year and participated in bi-monthly distance learning sessions. The LSC trainer also made support visits on an as-needed basis. In year 3, teachers participated in a two-day workshop during the summer and ten half-day follow-up workshops during the school year. Teachers had support from mentor coaches from CTL for approximately one to two days throughout the year and participated in bi-monthly distance learning sessions.

It is important to note that the teachers for the targeted intervention also served as literacy coaches who supported the implementation of the school-wide model in their schools. As part of their training for the project, most of the teachers participated in a literacy coach certification training offered through the University of Louisville. Through this facet of the project, they completed three hallmark assessments designed to support their work as literacy coaches for the school-wide model as well as to further develop their skills as targeted intervention teachers. In addition, the intervention teachers fully participated in all training related to the school-wide model.

Whole-School Intervention. The whole-school intervention used in the Danville Striving Readers project was the CTL Adolescent Literacy Model (ALM) (Awbrey, 2008). The CTL Adolescent Literacy Model is designed to support cross-content teachers in regularly applying literacy strategies during instruction in service of content learning. It is a professional development-based program, in that it does not include a specific set of texts for teachers to implement. The model focuses on the following components: vocabulary development, reading comprehension, verbal fluency, writing to learn, writing to demonstrate learning, and academic dialogue.

All teachers in the Striving Readers schools were expected to integrate the ALM into their classroom instruction, across the curriculum, and across grade levels (6th through 12th). It was expected that all teachers, including auxiliary content teachers such as music and physical education, would use the ALM strategies to some extent to integrate literacy into the content areas.

All content area teachers in the Striving Readers schools received 30 hours (five days) of training related to administering the school-wide intervention during the summer of 2006.

Initial training was provided by the Professional Development Director from the CTL and five mentor coaches from the CTL staff. Additional assistance in the form of ongoing job-embedded professional development was provided throughout the year on a daily basis by ALM coaches in each building and the external mentor coaches from CTL.

CTL provided professional development training, mentoring, coaching development, and direct coaching of teachers. The professional development activities to support the whole-school model included the following:

- two days of teacher training to full faculty in twenty-one project schools, with school-specific training agendas, based on observed needs of the school;
- direct coaching training to school ALM coaches on coaching skills development, content area expertise, and support of the school-wide literacy model;
- department-specific training opportunities for each participating school, with CTL content specialists conducting each 3-hour training session.
- follow-up trainings as needed, and mentoring of ALM coaches in how to conduct formal sessions for specific departments in their schools;
- ongoing ALM coach mentoring, with several interactions each month (as individual school needs dictated), focused on modeling coaching and training, co-constructing coaching activities, observing, and providing feedback on coaching activities;
- direct training and development for school literacy leadership teams;
- facilitation in the development of schools' long-range literacy plans, with follow-up support for monitoring the successful implementation of those plans; and
- direct training for school and district administrators to support development of leadership skills, strategies, and tool application.

In addition to support provided by CTL, The University of Louisville provided direct training and coursework support for the reading intervention and foundations of literacy knowledge.

The professional development model included training and support for administrators, as well. Each year, school administrators were invited to participate in the school-wide model training with their faculties. Additionally, each year administrators attended training days where they received professional development in literacy leadership to support both the targeted intervention and the school-wide model and participated in monthly on-site mentor meetings.

Logic Models

Exhibit 1: Logic Model for the Target Intervention (See Appendix A).

Exhibit 2: Logic Model for the Whole-School Intervention (See Appendix B).

Key Evaluation Design Features

The evaluation is designed to measure the impact of the targeted intervention on student outcomes and the impact of the whole-school model on teacher efficacy. During the first three years, the impact study was guided by the following research questions:

- What is the impact of the LSC on the reading achievement, strategy use, and motivation of struggling adolescent readers?
- What changes occurred in the personal and collective efficacy of the LSC teachers/ALM coaches over the course of the project?
- What is the impact of the ACM on content teachers' personal and collective efficacy?

For the evaluation of the targeted intervention, data from cohorts of 6th and 9th graders are combined for analysis each year of four years. In all three years, 6th and 9th grade students were randomly selected for treatment and control groups. In year four, the fourth cohort of 6th and 9th grade students will be randomly selected for treatment and control. Student outcome measures for the first three years' targeted intervention study are as follows:

- Group Reading Assessment and Diagnostic Evaluation (GRADE)
- Metacognitive Awareness of Reading Strategies Inventory (MARS)
- Motivation to Read Questionnaire (MRQ)

The evaluation of the whole-school model involves yearly measurement of teachers' efficacy for literacy teaching as well as student achievement in reading and the content areas at the end of four years. The following teacher outcome measure was used in years 1, 2, and 3:

- Teacher Efficacy Survey

The following student achievement measure will be used at the end of year four to determine the impact of the whole-school model on students' reading achievement and content area achievement:

- Kentucky Core Content Test

Evaluation of the Implementation of the Targeted Intervention: Years 1, 2, and 3

Summary of the Design of the Implementation Study

The research questions that guided the implementation study of the targeted intervention in years 1, 2, and 3 are:

- What was the level of implementation of professional development/support for teachers/coaches/leaders in years 1, 2, and 3?
- What was the level of implementation of classroom instruction in years 1, 2, and 3?

Exhibit 3 indicates the data sources that were used to answer each research question.

Exhibit 3.

Years 1, 2, and 3 Data Sources on Implementation Linked with Research Questions: Targeted Intervention (Learning Strategies Curriculum)

Data Sources	Measures/Data Sources					
	Responsible Partner				Record Review	
	Developer of ALM model (CTL)	U of L trainer/LSC certified trainer	Project Director	Evaluator	PD attendance records	Surveys/Questionnaires/Logs/Classroom Observations
Research Question 1: What was the level of implementation of professional development/support for intervention teachers/leaders in Year 1, 2, and 3?						
Type and amount of professional development provided to LSC teachers and level of participation.		●	●		●	●
Type and amount of coaching provided to LSC teachers and level of participation.	●	●				●
Level of participation of district leaders in professional development.			●		●	
Research Question 2: What was the level of implementation of classroom instruction in Year 1, 2, and 3?						
Percentage of time that LSC teachers used the targeted instructional strategies with fidelity.				●		●
Proportion of school days students received intervention instruction by a trained LSC teacher.			●			●

LSC Targeted Intervention Implementation Results

Professional Development Inputs. Table 1.3 shows the average participation of LSC teachers in professional development sessions and in coaching visits. As well, Table 1.3 shows

the average number of days that school administrators attended training. This table indicates high levels of participation by both teachers and administrators in that all teachers and most administrators participated fully in the training each year of the project. If teachers missed any of the training due to illness, school responsibilities, or other factors, the LSC trainer and mentor coaches met individually with the teacher to provide missed training content.

In addition to attending training sessions on the targeted intervention, LSC teachers received on-site mentoring by a CTL mentor coach. As is depicted in Table 1.3, middle school LSC teachers received an average of 5 days, 3.8 days, and 2.5 days of mentoring in the intervention in years 1, 2, and 3, respectively. High school LSC teachers received an average of 6.5 days, 4.6 days, and 2.3 days in years 1, 2, and 3, respectively. LSC teachers in 6 - 12 schools received an average of 5.6, 4.5, and 1.5 days of mentor coaching in years 1, 2, and 3, respectively. This represents a decrease in mentoring support, focused on the targeted intervention, for all teachers across the years.

Table 1.3

Means and Ranges for Professional Development Inputs for Targeted Intervention by School

School Level	PD Inputs						Mentor Coaching Site Visit Days
	LSC Teacher Training			Administrator Training			
	Days Attended	N ^d	% at Full Participation ^e	Days Attended	N	% at Full Participation ^f	
Year 1							
MS ^a	6.6 of 7 (6.5-7)	10	100	1.7 of 2 (1 – 2)	10	90	5.0 (4.2 - 6.5)
HS ^b	6.6 of 7 (6.5 - 7)	12	100	1.7 of 2 (1 – 2)	9	77.8	6.5 (4.5 - 10)
6-12 ^c	7.0 of 7 (7 - 7)	2	100	1.8 of 2 (1.5 – 2)	2	100	5.6 (5.3 - 5.8)
Year 2							
MS ^a	7.0 of 7.5 (6.5 - 7.5)	10	100	1.3 of 1.5 (1 - 1.5)	10	100	3.8 (1 - 6)
HS ^b	7.1 of 7.5 (5.5 - 7.5)	12	100	1.3 of 1.5 (1 - 1.5)	9	100	4.6 (2 - 8)
6-12 ^c	7.5 of 7.5 (7.5 - 7.5)	2	100	1.5 of 1.5 (1.5 - 1.5)	2	100	4.5 (4 - 5)
Year 3							
MS ^a	6.4 of 7 (6 - 7)	10	100	1.3 of 1.5 (1 - 1.5)	10	100	2.5 (.5 - 12)
HS ^b	6.6 of 7 (4.5 - 7)	12	100	1.3 of 1.5 (1 - 1.5)	9	100	2.3 (.5 - 4)
6-12 ^c	6.5 of 7 (6 - 7)	2	100	1.5 of 1.5	2	100	1.5 (1 - 2)

^an = 10 middle schools; ^bn = 9 high schools; ^cn = 2 Grades 6 – 12 schools. ^dEvery school employed one Literacy Coach with the exception of three high schools, which had two Literacy Coaches each. ^eLSC teachers who missed group training sessions received make up training for all sessions from the LSC trainer and mentor coaches. ^fParticipation for year 1 was complete with ≥1.5 days attended, year 2 was complete with ≥ 1 day attended, and year 3 was complete with ≥ 1 day attended.

It is important to note that LSC teachers received support from mentor coaches through telephone calls, email correspondence, and formal distance support. This support was for both the targeted intervention and whole-school intervention. While documentation of this support was provided in years 2 and 3, the extent to which the support was specific to the targeted intervention or whole-school model was not designated. LSC teachers and mentor coaches engaged in 10,461 minutes of phone support calls, exchanged 2,410 emails, and participated 357 times in formal distance support during the second year of the project. In year 3, LSC teachers and mentor coaches engaged in 11,490 minutes of phone support calls, exchanged 4,320 e-mails, and participated 45 times in formal distance support.

The LSC trainer also provided support through site visits, phone calls, and electronic communication. In year 1, the LSC trainer reported that coaches received an average of 3 days of site visits. For year 2, continuing coaches received an average of 3 days of visits, and new coaches received an average of 4 days of site visits. In year 3, continuing coaches received an average of 2.5 days of site visits, and new coaches again received an average of 4 days, according to the LSC trainer.

Many of the LSC teachers/ALM coaches participated in a literacy leadership certification program offered by the University of Louisville. The participants completed hallmark assignments as part of their certification program. In year 1, 11 high school teachers participated in the certification program, and eight participated in year 2. In year 3, none of the hallmark assignments pertained to the targeted intervention.

Process for Measuring Classroom Implementation. Each LSC teacher was observed two times each year during years 1, 2, and 3. During the spring of 2007 all LSC teachers were observed for at least one class period on two different occasions. During the 2007-2008 and 2008-2009 academic years, LSC teachers were again observed twice each year, once in the fall and again in the spring. The purpose of these observations was twofold: (a) to determine treatment fidelity, and (b) to determine the extent to which LSC teachers implemented aspects of the LSC in their instruction. Observers sought and recorded evidence from the classroom environment, the observation, and an interview with the LSC teacher.

In the fall of 2006, research assistants attended a training session conducted by the LSC intervention trainer. Following that training, the research assistants and investigators worked collaboratively to create an observation protocol that included the eight instructional stages of the LSC intervention (pretest and commitments, describe, model, verbal practice, controlled practice and feedback, posttest and commitments, and generalization). They then identified activities associated with each component and constructed interview questions that would clarify the observations. The evaluators shared the observation protocol with the LSC trainer and requested feedback on the instrument. The trainer made no suggestions for changes in the protocol.

The investigators then met with the research assistants on two occasions to provide training related to taking field notes. Training consisted of lecture related to taking field notes, watching video segments, practice taking field notes (both in classrooms and through videotape), and critique. Sample field notes were shared, critiqued, and refined. The research assistants were trained to organize their field notes using five-minute time intervals to capture the nature of instruction throughout the entire lesson. Four codes were developed to characterize the range of instructional behaviors observed in the intervention classrooms. Those codes included: (a) LSC, (b) Other Literacy Activities, (c) Non-literacy Activities, and (d) Behavior Management.

Four members of the evaluation team used the field notes to identify the number of minutes spent engaged in the LSC, Other Literacy Activities, Non-literacy Activities, and Behavior Management. These four researchers sought reliability for coding the observation protocols using 10.5% of the data ($n = 4$ observations) during year 1. Inter-rater reliability was 89.8% among all four coders. Two of the coders then coded all remaining intervention observations. Overall, a total of 2,414 minutes of intervention instruction was observed and coded. In year 2, the same four team members achieved 92% percent agreement using five of 46 observations (10.9% of the data). Two coders then coded the remainder of the year 2 observations. For the purposes of this report, only the number of minutes teachers and students were engaged in LSC are reported. Time spent in Other Literacy Activities, Non-literacy Activities, and Behavior Management is not disaggregated for this report.

Classroom Implementation Results. Table 1.4 shows the mean percentage of time that LSC teachers spent on the targeted intervention in the Striving Readers classrooms. In year 1 of the project, fidelity to the LSC model was higher for 9th grade LSC teachers at 70.4% than for 6th grade LSC teachers at 58.5%. In year 2, implementation increased for both 6th and 9th grade LSC teachers (80.0% and 78.5%, respectively) and again in year 3 (87.2% and 86.6%). This represents a large increase in implementation fidelity, for middle school teachers particularly.

Another important aspect of implementation fidelity involves the number of days that students received instruction in the targeted intervention by a trained LSC teacher. As a measure of this variable, the LSC teachers' attendance in the intervention class is presented in Table 1.4. As the table indicates, the average percentage of days attended was 90.5% for 6th grade LSC teachers, and 91.1% for 9th grade LSC teachers in year 1. In year 2, the average percentage of days attended was 78.1% for 6th grade LSC teachers and 87.5% for 9th grade LSC teachers. In year 3, the average percentage of days attended was 82.2% for 6th grade LSC teachers and 87.4 for 6th grade LSC teachers. Thus, it appears that intervention teachers were out of the targeted intervention classroom for a significant percentage of days, which could affect the overall impact of the targeted intervention.

Table 1.4

Implementation of the LSC Model in Intervention Classrooms as Measured by Percent of Class Time

	Year 1 ^a	Year 2 ^b	Year 3 ^c
6 th grade			
LSC instruction	58.5%	80.0%	87.2%
LSC teacher attendance	90.5%	78.1%	82.2%
Number of LSC teachers observed	11	12	11
9 th grade			
LSC instruction	70.4%	78.5%	86.6%
LSC teacher attendance	91.1%	87.5%	87.4%
Number of LSC teachers observed	13	12	9

Note. In year 1, every LSC teacher was observed twice in the spring, with the exception of one 9th grade teacher who was observed once. In years 2 and 3, every LSC teacher was observed once in the fall and once in the spring. The number of LSC teachers differs from year to year due to turnover.

Implications for Impact Analysis. In effectiveness studies, it is essential to examine the extent to which the intervention was implemented with fidelity so that appropriate conclusions may be drawn from the research findings (Durlak & DuPre, 2008; Institute of Education Sciences, 2009). If student outcomes do not improve after participation in an intervention, one of two explanations may be attributed: (a) the intervention, as designed, is not effective, or (b) the intervention was not implemented as it was designed or as the developer intended. For the targeted intervention in this study, implementation of the professional development was high, and classroom model was relatively high with increasing fidelity from year to year. Thus, it appears that outcomes from the impact analysis may be attributed to the effectiveness of the targeted intervention in this study.

Evaluation of the Impacts of the Targeted Intervention: Years 1, 2 and 3

Study Design

Sampling Plan. The evaluation combines cohorts of 6th and 9th graders from multiple years. In years 1, 2, and 3, 6th and 9th grade students were randomized to treatment and control. In year 4 a new cohort of 6th and 9th grade students will be randomized to treatment and control. The four cohorts of 6th grade students will be combined for analysis of impacts on 6th grade students, and the four cohorts of 9th grade students will be combined for analysis of

impacts on 9th grade students. Thus, the plan is a two-stage sampling design wherein a purposively selected sample of 21 schools was selected in stage one. Stage two sampling occurs each year of the study. In stage two all 6th and 9th grade students who meet eligibility criteria of scoring two grade levels below grade level (with the exception of students placed in self-contained special education classrooms full time) are randomly assigned to treatment and control groups within each of the 21 schools. Students can opt out of the intervention only with a written request by the parent or guardian. School administration strongly encourages treatment for qualified students, however.

Sample Size and Power. The empirical minimal detectable effects are derived after the third year of the study using Optimal Design Software developed by Spybrook, Raudenbush, Congdon, and Martinez (Optimal Design Software). The specific design used was person randomized trials at multi-site trials. The minimal detectable effects calculated for 6th and 9th grades are, 0.15 and 0.14, respectively. The following estimates were used in these calculations:

Estimated MDE for 6th grade at the end of year 3: 0.15

Estimated MDE for 9th grade at the end of year 3: 0.14

- Estimated number of students per school :
 - 60 intervention and control students/school in 6th grade
 - 90 intervention and control students/school in 9th grade
- Number of schools:
 - 12 middle schools
 - 11 high schools
- Minimum power: 80%
- Alpha level: .05
- Proportion of variance expected to be explained by blocking variables:
 - .05 for 6th grade,
 - .01 for 9th grade
- Proportion of variance expected to be explained by student-level covariates (e.g., a student-level pre-test) .40

Sample Selection Process: Every 6th and 9th grade student in the Striving Readers schools completed the GRADE at the beginning of the fall semester, with the exception of students placed in self-contained special education classrooms full time. Every student with an NCE of 33 or lower was assigned to the intervention or control group. Within each school, a stratified random sampling procedure was implemented using four demographic variables: special education status, free/reduced lunch status, ethnicity, and gender. The students were systematically assigned to the intervention or control group by sorting the students by demographic group and GRADE score within each subgroup. A random number generator was used to assign the first student into either the intervention or control group. Each subsequent student was alternately assigned to intervention or control.

Counterfactual. Students who were selected for the control group received a regular elective as part of their 6th or 9th grade program. A wide range of electives were taken, including band, chorus, civics, and physical education. In general, it is not expected that the electives included sufficient literacy content to influence the literacy achievement of students in the control group. Reading intervention teachers did not interact with or teach students in the control group, and intervention teachers did not share teaching or learning strategies with other teachers who may have influenced the performance of students in the control group.

Missing Data: Case-wise deletion was used for missing data, with the exception of the reading KCCT in the base year (2006). Two schools did not have data that year, so estimates from other years were averaged and substituted.

Data Collection Plan

This report includes data collected the first three years of the study. In the 21 Striving Readers schools, all current 6th and 9th grade students (with the exception of students who were placed in special education classes all day) were administered the following measures in the fall of 2006 and spring of 2007 (year 1), in the fall of 2007 and spring of 2008 (year 2), and in the fall of 2008 and the spring of 2009 (year 3):

Group Reading Assessment and Diagnostic Evaluation (GRADE). Each year, all students took the GRADE assessment (Form A) during the first two weeks of the school year. Consistent with GRADE norming procedures, the GRADE was administered in classrooms by teachers. Prior to September 1st of the school year, schools administered make-up tests to any 6th or 9th grade student who missed the first administration. In the spring, students took the GRADE assessment (Form B) during the first two weeks of May, except in year 3, when students took the GRADE during the last two weeks of April. In both the fall and the spring, school literacy coaches gathered students' GRADE answer sheets and mailed or delivered them to CCLD offices. Research assistants scanned the answer sheets for scoring.

Student Survey—Metacognitive Awareness of Reading Strategies Inventory (MARSII)/Motivation to Read Questionnaire (MRQ). The MARSII (Mokhtari & Reichard, 2002) is a self-report measure designed specifically to assess middle and high school students' perceived use of reading strategies during academic reading. The MARSII includes items related to three strategy domains: global, problem-solving, and support strategies. The MRQ (Wigfield & Guthrie, 1997) is designed to measure four aspects of motivation for reading (a) self-efficacy (i.e., reading efficacy, reading challenge), (b) intrinsic motivation (i.e., reading curiosity, reading involvement, importance of reading, and reading work avoidance), (c) extrinsic motivation (i.e., competition in reading, recognition for reading, and reading for grades), and (d) social motivation in reading (i.e., social reasons for reading, compliance). Because the MRQ is designed for students in grades three through six, the MRQ was field tested with high school students and was modified.

Each year, students completed the MARSJ/MRQ² during the fall and spring of the school year. Research assistants administered and collected the student surveys during the weeks of September 1 through October 30 in fall and during the weeks of May 14 through June 1 in spring. Because the sample of interest in this evaluation is struggling readers, the research assistants read the survey aloud to students as it was administered.

Summary of Analytic Approach

Hierarchical Linear Models (HLMs) were used to estimate the impact of the LSC on student achievement, motivation, and reading strategies outcomes. The GRADE Normal Curve Equivalent (NCE) scores were used to estimate the impact of the LSC intervention on achievement. The average MARSJ scores were used to estimate the impact on reading strategy use, and the MRQ averages were used to estimate the impact on motivation.

A two-level HLM model (students assigned to intervention or control group within schools) was used to determine the impact of the targeted intervention. At the student level, the spring outcome variable (achievement, strategy use, or motivation) was modeled as a function of fall outcome variables, intervention/control status and four demographic variables: gender, ethnicity, free/reduced lunch status, and special education.

Level-1 Model: Student Outcomes (achievement, reading strategies, or motivation)

$$Y_{ij} = \beta_{0j} + \beta_{1j}(Y^*_{ij}) + \beta_{2j}(T_{ij}) + \sum_{m=3}^M \beta_{mj} \alpha_{mij} + \varepsilon_{ij}$$

where

Y_{ij} is the spring student outcome (post-test) score for student i at school j ;

β_{0j} is the mean student outcome (post-test) score for control students at school j ;

Y^*_{ij} is the fall student outcome (pre-test) score for student i centered at school j ;

β_{1j} is the centered average student outcome (pre-test) slope for students at school j ;

$T_{ij} = 1$ if student i is assigned to LSC intervention at school j , and 0 if control;

β_{2j} is the mean difference of student outcome pre-post gain between intervention and control students at school j ;

α_{mij} are additional covariates representing demographic characteristics of student i at school j (gender, ethnicity, free/reduced lunch, and special education);

β_{mj} are coefficients corresponding to student demographic covariates (gender, ethnicity, free/reduced lunch, special education status), and

² In year 1, we observed a large proportion of students who did not complete the student questionnaire (approximately 25%), possibly due to the length of the survey (82 items). An Item Response model indicated that the questionnaire could be divided without excessive loss of precision. In the fall of year 2, we randomly divided the items into two survey forms of 40 items, and our completion response was higher. In the spring of year 2 and at both administrations in year 3, we included all of the MARSJ items and half of the MRQ items for a total of 60 items.

ε_{ij} is the random effect representing the difference between student ij 's score and the predicted mean score for school j . These residual effects are assumed normally distributed with mean 0 and variance σ^2 .

Level-2 Model: Student Achievement – School Level

This analysis was performed on data from 6th grade students and 9th grade students collected over multiple years. The covariates in this model pertain to the concurrent year the student was in the intervention or control group with the exception of the Reading Kentucky Core Content Test (KCCT) score, for which the score for the base year, spring, 2006, was used. In addition to the base year Reading KCCT score, other school level covariates included the concurrent year school percent of students qualifying for free or reduced lunch fees, concurrent year school percent of white students in the school, and concurrent year school percent of African American students. The school level variables were centered at the grand mean for all middle schools (or high schools).

$$\beta_{0j} = \gamma_{00} + \sum_q \gamma_{0q} W_{qj} + \mu_{0j}$$

$$\beta_{1j} = \gamma_{10}$$

$$\beta_{2j} = \gamma_{20}$$

$$\beta_{mj} = \gamma_{m0}$$

where

γ_{00} is the mean student outcome (post-test) score of 6th grade control students in Kentucky Striving Readers middle schools (note: or 9th grade in high schools);

W_{qj} are 4 school level covariates including base year Reading KCCT (spring, 2006), and concurrent year school percent free/reduced lunch, school percent white students, school percent black students, and school percent disability centered at grand mean for all middle schools (or high schools);

γ_{0q} are coefficients corresponding to school-level covariates;

μ_{0j} is the unique effect of school j on mean student outcome, holding W_{qj} constant (or conditioning on W_{qj}) - this effect is assumed normally distributed with mean 0 and variance τ^2 ;

γ_{10} is the average centered fall student outcome (pre-test) slope;

γ_{20} is the overall target intervention treatment effect on spring student outcome (post-test) scores;

γ_{m0} is the fixed m^{th} student covariate effect (gender, ethnicity, free/reduced lunch, special education status) on the spring outcome variable, centered at the school mean.

Selection of Covariates. Decisions about inclusion of the variables as covariates were made based on a $p < .20$ criterion, with the exception of the LSC intervention variable, which was included regardless of p -value. Of the school-level covariates, either the percent of white

students or percent of African-American students was removed at the beginning of the model fitting process (the less significant). Interaction effects were not considered.

Description of the First, Second, and Third Year Targeted Intervention Samples

Characteristics of Literacy Coaches (LSC Teachers/ALM Coaches)

Twenty-four literacy coach positions were filled by 25 teachers in year 1, 26 teachers in year 2 and 24 teachers in year 3. These literacy coaches implemented the LSC targeted and ALM whole-school interventions within the 21 schools (see Table 1.5). Seventeen of the literacy coaches (48.6%) had a masters degree and 13 (37.1%) had Rank I (30 hours above masters degree). Literacy coaches had an average of 12.9 years of experience.

Table 1.5

Literacy Coach Demographics

School Level	No. of Literacy Coaches ^{a,b,c}	Gender		Ethnicity		Reading Certification	
		Male	Female	Caucasian	Asian American	Certified	Not Certified
<i>Year 1</i>							
MS	11	0	11	11	0	4	7
HS	12	1	11	12	0	1	11
6-12	2	0	2	2	0	0	2
Total	25	1	24	25	0	5	20
<i>Year 2</i>							
MS	11	1	10	11	0	4	7
HS	13	2	11	12	1	1	12
6-12	2	0	2	2	0	0	2
Total	26	3	23	25	1	5	21
<i>Year 3</i>							
MS	10	1	9	10	0	3	7
HS	12	3	9	11	1	1	11
6-12	2	0	2	2	0	0	2
Total	24	4	20	23	1	4	20

Note. ^aLiteracy Coaches that stayed in the position for less than ½ a semester are not included in these statistics. ^bThere were 25 Literacy Coaches in Year 1 because of turnover at one middle school midyear. ^cThere were 26 Literacy Coaches in Year 2 because of turnover at one middle and one high school midyear.

Characteristics of LSC Classrooms

There were 192 6th grade students assigned to LSC intervention in year 1, 177 LSC students in year 2, and 152 LSC students in year 3. There were 250 9th grade intervention students in year 1, 211 students in year 2, and 141 in year 3.

All students were expected to receive a minimum of 50 minutes of intervention instruction daily, or 250 minutes per week. Classes ranged from 45 to 90 minutes in length. For those classes less than 50 minutes an additional class period was added so students averaged at least 250 minutes of intervention instruction weekly. Classes longer than 60 minutes were instructed to use time beyond 60 minutes for other literacy activities. Middle school classes ranged from 50 to 90 minutes daily (250 to 450 minutes weekly). High school classes ranged from 50 to 84 minutes daily (250 to 420 minutes weekly).

Characteristics of Students

Among 6th grade students in years 1, 2, and 3, 523 were randomly assigned to the intervention and 481 were randomly assigned to the control group (Table 1.6). Outcome results are provided for 462 intervention students, including 18 students whose parents opted out of the program. Aside from those students who opted out of the program, all students who were randomly assigned to the treatment group were successfully placed in treatment classes. There were 13 intervention students who did not take the spring test and an additional 48 intervention students who transferred or withdrew from school. Results are provided for 389 control students; 29 control students did not take the spring test and 63 transferred or withdrew from school.

Among 9th grade students, 646 were randomly assigned to the intervention and 628 were randomly assigned to the control group. This report includes results for 516 intervention students, including 44 students whose parents opted out of the program. Aside from those students who opted out, all students who were randomly assigned to the treatment group were successfully placed in treatment classes. There were 43 intervention students who did not take the spring test and an additional 87 intervention students who transferred or withdrew from school. This report includes results for 459 control students; 79 control students did not take the spring test and 90 transferred or withdrew from school.

Table 1.6

Intended and Actual Number of Students in LSC Intervention and Control Groups

	LSC Intervention				Control			
	Yr 1	Yr 2	Yr 3	Total	Yr 1	Yr 2	Yr 3	Total
<i>6th grade</i>								
Intended students	192	179	152	523	166	174	141	481
No spring GRADE scores	6	4	3	13	9	14	6	29
Transferred or withdrew	15	21	12	48	26	22	15	63
Actual students in study	171 ^a	154 ^b	137 ^c	462 ^d	131	138	120	389
<i>9th grade</i>								
Intended students	250	212	184	646	246	202	180	628
No spring GRADE scores	18	10	15	43	34	28	17	79
Transferred or withdrew	40	19	28	87	47	24	19	90
Actual students in study	192 ^e	183 ^f	141 ^g	516 ^h	165	150	144	459

^aEleven parent opt-outs. ^bFour parent opt-outs. ^cThree parent opt-outs. ^dEighteen parent opt-outs.

^eNineteen parent opt-outs. ^fEleven parent opt-outs. ^gFourteen parent opt-outs. ^hForty-four parent opt-outs.

The participation rate for 6th grade for the LSC intervention in the first three years was 462 of the 523 intended students, or 88.3%. The intervention participation rate for 9th grade was 516 of the 646 intended students, or 79.9%. There were no cross over students; no control student was placed in an intervention class. Also, no LSC teacher had an opportunity to teach the LSC curriculum to a control student.

Demographics of students in the intervention and control conditions with outcome data were similar for both 6th and 9th grades in terms of gender, ethnicity, and socioeconomic status (Table 1.7). The sample consisted of more males than females. In terms of ethnicity, approximately 87% of students in the sample were white and approximately 13% of the students were in an ethnic minority group for years 1 through 3. About 65% of the sample received free/reduced lunch, an indicator of low socio-economic status. Slightly more intervention students were in special education than control students.

Table 1.7

Years 1, 2, and 3 Intervention and Control Student Demographics (and Proportions)

Group	Gender		Ethnicity		Lunch		Special Education		
	Male	Female	White	Minority	Reg Pay	Free/Red	Not In	Read/Write	Other
<i>6th grade</i>									
Interv.	269 (.58)	193 (.42)	404 (.87)	58 (.13)	148 (.32)	314 (.68)	309 (.69)	102 (.21)	51 (.11)
Control	225 (.58)	164 (.42)	333 (.86)	56 (.14)	134 (.34)	255 (.66)	287 (.74)	69 (.17)	33 (.09)
<i>9th grade</i>									
Interv.	304 (.59)	212 (.41)	455 (.88)	61 (.12)	200 (.39)	316 (.61)	363 (.68)	92 (.20)	61 (.12)
Control	250 (.55)	209 (.46)	401 (.87)	58 (.13)	183 (.40)	276 (.60)	349 (.76)	67 (.14)	43 (.10)
Total	1048 (.57)	778 (.42)	1593 (.87)	233 (.13)	665 (.36)	1161 (.64)	1308 (.72)	330 (.18)	188 (.10)

Pearson's Chi-Square was used to test the hypotheses that students in intervention and control groups were similar for each demographic group, and no group was significantly different at the .05 level. For 6th grade, the test of equality of the proportion of boys and girls in the intervention versus control group yields X^2 (1, N=851)=0.013, with p=.944. The test of equality of the ethnic group representation (proportion of whites and minorities) in the intervention versus control group yields X^2 (1, N=851)=0.617, with p=.480. The test of equality of SES group representation (proportion of students qualifying for the free/reduced lunch program) in the intervention versus control group yields X^2 (1, N=851)=0.555, with p=.466. Finally, the test of equality of special education designation (proportion of students qualifying for special education for reading/writing or for another designation) in the intervention versus control group yields X^2 (2, N=851)=4.811, with p=.090.

For 9th grade, the test of equality of the proportion of boys and girls in the intervention versus control group yields $X^2(1, N=975)=2.959$, with $p=.274$. The test of equality of the ethnic group representation (proportion of whites and minorities) in the intervention versus control group yields $X^2(1, N=975)=0.150$, with $p=.769$. The test of equality of SES group representation (proportion of students qualifying for the free/reduced lunch program) in the intervention versus control group yields $X^2(1, N=975)=0.167$, with $p=.694$. Finally, the test of equality of special education designation (proportion of students qualifying for special education for reading/writing or for another designation) in the intervention versus control group yields $X^2(2, N=975)=4.003$, with $p=.135$.

Tests of Equivalence of Treatment and Comparison Students

Table 1.8 displays the results of independent samples t -tests in which the null hypothesis that 6th grade intervention students' pretest scores did not differ significantly from 6th grade control students' pretest scores on the GRADE measure was evaluated. Results confirmed the null hypothesis that 6th grade students in the intervention and control conditions were equivalent at the time of the pretest on the GRADE in terms of Normal Curve Equivalents (NCE), $t_{(1002)} = -1.077$, $p \leq 0.282$ (two-tailed), and a 95% confidence interval of -1.800 to 0.525.

Table 1.8 also displays the results of independent samples t -tests in which the null hypothesis that 9th grade intervention students' pretest scores did not differ significantly from 9th grade control students' pretest scores on the GRADE measure was evaluated. Results confirmed the null hypothesis that 9th grade students in the intervention and control conditions were equivalent at the time of the pretest on the GRADE in terms of Normal Curve Equivalent (NCE), $t_{(1266)} = 0.242$, $p \leq 0.809$ (two-tailed), and a 95% confidence interval of -0.815 to 1.045.

Table 1.8

Equivalence of Groups on GRADE Pretest Years 1, 2 and 3

Condition	N	M	SD	T	df	p	95% CI	
							Lower	Upper
<i>6th grade</i>								
Intervention	523	21.02	9.54	-1.077	1002	0.282	-1.800	0.525
Control	481	21.66	9.20					
<i>9th grade</i>								
Intervention	646	23.03	8.29	0.242	1272	0.809	-.815	1.045
Control	628	22.91	8.62					

Note. CI = confidence interval.

The null hypothesis that 6th grade intervention students' pretest scores did not differ significantly from 6th grade control students pretest scores on the MARSII was also evaluated (Table 1.9). Results showed that 6th graders in the intervention and control conditions were equivalent at the time of the pretest in terms of their reported strategy use for the full scale, $t(619) = -0.752$, $p \leq 0.452$ (two-tailed), and a 95% confidence interval of -0.148 to 0.066. The null hypothesis that 9th grade intervention students' pretest scores did not differ significantly from 9th grade control students pretest scores on the MARSII was also evaluated. Results showed that 9th graders in the intervention and control conditions did not differ significantly at the time of the pretest, $t(608) = 0.762$, $p \leq .446$ (two-tailed), and a 95% confidence interval of -0.067 to 0.153.

Table 1.9

Equivalence of Groups on MARSII Pretest Years 1, 2 and 3

Condition	N	M	SD	T	df	p	95% CI	
							Lower	Upper
<i>6th grade</i>								
Intervention	333	2.99	0.68	-0.752	619	0.452	-0.148	0.066
Control	288	3.03	0.67					
<i>9th grade</i>								
Intervention	312	2.64	0.72	0.762	608	0.446	-.067	0.153
Control	298	2.60	0.66					

Note. CI = confidence interval. There are fewer students that completed the MARSII than completed the GRADE because MARSII scores are only included if the student also completed the GRADE. Also, the MARSII was administered on different days, by different people in a different context than the GRADE.

Table 1.10 displays the results of independent samples *t*-tests in which the null hypothesis that 6th grade intervention students' pretest scores did not differ significantly from 6th grade control students' pretest scores on the MRQ measure was also evaluated. Results confirmed the null hypothesis that 6th grade students in the intervention and control conditions were equivalent at the time of the pretest on the MRQ full scale, $t(619) = 0.631$, $p \leq 1.11$ (two-tailed), and a 95% confidence interval of -0.050 to 0.096.

The null hypothesis that 9th grade intervention students' pretest scores did not differ significantly from 9th grade control students' pretest scores on the MRQ was also evaluated (Table 1.10). Results showed that 9th graders in the intervention and control conditions did not differ significantly at the time of the pretest, $t(607) = 0.241$, $p \leq 0.809$ (two-tailed), and a 95% confidence interval of -.065 to 0.083.

Table 1.10

Equivalence of Groups on MRQ Pretest Years 1, 2 and 3

Condition	n	M	SD	T	df	P	95% CI	
							Lower	Upper
6th grade								
Intervention	333	2.81	0.46	0.631	619	0.528	-0.050	0.096
Control	288	2.78	0.47					
9th grade								
Intervention	311	2.45	0.48	0.241	607	0.809	-0.065	0.083
Control	298	2.44	0.45					

Note. CI = confidence interval. There are fewer students that completed the MARSII than completed the GRADE because MARSII scores are only included if the student also completed the GRADE. Also, the MARSII was administered on different days, by different people in a different context than the GRADE.

Impacts on Students at the End of Three Years

Measures of Student Outcomes

Group Reading Assessment and Diagnostic Evaluation (GRADE). The GRADE is a norm-referenced, standardized test of reading achievement which yields standard Normal Curve Equivalent scores, normalized standard scores with a mean of 50 and a standard deviation of 21.06. NCEs range from 1-99. The GRADE also yields scale scores labeled Growth Scale Value (GSV) scores. The GRADE components and subtests for 6th and 9th grades include vocabulary, sentence comprehension, passage comprehension, and listening comprehension (Williams, 2000). Word-level skills are not measured on the GRADE. Fugate and Waterman (2004) found the GRADE's reliability adequate for educational decision making. Reliability coefficients across test levels, test forms, and subject grade levels are consistently .90 or better for the total test score, including subtests of vocabulary, sentence comprehension, and passage comprehension. Alternate forms reliability ranged from .81 to .93, while test-retest reliability coefficients ranged from .88 to .93. In this study, both GSV and NCE scores are provided. The GRADE technical manual (Williams, 2000) shows the NCE distribution to be identical to the standard scores distribution. Further, the manual states that, while NCEs are based on percentiles, they have been converted to an equal-interval scale, making arithmetical manipulation appropriate.

Fugate and Waterman (2004) found the GRADE's reliability adequate for educational decision making. Internal reliability coefficient alphas and split-half reliabilities were consistently high (alphas above 0.90) across test levels, forms, and grade-enrollment group.

Alternate forms reliability ranged from 0.81 to 0.93, while test-retest reliability coefficients ranged from 0.88 to 0.93 indicating stability of GRADE total test scores. The reliability of the GRADE as presented by the GRADE Technical Manual (Chapter 4) indicates consistency in test scores.

Metacognitive Awareness of Reading Strategies Inventory (MARS). The (MARS) is a self-report measure designed specifically to assess middle and high school students' perceived use of reading strategies during academic reading (Mokhtari & Reichard, 2002). The MARS includes items related to three strategy domains: Global, Problem-Solving, and Support Strategies. Global Reading Strategies represent a set of reading strategies oriented toward a global analysis of text. Problem-Solving Strategies include items oriented around strategies for solving problems when the text becomes difficult to read. Support Reading Strategies involve use of outside reference materials, taking notes, and other functional or support strategies. The survey items are presented on a scale of 1 to 5, where 1 is equal to "I never or almost never do this" and 5 is equal to "I always or almost always do this." This measure has been reported to have high reliability. Mokhtari and Reichard reported a Cronbach's alpha coefficient of 0.93 for the entire scale. In the first year of this study, we found a Cronbach's alpha coefficient for fall and spring of 0.92 and 0.93 (930 items), respectively, for the MARS.

Motivation to Read Questionnaire (MRQ). A modified MRQ (Wigfield & Guthrie, 1997) was used to measure motivation for reading. Items relate to aspects of motivation such as self-efficacy, intrinsic motivation, extrinsic motivation, and social motivation in reading. The MRQ consists of 55 items and uses a 4-point Likert response scale. The MRQ was normed for students through grade six, so the measure was field tested and modified for grades six through twelve. In year 1, we used the full MRQ scale. The MRQ had a Cronbach's alpha of 0.93 in the fall and spring (50 items).

Impacts on Student Reading Achievement

Sixth Grade. Table 1.11 indicates the overall impact of the targeted intervention on student achievement after three years. For the 6th grade spring GRADE NCEs, the unadjusted means for the treatment and control groups are 32.1 and 31.6, respectively. However, the estimate of the HLM-adjusted means for spring NCEs is 31.0 for treatment and 29.8 for control. This indicates no significant differences in spring NCEs for treatment and control ($ES=0.084$, $p = .158$).

Appendix C (Exhibit Table 1) shows a summary of model results when significant variables were used as covariates. The estimate of the spring NCE was 43.99 for 6th grade control students at Striving Readers middle schools with the following characteristics: (a) an average reading KCCT scores in the base year, (b) the average percent disabled students, and (c) the average percent white students. Additionally, the individual characteristics of control students with an estimated NCE of 43.99 include (d) scoring the school average Fall NCE and (e) enrolled in special education classes. Further, the estimate of 43.99 increases by 0.366 for every unit increase in the school's average base year reading KCCT score. It increases by 1.14 for every percent increase in the school's disabled students, and by 0.256 for every percent increase in the school's white students. For every unit the student scored above the school average Fall NCE, the estimate increases by 0.641. If the student was in the intervention, the estimate increases by 1.175, and if the student was not enrolled in special education classes, it increases by 5.32. There is very little explained variance in student achievement due to the effect of the school, with an intra-class correlation (ICC) of 0.067.

Ninth Grade. Table 1.11 shows the overall impact of the targeted intervention on 9th grade students' reading achievement. For 9th grade spring GRADE NCEs, the unadjusted means for the treatment and control groups are 33.6 and 32.1 respectively. However, the estimate of the HLM-adjusted means for spring NCEs is 31.8 for treatment and 29.8 for control. This indicates a significant differences in spring NCEs for treatment and control ($ES=0.147$, $p<.01$).

Appendix C (Exhibit Table 2) shows a summary of the model results for 9th grade when significant variables were used as covariates. The estimate of the spring NCE was 41.045 for 9th grade control students at Striving Readers high schools with the following characteristics: (a) an average reading KCCT scores in the base year, (b) the average percent disabled students, and (c) the average percent white students. Additionally, the individual characteristics of control students with an estimated NCE of 41.045 include (d) scoring the school average Fall NCE, (e) is minority ethnicity, and (f) enrolled in special education classes. Further, the estimate of 41.045 increases by 0.518 for every unit increase in the high school's average base year reading KCCT score. It increases by 2.35 for every percent increase in the school's disabled students and by 0.188 for every percent increase in the school's white students. For every unit the student scored above the school average Fall NCE, the estimate increases by 0.598. If the student was in the intervention, the estimate increases by 2.034. If the student was white, the estimate increases by 2.909, and if the student was not enrolled in special education classes, it increases

by 4.377. There is very little explained variance in student achievement due to the effect of the school, with an intra-class correlation (ICC) of 0.007.

Table 1.11

Overall Impact of the Target Intervention on Student Achievement, Spring 2009

	Unadjusted Means		HLM-adjusted Means		Estimated Impact	Effect Size	<i>p</i>
	Control	Tx	Control	Tx			
6 th grade Spring NCE	31.6 (14.11)	32.1 (14.33)	29.8	31.0	1.18	0.084	0.158
6 th grade students	389	462					
No. of schools = 12							
9 th grade Spring NCE	32.05 (13.83)	33.6 (14.38)	29.8	31.8	2.03	0.147	0.014
9 th grade students	459	516					
No. of schools = 11							

Note. Standard deviations are presented in parenthesis. Effect size calculated as estimated impact divided by control group standard deviation.

Impacts on Students' Reading Strategy Use

Sixth Grade. Table 1.12 indicates the impact of the LSC intervention on 6th grade students' strategy use, overall. The unadjusted means for the full MARS scale for treatment and control were 2.97 and 2.83, respectively. The HLM-adjusted means were 2.96 for the treatment group and 2.80 for the control group, and this difference between treatment and control was significant ($ES = 0.219$, $p < .01$).

Appendix C (Exhibit Table 3) shows a summary of the model results for the full MARS scale when significant variables were used as covariates. As this table indicates, the estimate of the spring MARS scale was 2.913 for 6th grade control students at Striving Readers middle schools with (a) an average reading KCCT scores in the base year. Additionally, the individual

characteristics of control students with an estimate of 2.913 include (b) scoring the school average Fall MARSII, (c) male gender, and (d) receiving free/reduced lunch. Further, the estimate of 2.913 increases by 0.012 for every unit increase in the school's average base year reading KCCT score. For every unit the student scored above the school average Fall MARSII, the estimate increases by 0.369. If the student was in the intervention, the estimate increases by 0.159. If the student was female, the estimate decreases by 0.111, and if the student was not receiving free/reduced lunch, it decreases by 0.138. The model yielded an intra-class correlation of 0.019 for reading strategy use, indicating very little variance explained by a school effect.

Ninth Grade. Table 1.12 indicates the impact of the targeted intervention on 9th grade students' reading strategy use overall. The unadjusted means for the full MARSII scale for treatment and control were 2.72 and 2.64, respectively. The HLM-adjusted means were 2.81 for the treatment group and 2.74 for the control group, and this difference between treatment and control was not significant ($ES = 0.087, p = 0.237$).

Appendix C (Exhibit Table 4) shows a summary of model results when significant variables were used as covariates. As this table indicates, the estimate of the spring MARSII scale was 2.95 for 9th grade control students at Striving Readers middle schools with (a) an average reading KCCT scores in the base year. The individual characteristics of control students with an estimate of 2.95 include (b) scoring the school average Fall MARSII, (c) male gender, (d) minority ethnic group membership, and (e) receiving free and reduced lunch. The estimate of 2.95 increases by 0.006 for every unit increase in the school's average base year reading KCCT score. For every unit the student scored above the school average Fall MARSII, the estimate increases by 0.444. If the student was in the intervention, the estimate increases by 0.065. If the student was female, the estimate decreases by 0.174, and if the student was white, the estimate decreases by 0.209. If the student was not receiving free/reduced lunch, the estimate increases by 0.121. The model yielded an intra-class correlation of 0.015 for reading strategy use, indicating very little variance explained by a school effect.

Table 1.12

Overall Impact of the Target Intervention on Reading Strategy Use, Spring 2009

	Unadjusted Means		HLM-adjusted Means		Estimated Impact	Effect Size	<i>p</i>
	Control	Tx	Control	Tx			
6 th grade spring MARSII score	2.83 (0.693)	2.97 (0.700)	2.80	2.96	0.152	0.219	0.002
6 th grade students No. of schools = 12	281	330					
9 th grade spring MARSII score	2.64 (0.747)	2.72 (0.761)	2.74	2.81	0.065	0.087	0.237
9 th grade students No. of schools = 11	289	306					

Note. Standard deviations are presented in parenthesis. Effect size calculated as estimated impact divided by control group standard deviation.

Impacts on Student Motivation

Sixth Grade. Table 1.13 indicates the overall impact of the targeted intervention on 6th grade students' reading motivation as measured by the MRQ. To assess the impact of the targeted intervention on students' motivation, we used HLM analysis on the full MRQ scale. For 6th grade, the MRQ unadjusted means for treatment and control were 2.76 and 2.64 respectively. The HLM-adjusted means for treatment and control groups were 2.74 for treatment and 2.63 for control, with an estimated impact of 0.109. This difference between the treatment and control groups was significant ($ES = 0.230$, $p < .01$).

Appendix C (Exhibit Table 5) shows a summary of model results for 6th grade students' reading motivation when significant variables were used as covariates. As this table indicates, the estimate of the spring MRQ scale was 2.654 for 6th grade control students at Striving Readers middle schools with an average reading KCCT scores in the base year. The individual characteristics of control students with an estimate of 2.654 include (a) scoring the school average Fall MRQ, (b) male gender, and (c) enrolled in special education classes. The estimate of 2.654 increases by 0.007 for every unit increase in the school's average base year reading

KCCT score. For every unit the student scored above the school average Fall MRQ, the estimate increases by 0.345. If the student was in the intervention, the estimate increases by 0.109. If the student was female, the estimate decreases by 0.052, and if the student was not enrolled in special education classes, it increases by 0.054. The model yielded an intra-class correlation of 0.065 for reading strategy use, indicating very little variance explained by a school effect.

Ninth Grade. Table 1.13 shows the impact of the LSC targeted intervention on students' reading motivation as measured by the MRQ. The unadjusted means for the full scale MRQ in the spring are 2.49 and 2.38 for treatment and control, respectively. The HLM-adjusted mean for the treatment group is 2.53 and for the control group is 2.42, with an estimated impact of 0.114. This indicates a significant difference between the treatment and control groups' mean spring scores ($ES = 0.221$, $p < .01$).

Appendix C (Exhibit Table 6) shows a summary of model results for 9th grade students' reading motivation. As this table indicates, the estimate of the spring MRQ scale was 2.56 for 9th grade control students at Striving Readers middle schools with (a) an average reading KCCT scores in the base year. The individual characteristics of control students with an estimate of 2.56 include (b) scoring the school average Fall MRQ, (c) male gender, (d) minority ethnic group membership, (e) receiving free and reduced lunch, and enrolled in special education classes. The estimate of 2.56 increases by 0.008 for every unit increase in the school's average base year reading KCCT score. For every unit the student scored above the school average Fall MRQ, the estimate increases by 0.491. If the student was in the intervention, the estimate increases by 0.114. If the student was female, the estimate decreases by 0.121, and if the student was white, the estimate decreases by 0.144. If the student was not receiving free/reduced lunch, the estimate increases by 0.082, and if the student was not enrolled in special education classes, the estimate increases by 0.076. The model yielded an intra-class correlation of 0.00 for reading strategy use, indicating virtually no variance explained by a school effect.

Table 1.13

Overall Impact of the Target Intervention on Student Motivation, Spring 2009

	Unadjusted Means		HLM-adjusted Means		Estimated Impact	Effect Size	<i>p</i>
	Control	Tx	Control	Tx			
6 th grade spring MRQ score	2.64 (0.473)	2.76 (0.475)	2.63	2.74	0.109	0.230	0.002
6 th grade students No. of schools = 12	281	330					
9 th grade spring MRQ score	2.38 (0.516)	2.49 (0.508)	2.42	2.53	0.114	0.221	0.002
9 th grade students No. of schools = 11	289	306					

Note. Standard deviations are presented in parenthesis. Effect size calculated as estimated impact divided by control group standard deviation.

Evaluation of the Implementation of the Whole-School Intervention: Years 1, 2, and 3

The research questions that guided the implementation study of the whole-school intervention in years 1, 2, and 3 are:

- What was the level of implementation of professional development/support for teachers/coaches/administrators?
- What was the level of implementation of professional development/support for literacy coaches/administrators?
- What was the level of implementation of classroom instruction?

Exhibit 4 indicates the data sources that were used to answer these questions.

Exhibit 4.

Years 1, 2 and 3 Data Sources on Implementation Linked with Research Questions: School-Wide Intervention (CTL Adolescent Literacy Model)

Data Sources	Measures/Data Sources					
	Responsible Partner				Record Review	
	Developer of ALM model (CTL)	U of L trainer/Coordinator	Project Director	Evaluator	PD attendance records	Surveys/Questionnaires/Logs/Classroom Observations
Research Question 1: What was the level of implementation of professional development support/participation for teachers in Year 1?						
Type and amount of professional development provided to teachers and level of participation.	●				●	
Type and amount of professional development provided to district leaders and level of participation.	●		●		●	
Research Question 2: What was the level of implementation of professional development/support for literacy coaches/leaders in Year 1?						
Type and amount of professional development provided to ALM coaches and level of participation.	●	●			●	●
Type and amount of coaching provided to ALM coaches and level of participation.	●				●	●
Research Question 3: What was the level of implementation of classroom instruction in Year 1?						
Percentage of class time teachers used the whole-school instructional practices.				●		

Whole-School Professional Development Inputs

Table 2.1 shows the participation of content teachers in the ALM whole school professional development inputs, and Table 2.2 shows the participation of the ALM coaches and administrators. In years 1, 2, and 3, the percentage of content teachers who attended at least one day of the whole-school summer training was calculated. In year 1, the average percentages of middle, high, and 6 - 12 teachers who attended the summer training were 86.1%, 83.8%, and 100% respectively. In year 2, the average percentages of middle, high, and 6 - 12 teachers who attended the summer training were 84.5%, 80.9%, and 78.0%, respectively. In year 3, the average percentages of middle, high, and 6 - 12 teachers who attended the summer training were 100.6%, 89.1%, and 117.6%, respectively. This represents a decrease in content teachers' participation from year 1 to year 2. In year 3, nine schools had more teachers participate in training than the number of certified teachers in the building. At the onset of the project, it was expected that at least 80% of content teachers would participate in the whole-school professional development training. Table 2.1 shows the proportion of schools that achieved full participation in the professional development each year of the project.

Table 2.1

ALM Implementation of Professional Development for Content Teachers

School Level	ALM PD for content teachers		
	N Attending at Least One Day ^a	% Attending ^a	% at Full Participation
<i>Year 1</i>			
MS	329	86.1	70
HS	409	83.8	66.7
6-12	42	100	100
<i>Year 2</i>			
MS	330	84.5	80
HS	448	80.9	55.6
6-12	39	78.0	50
<i>Year 3</i>			
MS	318	100.6	70
HS	439	89.1	66.7
6-12	40	117.6	100

Note. In Year 1, teachers participated in 5 days of professional development. In Years 2 and 3, teachers participated in 2 days of professional development.

^aIn year 2, one school had more teachers participate in training than there were certified teachers on staff. In year 3, nine schools had more teachers participate in training than there were certified teachers on staff. ^bIn all years, ≥80% of certified staff attending was considered complete participation in the training.

School administrators were expected to attend administrator training sessions on the ALM school-wide model. As is indicated in Table 2.2, 2 days of administrator professional development were provided in year 1, and 1.5 days were provided for administrators in years 2 and 3, respectively. Table 2.2 reflects a relatively high participation rate among administrators in these training sessions. Administrators were also expected to attend the school-wide trainings with their content teachers. In year 1, 21 administrators from 12 schools attended at least one day. In year 2, 16 administrators from 12 schools attended at least one day. In year 3, 21 administrators from 17 schools attended at least one day.

In years 1, 2, and 3, ALM coaches were expected to attend training sessions to learn about how to support the ALM whole-school model. In year 1, middle, high, and 6 – 12 ALM coaches attended an average of 11.1, 10.6, and 12.0 days, respectively. In year 2, middle, high, and 6 - 12 ALM coaches attended an average of 9.0, 9.1, and 9.5 days of training, respectively. In year 3, middle, high, and 6 – 12 ALM coaches attended an average of 8.4, 7.8, and 8.5 days, respectively. Table 2.2 indicates that all literacy coaches participated in the professional development fully. They were assisted in this by CTL mentor coaches who individually provided missed content to coaches who were absent from any part of the training.

In addition to these training sessions, mentor coaches from CTL provided on-site support to ALM coaches. In year 1, the average number of days of support from mentor coaches (for a six hour day) for middle, high, and 6 - 12 ALM coaches was 5.4, 6.4, and 6.4, respectively. In year 2, the average number of days of support from mentor coaches for middle, high, and 6 - 12 ALM coaches was 5.6, 5.1, and 6.0, respectively. In year 3, the average number of days of support from mentor coaches for middle, high, and 6 - 12 ALM coaches was 5.9, 5.3, and 5.0, respectively.

Mentor coaches also provided support for ALM coaches as needed, through phone calls, emails, and electronic distance support. This support was for both the targeted intervention and whole-school intervention, and while documentation of this support was provided for years 2 and 3, the extent to which the support was specific to the targeted intervention or whole-school model was not designated in year 1. Overall, ALM coaches and mentor coaches engaged in 10,461 minutes of phone support calls, exchanged 2,410 emails, and participated 357 times in formal distance support in year 2. In year 3, LSC teachers and mentor coaches engaged in 11,490 minutes of phone support calls, exchanged 4,320 e-mails, and participated 45 times in formal distance support.

Many literacy coaches completed hallmark assignments as part of their certification program through University of Louisville. There was one school-wide hallmark assignment in years 1, 2, and 3. For middle school, 8 literacy coaches participated in years 1 and 2, and 7 participated in year 3. For high school, eleven literacy coaches participated in year 1, 8 participated in year 2, and 9 participated in year 3.

Table 2.2

Means and Ranges for ALM Implementation of Professional Development for Administrators and ALM Coaches

	ALM PD for Administrators ^a			ALM PD for ALM Coaches ^b			Mentor Coaching
	Days Attended	N	% at Full Participation ^c	Days Attended	N	% at Full Participation	Site Visit Days
<i>Year 1</i>							
MS	1.7 (1-2)	10	90	11.1 (8-12)	10	100	5.4 (4.2-7.5)
HS	1.7 (0.5-2)	9	77.8	10.6 (7-12)	12	100	6.4 (2.5-12)
6-12	1.8 (1.5-2)	2	100	12.0	2	100	6.4 (5.3-7.5)
<i>Year 2</i>							
MS	1.3 (1-1.5)	10	100	9.0 (8.5-9.5)	10	100	5.6 (3-8)
HS	1.3 (1-1.5)	9	100	9.1 (7.5-9.5)	12	100	5.1 (3-8)
6-12	1.5	2	100	9.5	2	100	6.0 (5-7)
<i>Year 3</i>							
MS	1.3 (1-1.5)	10	100	8.4 (8-9)	10	100	5.9 (3-11)
HS	1.3 (1-1.5)	9	100	7.8 (6.5-9)	12	100	5.3 (3.5-8)
6-12	1.5	2	100	8.5 (8-9)	2	100	5 (3-7)

Note. ^aAdministrators had specific training days. In year 1, there were 2 days of PD. In years 2 and 3, there were 1.5 days of PD. Administrators were encouraged to also attend the ALM PD intended for content teachers. In year 1, 21 administrators from 12 schools attended at least one day. In year 2, 16 administrators from 12 schools attended at least one day. In year 3, 21 administrators from 17 schools attended at least one day.

^bIn year 1, ALM coaches had 12 days of PD. In year 2, ALM coaches had 9.5 days of PD. In year 3, ALM coaches had 9 days of PD. ALM coaches that missed group training sessions received make up training from the mentor coaches.

^cParticipation for year 1 was complete with ≥ 1.5 days attended, year 2 was complete with ≥ 1 day attended, and year 3 was complete with ≥ 1 day attended.

Classroom Observations. To judge content teachers' rate of use of ALM strategies in their classrooms, evaluators observed selected content teachers twice each year in each year of the project. During the 2006-2007 school year, all E/LA teachers in grades six and nine were observed twice in the spring ($n=78$ observations). During the 2007-2008 academic year, all 6th and 9th grade Language Arts teachers were again observed twice, once in the fall and once in the spring ($n = 101$ observations). Additionally, two middle schools and two high schools were randomly selected for additional observations in math, science and social studies classrooms ($n = 49$ observations). Those content teachers were also observed twice, once in the fall and again in the spring. During the 2008-2009 academic year, a random sampling of content teachers were observed twice, once in the fall and once in the spring ($n=112$ observations). With each observation, an interview was conducted with the teacher to provide further clarity for the observer.

Observers were trained through a multi-phased process that involved both the model developers and lead researchers. In the summer of 2006, research assistants attended a training session, conducted by CTL trainers, along with the content area teachers in the Striving Readers schools. Following that training, the research assistants and lead researchers worked collaboratively to create an observation protocol. First, they listed the six instructional domains present in the school-wide intervention (fluency, comprehension, writing to use what you know, writing to learn, academic dialogue, vocabulary development). Second, they identified activities associated with each component. This section of the observation protocol provided evidence as to whether any of the six instruction domains were present during content area instruction. Interview questions were constructed to supplement observations. The investigators then constructed the observation protocol and sent it to the Professional Development Director at CTL for feedback. Codes were developed to characterize the range of instructional behaviors observed in the intervention classrooms.

The investigators met with the research assistants to provide training related to taking field notes. Training consisted of lecture related to taking field notes, watching video segments, practice taking field notes, and critique. Research assistants were trained to organize their field notes in five-minute time intervals, capturing as much detail about instruction and classroom dialogue as was possible. Sample field notes were shared, critiqued, and refined.

In November of 2006 research assistants went out in pairs and practiced taking field notes in three content area classrooms. In December of 2006 the group reconvened and research assistants practiced coding the data and discussing the codes after each observation was coded. Each five-minute segment was coded using codes to represent (a) the ALM domains (fluency, comprehension, writing to use what you know/writing to learn, vocabulary development, and academic dialogue) and, (b) Other Literacy Activities, (c) Non-literacy Activities, or (d) Behavior Management Activities. Agreement was discussed but not compiled/computed at this meeting.

After the observations were conducted in year 1, four members of the evaluation team sought inter-rater reliability for coding the observation protocols. First, two co-principal investigators coded and discussed one protocol. They used that coding event to establish initial rules for coding. Second, they coded five protocols independently. They discussed those five coded protocols and refined the coding rules further. Third, they recoded the initial five protocols using the new rules. Next, they coded an additional five protocols using the new rules. Inter-rater agreement on all 10 protocols (13% of the data) was 92%. Agreement on the last five protocols was 82%. After inter-rater agreement was established, raters discussed and came to 100% consensus on all codes.

The investigators used three of the coded protocols and three additional protocols to train two advanced doctoral students in literacy to use the coding rules. The investigators coded eight additional protocols (four each) and both doctoral students coded all eight protocols. Inter-rater agreement between the two doctoral students and each of the co-principal investigators was 83.1% and 89.8% respectively. Overall inter-rater agreement across all raters was 85.5%.

Classroom Implementation Results. Table 2.3 shows the mean percentages of content class time that content-area teachers implemented the ALM whole-school intervention techniques. In year 1, the 6th and 9th grade E/LA teachers spent approximately one quarter of their class time using the whole-school intervention techniques. In year 2, the table indicates that use of the whole-school intervention techniques decreased among 9th grade teachers and increased slightly among 6th grade teachers. It is important to note that the composition of content area teachers changed in year 2 to include other content area teachers, but most (26 teachers) were E/LA teachers. In year 3, both 6th and 9th grade teachers slightly increased the percent of time using whole-school techniques. However, the composition of content area teachers observed had again changed to include a smaller number of E/LA teachers (8 sixth grade, and 6 ninth grade). It is interesting that, for both years 1 and 2, middle school teachers exhibited higher levels of implementation than high school teachers, overall. The ALM school-wide intervention trainer indicated that at least 30% of content-area teachers' class time should be spent on the school-wide techniques, and this level of implementation was achieved by 6th grade teachers in years 2 and 3.

Table 2.3

Implementation of the ALM Model in Content Classrooms as Measured by Percent of Class Time

	Year 1 ^a	Year 2 ^b	Year 3 ^c
<i>6th grade</i>			
Observed ALM	25.7%	30.1%	32.2%
Number of teachers observed	25	39	30
Number of observations	42	77	58
<i>9th grade</i>			
Observed ALM	24.3%	13.3%	16.1%
Number of teachers observed	24	38	27
Number of observations	36	73	54

Note. In year 1, teachers were observed in the spring semester. In years 2 and 3, teachers were observed once in the fall and once in the spring.

^aAll teachers observed were English/Language Arts teachers.

^bTwenty-six of the teachers observed in the 6th grade and twenty-six of the teachers observed in the 9th grade were English/Language Arts teachers.

^cEight of the teachers observed in the 6th grade and six of the teachers observed in the 9th grade were English/Language Arts teachers.

Implications for the Impact Analysis. In effectiveness studies, it is essential to examine the extent to which the intervention was implemented with fidelity so that appropriate conclusions may be drawn from the research findings (Durlak & DuPre, 2008; Institute of Education Sciences, 2009). If student outcomes do not improve after participation in an intervention, one of two explanations may be attributed: (a) the intervention, as designed, is not effective, or (b) the intervention was not implemented as it was designed or as the developer intended. Participation in the professional development inputs was very high for literacy coaches and relatively high for content teachers across all years of the project. Implementation of the classroom model was higher for middle school teachers than for high school teachers. While the ideal level of classroom implementation of the whole-school model has not been empirically determined, it might be expected that if the whole-school model is effective, then middle schools will yield greater impacts than high schools.

Evaluation of the Impacts of the Whole-School Intervention: Years 1, 2, and 3

Description of the Teacher Samples

Impacts of the whole-school intervention were evaluated by comparing teacher outcomes in Striving Readers and matched comparison schools. These matched pairs of schools were identified by the Kentucky Department of Education (DOE) based on ethnicity, number of students, percent free and reduced lunch, and accountability index. Of the twenty-one matched schools identified by the Kentucky DOE, twelve schools participated in year 1, nine schools in year 2, and eight schools in year 3. In Striving Readers schools, one thousand three hundred twenty area classroom teachers were trained to implement the school-wide intervention and completed questionnaires during the summers of 2006, 2007, 2008, and 2009. In addition, five hundred twenty-three teachers were trained and completed questionnaires in the matched schools during the same time period.

Demographic data on teachers were gathered from the Teacher Efficacy Survey (Table 2.4). The mean number of years of experience for content area teachers in Striving Readers schools was 10.1 years. Years of experience ranged from 0 to 39 years. The mean years of experience for teachers in the matched schools was similar (10.7 years) and ranged from 0 to 47 years. The corresponding pie charts (Figure 1.1) show content areas were represented with similar proportions of teachers in the Striving Readers and matched schools across all three years. Teachers' primary teaching responsibility in terms of grade level also had similar proportions in Striving Readers and matched schools with the exception of 6th and 9th grades. Striving Readers schools had a larger proportion of 6th grade teachers, and a smaller proportion of 9th grade teachers complete the questionnaire as compared to the matched schools (Figure 1.2).

Table 2.4

Teacher Demographics for Striving Readers and Matched Schools, Years 2006-2009

No. of Surveys	Gender		Ethnicity			Highest Degree				No. Res.	
	F	M	Wht.	Blk.	Othr	BA/BS	MA	Spec.	Doc.		
<i>Striving Readers Schools</i>											
No.	2828	1837	991	2720	53	55	582	1667	460	28	91
(Prop.)		(.65)	(.35)	(.96)	(.02)	(.02)	(.21)	(.59)	(.16)	(.01)	(.03)
<i>Matched Schools</i>											
No.	985	642	343	927	35	23	170	542	226	13	34
(Prop.)		(.65)	(.35)	(.94)	(.04)	(.02)	(.17)	(.55)	(.23)	(.01)	(.04)

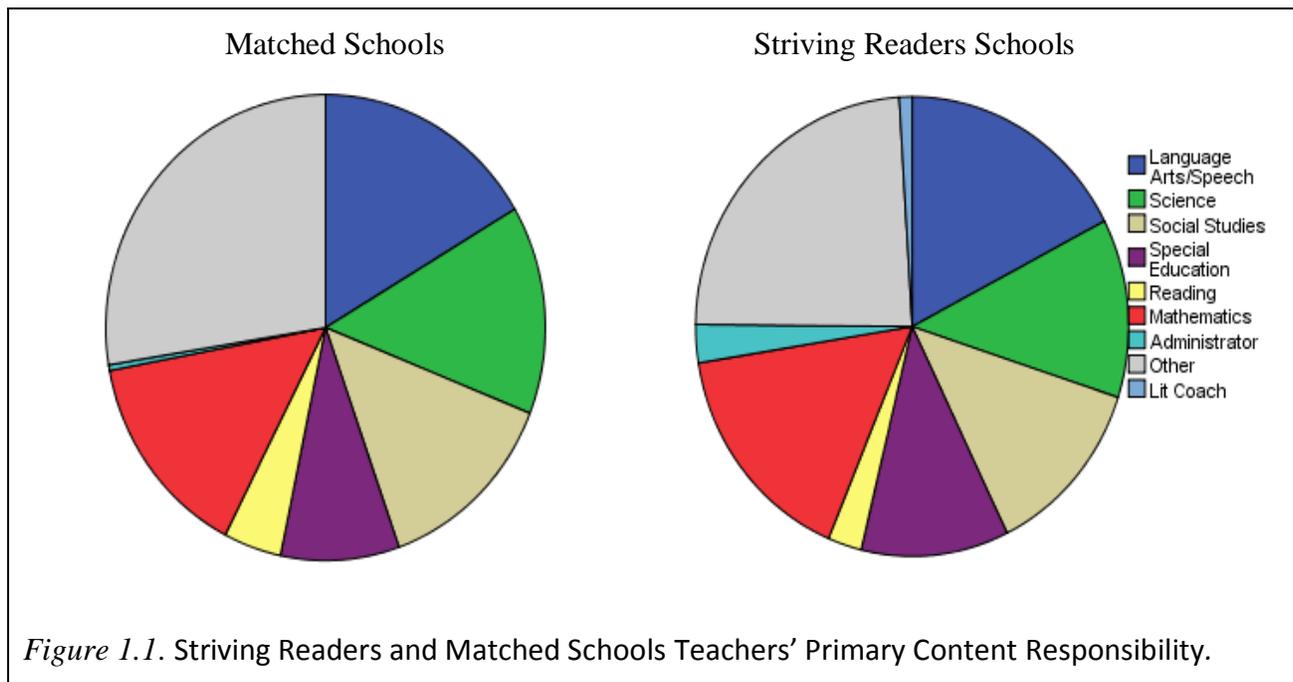


Figure 1.1. Striving Readers and Matched Schools Teachers' Primary Content Responsibility.

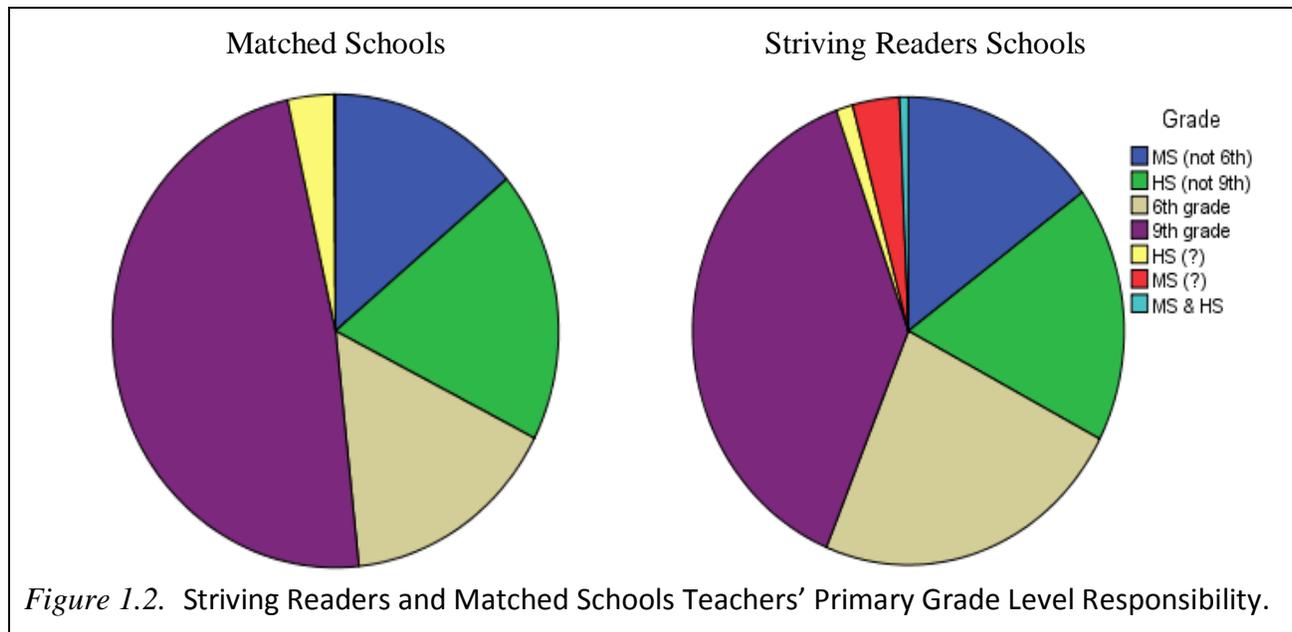


Figure 1.2. Striving Readers and Matched Schools Teachers' Primary Grade Level Responsibility.

Teacher Efficacy Measure

The Teacher Efficacy Survey was used to determine the impact of the whole-school professional development model on teachers' personal and collective efficacy for literacy teaching.

Teacher Efficacy Survey. Teachers' sense of efficacy for teaching has been associated with effective classroom practices (Ashton & Webb, 1986; Gibson & Dembo, 1984) and higher student achievement (Ross, 1992). Pre- and post-surveys of teacher efficacy were used to determine the effects of the project on teachers' sense of efficacy for literacy teaching. A teacher efficacy survey comprised of sixty items to measure Personal Teaching Efficacy (PTE) and Collective Teacher Efficacy (CTE) was administered to literacy coaches. PTE items were drawn from teacher efficacy instruments developed by Woolfolk and Hoy (1990), Hoy and Woolfolk (1993), and Gibson and Dembo (1984). PTE items include statements, such as, "Some students are not going to make a lot of progress this year in reading, no matter what I do." CTE items were developed by Goddard, Hoy, and Hoy (2000) and include statements, such as, "If a child does not want to read in their content area, most teachers in my school give up." Some questions from the original surveys were altered to reflect more of a reading emphasis (e.g., "When a student does better than usual in reading, it is often because I exerted a little extra effort.") while some additional questions were added by the evaluation team that focused specifically on processes related to teaching content area literacy, such as, "I know how to teach vocabulary effectively." All items used a 6-point Likert-type format, ranging from 1 is equal to Strongly Agree to 6 is equal to Strongly Disagree.

All of the original instruments from which the present survey was adapted have demonstrated high reliability and validity. Gibson and Dembo (1984) reported Cronbach's alpha coefficient of 0.75 on the PTE subscales. Goddard et al. (2000) reported Cronbach's alpha coefficient of 0.96 for the CTE subscale. In the present study the reliability of each subscale, with the revisions described above, was evaluated using the entire teacher sample (literacy coaches and content teachers). The Personal Teaching Efficacy (PTE) subscale in the summer of 2006 ($\alpha = 0.878$, $n = 624$), the summer of 2007 ($\alpha = 0.912$, $n = 609$), and the summer of 2008 ($\alpha = .899$, $n = 602$) was reliable. Likewise, the Collective Teacher Efficacy (CTE) subscale in the summer of 2006 ($\alpha = 0.801$, $n = 650$), the summer of 2007 ($\alpha = 0.833$, $n = 647$), and the summer of 2008 ($\alpha = 0.829$, $n = 643$) was reliable.

Impacts on Teacher Efficacy

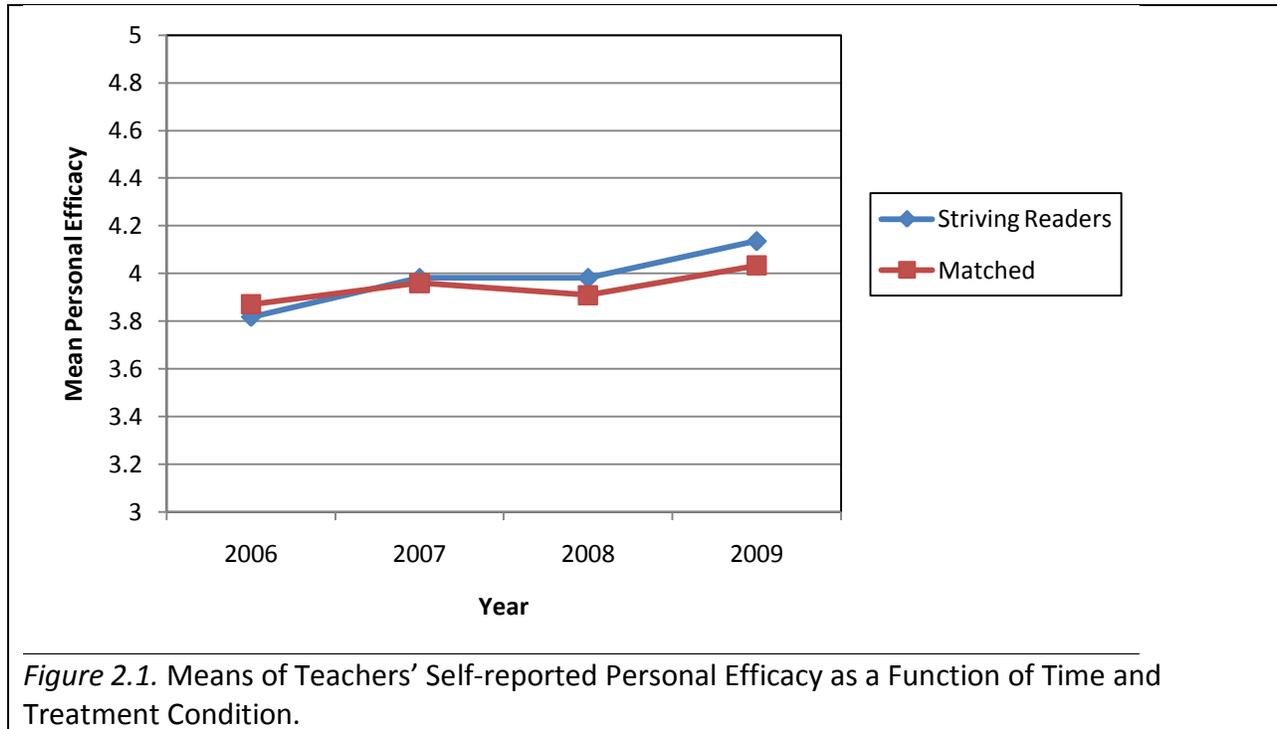
The school-wide intervention teachers' efficacy was measured using the Teacher Efficacy Survey. Data were gathered prior to training in the summer of 2006 and again in the summers of 2007, 2008 and 2009. Table 2.5 displays the means and standard deviations of Striving Readers and matched comparison content area teachers' self-reported personal and collective efficacy.

Table 2.5

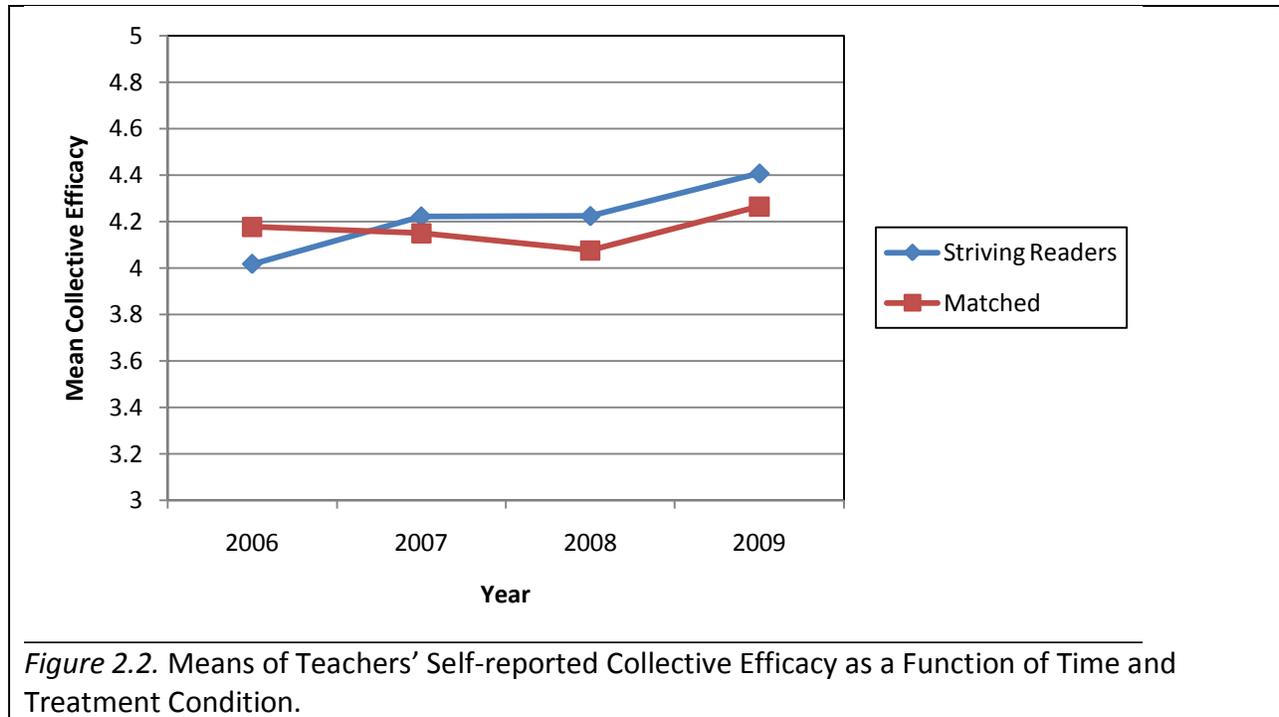
Means and Standard Deviations on Personal and Collective Efficacy Subscales of the Teacher Efficacy Survey for Intervention and Control Groups Across Time

Subscale	2006		2007		2008		2009	
	n	Mean (St. Dev.)						
<i>Personal Efficacy</i>								
Striving Readers	737	3.82 (.58)	724	3.98 (.51)	632	3.98 (.52)	734	4.14 (.52)
Matched	319	3.87 (.53)	208	3.96 (.52)	202	3.91 (.62)	251	4.03 (.55)
<i>Collective Efficacy</i>								
Striving Readers	735	4.02 (.67)	718	4.22 (.63)	622	4.22 (.61)	729	4.41 (.58)
Matched	316	4.18 (.68)	208	4.15 (.65)	206	4.07 (.69)	251	4.26 (.69)

The personal efficacy averages over time are illustrated in Figure 2.1, and the collective efficacy averages are illustrated in Figure 2.2. Figure 2.1 shows that Striving Readers teachers had slightly lower personal efficacy in the summer of 2006 than the teachers at the matched schools. However, by the summer of 2008, the Striving Readers teachers had slightly higher personal efficacy than the matched school teachers. Striving Readers teachers and matched school teachers' increased in personal efficacy in 2009.



A somewhat similar trend can be seen in Figure 2.2, showing that teachers in the Striving Readers schools began with lower collective efficacy than the teachers at matched schools and by the summer of 2008 had higher collective efficacy. However, a fairly steep decline in collective efficacy of teachers at matched schools between 2007 and 2008 is evident. This decline was not shown as sharply in the personal efficacy data. Teachers in Striving Readers and matched schools collective efficacy increased in 2009.



Regression analysis was used to estimate the effect of ALM treatment at Striving Readers schools over time on teachers' personal and collective efficacy. The regression model was as follows:

$$F_{ijk} = \beta_0 + \beta_1(T_i) + \beta_2(Y_j) + \beta_3(T_i * Y_j) + \varepsilon_{ijk}$$

where

F_{ijk} is teacher efficacy subscale score in school treatment group i and time period j ;

β_0 is the mean teacher efficacy subscale score,

β_1 is the marginal effect of the school group i , where;

$T_i = 1$ if teacher is in SR school and -1 if in matched school

β_2 is the marginal effect of time period j , where;

$Y_j = -3$ for summer 2006, -1 for summer 2007, and 1 for summer 2008, and 3 for summer 2009.

β_3 is the interaction coefficient for treatment by year, where

$Y_1 * T_1 = -3 * -1 = 3$ for teachers in matched schools in 2006

$Y_1 * T_2 = -3 * 1 = -3$ for teachers in Striving Readers schools in 2006

$Y_2 * T_1 = -1 * -1 = 1$ for teachers in matched schools in 2007

$Y_2 * T_2 = -1 * 1 = -1$ for teachers in Striving Readers schools in 2007

$Y_3 * T_1 = 1 * -1 = -1$ for teachers in matched schools in 2008

$Y_3 * T_2 = 1 * 1 = 1$ for teachers in Striving Readers schools in 2008

$$Y_4 * T_1 = 3 * -1 = -3 \text{ for teachers in matched schools in 2009}$$

$$Y_4 * T_2 = 3 * 1 = 3 \text{ for teachers in Striving Readers schools in 2009.}$$

ε_{ijk} is the random effect in teacher efficacy in treatment group i at time j . These residual effects are assumed normally distributed with mean 0 and variance σ^2 .

Table 2.6 shows the regression results for modeling the teacher personal efficacy.

Table 2.6

Regression Results for Teacher Personal Efficacy Subscale

	B	SE	β	t	P
Personal Efficacy	3.96	.010	---	395.89	.000
Treatment (T_1)	.018	.010	.029	1.82	.064
Year (Y_1)	.036	.004	.150	8.36	.001**
Interaction ($T_1 * Y_1$)	.013	.004	.053	2.94	.003**

** Significant at the .01 level.

Teacher personal efficacy can be estimated using the formula:

$$\text{Est of } F_{ij} = 3.96 + 0.018 (T_i) + .036 (Y_j) + .013 (T_i * Y_j)$$

where

$T_i = -1$ at matched schools and 1 for Striving Readers schools, and

$Y_j = -3$ for summer 2006, -1 for summer 2007, 1 for summer 2008, and 3 for summer 2009.

The year and the interaction term are significant, indicating an increase in teacher personal efficacy over time. Matched schools started with higher personal efficacy score than Striving Readers schools, but ended with a lower average. Also, the treatment variable is marginally significant, indicating that the personal efficacy of teacher at Striving Readers schools is somewhat higher than at the matched schools. However, the adjusted R^2 of 0.033 is extremely small, indicating that very little of the variance in the data is explained by the regression model.

Table 2.7 shows the regression results for modeling the teacher collective efficacy.

Table 2.7

Regression Results for Teacher Collective Efficacy Subscale

	B	SE	β	t	P
Collective Efficacy	4.174	.012	---	352.88	.000
Treatment (T _i)	.044	.012	.030	1.89	.068
Year (Y _j)	.009	.005	.120	6.70	.299
Interaction (T _i *Y _j)	.050	.005	.088	4.93	.000**

** Significant at the .01 level.

Teacher collective efficacy can be estimated using the formula:

$$\text{Est of } F_{ij} = 4.174 + 0.044 (T_i) + .009 (Y_j) + .050 (T_i * Y_j)$$

Where

T_i = -1 at matched schools and 1 for Striving Readers schools, and

Y_j = -3 for summer 2006, -1 for summer 2007, 1 for summer 2008, and 3 for summer 2009.

The interaction term is significant, indicating that matched schools started with higher collective efficacy than Striving Readers schools, but ended with lower collective efficacy than Striving Readers schools. Also, the treatment variable is again marginally significant, indicating that the collective efficacy of teachers at Striving Readers schools is somewhat higher than at the matched schools. However, the adjusted R² of .032 is also extremely small, indicating that very little of the variance in the data is explained by the regression model.

Changes in Teacher Efficacy for Literacy Coaches (LSC Teachers/ALM Coaches)

The literacy coaches' self efficacy was measured using the Teacher Efficacy Survey. Pre-test data were gathered prior to training in the summer of 2006, or at the time new literacy coaches were hired to fill vacancies. Literacy coaches' efficacy was measured each subsequent summer. Table 2.8 displays the means and standard deviations for literacy coaches on the Personal Efficacy and Collective Efficacy Subscales by year of exposure to the Striving Readers program. This table, along with Figure 2.3 illustrates that literacy coaches decreased in their sense of personal efficacy after their first year in the program. After participating in Striving Readers for a second year, literacy coaches' personal efficacy for literacy teaching rebounded and surpassed their initial efficacy level. Personal efficacy continued to increase after a third year in the program. Conversely, literacy coaches' sense of collective efficacy increased after

one year of participation in the Striving Readers program, decreased after a second year, and rebounded at the end of year 3.

Table 2.8

Literacy Coach Efficacy by Exposure to the Striving Readers Program.

	No. ^a	Minimum	Maximum	Mean	Stand dev.
<i>Personal efficacy</i>					
At time of hire	24	3.5	5.3	4.47	.541
After first year	13	3.0	4.9	4.21	.654
After second year	22	3.7	5.3	4.61	.495
After third year	13	4.1	5.5	4.82	.494
<i>Collective efficacy</i>					
After first year	23	2.00	4.72	3.73	.653
After second year	13	2.50	5.06	4.09	.770
After third year	22	2.44	5.39	3.92	.686
After first year	13	3.28	5.17	4.07	.606

^a. Literacy coaches were given survey at the time of hire and each subsequent summer in the program. Due to turnover and uncompleted questionnaires, this number varies.

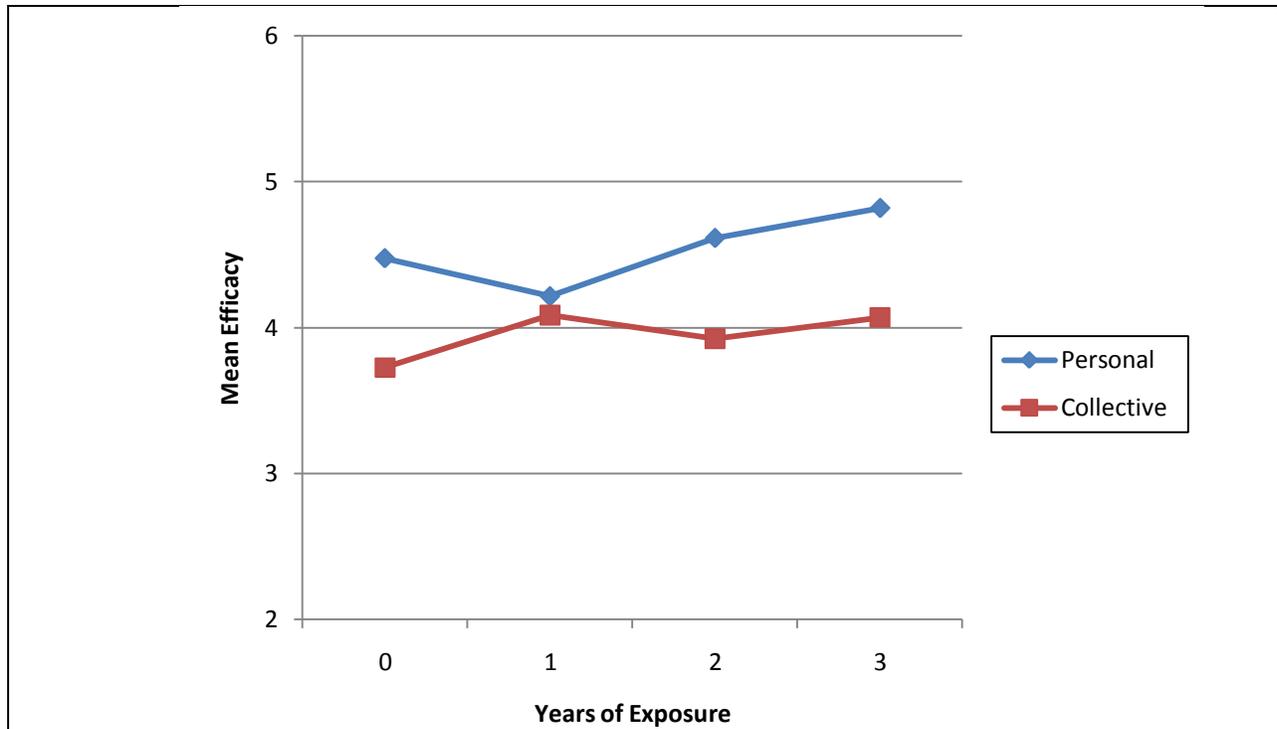


Figure 2.3. Literacy Coach Efficacy by Exposure to Striving Readers Program.

Note. Literacy Coaches were given the survey at the time of hire and each subsequent summer in the program. Due to turnover and uncompleted questionnaires, this number varies. In base year (before exposure), 23 completed questionnaires. After 1 year of exposure, 13 completed questionnaires. After 2 years of exposure, 22 completed questionnaires. After 3 years of exposure, 13 completed questionnaires.

Conclusions

In the first three years of this Striving Readers project, literacy coaches, administrators, and content area teachers achieved high levels of participation in the professional development inputs, overall, for both the targeted intervention and whole-school model. However, there was more variation in the levels of classroom implementation of the targeted and whole-school interventions. For the targeted intervention, classroom implementation was relatively low in year 1 but improved to higher levels in years 2 and 3. For the school-wide model, implementation by middle school content teachers was consistently higher than implementation by high school teachers.

While levels of classroom implementation fidelity to the models have varied across years and between 6th and 9th grade teachers, the first 3 years of the Striving Readers project have yielded positive impacts on students and teachers. In particular, the targeted intervention (LSC) seems promising for improving the reading achievement of 9th grade readers. The impact on 6th grade students' reading achievement is not statistically significant, but positive differences in mean scores between treatment and control groups have been noted each year

of the project. In addition, the LSC has improved the strategy use of 6th grade struggling readers, indicating that 6th grade students seem more aware of reading strategies and report higher levels of strategy use as a result of the project. Ninth-graders, on the other hand, do not report increases in their reading strategy use as a result of participating in the targeted intervention. Finally, the LSC had a positive effect on both 6th and 9th grade students' reading motivation.

The design of this study provides a number of insights regarding the LSC. First, the study shows promising results for examining the impact of the LSC as a set of coherent strategies rather than studying the impact of each component individually. Second, findings from this study suggest that the LSC has positive benefits related to reading achievement, strategy use, and motivation, not only for students receiving special education services, but also those in regular education. Finally, this study provides empirical evidence about the impact of the LSC using a randomized pretest-post-test control group design with larger numbers of students than had been available in previous studies.

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Appendix C

Summary of HLM Model Results for Student Achievement

Exhibit Table 1

6th Grade Student Achievement, NCE Scores:– Summary of Model Results

Fixed Effects

Effect	Estimate	Standard Error	df	t Value	Pr > t
Intercept	43.990	2.061	8	21.34	<.0001
School: KCCT reading scores, base year (spring, 2006) centered by mean of SR middle schools	0.366	0.137	836	2.66	0.0079
School: Percent disabled, centered by mean of SR middle schools	1.140	0.411	836	2.78	0.0056
School: Percent white students, centered by mean of SR middle schools	0.256	0.106	836	2.43	0.0155
Student Fall NCE scores, centered for each school	0.641	0.048	836	13.25	<.0001
Student: Intervention	1.175	0.831	836	1.41	0.1576
Student: Not in Special Ed	5.320	1.001	836	5.32	<.0001

Random Effects

Variance Components		Estimate	ICC
Level-2 Random Intercept	School	10.43	0.067
Level-1 Residual	Student	144.16	

Exhibit Table 2

*9th Grade Student Achievement, NCE Scores:– Summary of Model Results*Fixed Effects

Effect	Estimate	Standard Error	df	t Value	Pr > t
Intercept	41.045	2.173	8	18.89	<.0001
School: KCCT reading scores, base year (spring, 2006) centered by mean of SR high schools	0.518	0.110	957	4.73	<.0001
School: Percent disabled, centered by mean of SR high schools	2.350	0.456	957	5.16	<.0001
School: Percent white students, centered by mean of SR high schools	0.188	0.091	957	2.07	0.0390
Student Fall NCE scores, centered for each school	0.598	0.051	957	11.72	<.0001
Student: Intervention	2.034	0.827	957	2.46	0.0141
Student: Ethnicity, white	2.909	1.450	957	2.01	0.0450
Student: Not in Special Ed	4.377	0.973	957	4.50	<.0001

Random Effects

Variance Components		Estimate	ICC
Level-2 Random Intercept	School	1.154	0.007
Level-1 Residual	Student	164.85	

Exhibit Table 3

6th Grade Student Reading Strategy Use; MARSJ Scores:– Summary of Model Results

Fixed Effects

Effects	Estimate	Standard Error	Df	t Value	Pr> t
Intercept	2.913	0.059	10	49.71	<.001
School: KCCT reading scores, base year (spring, 2006) centered by mean of SR middle schools	0.012	0.006	595	2.01	0.0392
Student Fall MARSJ scores, centered for each school	0.369	0.039	595	9.52	<.0001
Student: Intervention	0.159	0.052	595	3.06	0.0023
Student: Gender, female	0.111	0.053	595	-2.11	0.0350
Student: SES, ineligible for free/reduced lunch	0.138	0.056	595	-2.48	0.0134

Random Effects

Variance Components		Estimate	ICC
Level-2 Random Intercept	School	0.008	0.019
Level-1 Residual	Student	0.408	

Exhibit Table 4

*9th Grade Student Reading Strategy Use; MARSJ Scores:– Summary of Model Results*Fixed Effects

Effect	Estimate	Standard Error	df	t Value	Pr > t
Intercept	2.95	0.089	10	33.20	<.0001
School: Percent disabled, centered by mean of SR high schools	0.006	0.004	577	1.50	0.1344
Fall MARSJ scores, centered by school	0.444	0.041	577	10.87	<.0001
Student: Intervention	0.065	0.055	577	1.18	0.2374
Student: Gender, female	-0.174	0.057	577	-3.06	0.0023
Student: Ethnicity, white	-0.209	0.083	577	-2.51	0.0124
Student: SES, ineligible for free/reduced lunch	0.121	0.058	577	2.08	0.0384

Random Effects

Variance Components		Estimate	ICC
Level-2 Random Intercept	School	0.007	0.014
Level-1 Residual	Student	0.446	

Exhibit Table 5
 6th Grade Student Motivation; MRQ Scores:– Summary of Model Results

Fixed Effects

Effect	Estimate	Standard Error	df	t Value	Pr > t
Intercept	2.654	0.058	10	45.24	<.0001
School: KCCT reading scores, base year (spring, 2006) centered by mean of SR middle schools	0.007	0.006	595	1.21	0.2255
Fall MRQ scores, centered by school	0.345	0.038	595	9.00	<.0001
Student: Intervention	0.109	0.035	595	3.10	0.0021
Student: Gender, Female	-0.052	0.036	595	-1.46	0.1453
Student: Not in Special Ed	0.054	0.042	595	1.29	0.1978

Random Effects

Variance Components		Estimate
Level-2 Random Intercept	School	0.007
Level-1 Residual	Student	0.446

Exhibit Table 6

*9th Grade Student Motivation; MRQ Scores:– Summary of Model Results*Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > t
Intercept	2.561	0.0633	10	40.51	<.0001
School: Percent disabled, centered by mean of SR high schools	0.008	0.0021	575	3.69	0.0002
Fall MRQ scores, centered by school	0.491	0.0406	575	12.09	<.0001
Student: Intervention	0.114	0.0366	575	3.12	0.0019
Student: Gender, female	-0.121	0.0376	575	-3.22	0.0013
Student: Ethnicity, white	-0.144	0.0521	575	-2.77	0.0058
Student: SES, ineligible for free/reduced lunch	0.082	0.0387	575	2.11	0.0349
Student: Not in special ed	0.076	0.0433	575	1.76	0.0782

Random Effects

Variance Components		Estimate	ICC
Level-2 Random Intercept	School	0.000	0.000
Level-1 Residual	Student	0.197	



Appendix D: Measures

Student Reading Strategies Inventory

Listed below are statements about what people do when they read academic or school-related materials such as textbooks or library books. There are no right or wrong answers. Please answer as honestly and truthfully as you can and provide an answer for each question.

Your answers on this survey are completely confidential.
Information about this survey will be released in summary form only.

- 1 = I never or almost never do this**
- 2 = I do this only occasionally**
- 3 = I sometimes do this (about 50% of the time)**
- 4 = I usually do this**
- 5 = I always or almost always do this**

1. I have a purpose in mind when I read.
2. I take notes while reading to help me understand what I read.
3. I think about what I know to help me understand what I read.
4. I preview the text to see what it's about before reading it.
5. When text becomes difficult, I read aloud to help me understand what I read.
6. I summarize what I read to reflect on important information in the text.
7. I think about whether the content of the text fits my reading purpose.
8. I read slowly but carefully to be sure I understand what I'm reading.
9. I discuss what I read with others to check my understanding.
10. I skim the text first by noting characteristics like length and organization.
11. I try to get back on track when I lose concentration.
12. I underline or circle information in the text to help me remember it.
13. I adjust my reading speed according to what I'm reading.

- 1 = I never or almost never do this**
- 2 = I do this only occasionally**
- 3 = I sometimes do this (about 50% of the time)**
- 4 = I usually do this**
- 5 = I always or almost always do this**

- 14. I decide what to read closely and what to ignore.
- 15. I use reference materials such as dictionaries to help me understand what I read.
- 16. When text becomes difficult, I pay closer attention to what I'm reading.
- 17. I use tables, figures, and pictures in text to increase my understanding.
- 18. I stop from time to time and think about what I'm reading.
- 19. I use context clues to help me better understand what I'm reading.
- 20. I paraphrase (restate ideas in my own words) to better understand what I read.
- 21. I try to picture or visualize information to help remember what I read.
- 22. I use typographical aids like boldface, and italics to identify key information.
- 23. I critically analyze and evaluate the information presented in the text.
- 24. I go back and forth in the text to find relationships among ideas in it.
- 25. I check my understanding when I come across conflicting information.
- 26. I try to guess what the material is about when I read.
- 27. When text becomes difficult, I reread to increase my understanding.
- 28. I ask myself questions I like to have answered in the text.
- 29. I check to see if my guesses about the text are right or wrong.
- 30. I try to guess the meaning of unknown words or phrases.

Please mark your responses to these statements on the scantron sheet:

31. I would rate my overall reading ability as:
1) excellent 2) average 3) not so good

32. I would rate my overall academic performance in school as:
1) excellent 2) average 3) not so good

Motivation for Reading Questionnaire for Adolescents*, (Cantrell, Almasi, & Rintamaa © 2006) p.3.



Striving Readers Motivation for Reading Questionnaire for Adolescents*

- 1 = Strongly Disagree**
2 = Disagree
3 = Agree
4 = Strongly Agree

33. I visit the library often with friends or family.
34. I like hard, challenging books.
35. I know that I will do well reading in my classes next year.
36. If the teacher discusses something interesting I might read more about it.
37. I like it when the questions in books make me think.
38. I read about my hobbies to learn more about them.
39. I am a good reader.
40. I enjoy reading magazines.
41. I often read to other people.
42. I like being the only one who knows an answer in something we read.
43. I read to learn new information about topics that interest me.
44. My friends sometimes tell me I am a good reader.
45. I learn more from reading than most students in the class.
46. I like to read about new things.
47. I like hearing the teacher say I read well.
48. I sometimes read to my parents.
49. My friends and I like to trade things to read.

- 1 = Strongly Disagree**
2 = Disagree
3 = Agree
4 = Strongly Agree

50. I don't like reading something when the words are too difficult.
51. I make pictures in my mind when I read.
52. I always read exactly as the teacher wants.
53. I usually learn difficult things by reading.
54. I don't like vocabulary questions.
55. Complicated texts are no fun to read.
56. I am happy when someone recognizes my reading.
57. I feel like I make friends with people in good books.
58. My parents often tell me what a good job I am doing with reading.
59. Finishing every reading assignment is very important to me.
60. I talk to my friends about what I am reading.
61. If I am reading an interesting topic I sometimes lose track of time.
62. I like to get compliments for my reading.
63. Grades are a good way to see how well you read.
64. I like to help my friends with the reading we do for school.
65. I read to improve my grades.
66. I enjoy a long, involved story or fiction book.
67. I like to tell my family about what I am reading.
68. I try to get more answers right than friends.
69. If the project is interesting, I can read difficult material.

1 = Strongly Disagree

2 = Disagree

3 = Agree

4 = Strongly Agree

70. I enjoy reading books about people in different countries.
71. I enjoy searching for information on the internet.

72. I always try to finish my reading on time.
73. If a book is interesting, I don't care how hard it is to read.
74. I like to finish my reading before other students.
75. In comparison to my other school work I am best at reading.
76. I am willing to work hard to read better than my friends.
77. I don't like it when there are too many new ideas in the text.
78. It is very important to me to be a good reader.
79. In comparison to other activities I do, it is very important to me to be a good reader.
80. I am a very good reader.
81. I put forth my best effort on this survey.
82. This survey was easy for me.

Thank you for taking time for to fill out this survey!

*based on the Motivation for Reading Questionnaire contained in:

Baker, L., & Wigfield, A. (1999). Dimensions of children's motivation for reading and their relations to reading activity and reading achievement. *Reading Research Quarterly, 34*, 452-477.

Wigfield, A. & Gurthrie, J. (1997). Relations of children's motivation for reading to the amount and breadth of their reading. *Journal of Educational Psychology, 89*, 420-432.



Striving Readers Teacher Survey*

Name (*please print*) _____ Date _____

School _____

E-mail address (school) _____

Directions: *Please completely fill in each circle.*

Thank you for completing this questionnaire. To ensure your privacy, information from this survey will be released in summary form only.

PART I. Teacher Background

- What subject(s) do you currently teach? (include all)

<input type="radio"/> Language Arts/Speech	<input type="radio"/> Science	<input type="radio"/> Social Studies
<input type="radio"/> Special Ed	<input type="radio"/> Reading	<input type="radio"/> Mathematics
<input type="radio"/> Administrator (<i>If you are an Administrator, please fill in circle and skip to Part II</i>)		
<input type="radio"/> Other _____		
- What subject(s) is your primary teaching responsibility?

<input type="radio"/> Language Arts/Speech	<input type="radio"/> Science	<input type="radio"/> Social Studies	<input type="radio"/>
<input type="radio"/> Mathematics	<input type="radio"/> Special Ed	<input type="radio"/> Reading	<input type="radio"/> Other

- What is your gender: male female
- Ethnicity (optional): Caucasian African American Hispanic Asian American
 Native Americans Other
- How many years of teaching experience do you have?

<input type="radio"/> 0 – 3 years	<input type="radio"/> 4 - 7 years	<input type="radio"/> 8 – 11 years	<input type="radio"/> 12 – 15 years	<input type="radio"/> 16 years and up
-----------------------------------	-----------------------------------	------------------------------------	-------------------------------------	---------------------------------------
- What grade level(s) do you teach in school? (include all)

6th 7th 8th 9th 10th 11th 12th Other _____

7. What is the highest degree you have earned?
 Bachelor's Master's Specialist/Rank I Doctorate
8. How many years ago did you receive your highest academic degree?
 0 – 3 years 4 - 7 years 8 – 11 years 12 – 15 years 16 years
 and up
9. How many years have you been teaching in your present school?
 0 – 3 years 4 - 7 years 8 – 11 years 12 – 15 years 16 years
 and up
10. Are you presently teaching under emergency certification? yes no
11. Have you had other types of literacy-focused professional development? yes no
12. When were you first hired as a teacher at your school? Month _____ Year

13. What is your area of certification? (include all)_
 Language Arts Science Social Studies
 Special/Speech Ed Reading
 Mathematics

PART II. Teacher Beliefs

This survey focuses on **reading**, which may be defined as constructing meaning from a variety of texts, including books, charts, graphs, technology, etc.

Please use the scale below to answer the questions that follow. Please provide a response to every question. If none of the alternatives provided for a question corresponds exactly to your position or opinion, select the alternative that comes closest to the answer you would like to give. **If you teach more than one subject area, please think about the subject that is your primary responsibility when answering the questions.**

- 1=Strongly Agree
 2=Moderately Agree
 3=Agree slightly more than disagree
 4=Disagree slightly more than agree
 5=Moderately Disagree
 6=Strongly Disagree

		Str ongly Agr ee	Moder ately Agr ee	Agr ee slightly mor e than Disagree	Dis agree slightly more than Agr ee	Moder ately Disagr ee	Stro ngly Disagree
31.	Factors beyond my control have a greater influence on my students' ability to read than I do.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6
32.	I am good at helping all the students in my classes make significant improvement in their reading comprehension.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6
33.	Some students are not going to make a lot of progress this year in reading, no matter what I do.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6
34.	I am certain that I am making a difference in the lives of my students when it comes to reading.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6
35.	There is little I can do to ensure that all my students make significant progress in reading this year.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6
36.	I can deal with almost any reading problem.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6
37.	The amount a student can read is primarily related to family background.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6
38.	If students are not willing to read, I can do little about it.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6
39.	If parents would do more for their children's reading, I could do more.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6
10.	If one of my students could not do a class assignment, I would be able to accurately assess whether the assignment was at the correct level of reading difficulty.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6
1.	If I really try hard, I can get through to even the most difficult or unmotivated students.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6

		Str ongly Agr ee	Moder ately Agr ee	Agr ee slightly mor e than Disagree	Dis agree slightly more than Agr ee	Moder ately Disagr ee	Stro ngly Disagree
2.	When it comes right down to it, I really cannot do much about a student's reading because most of a student's performance depends upon his or her home environment.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6
3.	When a student does better than usual in reading, it is often because I exerted a little extra effort.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6
4.	I know how to teach vocabulary effectively. Vocabulary refers to the understanding of word meanings.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6
5.	Even when I try very hard, I do not teach reading as well as I do most subjects.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6
6.	When my students' reading improves, it is most often due to my having found a more effective teaching approach.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6
7.	I know the steps necessary to teach reading in my content area effectively.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6
8.	I am convinced that I am able to successfully teach all relevant subject content to even the most difficult students.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6
9.	I effectively use grouping to engage students in reading in my content area.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6
0.	I am not very effective in monitoring students' reading ability.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6
1.	If students are underachieving in reading, it is most likely due to my ineffective teaching.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6
	I generally deal with	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

		Str ongly Agr ee	Moder ately Agr ee	Agr ee slightly mor e than Disagree	Dis agree slightly more than Agr ee	Moder ately Disagr ee	Stro ngly Disagree
2.	students' reading problems ineffectively.	1	2	3	4	5	6
3.	Even when I try very hard, I do not teach writing as well as I teach most subjects.	○ 1	○ 2	○ 3	○ 4	○ 5	○ 6
4.	My good teaching can overcome the inadequacy of a student's reading.	○ 1	○ 2	○ 3	○ 4	○ 5	○ 6
5.	I should not be held responsible for the low reading achievement of some students.	○ 1	○ 2	○ 3	○ 4	○ 5	○ 6
6.	When a low-achieving student progresses in reading, it is usually due to my extra attention.	○ 1	○ 2	○ 3	○ 4	○ 5	○ 6
7.	I understand reading concepts well enough to be effective in teaching it along with content area material.	○ 1	○ 2	○ 3	○ 4	○ 5	○ 6
8.	Increased effort in teaching reading will produce little change in some students' achievement in my class.	○ 1	○ 2	○ 3	○ 4	○ 5	○ 6
9.	I am generally responsible for the reading achievement of students in my class.	○ 1	○ 2	○ 3	○ 4	○ 5	○ 6
0.	Students' achievement in a subject is directly related to my effectiveness in teaching that content area AND my ability to teach reading.	○ 1	○ 2	○ 3	○ 4	○ 5	○ 6

		Str ongly Agr ee	Moder ately Agr ee	Agr ee slightly mor e than Disagree	Dis agree slightly more than Agr ee	Moder ately Disagr ee	Stro ngly Disagree
1.	If parents comment that their child is showing more interest in a subject at school, it is probably due to my performance.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6
2.	I know how to teach my students to decode unknown words they read in my content area. Decoding refers to the method or strategy a student uses to “figure out” a word.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6
3.	I wonder if I have the necessary skills to teach reading.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6
4.	My effectiveness in teaching reading has little influence on students with low motivation.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6
5.	Given a choice, I would not invite someone in to evaluate my teaching of reading within my content area.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6
6.	When a student has difficulty understanding his/her reading, I am usually at a loss as to how to help the student understand it better.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6
7.	I do not know what to do to get students excited about reading in my content area.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6
8.	I am certain that I know how to enhance students’ reading fluency in my content area. (Fluency refers to the ability to read text accurately and quickly and with expression).	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6
9.	Even if I teach the content area well, I cannot help some kids to read better.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6
0.	I believe my students’ prior experiences will directly affect their ability to understand what they are reading in my content	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6

	area.						
1.	I believe I teach students to question the viewpoint of text appropriately when they read.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6
2.	If a child does not learn something the first time I will try another way.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6
		Str ongly Agr ee	Moder ately Agr ee	Agr ee slightly mor e than Disagree	Dis agree slightly more than Agr ee	Moder ately Disagr ee	Stro ngly Disagree
3.	Most teachers in my school are skilled in various methods of teaching reading.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6
4.	Most teachers in my school are well prepared to teach the subjects they are assigned to teach.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6
5.	Most teachers in my school really believe every child can learn to read in their content area.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6
6.	If a child does not want to read in their content area, most teachers in my school give up.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6
7.	Most teachers in my school do not have the skills needed to produce meaningful student learning.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6
8.	Most teachers in my school have what it takes to get the children to read in their content area.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6
9.	Most teachers in my school are able to get through to struggling readers.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6
0.	Most teachers in my school are confident they will be able to motivate their struggling readers.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6
1.	The lack of instructional materials and supplies makes teaching very difficult.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6

2.	Most teachers in my school do not have the skills to deal with student disciplinary problems.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6
3.	Most teachers in my school think there are some students that no one can reach.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6
4.	The quality of school facilities in my school really facilitates the teaching and learning process for reading in the content area.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6
5.	Home life provides so many advantages to students in my school that they are bound to learn.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6
6.	The students in my school come to school ready to learn.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6
		Str ongly Agr ee	Moder ately Agr ee	Agr ee slightly mor e than Disagree	Dis agree slightly more than Agr ee	Moder ately Disagr ee	Stro ngly Disagree
7.	Drug and alcohol abuse in my school's community make learning difficult for students.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6
8.	The opportunities in my school's community help ensure that the students in my school will learn.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6
9.	Students in my school just are not motivated to learn.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6
0.	Learning is more difficult at my school because students are worried about their safety.	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6

Thank you for completing this survey!

* Adapted from:

Woolfolk, A. E., & Hoy, W. K. (1990). Prospective teachers' sense of efficacy and beliefs about control. *Journal of Educational Psychology, 82*, 81-91.

Hoy, W. K., & Woolfolk, A. E. (1993). Teachers' sense of efficacy and the organizational health of schools. *The Elementary School Journal, 93*, 356-372.

Appendix E

Grantee Administered Implementation Questionnaire Results

Kathy Belcher, Project Director, Danville Independent Schools

Surveys of literacy coach and administrators' perceptions of the Striving Readers program during the previous year were administered to the participants within the intervention schools. Surveys were administered in Year 3 from May to June 2009 through an online survey system. Each literacy coach and administrator within the intervention schools was emailed a request to participate by the Project Director. These surveys were used to examine the perceived impact of the program, implementation of the program, additional needs not addressed within the program, and the likelihood for the schools to participate in all or parts of the program in the future. Survey items addressed the school-wide literacy and the intervention models within the participating schools. The Literacy Coach Implementation Questionnaire consisted of 13 items and the Administrator Implementation Questionnaire consisted of 17 items. Both surveys utilized open-ended and closed-ended items. The majority of the items included a list of response options with instructions to check all that apply, check only one response option, or to rate each response on a one to four scale. A few items instructed the participants to provide open-ended responses and some of the closed-ended response items allowed participants to provide comments or asked participants to explain their responses. Only closed-ended response options were included in these results.

Table E1

Administrator and Literacy Coach Implementation Questionnaire Results

Item	Responses	
	Administrator	Literacy Coach
<u>Implementation</u>		
At this time, what percentage of your staff is implementing the school-wide literacy strategies in your school this year on a regular basis (i.e. daily/weekly)?	Twenty-five percent (3.6%)	Twenty-five percent (4.2%)
	Fifty percent (10.7%)	Fifty percent (29.2%)
	Seventy-five percent (64.3%)	Seventy-five percent (58.3%)
	One hundred percent (21.4%)	One hundred percent (8.3%)
In which content area do you see the greatest implementation in your school?	Language Arts (42.9%)	Language Arts (25%)
	Science (25%)	Science (33.3%)
	Math (21.4%)	Math (12.5%)
	Social Studies (10.7%)	Social Studies (20.8%)
	Arts and Humanities (0%)	Arts and Humanities (8.3%)
	Health/PE (0%)	Health/PE (0%)
In which content area do you see the least implementation in your school?	Language Arts (14.8%)	Language Arts (16.7%)
	Science (0%)	Science (4.2%)
	Math (18.5%)	Math (25%)
	Social Studies (3.7%)	Social Studies (8.3%)
	Arts and Humanities (18.5%)	Arts and Humanities (8.3%)
	Health/PE (44.4%)	Health/PE (37.5%)
Concerning the implementation levels of the content literacy strategies at your school, please rate the following content areas on a scale from 1-4 (left to right) with 4 being high implementation in your school and 1 being the area with the lowest level of implementation.	Language Arts (M = 3.07)	Language Arts (M = 2.91)
	Science (M = 2.93)	Science (M = 3.04)
	Math (M = 2.75)	Math (M = 2.33)
	Social Studies (M = 2.89)	Social Studies (M = 2.83)
	Arts and Humanities (M = 2.46)	Arts and Humanities (M = 2.52)
	Health/PE (M = 1.93)	Health/PE (M = 1.86)
How would you rate the quality of the literacy coaching taking place in your school?	Poor (0%)	
	Adequate (21.4%)	
	Above Average (28.6%)	
	Excellent (50%)	

Item	Responses	
	Administrator	Literacy Coach
How would you rate the quality of instruction provided in the targeted intervention?	Poor (0%) Adequate (7.1%) Above Average (32.1%) Excellent (60.7%)	
On a rating scale of 1-4 with 1 being 'not supportive' and 4 being 'very supportive', please rate the support of your school administrator in implementing the initiatives in the Striving Readers Project.		One (0%) Two (25%) Three (16.7%) Four (58.3%)
<u>Learning Outcomes</u>		
To what extent do you believe the school-wide content literacy approaches are supporting improved student learning?	Not (0%) Little (0%) Somewhat (42.9%) Substantially (57.1%)	
Do you see evidence that the school-wide model is helping to improve student achievement?		Yes (95.8%) No (4.2%)
To what extent is the targeted intervention making a positive impact on student learning?	Not (0%) Little (7.1%) Somewhat (39.3%) Substantially (53.6%)	
Do you see the targeted intervention class making an impact on improving reading?		Yes (91.7%) No (8.3%)
On a rating scale from 1-4 with 1 being 'not effective' and 4 being 'very effective', please rate the overall effectiveness of the school-wide model in helping to increase student achievement?		One (0%) Two (16.7%) Three (50%) Four (33.3%)

Item	Responses	
	Administrator	Literacy Coach
How often do you use the Content Literacy Building Walkthrough Tool and/or Classroom Observation Tool to assess the progress of content literacy integration in your school?	Seldom (25%) Somewhat (14.3%) Often (once per quarter; 28.6%) Regularly (monthly; 32.1%)	
How often do you reassess your school's growth using the CTL Adolescent Literacy Performance Guide (lykert scale)?	Monthly (7.1%) Quarterly (10.7%) Once a semester (32.1%) Annually (50%)	
How often do you meet with your Literacy Coach to discuss general and specific content literacy and coaching needs in your school?	Once per year (0%) Monthly (89.3%) Quarterly (10.7%) Never (0%)	
<u>Perceived Needs and Sustainability</u>		
What is needed to improve the school-wide content literacy model in your school? (Check all that are needed)	Continued PD for CLM (39.3%) Continued Coaching for CLM (64.3%) Classroom materials for the CLM (39.3%) Technology used to teach instructional strategies (60.7%) More intentional implementation on the part of the teaching staff (67.9%)	
If funds were available, would your school want to continue the Striving Readers' initiatives for the 2010-2011		Yes (87.5%) No (12.5%)

school year?

Item	Responses	
	Administrator	Literacy Coach
If funds are available to continue the Striving Readers initiatives for the year 2010-2011 and your school decided to continue the efforts set by the Striving Readers grant, list the areas you would want to see continued.	Targeted Intervention class (71.4%)	Targeted Intervention class (58.3%)
	School wide CLM (82.1%)	School wide CLM (75%)
	Intervention teacher half time (57.1%)	Intervention teacher half time (58.3%)
	School wide Content Literacy Coach half time (67.9%)	School wide Content Literacy Coach half time (66.7%)
	Two day school wide PD summer institutes (32.1%)	Two day school wide PD summer institutes (54.2%)
	Four day literacy coach PD summer institutes (25%)	Four day literacy coach PD summer institutes (37.5%)
	Monthly Literacy Coach PD/support (32.1%)	Monthly Literacy Coach PD/support (50%)
	Three administrator's meetings (14.3%)	Three administrator's meetings (20.8%)
	Other (3.6%)	Other (8.3%)
What is needed to improve the targeted intervention model in your school? (Check all that are needed)	Continued PD for the Intervention teachers (25%)	
	Continued coaching for the Intervention teachers (39.3%)	
	More classroom materials for the targeted intervention (25%)	
	Technology used to teach instructional strategies (57.1%)	
	More intentional implementation on the part of the Intervention teacher (17.9%)	
	Other (10.7%)	

Item	Responses	
	Administrator	Literacy Coach
<p>What steps has your school taken to ensure the efforts made for the school-wide content literacy model and the targeted intervention will be sustained after the Striving Readers grant is completed.</p>	<p>My school principal is leading my staff and district to include using school-wide content literacy strategies and provide a targeted intervention as a major part of the school and district comprehensive plans. (41.7%)</p>	<p>I believe my principal acknowledges there is positive evidence that the school-wide and targeted intervention models are needed for improvement of student achievement but have not set into place sustainability. (54.2%)</p>
	<p>My school principal sees evidence of improvement of student achievement, but only feels the school-wide content literacy model needs to be sustained. (4.2%)</p>	<p>My school principal sees evidence of improvement of student achievement, but feels only the need to support sustaining the targeted intervention model. (0%)</p>
	<p>In my opinion, my school principal does not see evidence that the school-wide content literacy model nor the targeted intervention is overall effective and therefore probably will not support continuing efforts outlined in the Striving Readers initiatives. (8.3%)</p>	